

Volkswagen 2017CY PEMS Report

Volkswagen Group of America
3800 Hamlin Rd
Auburn Hills, MI 48326

March 21, 2018

Background

The Volkswagen Group (VW), with its headquarters in Wolfsburg, Germany, is a large automobile manufacturer that comprises 12 brands from seven European countries: Volkswagen Passenger Cars, Audi, SEAT, ŠKODA, Bentley, Bugatti, Lamborghini, Porsche, Ducati, Volkswagen Commercial Vehicles, Scania and MAN.

The Consent Decree requires Volkswagen AG, Audi AG, and VWGoA to retain an independent third-party to conduct portable emissions measurement systems (PEMS) testing of Model Year (MY) 2017, 2018, and 2019 vehicles. This test program requires PEMS measurement of regulated criteria air pollutants and CO₂ under certain conditions as set forth in the Consent Decree. This report includes the test results of the MY 2017 vehicles in the U.S. Market.

Approach

The test plan was approved by the U.S. EPA and carried out by a third-party, the University of California, Riverside (UCR). The plan includes emissions testing of eleven vehicles on public roads, over a range of conditions, utilizing PEMS. Emissions measured and reported include oxides of nitrogen (NO_x), carbon monoxide (CO), carbon dioxide (CO₂), and total hydrocarbons (THC). All vehicles were tested, configured, and operated by UCR and were independent of VW operations. Measurement quality control checks were performed prior to each emission test so the data provided in this report is valid and representative. The following three on-road cycles (highway, mountain, and city) were performed in the Los Angeles, CA area.

Results

The MY 2017 vehicles were tested between August 29 through October 12, 2017. The results are presented in the following tables. All vehicles were tested with commercially available E10 gasoline. Table 1 shows the vehicles tested, Table 2 shows the relevant emission standards, Table 3 lists the summary on-road emission results, and Tables 4, 5, and 6 list the route summary statistics.

Table 1 Summary of vehicles tested for model year 2017 organized by test order (first to last)

Test Group	Vehicle Model	Manufacturer	VIN	Emission Class:	Type of drive:	Nominal power [HP]:	Nominal torque [Nm]:	Transmission:	Exhaust gas treatment:	Type of fuel:	Start Mileage [mi]:
HVGAT03.6VUK	Touareg 3.6L	VW		T2B5/ULEV	AWD	280	360	Automatic	TWC	Gasoline	3377
HVGAV01.4V7P	Jetta 1.4L	VW		T3B70/ULEV70	FWD	150	250	Automatic	TWC	Gasoline	3873
HVGAT03.0AUT	Q7 3.0L	Audi		T2B5/ULEV	AWD	333	440	Automatic	TWC	Gasoline	5811
HVGAJ02.0AUF	Q5 2.0L	Audi		IntT3B125/ULEV	AWD	220	350	Automatic	TWC	Gasoline	3442
HVGAV02.0AUA	Q3 2.0L	Audi		IntT3B125/ULEV	AWD	200	280	Automatic	TWC	Gasoline	5765
HVGAV02.0VPE	CC 2.0L	VW		IntT3B30/SULEV	FWD	200	280	Automatic	TWC	Gasoline	3706
HVGAV02.0VPD	Jetta 1.8L	VW		IntT3B30/SULEV	FWD	170	250	Automatic	TWC	Gasoline	5339
HVGAV02.0APA	GTI 2.0L	VW		IntT3B30/SULEV	FWD	220	350	Automatic	TWC	Gasoline	14321
HVGAJ03.0AUD	S5 3.0L	Audi		IntT3B125/ULEV	AWD	333	325	Automatic	TWC	Gasoline	8411
HVGAV03.6VUF	CC 3.6L	VW		IntT3B125/ULEV	AWD	280	360	Automatic	TWC	Gasoline	11584
HVGAV02.0AUB	A5 2.0L	Audi		IntT3B125/ULEV	AWD	220	350	Manual	TWC	Gasoline	4348

¹ HVGAV02.0VPD and HVGAV02.0APA are part of the high volume test group.

Table 2 Summary of emission standards (Federal)

Test Group	Vehicle Model	Emission class:	Cert Type Federal:	FTP 75 g/mi								HWY g/mi		US06 g/mi CO 4,000mi
				NMOG	CH ₄	CO	NO _x	PM	HCHO	NMOG+NO _x	NO _x	NMOG+NO _x		
HVGAT03.6VUK	Touareg 3.6L	T2B5/ULEV	50,000 mi	0.075	0.03	3.4	0.05	0.01	0.150	n/a	0.07	n/a	10.5	
HVGAV01.4V7P	Jetta 1.4L	T3B70/ULEV70	150,000 mi	n/a	0.03	1.7	n/a	0.01	0.004	0.070	n/a	0.070	n/a	
HVGAT03.0AUT	Q7 3.0L	T2B5/ULEV	50,000 mi	0.075	0.03	3.4	0.05	0.01	0.015	n/a	0.07	n/a	11.8	
HVGAJ02.0AUF	Q5 2.0L	IntT3B125/ULEV	120,000 mi	n/a	0.03	2.1	n/a	0.01	0.018	0.125	n/a	0.125	8.0	
HVGAV02.0AUA	Q3 2.0L	IntT3B125/ULEV	120,000 mi	n/a	0.03	2.1	n/a	0.01	0.018	0.125	n/a	0.125	8.0	
HVGAV02.0VPE	CC 2.0L	IntT3B30/SULEV	120,000 mi	n/a	0.03	1.0	n/a	0.01	0.004	0.030	n/a	0.030	8.0	
HVGAV02.0VPD	Jetta 1.8L	IntT3B30/SULEV	120,000 mi	n/a	0.03	1.0	n/a	0.01	0.004	0.030	n/a	0.030	8.0	
HVGAV02.0APA	GTI 2.0L	IntT3B30/SULEV	120,000 mi	n/a	0.03	1.0	n/a	0.01	0.004	0.030	n/a	0.030	8.0	
HVGAJ03.0AUD	S5 3.0L	IntT3B125/ULEV	120,000 mi	n/a	0.03	2.1	n/a	0.01	0.018	0.125	n/a	0.125	8.0	
HVGAV03.6VUF	CC 3.6L	IntT3B125/ULEV	120,000 mi	n/a	0.03	2.1	n/a	0.01	0.018	0.125	n/a	0.125	8.0	
HVGAV02.0AUB	A5 2.0L	IntT3B125/ULEV	120,000 mi	n/a	0.03	2.1	n/a	0.01	0.018	0.125	n/a	0.125	8.0	

Table 3 Summary of emission results for the on-road routes

Test Group	Vehicle Model	Emission Class	City g/mi					Highway g/mi					Mountain g/mi				
			CO ₂	THC	CO	NO _x	NMOG	CO ₂	THC	CO	NO _x	NMOG	CO ₂	THC	CO	NO _x	NMOG
HVGAT03.6VUK	Touareg 3.6L	T2B5/ULEV	611.1	0.0015	0.0009	0.0260	0.0009	436.3	0.0110	0.2917	0.0041	0.0093	479.8	0.0377	2.4683	0.0192	0.0317
HVGAV01.4V7P	Jetta 1.4L	T3B70/ULEV70	373.6	0.0010	0.0227	0.0167	0.0012	229.6	0.0044	0.1088	0.0069	0.0041	276.8	0.0145	0.7506	0.0096	0.0122
HVGAT03.0AUT	Q7 3.0L	T2B5/ULEV	506.1	0.0006	0.2393	0.0320	0.0012	346.4	0.0171	0.3160	0.0091	0.0197	408.1	0.0224	0.3262	0.0200	0.0276
HVGAJ02.0AUF	Q5 2.0L	IntT3B125/ULEV	493.1	0.0045	1.2635	0.0218	0.0052	302.6	0.0154	0.7988	0.0135	0.0143	361.8	0.0091	0.5093	0.0297	0.0102
HVGAV02.0AUA	Q3 2.0L	IntT3B125/ULEV	425.1	0.0071	1.0141	0.0254	0.0041	278.3	0.0041	0.6827	0.0039	0.0032	303.6	0.0295	5.4029	0.0107	0.0206
HVGAV02.0VPE	CC 2.0L	IntT3B30/SULEV	516.4	0.0000	0.4393	0.0154	0.0001	301.4	0.0000	0.0986	0.0037	0.0000	333.2	0.0004	1.0474	0.0065	0.0009
HVGAV02.0VPD	Jetta 1.8L	IntT3B30/SULEV	630.1	0.0022	0.4487	0.0140	0.0010	255.6	0.0013	0.4653	0.0043	0.0017	305.7	0.0011	0.6311	0.0090	0.0019
HVGAV02.0APA	GTI 2.0L	IntT3B30/SULEV	317.4	0.0003	0.0000	0.0163	0.0002	207.9	0.0003	0.0434	0.0064	0.0003	250.6	0.0023	0.0361	0.0103	0.0021
HVGAJ03.0AUD	S5 3.0L	IntT3B125/ULEV	537.3	0.0032	0.0143	0.0476	0.0028	344.7	0.0088	0.5949	0.0077	0.0094	378.4	0.0306	1.0742	0.0172	0.0296
HVGAV03.6VUF	CC 3.6L	IntT3B125/ULEV	573.7	0.0006	0.0138	0.0186	0.0017	319.7	0.0074	0.0700	0.0068	0.0070	374.3	0.0307	0.3798	0.0255	0.0297
HVGAV02.0AUB	A5 2.0L	IntT3B125/ULEV	434.7	0.0023	0.2015	0.0188	0.0023	274.8	0.0035	0.1312	0.0091	0.0036	322.8	0.0059	0.1225	0.0247	0.0069

Table 4 Summary trip statistics for the Highway route

Test Group	Vehicle Model	Trip Duration [mm:ss]	Distance [mi]	Average speed [mph]	Maximum speed [mph]	v*a (95% percentile) [m ² /s ³]	RPA [m/s ²]	Standstill proportion [%]	Constant proportion [%]	Acceleration proportion [%]	Deceleration proportion [%]	Road Gradient (95% percentile) [%]	Cumulative positive Altitude [m]	Altitude difference [m]	Average Amb Temperature [F]
HVGAT03.6VUK	Touareg 3.6L	49:01	38.0	46.5	75.8	12.5	0.09	5.7	24.5	36.7	33.2	2.8	177	-14	83.6
HVGAV01.4V7P	Jetta 1.4L	61:20	39.2	38.3	77.7	14.5	0.13	5.2	17.7	39.7	37.4	2.8	192	-18	71.6
HVGAT03.0AUT	Q7 3.0L	57:21	38.9	40.7	77.1	11.5	0.10	4.8	22.9	37.6	34.7	2.7	202	-13	77.9
HVGAJ02.0AUF	Q5 2.0L	53:20	39.0	43.8	74.6	11.8	0.09	4.0	23.9	36.0	36.1	2.8	178	-21	67.3
HVGAV02.0AUA	Q3 2.0L	49:53	38.7	46.5	73.3	14.5	0.12	2.8	19.8	38.8	38.6	2.8	193	-8	78.2
HVGAV02.0VPE	CC 2.0L	64:07	39.5	37.0	84.5	10.3	0.12	8.8	18.4	40.3	32.4	2.7	212	-8	67.9
HVGAV02.0VPD	Jetta 1.8L	42:25	39.0	55.1	82.6	17.3	0.12	7.7	17.6	39.0	35.6	2.8	173	-22	76.8
HVGAV02.0APA	GTI 2.0L	42:51	39.7	55.6	73.3	12.4	0.09	4.3	24.8	36.6	34.3	2.7	176	-15	80.9
HVGAJ03.0AUD	S5 3.0L	59:48	38.5	38.6	70.8	11.4	0.11	2.7	21.6	39.7	36.0	2.9	225	0	64.8
HVGAV03.6VUF	CC 3.6L	60:19	38.9	38.7	68.4	11.3	0.11	4.6	20.4	40.0	35.0	2.8	210	-1	63.4
HVGAV02.0AUB	A5 2.0L	57:18	38.7	40.6	77.1	12.5	0.10	6.6	21.4	38.0	34.0	2.7	194	-11	61.3

Table 5 Summary trip statistics for the Mountain route

Test Group	Vehicle Model	Trip Duration [mm:ss]	Distance [mi]	Average speed [mph]	Maximum speed [mph]	v*a (95% percentile) [m ² /s ³]	RPA [m/s ²]	Standstill proportion [%]	Constant proportion [%]	Acceleration proportion [%]	Deceleration proportion [%]	Road Gradient (95% percentile) [%]	Cumulative positive Altitude [m]	Altitude difference [m]	Average Amb Temperature [F]
HVGAT03.6VUK	Touareg 3.6L	51:04	28.7	33.7	73.3	12.5	0.15	10.8	13.1	43.0	33.1	11.5	783	-2	89.6
HVGAV01.4V7P	Jetta 1.4L	61:19	29.6	29.0	69.0	12.9	0.17	14.5	11.7	37.8	36.0	-	785	1	72.2
HVGAT03.0AUT	Q7 3.0L	54:16	28.8	31.9	67.1	13.1	0.16	13.3	13.3	39.0	34.4	10.4	753	7	81.2
HVGAJ02.0AUF	Q5 2.0L	55:32	28.9	31.2	67.1	13.0	0.17	10.4	12.1	41.2	36.3	-	746	3	65.8
HVGAV02.0AUA	Q3 2.0L	49:37	28.7	34.7	68.4	15.6	0.17	9.2	12.8	39.6	38.4	11.4	730	-6	77.7
HVGAV02.0VPE	CC 2.0L	54:22	29.3	32.3	79.5	14.2	0.17	17.6	13.9	38.2	30.3	10.4	725	-9	78.2
HVGAV02.0VPD	Jetta 1.8L	50:22	28.9	34.4	70.2	15.7	0.17	11.7	12.0	39.9	36.3	-	731	2	84.2
HVGAV02.0APA	GTI 2.0L	52:18	29.4	33.8	67.1	12.7	0.15	11.2	14.9	40.7	33.3	10.4	742	4	76.9
HVGAJ03.0AUD	S5 3.0L	53:30	28.5	32.0	69.0	11.6	0.14	9.8	14.7	38.8	36.7	10.8	732	-3	64.3
HVGAV03.6VUF	CC 3.6L	56:26	28.8	30.6	63.4	12.6	0.15	13.3	13.6	37.8	35.3	10.5	734	-3	64.2
HVGAV02.0AUB	A5 2.0L	55:49	28.8	30.9	69.6	14.3	0.17	18.0	12.1	37.7	32.2	10.5	732	-7	62.7

Table 6 Summary trip statistics for the City route

Test Group	Vehicle Model	Trip Duration [mm:ss]	Distance [mi]	Average speed [mph]	Maximum speed [mph]	v*a (95% percentile) [m ² /s ³]	RPA [m/s ²]	Standstill proportion [%]	Constant proportion [%]	Acceleration proportion [%]	Deceleration proportion [%]	Road Gradient (95% percentile) [%]	Cumulative positive Altitude [m]	Altitude difference [m]	Average Amb Temperature [F]
HVGAT03.6VUK	Touareg 3.6L	62:05	15.8	15.3	59.7	9.5	0.20	26.3	8.2	35.5	29.9	2.6	149	7	88.1
HVGAV01.4V7P	Jetta 1.4L	67:40	16.2	14.4	62.1	9.3	0.19	28.8	7.4	32.3	31.5	2.2	139	3	94.4
HVGAT03.0AUT	Q7 3.0L	69:47	16.2	13.9	56.5	8.1	0.19	27.1	8.2	33.4	31.3	2.9	239	16	96.6
HVGAJ02.0AUF	Q5 2.0L	62:28	16.1	15.5	67.1	12.0	0.24	31.2	5.6	31.4	31.8	2.5	151	4	78.5
HVGAV02.0AUA	Q3 2.0L	57:50	16.0	16.6	64.0	11.6	0.23	23.1	7.0	34.3	35.7	2.7	123	4	81.3
HVGAV02.0VPE	CC 2.0L	62:51	16.4	15.6	65.9	13.3	0.30	25.6	4.9	36.8	32.7	2.5	124	2	97.0
HVGAV02.0VPD	Jetta 1.8L	105:51	15.7	8.9	39.2	9.3	0.24	36.1	7.1	27.9	28.8	2.7	175	-2	91.2
HVGAV02.0APA	GTI 2.0L	61:30	16.2	15.8	54.7	10.4	0.22	29.6	6.8	31.8	31.9	2.3	143	-2	69.8
HVGAJ03.0AUD	S5 3.0L	67:57	15.6	13.8	65.2	8.9	0.21	28.9	7.2	32.9	31.1	2.6	128	1	96.4
HVGAV03.6VUF	CC 3.6L	67:03	15.8	14.1	60.9	8.4	0.20	27.1	7.7	33.3	31.9	2.5	115	-6	84.5
HVGAV02.0AUB	A5 2.0L	63:26	15.8	14.9	56.5	11.3	0.26	31.1	5.4	32.6	31.0	2.4	124	-8	84.5



Figure 1 On-road testing California public roads

Summary

The emissions from the test vehicles were representative of those typical in-use conditions for highway, city, and mountain driving. The conditions ranged from 61 to 97 °F, 0% to 11.5% grade, and a net increase in elevation up to 2,569 feet. In summary, the emissions from the vehicles tested were representative of well-maintained vehicles and of actual in-use emissions.

Sincerely,

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Appendix A - Routes

The routes for the on-road testing included various geographies and climactic conditions, including highway driving, stop-go city traffic, and heavy grade/high elevation with a diversity of climatic conditions. The routes included a route in the LA Downtown area, a highway route between Oxnard and Santa Barbara, CA, and a route in the Santa Barbara mountains. These routes are shown geographically in Figure 0-1, and Table 0-1 provides the characteristics for the test routes. These routes were approved by EPA as meeting their requirements for the Consent Decree testing. The routes were central enough to the Oxnard TCC that the TCC facility could be the base point for the starting and ending of the daily PEMS testing.

Table 0-1. Description of Test Routes and Key Trip Statistics

Route	Map Color Code	Accessibility (hrs)	Route Distance (mi)	Average Speed (mph)	Max Elevation (ft)	Estimated Grade (%)
Mountain	Red	24hr	45	45	2270	11% (5mi)
Freeway cruise	Green	24hr	37	54	75	0%
LA - Downtown	Blue	09:00-14:00	15.5	25	250	0%

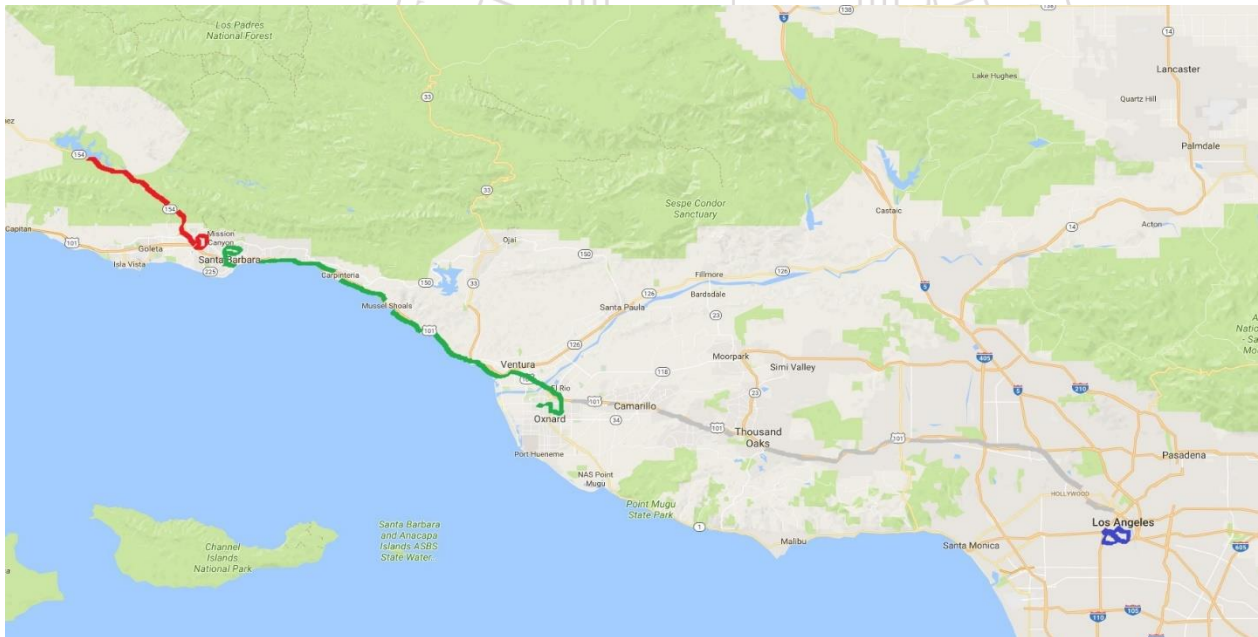


Figure 0-1. Overview of the Test Routes

Figure 0-2 shows a map of the downtown LA area route, designated as Route 1, that is representative of urban driving in downtown Los Angeles. This route essentially represents the “Los Angeles Route Four” (i.e., LA4) which was ultimately used in developing the original FTP vehicle certification cycle, with some minor modifications at locations where the traffic pattern or roads have changed since the FTP’s development. The average typical speed for this route is ~16.8 mph, and a typical speed profile of this route is provided in Figure 0-3. The route is ~15.3 miles long and starts and ends at University of Southern California (USC).

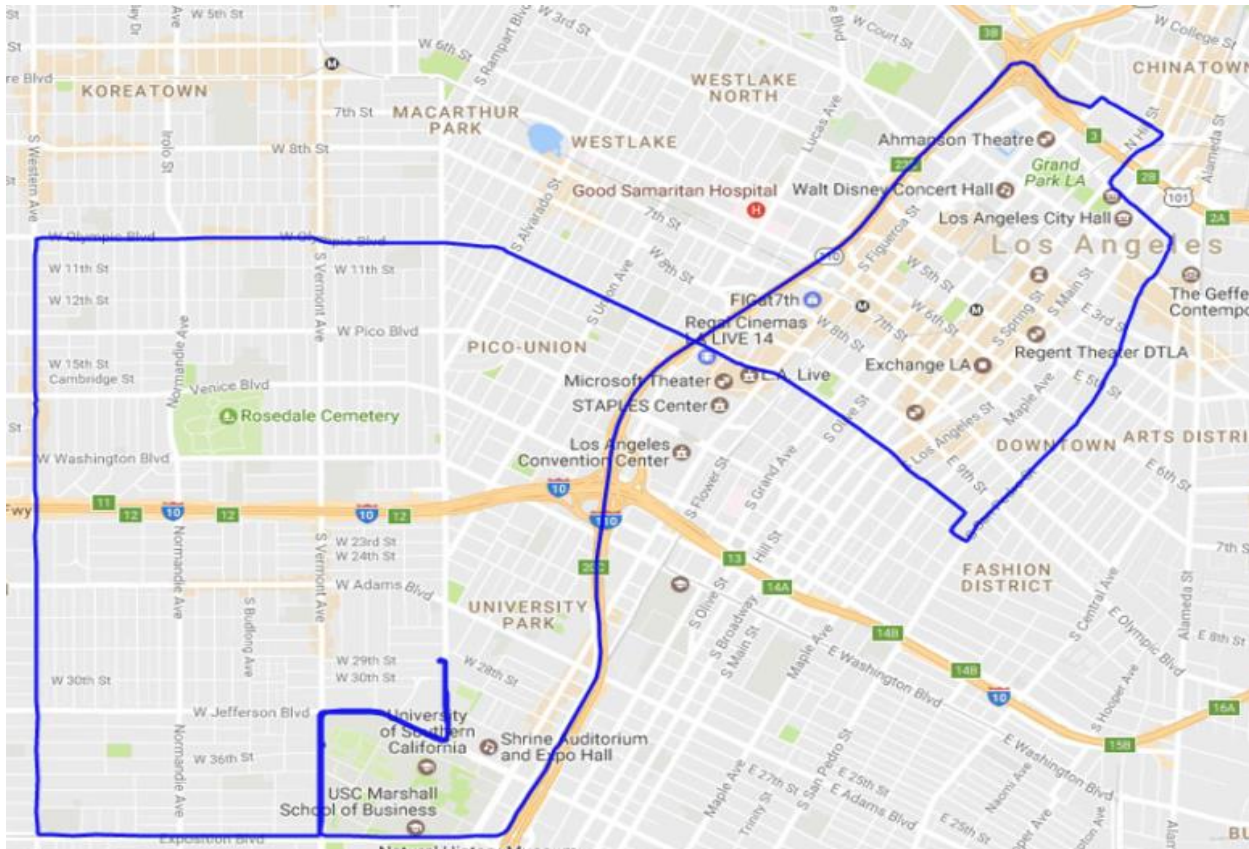


Figure 0-2. Map of Route 1, urban driving downtown Los Angeles

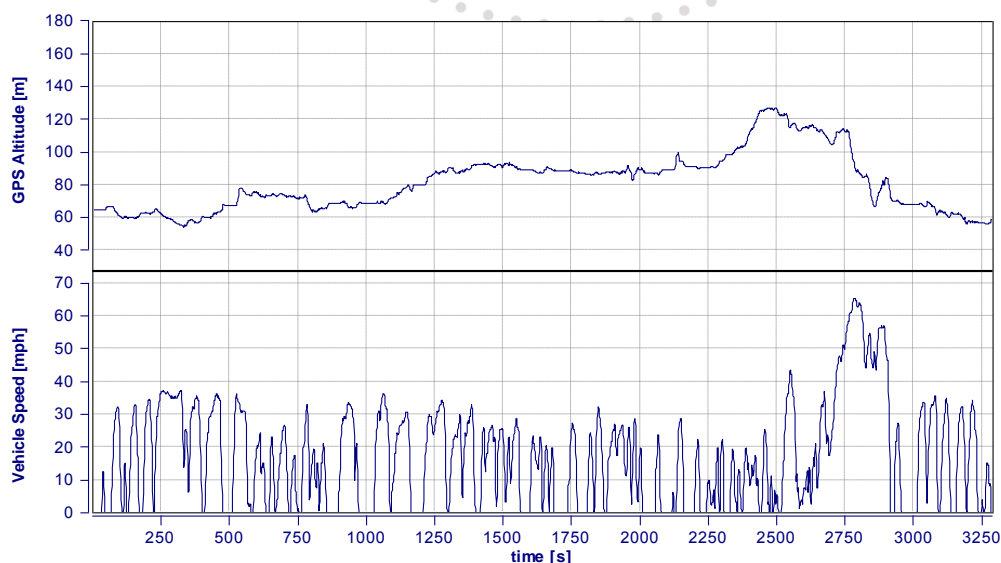


Figure 0-3. Speed and Elevation Profiles for Route 1, urban driving downtown Los Angeles

A map of the highway route, which is designated Route 2, is depicted in Figure 0-4. Route 2 is ~39.2 miles in distance between Oxnard and Santa Barbara, CA. The typical average speed for this route is 49.7 mph, and a typical speed profile for this route is provided in Figure 0-5.

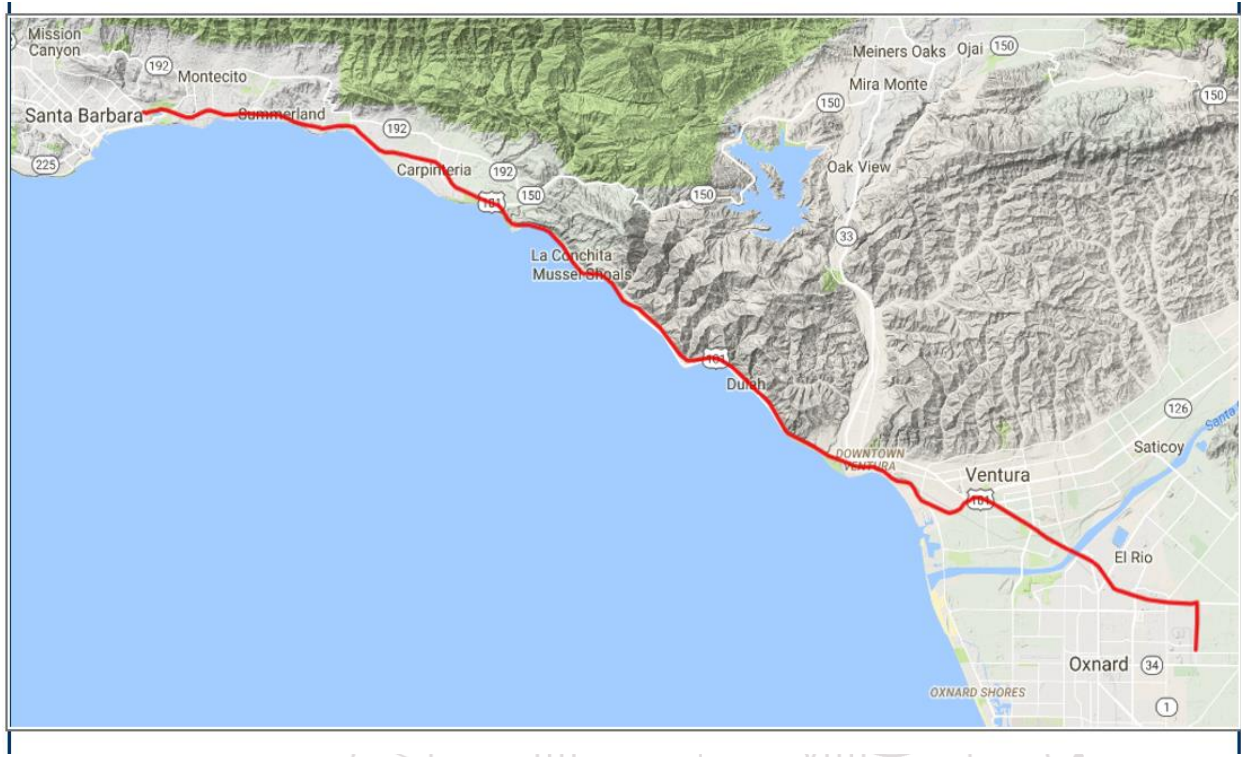


Figure 0-4. Topographic map of Route 2, highway driving between Oxnard and Santa Barbara

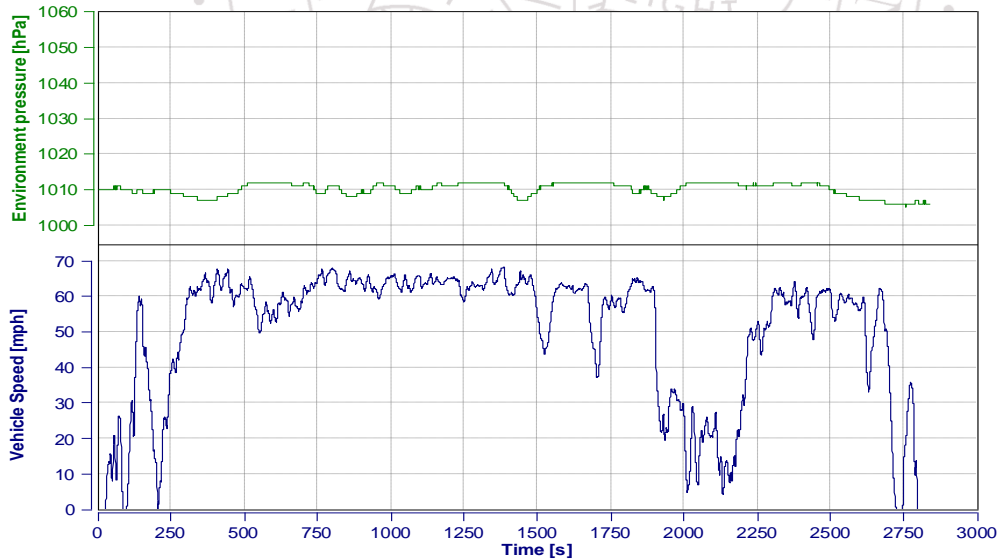


Figure 0-5. Speed and Elevation Profiles for Route 2, highway driving between Oxnard and Santa Barbara

A map of the uphill/downhill route, which is designated Route 3, is depicted in Figure 0-6. Route 3 is ~29.7 miles in distance, with a majority of the miles in the Santa Barbara mountains. The typical average speed for this route is 35.2 mph, and a typical speed profile for this route is provided in Figure 0-7. The route goes to a maximum elevation of ~2,500 feet.

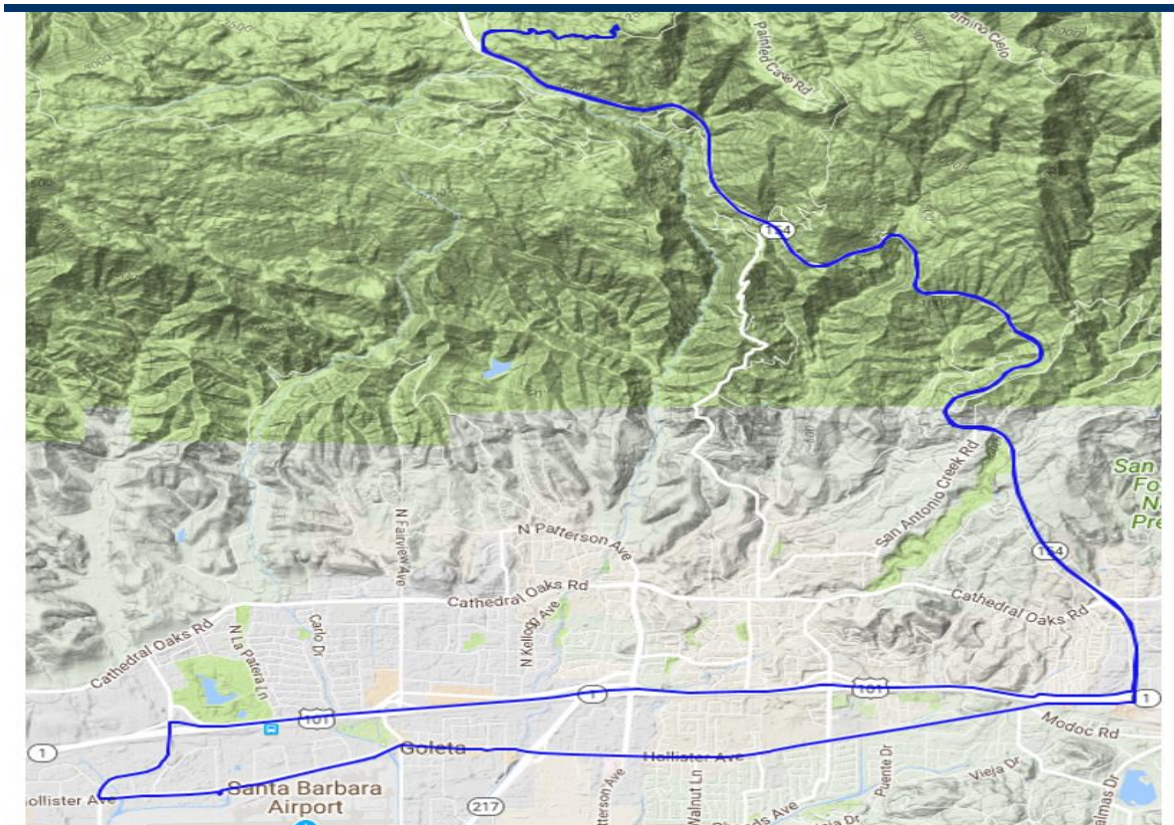


Figure 0-6. Map of Route 3, uphill/downhill driving in the Santa Barbara Mountains

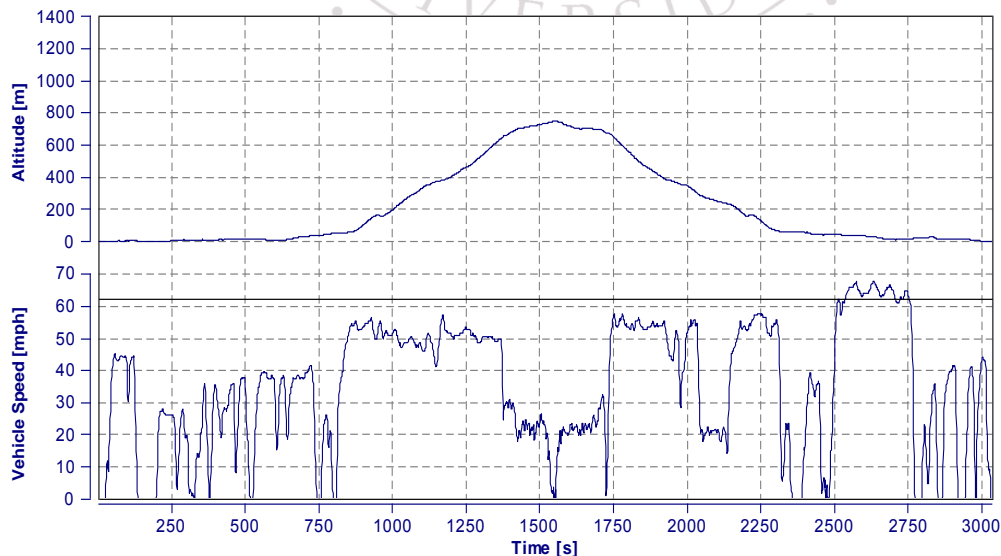


Figure 0-7. Speed and Elevation Profiles for Route 3, uphill/downhill driving in the Santa Barbara Mountains

Appendix B- Detailed Test Data

Case: Highway
Page: Trip Summary

" "
Start Date: 08/31/2017
Start Time: 17:31:51.0



Trip Duration	2942.00	s	ave THC	4.47122	ppm	BS CO2	n/a	g/hphr
Trip Duration (a)	2942.00	s	ave NMHC	3.78960	ppm	BS CO	n/a	g/hphr
Trip Distance	38.02	mi	ave CH4	0.61966	ppm	BS THC	n/a	g/hphr
Trip Distance (a)	38.02	mi	ave CO	86.38496	ppm	BS NMHC	n/a	g/hphr
Trip Fuel Cons. (b)	n/a	kg	ave CO2	12.51356	%	BS CH4	n/a	g/hphr
Trip Fuel Cons. (ab)	n/a	kg	ave NOx	2.08627	ppm	BS NO (d)	n/a	g/hphr
Trip Fuel Cons. EU (ac)	5.53	kg	ave PM	n/a	mg/m3	BS NO2	n/a	g/hphr
Trip Fuel Cons. US (ac)	5.46	kg	ave Soot meas	n/a	mg/m3	BS NOx	n/a	g/hphr
Trip Fuel Cons. Volume (b)	n/a	gall	ave Soot	n/a	mg/m3	BS Soot	n/a	g/hphr
Trip Fuel Cons. Volume (ab)	n/a	gall	ave PN	n/a	#/cm3	BS Soot meas	n/a	g/hphr
Trip Fuel Cons. Volume EU (ac)	1.95	gall	tot THC	0.30792	g	BS PM	n/a	g/hphr
Trip Fuel Cons. Volume US (ac)	1.93	gall	tot NMHC	0.21956	g	BS PN	n/a	#/hpr
Trip Fuel Economy (b)	n/a	mpg_US	tot CH4	0.09892	g	DS CO2	436.19845	g/mi
Trip Fuel Economy (ab)	n/a	mpg_US	tot CO	11.01297	g	DS CO	0.28964	g/mi
Trip Fuel Economy EU (ac)	19.45	mpg_US	tot CO2	16585.75585	g	DS THC	0.00810	g/mi
Trip Fuel Economy US (ac)	19.71	mpg_US	tot NO (d)	0.37690	g	DS NMHC	0.00577	g/mi
Trip Av. Eng. Speed	1638.27	rpm	tot NO2	0.00000	g	DS CH4	0.00260	g/mi
Trip Av. Torque	n/a	lbft	tot NOx	0.15756	g	DS NO (d)	0.00991	g/mi
Trip Av. Power	n/a	hp	tot Soot	n/a	g	DS NO2	0.00000	g/mi
Trip Work	n/a	hphr	tot Soot meas	n/a	g	DS NOx	0.00414	g/mi
Trip Exhaust Mass	85.59	kg	tot PM	n/a	g	DS Soot	n/a	g/mi
Trip Exhaust Mass EU (ac)	n/a	kg	tot PN	n/a	#	DS Soot meas	n/a	g/mi
Trip Exhaust Mass US (ac)	n/a	kg	PM measurement type	0.00000	-	DS PM	n/a	g/mi
Trip Av. Amb. Temperature	80.60	deg_F	PM correction type	1.00000	alpha(HC)	DS PN	n/a	#/mi
Trip Av. Humidity	56.85	%	tot Soot on PM filter (estim.)	n/a	mg	FS CO2	n/a	g/kg
Fuel Type	Petrol (E10)		Soot --> PM simple scaling factor	1.00000	-	FS CO	n/a	g/kg
			Soot --> PM alpha scaling factor	0.00000	-	FS THC	n/a	g/kg
			Trip Av. Veh. Speed	46.52764	mi/hr	FS NMHC	n/a	g/kg
			Trip Velocity Zero	5.13256	%	FS CH4	n/a	g/kg
			Trip Velocity Urban	30.11557	%	FS NO (d)	n/a	g/kg
			Trip Velocity Rural	5.03059	%	FS NO2	n/a	g/kg
			Trip Velocity Motorway	64.85384	%	FS NOx	n/a	g/kg
						FS Soot	n/a	g/kg
						FS Soot meas	n/a	g/kg
						FS PM	n/a	g/kg
						FS PN	n/a	#/kg

(a) GAS PEMS measurement state only, (b) based on fuel rate input (ECU, Fuel Meter), (c) calculated from carbon balance
(d) NO calculated using molecular weight of NO2

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Touareg /
Engine: Gasoline / 3.6L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

Page: Trip Summary Drift Corrected

Start Date: 08/31/2017

Start Time: 17:31:51.0

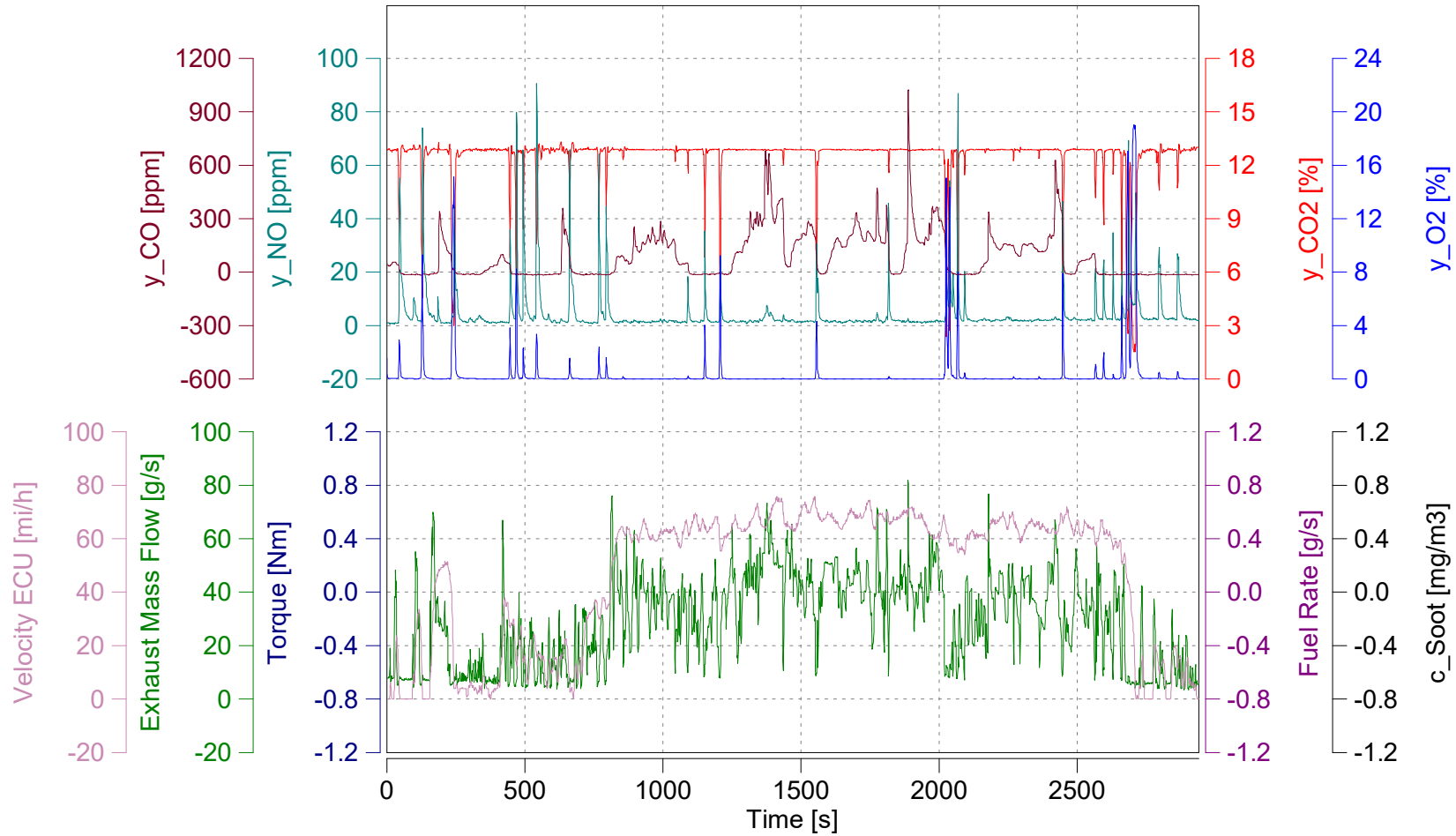


Trip Duration	2942.00	s	ave THC DC	6.06058	ppm	BS CO2 DC	n/a	g/hphr
Trip Duration (a)	2942.00	s	ave NMHC DC	5.40913	ppm	BS CO DC	n/a	g/hphr
Trip Distance	38.02	mi	ave CH4 DC	0.59222	ppm	BS THC DC	n/a	g/hphr
Trip Distance (a)	38.02	mi	ave CO DC	86.99635	ppm	BS NMHC DC	n/a	g/hphr
Trip Fuel Cons. (b)	n/a	kg	ave CO2 DC	12.51771	%	BS CH4 DC	n/a	g/hphr
Trip Fuel Cons. (ab)	n/a	kg	ave NOx DC	2.08489	ppm	BS NO DC (d)	n/a	g/hphr
Trip Fuel Cons. EU (ac)	5.53	kg	ave PM	n/a	mg/m3	BS NO2 DC	n/a	g/hphr
Trip Fuel Cons. US (ac)	5.46	kg	ave Soot meas	n/a	mg/m3	BS NOx DC	n/a	g/hphr
Trip Fuel Cons. Volume (b)	n/a	gall	ave Soot	n/a	mg/m3	BS Soot	n/a	g/hphr
Trip Fuel Cons. Volume (ab)	n/a	gall	ave PN DC	n/a	#/cm3	BS Soot meas	n/a	g/hphr
Trip Fuel Cons. Volume EU (ac)	1.95	gall	tot THC DC	0.41737	g	BS PM	n/a	g/hphr
Trip Fuel Cons. Volume US (ac)	1.93	gall	tot NMHC DC	0.32149	g	BS PN DC	n/a	#/hpr
Trip Fuel Economy (b)	n/a	mpg_US	tot CH4 DC	0.09668	g	DS CO2 DC	436.34313	g/mi
Trip Fuel Economy (ab)	n/a	mpg_US	tot CO DC	11.09092	g	DS CO DC	0.29169	g/mi
Trip Fuel Economy EU (ac)	19.45	mpg_US	tot CO2 DC	16591.25693	g	DS THC DC	0.01098	g/mi
Trip Fuel Economy US (ac)	19.71	mpg_US	tot NO DC (d)	0.37641	g	DS NMHC DC	0.00846	g/mi
Trip Av. Eng. Speed	1638.27	rpm	tot NO2 DC	0.00000	g	DS CH4 DC	0.00254	g/mi
Trip Av. Torque	n/a	lbft	tot NOx DC	0.15741	g	DS NO DC (d)	0.00990	g/mi
Trip Av. Power	n/a	hp	tot Soot	n/a	g	DS NO2 DC	0.00000	g/mi
Trip Work	n/a	hphr	tot Soot meas	n/a	g	DS NOx DC	0.00414	g/mi
Trip Exhaust Mass	85.59	kg	tot PM	n/a	g	DS Soot	n/a	g/mi
Trip Exhaust Mass EU (ac)	n/a	kg	tot PN DC	n/a	#	DS Soot meas	n/a	g/mi
Trip Exhaust Mass US (ac)	n/a	kg	PM measurement type	0.00000	-	DS PM	n/a	g/mi
Trip Av. Amb. Temperature	80.60	deg_F	PM correction type	1.00000	alpha(HC)	DS PN DC	n/a	#/mi
Trip Av. Humidity	56.85	%	tot Soot on PM filter (estim.)	n/a	mg	FS CO2 DC	n/a	g/kg
Fuel Type	Petrol (E10)		Soot --> PM simple scaling factor	1.00000	-	FS CO DC	n/a	g/kg
			Soot --> PM alpha scaling factor	0.00000	-	FS THC DC	n/a	g/kg
			Trip Av. Veh. Speed	46.52764	mi/hr	FS NMHC DC	n/a	g/kg
			Trip Velocity Zero	5.13256	%	FS CH4 DC	n/a	g/kg
			Trip Velocity Urban	30.11557	%	FS NO DC (d)	n/a	g/kg
			Trip Velocity Rural	5.03059	%	FS NO2 DC	n/a	g/kg
			Trip Velocity Motorway	64.85384	%	FS NOx DC	n/a	g/kg
						FS Soot	n/a	g/kg
						FS Soot meas	n/a	g/kg
						FS PM	n/a	g/kg
						FS PN DC	n/a	#/kg

(a) GAS PEMS measurement state only, (b) based on fuel rate input (ECU, Fuel Meter), (c) calculated from carbon balance
 (d) NO calculated using molecular weight of NO2

Concerto Version: 480 Build 215, Serial Number: 8468
 M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Touareg /
 Engine: Gasoline / 3.6L
 NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
 Dry / Wet Corr.: 2 - CFR40 §86.1342-90



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

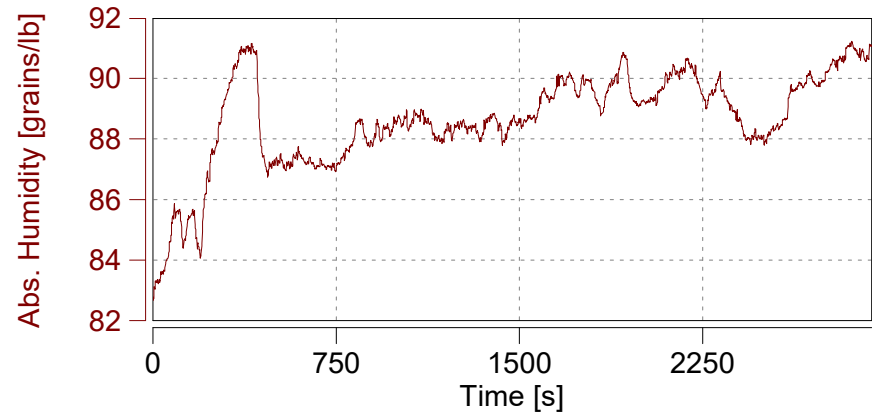
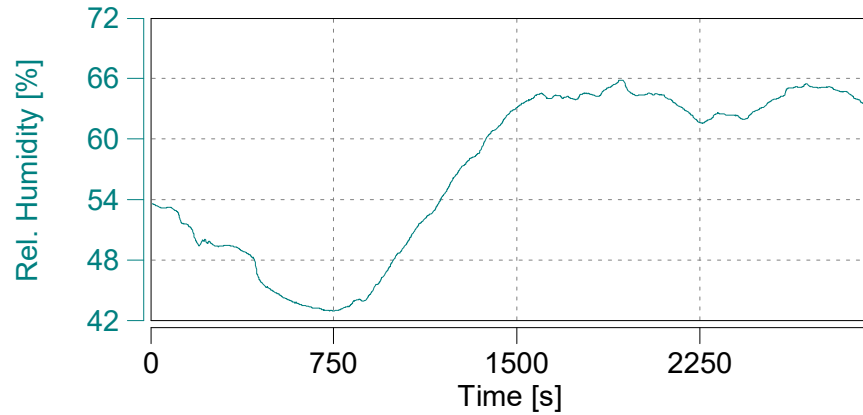
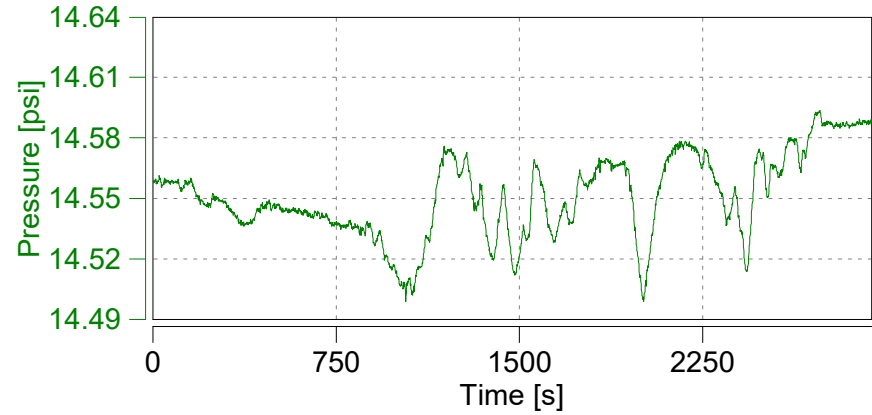
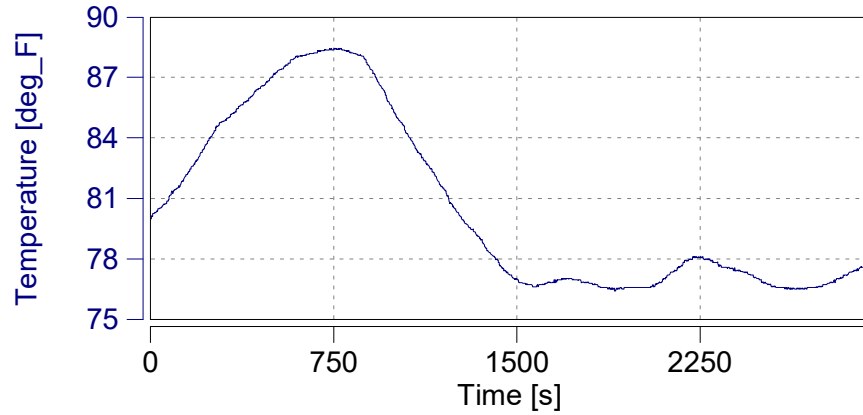
Vehicle: 2017 VW Touareg /
Engine: Gasoline / 3.6L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

Page: Ambient Conditions

Start Date: 08/31/2017

Start Time: 17:31:51.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

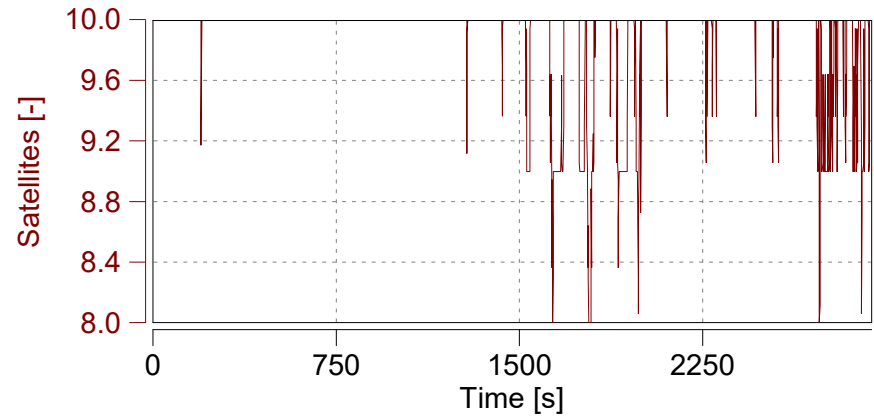
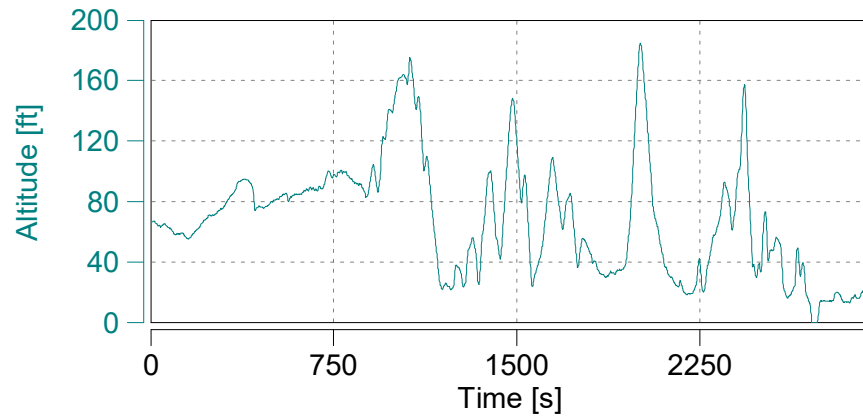
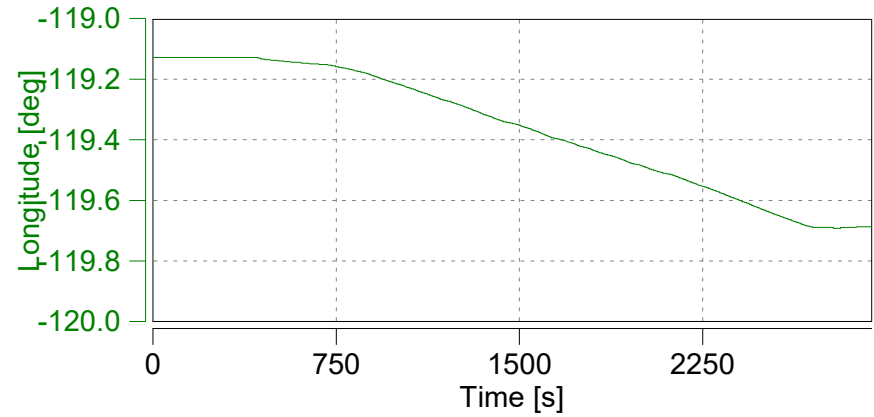
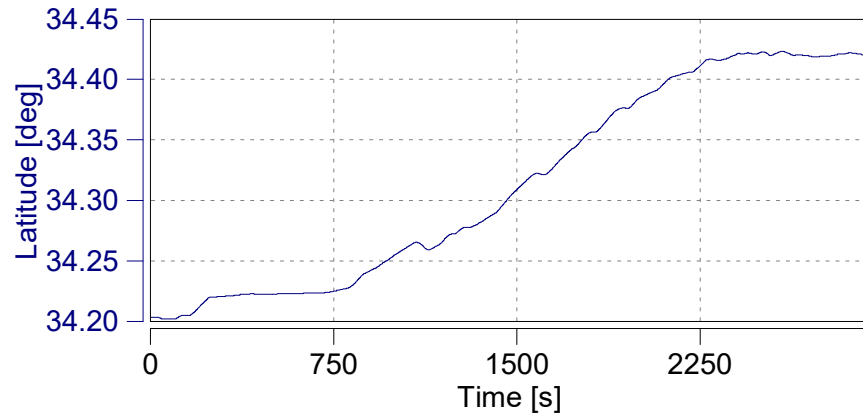
Vehicle: 2017 VW Touareg /
Engine: Gasoline / 3.6L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

Page: GPS

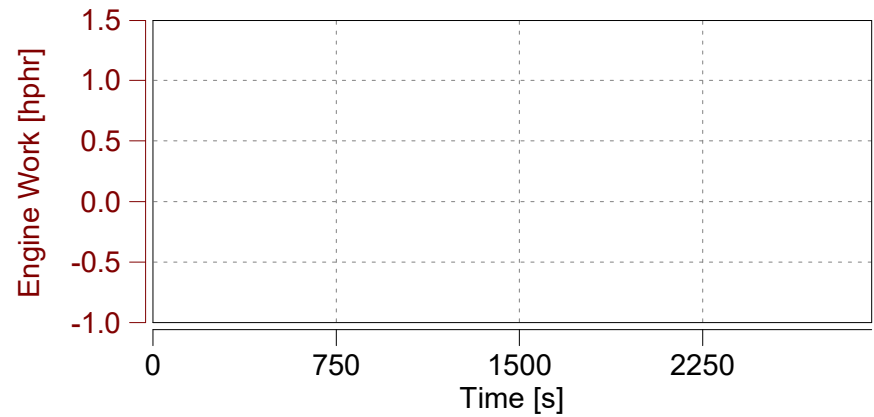
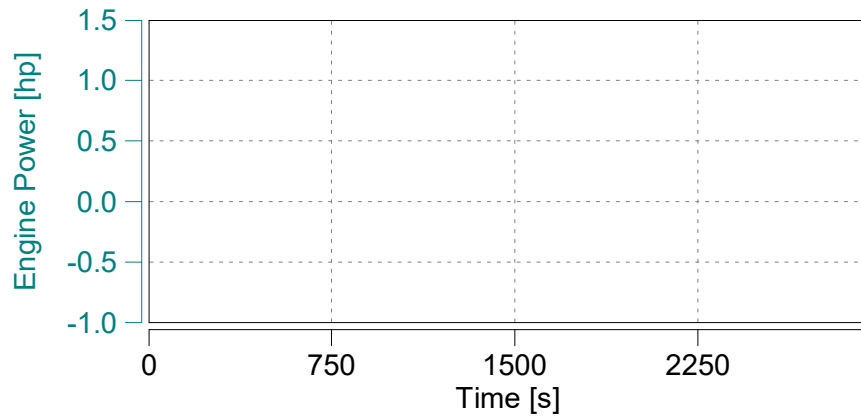
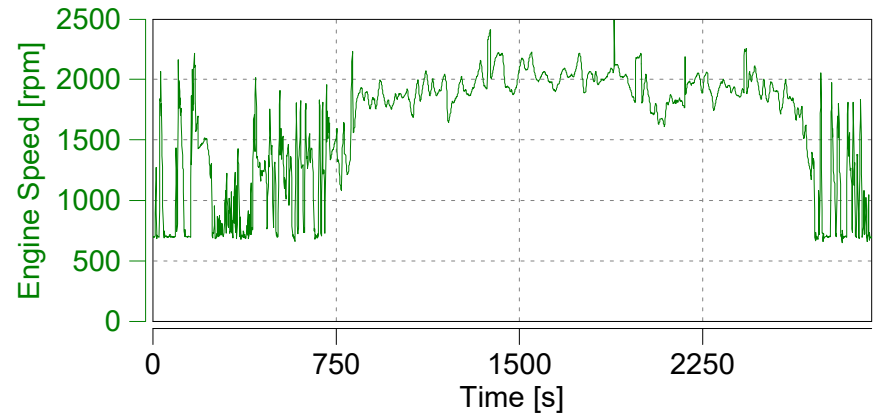
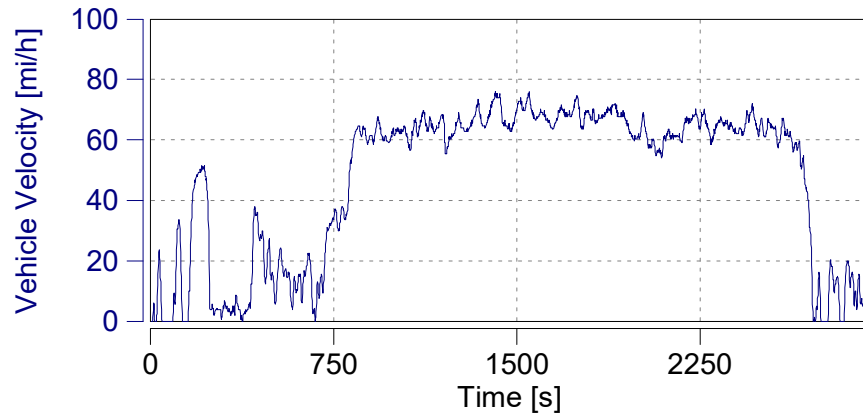
Start Date: 08/31/2017

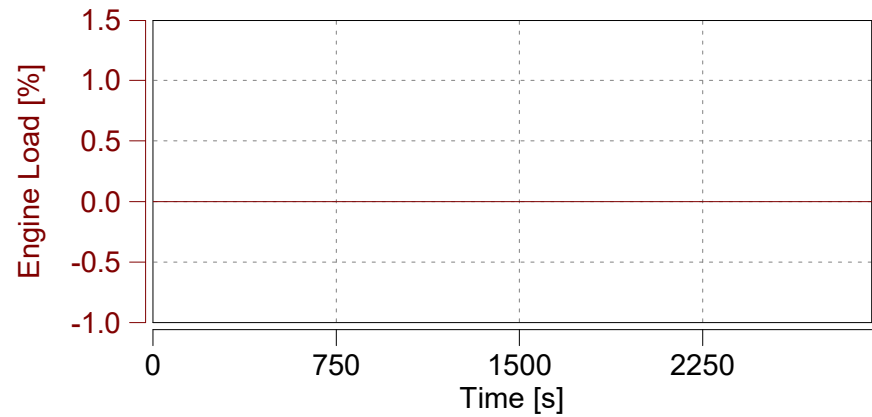
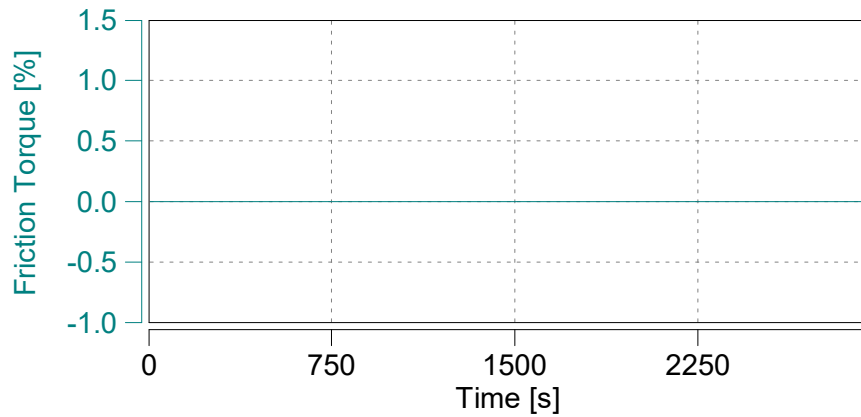
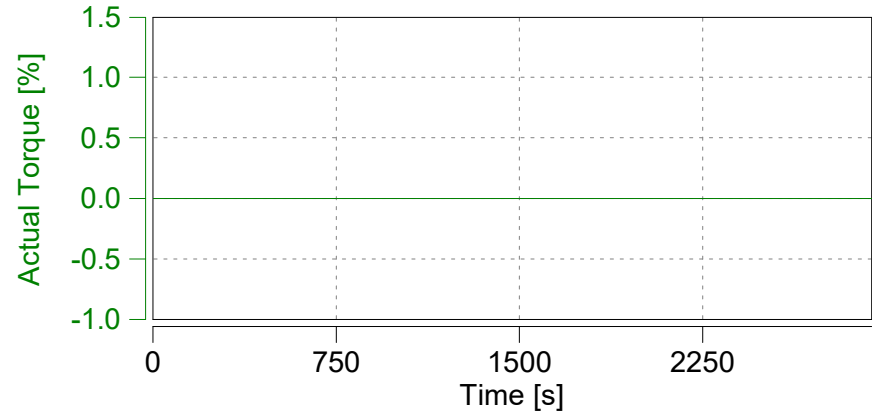
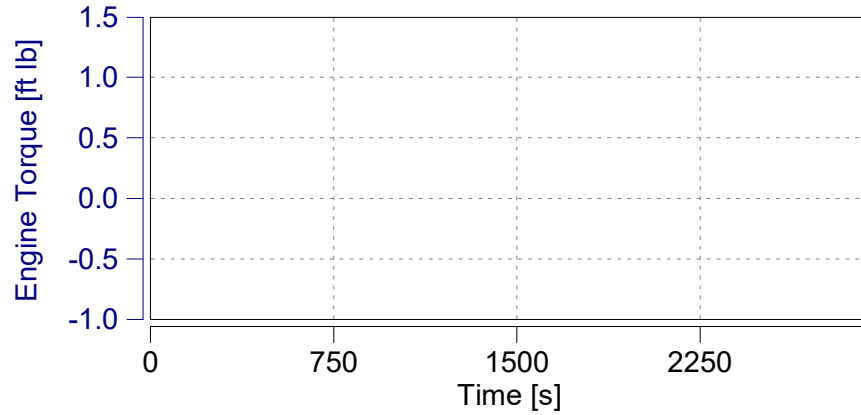
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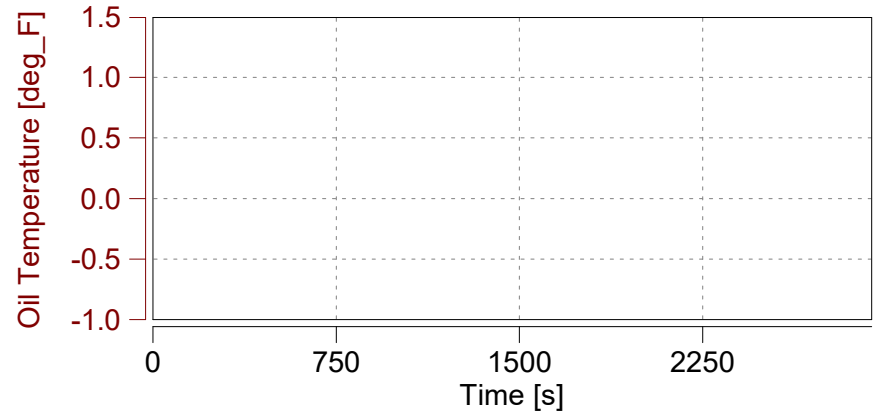
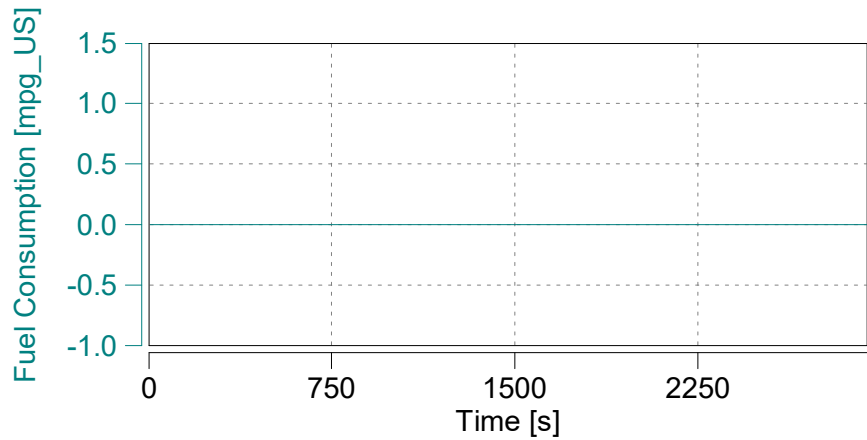
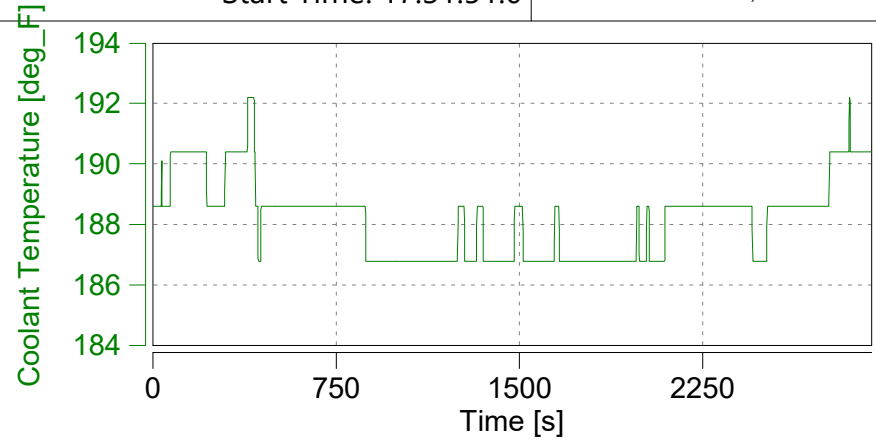
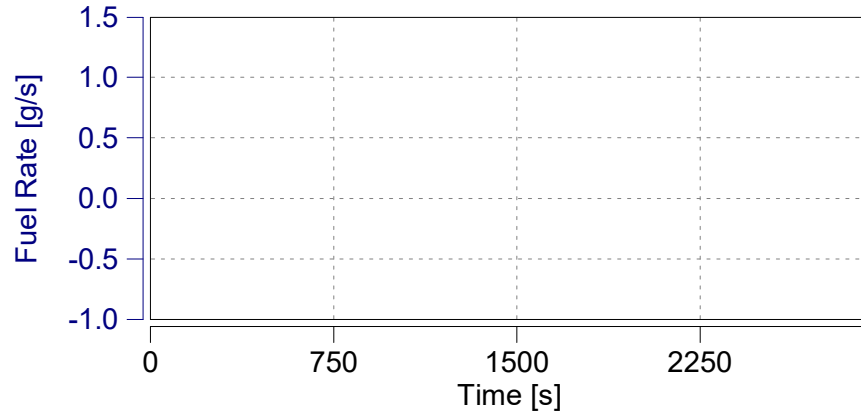


Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Touareg /
Engine: Gasoline / 3.6L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90





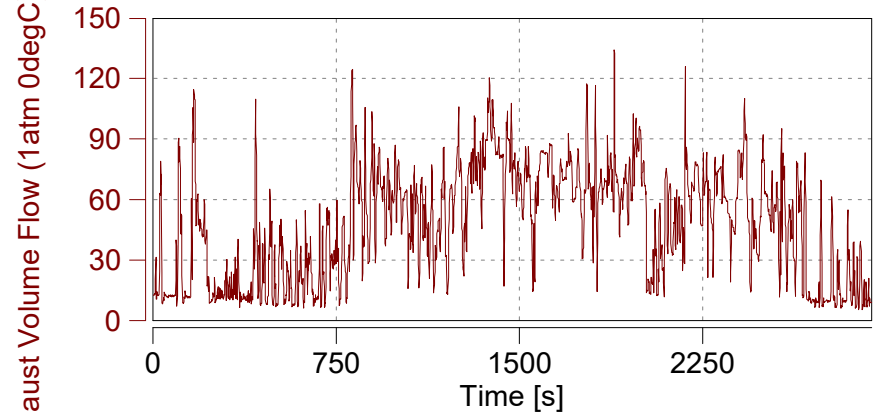
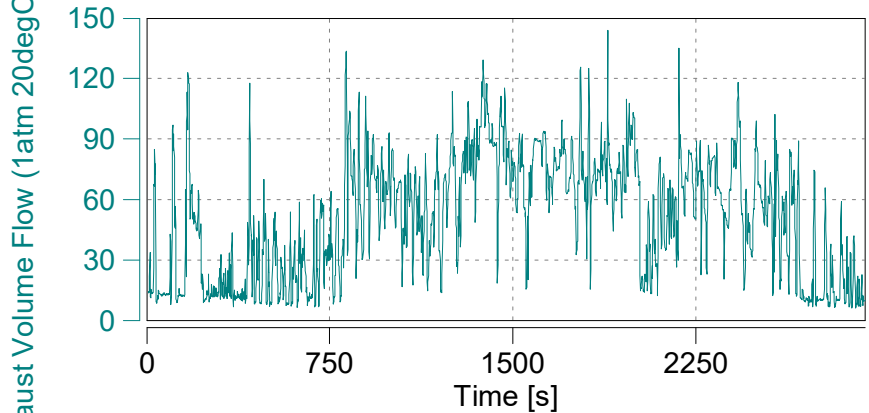
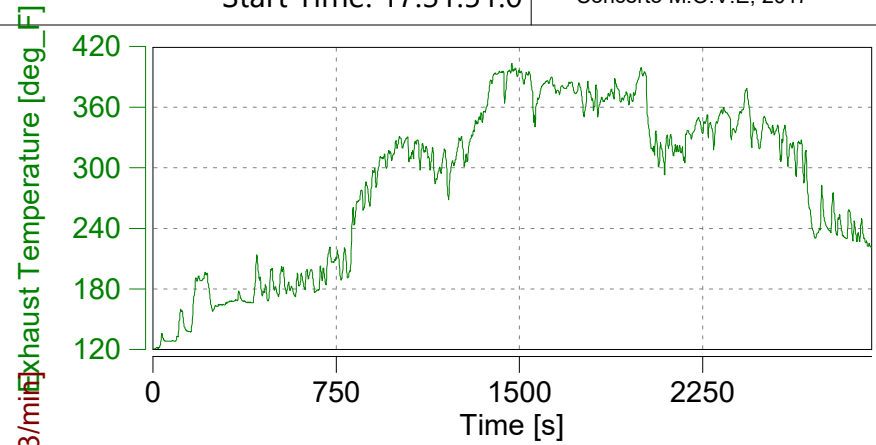
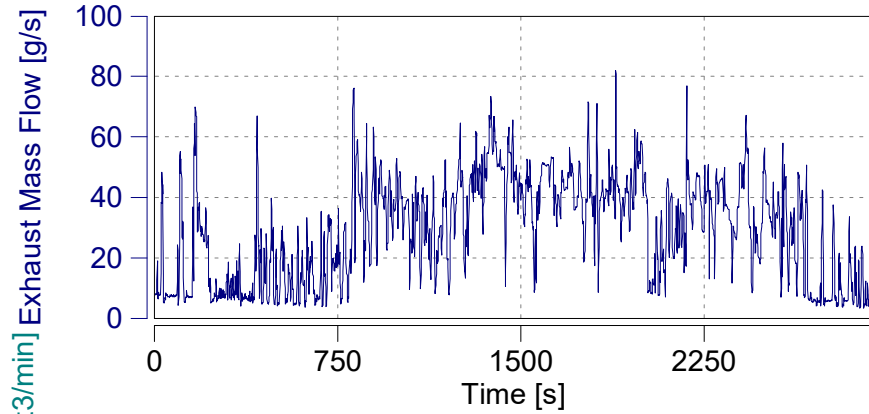


Case: Highway

Page: Exhaust Flow (1)

Start Date: 08/31/2017

Start Time: 17:31:51.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

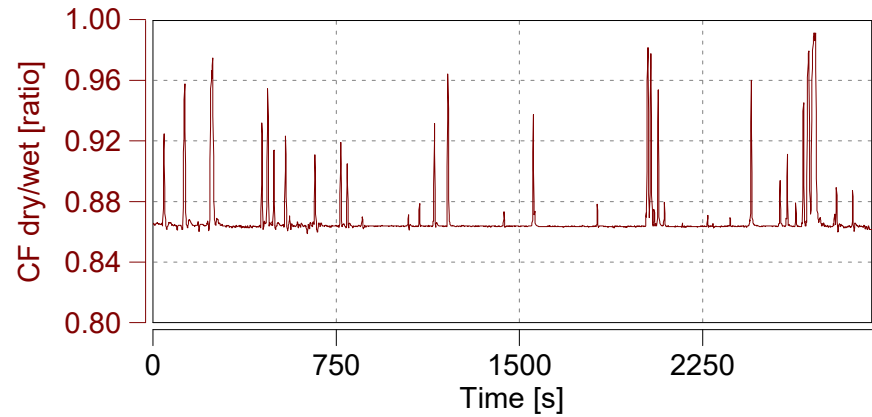
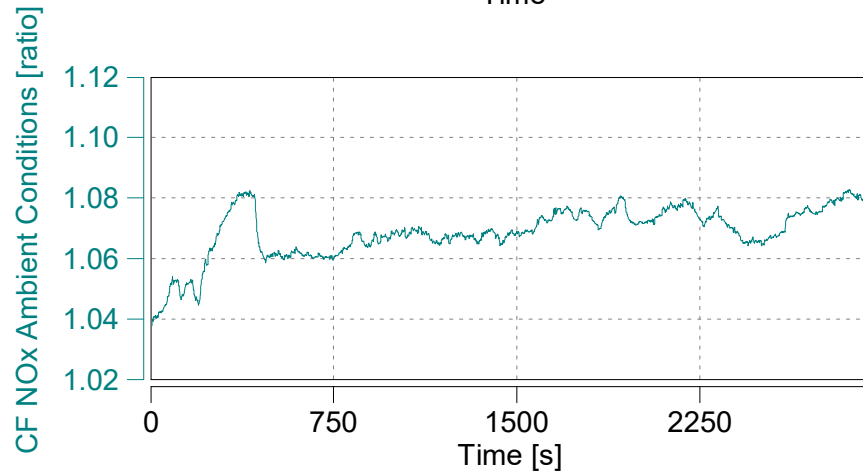
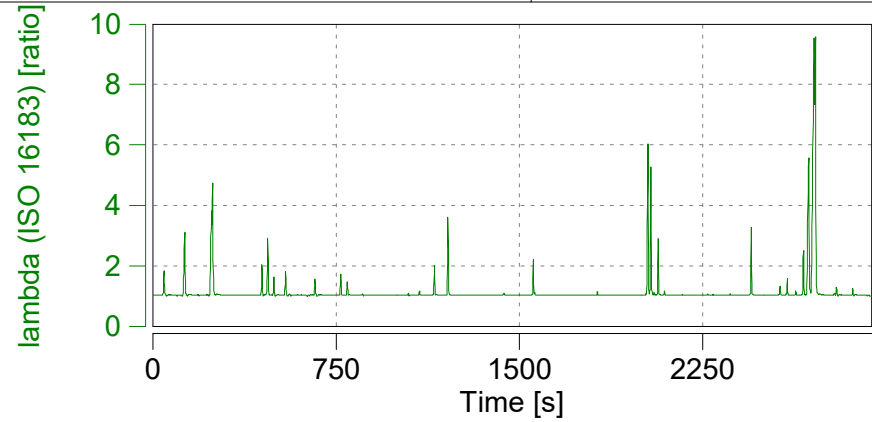
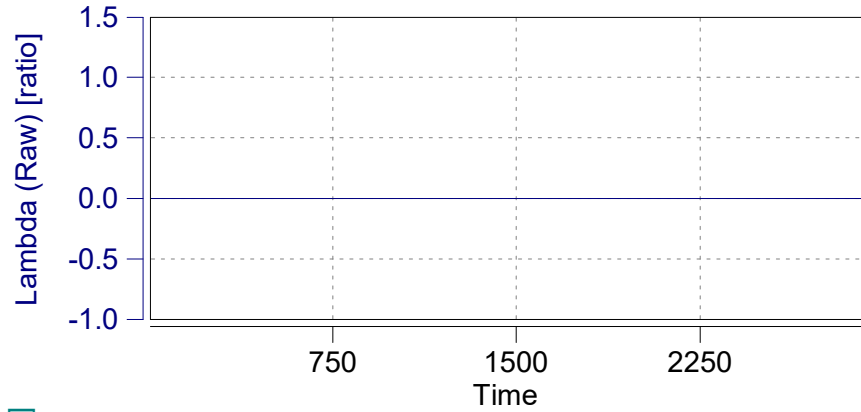
Vehicle: 2017 VW Touareg /
Engine: Gasoline / 3.6L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

Page: Exhaust Flow (2)

Start Date: 08/31/2017

Start Time: 17:31:51.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

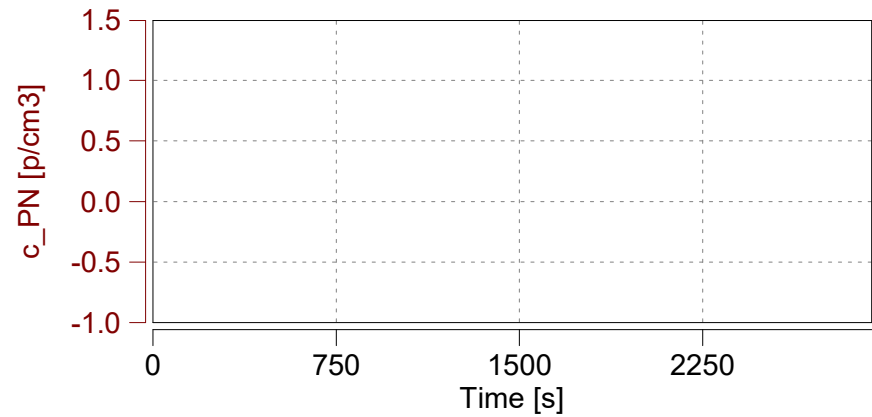
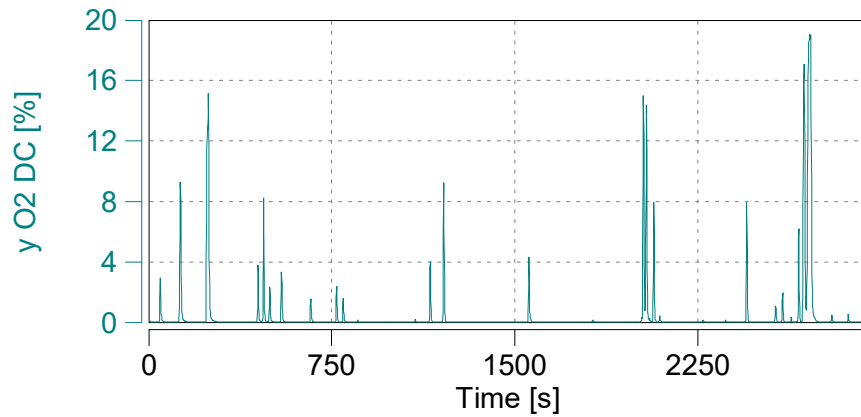
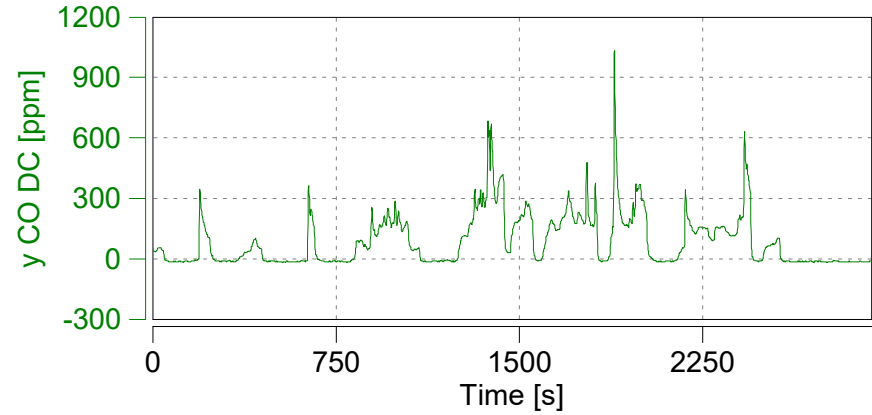
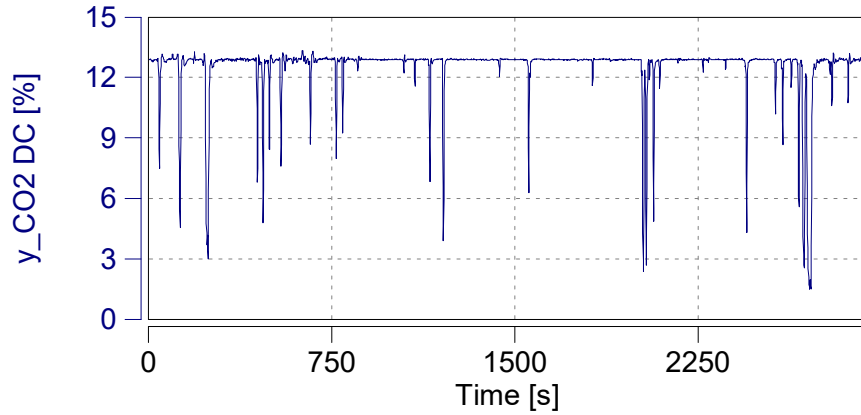
Vehicle: 2017 VW Touareg /
Engine: Gasoline / 3.6L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

Page: Corrected Emissions (1)

Start Date: 08/31/2017

Start Time: 17:31:51.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

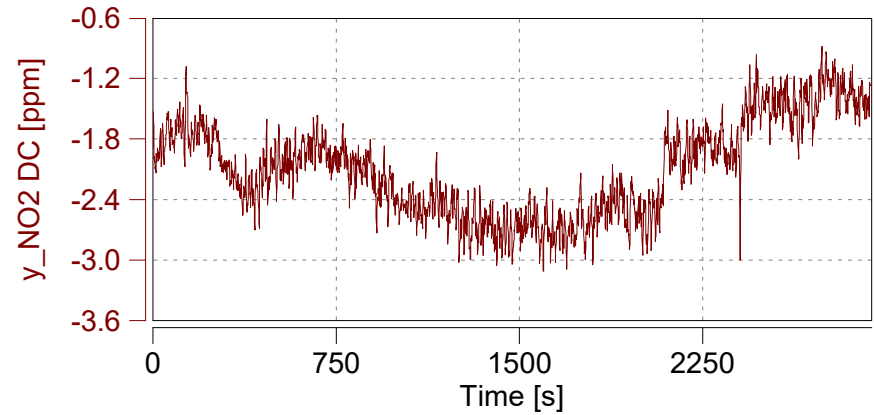
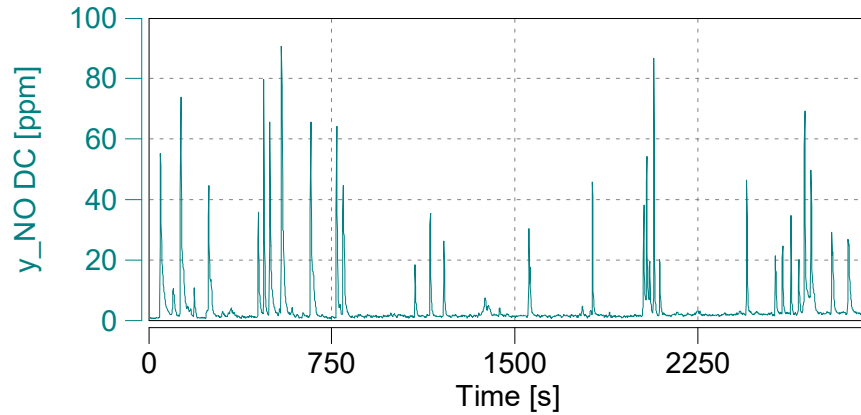
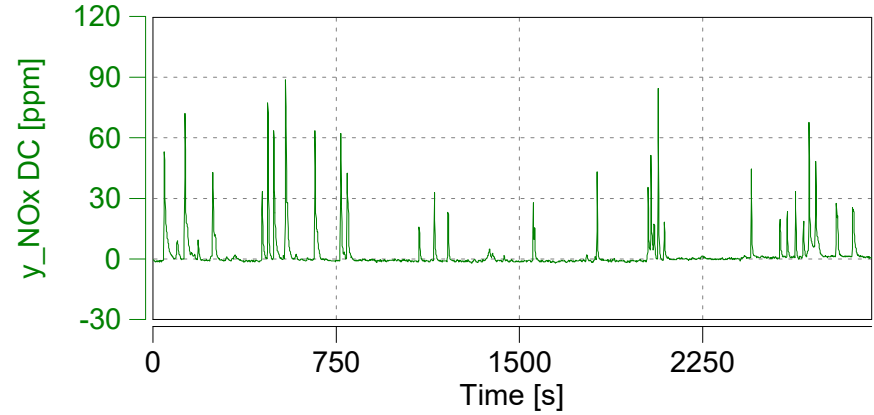
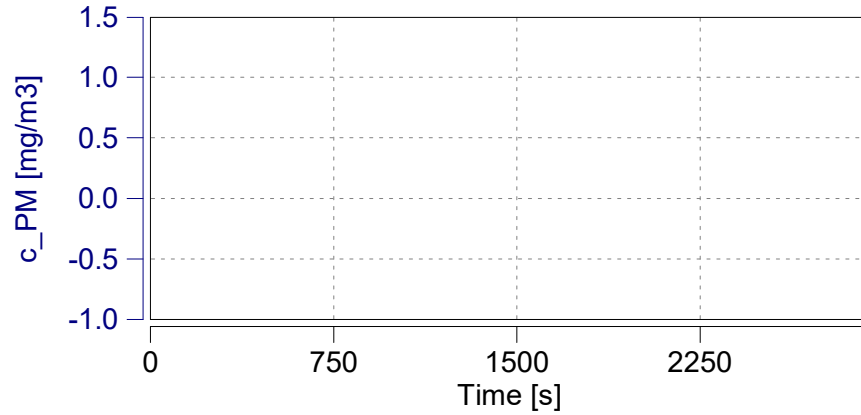
Vehicle: 2017 VW Touareg /
Engine: Gasoline / 3.6L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

Page: Corrected Emissions (2)

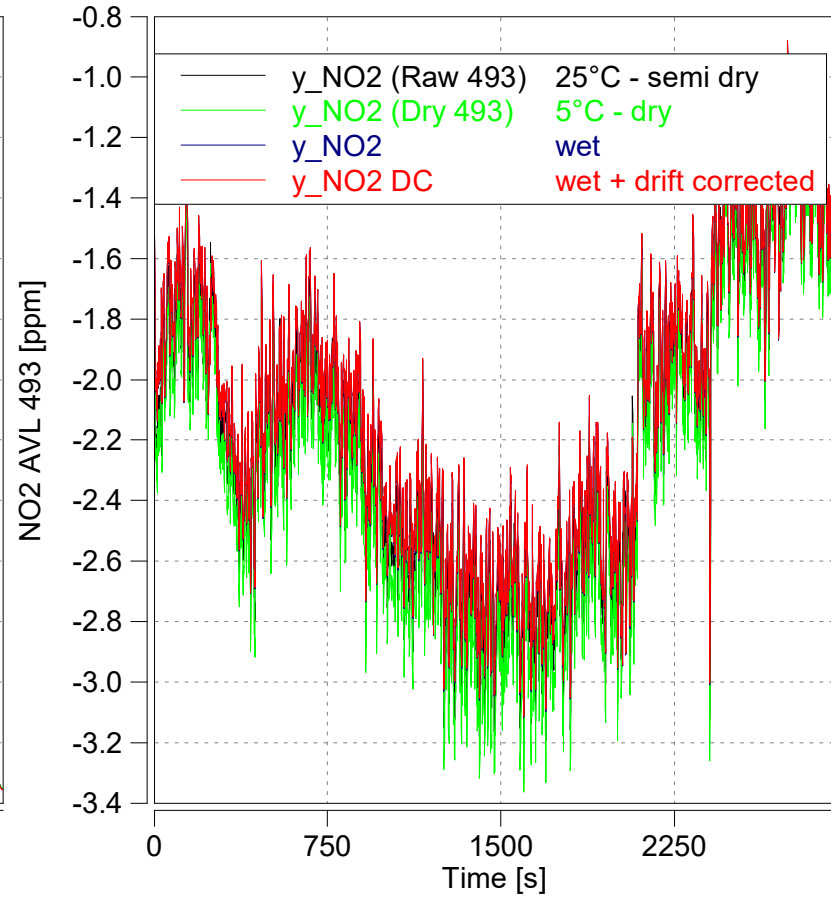
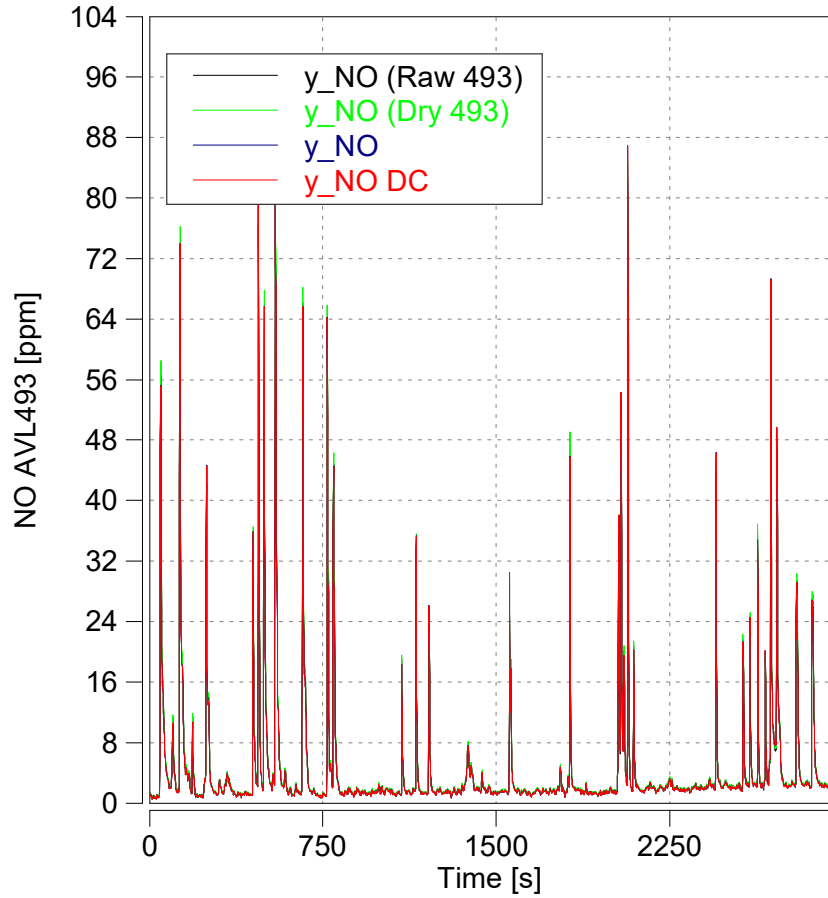
Start Date: 08/31/2017

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Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

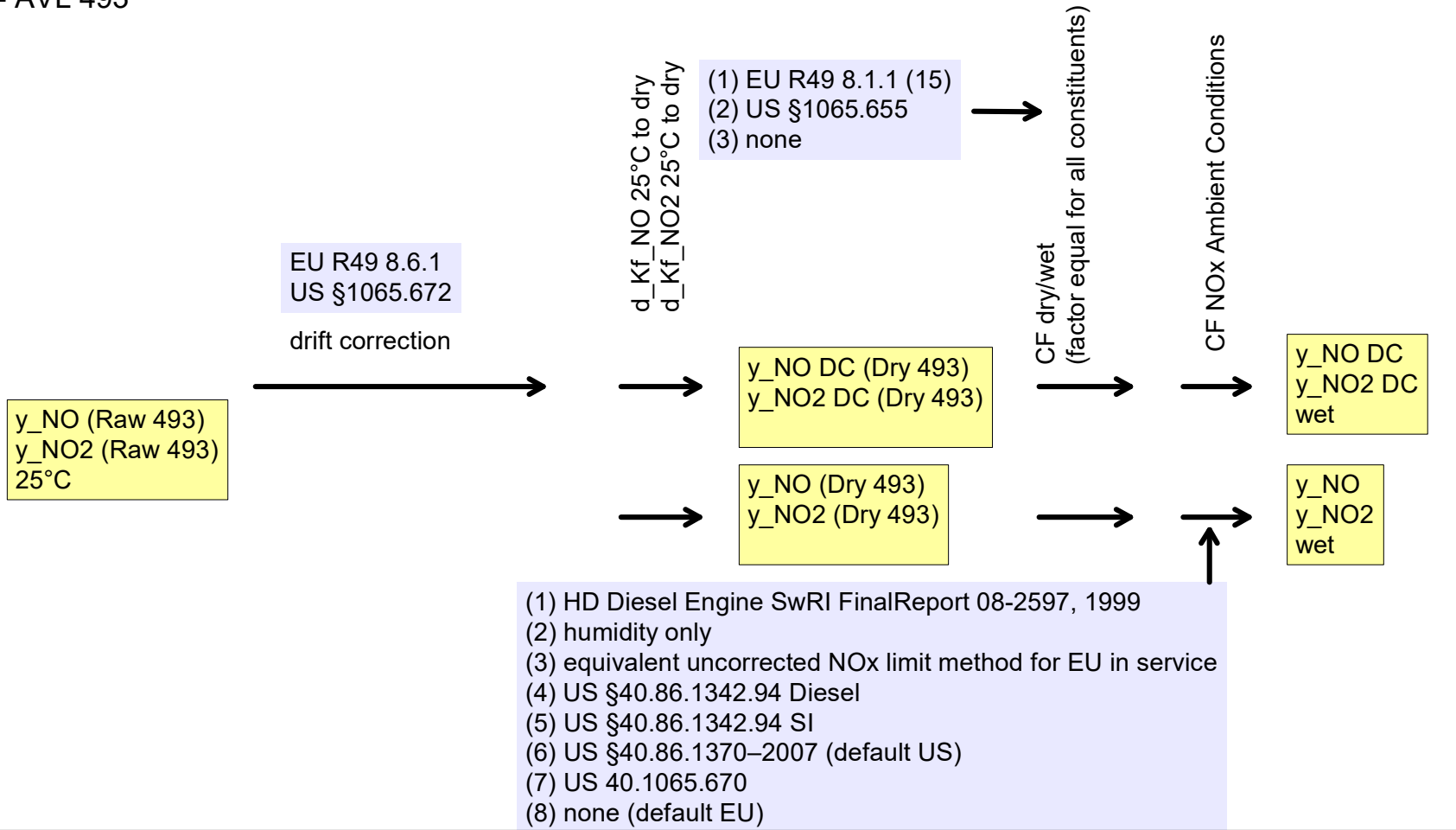
Vehicle: 2017 VW Touareg /
Engine: Gasoline / 3.6L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Touareg /
Engine: Gasoline / 3.6L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

NOx - AVL 493

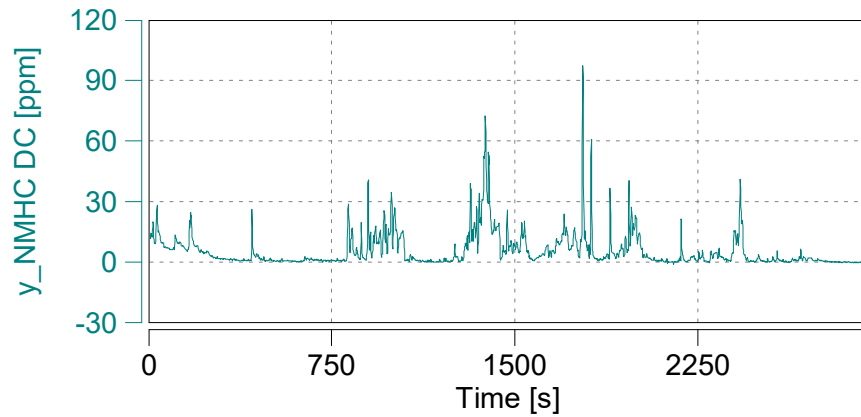
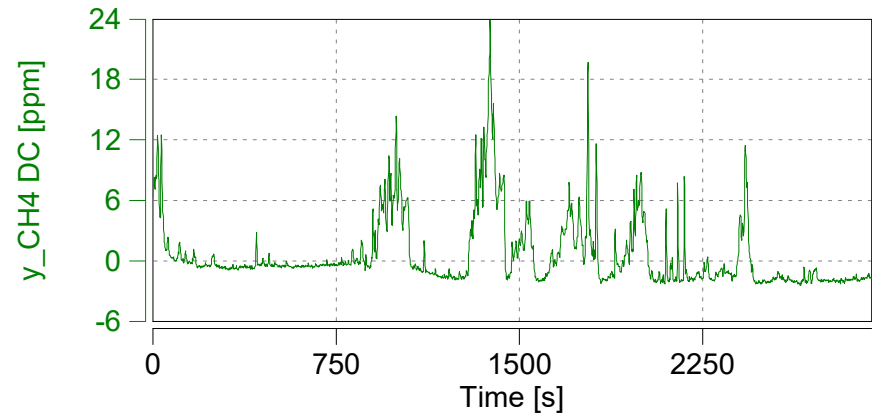
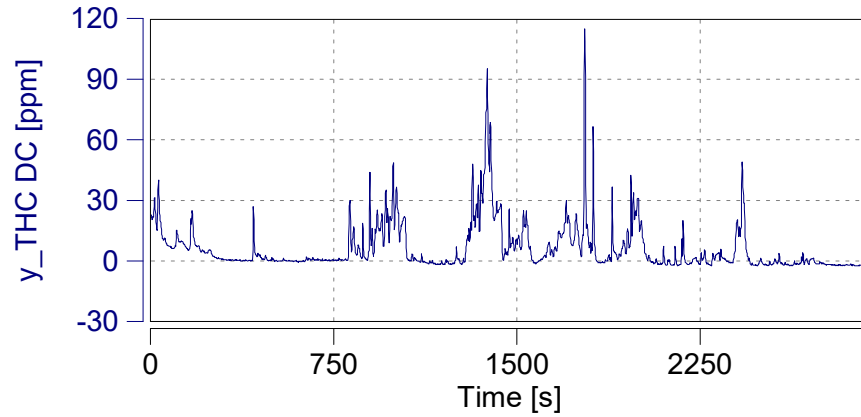


Case: Highway

Page: Corrected Emissions (5)

Start Date: 08/31/2017

Start Time: 17:31:51.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

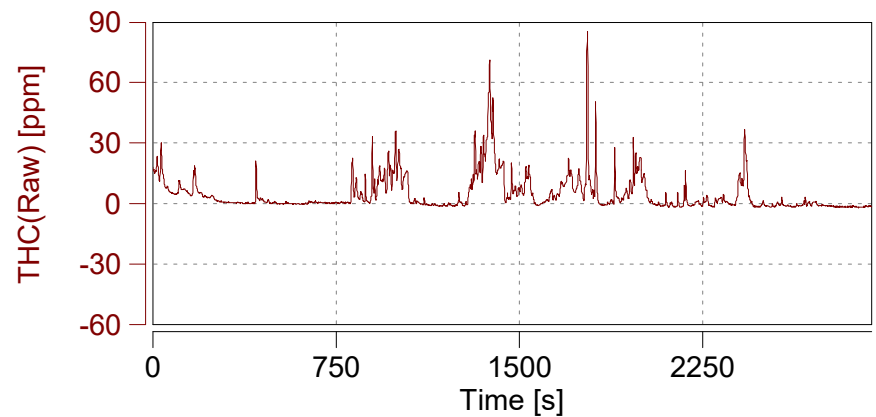
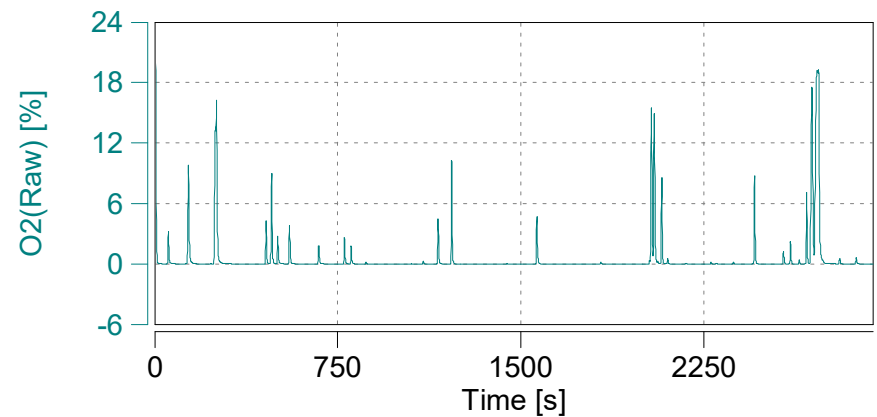
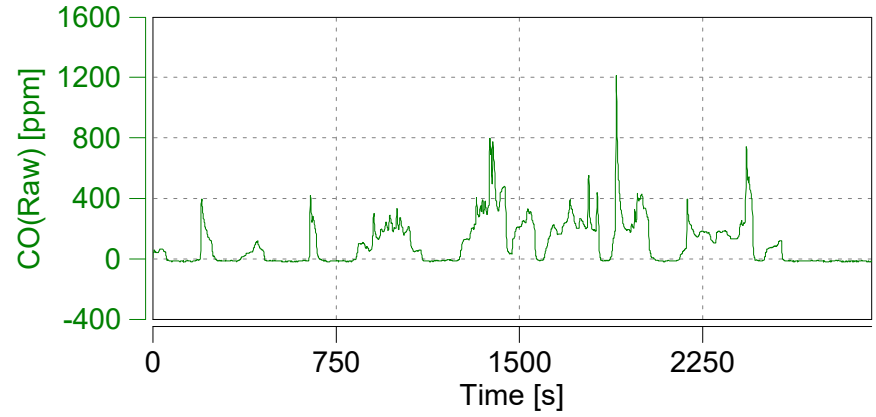
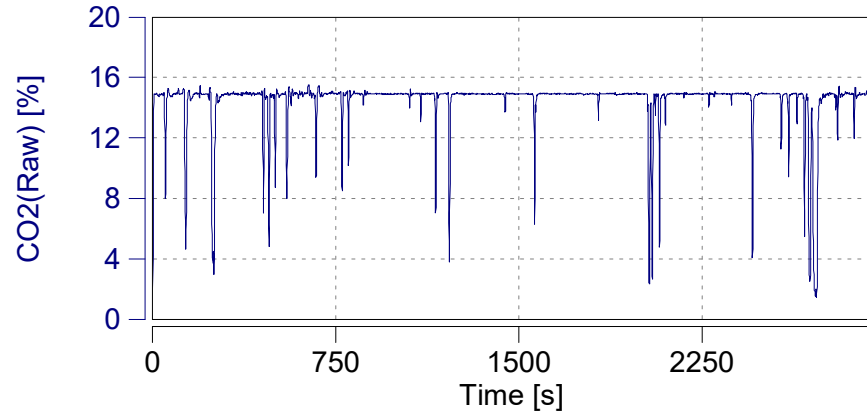
Vehicle: 2017 VW Touareg /
Engine: Gasoline / 3.6L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

Page: Emissions Raw Data (1)

Start Date: 08/31/2017

Start Time: 17:31:51.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

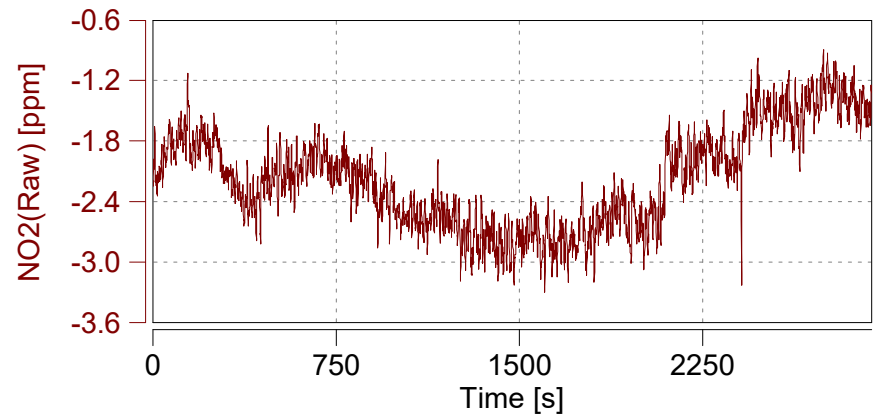
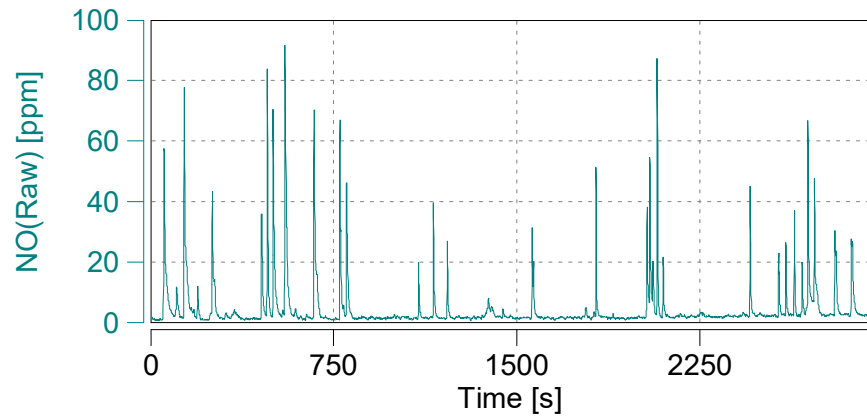
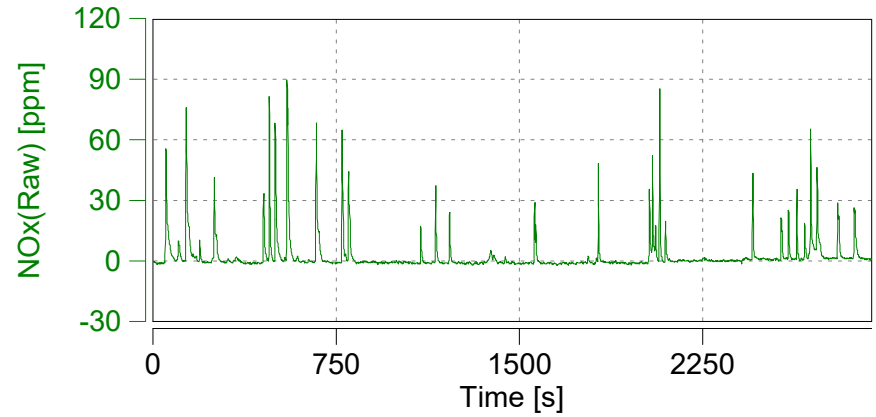
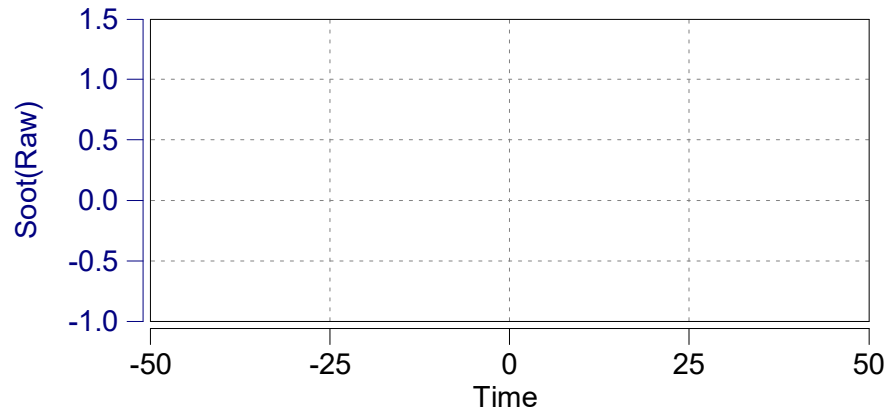
Vehicle: 2017 VW Touareg /
Engine: Gasoline / 3.6L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

Page: Emissions Raw Data (2)

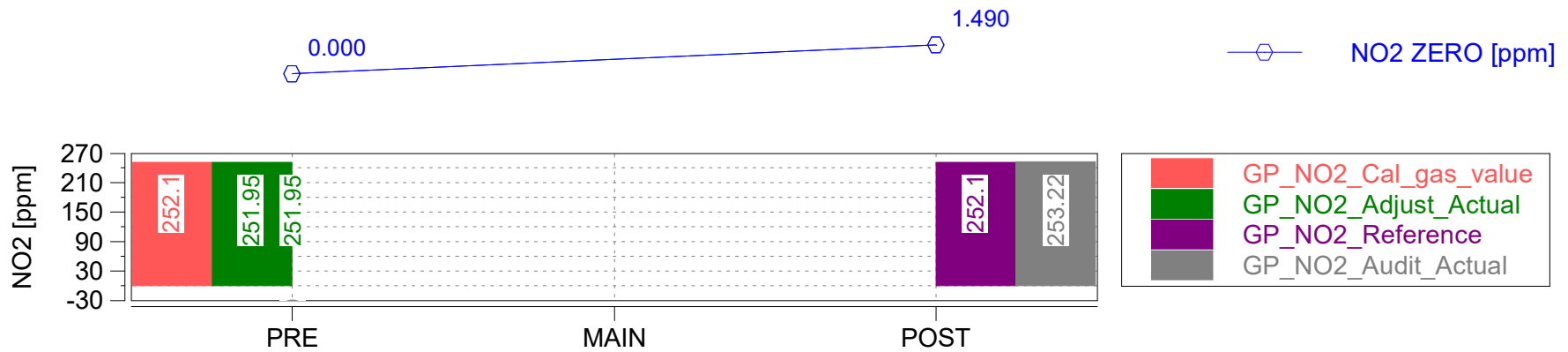
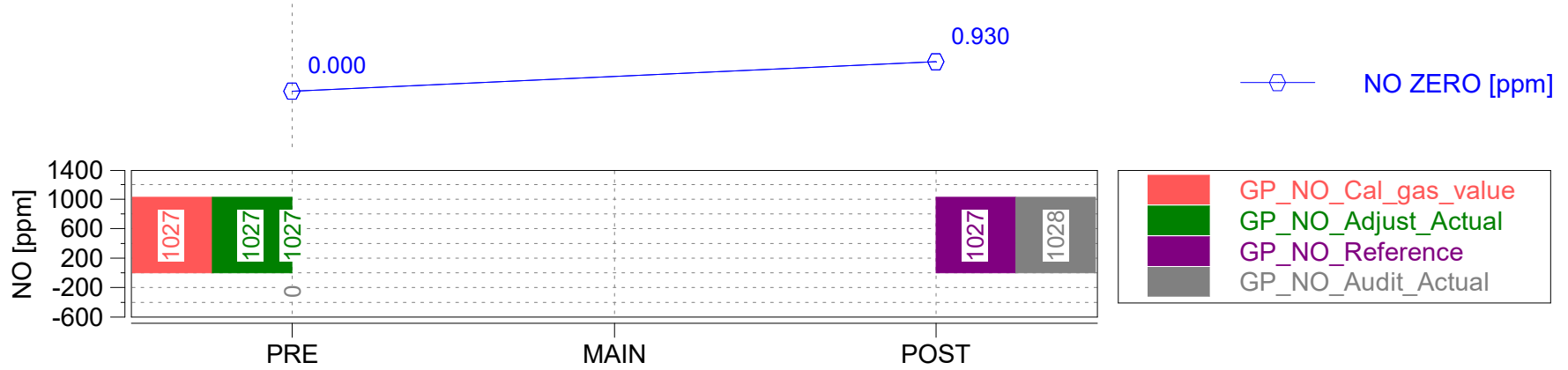
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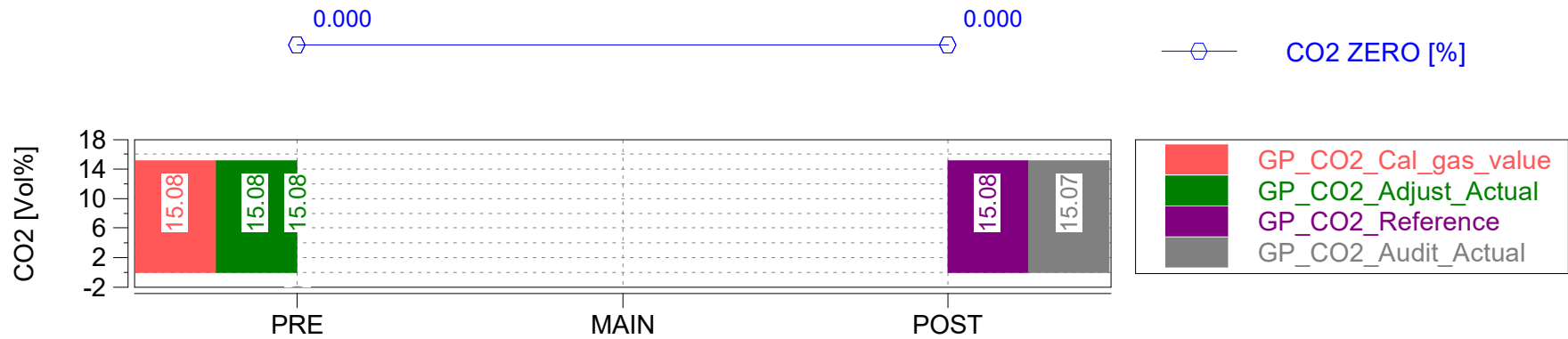
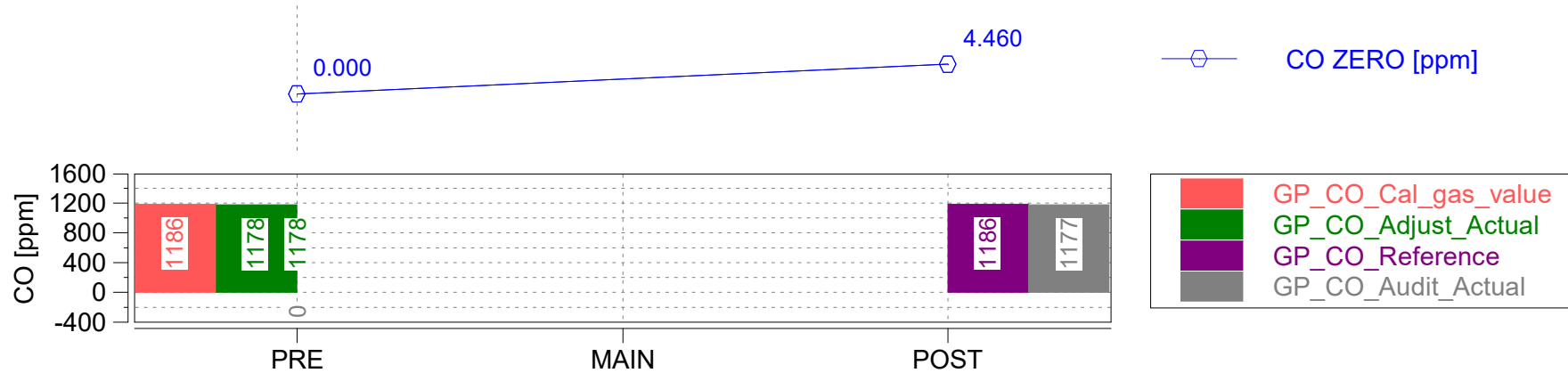
Start Time: 17:31:51.0

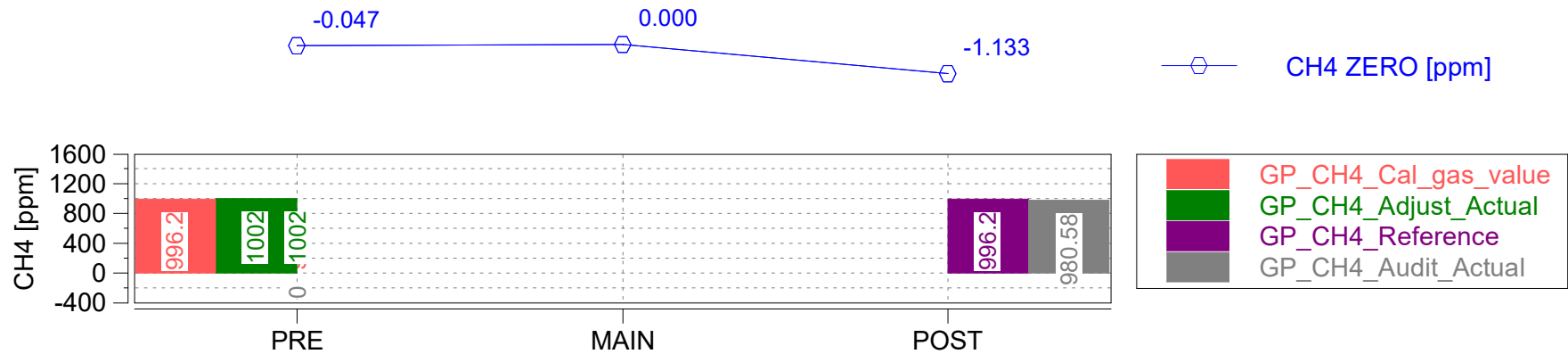
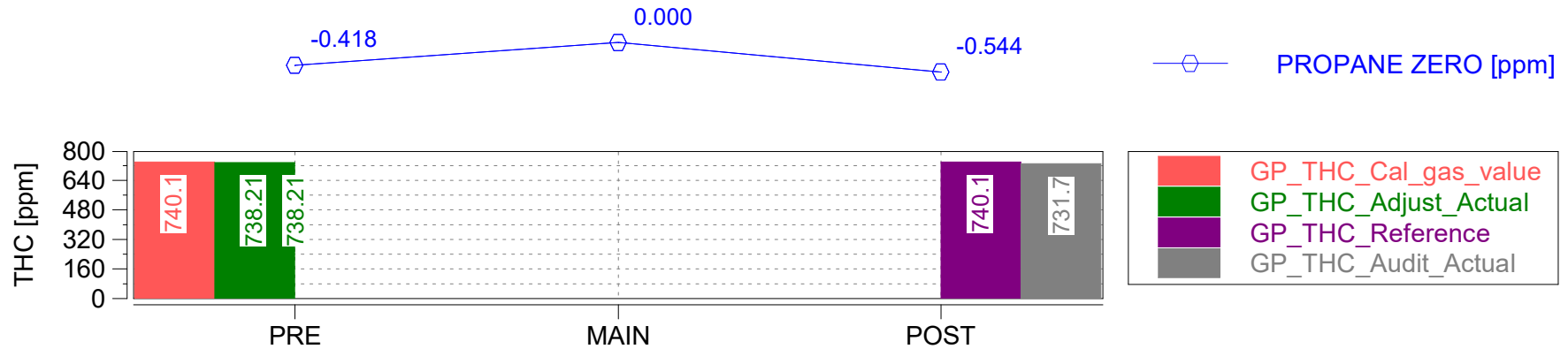


Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Touareg /
Engine: Gasoline / 3.6L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90







#	Text	Value	Unit
-	----	----	----
1.0	Test Start: Date	-	-
2.0	Test Start: Time	-	-
3.0	Ambient Temperature	IFILE1:TM'Temperature	deg C
4.0	Ambient Temperature TS	0.00000	s
5.0	Ambient Pressure	IFILE1:TM'Pressure	kPa
6.0	Ambient Pressure TS	0.00000	s
7.0	Humidity Type	1.00000	-
8.0	Amb. Rel. Humidity	IFILE1:TM'Humidity	%
9.0	Amb. Rel. Humidity	0.00000	s
10.0	GPS Latitude		deg
11.0	GPS Latitude TS	0.00000	s
12.0	GPS Longitude		deg
13.0	GPS Longitude TS	0.00000	s
14.0	Altitude		m
15.0	Altitude TS	0.00000	s
16.0	GPS Quality		-
17.0	GPS Quality TS	0.00000	s
18.0	GroundSpeed		km/h
19.0	GroundSpeed TS	0.00000	s
20.0	Altitude from topographical map		m
21.0	Altitude TS of topographical map		s
22.0	TRIP_AMBIENT_GPS_AVL	YES	-
23.0	CALC_GPS_GROUNDSPEED	NO	-
24.0	EXHAUST_FLOW_AVL	NO	-
25.0	EXHAUST_FLOW_AVL_EFM	YES	-
26.0	Exhaust Flow Type	2.00000	-
27.0	Mass Flow	IFILE1:TM'PitotEFM_ExhaustG	various
28.0	Mass Flow TS	1.20000	s
29.0	Exhaust Pressure		kPa
30.0	Exhaust Pressure TS	1.20000	s

#	Text	Value	Unit
-	----	----	----
31.0	Exhaust Delta Pressure		kPa
32.0	Exhaust Pressure Delta TS	1.20000	s
33.0	Exhaust Temperature	IFILE1:TM'PitotEFM_ExhaustG	degC
34.0	Exhaust Temperature TS	1.20000	s
35.0	Lambda	N/A	-
36.0	Lambda TS		s
37.0	CO2_DIL		%
38.0	CO2_DIL TS		s
39.0	CVS Volume Flow		m3/min
40.0	TimeShift_CVS_VOL_FLOW		s
41.0	IN_CVS_PRESSURE		kPa
42.0	TimeShift_CVS_PRESSURE		s
43.0	IN_CVS_TEMP		degC
44.0	TimeShift_CVS_TEMP		s
45.0	Dry to Wet Conversion CO2	YES	-
46.0	Dry to Wet Conversion O2	YES	-
47.0	Dry to Wet Conversion NO	NO	-
48.0	Dry to Wet Conversion NO2	NO	-
49.0	Dry to Wet Conversion THC	NO	-
50.0	Dry to Wet Conversion CH4	NO	-
51.0	Dry to Wet Conversion O2	NO	-
52.0	CO2	IFILE1:TM'GPiS_CO2	%
53.0	CO2 TS	-7.80000	s
54.0	OS	IFILE1:TM'GPiS_O2	%
55.0	O2 TS	-8.30000	s
56.0	CO	IFILE1:TM'GPiS_CO	ppm
57.0	CO TS	-7.80000	s
58.0	NO	IFILE1:TM'GPiS_NO	ppm
59.0	NO TS	-6.00000	s
60.0	NO2	IFILE1:TM'GPiS_NO2	ppm

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Vehicle: 2017 VW Touareg /
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#	Text	Value	Unit
-	----	----	----
61.0	NO2 TS	-6.00000	s
62.0	THC	IFILE1:TM'FIDiS_THC_C1	ppm
63.0	THC TS	0.00000	s
64.0	CH4	IFILE1:TM'FIDiS_CH4_C1	ppm
65.0	CH4 TS	0.00000	s
66.0	GAS_PEMS_Ethane_Efficiency	IFILE1:MOVE_AVL4925'GP_Et -	
67.0	GAS_PEMS_Methane_Efficiency	IFILE1:MOVE_AVL4925'GP_M -	
68.0	GAS_PEMS_Methane_Response	IFILE1:MOVE_AVL4925'GP_M -	
69.0	Zero Signal	IFILE1:TM'GPiS_STATE	0/1
70.0	Zero Signal TS	-6.00000	s
71.0	Zero Signal_FIDiS	IFILE1:TM'FIDiS_STATE	0/1
72.0	Zero Signal_FIDiS TS		s
73.0	Species Input Type	4.00000	-
74.0	GASPEMS=AVL493	NO	-
75.0	GASPEMS=AVL493_iX	NO	-
76.0	GASPEMS=AVL492	YES	-
77.0	GASPEMS=AVL4925	YES	-
78.0	PM: Type	4.00000	1=GFB+HC, 2=GFB, 3='PM=S
79.0	Filter ID from IFile	NO	-
80.0	Lab ID from IFile	NO	-
81.0	PM Filter: ID	N/A	ID
82.0	PM Filter: Lab	N/A	Name/ID
83.0	PM Filter: Weight before Test	N/A	mg
84.0	PM Filter: Weight after Test	N/A	mg
85.0	PM (HC Corr): Max. Exhaust Flow	N/A	scfm
86.0	Soot		mg/m3
87.0	Soot TS	-5.00000	s
88.0	Soot Sensor		mg/m3
89.0	Soot Sensor TS		s
90.0	PM Filter: Filter Flow Rate		l/min

#	Text	Value	Unit
-	----	----	----
91.0	PM Filter: Filter Flow Rate TS	-5.00000	s
92.0	PM Filter: Filter Dilution Ratio		-
93.0	PM Filter: Filter Dilution Ratio TS	-5.00000	s
94.0	PM Filter: Filter Trigger		-
95.0	PM Filter: Filter Trigger TS	-5.00000	s
96.0	PMPEMS=AVL494	YES	-
97.0	PMPEMS_AVL494_PROP_DIL	NO	-
98.0	PM dilution ratio min		-
99.0	PM_MaxExhaustFlowRate		-
100.0	PM_ExhaustFlow_Thresh		-
101.0	PM_total_flow_val		-
102.0	PM_total_flow_val_TS		-
103.0	PM_exh_mass_flow		-
104.0	PM_exh_mass_flow_TS		-
105.0	PN		#/cm3
106.0	TimeShift_PN		s
107.0	PN_STATE		-
108.0	PN TS STATE		s
109.0	PNPEMS_AVL496	NO	-
110.0	PN_CorrFactor	1.00000	
111.0	Time Alignment	1.00000	-
112.0	Time Alignment Dataset 1	N/A	0/1
113.0	Time Alignment Dataset 2	N/A	0/1
114.0	Time Alignment Thresh 1	N/A	-
115.0	Time Alignment Thresh 2	N/A	-
116.0			
117.0			
118.0			
119.0			
120.0			

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#	Text	Value	Unit
-	----	----	----
121.0			
122.0	Trigger		0/1
123.0	Trigger TS		s
124.0	FTIR_NAME_1		-
125.0	FTIR_MW_1		-
126.0	FTIR_CHANNEL_1		-
127.0	FTIR_CHANNEL_TS_1		-
128.0	FTIR_CHANNEL_DRY_1	NO	-
129.0	FTIR_NAME_2		-
130.0	FTIR_MW_2		-
131.0	FTIR_CHANNEL_2		-
132.0	FTIR_CHANNEL_TS_2		-
133.0	FTIR_CHANNEL_DRY_2	NO	-
134.0	FTIR_NAME_3		-
135.0	FTIR_MW_3		-
136.0	FTIR_CHANNEL_3		-
137.0	FTIR_CHANNEL_TS_3		-
138.0	FTIR_CHANNEL_DRY_3	NO	-
139.0	FTIR_NAME_4		-
140.0	FTIR_MW_4		-
141.0	FTIR_CHANNEL_4		-
142.0	FTIR_CHANNEL_TS_4		-
143.0	FTIR_CHANNEL_DRY_4	NO	-
144.0	FTIR_NAME_5		-
145.0	FTIR_MW_5		-
146.0	FTIR_CHANNEL_5		-
147.0	FTIR_CHANNEL_TS_5		-
148.0	FTIR_CHANNEL_DRY_5	NO	-
149.0	FTIR_NAME_6		-
150.0	FTIR_MW_6		-

#	Text	Value	Unit
-	----	----	----
151.0	FTIR_CHANNEL_6		-
152.0	FTIR_CHANNEL_TS_6		-
153.0	FTIR_CHANNEL_DRY_6	NO	-
154.0	FTIR_NAME_7		-
155.0	FTIR_MW_7		-
156.0	FTIR_CHANNEL_7		-
157.0	FTIR_CHANNEL_TS_7		-
158.0	FTIR_CHANNEL_DRY_7	NO	-
159.0	FTIR_NAME_8		-
160.0	FTIR_MW_8		-
161.0	FTIR_CHANNEL_8		-
162.0	FTIR_CHANNEL_TS_8		-
163.0	FTIR_CHANNEL_DRY_8	NO	-
164.0	FTIR_NAME_9		-
165.0	FTIR_MW_9		-
166.0	FTIR_CHANNEL_9		-
167.0	FTIR_CHANNEL_TS_9		-
168.0	FTIR_CHANNEL_DRY_9	NO	-
169.0	FTIR_NAME_10		-
170.0	FTIR_MW_10		-
171.0	FTIR_CHANNEL_10		-
172.0	FTIR_CHANNEL_TS_10		-
173.0	FTIR_CHANNEL_DRY_10	NO	-
174.0	FTIR_NAME_11		-
175.0	FTIR_MW_11		-
176.0	FTIR_CHANNEL_11		-
177.0	FTIR_CHANNEL_TS_11		-
178.0	FTIR_CHANNEL_DRY_11	NO	-
179.0	FTIR_NAME_12		-
180.0	FTIR_MW_12		-

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#	Text	Value	Unit
-	----	----	----
181.0	FTIR_CHANNEL_12		-
182.0	FTIR_CHANNEL_TS_12		-
183.0	FTIR_CHANNEL_DRY_12	NO	-
184.0	FTIR_NAME_13		-
185.0	FTIR_MW_13		-
186.0	FTIR_CHANNEL_13		-
187.0	FTIR_CHANNEL_TS_13		-
188.0	FTIR_CHANNEL_DRY_13	NO	-
189.0	FTIR_NAME_14		-
190.0	FTIR_MW_14		-
191.0	FTIR_CHANNEL_14		-
192.0	FTIR_CHANNEL_TS_14		-
193.0	FTIR_CHANNEL_DRY_14	NO	-
194.0	FTIR_NAME_15		-
195.0	FTIR_MW_15		-
196.0	FTIR_CHANNEL_15		-
197.0	FTIR_CHANNEL_TS_15		-
198.0	FTIR_CHANNEL_DRY_15	NO	-
199.0	FTIR_NAME_16		-
200.0	FTIR_MW_16		-
201.0	Vehicle Type	2017 VW Touareg	-
202.0	Vehicle Info		-
203.0	Engine Type	Gasoline	-
204.0	Engine Info	3.6L	-
205.0	Engine Torque		Nm
206.0	Curb Idle Load		%
207.0	Idle Speed		rpm
208.0	HYBRID_OVC_REF_CO2_gkm		g/km
209.0	Engine Concept	1.00000	-
210.0	Alpha	1.93000	-

#	Text	Value	Unit
-	----	----	----
211.0	Beta	1.00000	
212.0	Gamma	0.00000	
213.0	Delta	0.00000	
214.0	Epsilon	0.03200	
215.0	X_C	83.00000	
216.0	X_H	13.30000	
217.0	X_N	0.00000	
218.0	X_O	3.50000	
219.0	X_S	0.00000	
220.0	Fuel_Density	747.50000	
221.0	rho_exhaust	1.29310	
222.0	U_CO2	1.51800	
223.0	U_CO	0.96600	
224.0	U_NO	1.58700	
225.0	U_NO2	1.58700	
226.0	U_NOx	1.58700	
227.0	U_HC	0.49900	
228.0	U_NMHC	0.47100	
229.0	U_CH4	0.55300	
230.0	U_O2	1.10400	
231.0	Fuel Type	2.00000	-
232.0	exhaust mass flow type (YES/NO)	YES	-
233.0	Distance Calculation Type	1.00000	-
234.0	Velocity Statistics Calculation Type	2.00000	-
235.0	RDE vehicle class	1.00000	-
236.0	TM_CITY0		s
237.0	TM_CITY1		s
238.0	TM_RURAL0		s
239.0	TM_RURAL1		s
240.0	TM_RURAL2_0		s

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Vehicle: 2017 VW Touareg /
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NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
241.0	TM_RURAL2_1		s
242.0	Second Rural Part for Time Marks (NO		-
243.0	TM_MW0		s
244.0	TM_MW1		s
245.0	VELOCITY_LIMIT_STOP	2.00000	km/h
246.0	VELOCITY_LIMIT_URBAN	50.00000	km/h
247.0	VELOCITY_LIMIT_RURAL	75.00000	km/h
248.0	Intake Manifold Pressure Type	1.00000	-
249.0	Velocity	IFILE1:TM'OBD_Vehicle_Spee	km/h
250.0	Velocity TS	1.30000	s
251.0	Velocity FACTOR	1.00000	-
252.0	Coolant Temperature	IFILE1:TM'OBD_Engine_Coola	degC
253.0	Coolant Temperature TS	1.30000	s
254.0	Oil Temperature		degC
255.0	Oil Temperature TS	1.30000	s
256.0	Intake Manifold Temperature		degC
257.0	Intake Manifold Temp TS	1.30000	s
258.0	Intake Manifold Pressure	IFILE1:TM'OBD_Intake_manifo	kPa
259.0	Intake Manifold Pressure TS	1.30000	s
260.0	Throttle Position		%
261.0	Throttle TS	1.30000	s
262.0	TYP_IDLE_MASS_FLOW		kg/h
263.0	Torque Type	1.00000	-
264.0	Speed	IFILE1:TM'OBD_Engine_RPM	rpm
265.0	Speed TS	1.30000	s
266.0	Torque		Nm
267.0	Torque TS	1.30000	s
268.0	Friction Torque	N/A	Nm
269.0	Friction Torque TS	N/A	s
270.0	Reference Torque	N/A	Nm

#	Text	Value	Unit
-	----	----	----
271.0	Reference Torque TS	N/A	s
272.0	k_VELINE		-
273.0	D_VELINE		-
274.0	Fuel Flow Type	2.00000	-
275.0	Air Flow Type	1.00000	-
276.0	Fuel Rate		various
277.0	Air Rate		various
278.0	Fuel Rate TS	1.30000	s
279.0	No_Cylinders		-
280.0	Air Rate TS	1.30000	s
281.0	FTIR_CHANNEL_32		-
282.0	FTIR_CHANNEL_TS_32		-
283.0	FTIR_CHANNEL_DRY_32	NO	-
284.0	FTIR_NAME_33		-
285.0	FTIR_MW_33		-
286.0	FTIR_CHANNEL_33		-
287.0	FTIR_CHANNEL_TS_33		-
288.0	FTIR_CHANNEL_DRY_33	NO	-
289.0	FTIR_NAME_34		-
290.0	FTIR_MW_34		-
291.0	FTIR_CHANNEL_34		-
292.0	FTIR_CHANNEL_TS_34		-
293.0	FTIR_CHANNEL_DRY_34	NO	-
294.0	FTIR_NAME_35		-
295.0	FTIR_MW_35		-
296.0	FTIR_CHANNEL_35		-
297.0	FTIR_CHANNEL_TS_35		-
298.0	FTIR_CHANNEL_DRY_35	NO	-
299.0	FTIR_NAME_36		-
300.0	FTIR_MW_36		-

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NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
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#	Text	Value	Unit
-	----	----	----
301.0	FTIR_CHANNEL_36		-
302.0	FTIR_CHANNEL_TS_36		-
303.0	FTIR_CHANNEL_DRY_36	NO	-
304.0	FTIR_NAME_37		-
305.0	FTIR_MW_37		-
306.0	FTIR_CHANNEL_37		-
307.0	FTIR_CHANNEL_TS_37		-
308.0	FTIR_CHANNEL_DRY_37	NO	-
309.0	FTIR_NAME_38		-
310.0	FTIR_MW_38		-
311.0	FTIR_CHANNEL_38		-
312.0	FTIR_CHANNEL_TS_38		-
313.0	FTIR_CHANNEL_DRY_38	NO	-
314.0	FTIR_NAME_39		-
315.0	FTIR_MW_39		-
316.0	FTIR_CHANNEL_39		-
317.0	FTIR_CHANNEL_TS_39		-
318.0	FTIR_CHANNEL_DRY_39	NO	-
319.0	FTIR_NAME_40		-
320.0	FTIR_MW_40		-
321.0	FTIR_CHANNEL_40		-
322.0	FTIR_CHANNEL_TS_40		-
323.0	FTIR_CHANNEL_DRY_40	NO	-
324.0	Legislation Type (1=HDIUT 2=EU H	4.00000	-
325.0	WholeTest_NOx_corr	5.00000	-
326.0	WholeTest_Hum_corr	2.00000	-
327.0	CD_Distance	0.00000	km
328.0	CD_NOx	0.00000	mg/km
329.0	CD_CO	0.00000	mg/km
330.0	CD_CO2	0.00000	g/km

#	Text	Value	Unit
-	----	----	----
331.0	CD_NMHC	0.00000	mg/km
332.0	CD_CH4	0.00000	mg/km
333.0	CD_THC	0.00000	mg/km
334.0	CD_PN		#/km
335.0	WLTC_LOW_SPEED_gkm		g/km
336.0	WLTC_LOW_SPEED_FAC	1.20000	-
337.0	WLTC_MEDIUM_SPEED_gkm		g/km
338.0	WLTC_HIGH_SPEED_gkm		g/km
339.0	WLTC_HIGH_SPEED_FAC	1.10000	-
340.0	WLTC_EXTRA_HIGH_SPEED_gkm		g/km
341.0	WLTC_EXTRA_HIGH_SPEED_FA	1.05000	-
342.0	TOL_NORMAL_DRIVING	25.00000	%
343.0	TOL_SEVERE_DRIVING	50.00000	%
344.0	Increase Tolerance Nomral Driving	NO	-
345.0	Bin1_min		km/h
346.0	Bin2_min		km/h
347.0	Bin3_min		km/h
348.0	Bin1_max		km/h
349.0	Bin2_max		km/h
350.0	Bin3_max		km/h
351.0	Clear_R0	125.40000	N
352.0	Clear_R1	0.29300	Nh/km
353.0	Clear_R2	0.02795	N*(h/km) ²
354.0	Clear_SMK	1470.00000	kg
355.0	Clear_Rated_Power	140.00000	kW
356.0	Clear_Ref_Velocity	70.00000	km/h
357.0	Clear_Ref_Acc	0.45000	m/s ²
358.0	Clear_Smooth	3.00000	s
359.0	EXTC_From_High_Temp	30.00000	degC
360.0	EXTC_To_High_Temp	35.00000	degC

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#	Text	Value	Unit
-	----	----	----
361.0	EXTC_From_Low_Temp	-7.00000	degC
362.0	EXTC_To_Low_Temp	0.00000	degC
363.0	Euro 6d or Euro 6d temp	NO	-
364.0	EXTC_From_Altitude	700.00000	m
365.0	EXTC_To_Altitude	1300.00000	m
366.0	EXTC_CORR_FAC	1.60000	
367.0	weight cold start (YES/NO)	NO	-
368.0	precon and soak done (YES/NO)	NO	-
369.0	PATH_PRECON_FILE		
370.0	filter velocity (YES/NO)	NO	-
371.0	filter velocity auto(YES/NO)	NO	-
372.0	Ki_CO		
373.0	Ki_CO2		
374.0	Ki_NOx		
375.0	Ki_FACTOR_CO2 (YES/NO)	NO	-
376.0	Ki_OFFSET_CO2 (YES/NO)	NO	-
377.0	Ki_FACTOR_CO (YES/NO)	NO	-
378.0	Ki_OFFSET_CO (YES/NO)	NO	-
379.0	Ki_FACTOR_NOx (YES/NO)	NO	-
380.0	Ki_OFFSET_NOx (YES/NO)	NO	-
381.0	Ki_OFF (YES/NO)	NO	-
382.0	HD legislations	1.00000	-
383.0	RDE legislations	1.00000	-
384.0	Submission Documents (YES/NO)	NO	-
385.0	General Setup Parameters Text	Highway	-
386.0	Legislation Setup Parameters Text	Highway	-
387.0	Trip Info		-
388.0	IN_TIME_REF		-
389.0	Sub-Trip Start: Auto	YES	-
390.0	Sub-Trip Start: Seconds	N/A	s

#	Text	Value	Unit
-	----	----	----
391.0	Sub-Trip End: Auto	YES	-
392.0	Sub-Trip End: Seconds	N/A	s
393.0	Unit System	2.00000	-
394.0	Calculate: PM Emissions	NO	-
395.0	Calculate: PN Emissions	NO	-
396.0	Output: Summary	YES	-
397.0	Output: Emissions	YES	-
398.0	Output: Raw Data	YES	-
399.0	Output: Zero Span	YES	-
400.0	Output: Data Consistency	NO	-
401.0	Output: Window Plots	YES	-
402.0	Fuel Rate ECU vs. EU ISO16183	$y = 10000000000.0000 x - 0.000 R^2=10000000000.000 SEE=$	
403.0	PEMS post processing version	Rel_10_B192	
404.0	Concerto version	480.00000	
405.0	Concerto build	215.00000	
406.0	USERNAME	EFR	

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Vehicle: 2017 VW Touareg /
Engine: Gasoline / 3.6L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Mountain
Page: Trip Summary

Start Date: 08/31/2017
Start Time: 17:31:51.0



Trip Duration	3065.00	s	ave THC	12.44236	ppm	BS CO2	n/a	g/hphr
Trip Duration (a)	3065.00	s	ave NMHC	9.25633	ppm	BS CO	n/a	g/hphr
Trip Distance	28.71	mi	ave CH4	2.89639	ppm	BS THC	n/a	g/hphr
Trip Distance (a)	28.71	mi	ave CO	326.71638	ppm	BS NMHC	n/a	g/hphr
Trip Fuel Cons. (b)	n/a	kg	ave CO2	10.91460	%	BS CH4	n/a	g/hphr
Trip Fuel Cons. (ab)	n/a	kg	ave NOx	7.11637	ppm	BS NO (d)	n/a	g/hphr
Trip Fuel Cons. EU (ac)	4.62	kg	ave PM	n/a	mg/m3	BS NO2	n/a	g/hphr
Trip Fuel Cons. US (ac)	4.56	kg	ave Soot meas	n/a	mg/m3	BS NOx	n/a	g/hphr
Trip Fuel Cons. Volume (b)	n/a	gall	ave Soot	n/a	mg/m3	BS Soot	n/a	g/hphr
Trip Fuel Cons. Volume (ab)	n/a	gall	ave PN	n/a	#/cm3	BS Soot meas	n/a	g/hphr
Trip Fuel Cons. Volume EU (ac)	1.63	gall	tot THC	0.79901	g	BS PM	n/a	g/hphr
Trip Fuel Cons. Volume US (ac)	1.61	gall	tot NMHC	0.55294	g	BS PN	n/a	#/hpr
Trip Fuel Economy (b)	n/a	mpg_US	tot CH4	0.21988	g	DS CO2	479.67359	g/mi
Trip Fuel Economy (ab)	n/a	mpg_US	tot CO	70.35724	g	DS CO	2.45092	g/mi
Trip Fuel Economy EU (ac)	17.57	mpg_US	tot CO2	13769.73904	g	DS THC	0.02783	g/mi
Trip Fuel Economy US (ac)	17.80	mpg_US	tot NO (d)	0.59529	g	DS NMHC	0.01926	g/mi
Trip Av. Eng. Speed	1581.85	rpm	tot NO2	0.05869	g	DS CH4	0.00766	g/mi
Trip Av. Torque	n/a	lbft	tot NOx	0.55241	g	DS NO (d)	0.02074	g/mi
Trip Av. Power	n/a	hp	tot Soot	n/a	g	DS NO2	0.00204	g/mi
Trip Work	n/a	hphr	tot Soot meas	n/a	g	DS NOx	0.01924	g/mi
Trip Exhaust Mass	74.74	kg	tot PM	n/a	g	DS Soot	n/a	g/mi
Trip Exhaust Mass EU (ac)	n/a	kg	tot PN	n/a	#	DS Soot meas	n/a	g/mi
Trip Exhaust Mass US (ac)	n/a	kg	PM measurement type	0.00000	-	DS PM	n/a	g/mi
Trip Av. Amb. Temperature	86.63	deg_F	PM correction type	1.00000	alpha(HC)	DS PN	n/a	#/mi
Trip Av. Humidity	44.14	%	tot Soot on PM filter (estim.)	n/a	mg	FS CO2	n/a	g/kg
Fuel Type	Petrol (E10)		Soot --> PM simple scaling factor	1.00000	-	FS CO	n/a	g/kg
			Soot --> PM alpha scaling factor	0.00000	-	FS THC	n/a	g/kg
			Trip Av. Veh. Speed	33.71723	mi/hr	FS NMHC	n/a	g/kg
			Trip Velocity Zero	10.14682	%	FS CH4	n/a	g/kg
			Trip Velocity Urban	43.78467	%	FS NO (d)	n/a	g/kg
			Trip Velocity Rural	22.12072	%	FS NO2	n/a	g/kg
			Trip Velocity Motorway	34.09462	%	FS NOx	n/a	g/kg
						FS Soot	n/a	g/kg
						FS Soot meas	n/a	g/kg
						FS PM	n/a	g/kg
						FS PN	n/a	#/kg

(a) GAS PEMS measurement state only, (b) based on fuel rate input (ECU, Fuel Meter), (c) calculated from carbon balance
(d) NO calculated using molecular weight of NO2

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Touareg /
Engine: Gasoline / 3.6L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Mountain

Page: Trip Summary Drift Corrected

Start Date: 08/31/2017

Start Time: 17:31:51.0

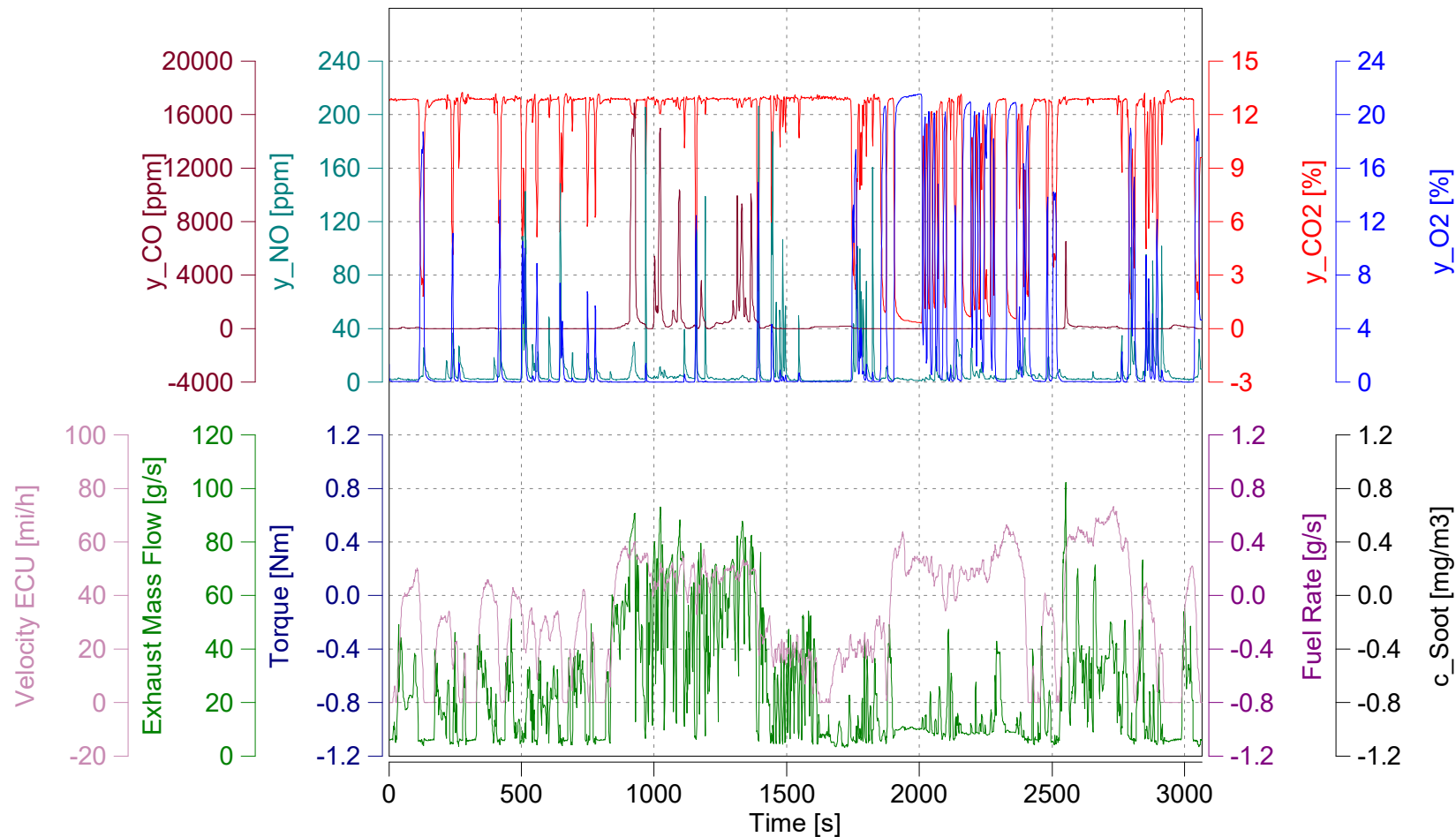


Trip Duration	3065.00	s	ave THC DC	16.86515	ppm	BS CO2 DC	n/a	g/hphr
Trip Duration (a)	3065.00	s	ave NMHC DC	13.78925	ppm	BS CO DC	n/a	g/hphr
Trip Distance	28.71	mi	ave CH4 DC	2.79627	ppm	BS THC DC	n/a	g/hphr
Trip Distance (a)	28.71	mi	ave CO DC	329.02874	ppm	BS NMHC DC	n/a	g/hphr
Trip Fuel Cons. (b)	n/a	kg	ave CO2 DC	10.91822	%	BS CH4 DC	n/a	g/hphr
Trip Fuel Cons. (ab)	n/a	kg	ave NOx DC	7.10724	ppm	BS NO DC (d)	n/a	g/hphr
Trip Fuel Cons. EU (ac)	4.62	kg	ave PM	n/a	mg/m3	BS NO2 DC	n/a	g/hphr
Trip Fuel Cons. US (ac)	4.56	kg	ave Soot meas	n/a	mg/m3	BS NOx DC	n/a	g/hphr
Trip Fuel Cons. Volume (b)	n/a	gall	ave Soot	n/a	mg/m3	BS Soot	n/a	g/hphr
Trip Fuel Cons. Volume (ab)	n/a	gall	ave PN DC	n/a	#/cm3	BS Soot meas	n/a	g/hphr
Trip Fuel Cons. Volume EU (ac)	1.63	gall	tot THC DC	1.08303	g	BS PM	n/a	g/hphr
Trip Fuel Cons. Volume US (ac)	1.61	gall	tot NMHC DC	0.82718	g	BS PN DC	n/a	#/hpr
Trip Fuel Economy (b)	n/a	mpg_US	tot CH4 DC	0.21309	g	DS CO2 DC	479.83269	g/mi
Trip Fuel Economy (ab)	n/a	mpg_US	tot CO DC	70.85520	g	DS CO DC	2.46827	g/mi
Trip Fuel Economy EU (ac)	17.57	mpg_US	tot CO2 DC	13774.30612	g	DS THC DC	0.03773	g/mi
Trip Fuel Economy US (ac)	17.80	mpg_US	tot NO DC (d)	0.59452	g	DS NMHC DC	0.02882	g/mi
Trip Av. Eng. Speed	1581.85	rpm	tot NO2 DC	0.05858	g	DS CH4 DC	0.00742	g/mi
Trip Av. Torque	n/a	lbft	tot NOx DC	0.55172	g	DS NO DC (d)	0.02071	g/mi
Trip Av. Power	n/a	hp	tot Soot	n/a	g	DS NO2 DC	0.00204	g/mi
Trip Work	n/a	hphr	tot Soot meas	n/a	g	DS NOx DC	0.01922	g/mi
Trip Exhaust Mass	74.74	kg	tot PM	n/a	g	DS Soot	n/a	g/mi
Trip Exhaust Mass EU (ac)	n/a	kg	tot PN DC	n/a	#	DS Soot meas	n/a	g/mi
Trip Exhaust Mass US (ac)	n/a	kg	PM measurement type	0.00000	-	DS PM	n/a	g/mi
Trip Av. Amb. Temperature	86.63	deg_F	PM correction type	1.00000	alpha(HC)	DS PN DC	n/a	#/mi
Trip Av. Humidity	44.14	%	tot Soot on PM filter (estim.)	n/a	mg	FS CO2 DC	n/a	g/kg
Fuel Type	Petrol (E10)		Soot --> PM simple scaling factor	1.00000	-	FS CO DC	n/a	g/kg
			Soot --> PM alpha scaling factor	0.00000	-	FS THC DC	n/a	g/kg
			Trip Av. Veh. Speed	33.71723	mi/hr	FS NMHC DC	n/a	g/kg
			Trip Velocity Zero	10.14682	%	FS CH4 DC	n/a	g/kg
			Trip Velocity Urban	43.78467	%	FS NO DC (d)	n/a	g/kg
			Trip Velocity Rural	22.12072	%	FS NO2 DC	n/a	g/kg
			Trip Velocity Motorway	34.09462	%	FS NOx DC	n/a	g/kg
						FS Soot	n/a	g/kg
						FS Soot meas	n/a	g/kg
						FS PM	n/a	g/kg
						FS PN DC	n/a	#/kg

(a) GAS PEMS measurement state only, (b) based on fuel rate input (ECU, Fuel Meter), (c) calculated from carbon balance
 (d) NO calculated using molecular weight of NO2

Concerto Version: 480 Build 215, Serial Number: 8468
 M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Touareg /
 Engine: Gasoline / 3.6L
 NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
 Dry / Wet Corr.: 2 - CFR40 §86.1342-90



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

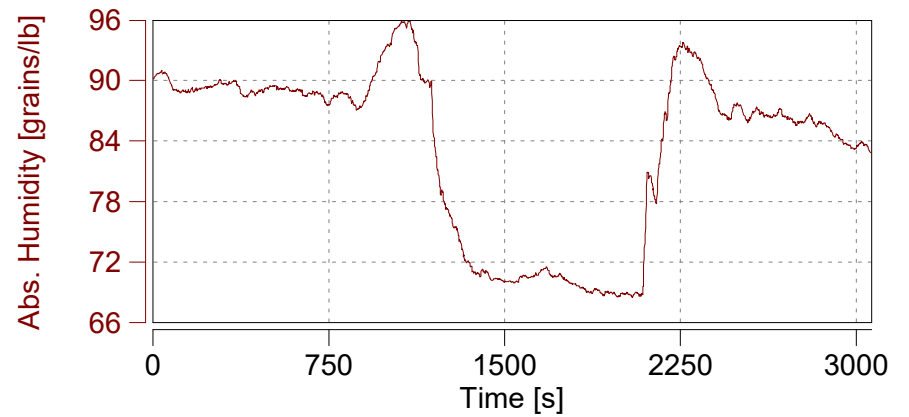
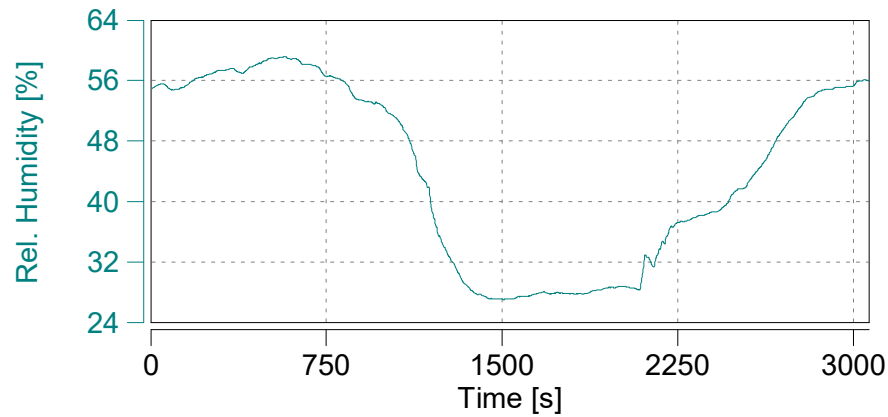
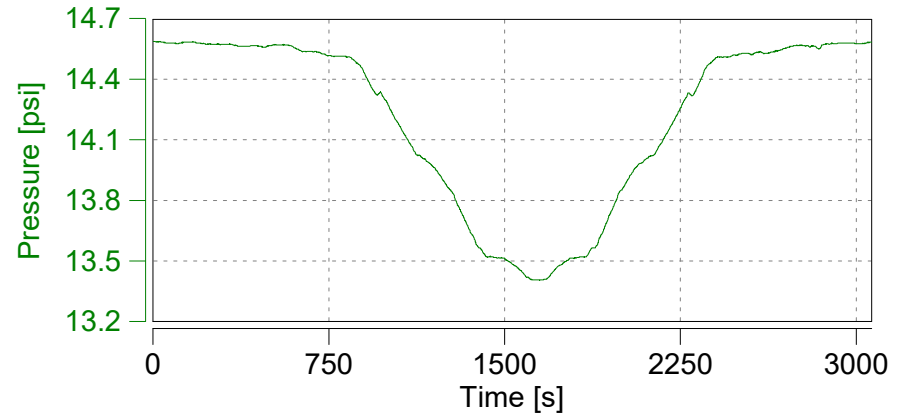
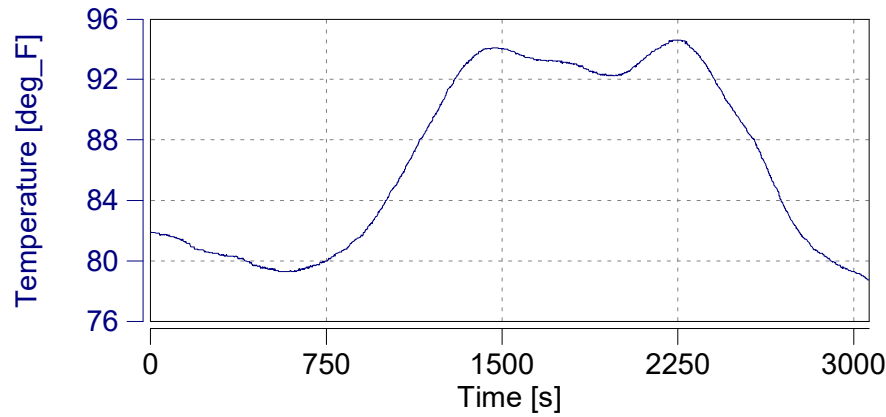
Vehicle: 2017 VW Touareg /
Engine: Gasoline / 3.6L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Mountain

Page: Ambient Conditions

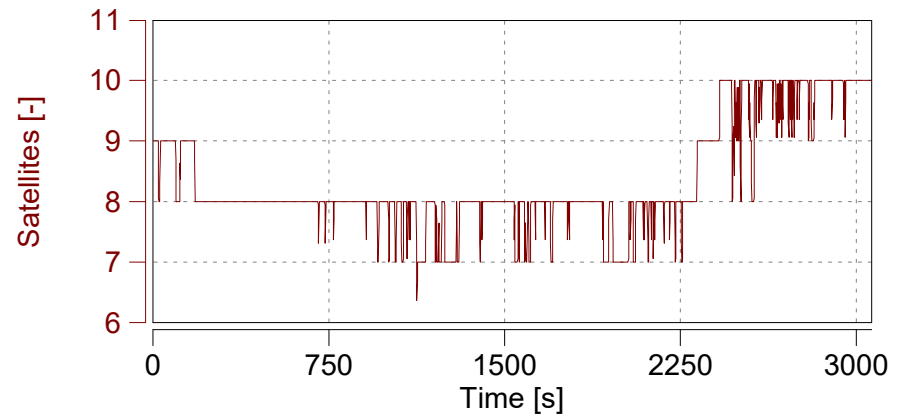
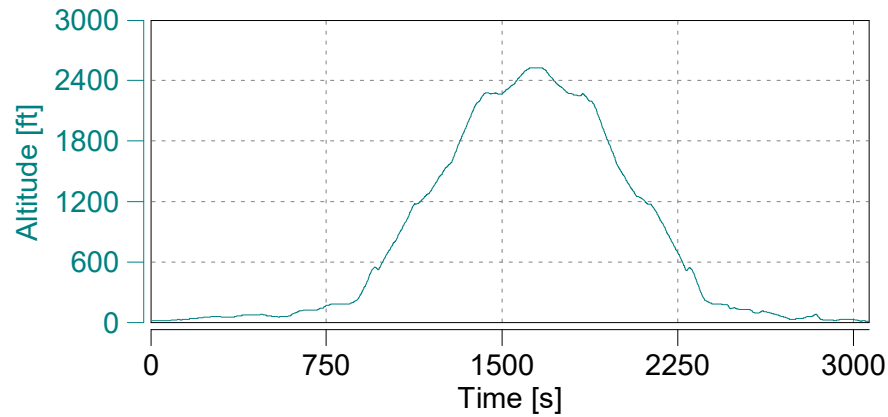
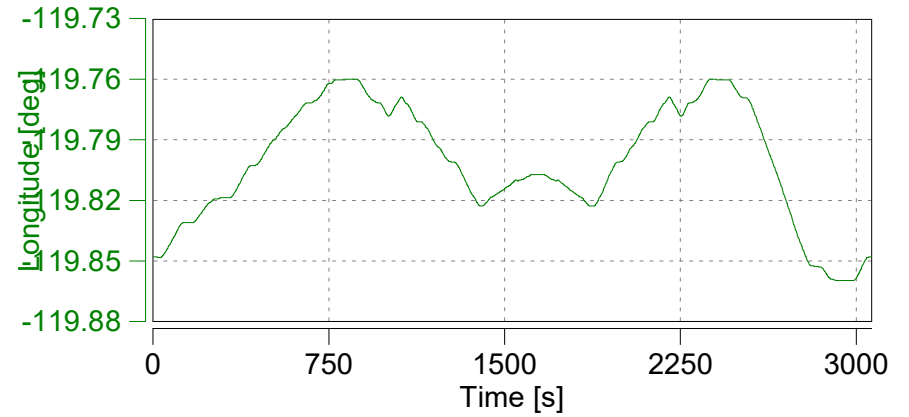
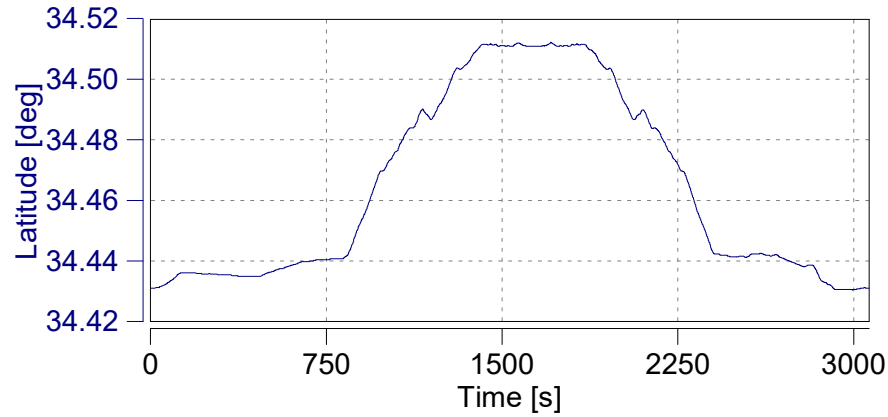
Start Date: 08/31/2017

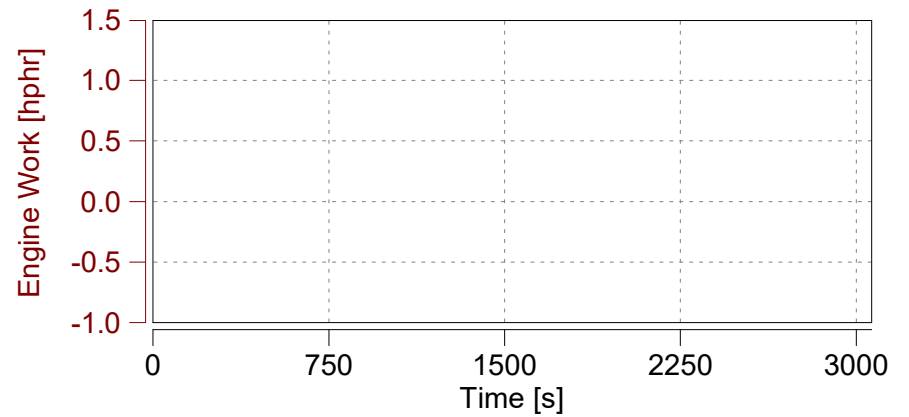
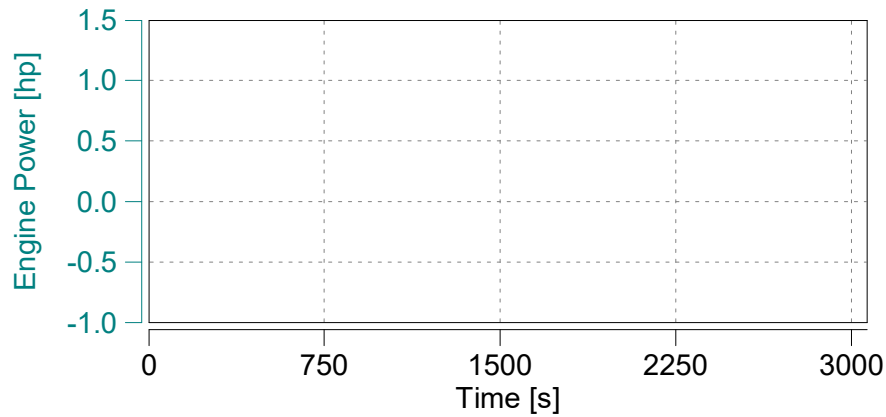
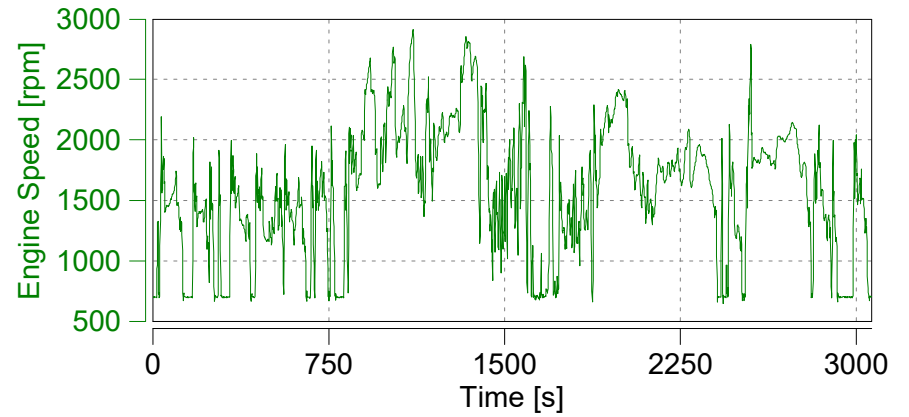
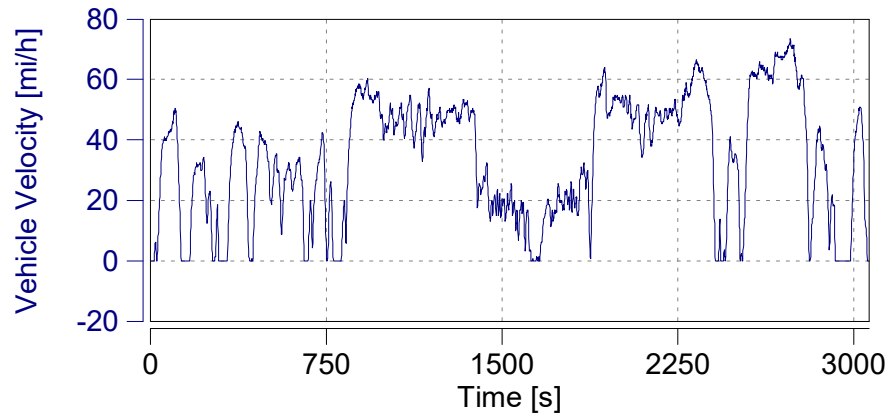
Start Time: 17:31:51.0

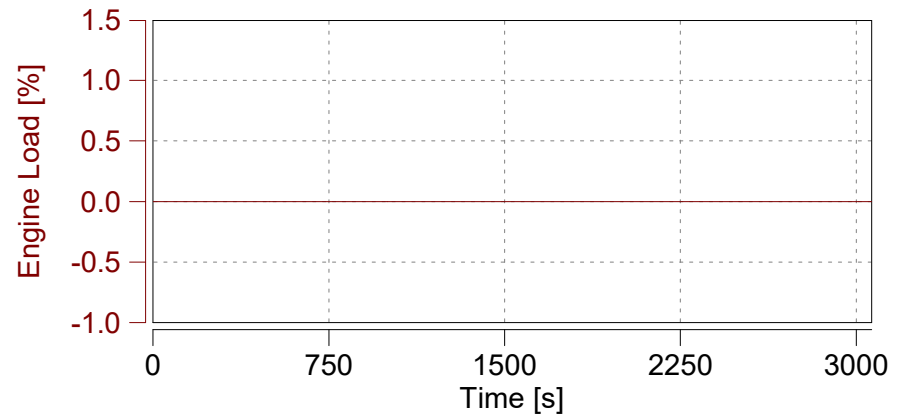
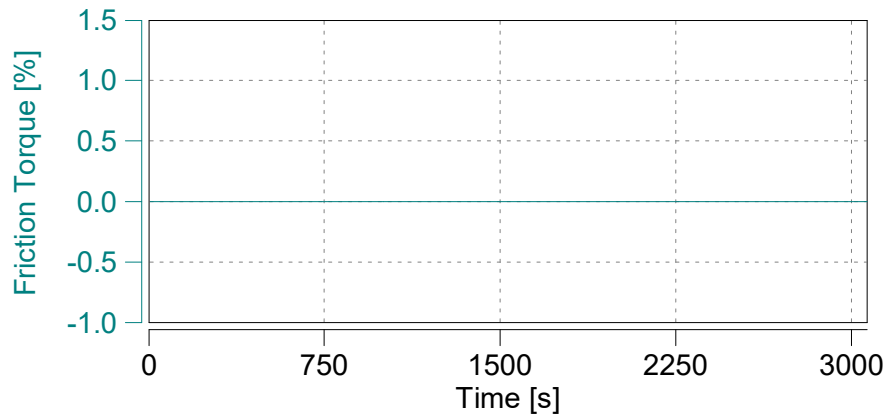
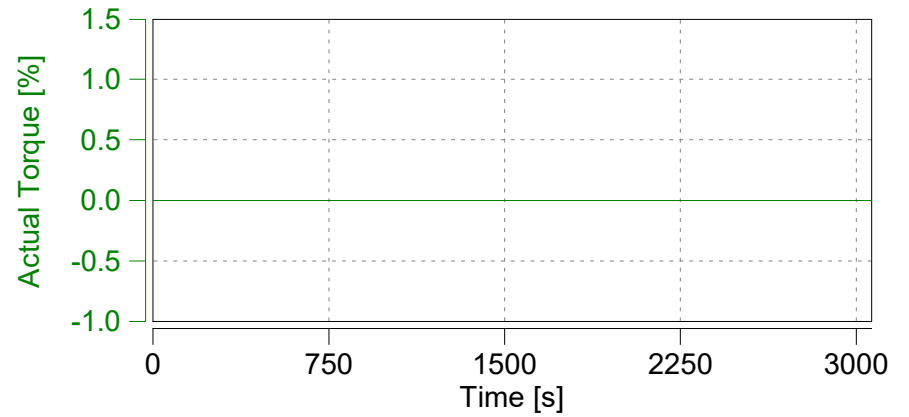
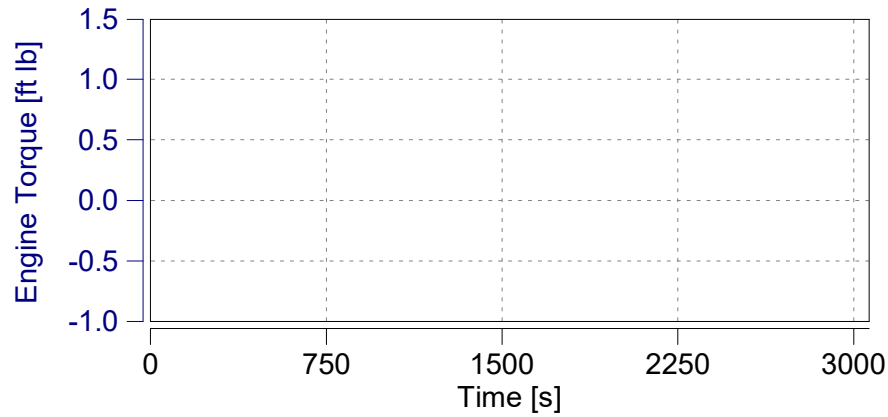


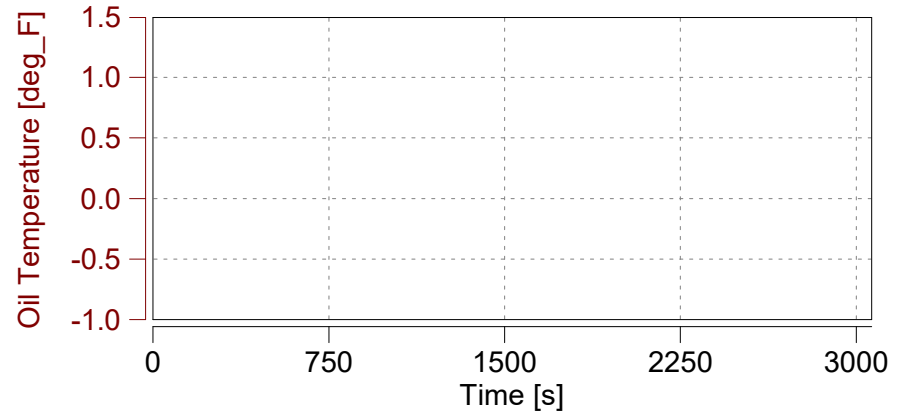
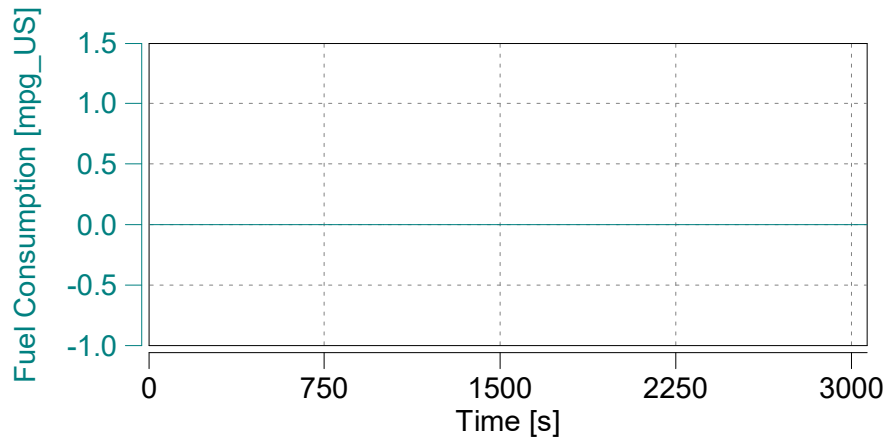
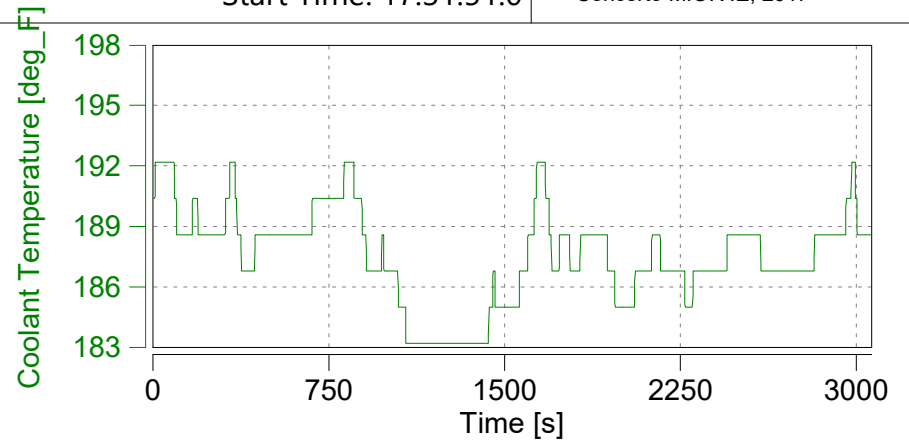
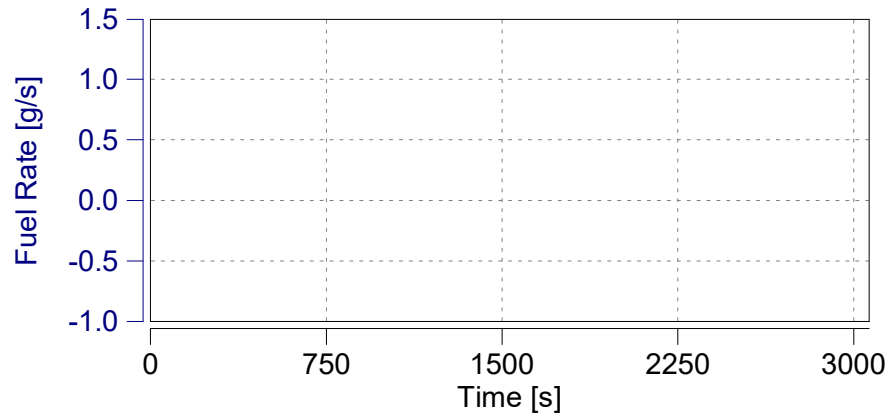
Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

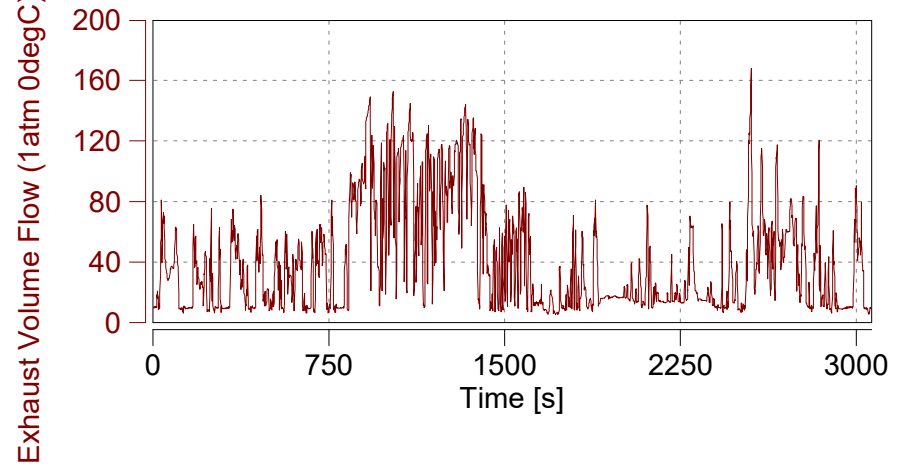
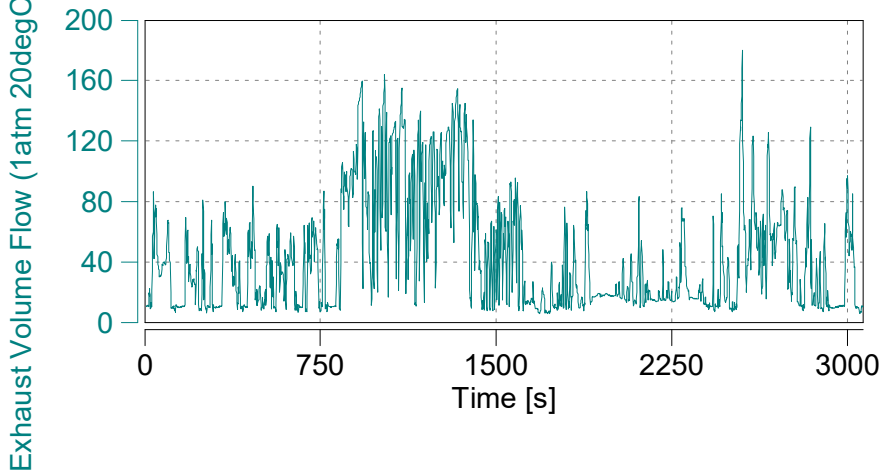
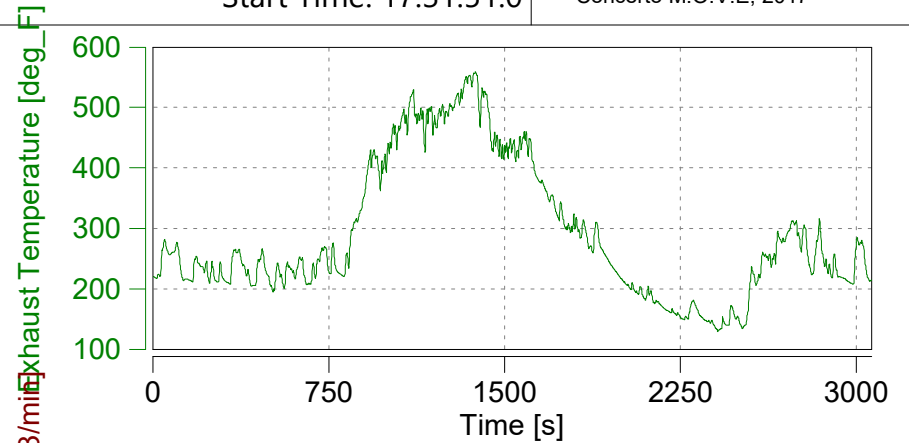
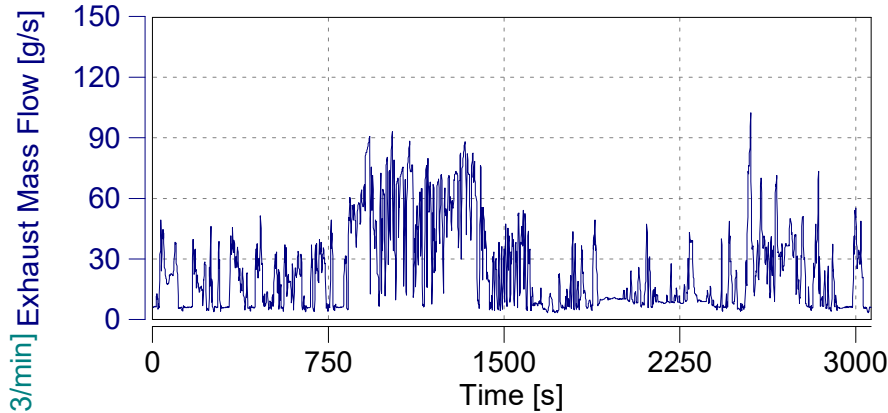
Vehicle: 2017 VW Touareg /
Engine: Gasoline / 3.6L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

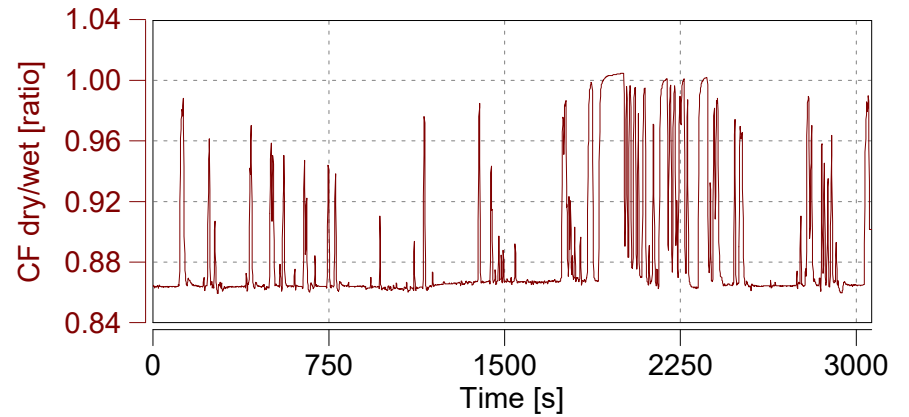
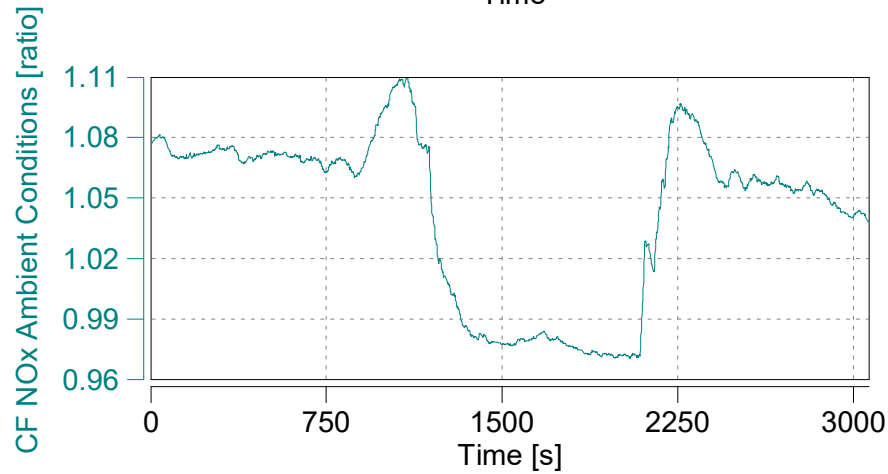
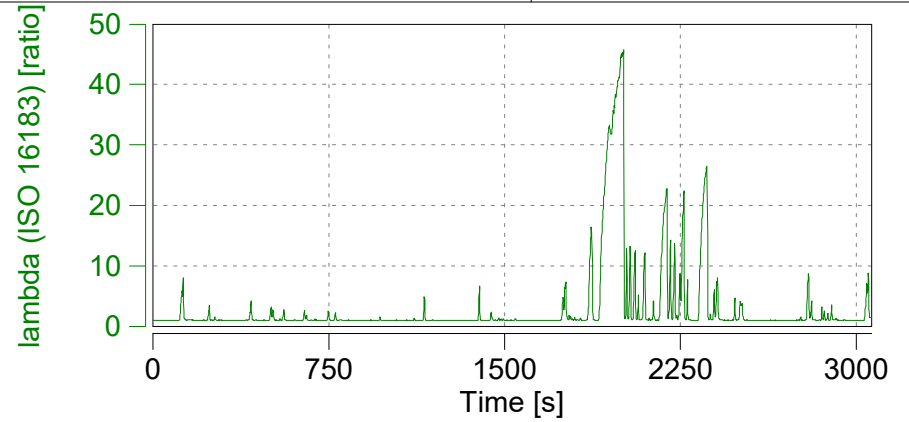
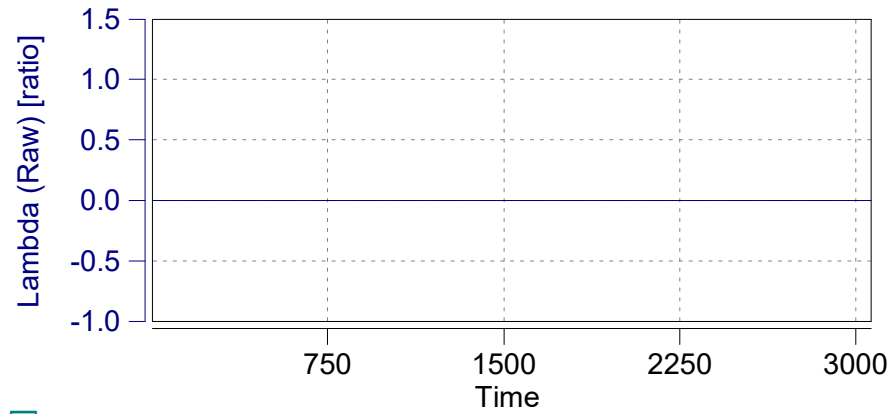










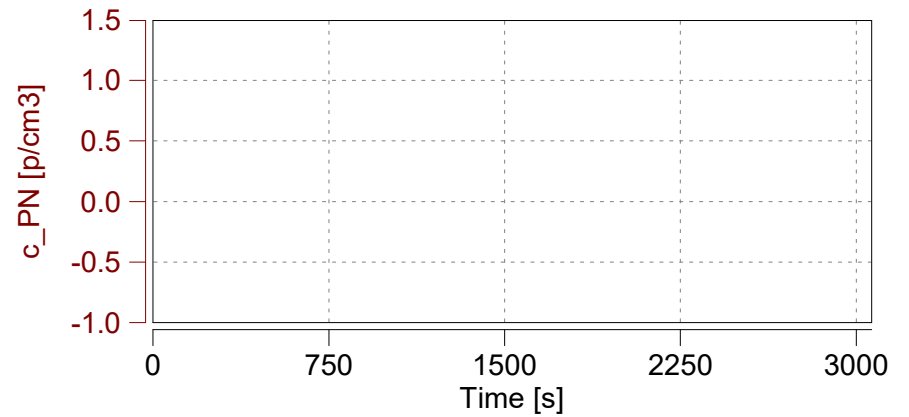
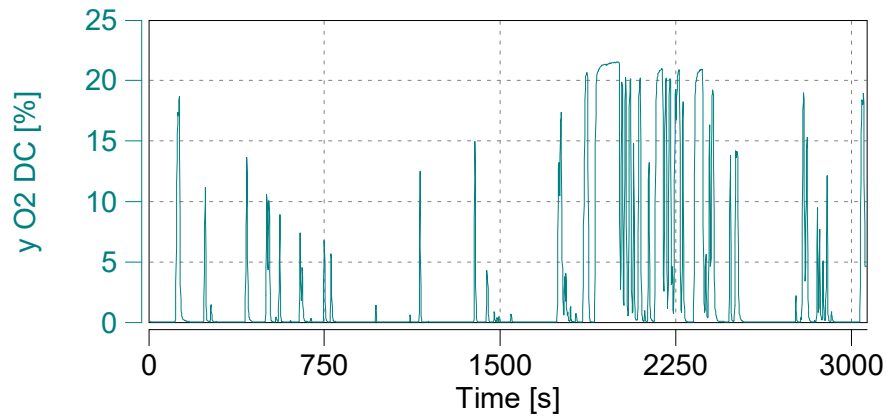
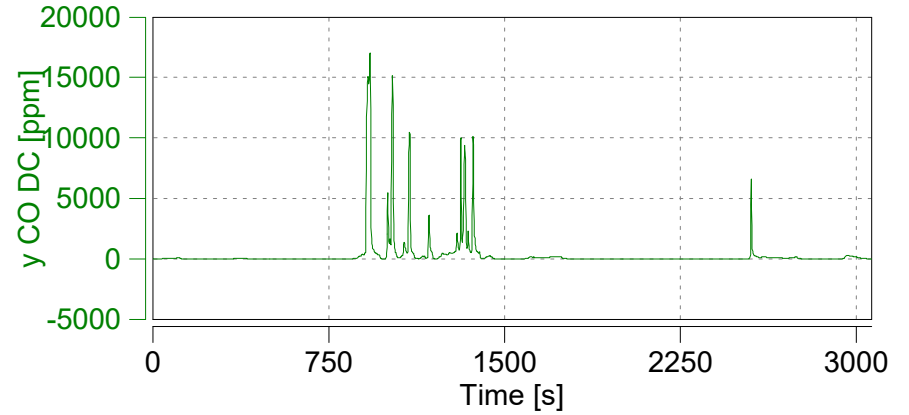
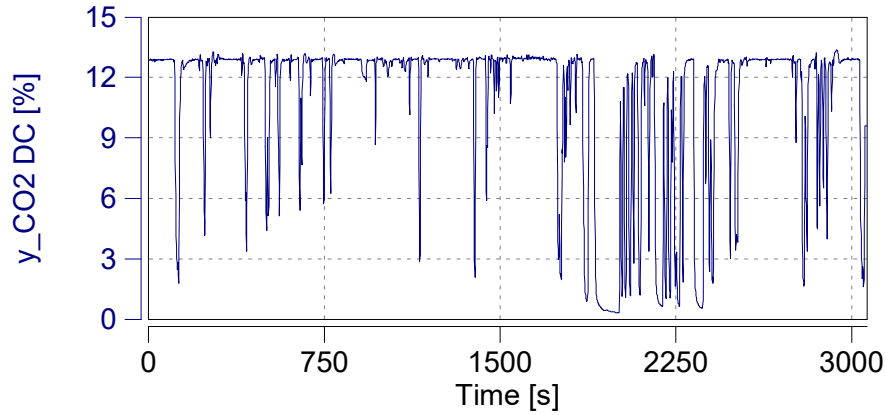


Case: Mountain

Page: Corrected Emissions (1)

Start Date: 08/31/2017

Start Time: 17:31:51.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

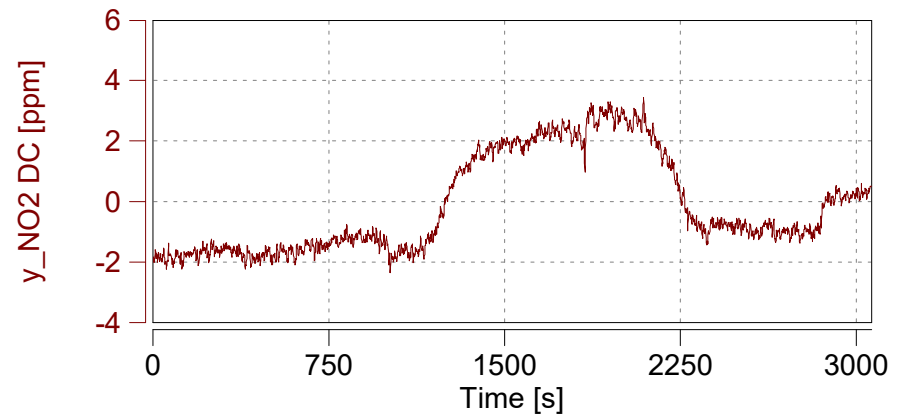
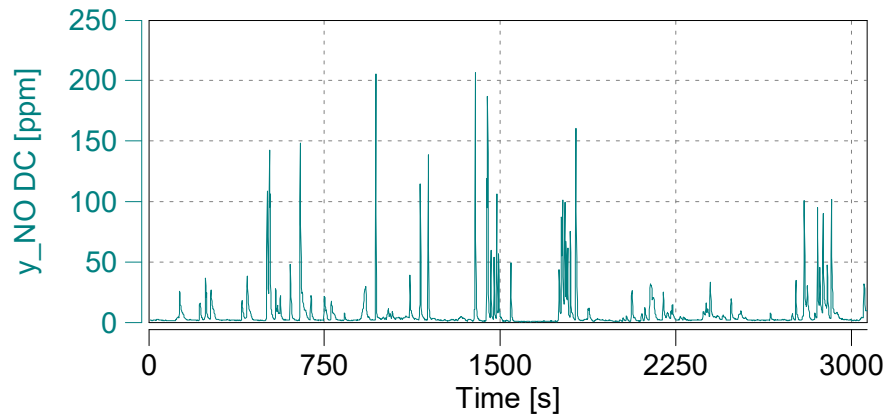
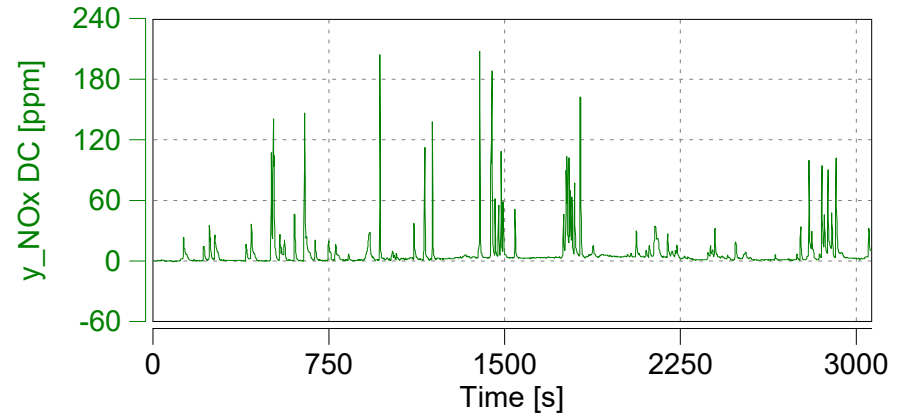
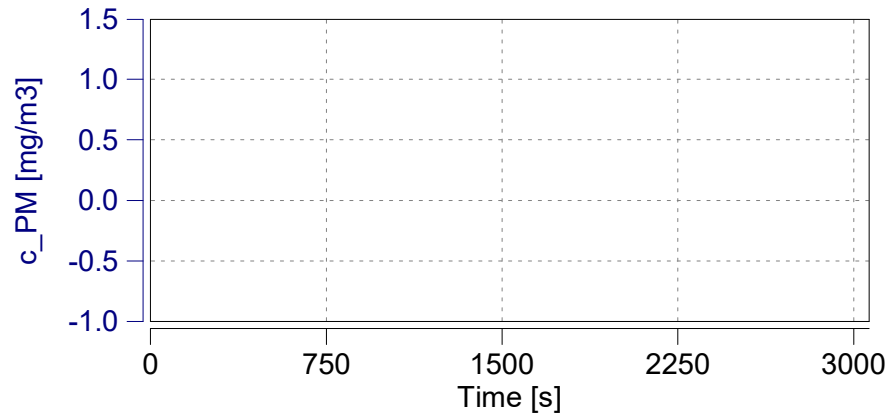
Vehicle: 2017 VW Touareg /
Engine: Gasoline / 3.6L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Mountain

Page: Corrected Emissions (2)

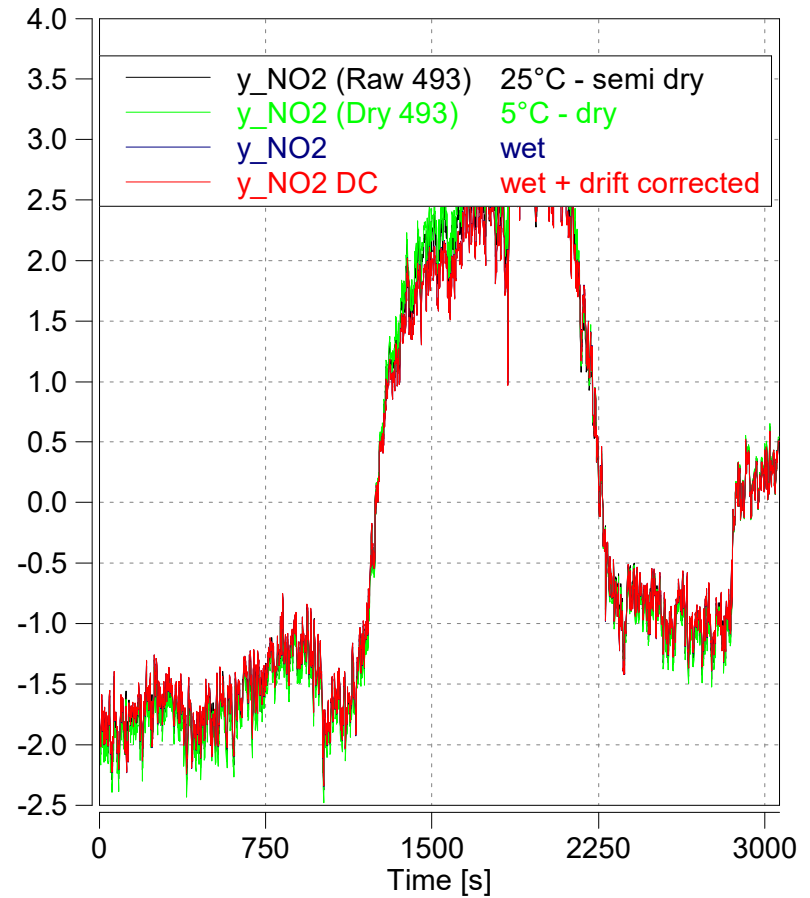
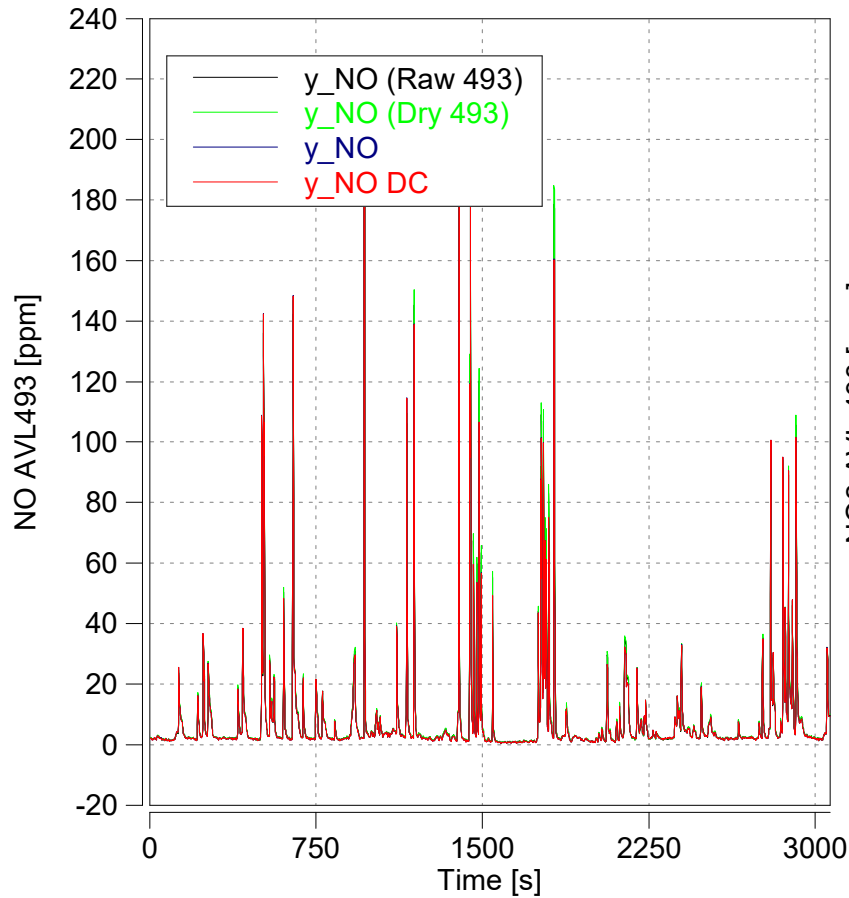
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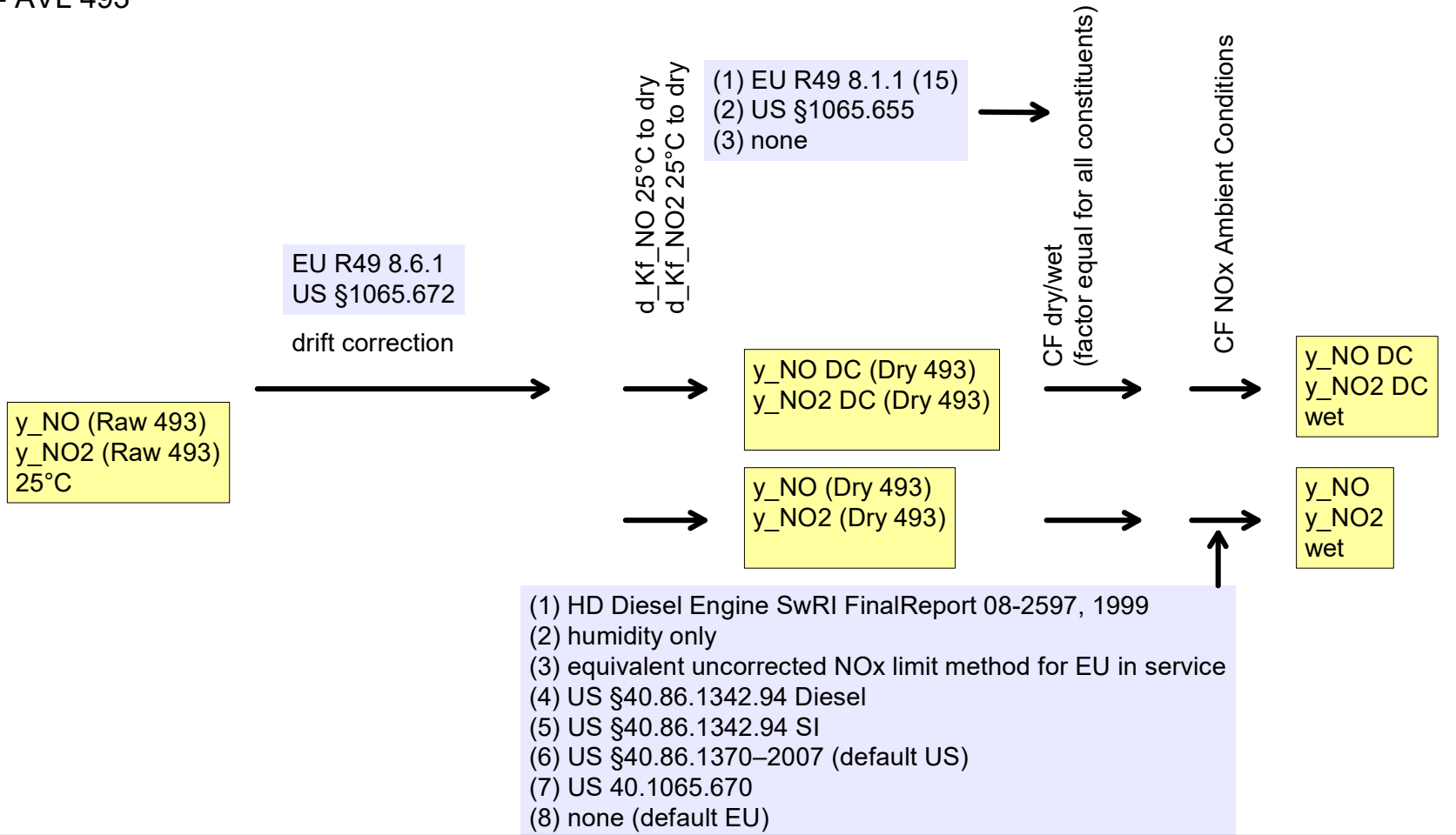


Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Touareg /
Engine: Gasoline / 3.6L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90



NOx - AVL 493

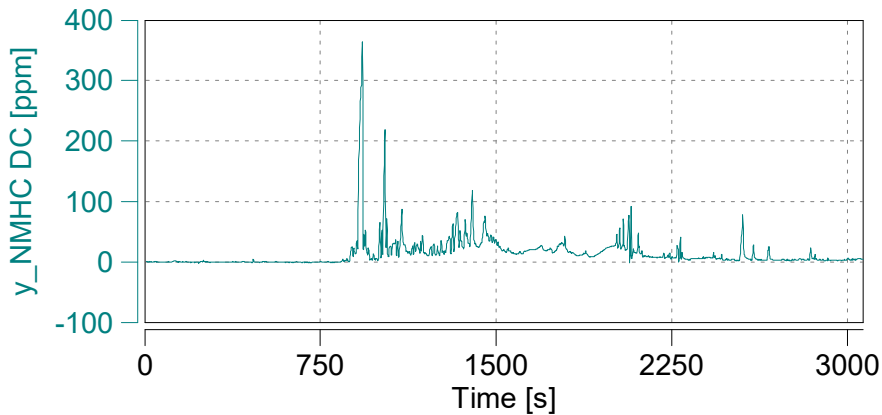
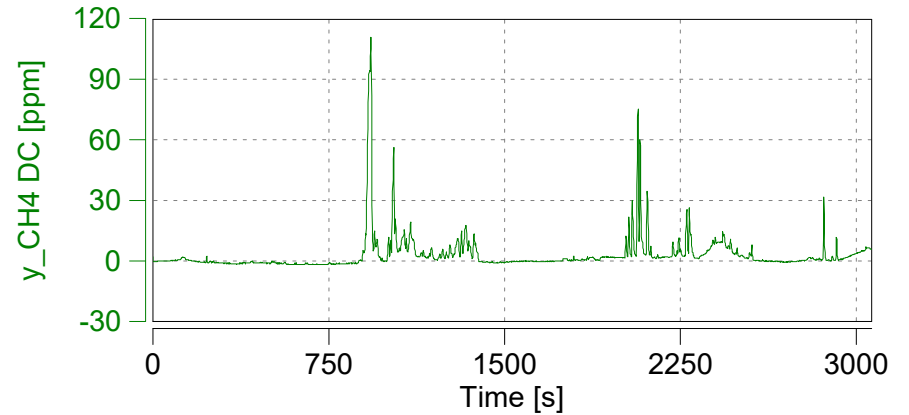
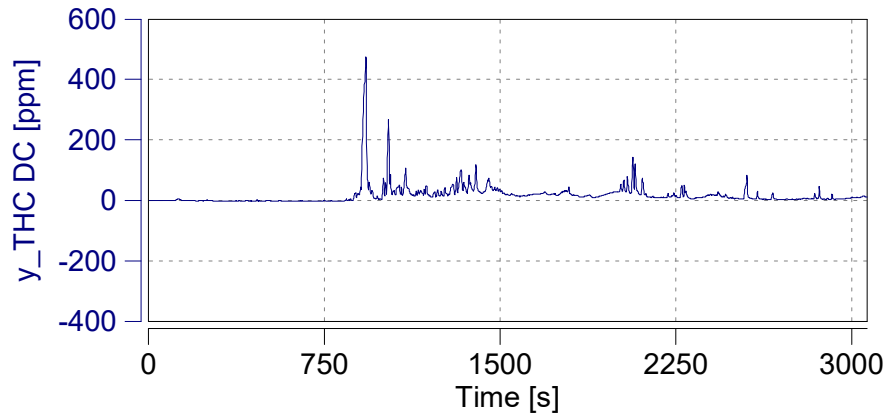


Case: Mountain

Page: Corrected Emissions (5)

Start Date: 08/31/2017

Start Time: 17:31:51.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

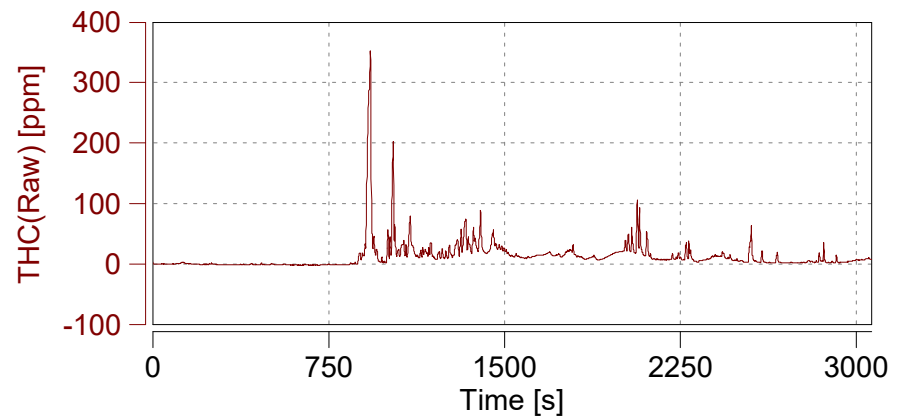
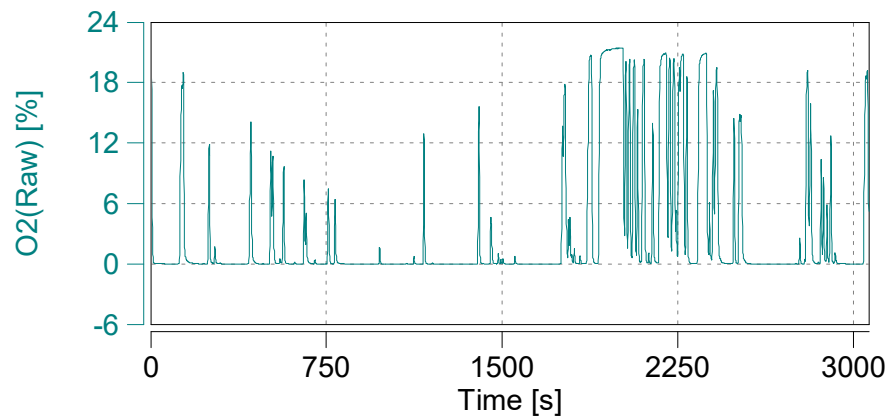
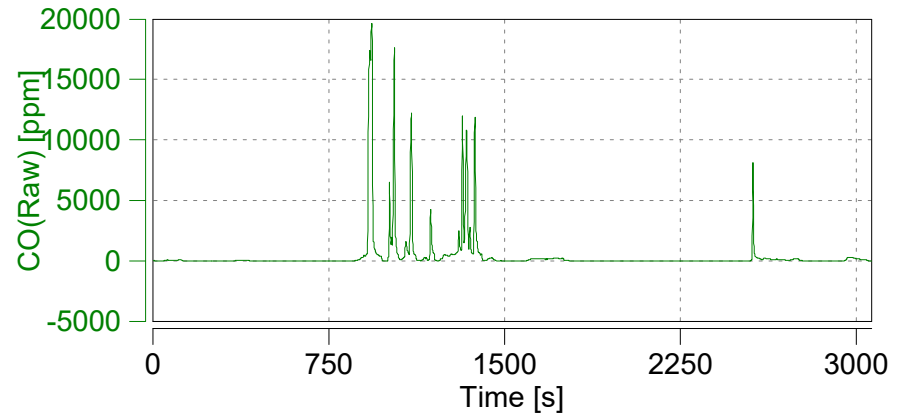
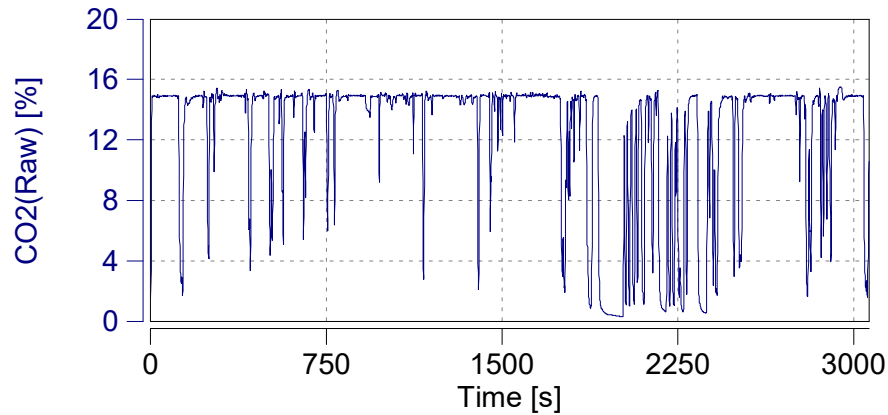
Vehicle: 2017 VW Touareg /
Engine: Gasoline / 3.6L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Mountain

Page: Emissions Raw Data (1)

Start Date: 08/31/2017

Start Time: 17:31:51.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

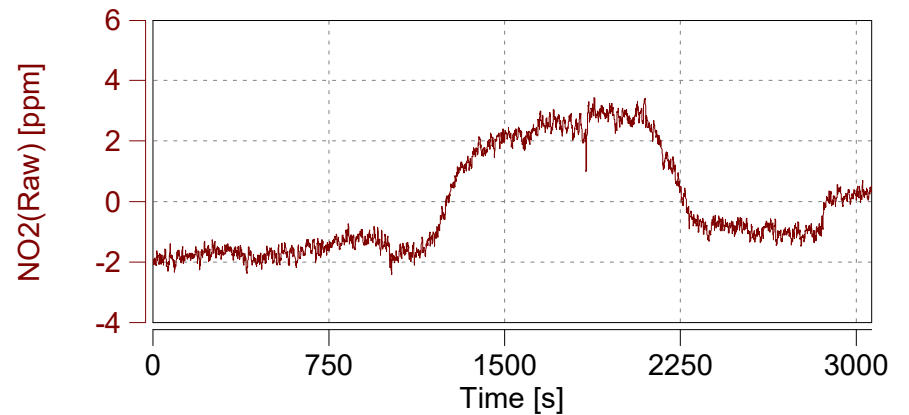
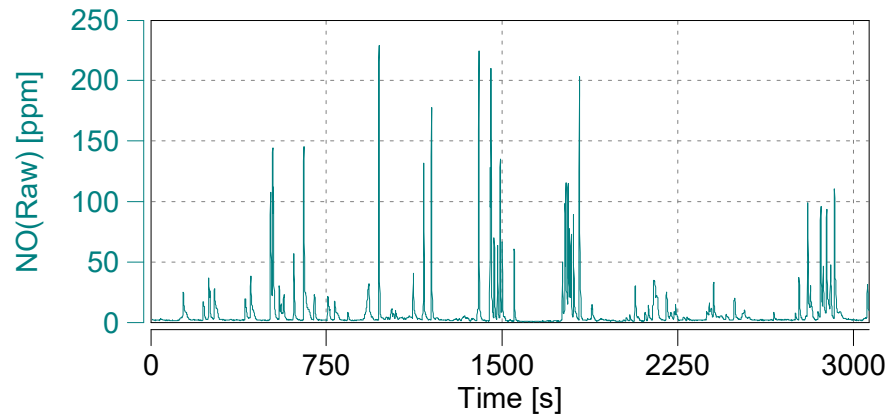
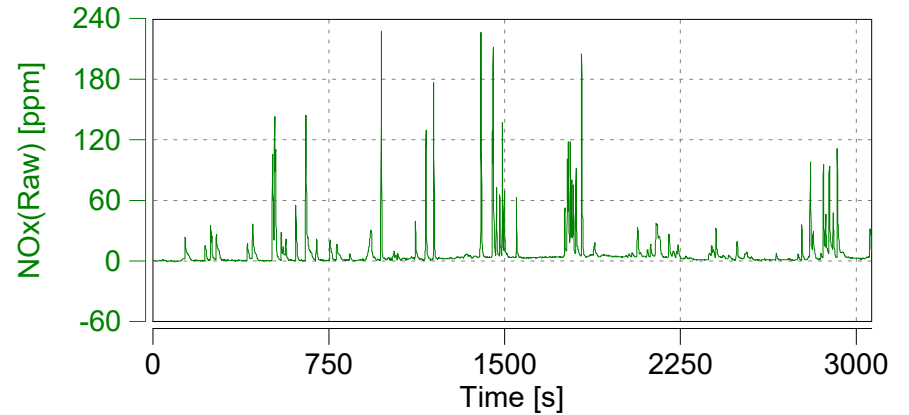
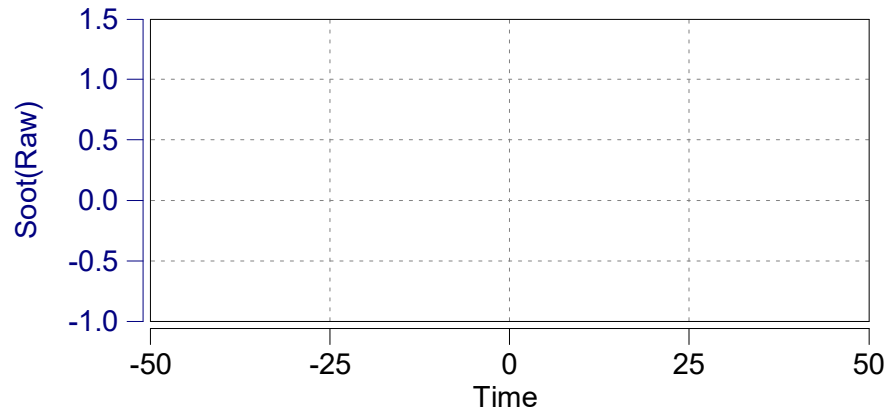
Vehicle: 2017 VW Touareg /
Engine: Gasoline / 3.6L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Mountain

Page: Emissions Raw Data (2)

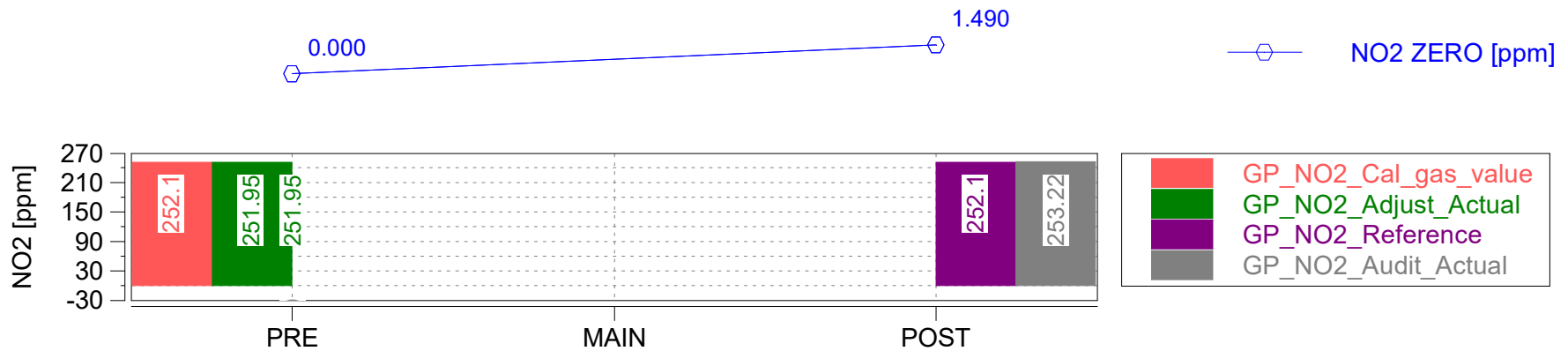
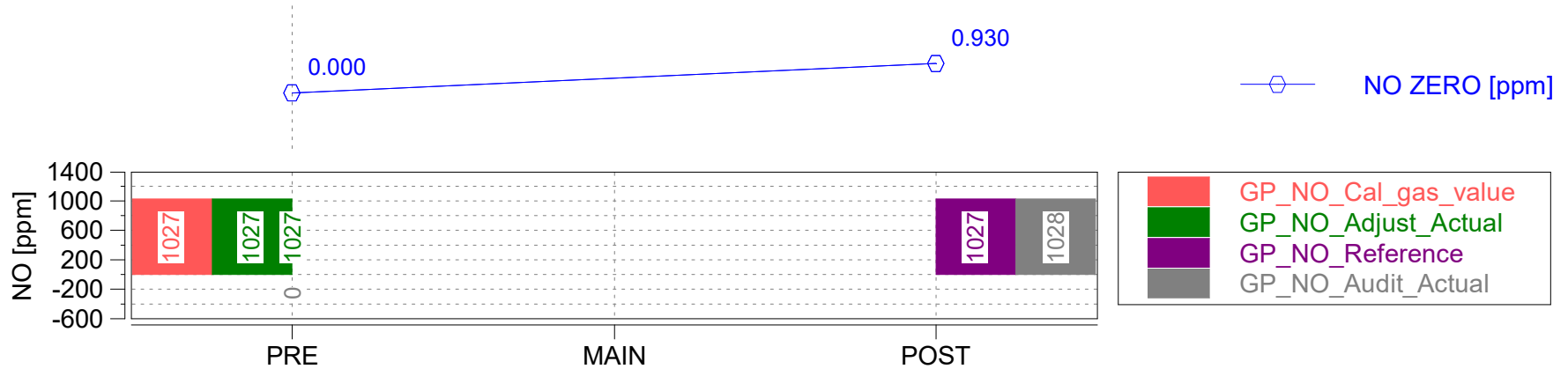
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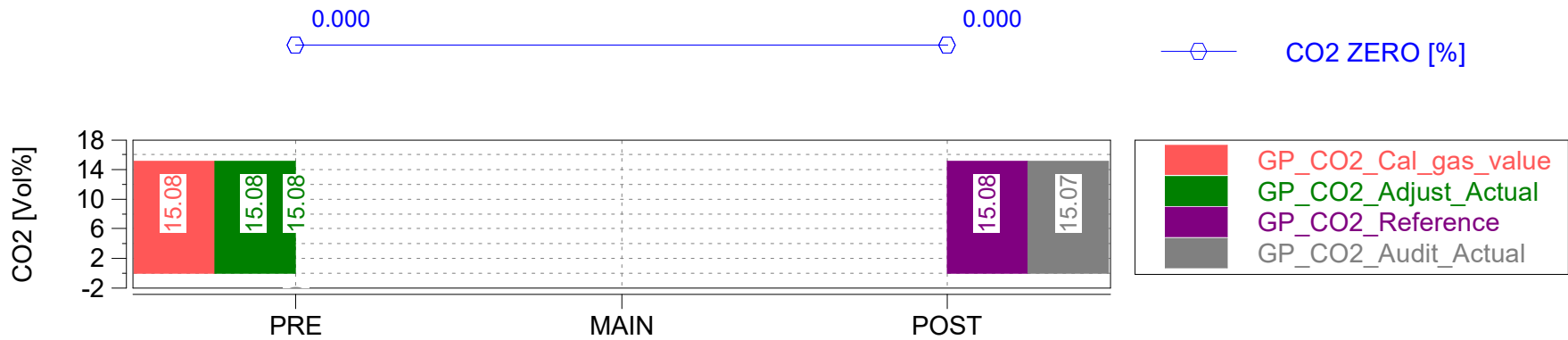
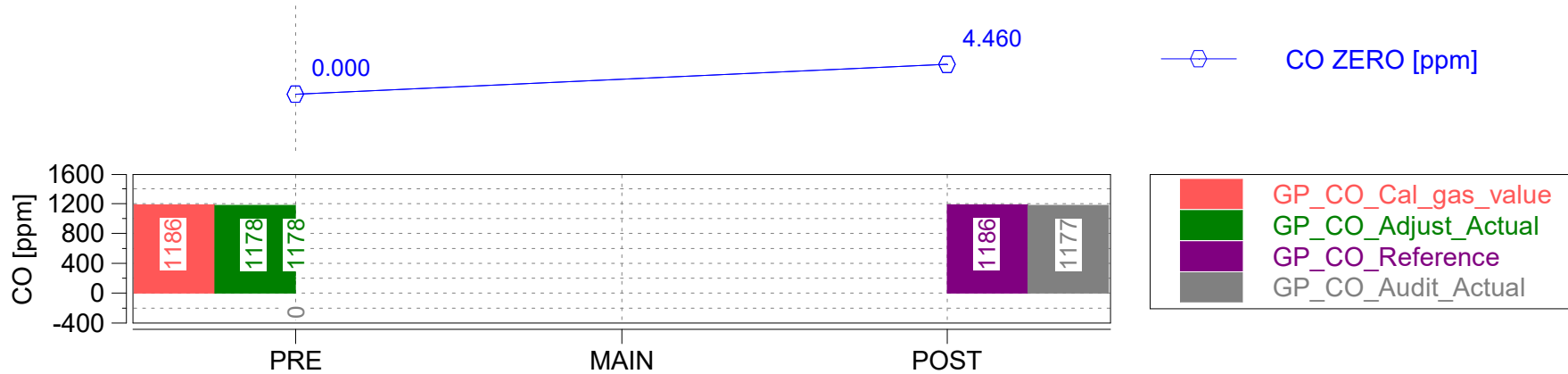
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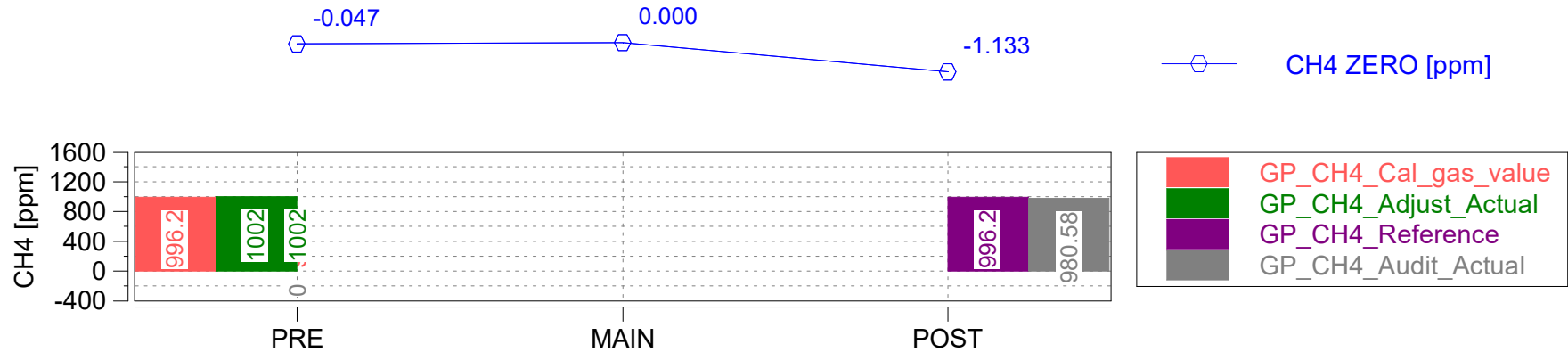
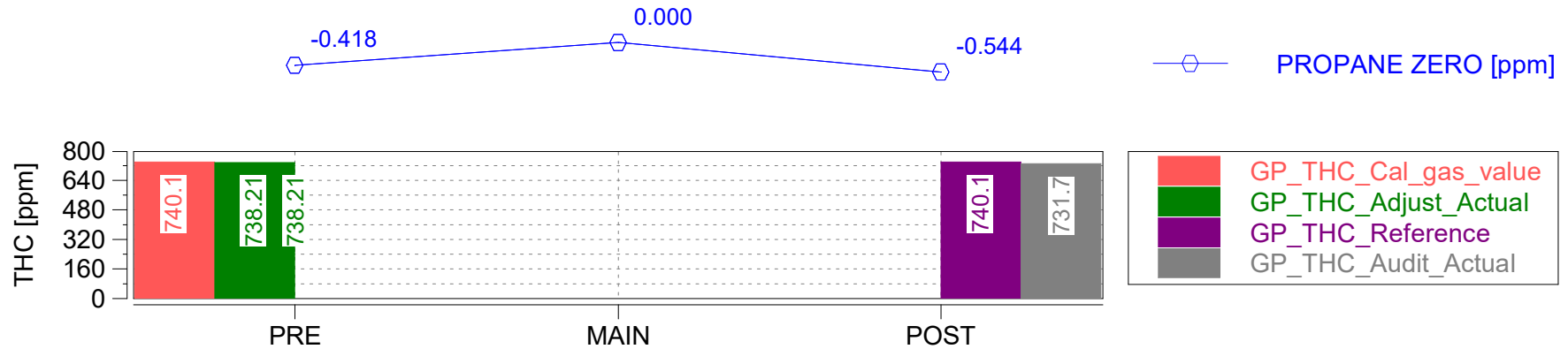


Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Touareg /
Engine: Gasoline / 3.6L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90







#	Text	Value	Unit
-	----	----	----
1.0	Test Start: Date	-	-
2.0	Test Start: Time	-	-
3.0	Ambient Temperature	IFILE1:TM'Temperature	deg C
4.0	Ambient Temperature TS	0.00000	s
5.0	Ambient Pressure	IFILE1:TM'Pressure	kPa
6.0	Ambient Pressure TS	0.00000	s
7.0	Humidity Type	1.00000	-
8.0	Amb. Rel. Humidity	IFILE1:TM'Humidity	%
9.0	Amb. Rel. Humidity	0.00000	s
10.0	GPS Latitude		deg
11.0	GPS Latitude TS	0.00000	s
12.0	GPS Longitude		deg
13.0	GPS Longitude TS	0.00000	s
14.0	Altitude		m
15.0	Altitude TS	0.00000	s
16.0	GPS Quality		-
17.0	GPS Quality TS	0.00000	s
18.0	GroundSpeed		km/h
19.0	GroundSpeed TS	0.00000	s
20.0	Altitude from topographical map		m
21.0	Altitude TS of topographical map		s
22.0	TRIP_AMBIENT_GPS_AVL	YES	-
23.0	CALC_GPS_GROUNDSPEED	NO	-
24.0	EXHAUST_FLOW_AVL	NO	-
25.0	EXHAUST_FLOW_AVL_EFM	YES	-
26.0	Exhaust Flow Type	2.00000	-
27.0	Mass Flow	IFILE1:TM'PitotEFM_ExhaustG	various
28.0	Mass Flow TS	1.20000	s
29.0	Exhaust Pressure		kPa
30.0	Exhaust Pressure TS	1.20000	s

#	Text	Value	Unit
-	----	----	----
31.0	Exhaust Delta Pressure		kPa
32.0	Exhaust Pressure Delta TS	1.20000	s
33.0	Exhaust Temperature	IFILE1:TM'PitotEFM_ExhaustG	degC
34.0	Exhaust Temperature TS	1.20000	s
35.0	Lambda	N/A	-
36.0	Lambda TS		s
37.0	CO2_DIL		%
38.0	CO2_DIL TS		s
39.0	CVS Volume Flow		m3/min
40.0	TimeShift_CVS_VOL_FLOW		s
41.0	IN_CVS_PRESSURE		kPa
42.0	TimeShift_CVS_PRESSURE		s
43.0	IN_CVS_TEMP		degC
44.0	TimeShift_CVS_TEMP		s
45.0	Dry to Wet Conversion CO2	YES	-
46.0	Dry to Wet Conversion O2	YES	-
47.0	Dry to Wet Conversion NO	NO	-
48.0	Dry to Wet Conversion NO2	NO	-
49.0	Dry to Wet Conversion THC	NO	-
50.0	Dry to Wet Conversion CH4	NO	-
51.0	Dry to Wet Conversion O2	NO	-
52.0	CO2	IFILE1:TM'GPiS_CO2	%
53.0	CO2 TS	-7.80000	s
54.0	OS	IFILE1:TM'GPiS_O2	%
55.0	O2 TS	-8.30000	s
56.0	CO	IFILE1:TM'GPiS_CO	ppm
57.0	CO TS	-7.80000	s
58.0	NO	IFILE1:TM'GPiS_NO	ppm
59.0	NO TS	-6.00000	s
60.0	NO2	IFILE1:TM'GPiS_NO2	ppm

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Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
61.0	NO2 TS	-6.00000	s
62.0	THC	IFILE1:TM'FIDiS_THC_C1	ppm
63.0	THC TS	0.00000	s
64.0	CH4	IFILE1:TM'FIDiS_CH4_C1	ppm
65.0	CH4 TS	0.00000	s
66.0	GAS_PEMS_Ethane_Efficiency	IFILE1:MOVE_AVL4925'GP_Et -	
67.0	GAS_PEMS_Methane_Efficiency	IFILE1:MOVE_AVL4925'GP_M -	
68.0	GAS_PEMS_Methane_Response	IFILE1:MOVE_AVL4925'GP_M -	
69.0	Zero Signal	IFILE1:TM'GPiS_STATE	0/1
70.0	Zero Signal TS	-6.00000	s
71.0	Zero Signal_FIDiS	IFILE1:TM'FIDiS_STATE	0/1
72.0	Zero Signal_FIDiS TS		s
73.0	Species Input Type	4.00000	-
74.0	GASPEMS=AVL493	NO	-
75.0	GASPEMS=AVL493_iX	NO	-
76.0	GASPEMS=AVL492	YES	-
77.0	GASPEMS=AVL4925	YES	-
78.0	PM: Type	4.00000	1=GFB+HC, 2=GFB, 3='PM=S
79.0	Filter ID from IFile	NO	-
80.0	Lab ID from IFile	NO	-
81.0	PM Filter: ID	N/A	ID
82.0	PM Filter: Lab	N/A	Name/ID
83.0	PM Filter: Weight before Test	N/A	mg
84.0	PM Filter: Weight after Test	N/A	mg
85.0	PM (HC Corr): Max. Exhaust Flow	N/A	scfm
86.0	Soot		mg/m3
87.0	Soot TS	-5.00000	s
88.0	Soot Sensor		mg/m3
89.0	Soot Sensor TS		s
90.0	PM Filter: Filter Flow Rate		l/min

#	Text	Value	Unit
-	----	----	----
91.0	PM Filter: Filter Flow Rate TS	-5.00000	s
92.0	PM Filter: Filter Dilution Ratio		-
93.0	PM Filter: Filter Dilution Ratio TS	-5.00000	s
94.0	PM Filter: Filter Trigger		-
95.0	PM Filter: Filter Trigger TS	-5.00000	s
96.0	PMPEMS=AVL494	YES	-
97.0	PMPEMS_AVL494_PROP_DIL	NO	-
98.0	PM dilution ratio min		-
99.0	PM_MaxExhaustFlowRate		-
100.0	PM_ExhaustFlow_Thresh		-
101.0	PM_total_flow_val		-
102.0	PM_total_flow_val_TS		-
103.0	PM_exh_mass_flow		-
104.0	PM_exh_mass_flow_TS		-
105.0	PN		#/cm3
106.0	TimeShift_PN		s
107.0	PN_STATE		-
108.0	PN TS STATE		s
109.0	PNPEMS_AVL496	NO	-
110.0	PN_CorrFactor	1.00000	
111.0	Time Alignment	1.00000	-
112.0	Time Alignment Dataset 1	N/A	0/1
113.0	Time Alignment Dataset 2	N/A	0/1
114.0	Time Alignment Thresh 1	N/A	-
115.0	Time Alignment Thresh 2	N/A	-
116.0			
117.0			
118.0			
119.0			
120.0			

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Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
121.0			
122.0	Trigger		0/1
123.0	Trigger TS		s
124.0	FTIR_NAME_1		-
125.0	FTIR_MW_1		-
126.0	FTIR_CHANNEL_1		-
127.0	FTIR_CHANNEL_TS_1		-
128.0	FTIR_CHANNEL_DRY_1	NO	-
129.0	FTIR_NAME_2		-
130.0	FTIR_MW_2		-
131.0	FTIR_CHANNEL_2		-
132.0	FTIR_CHANNEL_TS_2		-
133.0	FTIR_CHANNEL_DRY_2	NO	-
134.0	FTIR_NAME_3		-
135.0	FTIR_MW_3		-
136.0	FTIR_CHANNEL_3		-
137.0	FTIR_CHANNEL_TS_3		-
138.0	FTIR_CHANNEL_DRY_3	NO	-
139.0	FTIR_NAME_4		-
140.0	FTIR_MW_4		-
141.0	FTIR_CHANNEL_4		-
142.0	FTIR_CHANNEL_TS_4		-
143.0	FTIR_CHANNEL_DRY_4	NO	-
144.0	FTIR_NAME_5		-
145.0	FTIR_MW_5		-
146.0	FTIR_CHANNEL_5		-
147.0	FTIR_CHANNEL_TS_5		-
148.0	FTIR_CHANNEL_DRY_5	NO	-
149.0	FTIR_NAME_6		-
150.0	FTIR_MW_6		-

#	Text	Value	Unit
-	----	----	----
151.0	FTIR_CHANNEL_6		-
152.0	FTIR_CHANNEL_TS_6		-
153.0	FTIR_CHANNEL_DRY_6	NO	-
154.0	FTIR_NAME_7		-
155.0	FTIR_MW_7		-
156.0	FTIR_CHANNEL_7		-
157.0	FTIR_CHANNEL_TS_7		-
158.0	FTIR_CHANNEL_DRY_7	NO	-
159.0	FTIR_NAME_8		-
160.0	FTIR_MW_8		-
161.0	FTIR_CHANNEL_8		-
162.0	FTIR_CHANNEL_TS_8		-
163.0	FTIR_CHANNEL_DRY_8	NO	-
164.0	FTIR_NAME_9		-
165.0	FTIR_MW_9		-
166.0	FTIR_CHANNEL_9		-
167.0	FTIR_CHANNEL_TS_9		-
168.0	FTIR_CHANNEL_DRY_9	NO	-
169.0	FTIR_NAME_10		-
170.0	FTIR_MW_10		-
171.0	FTIR_CHANNEL_10		-
172.0	FTIR_CHANNEL_TS_10		-
173.0	FTIR_CHANNEL_DRY_10	NO	-
174.0	FTIR_NAME_11		-
175.0	FTIR_MW_11		-
176.0	FTIR_CHANNEL_11		-
177.0	FTIR_CHANNEL_TS_11		-
178.0	FTIR_CHANNEL_DRY_11	NO	-
179.0	FTIR_NAME_12		-
180.0	FTIR_MW_12		-

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Vehicle: 2017 VW Touareg /
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#	Text	Value	Unit
-	----	----	----
181.0	FTIR_CHANNEL_12		-
182.0	FTIR_CHANNEL_TS_12		-
183.0	FTIR_CHANNEL_DRY_12	NO	-
184.0	FTIR_NAME_13		-
185.0	FTIR_MW_13		-
186.0	FTIR_CHANNEL_13		-
187.0	FTIR_CHANNEL_TS_13		-
188.0	FTIR_CHANNEL_DRY_13	NO	-
189.0	FTIR_NAME_14		-
190.0	FTIR_MW_14		-
191.0	FTIR_CHANNEL_14		-
192.0	FTIR_CHANNEL_TS_14		-
193.0	FTIR_CHANNEL_DRY_14	NO	-
194.0	FTIR_NAME_15		-
195.0	FTIR_MW_15		-
196.0	FTIR_CHANNEL_15		-
197.0	FTIR_CHANNEL_TS_15		-
198.0	FTIR_CHANNEL_DRY_15	NO	-
199.0	FTIR_NAME_16		-
200.0	FTIR_MW_16		-
201.0	Vehicle Type	2017 VW Touareg	-
202.0	Vehicle Info		-
203.0	Engine Type	Gasoline	-
204.0	Engine Info	3.6L	-
205.0	Engine Torque		Nm
206.0	Curb Idle Load		%
207.0	Idle Speed		rpm
208.0	HYBRID_OVC_REF_CO2_gkm		g/km
209.0	Engine Concept	1.00000	-
210.0	Alpha	1.93000	-

#	Text	Value	Unit
-	----	----	----
211.0	Beta	1.00000	
212.0	Gamma	0.00000	
213.0	Delta	0.00000	
214.0	Epsilon	0.03200	
215.0	X_C	83.00000	
216.0	X_H	13.30000	
217.0	X_N	0.00000	
218.0	X_O	3.50000	
219.0	X_S	0.00000	
220.0	Fuel_Density	747.50000	
221.0	rho_exhaust	1.29310	
222.0	U_CO2	1.51800	
223.0	U_CO	0.96600	
224.0	U_NO	1.58700	
225.0	U_NO2	1.58700	
226.0	U_NOx	1.58700	
227.0	U_HC	0.49900	
228.0	U_NMHC	0.47100	
229.0	U_CH4	0.55300	
230.0	U_O2	1.10400	
231.0	Fuel Type	2.00000	-
232.0	exhaust mass flow type (YES/NO)	YES	-
233.0	Distance Calculation Type	1.00000	-
234.0	Velocity Statistics Calculation Type	2.00000	-
235.0	RDE vehicle class	1.00000	-
236.0	TM_CITY0		s
237.0	TM_CITY1		s
238.0	TM_RURAL0		s
239.0	TM_RURAL1		s
240.0	TM_RURAL2_0		s

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Touareg /
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NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
241.0	TM_RURAL2_1		s
242.0	Second Rural Part for Time Marks (NO		-
243.0	TM_MW0		s
244.0	TM_MW1		s
245.0	VELOCITY_LIMIT_STOP	2.00000	km/h
246.0	VELOCITY_LIMIT_URBAN	50.00000	km/h
247.0	VELOCITY_LIMIT_RURAL	75.00000	km/h
248.0	Intake Manifold Pressure Type	1.00000	-
249.0	Velocity	IFILE1:TM'OBD_Vehicle_Spee	km/h
250.0	Velocity TS	1.30000	s
251.0	Velocity FACTOR	1.00000	-
252.0	Coolant Temperature	IFILE1:TM'OBD_Engine_Coola	degC
253.0	Coolant Temperature TS	1.30000	s
254.0	Oil Temperature		degC
255.0	Oil Temperature TS	1.30000	s
256.0	Intake Manifold Temperature		degC
257.0	Intake Manifold Temp TS	1.30000	s
258.0	Intake Manifold Pressure	IFILE1:TM'OBD_Intake_manifo	kPa
259.0	Intake Manifold Pressure TS	1.30000	s
260.0	Throttle Position		%
261.0	Throttle TS	1.30000	s
262.0	TYP_IDLE_MASS_FLOW		kg/h
263.0	Torque Type	1.00000	-
264.0	Speed	IFILE1:TM'OBD_Engine_RPM	rpm
265.0	Speed TS	1.30000	s
266.0	Torque		Nm
267.0	Torque TS	1.30000	s
268.0	Friction Torque	N/A	Nm
269.0	Friction Torque TS	N/A	s
270.0	Reference Torque	N/A	Nm

#	Text	Value	Unit
-	----	----	----
271.0	Reference Torque TS	N/A	s
272.0	k_VELINE		-
273.0	D_VELINE		-
274.0	Fuel Flow Type	2.00000	-
275.0	Air Flow Type	1.00000	-
276.0	Fuel Rate		various
277.0	Air Rate		various
278.0	Fuel Rate TS	1.30000	s
279.0	No_Cylinders		-
280.0	Air Rate TS	1.30000	s
281.0	FTIR_CHANNEL_32		-
282.0	FTIR_CHANNEL_TS_32		-
283.0	FTIR_CHANNEL_DRY_32	NO	-
284.0	FTIR_NAME_33		-
285.0	FTIR_MW_33		-
286.0	FTIR_CHANNEL_33		-
287.0	FTIR_CHANNEL_TS_33		-
288.0	FTIR_CHANNEL_DRY_33	NO	-
289.0	FTIR_NAME_34		-
290.0	FTIR_MW_34		-
291.0	FTIR_CHANNEL_34		-
292.0	FTIR_CHANNEL_TS_34		-
293.0	FTIR_CHANNEL_DRY_34	NO	-
294.0	FTIR_NAME_35		-
295.0	FTIR_MW_35		-
296.0	FTIR_CHANNEL_35		-
297.0	FTIR_CHANNEL_TS_35		-
298.0	FTIR_CHANNEL_DRY_35	NO	-
299.0	FTIR_NAME_36		-
300.0	FTIR_MW_36		-

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Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
301.0	FTIR_CHANNEL_36		-
302.0	FTIR_CHANNEL_TS_36		-
303.0	FTIR_CHANNEL_DRY_36	NO	-
304.0	FTIR_NAME_37		-
305.0	FTIR_MW_37		-
306.0	FTIR_CHANNEL_37		-
307.0	FTIR_CHANNEL_TS_37		-
308.0	FTIR_CHANNEL_DRY_37	NO	-
309.0	FTIR_NAME_38		-
310.0	FTIR_MW_38		-
311.0	FTIR_CHANNEL_38		-
312.0	FTIR_CHANNEL_TS_38		-
313.0	FTIR_CHANNEL_DRY_38	NO	-
314.0	FTIR_NAME_39		-
315.0	FTIR_MW_39		-
316.0	FTIR_CHANNEL_39		-
317.0	FTIR_CHANNEL_TS_39		-
318.0	FTIR_CHANNEL_DRY_39	NO	-
319.0	FTIR_NAME_40		-
320.0	FTIR_MW_40		-
321.0	FTIR_CHANNEL_40		-
322.0	FTIR_CHANNEL_TS_40		-
323.0	FTIR_CHANNEL_DRY_40	NO	-
324.0	Legislation Type (1=HDIUT 2=EU H	4.00000	-
325.0	WholeTest_NOx_corr	5.00000	-
326.0	WholeTest_Hum_corr	2.00000	-
327.0	CD_Distance	0.00000	km
328.0	CD_NOx	0.00000	mg/km
329.0	CD_CO	0.00000	mg/km
330.0	CD_CO2	0.00000	g/km

#	Text	Value	Unit
-	----	----	----
331.0	CD_NMHC	0.00000	mg/km
332.0	CD_CH4	0.00000	mg/km
333.0	CD_THC	0.00000	mg/km
334.0	CD_PN		#/km
335.0	WLTC_LOW_SPEED_gkm		g/km
336.0	WLTC_LOW_SPEED_FAC	1.20000	-
337.0	WLTC_MEDIUM_SPEED_gkm		g/km
338.0	WLTC_HIGH_SPEED_gkm		g/km
339.0	WLTC_HIGH_SPEED_FAC	1.10000	-
340.0	WLTC_EXTRA_HIGH_SPEED_gkm		g/km
341.0	WLTC_EXTRA_HIGH_SPEED_FA	1.05000	-
342.0	TOL_NORMAL_DRIVING	25.00000	%
343.0	TOL_SEVERE_DRIVING	50.00000	%
344.0	Increase Tolerance Nomral Driving	NO	-
345.0	Bin1_min		km/h
346.0	Bin2_min		km/h
347.0	Bin3_min		km/h
348.0	Bin1_max		km/h
349.0	Bin2_max		km/h
350.0	Bin3_max		km/h
351.0	Clear_R0	125.40000	N
352.0	Clear_R1	0.29300	Nh/km
353.0	Clear_R2	0.02795	N*(h/km) ²
354.0	Clear_SMK	1470.00000	kg
355.0	Clear_Rated_Power	140.00000	kW
356.0	Clear_Ref_Velocity	70.00000	km/h
357.0	Clear_Ref_Acc	0.45000	m/s ²
358.0	Clear_Smooth	3.00000	s
359.0	EXTC_From_High_Temp	30.00000	degC
360.0	EXTC_To_High_Temp	35.00000	degC

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#	Text	Value	Unit
-	----	----	----
361.0	EXTC_From_Low_Temp	-7.00000	degC
362.0	EXTC_To_Low_Temp	0.00000	degC
363.0	Euro 6d or Euro 6d temp	NO	-
364.0	EXTC_From_Altitude	700.00000	m
365.0	EXTC_To_Altitude	1300.00000	m
366.0	EXTC_CORR_FAC	1.60000	
367.0	weight cold start (YES/NO)	NO	-
368.0	precon and soak done (YES/NO)	NO	-
369.0	PATH_PRECON_FILE		
370.0	filter velocity (YES/NO)	NO	-
371.0	filter velocity auto(YES/NO)	NO	-
372.0	Ki_CO		
373.0	Ki_CO2		
374.0	Ki_NOx		
375.0	Ki_FACTOR_CO2 (YES/NO)	NO	-
376.0	Ki_OFFSET_CO2 (YES/NO)	NO	-
377.0	Ki_FACTOR_CO (YES/NO)	NO	-
378.0	Ki_OFFSET_CO (YES/NO)	NO	-
379.0	Ki_FACTOR_NOx (YES/NO)	NO	-
380.0	Ki_OFFSET_NOx (YES/NO)	NO	-
381.0	Ki_OFF (YES/NO)	NO	-
382.0	HD legislations	1.00000	-
383.0	RDE legislations	1.00000	-
384.0	Submission Documents (YES/NO)	NO	-
385.0	General Setup Parameters Text	Mountain	-
386.0	Legislation Setup Parameters Text	Mountain	-
387.0	Trip Info		-
388.0	IN_TIME_REF		-
389.0	Sub-Trip Start: Auto	YES	-
390.0	Sub-Trip Start: Seconds	N/A	s

#	Text	Value	Unit
-	----	----	----
391.0	Sub-Trip End: Auto	YES	-
392.0	Sub-Trip End: Seconds	N/A	s
393.0	Unit System	2.00000	-
394.0	Calculate: PM Emissions	NO	-
395.0	Calculate: PN Emissions	NO	-
396.0	Output: Summary	YES	-
397.0	Output: Emissions	YES	-
398.0	Output: Raw Data	YES	-
399.0	Output: Zero Span	YES	-
400.0	Output: Data Consistency	NO	-
401.0	Output: Window Plots	YES	-
402.0	Fuel Rate ECU vs. EU ISO16183	y = 10000000000.0000 x - 0.000 R ² =10000000000.000 SEE=	
403.0	PEMS post processing version	Rel_10_B192	
404.0	Concerto version	480.00000	
405.0	Concerto build	215.00000	
406.0	USERNAME	EFR	

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Touareg /
Engine: Gasoline / 3.6L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City
Page: Trip Summary

Start Date: 09/01/2017
Start Time: 19:11:53.0



Trip Duration	3726.00	s	ave THC	-0.06713	ppm	BS CO2	n/a	g/hphr
Trip Duration (a)	3726.00	s	ave NMHC	0.09247	ppm	BS CO	n/a	g/hphr
Trip Distance	15.81	mi	ave CH4	-0.14509	ppm	BS THC	n/a	g/hphr
Trip Distance (a)	15.81	mi	ave CO	-15.95806	ppm	BS NMHC	n/a	g/hphr
Trip Fuel Cons. (b)	n/a	kg	ave CO2	12.29625	%	BS CH4	n/a	g/hphr
Trip Fuel Cons. (ab)	n/a	kg	ave NOx	7.14252	ppm	BS NO (d)	n/a	g/hphr
Trip Fuel Cons. EU (ac)	3.22	kg	ave PM	n/a	mg/m3	BS NO2	n/a	g/hphr
Trip Fuel Cons. US (ac)	3.18	kg	ave Soot meas	n/a	mg/m3	BS NOx	n/a	g/hphr
Trip Fuel Cons. Volume (b)	n/a	gall	ave Soot	n/a	mg/m3	BS Soot	n/a	g/hphr
Trip Fuel Cons. Volume (ab)	n/a	gall	ave PN	n/a	#/cm3	BS Soot meas	n/a	g/hphr
Trip Fuel Cons. Volume EU (ac)	1.14	gall	tot THC	0.01781	g	BS PM	n/a	g/hphr
Trip Fuel Cons. Volume US (ac)	1.12	gall	tot NMHC	0.00846	g	BS PN	n/a	#/hpr
Trip Fuel Economy (b)	n/a	mpg_US	tot CH4	0.01238	g	DS CO2	610.69470	g/mi
Trip Fuel Economy (ab)	n/a	mpg_US	tot CO	0.01335	g	DS CO	0.00084	g/mi
Trip Fuel Economy EU (ac)	13.91	mpg_US	tot CO2	9657.98698	g	DS THC	0.00113	g/mi
Trip Fuel Economy US (ac)	14.09	mpg_US	tot NO (d)	0.52743	g	DS NMHC	0.00054	g/mi
Trip Av. Eng. Speed	1152.90	rpm	tot NO2	0.00000	g	DS CH4	0.00078	g/mi
Trip Av. Torque	n/a	lbft	tot NOx	0.41118	g	DS NO (d)	0.03335	g/mi
Trip Av. Power	n/a	hp	tot Soot	n/a	g	DS NO2	0.00000	g/mi
Trip Work	n/a	hphr	tot Soot meas	n/a	g	DS NOx	0.02600	g/mi
Trip Exhaust Mass	50.69	kg	tot PM	n/a	g	DS Soot	n/a	g/mi
Trip Exhaust Mass EU (ac)	n/a	kg	tot PN	n/a	#	DS Soot meas	n/a	g/mi
Trip Exhaust Mass US (ac)	n/a	kg	PM measurement type	0.00000	-	DS PM	n/a	g/mi
Trip Av. Amb. Temperature	85.07	deg_F	PM correction type	1.00000	alpha(HC)	DS PN	n/a	#/mi
Trip Av. Humidity	49.39	%	tot Soot on PM filter (estim.)	n/a	mg	FS CO2	n/a	g/kg
Fuel Type	Petrol (E10)		Soot --> PM simple scaling factor	1.00000	-	FS CO	n/a	g/kg
			Soot --> PM alpha scaling factor	0.00000	-	FS THC	n/a	g/kg
			Trip Av. Veh. Speed	15.27996	mi/hr	FS NMHC	n/a	g/kg
			Trip Velocity Zero	24.53033	%	FS CH4	n/a	g/kg
			Trip Velocity Urban	88.78154	%	FS NO (d)	n/a	g/kg
			Trip Velocity Rural	7.32689	%	FS NO2	n/a	g/kg
			Trip Velocity Motorway	3.89157	%	FS NOx	n/a	g/kg
						FS Soot	n/a	g/kg
						FS Soot meas	n/a	g/kg
						FS PM	n/a	g/kg
						FS PN	n/a	#/kg

(a) GAS PEMS measurement state only, (b) based on fuel rate input (ECU, Fuel Meter), (c) calculated from carbon balance
(d) NO calculated using molecular weight of NO2

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Touareg /
Engine: Gasoline / 3.6L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Trip Summary Drift Corrected

Start Date: 09/01/2017

Start Time: 19:11:53.0

"



Concerto M.O.V.E, 2017

Trip Duration	3726.00	s	ave THC DC	-0.09108	ppm	BS CO2 DC	n/a	g/hphr
Trip Duration (a)	3726.00	s	ave NMHC DC	0.00711	ppm	BS CO DC	n/a	g/hphr
Trip Distance	15.81	mi	ave CH4 DC	-0.08927	ppm	BS THC DC	n/a	g/hphr
Trip Distance (a)	15.81	mi	ave CO DC	-16.15820	ppm	BS NMHC DC	n/a	g/hphr
			ave CO2 DC	12.30441	%	BS CH4 DC	n/a	g/hphr
Trip Fuel Cons. (b)	n/a	kg	ave NOx DC	7.13720	ppm	BS NO DC (d)	n/a	g/hphr
Trip Fuel Cons. (ab)	n/a	kg	ave PM	n/a	mg/m3	BS NO2 DC	n/a	g/hphr
Trip Fuel Cons. EU (ac)	3.22	kg	ave Soot meas	n/a	mg/m3	BS NOx DC	n/a	g/hphr
Trip Fuel Cons. US (ac)	3.18	kg	ave Soot	n/a	mg/m3	BS Soot	n/a	g/hphr
			ave PN DC	n/a	#/cm3	BS Soot meas	n/a	g/hphr
Trip Fuel Cons. Volume (b)	n/a	gall				BS PM	n/a	g/hphr
Trip Fuel Cons. Volume (ab)	n/a	gall	tot THC DC	0.02417	g	BS PN DC	n/a	#/hpr
Trip Fuel Cons. Volume EU (ac)	1.14	gall	tot NMHC DC	0.01239	g			
Trip Fuel Cons. Volume US (ac)	1.12	gall	tot CH4 DC	0.01307	g	DS CO2 DC	611.09993	g/mi
			tot CO DC	0.01352	g	DS CO DC	0.00085	g/mi
Trip Fuel Economy (b)	n/a	mpg_US	tot CO2 DC	9664.39573	g	DS THC DC	0.00153	g/mi
Trip Fuel Economy (ab)	n/a	mpg_US	tot NO DC (d)	0.52729	g	DS NMHC DC	0.00078	g/mi
Trip Fuel Economy EU (ac)	13.91	mpg_US	tot NO2 DC	0.00000	g	DS CH4 DC	0.00083	g/mi
Trip Fuel Economy US (ac)	14.09	mpg_US	tot NOx DC	0.41089	g	DS NO DC (d)	0.03334	g/mi
			tot Soot	n/a	g	DS NO2 DC	0.00000	g/mi
Trip Av. Eng. Speed	1152.90	rpm	tot Soot meas	n/a	g	DS NOx DC	0.02598	g/mi
Trip Av. Torque	n/a	lbft	tot PM	n/a	g	DS Soot	n/a	g/mi
Trip Av. Power	n/a	hp	tot PN DC	n/a	#	DS Soot meas	n/a	g/mi
Trip Work	n/a	hphr				DS PM	n/a	g/mi
			PM measurement type	0.00000	-	DS PN DC	n/a	#/mi
Trip Exhaust Mass	50.69	kg	PM correction type	1.00000	alpha(HC)			
Trip Exhaust Mass EU (ac)	n/a	kg	tot Soot on PM filter (estim.)	n/a	mg	FS CO2 DC	n/a	g/kg
Trip Exhaust Mass US (ac)	n/a	kg	Soot --> PM simple scaling factor	1.00000	-	FS CO DC	n/a	g/kg
			Soot --> PM alpha scaling factor	0.00000	-	FS THC DC	n/a	g/kg
Trip Av. Amb. Temperature	85.07	deg_F				FS NMHC DC	n/a	g/kg
Trip Av. Humidity	49.39	%	Trip Av. Veh. Speed	15.27996	mi/hr	FS CH4 DC	n/a	g/kg
			Trip Velocity Zero	24.53033	%	FS NO DC (d)	n/a	g/kg
Fuel Type	Petrol (E10)		Trip Velocity Urban	88.78154	%	FS NO2 DC	n/a	g/kg
			Trip Velocity Rural	7.32689	%	FS NOx DC	n/a	g/kg
			Trip Velocity Motorway	3.89157	%	FS Soot	n/a	g/kg
						FS Soot meas	n/a	g/kg
						FS PM	n/a	g/kg
						FS PN DC	n/a	#/kg

(a) GAS PEMS measurement state only, (b) based on fuel rate input (ECU, Fuel Meter), (c) calculated from carbon balance
 (d) NO calculated using molecular weight of NO2

Concerto Version: 480 Build 215, Serial Number: 8468
 M.O.V.E Post-Processing: Rel_10_B192

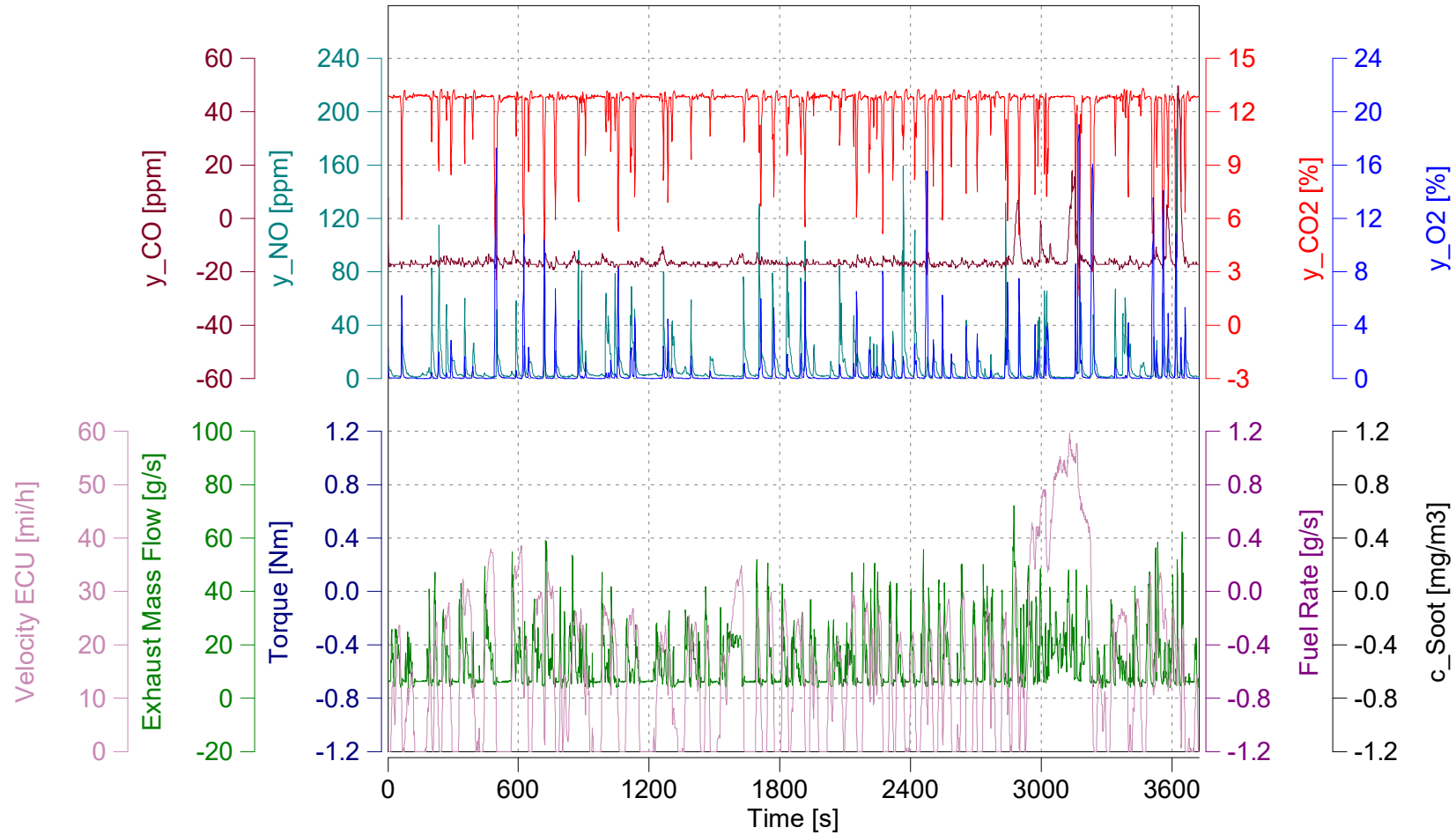
Vehicle: 2017 VW Touareg /
 Engine: Gasoline / 3.6L
 NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
 Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Time Alignment Check

Start Date: 09/01/2017

Start Time: 19:11:53.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

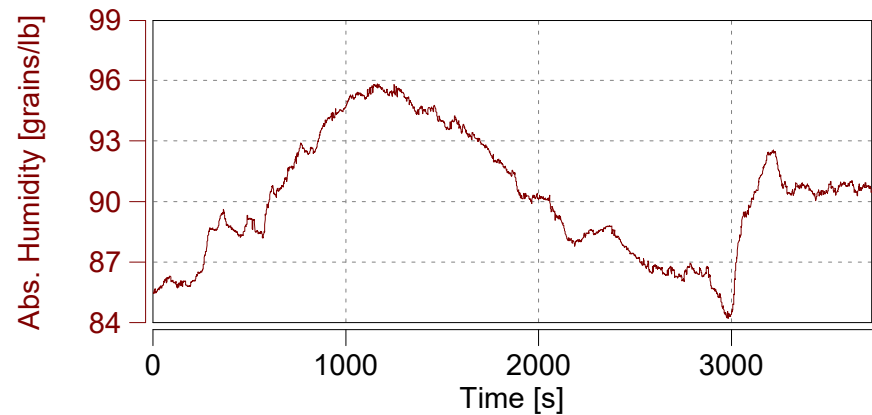
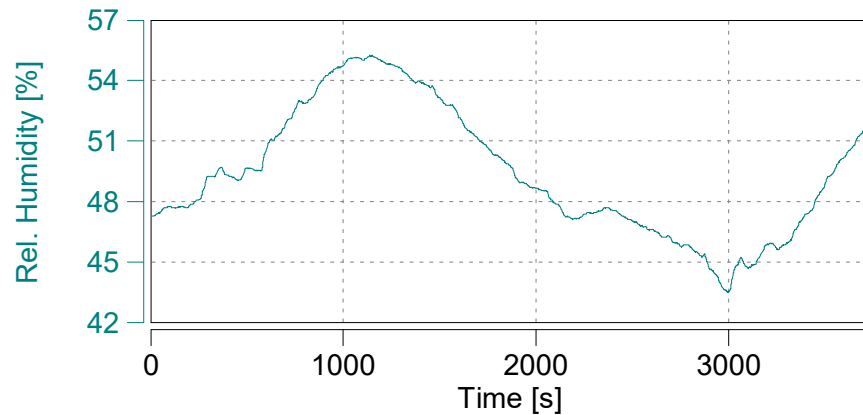
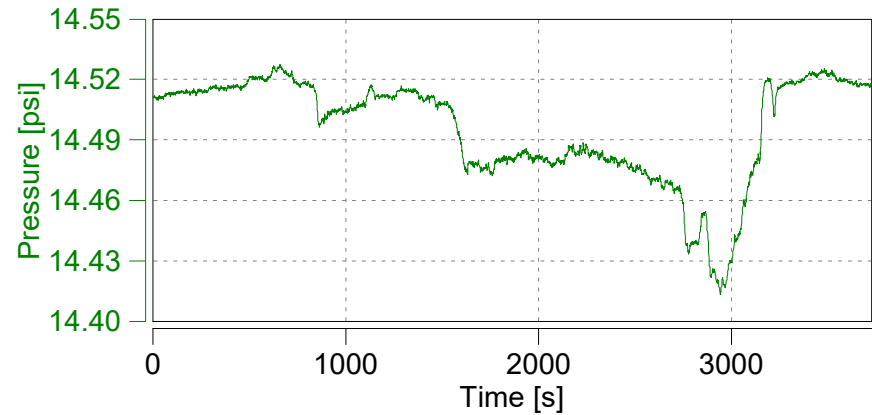
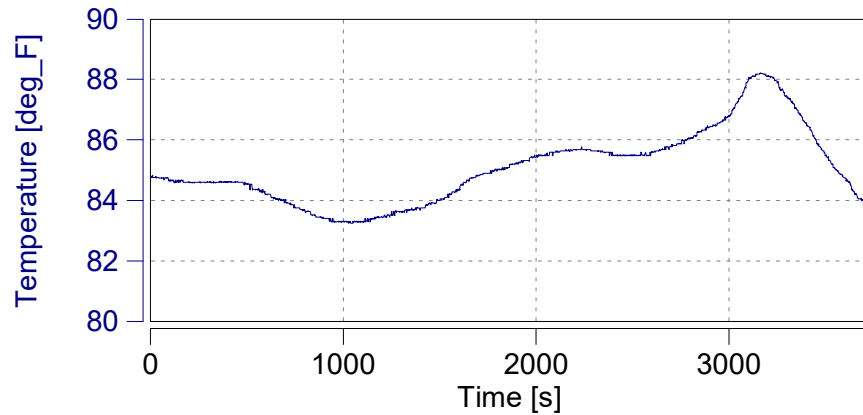
Vehicle: 2017 VW Touareg /
Engine: Gasoline / 3.6L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Ambient Conditions

Start Date: 09/01/2017

Start Time: 19:11:53.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

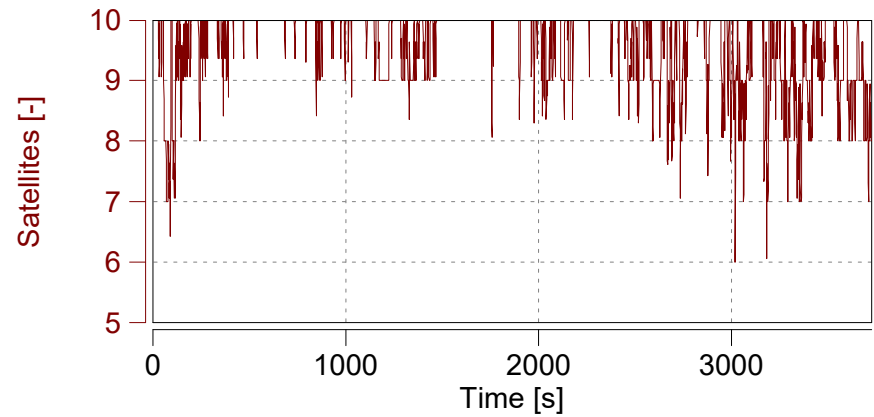
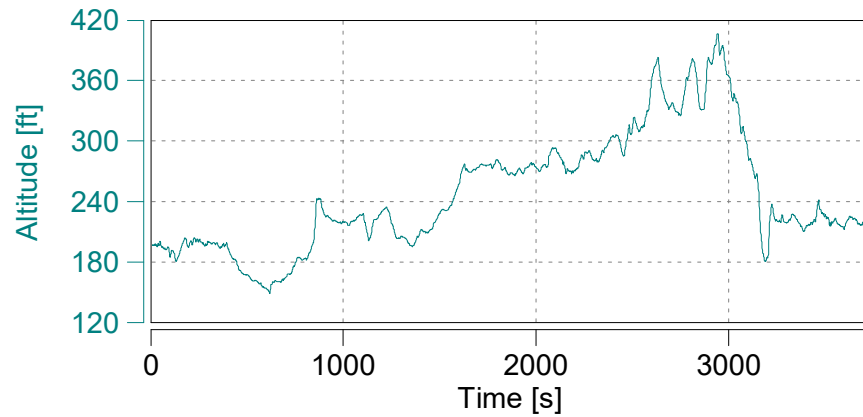
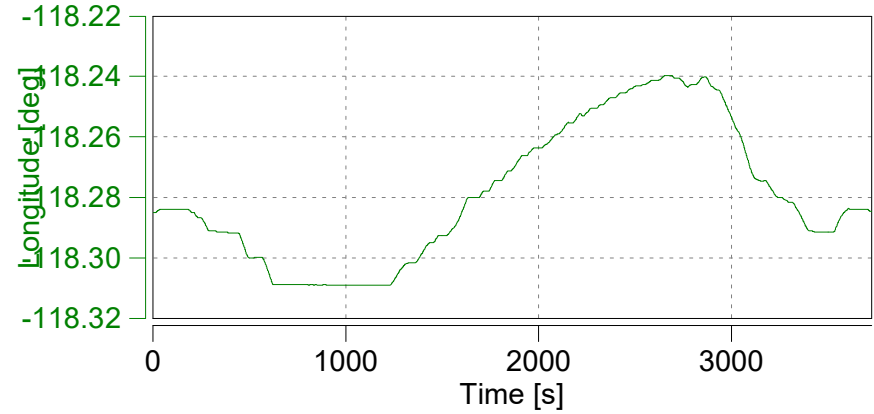
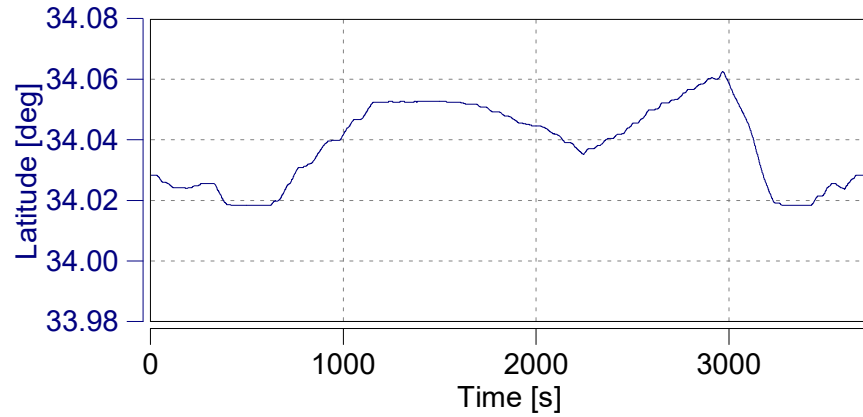
Vehicle: 2017 VW Touareg /
Engine: Gasoline / 3.6L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: GPS

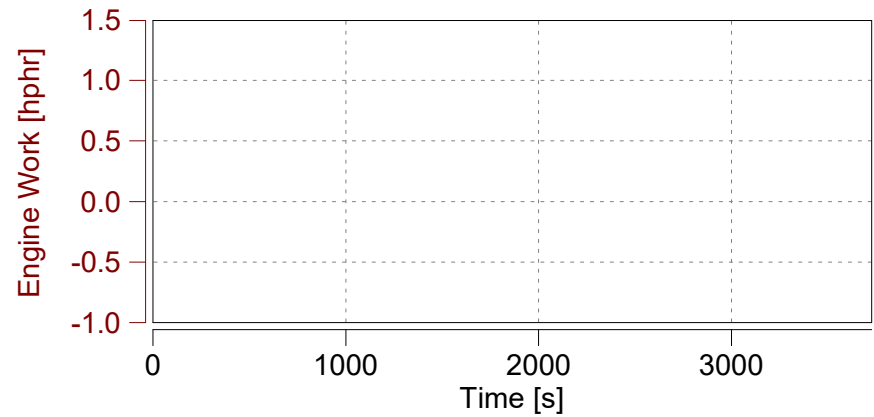
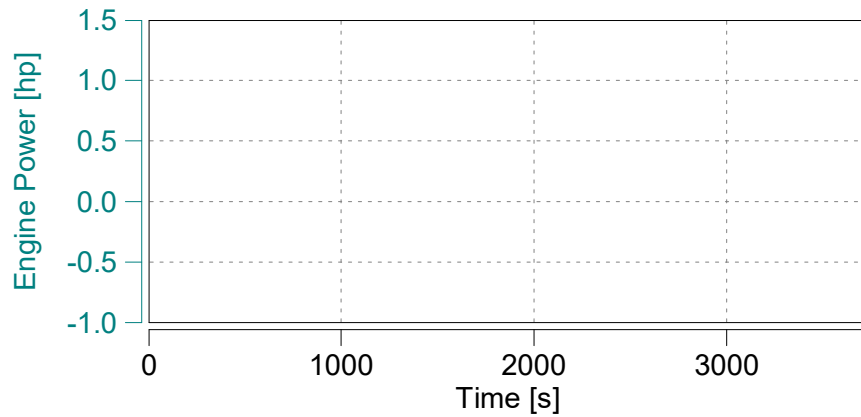
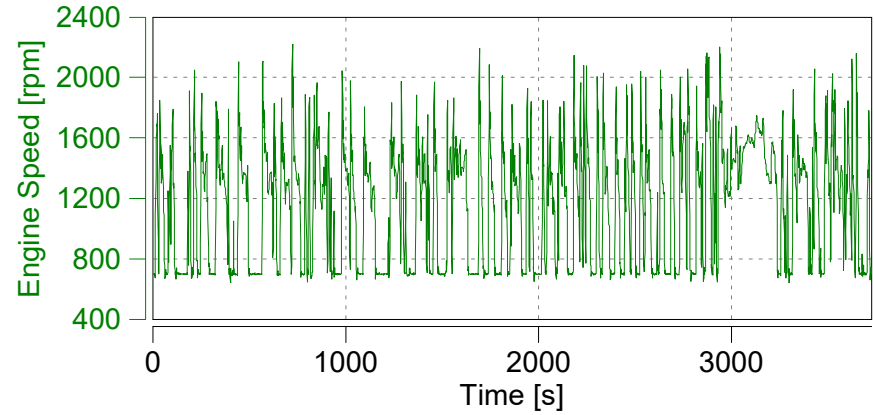
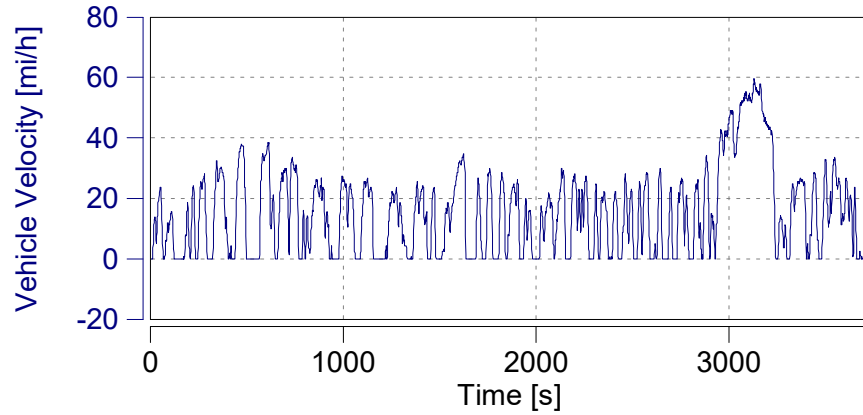
Start Date: 09/01/2017

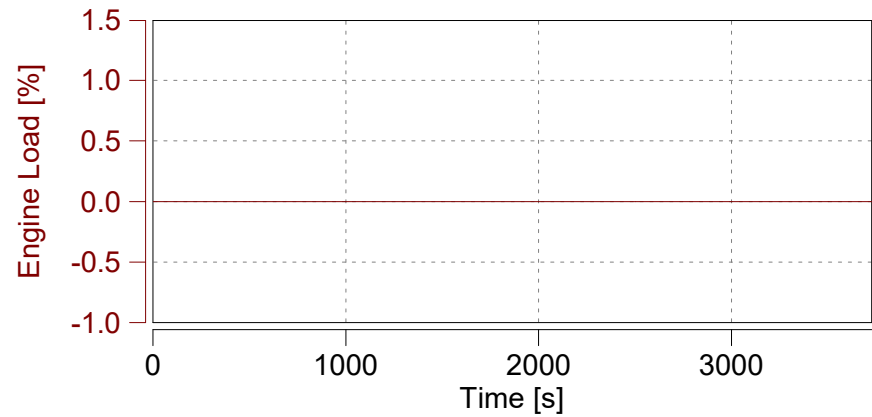
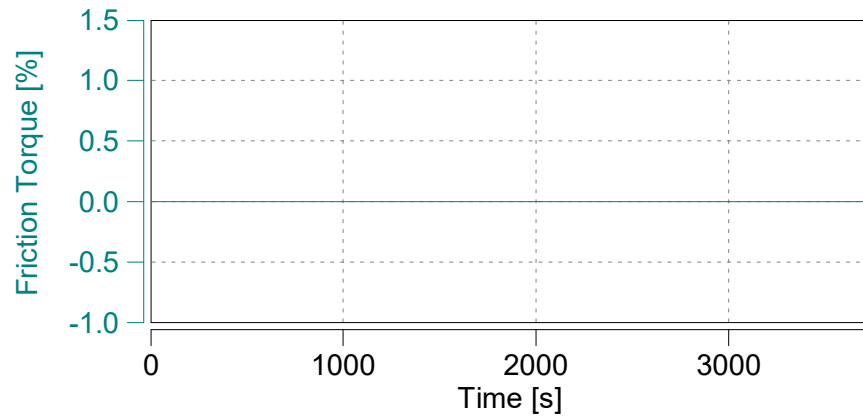
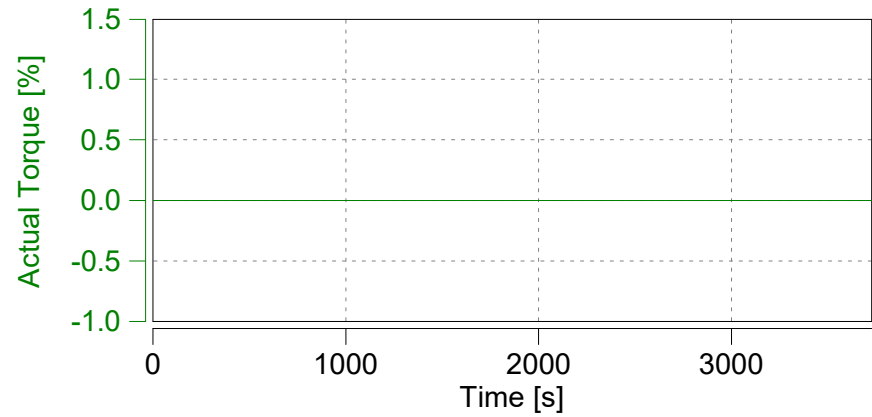
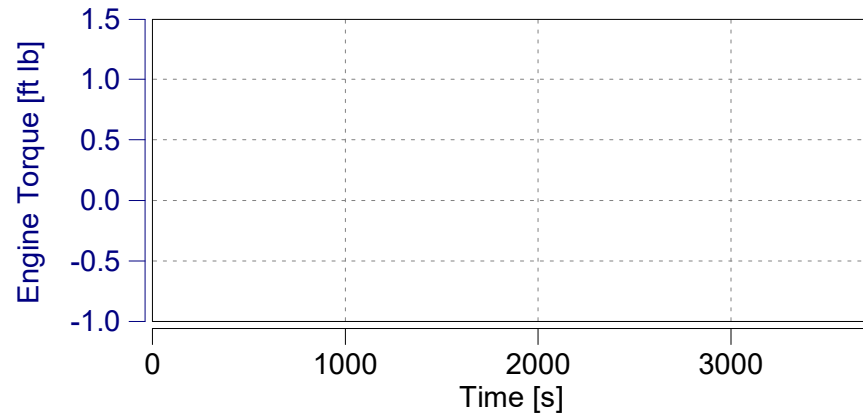
Start Time: 19:11:53.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Touareg /
Engine: Gasoline / 3.6L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90



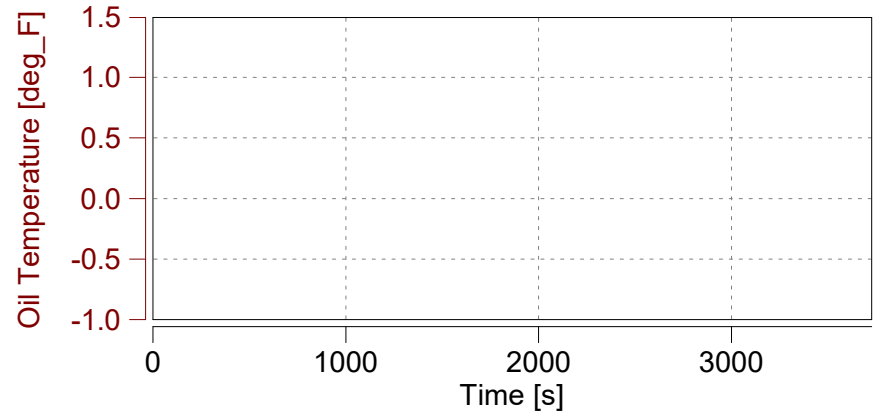
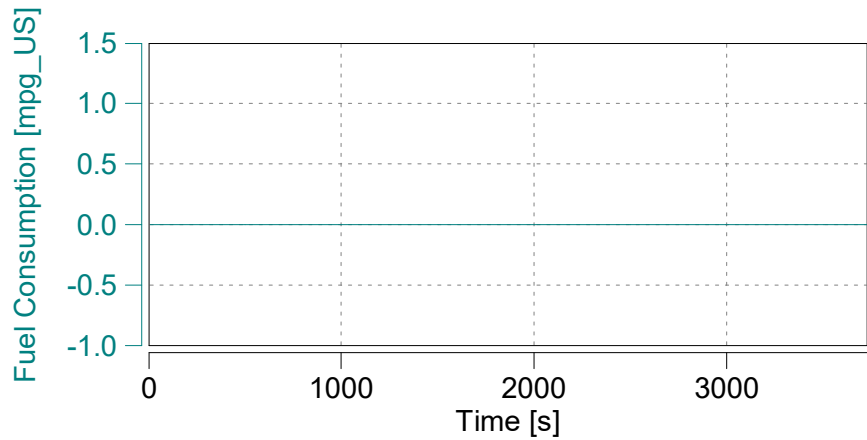
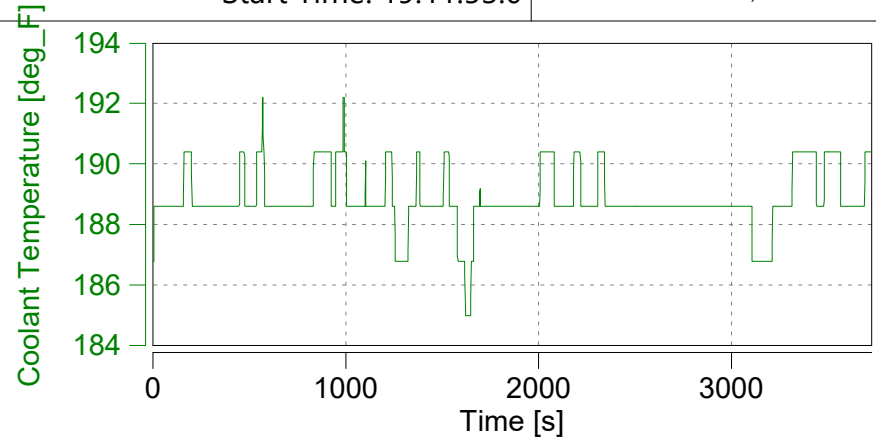
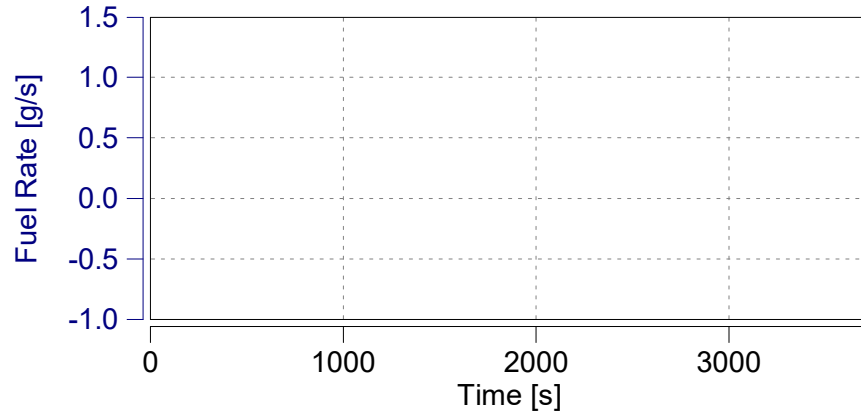


Case: City

Page: Engine (3)

Start Date: 09/01/2017

Start Time: 19:11:53.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

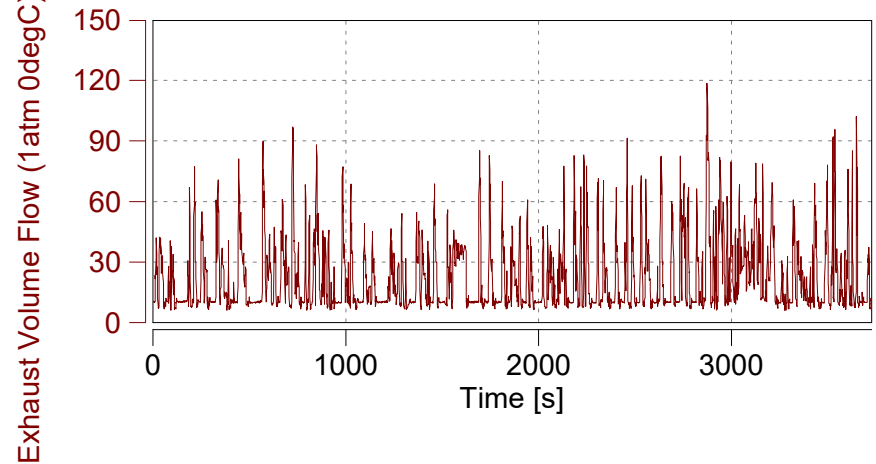
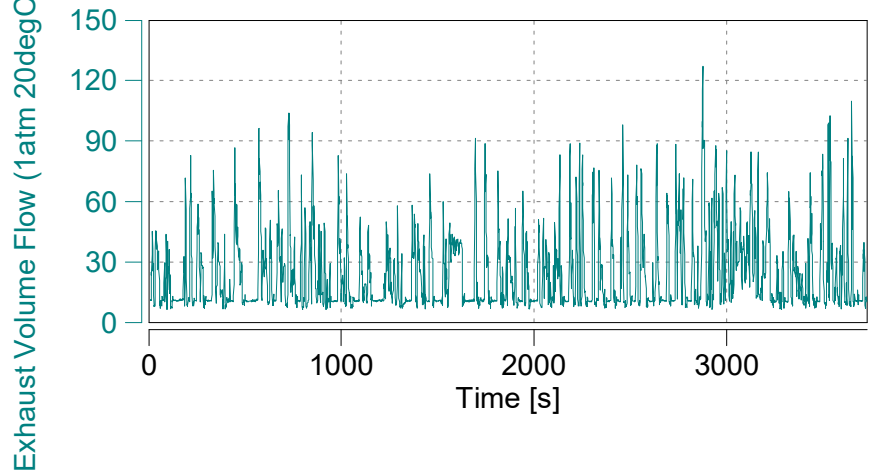
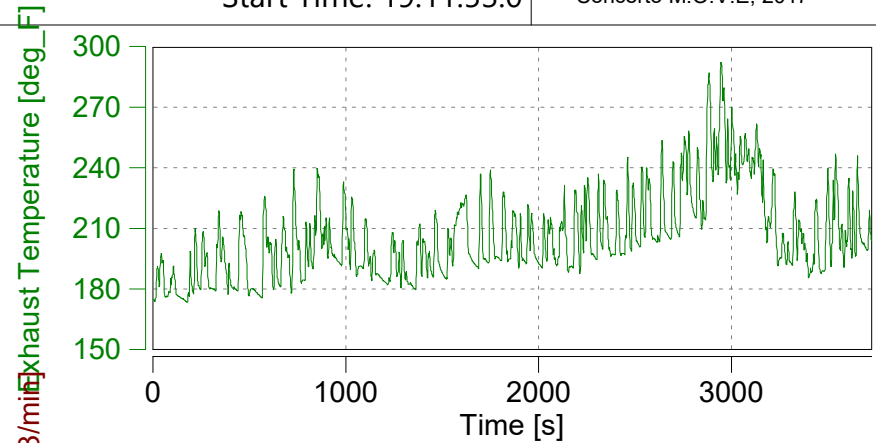
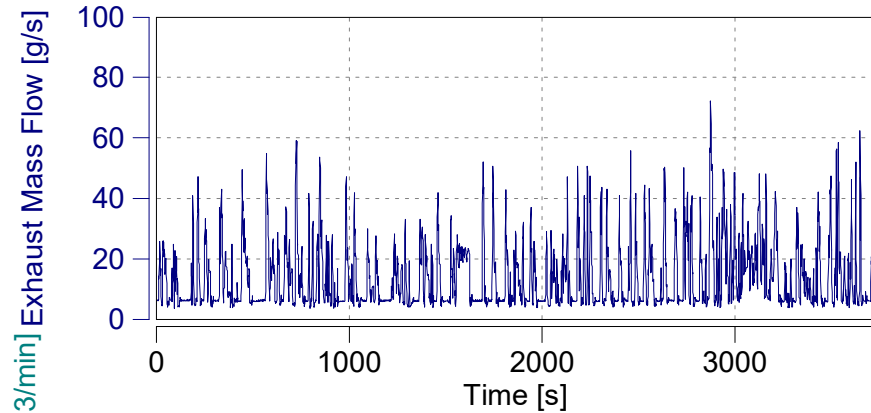
Vehicle: 2017 VW Touareg /
Engine: Gasoline / 3.6L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Exhaust Flow (1)

Start Date: 09/01/2017

Start Time: 19:11:53.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

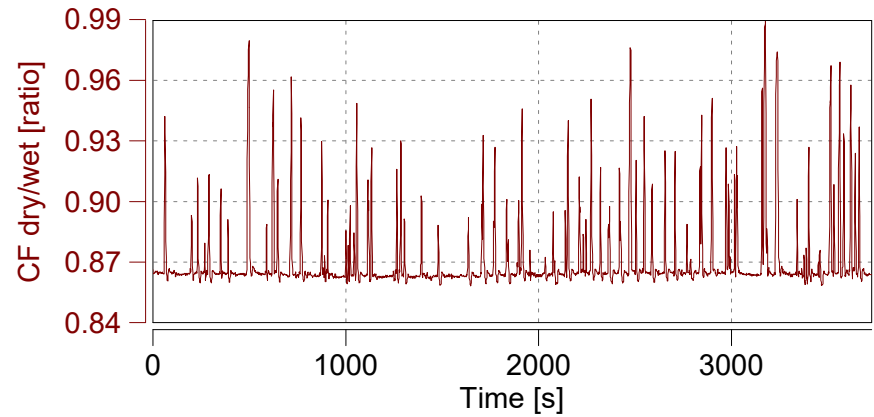
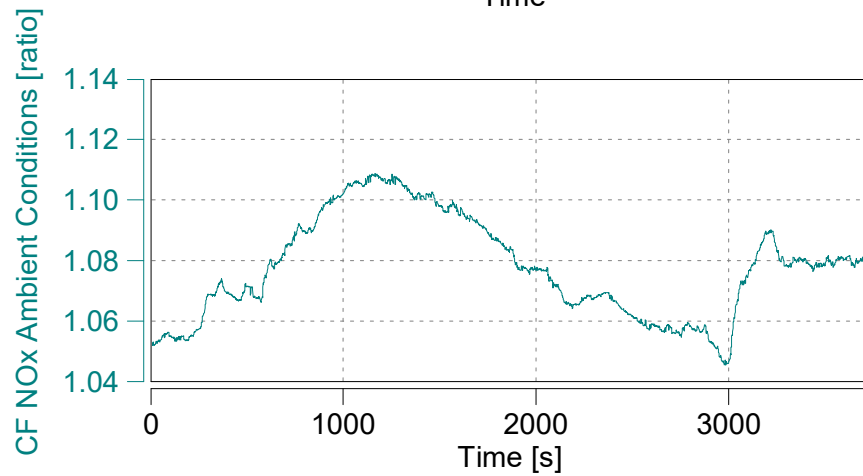
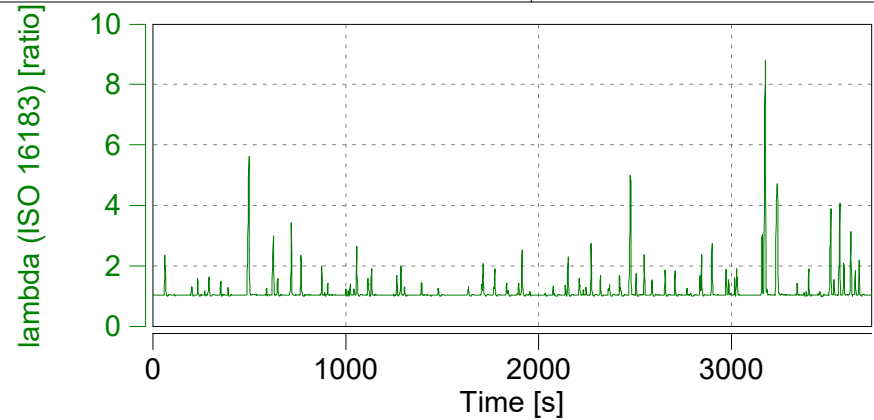
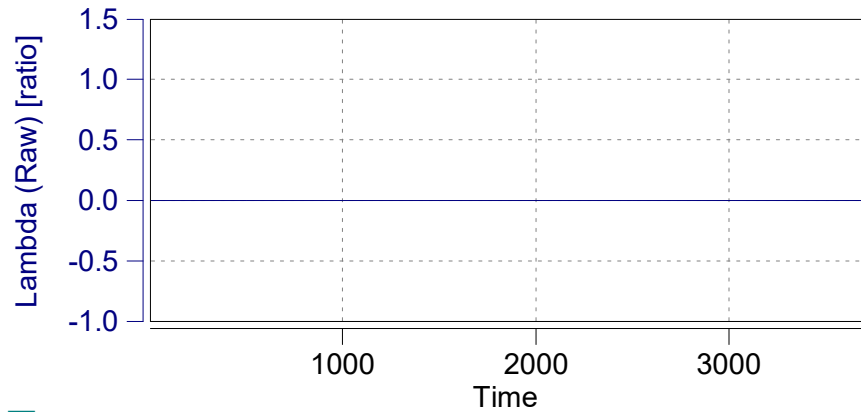
Vehicle: 2017 VW Touareg /
Engine: Gasoline / 3.6L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Exhaust Flow (2)

Start Date: 09/01/2017

Start Time: 19:11:53.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

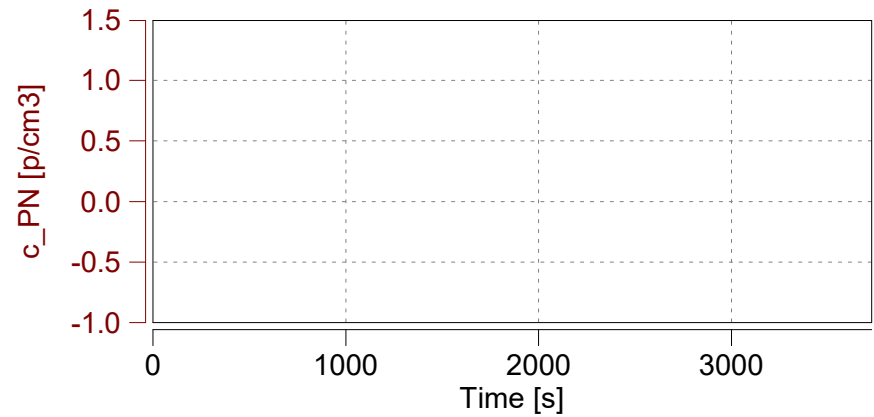
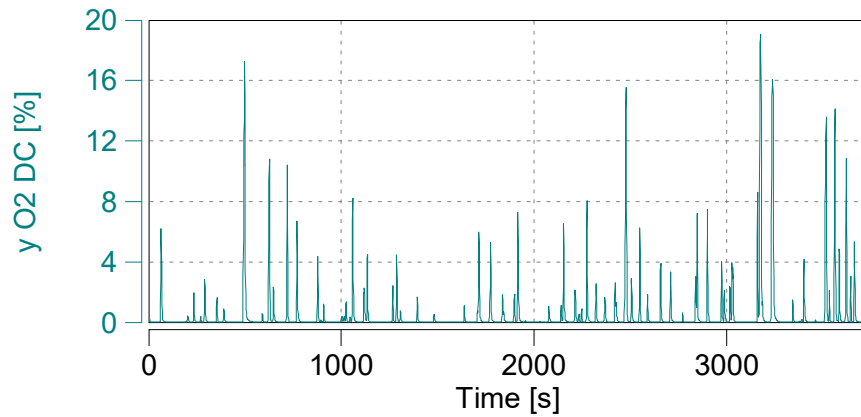
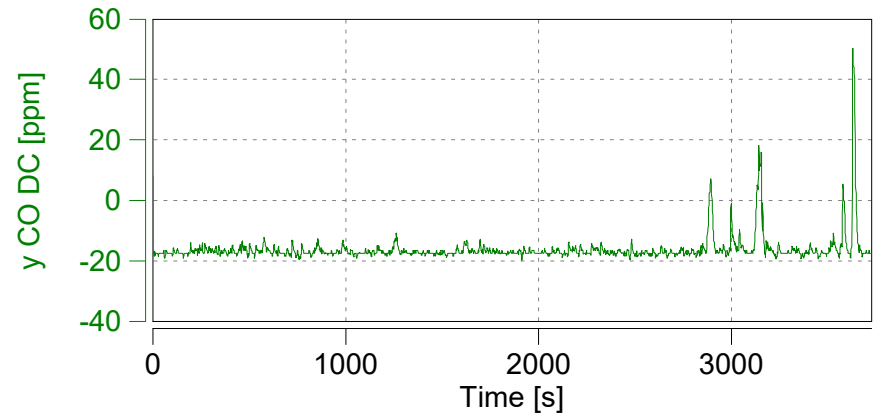
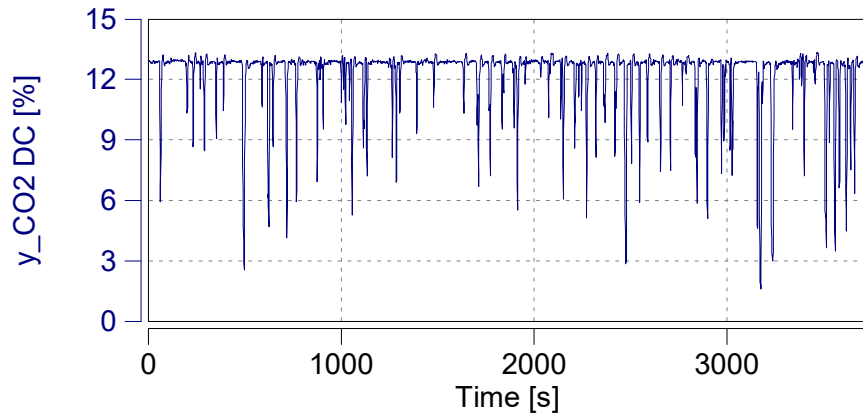
Vehicle: 2017 VW Touareg /
Engine: Gasoline / 3.6L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Corrected Emissions (1)

Start Date: 09/01/2017

Start Time: 19:11:53.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

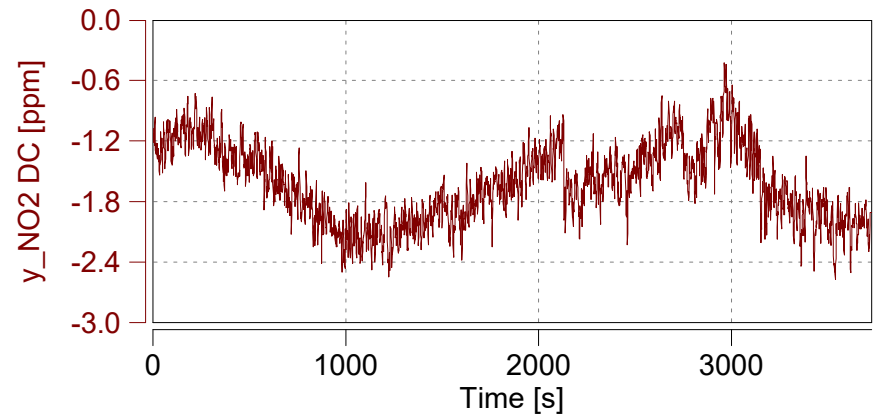
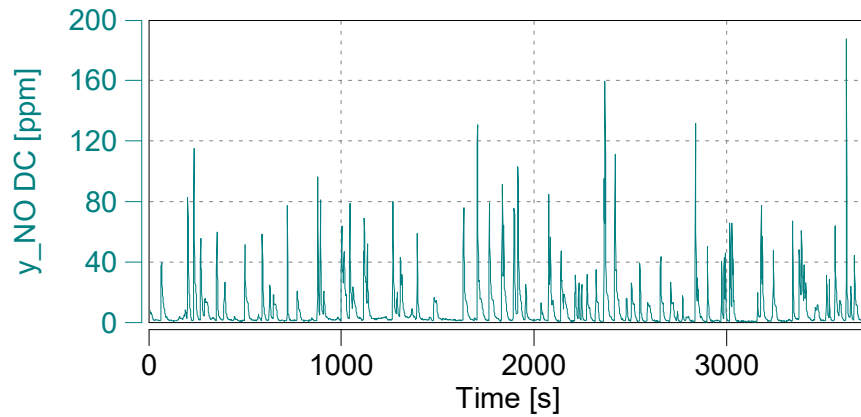
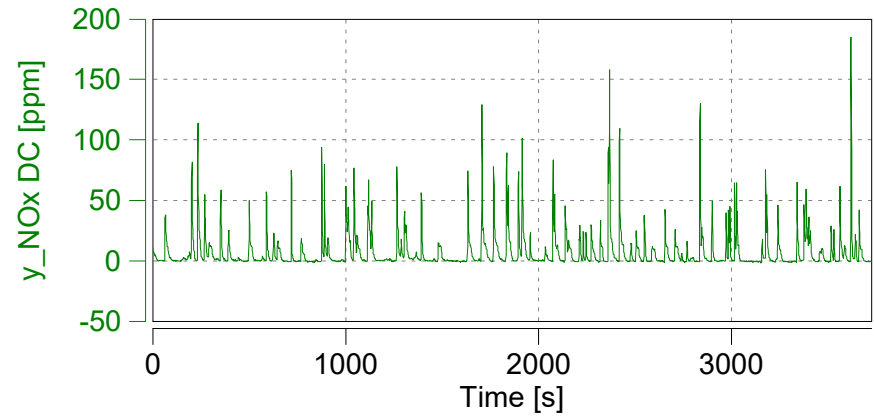
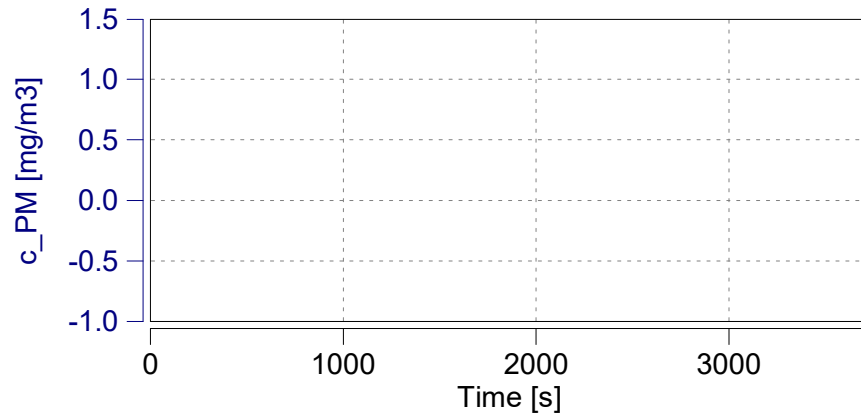
Vehicle: 2017 VW Touareg /
Engine: Gasoline / 3.6L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Corrected Emissions (2)

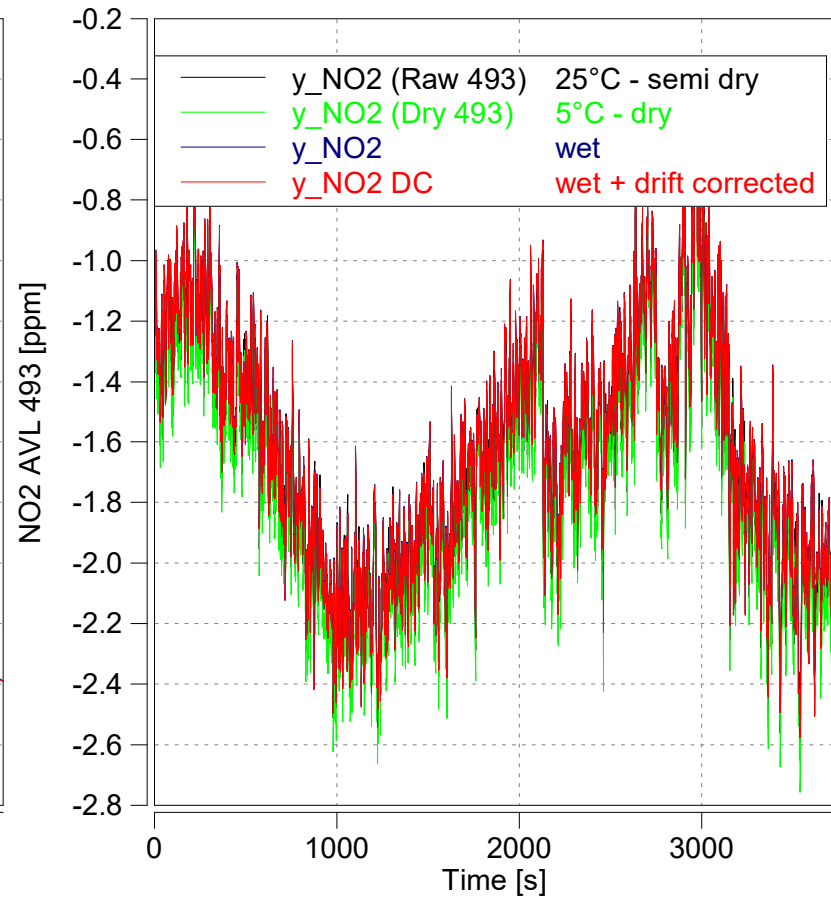
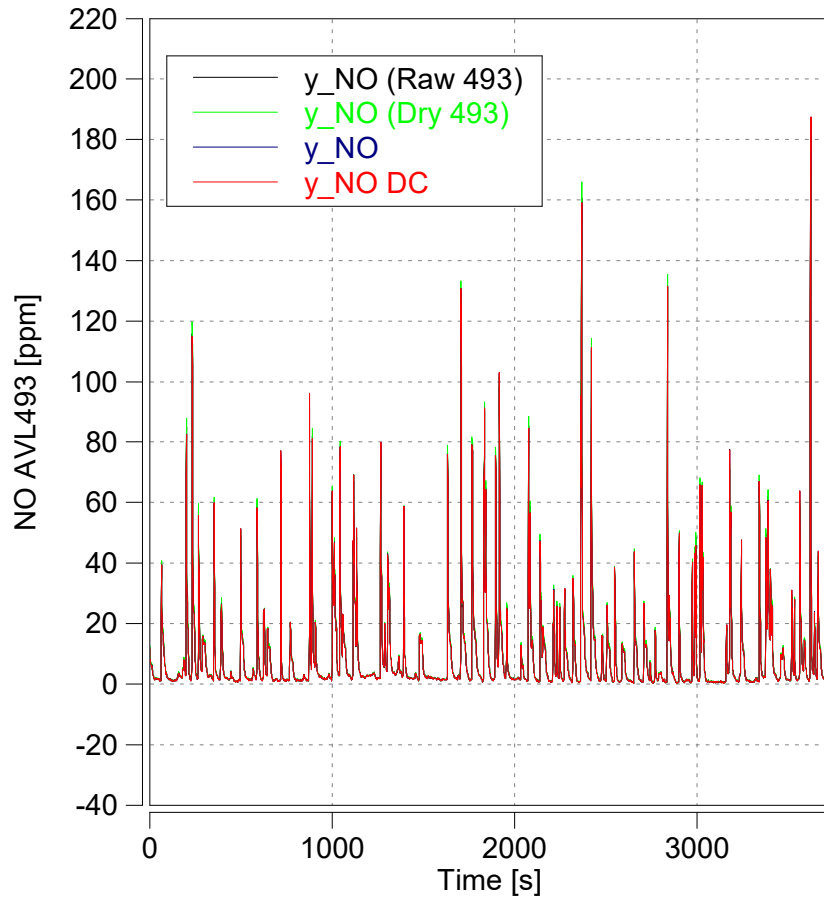
Start Date: 09/01/2017

Start Time: 19:11:53.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Touareg /
Engine: Gasoline / 3.6L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Touareg /
Engine: Gasoline / 3.6L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

NOx - AVL 493

y_NO (Raw 493)
y_NO2 (Raw 493)
25°C

EU R49 8.6.1
US §1065.672
drift correction

d_Kf_NO 25°C to dry
d_Kf_NO2 25°C to dry

- (1) EU R49 8.1.1 (15)
- (2) US §1065.655
- (3) none

y_NO DC (Dry 493)
y_NO2 DC (Dry 493)

y_NO (Dry 493)
y_NO2 (Dry 493)

CF dry/wet
(factor equal for all constituents)

CF NOx Ambient Conditions

y_NO DC
y_NO2 DC
wet

y_NO
y_NO2
wet

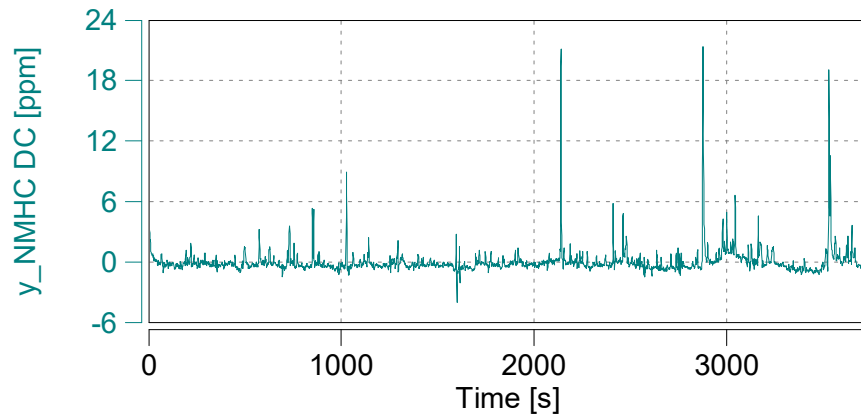
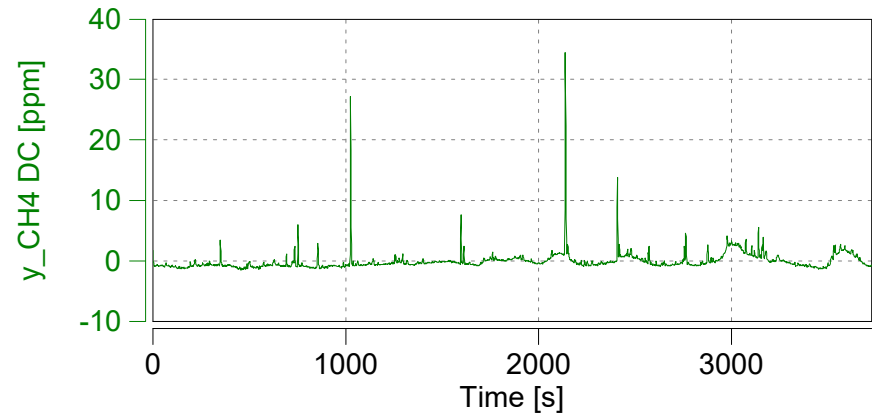
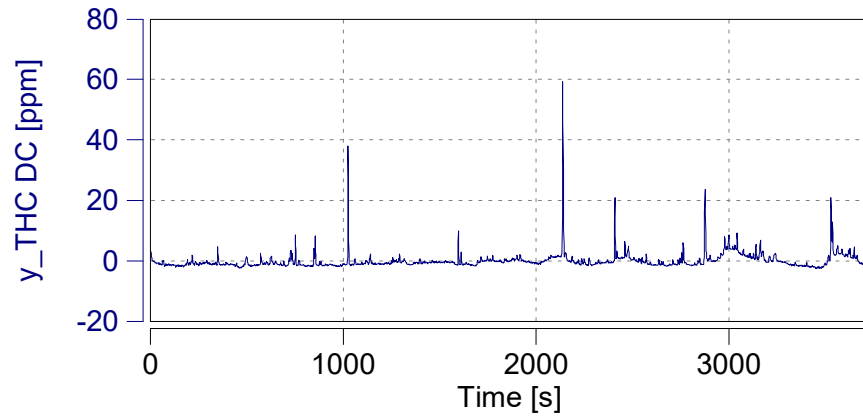
- (1) HD Diesel Engine SwRI FinalReport 08-2597, 1999
- (2) humidity only
- (3) equivalent uncorrected NOx limit method for EU in service
- (4) US §40.86.1342.94 Diesel
- (5) US §40.86.1342.94 SI
- (6) US §40.86.1370-2007 (default US)
- (7) US 40.1065.670
- (8) none (default EU)

Case: City

Page: Corrected Emissions (5)

Start Date: 09/01/2017

Start Time: 19:11:53.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

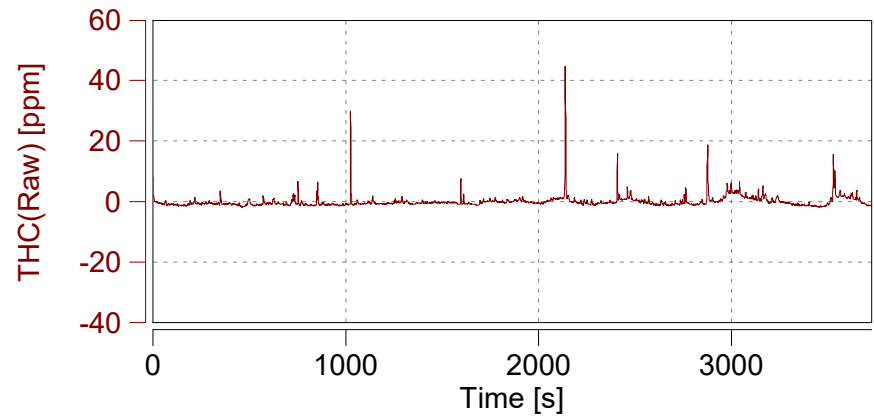
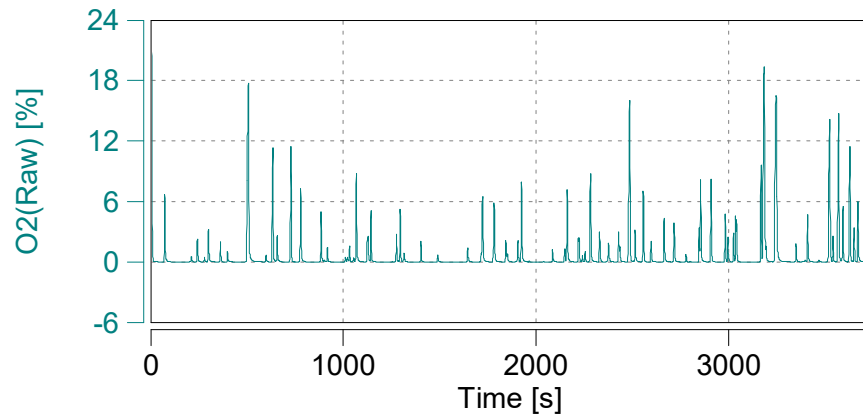
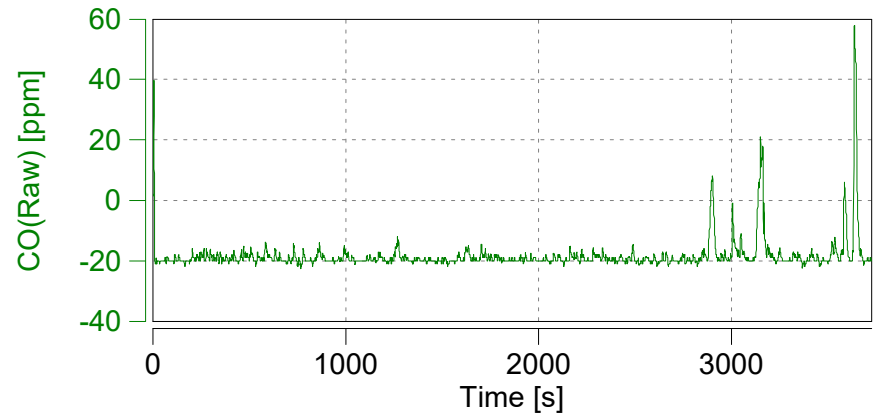
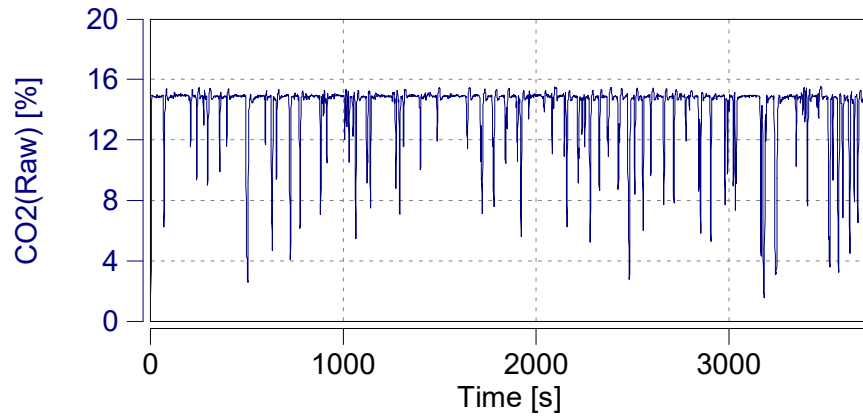
Vehicle: 2017 VW Touareg /
Engine: Gasoline / 3.6L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Emissions Raw Data (1)

Start Date: 09/01/2017

Start Time: 19:11:53.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

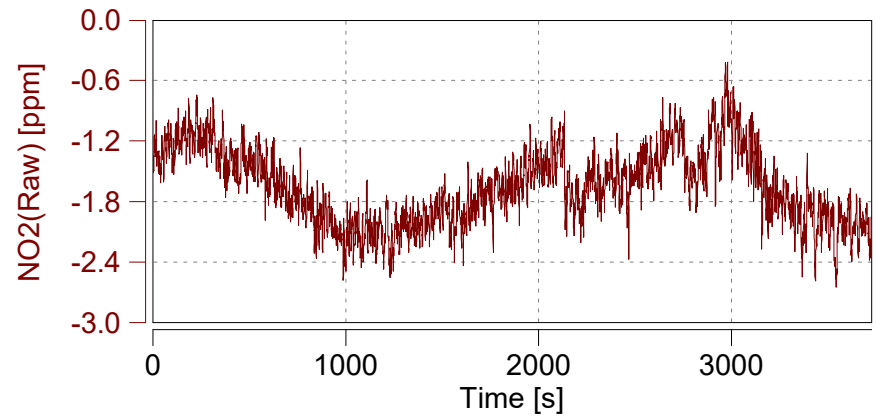
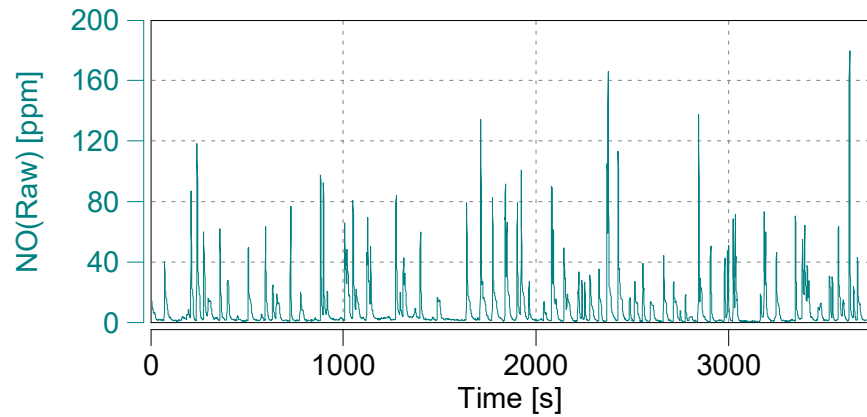
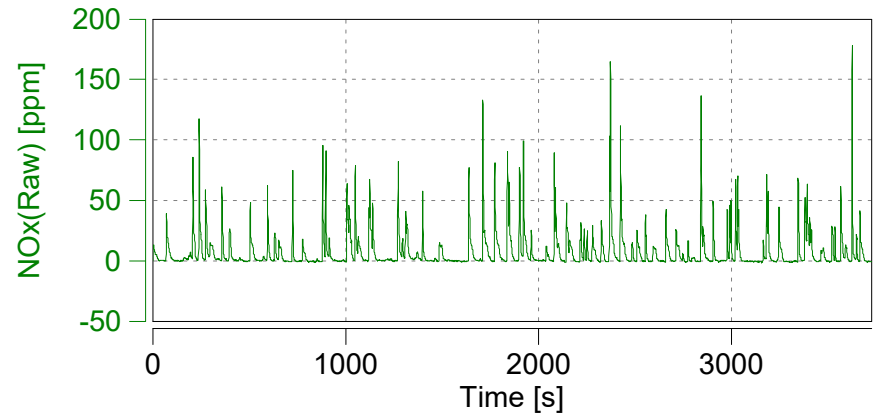
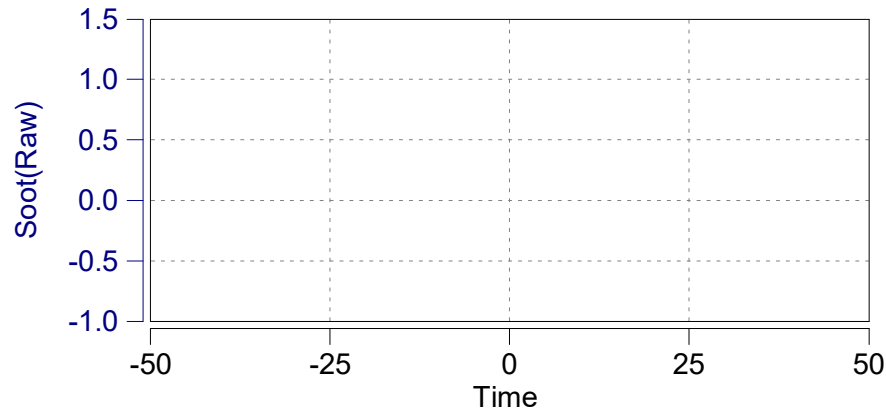
Vehicle: 2017 VW Touareg /
Engine: Gasoline / 3.6L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Emissions Raw Data (2)

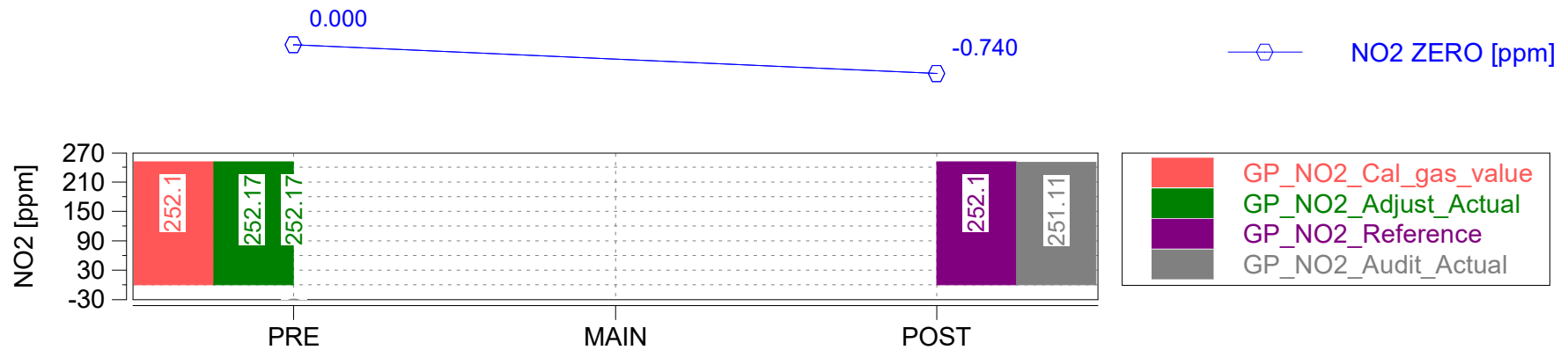
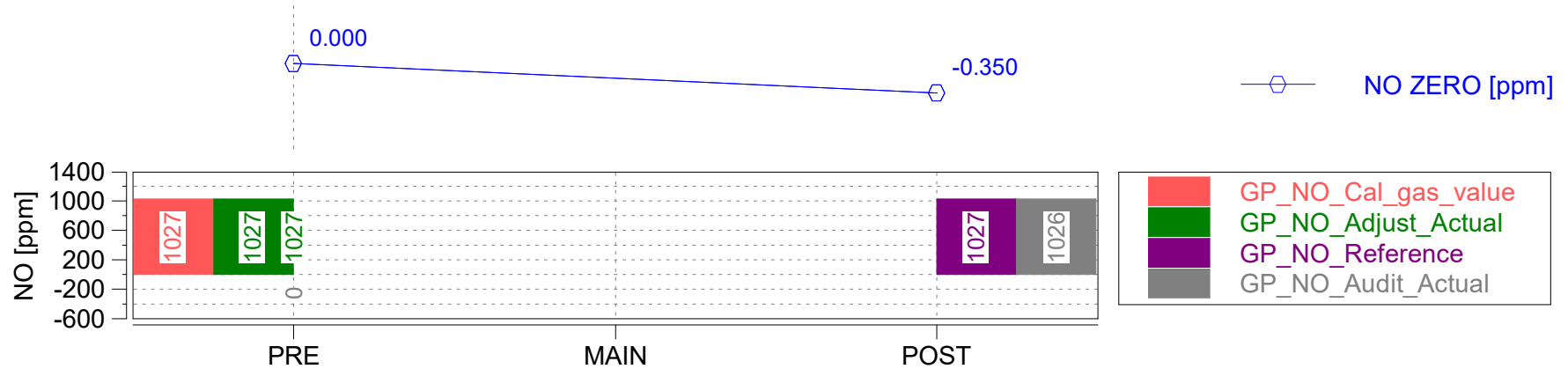
Start Date: 09/01/2017

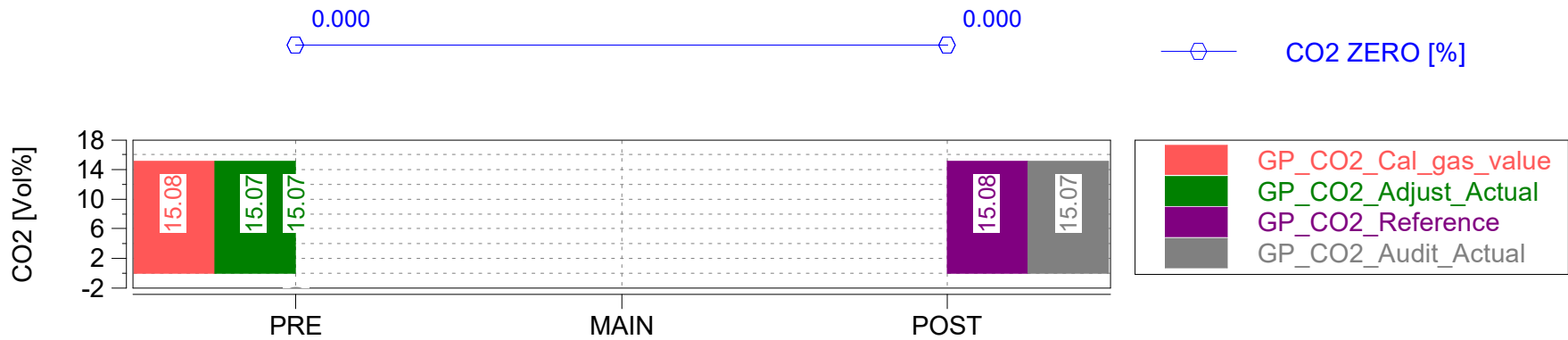
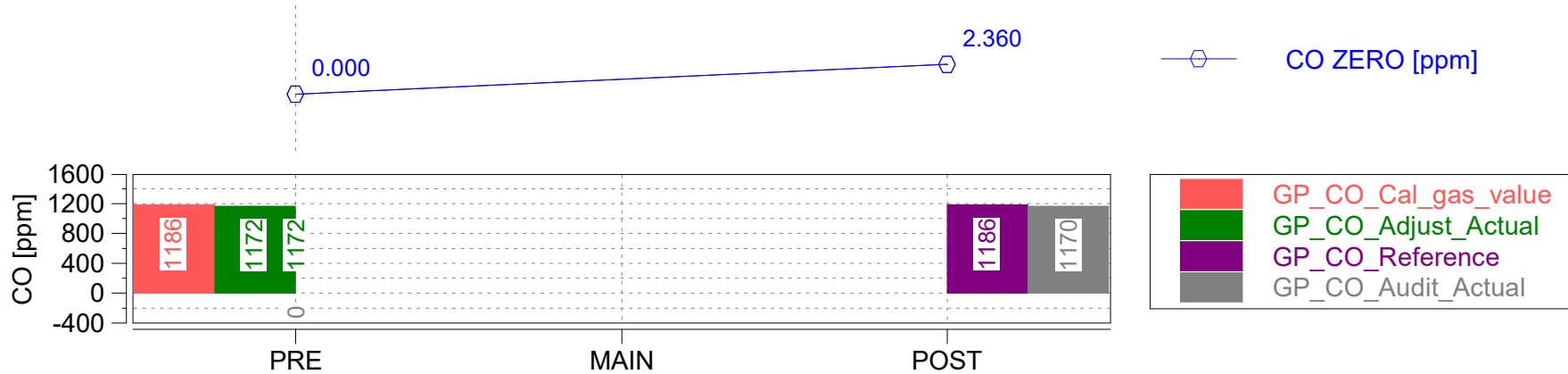
Start Time: 19:11:53.0

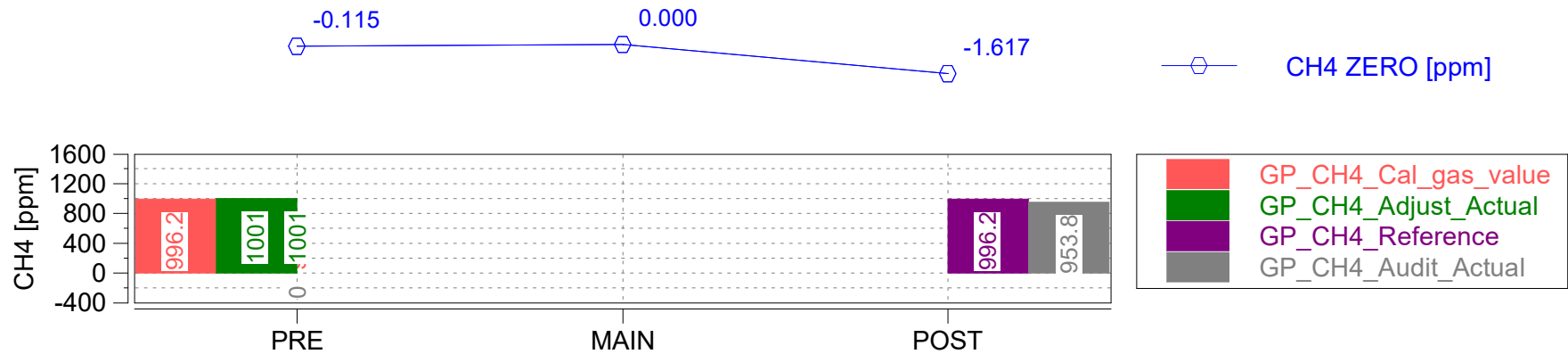
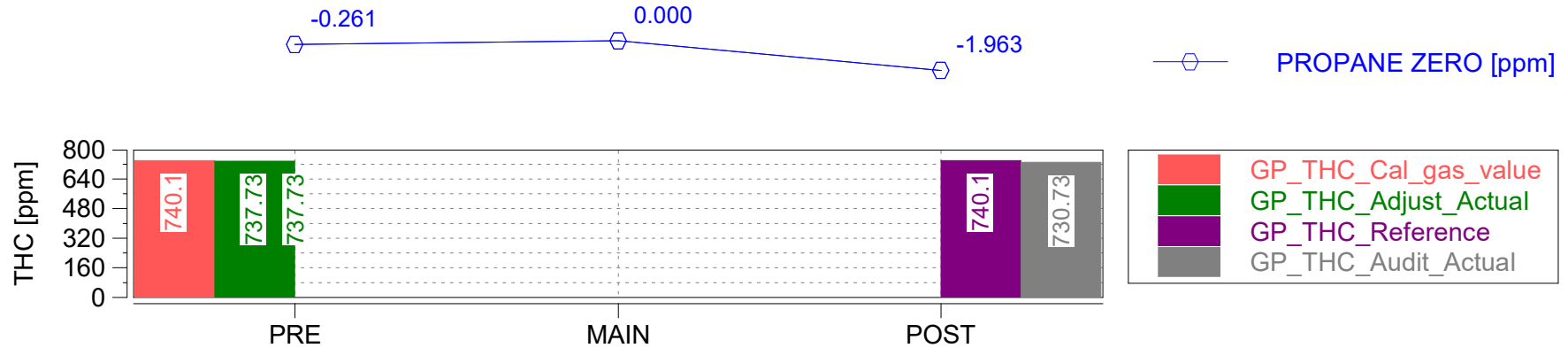


Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Touareg /
Engine: Gasoline / 3.6L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90







#	Text	Value	Unit
-	----	----	----
1.0	Test Start: Date	-	-
2.0	Test Start: Time	-	-
3.0	Ambient Temperature	IFILE1:TM'Temperature	deg C
4.0	Ambient Temperature TS	0.00000	s
5.0	Ambient Pressure	IFILE1:TM'Pressure	kPa
6.0	Ambient Pressure TS	0.00000	s
7.0	Humidity Type	1.00000	-
8.0	Amb. Rel. Humidity	IFILE1:TM'Humidity	%
9.0	Amb. Rel. Humidity	0.00000	s
10.0	GPS Latitude		deg
11.0	GPS Latitude TS	0.00000	s
12.0	GPS Longitude		deg
13.0	GPS Longitude TS	0.00000	s
14.0	Altitude		m
15.0	Altitude TS	0.00000	s
16.0	GPS Quality		-
17.0	GPS Quality TS	0.00000	s
18.0	GroundSpeed		km/h
19.0	GroundSpeed TS	0.00000	s
20.0	Altitude from topographical map		m
21.0	Altitude TS of topographical map		s
22.0	TRIP_AMBIENT_GPS_AVL	YES	-
23.0	CALC_GPS_GROUNDSPEED	NO	-
24.0	EXHAUST_FLOW_AVL	NO	-
25.0	EXHAUST_FLOW_AVL_EFM	YES	-
26.0	Exhaust Flow Type	2.00000	-
27.0	Mass Flow	IFILE1:TM'PitotEFM_ExhaustG	various
28.0	Mass Flow TS	1.20000	s
29.0	Exhaust Pressure		kPa
30.0	Exhaust Pressure TS	1.20000	s

#	Text	Value	Unit
-	----	----	----
31.0	Exhaust Delta Pressure		kPa
32.0	Exhaust Pressure Delta TS	1.20000	s
33.0	Exhaust Temperature	IFILE1:TM'PitotEFM_ExhaustG	degC
34.0	Exhaust Temperature TS	1.20000	s
35.0	Lambda	N/A	-
36.0	Lambda TS		s
37.0	CO2_DIL		%
38.0	CO2_DIL TS		s
39.0	CVS Volume Flow		m3/min
40.0	TimeShift_CVS_VOL_FLOW		s
41.0	IN_CVS_PRESSURE		kPa
42.0	TimeShift_CVS_PRESSURE		s
43.0	IN_CVS_TEMP		degC
44.0	TimeShift_CVS_TEMP		s
45.0	Dry to Wet Conversion CO2	YES	-
46.0	Dry to Wet Conversion O2	YES	-
47.0	Dry to Wet Conversion NO	NO	-
48.0	Dry to Wet Conversion NO2	NO	-
49.0	Dry to Wet Conversion THC	NO	-
50.0	Dry to Wet Conversion CH4	NO	-
51.0	Dry to Wet Conversion O2	NO	-
52.0	CO2	IFILE1:TM'GPiS_CO2	%
53.0	CO2 TS	-7.80000	s
54.0	OS	IFILE1:TM'GPiS_O2	%
55.0	O2 TS	-8.30000	s
56.0	CO	IFILE1:TM'GPiS_CO	ppm
57.0	CO TS	-7.80000	s
58.0	NO	IFILE1:TM'GPiS_NO	ppm
59.0	NO TS	-6.00000	s
60.0	NO2	IFILE1:TM'GPiS_NO2	ppm

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Touareg /
Engine: Gasoline / 3.6L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
61.0	NO2 TS	-6.00000	s
62.0	THC	IFILE1:TM'FIDiS_THC_C1	ppm
63.0	THC TS	0.00000	s
64.0	CH4	IFILE1:TM'FIDiS_CH4_C1	ppm
65.0	CH4 TS	0.00000	s
66.0	GAS_PEMS_Ethane_Efficiency	IFILE1:MOVE_AVL4925'GP_Et -	
67.0	GAS_PEMS_Methane_Efficiency	IFILE1:MOVE_AVL4925'GP_M -	
68.0	GAS_PEMS_Methane_Response	IFILE1:MOVE_AVL4925'GP_M -	
69.0	Zero Signal	IFILE1:TM'GPiS_STATE	0/1
70.0	Zero Signal TS	-6.00000	s
71.0	Zero Signal_FIDiS	IFILE1:TM'FIDiS_STATE	0/1
72.0	Zero Signal_FIDiS TS		s
73.0	Species Input Type	4.00000	-
74.0	GASPEMS=AVL493	NO	-
75.0	GASPEMS=AVL493_iX	NO	-
76.0	GASPEMS=AVL492	YES	-
77.0	GASPEMS=AVL4925	YES	-
78.0	PM: Type	4.00000	1=GFB+HC, 2=GFB, 3='PM=S
79.0	Filter ID from IFile	NO	-
80.0	Lab ID from IFile	NO	-
81.0	PM Filter: ID	N/A	ID
82.0	PM Filter: Lab	N/A	Name/ID
83.0	PM Filter: Weight before Test	N/A	mg
84.0	PM Filter: Weight after Test	N/A	mg
85.0	PM (HC Corr): Max. Exhaust Flow	N/A	scfm
86.0	Soot		mg/m3
87.0	Soot TS	-5.00000	s
88.0	Soot Sensor		mg/m3
89.0	Soot Sensor TS		s
90.0	PM Filter: Filter Flow Rate		l/min

#	Text	Value	Unit
-	----	----	----
91.0	PM Filter: Filter Flow Rate TS	-5.00000	s
92.0	PM Filter: Filter Dilution Ratio		-
93.0	PM Filter: Filter Dilution Ratio TS	-5.00000	s
94.0	PM Filter: Filter Trigger		-
95.0	PM Filter: Filter Trigger TS	-5.00000	s
96.0	PMPEMS=AVL494	YES	-
97.0	PMPEMS_AVL494_PROP_DIL	NO	-
98.0	PM dilution ratio min		-
99.0	PM_MaxExhaustFlowRate		-
100.0	PM_ExhaustFlow_Thresh		-
101.0	PM_total_flow_val		-
102.0	PM_total_flow_val_TS		-
103.0	PM_exh_mass_flow		-
104.0	PM_exh_mass_flow_TS		-
105.0	PN		#/cm3
106.0	TimeShift_PN		s
107.0	PN_STATE		-
108.0	PN TS STATE		s
109.0	PNPEMS_AVL496	NO	-
110.0	PN_CorrFactor	1.00000	
111.0	Time Alignment	1.00000	-
112.0	Time Alignment Dataset 1	N/A	0/1
113.0	Time Alignment Dataset 2	N/A	0/1
114.0	Time Alignment Thresh 1	N/A	-
115.0	Time Alignment Thresh 2	N/A	-
116.0			
117.0			
118.0			
119.0			
120.0			

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M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Touareg /
Engine: Gasoline / 3.6L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
121.0			
122.0	Trigger		0/1
123.0	Trigger TS		s
124.0	FTIR_NAME_1		-
125.0	FTIR_MW_1		-
126.0	FTIR_CHANNEL_1		-
127.0	FTIR_CHANNEL_TS_1		-
128.0	FTIR_CHANNEL_DRY_1	NO	-
129.0	FTIR_NAME_2		-
130.0	FTIR_MW_2		-
131.0	FTIR_CHANNEL_2		-
132.0	FTIR_CHANNEL_TS_2		-
133.0	FTIR_CHANNEL_DRY_2	NO	-
134.0	FTIR_NAME_3		-
135.0	FTIR_MW_3		-
136.0	FTIR_CHANNEL_3		-
137.0	FTIR_CHANNEL_TS_3		-
138.0	FTIR_CHANNEL_DRY_3	NO	-
139.0	FTIR_NAME_4		-
140.0	FTIR_MW_4		-
141.0	FTIR_CHANNEL_4		-
142.0	FTIR_CHANNEL_TS_4		-
143.0	FTIR_CHANNEL_DRY_4	NO	-
144.0	FTIR_NAME_5		-
145.0	FTIR_MW_5		-
146.0	FTIR_CHANNEL_5		-
147.0	FTIR_CHANNEL_TS_5		-
148.0	FTIR_CHANNEL_DRY_5	NO	-
149.0	FTIR_NAME_6		-
150.0	FTIR_MW_6		-

#	Text	Value	Unit
-	----	----	----
151.0	FTIR_CHANNEL_6		-
152.0	FTIR_CHANNEL_TS_6		-
153.0	FTIR_CHANNEL_DRY_6	NO	-
154.0	FTIR_NAME_7		-
155.0	FTIR_MW_7		-
156.0	FTIR_CHANNEL_7		-
157.0	FTIR_CHANNEL_TS_7		-
158.0	FTIR_CHANNEL_DRY_7	NO	-
159.0	FTIR_NAME_8		-
160.0	FTIR_MW_8		-
161.0	FTIR_CHANNEL_8		-
162.0	FTIR_CHANNEL_TS_8		-
163.0	FTIR_CHANNEL_DRY_8	NO	-
164.0	FTIR_NAME_9		-
165.0	FTIR_MW_9		-
166.0	FTIR_CHANNEL_9		-
167.0	FTIR_CHANNEL_TS_9		-
168.0	FTIR_CHANNEL_DRY_9	NO	-
169.0	FTIR_NAME_10		-
170.0	FTIR_MW_10		-
171.0	FTIR_CHANNEL_10		-
172.0	FTIR_CHANNEL_TS_10		-
173.0	FTIR_CHANNEL_DRY_10	NO	-
174.0	FTIR_NAME_11		-
175.0	FTIR_MW_11		-
176.0	FTIR_CHANNEL_11		-
177.0	FTIR_CHANNEL_TS_11		-
178.0	FTIR_CHANNEL_DRY_11	NO	-
179.0	FTIR_NAME_12		-
180.0	FTIR_MW_12		-

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 M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Touareg /
 Engine: Gasoline / 3.6L
 NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
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#	Text	Value	Unit
-	----	----	----
181.0	FTIR_CHANNEL_12		-
182.0	FTIR_CHANNEL_TS_12		-
183.0	FTIR_CHANNEL_DRY_12	NO	-
184.0	FTIR_NAME_13		-
185.0	FTIR_MW_13		-
186.0	FTIR_CHANNEL_13		-
187.0	FTIR_CHANNEL_TS_13		-
188.0	FTIR_CHANNEL_DRY_13	NO	-
189.0	FTIR_NAME_14		-
190.0	FTIR_MW_14		-
191.0	FTIR_CHANNEL_14		-
192.0	FTIR_CHANNEL_TS_14		-
193.0	FTIR_CHANNEL_DRY_14	NO	-
194.0	FTIR_NAME_15		-
195.0	FTIR_MW_15		-
196.0	FTIR_CHANNEL_15		-
197.0	FTIR_CHANNEL_TS_15		-
198.0	FTIR_CHANNEL_DRY_15	NO	-
199.0	FTIR_NAME_16		-
200.0	FTIR_MW_16		-
201.0	Vehicle Type	2017 VW Touareg	-
202.0	Vehicle Info		-
203.0	Engine Type	Gasoline	-
204.0	Engine Info	3.6L	-
205.0	Engine Torque		Nm
206.0	Curb Idle Load		%
207.0	Idle Speed		rpm
208.0	HYBRID_OVC_REF_CO2_gkm		g/km
209.0	Engine Concept	1.00000	-
210.0	Alpha	1.93000	-

#	Text	Value	Unit
-	----	----	----
211.0	Beta	1.00000	
212.0	Gamma	0.00000	
213.0	Delta	0.00000	
214.0	Epsilon	0.03200	
215.0	X_C	83.00000	
216.0	X_H	13.30000	
217.0	X_N	0.00000	
218.0	X_O	3.50000	
219.0	X_S	0.00000	
220.0	Fuel_Density	747.50000	
221.0	rho_exhaust	1.29310	
222.0	U_CO2	1.51800	
223.0	U_CO	0.96600	
224.0	U_NO	1.58700	
225.0	U_NO2	1.58700	
226.0	U_NOx	1.58700	
227.0	U_HC	0.49900	
228.0	U_NMHC	0.47100	
229.0	U_CH4	0.55300	
230.0	U_O2	1.10400	
231.0	Fuel Type	2.00000	-
232.0	exhaust mass flow type (YES/NO)	YES	-
233.0	Distance Calculation Type	1.00000	-
234.0	Velocity Statistics Calculation Type	2.00000	-
235.0	RDE vehicle class	1.00000	-
236.0	TM_CITY0		s
237.0	TM_CITY1		s
238.0	TM_RURAL0		s
239.0	TM_RURAL1		s
240.0	TM_RURAL2_0		s

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Touareg /
Engine: Gasoline / 3.6L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
241.0	TM_RURAL2_1		s
242.0	Second Rural Part for Time Marks (NO		-
243.0	TM_MW0		s
244.0	TM_MW1		s
245.0	VELOCITY_LIMIT_STOP	2.00000	km/h
246.0	VELOCITY_LIMIT_URBAN	50.00000	km/h
247.0	VELOCITY_LIMIT_RURAL	75.00000	km/h
248.0	Intake Manifold Pressure Type	1.00000	-
249.0	Velocity	IFILE1:TM'OBD_Vehicle_Spee	km/h
250.0	Velocity TS	1.30000	s
251.0	Velocity FACTOR	1.00000	-
252.0	Coolant Temperature	IFILE1:TM'OBD_Engine_Coola	degC
253.0	Coolant Temperature TS	1.30000	s
254.0	Oil Temperature		degC
255.0	Oil Temperature TS	1.30000	s
256.0	Intake Manifold Temperature		degC
257.0	Intake Manifold Temp TS	1.30000	s
258.0	Intake Manifold Pressure	IFILE1:TM'OBD_Intake_manifo	kPa
259.0	Intake Manifold Pressure TS	1.30000	s
260.0	Throttle Position		%
261.0	Throttle TS	1.30000	s
262.0	TYP_IDLE_MASS_FLOW		kg/h
263.0	Torque Type	1.00000	-
264.0	Speed	IFILE1:TM'OBD_Engine_RPM	rpm
265.0	Speed TS	1.30000	s
266.0	Torque		Nm
267.0	Torque TS	1.30000	s
268.0	Friction Torque	N/A	Nm
269.0	Friction Torque TS	N/A	s
270.0	Reference Torque	N/A	Nm

#	Text	Value	Unit
-	----	----	----
271.0	Reference Torque TS	N/A	s
272.0	k_VELINE		-
273.0	D_VELINE		-
274.0	Fuel Flow Type	2.00000	-
275.0	Air Flow Type	1.00000	-
276.0	Fuel Rate		various
277.0	Air Rate		various
278.0	Fuel Rate TS	1.30000	s
279.0	No_Cylinders		-
280.0	Air Rate TS	1.30000	s
281.0	FTIR_CHANNEL_32		-
282.0	FTIR_CHANNEL_TS_32		-
283.0	FTIR_CHANNEL_DRY_32	NO	-
284.0	FTIR_NAME_33		-
285.0	FTIR_MW_33		-
286.0	FTIR_CHANNEL_33		-
287.0	FTIR_CHANNEL_TS_33		-
288.0	FTIR_CHANNEL_DRY_33	NO	-
289.0	FTIR_NAME_34		-
290.0	FTIR_MW_34		-
291.0	FTIR_CHANNEL_34		-
292.0	FTIR_CHANNEL_TS_34		-
293.0	FTIR_CHANNEL_DRY_34	NO	-
294.0	FTIR_NAME_35		-
295.0	FTIR_MW_35		-
296.0	FTIR_CHANNEL_35		-
297.0	FTIR_CHANNEL_TS_35		-
298.0	FTIR_CHANNEL_DRY_35	NO	-
299.0	FTIR_NAME_36		-
300.0	FTIR_MW_36		-

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M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Touareg /
Engine: Gasoline / 3.6L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
301.0	FTIR_CHANNEL_36	-	-
302.0	FTIR_CHANNEL_TS_36	-	-
303.0	FTIR_CHANNEL_DRY_36	NO	-
304.0	FTIR_NAME_37	-	-
305.0	FTIR_MW_37	-	-
306.0	FTIR_CHANNEL_37	-	-
307.0	FTIR_CHANNEL_TS_37	-	-
308.0	FTIR_CHANNEL_DRY_37	NO	-
309.0	FTIR_NAME_38	-	-
310.0	FTIR_MW_38	-	-
311.0	FTIR_CHANNEL_38	-	-
312.0	FTIR_CHANNEL_TS_38	-	-
313.0	FTIR_CHANNEL_DRY_38	NO	-
314.0	FTIR_NAME_39	-	-
315.0	FTIR_MW_39	-	-
316.0	FTIR_CHANNEL_39	-	-
317.0	FTIR_CHANNEL_TS_39	-	-
318.0	FTIR_CHANNEL_DRY_39	NO	-
319.0	FTIR_NAME_40	-	-
320.0	FTIR_MW_40	-	-
321.0	FTIR_CHANNEL_40	-	-
322.0	FTIR_CHANNEL_TS_40	-	-
323.0	FTIR_CHANNEL_DRY_40	NO	-
324.0	Legislation Type (1=HDIUT 2=EU H	4.00000	-
325.0	WholeTest_NOx_corr	5.00000	-
326.0	WholeTest_Hum_corr	2.00000	-
327.0	CD_Distance	0.00000	km
328.0	CD_NOx	0.00000	mg/km
329.0	CD_CO	0.00000	mg/km
330.0	CD_CO2	0.00000	g/km

#	Text	Value	Unit
-	----	----	----
331.0	CD_NMHC	0.00000	mg/km
332.0	CD_CH4	0.00000	mg/km
333.0	CD_THC	0.00000	mg/km
334.0	CD_PN	-	#/km
335.0	WLTC_LOW_SPEED_gkm	-	g/km
336.0	WLTC_LOW_SPEED_FAC	1.20000	-
337.0	WLTC_MEDIUM_SPEED_gkm	-	g/km
338.0	WLTC_HIGH_SPEED_gkm	-	g/km
339.0	WLTC_HIGH_SPEED_FAC	1.10000	-
340.0	WLTC_EXTRA_HIGH_SPEED_gkm	-	g/km
341.0	WLTC_EXTRA_HIGH_SPEED_FA	1.05000	-
342.0	TOL_NORMAL_DRIVING	25.00000	%
343.0	TOL_SEVERE_DRIVING	50.00000	%
344.0	Increase Tolerance Nomral Driving	NO	-
345.0	Bin1_min	-	km/h
346.0	Bin2_min	-	km/h
347.0	Bin3_min	-	km/h
348.0	Bin1_max	-	km/h
349.0	Bin2_max	-	km/h
350.0	Bin3_max	-	km/h
351.0	Clear_R0	125.40000	N
352.0	Clear_R1	0.29300	Nh/km
353.0	Clear_R2	0.02795	N*(h/km) ²
354.0	Clear_SMK	1470.00000	kg
355.0	Clear_Rated_Power	140.00000	kW
356.0	Clear_Ref_Velocity	70.00000	km/h
357.0	Clear_Ref_Acc	0.45000	m/s ²
358.0	Clear_Smooth	3.00000	s
359.0	EXTC_From_High_Temp	30.00000	degC
360.0	EXTC_To_High_Temp	35.00000	degC

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Touareg /
Engine: Gasoline / 3.6L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
361.0	EXTC_From_Low_Temp	-7.00000	degC
362.0	EXTC_To_Low_Temp	0.00000	degC
363.0	Euro 6d or Euro 6d temp	NO	-
364.0	EXTC_From_Altitude	700.00000	m
365.0	EXTC_To_Altitude	1300.00000	m
366.0	EXTC_CORR_FAC	1.60000	
367.0	weight cold start (YES/NO)	NO	-
368.0	precon and soak done (YES/NO)	NO	-
369.0	PATH_PRECON_FILE		
370.0	filter velocity (YES/NO)	NO	-
371.0	filter velocity auto(YES/NO)	NO	-
372.0	Ki_CO		
373.0	Ki_CO2		
374.0	Ki_NOx		
375.0	Ki_FACTOR_CO2 (YES/NO)	NO	-
376.0	Ki_OFFSET_CO2 (YES/NO)	NO	-
377.0	Ki_FACTOR_CO (YES/NO)	NO	-
378.0	Ki_OFFSET_CO (YES/NO)	NO	-
379.0	Ki_FACTOR_NOx (YES/NO)	NO	-
380.0	Ki_OFFSET_NOx (YES/NO)	NO	-
381.0	Ki_OFF (YES/NO)	NO	-
382.0	HD legislations	1.00000	-
383.0	RDE legislations	1.00000	-
384.0	Submission Documents (YES/NO)	NO	-
385.0	General Setup Parameters Text	City	-
386.0	Legislation Setup Parameters Text	City	-
387.0	Trip Info		-
388.0	IN_TIME_REF		-
389.0	Sub-Trip Start: Auto	YES	-
390.0	Sub-Trip Start: Seconds	N/A	s

#	Text	Value	Unit
-	----	----	----
391.0	Sub-Trip End: Auto	YES	-
392.0	Sub-Trip End: Seconds	N/A	s
393.0	Unit System	2.00000	-
394.0	Calculate: PM Emissions	NO	-
395.0	Calculate: PN Emissions	NO	-
396.0	Output: Summary	YES	-
397.0	Output: Emissions	YES	-
398.0	Output: Raw Data	YES	-
399.0	Output: Zero Span	YES	-
400.0	Output: Data Consistency	NO	-
401.0	Output: Window Plots	YES	-
402.0	Fuel Rate ECU vs. EU ISO16183	y = 10000000000.0000 x - 0.000 R ² =10000000000.000 SEE=	
403.0	PEMS post processing version	Rel_10_B192	
404.0	Concerto version	480.00000	
405.0	Concerto build	215.00000	
406.0	USERNAME	EFR	

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Touareg /
Engine: Gasoline / 3.6L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway
Page: Trip Summary

Start Date: 09/06/2017
Start Time: 07:30:18.0



Trip Duration	3681.00	s	ave THC	4.44646	ppm	BS CO2	n/a	g/hphr
Trip Duration (a)	3681.00	s	ave NMHC	4.08823	ppm	BS CO	n/a	g/hphr
Trip Distance	39.16	mi	ave CH4	0.32566	ppm	BS THC	n/a	g/hphr
Trip Distance (a)	39.16	mi	ave CO	40.34357	ppm	BS NMHC	n/a	g/hphr
Trip Fuel Cons. (b)	n/a	kg	ave CO2	12.26549	%	BS CH4	n/a	g/hphr
Trip Fuel Cons. (ab)	n/a	kg	ave NOx	5.69946	ppm	BS NO (d)	n/a	g/hphr
Trip Fuel Cons. EU (ac)	2.99	kg	ave PM	n/a	mg/m3	BS NO2	n/a	g/hphr
Trip Fuel Cons. US (ac)	2.96	kg	ave Soot meas	n/a	mg/m3	BS NOx	n/a	g/hphr
Trip Fuel Cons. Volume (b)	n/a	gall	ave Soot	n/a	mg/m3	BS Soot	n/a	g/hphr
Trip Fuel Cons. Volume (ab)	n/a	gall	ave PN	n/a	#/cm3	BS Soot meas	n/a	g/hphr
Trip Fuel Cons. Volume EU (ac)	1.06	gall	tot THC	0.12942	g	BS PM	n/a	g/hphr
Trip Fuel Cons. Volume US (ac)	1.04	gall	tot NMHC	0.10615	g	BS PN	n/a	#/hpr
Trip Fuel Economy (b)	n/a	mpg_US	tot CH4	0.03833	g	DS CO2	229.66362	g/mi
Trip Fuel Economy (ab)	n/a	mpg_US	tot CO	4.21735	g	DS CO	0.10769	g/mi
Trip Fuel Economy EU (ac)	37.02	mpg_US	tot CO2	8994.42196	g	DS THC	0.00330	g/mi
Trip Fuel Economy US (ac)	37.48	mpg_US	tot NO (d)	0.28009	g	DS NMHC	0.00271	g/mi
Trip Av. Eng. Speed	1576.05	rpm	tot NO2	0.00429	g	DS CH4	0.00098	g/mi
Trip Av. Torque	n/a	lbft	tot NOx	0.27152	g	DS NO (d)	0.00715	g/mi
Trip Av. Power	n/a	hp	tot Soot	n/a	g	DS NO2	0.00011	g/mi
Trip Work	n/a	hphr	tot Soot meas	n/a	g	DS NOx	0.00693	g/mi
Trip Exhaust Mass	46.52	kg	tot PM	n/a	g	DS Soot	n/a	g/mi
Trip Exhaust Mass EU (ac)	n/a	kg	tot PN	n/a	#	DS Soot meas	n/a	g/mi
Trip Exhaust Mass US (ac)	n/a	kg	PM measurement type	0.00000	-	DS PM	n/a	g/mi
Trip Av. Amb. Temperature	68.60	deg_F	PM correction type	1.00000	alpha(HC)	DS PN	n/a	#/mi
Trip Av. Humidity	80.90	%	tot Soot on PM filter (estim.)	n/a	mg	FS CO2	n/a	g/kg
Fuel Type	Petrol (E10)		Soot --> PM simple scaling factor	1.00000	-	FS CO	n/a	g/kg
			Soot --> PM alpha scaling factor	0.00000	-	FS THC	n/a	g/kg
			Trip Av. Veh. Speed	38.30167	mi/hr	FS NMHC	n/a	g/kg
			Trip Velocity Zero	4.83564	%	FS CH4	n/a	g/kg
			Trip Velocity Urban	44.68894	%	FS NO (d)	n/a	g/kg
			Trip Velocity Rural	9.61695	%	FS NO2	n/a	g/kg
			Trip Velocity Motorway	45.69410	%	FS NOx	n/a	g/kg
						FS Soot	n/a	g/kg
						FS Soot meas	n/a	g/kg
						FS PM	n/a	g/kg
						FS PN	n/a	#/kg

(a) GAS PEMS measurement state only, (b) based on fuel rate input (ECU, Fuel Meter), (c) calculated from carbon balance
(d) NO calculated using molecular weight of NO2

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Jetta /
Engine: Gasoline / 1.4L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

Page: Trip Summary Drift Corrected

Start Date: 09/06/2017

Start Time: 07:30:18.0



Trip Duration	3681.00	s	ave THC DC	5.98371	ppm	BS CO2 DC	n/a	g/hphr
Trip Duration (a)	3681.00	s	ave NMHC DC	5.62179	ppm	BS CO DC	n/a	g/hphr
Trip Distance	39.16	mi	ave CH4 DC	0.32902	ppm	BS THC DC	n/a	g/hphr
Trip Distance (a)	39.16	mi	ave CO DC	40.55072	ppm	BS NMHC DC	n/a	g/hphr
Trip Fuel Cons. (b)	n/a	kg	ave CO2 DC	12.26142	%	BS CH4 DC	n/a	g/hphr
Trip Fuel Cons. (ab)	n/a	kg	ave NOx DC	5.69453	ppm	BS NO DC (d)	n/a	g/hphr
Trip Fuel Cons. EU (ac)	2.99	kg	ave PM	n/a	mg/m3	BS NO2 DC	n/a	g/hphr
Trip Fuel Cons. US (ac)	2.96	kg	ave Soot meas	n/a	mg/m3	BS NOx DC	n/a	g/hphr
Trip Fuel Cons. Volume (b)	n/a	gall	ave Soot	n/a	mg/m3	BS Soot	n/a	g/hphr
Trip Fuel Cons. Volume (ab)	n/a	gall	ave PN DC	n/a	#/cm3	BS Soot meas	n/a	g/hphr
Trip Fuel Cons. Volume EU (ac)	1.06	gall	tot THC DC	0.17417	g	BS PM	n/a	g/hphr
Trip Fuel Cons. Volume US (ac)	1.04	gall	tot NMHC DC	0.14577	g	BS PN DC	n/a	#/hpr
Trip Fuel Economy (b)	n/a	mpg_US	tot CH4 DC	0.03682	g	DS CO2 DC	229.58749	g/mi
Trip Fuel Economy (ab)	n/a	mpg_US	tot CO DC	4.26147	g	DS CO DC	0.10881	g/mi
Trip Fuel Economy EU (ac)	37.02	mpg_US	tot CO2 DC	8991.44072	g	DS THC DC	0.00445	g/mi
Trip Fuel Economy US (ac)	37.48	mpg_US	tot NO DC (d)	0.28303	g	DS NMHC DC	0.00372	g/mi
Trip Av. Eng. Speed	1576.05	rpm	tot NO2 DC	0.00425	g	DS CH4 DC	0.00094	g/mi
Trip Av. Torque	n/a	lbft	tot NOx DC	0.27130	g	DS NO DC (d)	0.00723	g/mi
Trip Av. Power	n/a	hp	tot Soot	n/a	g	DS NO2 DC	0.00011	g/mi
Trip Work	n/a	hphr	tot Soot meas	n/a	g	DS NOx DC	0.00693	g/mi
Trip Exhaust Mass	46.52	kg	tot PM	n/a	g	DS Soot	n/a	g/mi
Trip Exhaust Mass EU (ac)	n/a	kg	tot PN DC	n/a	#	DS Soot meas	n/a	g/mi
Trip Exhaust Mass US (ac)	n/a	kg	PM measurement type	0.00000	-	DS PM	n/a	g/mi
Trip Av. Amb. Temperature	68.60	deg_F	PM correction type	1.00000	alpha(HC)	DS PN DC	n/a	#/mi
Trip Av. Humidity	80.90	%	tot Soot on PM filter (estim.)	n/a	mg	FS CO2 DC	n/a	g/kg
Fuel Type	Petrol (E10)		Soot --> PM simple scaling factor	1.00000	-	FS CO DC	n/a	g/kg
			Soot --> PM alpha scaling factor	0.00000	-	FS THC DC	n/a	g/kg
			Trip Av. Veh. Speed	38.30167	mi/hr	FS NMHC DC	n/a	g/kg
			Trip Velocity Zero	4.83564	%	FS CH4 DC	n/a	g/kg
			Trip Velocity Urban	44.68894	%	FS NO DC (d)	n/a	g/kg
			Trip Velocity Rural	9.61695	%	FS NO2 DC	n/a	g/kg
			Trip Velocity Motorway	45.69410	%	FS NOx DC	n/a	g/kg
						FS Soot	n/a	g/kg
						FS Soot meas	n/a	g/kg
						FS PM	n/a	g/kg
						FS PN DC	n/a	#/kg

(a) GAS PEMS measurement state only, (b) based on fuel rate input (ECU, Fuel Meter), (c) calculated from carbon balance
 (d) NO calculated using molecular weight of NO2

Concerto Version: 480 Build 215, Serial Number: 8468
 M.O.V.E Post-Processing: Rel_10_B192

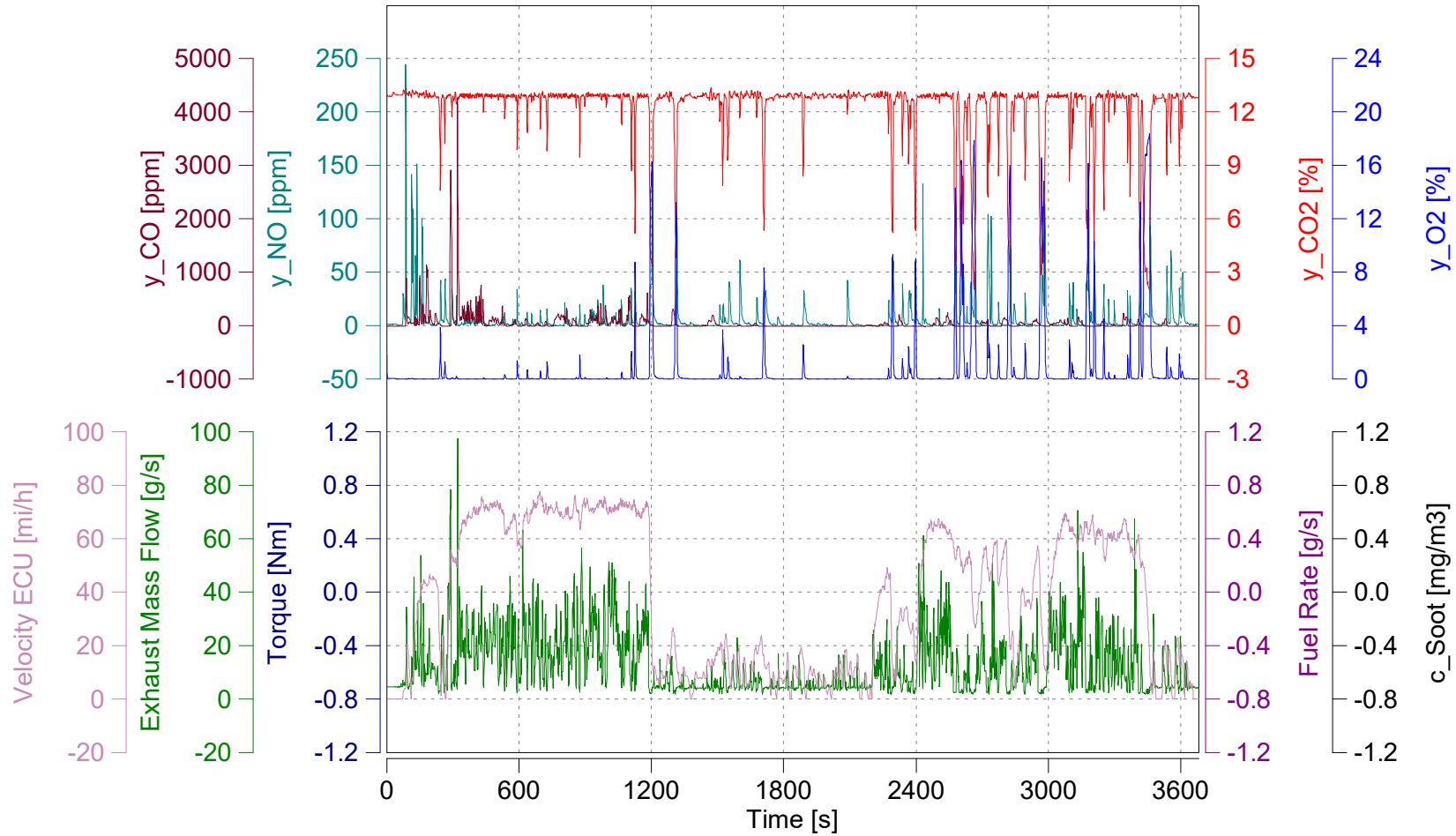
Vehicle: 2017 VW Jetta /
 Engine: Gasoline / 1.4L
 NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
 Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

Page: Time Alignment Check

Start Date: 09/06/2017

Start Time: 07:30:18.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

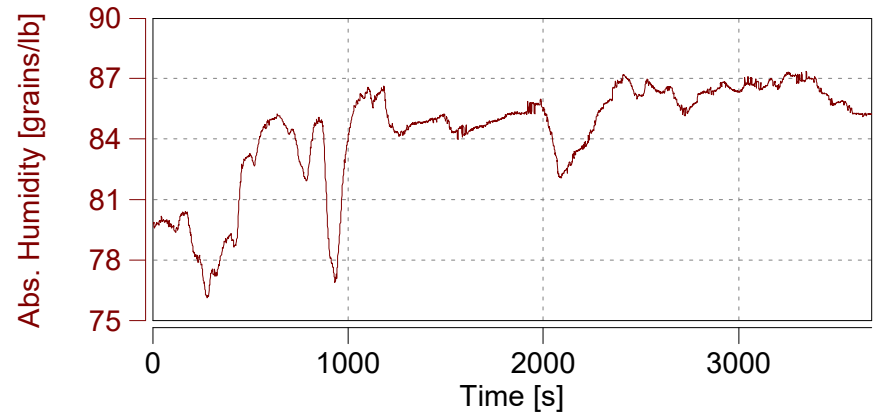
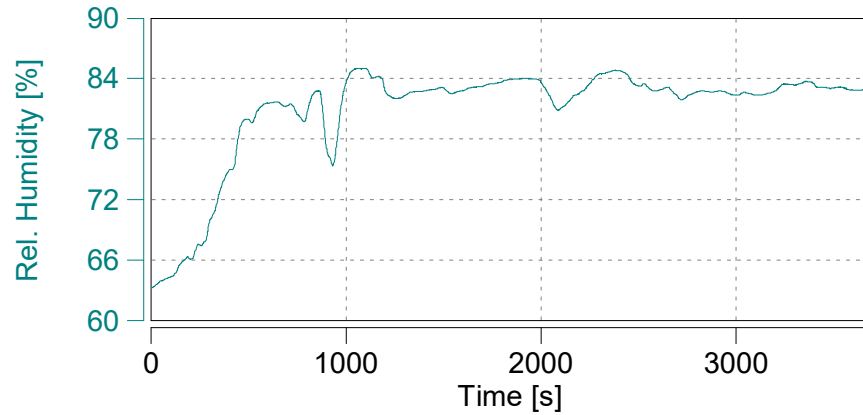
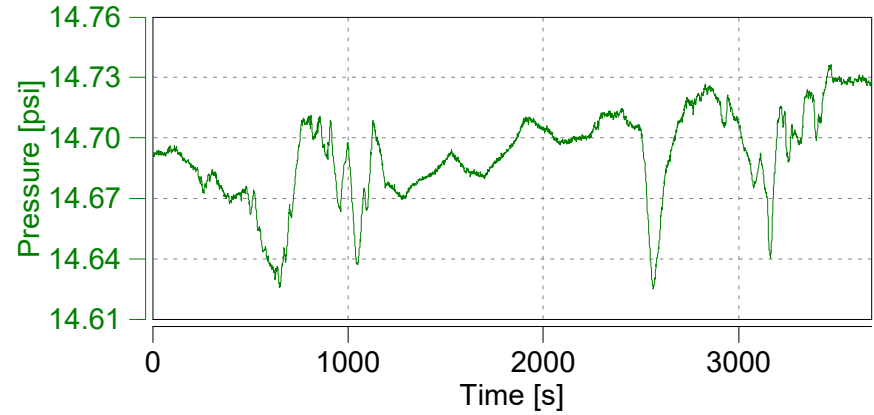
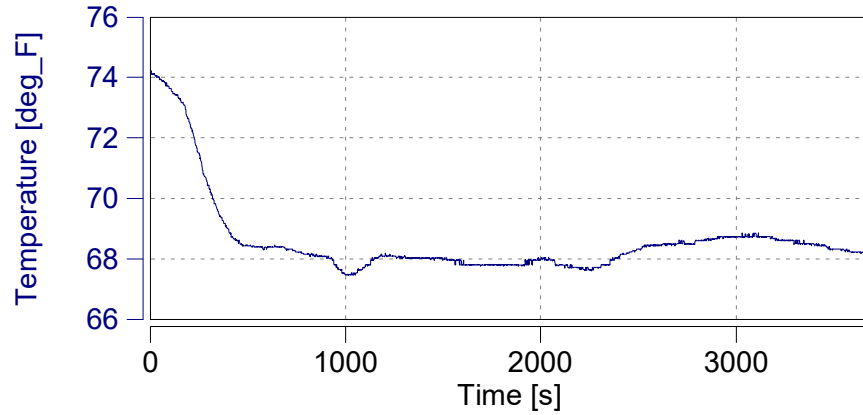
Vehicle: 2017 VW Jetta /
Engine: Gasoline / 1.4L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

Page: Ambient Conditions

Start Date: 09/06/2017

Start Time: 07:30:18.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

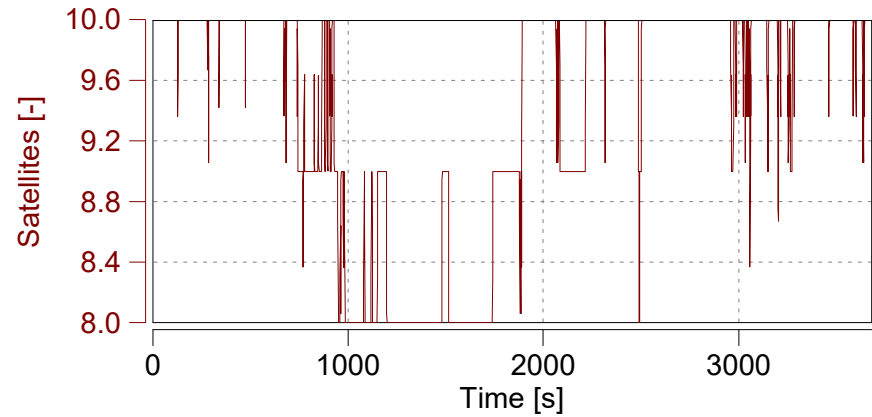
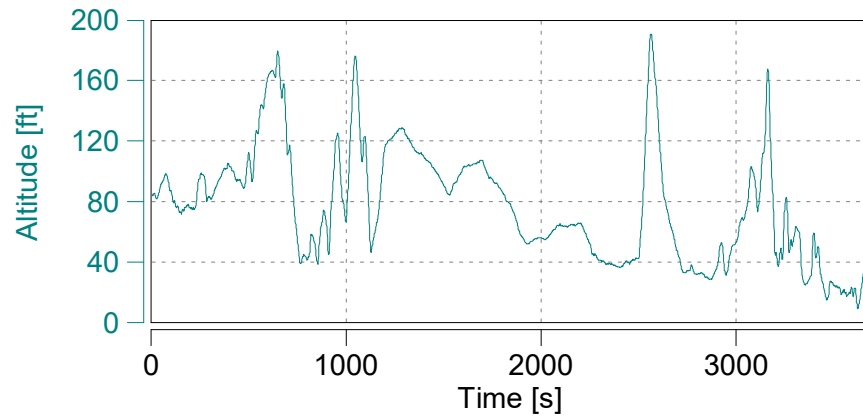
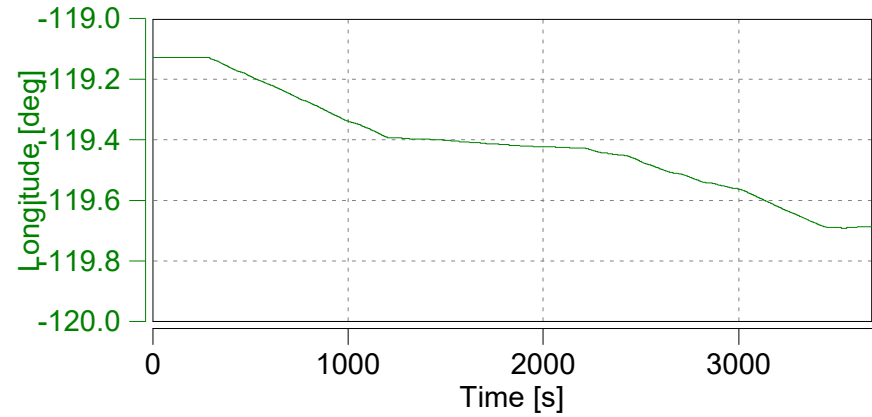
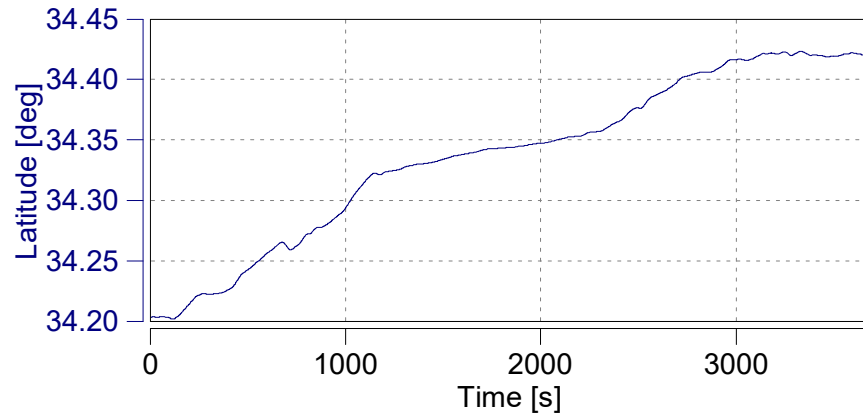
Vehicle: 2017 VW Jetta /
Engine: Gasoline / 1.4L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

Page: GPS

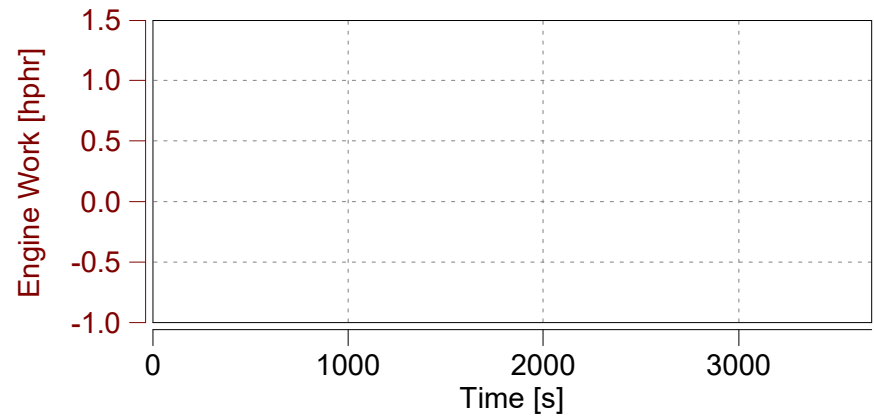
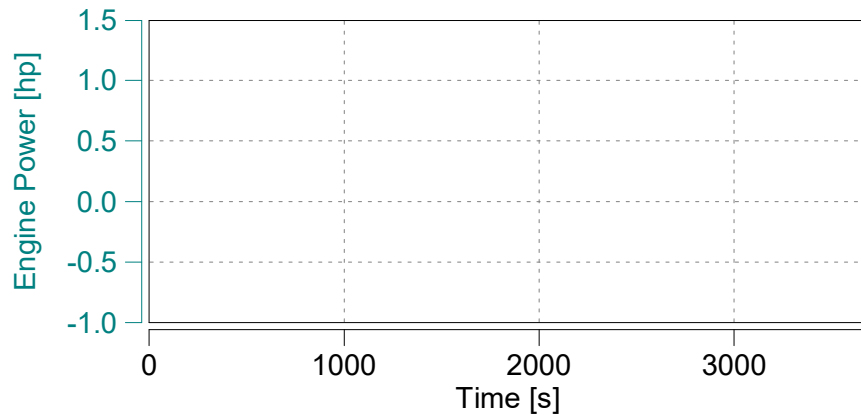
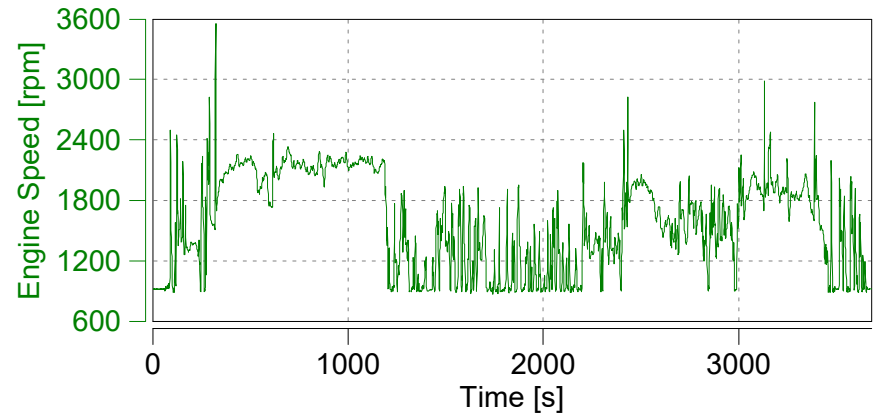
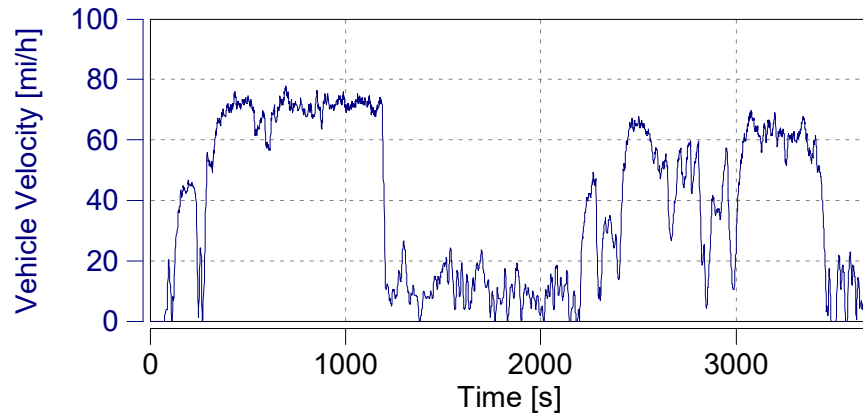
Start Date: 09/06/2017

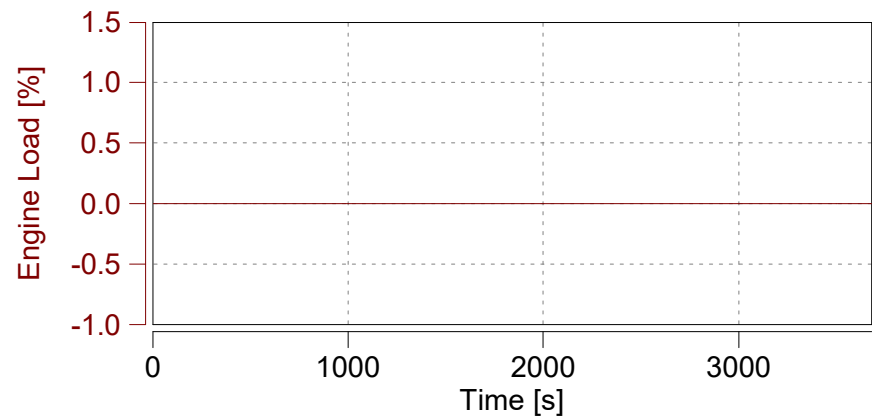
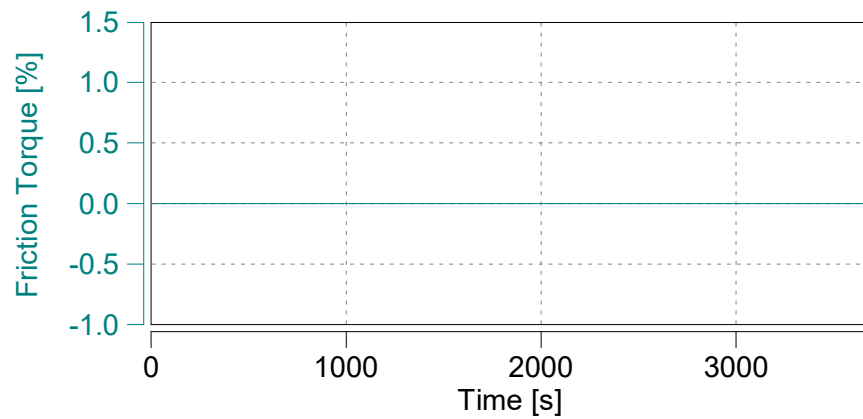
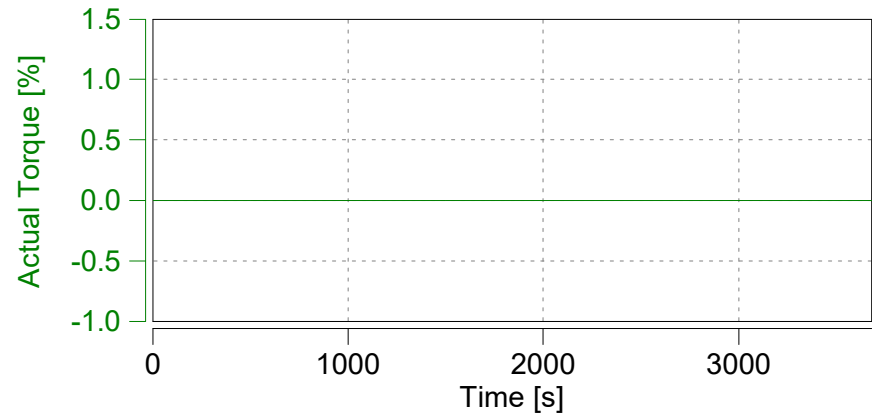
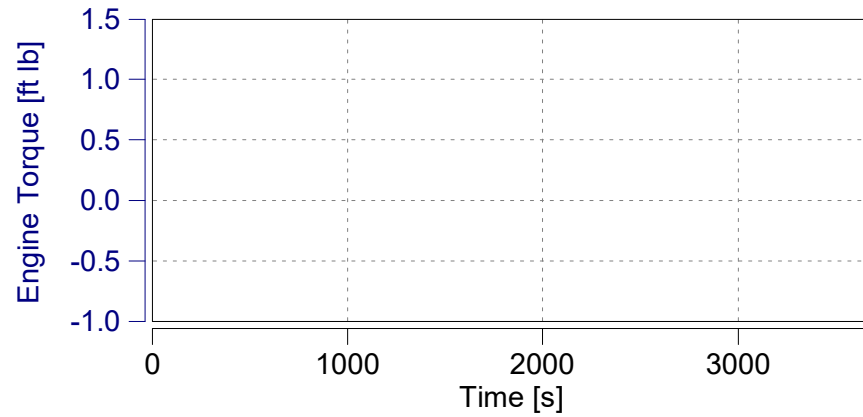
Start Time: 07:30:18.0

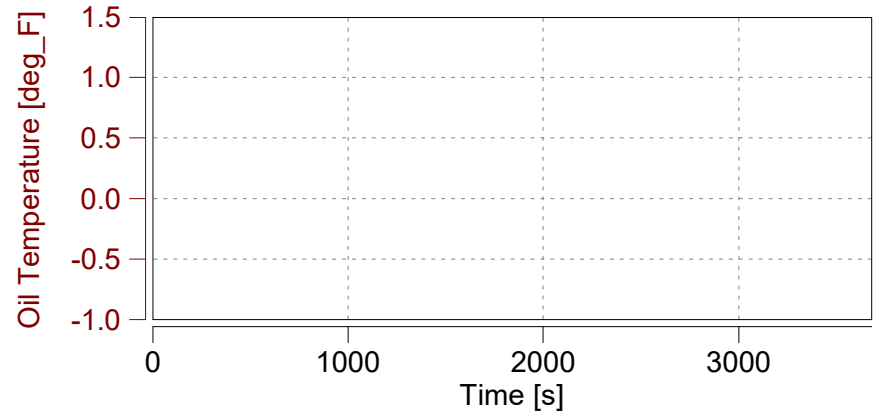
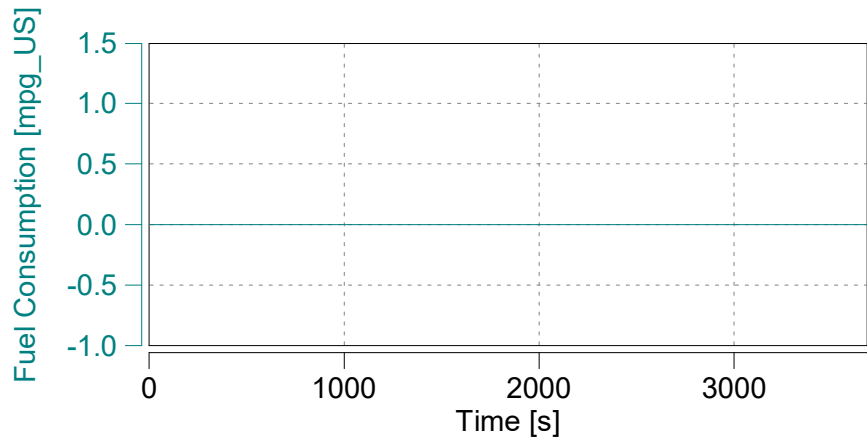
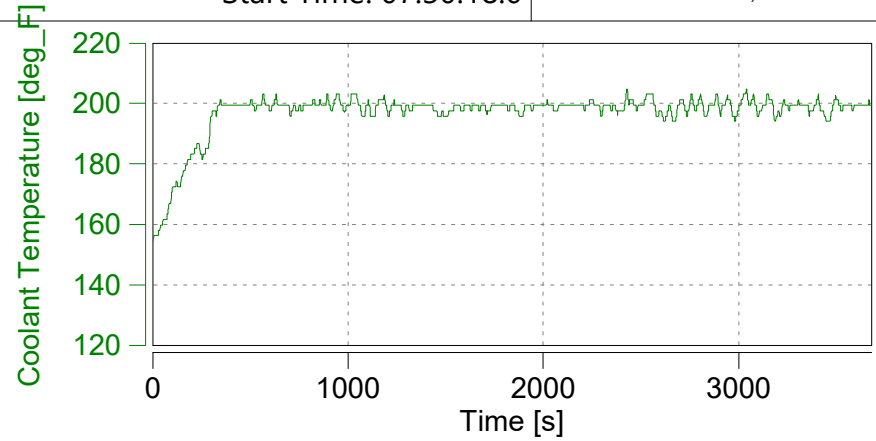
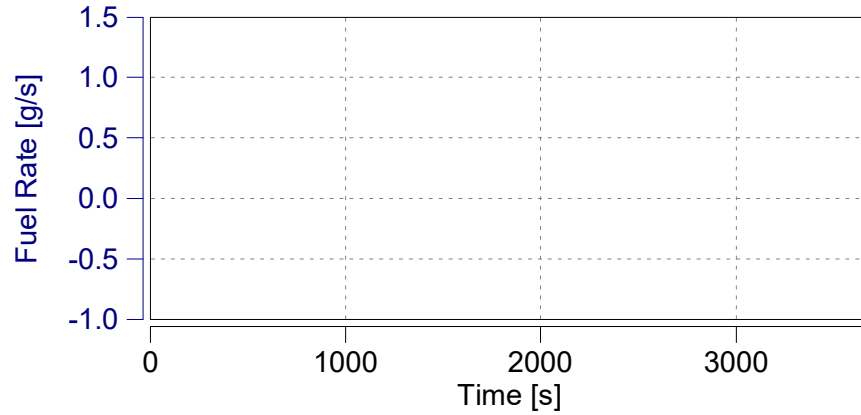


Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Jetta /
Engine: Gasoline / 1.4L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90





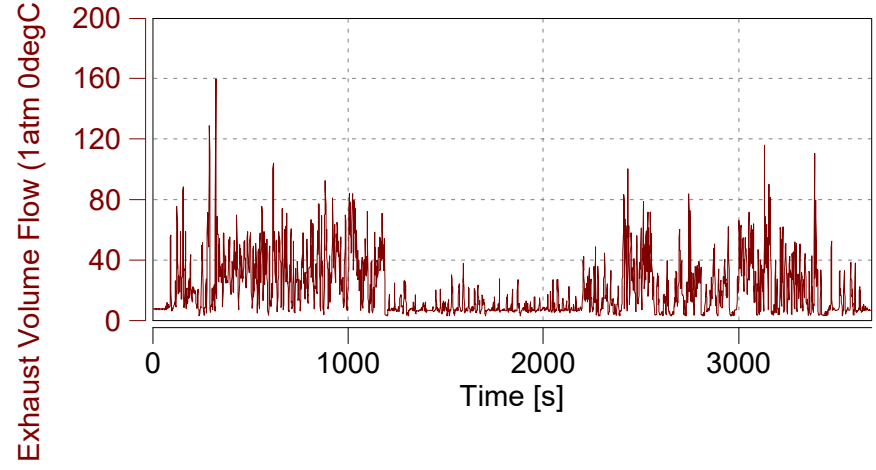
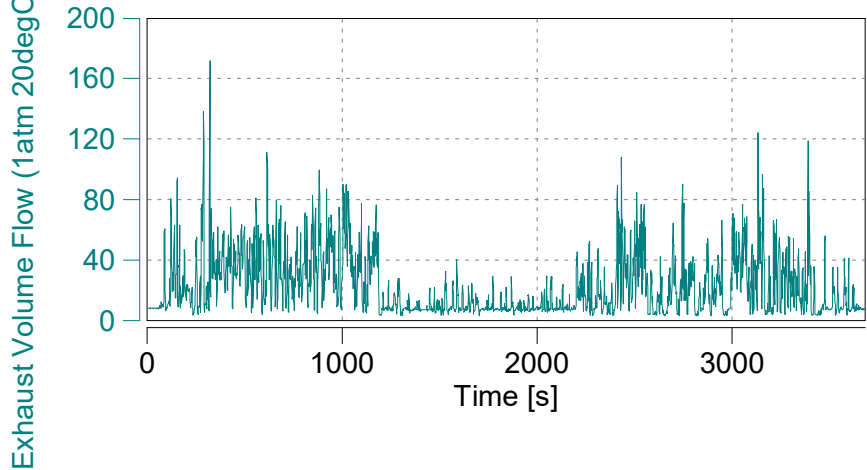
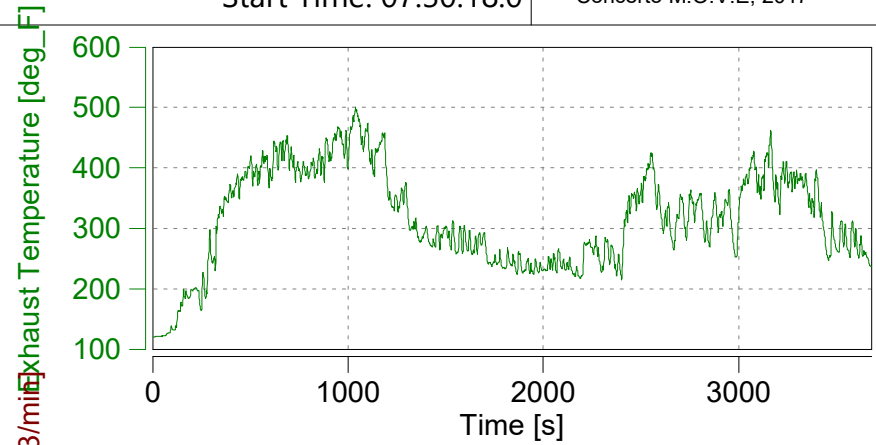
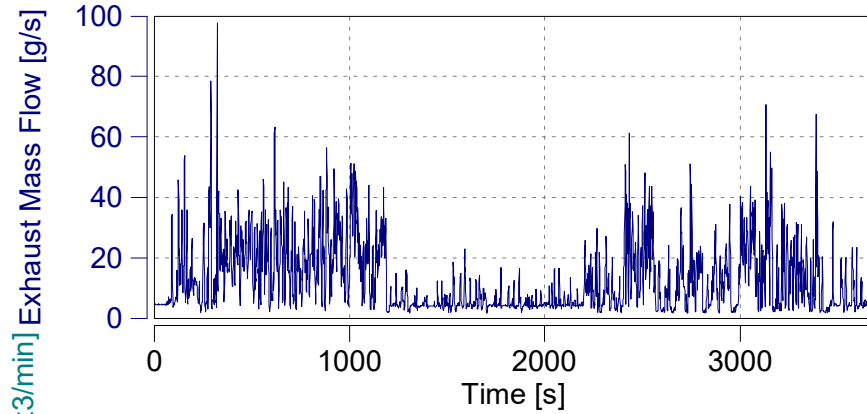


Case: Highway

Page: Exhaust Flow (1)

Start Date: 09/06/2017

Start Time: 07:30:18.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

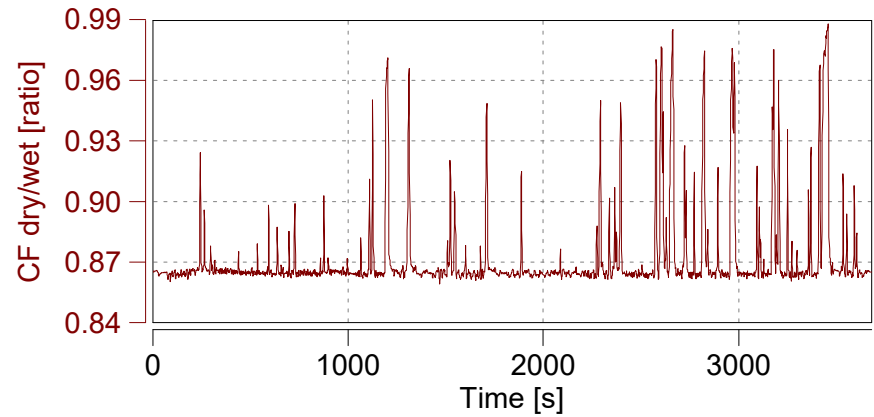
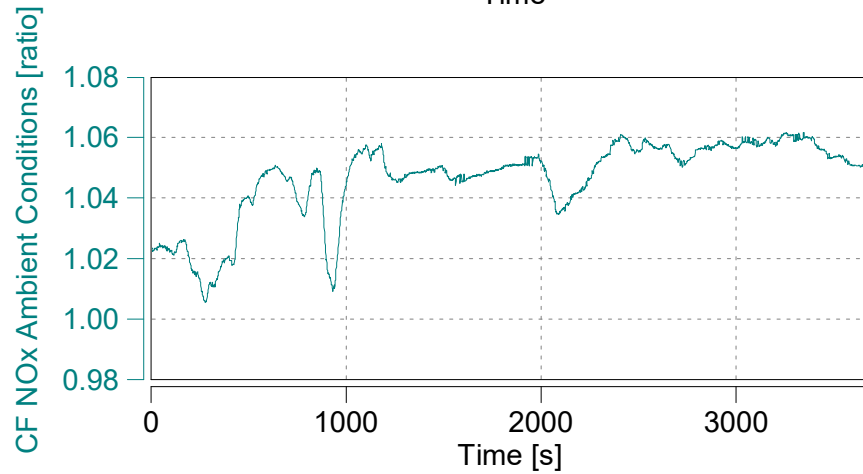
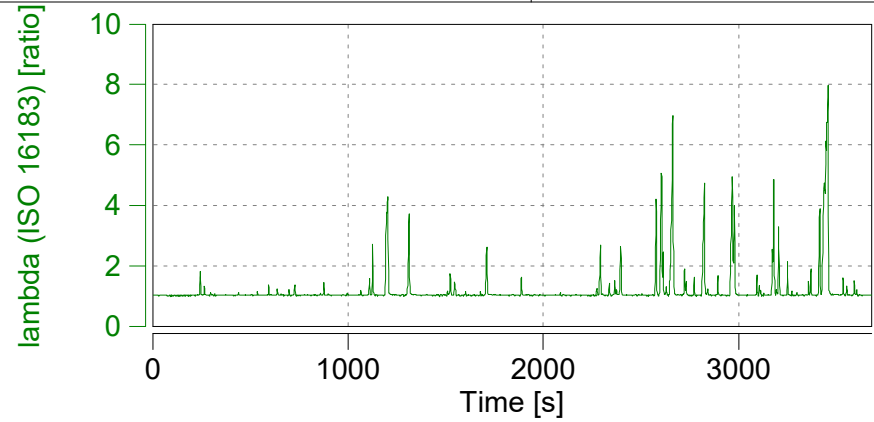
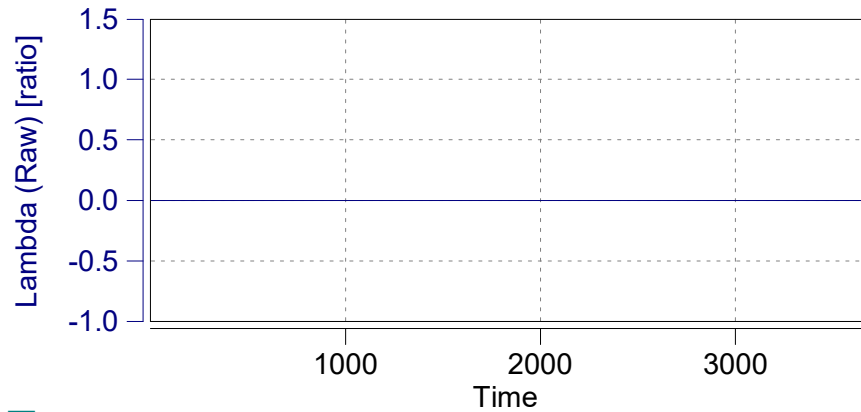
Vehicle: 2017 VW Jetta /
Engine: Gasoline / 1.4L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

Page: Exhaust Flow (2)

Start Date: 09/06/2017

Start Time: 07:30:18.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

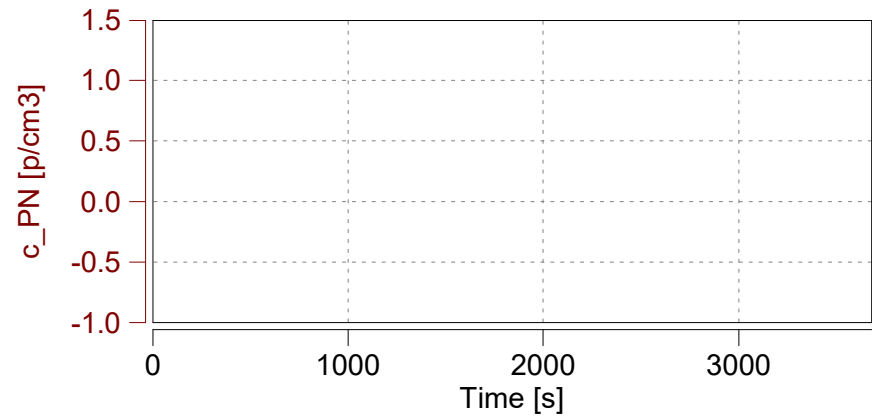
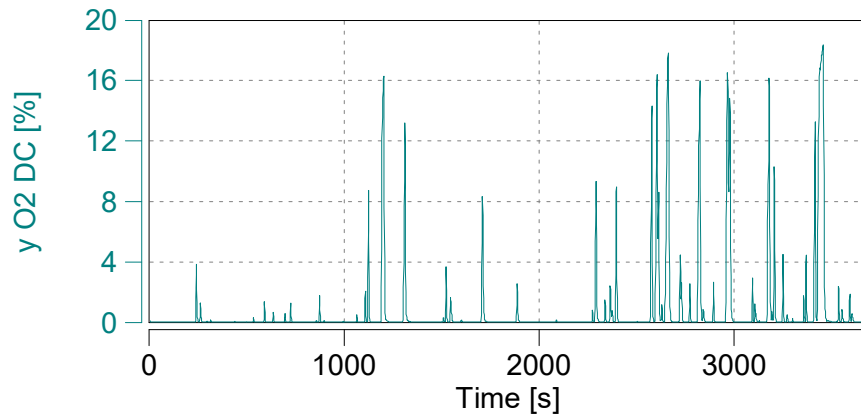
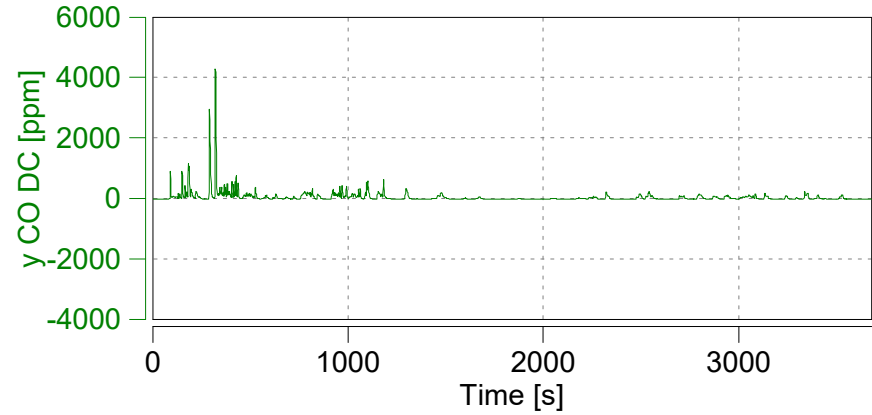
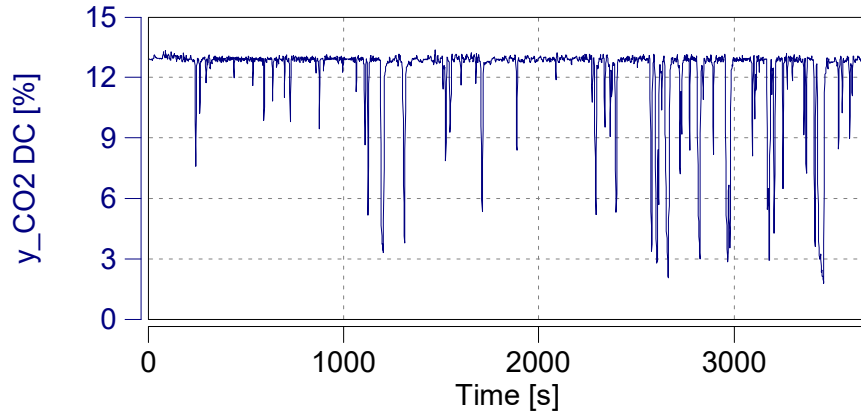
Vehicle: 2017 VW Jetta /
Engine: Gasoline / 1.4L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

Page: Corrected Emissions (1)

Start Date: 09/06/2017

Start Time: 07:30:18.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

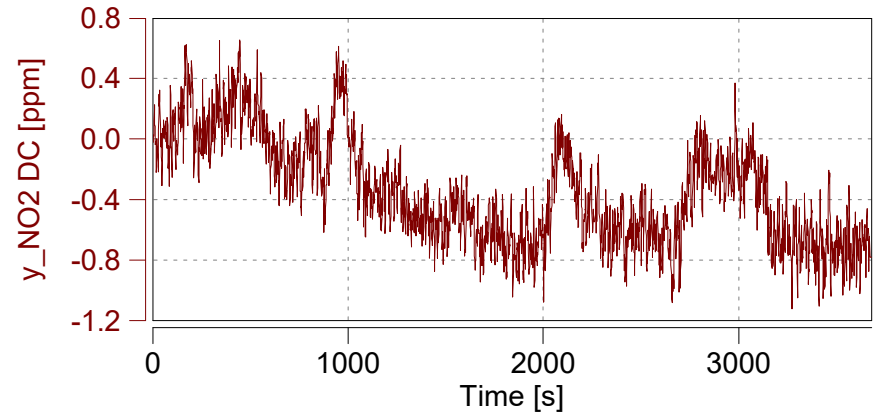
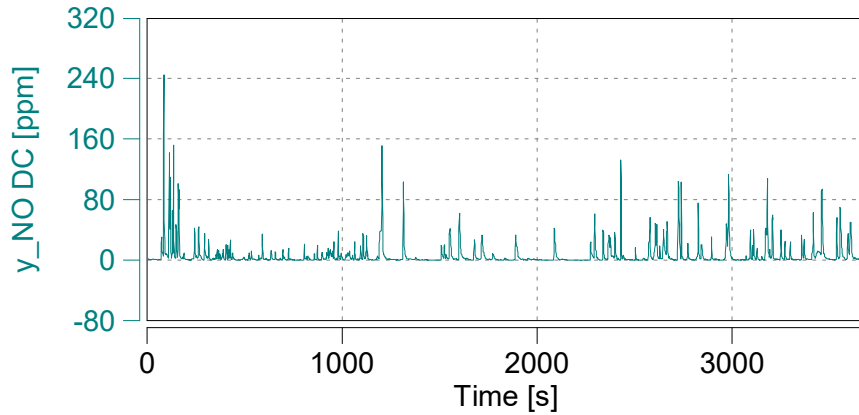
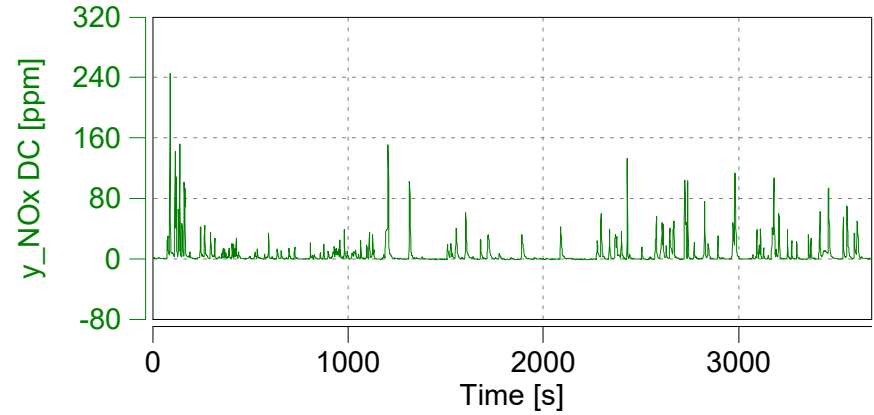
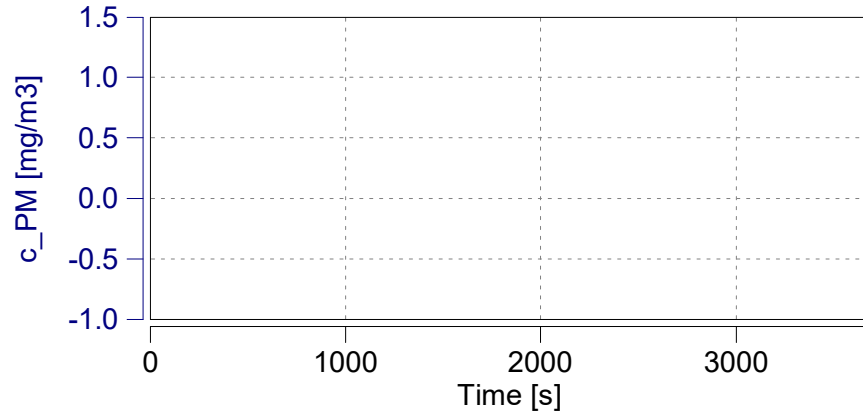
Vehicle: 2017 VW Jetta /
Engine: Gasoline / 1.4L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

Page: Corrected Emissions (2)

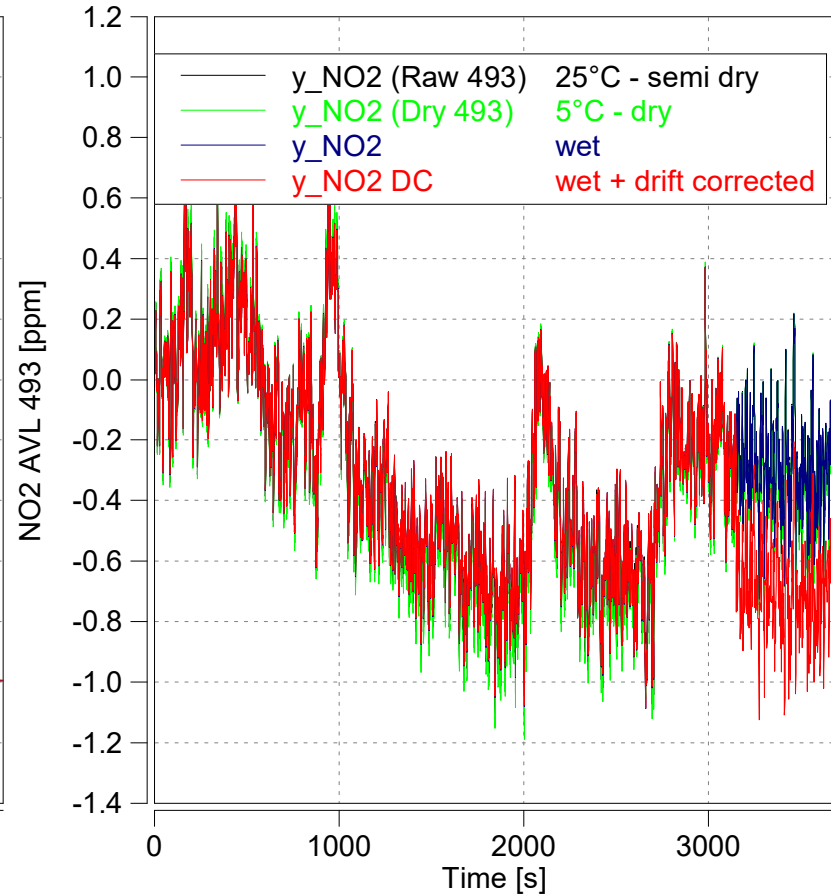
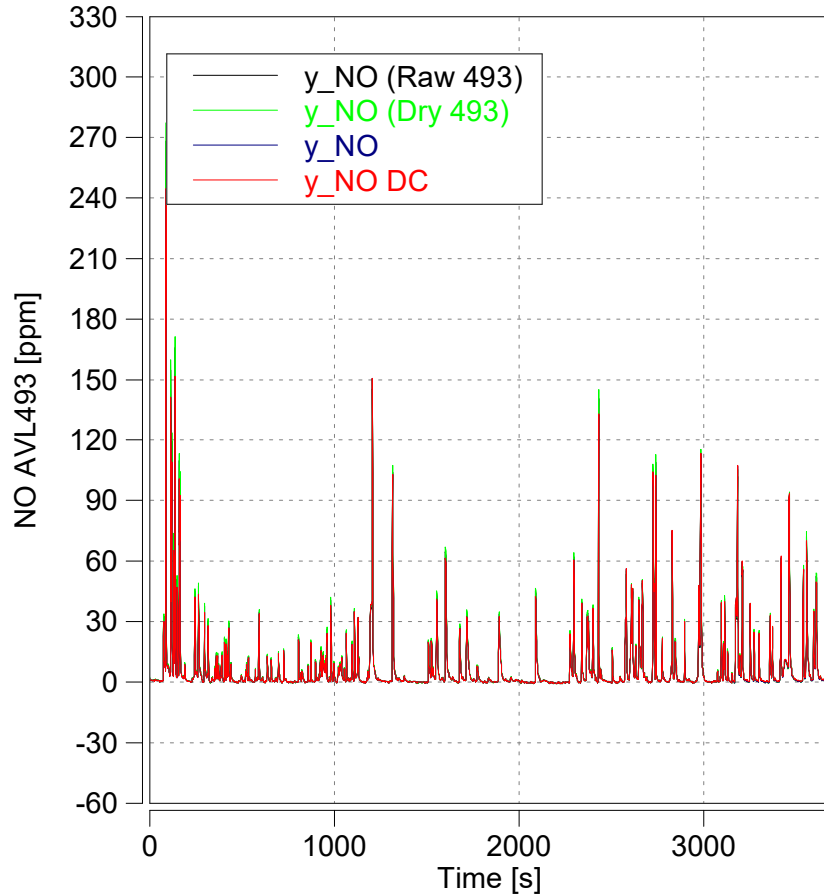
Start Date: 09/06/2017

Start Time: 07:30:18.0

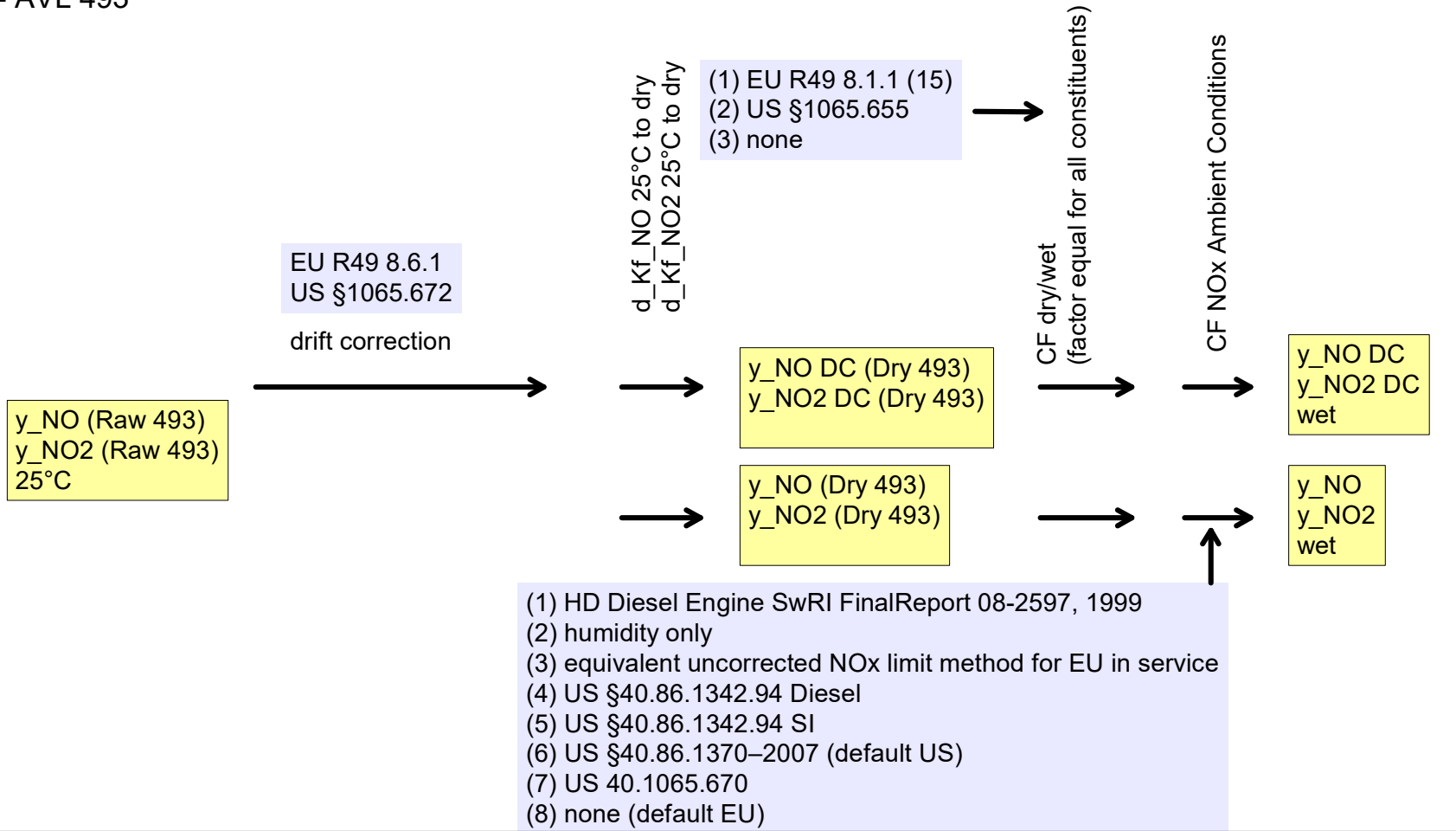


Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Jetta /
Engine: Gasoline / 1.4L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90



NOx - AVL 493

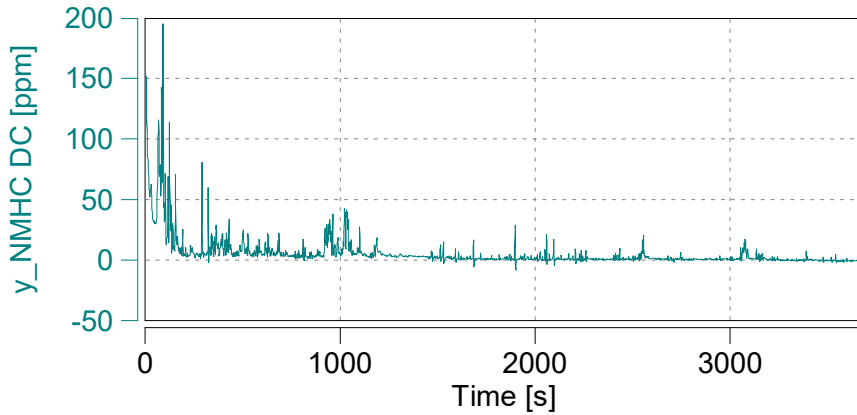
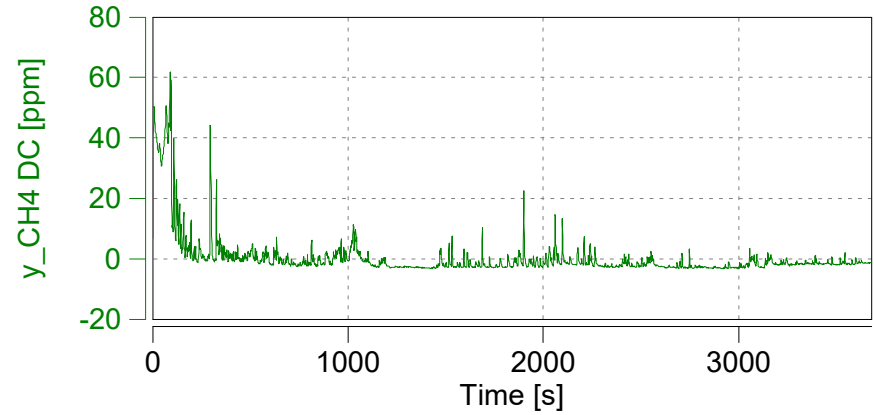
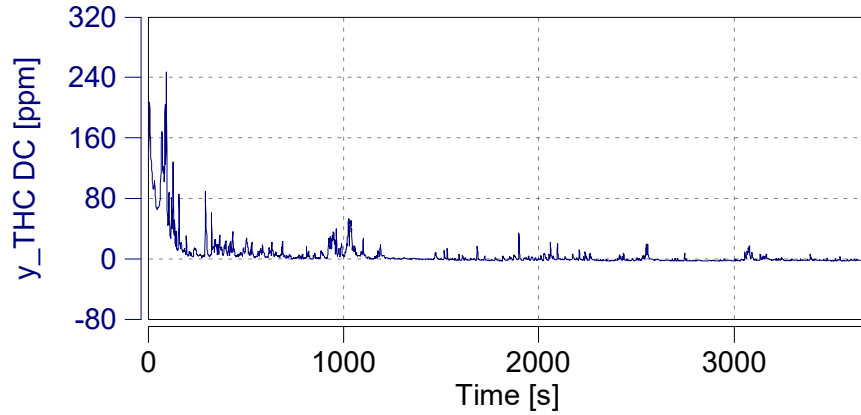


Case: Highway

Page: Corrected Emissions (5)

Start Date: 09/06/2017

Start Time: 07:30:18.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

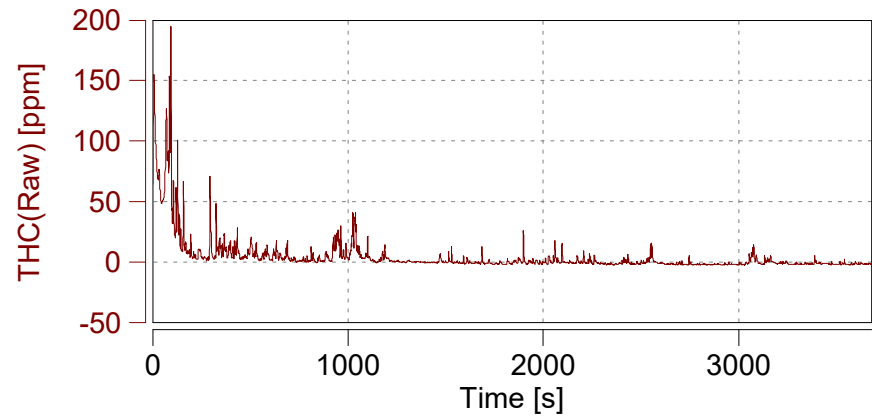
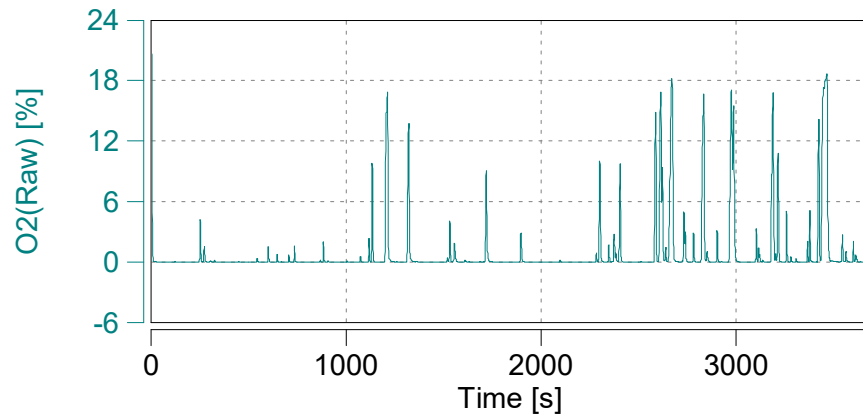
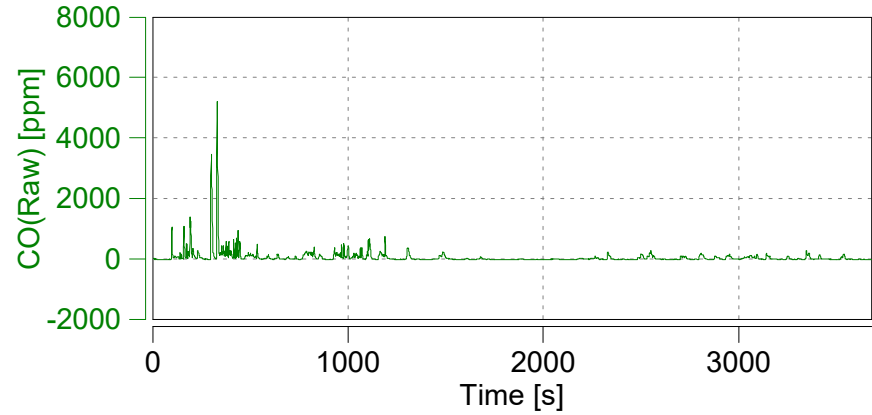
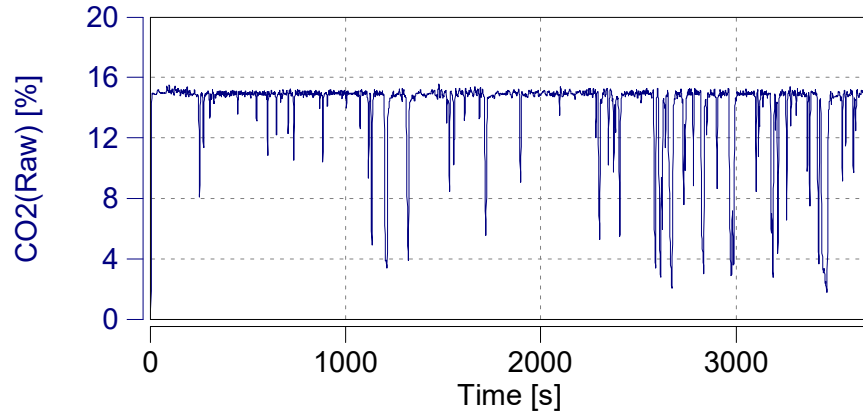
Vehicle: 2017 VW Jetta /
Engine: Gasoline / 1.4L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

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Start Date: 09/06/2017

Start Time: 07:30:18.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

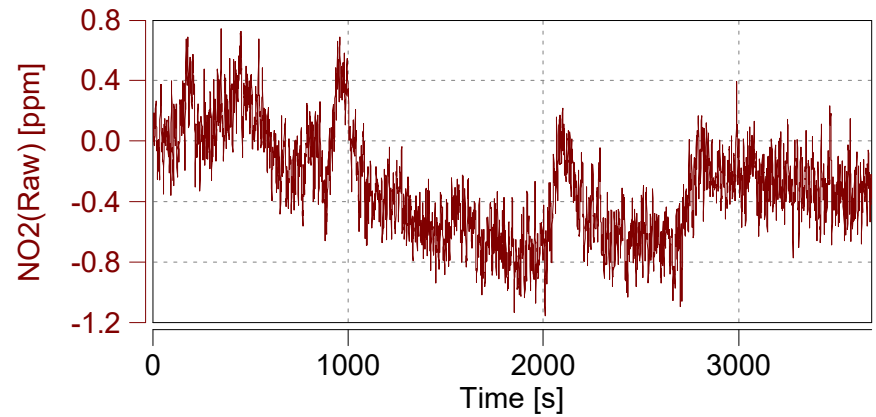
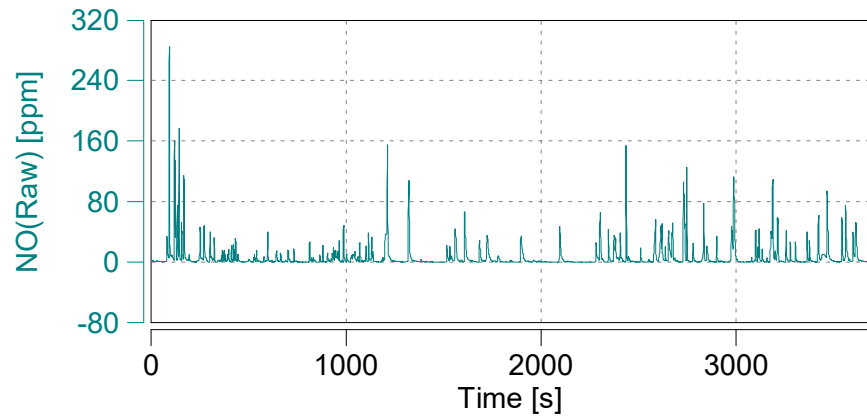
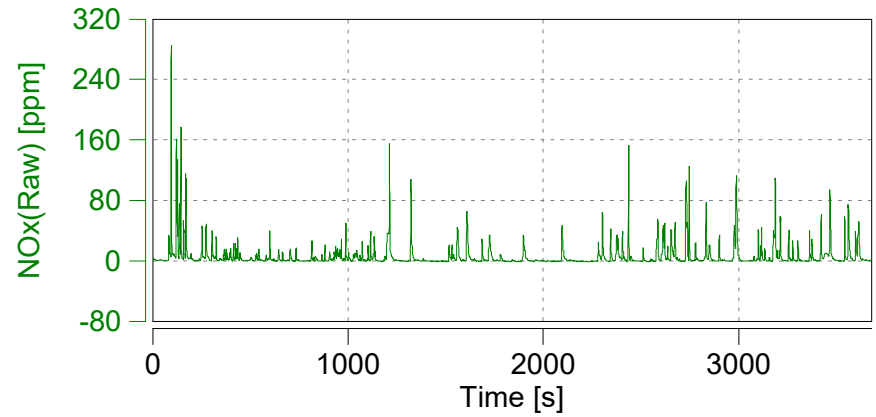
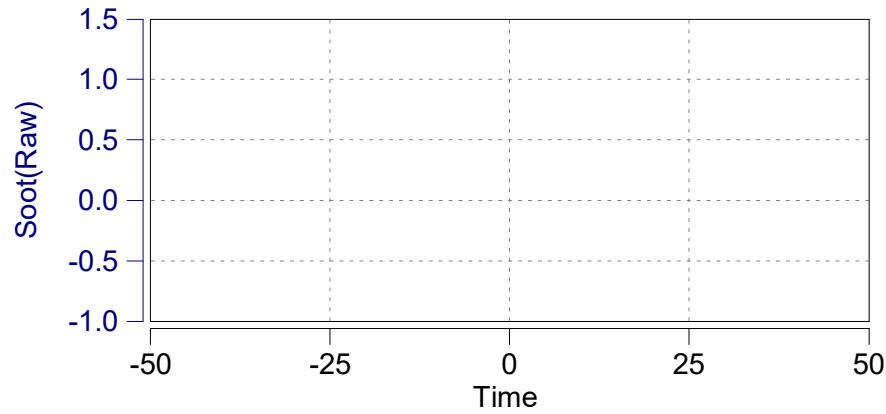
Vehicle: 2017 VW Jetta /
Engine: Gasoline / 1.4L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

Page: Emissions Raw Data (2)

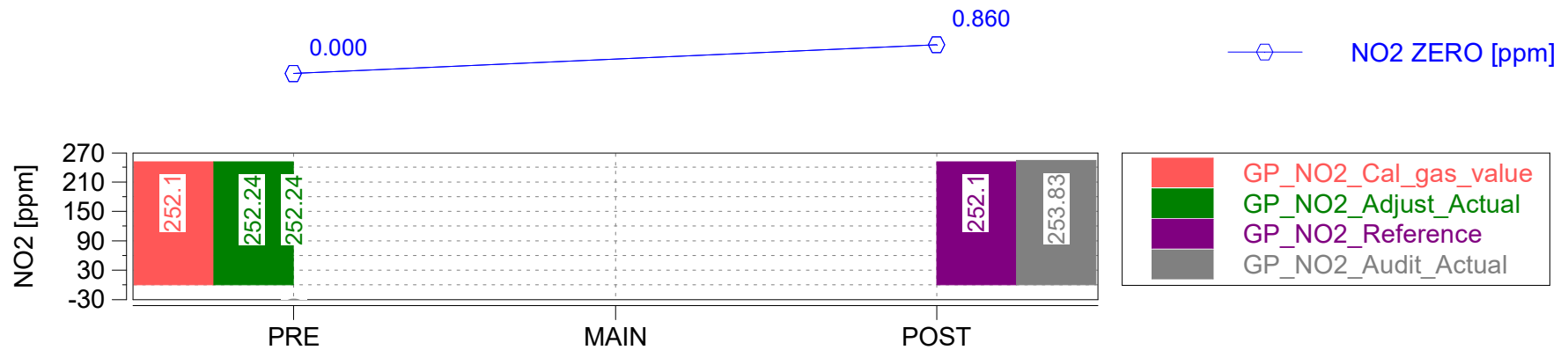
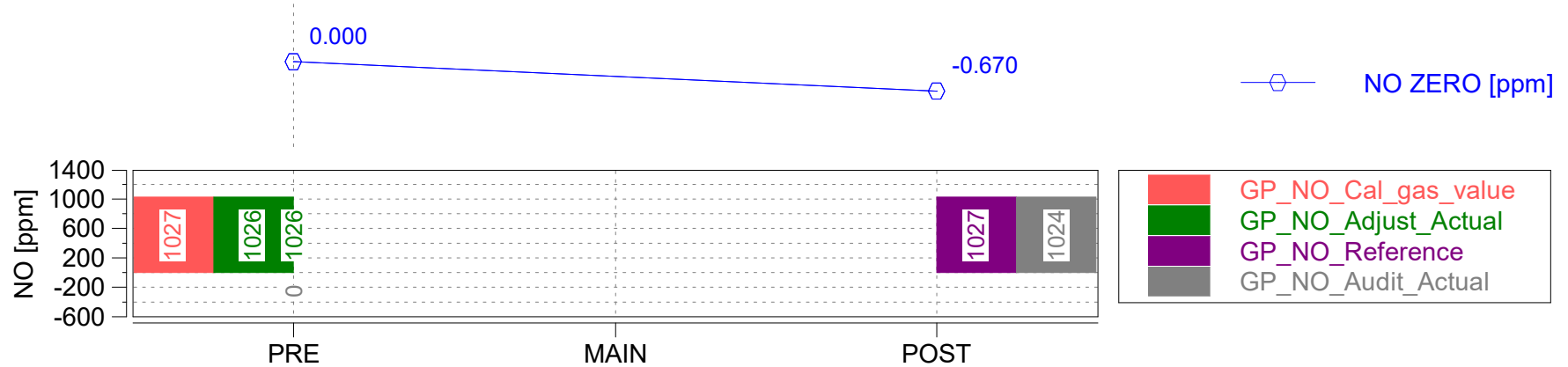
Start Date: 09/06/2017

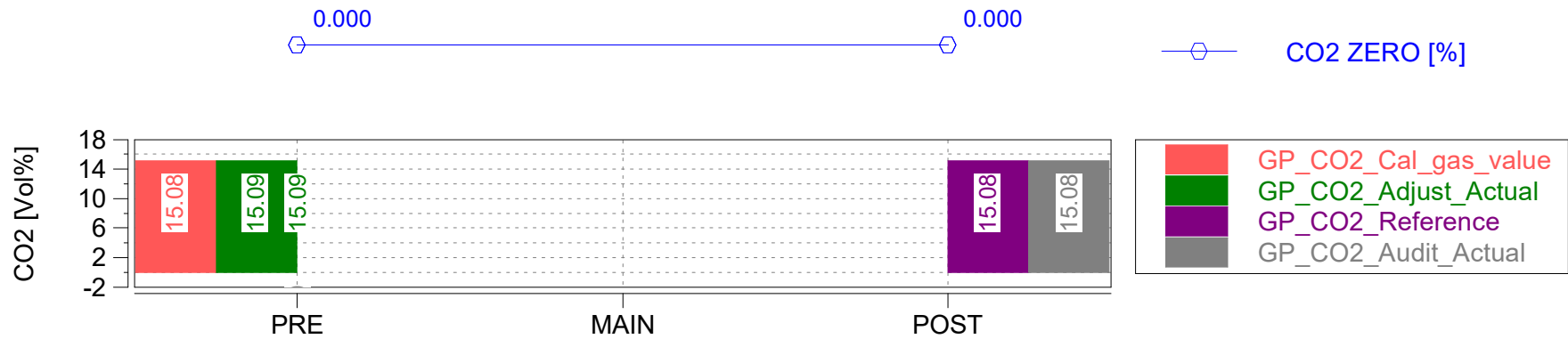
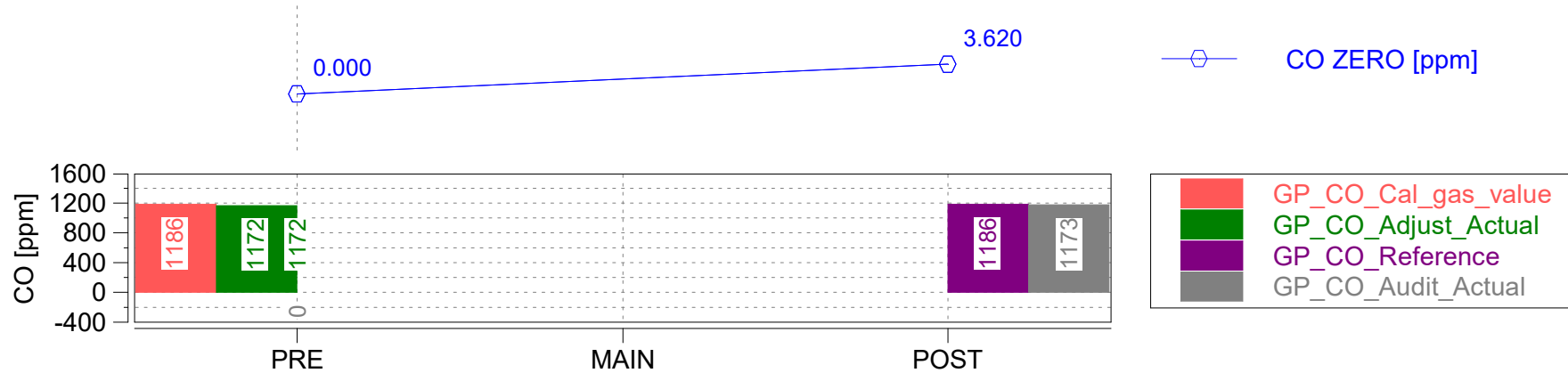
Start Time: 07:30:18.0

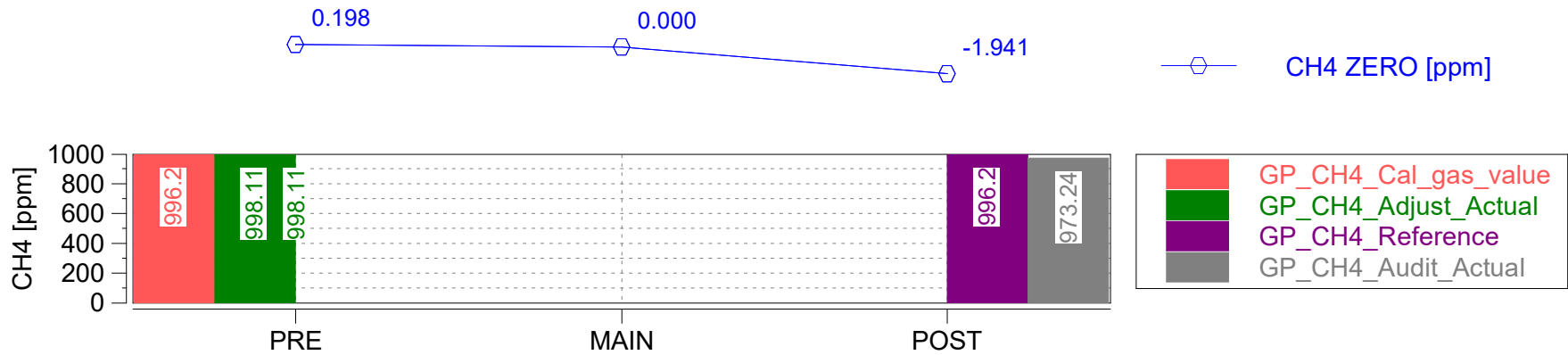
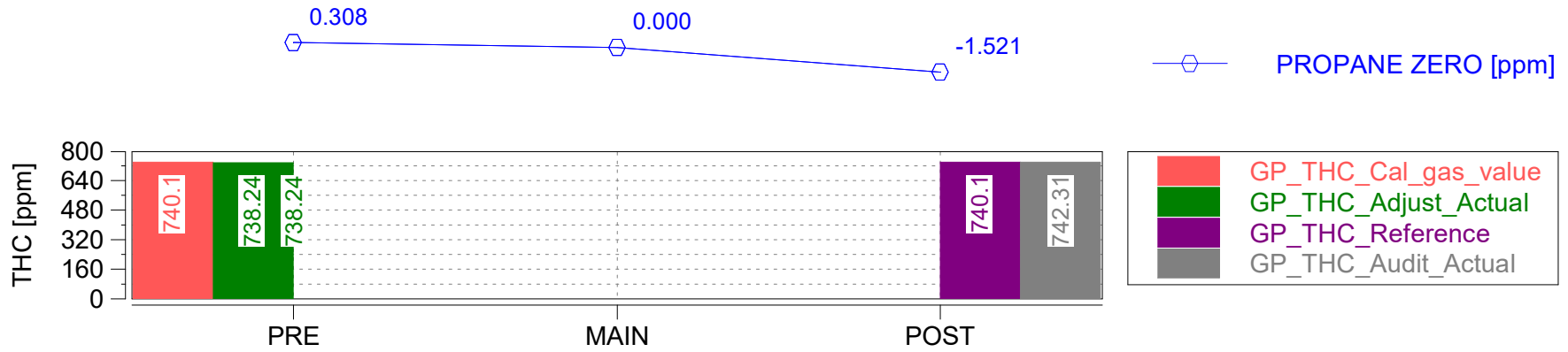


Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Jetta /
Engine: Gasoline / 1.4L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90







#	Text	Value	Unit
-	----	----	----
1.0	Test Start: Date		-
2.0	Test Start: Time		-
3.0	Ambient Temperature	IFILE1:TM'Temperature	deg C
4.0	Ambient Temperature TS	0.00000	s
5.0	Ambient Pressure	IFILE1:TM'Pressure	kPa
6.0	Ambient Pressure TS	0.00000	s
7.0	Humidity Type	1.00000	-
8.0	Amb. Rel. Humidity	IFILE1:TM'Humidity	%
9.0	Amb. Rel. Humidity	0.00000	s
10.0	GPS Latitude		deg
11.0	GPS Latitude TS	0.00000	s
12.0	GPS Longitude		deg
13.0	GPS Longitude TS	0.00000	s
14.0	Altitude		m
15.0	Altitude TS	0.00000	s
16.0	GPS Quality		-
17.0	GPS Quality TS	0.00000	s
18.0	GroundSpeed		km/h
19.0	GroundSpeed TS	0.00000	s
20.0	Altitude from topographical map		m
21.0	Altitude TS of topographical map		s
22.0	TRIP_AMBIENT_GPS_AVL	YES	-
23.0	CALC_GPS_GROUNDSPEED	NO	-
24.0	EXHAUST_FLOW_AVL	NO	-
25.0	EXHAUST_FLOW_AVL_EFM	YES	-
26.0	Exhaust Flow Type	2.00000	-
27.0	Mass Flow	IFILE1:TM'PitotEFM_ExhaustG	various
28.0	Mass Flow TS	0.80000	s
29.0	Exhaust Pressure		kPa
30.0	Exhaust Pressure TS	0.80000	s

#	Text	Value	Unit
-	----	----	----
31.0	Exhaust Delta Pressure		kPa
32.0	Exhaust Pressure Delta TS	0.80000	s
33.0	Exhaust Temperature	IFILE1:TM'PitotEFM_ExhaustG	degC
34.0	Exhaust Temperature TS	0.80000	s
35.0	Lambda	N/A	-
36.0	Lambda TS		s
37.0	CO2_DIL		%
38.0	CO2_DIL TS		s
39.0	CVS Volume Flow		m3/min
40.0	TimeShift_CVS_VOL_FLOW		s
41.0	IN_CVS_PRESSURE		kPa
42.0	TimeShift_CVS_PRESSURE		s
43.0	IN_CVS_TEMP		degC
44.0	TimeShift_CVS_TEMP		s
45.0	Dry to Wet Conversion CO2	YES	-
46.0	Dry to Wet Conversion O2	YES	-
47.0	Dry to Wet Conversion NO	NO	-
48.0	Dry to Wet Conversion NO2	NO	-
49.0	Dry to Wet Conversion THC	NO	-
50.0	Dry to Wet Conversion CH4	NO	-
51.0	Dry to Wet Conversion O2	NO	-
52.0	CO2	IFILE1:TM'GPiS_CO2	%
53.0	CO2 TS	-8.80000	s
54.0	OS	IFILE1:TM'GPiS_O2	%
55.0	O2 TS	-9.30000	s
56.0	CO	IFILE1:TM'GPiS_CO	ppm
57.0	CO TS	-8.80000	s
58.0	NO	IFILE1:TM'GPiS_NO	ppm
59.0	NO TS	-7.00000	s
60.0	NO2	IFILE1:TM'GPiS_NO2	ppm

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M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Jetta /
Engine: Gasoline / 1.4L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
61.0	NO2 TS	-7.00000	s
62.0	THC	IFILE1:TM'FIDiS_THC_C1	ppm
63.0	THC TS	0.00000	s
64.0	CH4	IFILE1:TM'FIDiS_CH4_C1	ppm
65.0	CH4 TS	0.00000	s
66.0	GAS_PEMS_Ethane_Efficiency	IFILE1:MOVE_AVL4925'GP_Et -	
67.0	GAS_PEMS_Methane_Efficiency	IFILE1:MOVE_AVL4925'GP_M -	
68.0	GAS_PEMS_Methane_Response	IFILE1:MOVE_AVL4925'GP_M -	
69.0	Zero Signal	IFILE1:TM'GPiS_STATE	0/1
70.0	Zero Signal TS	-7.00000	s
71.0	Zero Signal_FIDiS	IFILE1:TM'FIDiS_STATE	0/1
72.0	Zero Signal_FIDiS TS		s
73.0	Species Input Type	4.00000	-
74.0	GASPEMS=AVL493	NO	-
75.0	GASPEMS=AVL493_iX	NO	-
76.0	GASPEMS=AVL492	YES	-
77.0	GASPEMS=AVL4925	YES	-
78.0	PM: Type	4.00000	1=GFB+HC, 2=GFB, 3=PM=S
79.0	Filter ID from IFile	NO	-
80.0	Lab ID from IFile	NO	-
81.0	PM Filter: ID	N/A	ID
82.0	PM Filter: Lab	N/A	Name/ID
83.0	PM Filter: Weight before Test	N/A	mg
84.0	PM Filter: Weight after Test	N/A	mg
85.0	PM (HC Corr): Max. Exhaust Flow	N/A	scfm
86.0	Soot		mg/m3
87.0	Soot TS	-5.00000	s
88.0	Soot Sensor		mg/m3
89.0	Soot Sensor TS		s
90.0	PM Filter: Filter Flow Rate		l/min

#	Text	Value	Unit
-	----	----	----
91.0	PM Filter: Filter Flow Rate TS	-5.00000	s
92.0	PM Filter: Filter Dilution Ratio		-
93.0	PM Filter: Filter Dilution Ratio TS	-5.00000	s
94.0	PM Filter: Filter Trigger		-
95.0	PM Filter: Filter Trigger TS	-5.00000	s
96.0	PMPEMS=AVL494	YES	-
97.0	PMPEMS_AVL494_PROP_DIL	NO	-
98.0	PM dilution ratio min		-
99.0	PM_MaxExhaustFlowRate		-
100.0	PM_ExhaustFlow_Thresh		-
101.0	PM_total_flow_val		-
102.0	PM_total_flow_val_TS		-
103.0	PM_exh_mass_flow		-
104.0	PM_exh_mass_flow_TS		-
105.0	PN		#/cm3
106.0	TimeShift_PN		s
107.0	PN_STATE		-
108.0	PN TS STATE		s
109.0	PNPEMS_AVL496	NO	-
110.0	PN_CorrFactor	1.00000	
111.0	Time Alignment	1.00000	-
112.0	Time Alignment Dataset 1	N/A	0/1
113.0	Time Alignment Dataset 2	N/A	0/1
114.0	Time Alignment Thresh 1	N/A	-
115.0	Time Alignment Thresh 2	N/A	-
116.0			
117.0			
118.0			
119.0			
120.0			

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Vehicle: 2017 VW Jetta /
Engine: Gasoline / 1.4L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
121.0			
122.0	Trigger		0/1
123.0	Trigger TS		s
124.0	FTIR_NAME_1		-
125.0	FTIR_MW_1		-
126.0	FTIR_CHANNEL_1		-
127.0	FTIR_CHANNEL_TS_1		-
128.0	FTIR_CHANNEL_DRY_1	NO	-
129.0	FTIR_NAME_2		-
130.0	FTIR_MW_2		-
131.0	FTIR_CHANNEL_2		-
132.0	FTIR_CHANNEL_TS_2		-
133.0	FTIR_CHANNEL_DRY_2	NO	-
134.0	FTIR_NAME_3		-
135.0	FTIR_MW_3		-
136.0	FTIR_CHANNEL_3		-
137.0	FTIR_CHANNEL_TS_3		-
138.0	FTIR_CHANNEL_DRY_3	NO	-
139.0	FTIR_NAME_4		-
140.0	FTIR_MW_4		-
141.0	FTIR_CHANNEL_4		-
142.0	FTIR_CHANNEL_TS_4		-
143.0	FTIR_CHANNEL_DRY_4	NO	-
144.0	FTIR_NAME_5		-
145.0	FTIR_MW_5		-
146.0	FTIR_CHANNEL_5		-
147.0	FTIR_CHANNEL_TS_5		-
148.0	FTIR_CHANNEL_DRY_5	NO	-
149.0	FTIR_NAME_6		-
150.0	FTIR_MW_6		-

#	Text	Value	Unit
-	----	----	----
151.0	FTIR_CHANNEL_6		-
152.0	FTIR_CHANNEL_TS_6		-
153.0	FTIR_CHANNEL_DRY_6	NO	-
154.0	FTIR_NAME_7		-
155.0	FTIR_MW_7		-
156.0	FTIR_CHANNEL_7		-
157.0	FTIR_CHANNEL_TS_7		-
158.0	FTIR_CHANNEL_DRY_7	NO	-
159.0	FTIR_NAME_8		-
160.0	FTIR_MW_8		-
161.0	FTIR_CHANNEL_8		-
162.0	FTIR_CHANNEL_TS_8		-
163.0	FTIR_CHANNEL_DRY_8	NO	-
164.0	FTIR_NAME_9		-
165.0	FTIR_MW_9		-
166.0	FTIR_CHANNEL_9		-
167.0	FTIR_CHANNEL_TS_9		-
168.0	FTIR_CHANNEL_DRY_9	NO	-
169.0	FTIR_NAME_10		-
170.0	FTIR_MW_10		-
171.0	FTIR_CHANNEL_10		-
172.0	FTIR_CHANNEL_TS_10		-
173.0	FTIR_CHANNEL_DRY_10	NO	-
174.0	FTIR_NAME_11		-
175.0	FTIR_MW_11		-
176.0	FTIR_CHANNEL_11		-
177.0	FTIR_CHANNEL_TS_11		-
178.0	FTIR_CHANNEL_DRY_11	NO	-
179.0	FTIR_NAME_12		-
180.0	FTIR_MW_12		-

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M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Jetta /
Engine: Gasoline / 1.4L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
181.0	FTIR_CHANNEL_12	-	-
182.0	FTIR_CHANNEL_TS_12	-	-
183.0	FTIR_CHANNEL_DRY_12	NO	-
184.0	FTIR_NAME_13	-	-
185.0	FTIR_MW_13	-	-
186.0	FTIR_CHANNEL_13	-	-
187.0	FTIR_CHANNEL_TS_13	-	-
188.0	FTIR_CHANNEL_DRY_13	NO	-
189.0	FTIR_NAME_14	-	-
190.0	FTIR_MW_14	-	-
191.0	FTIR_CHANNEL_14	-	-
192.0	FTIR_CHANNEL_TS_14	-	-
193.0	FTIR_CHANNEL_DRY_14	NO	-
194.0	FTIR_NAME_15	-	-
195.0	FTIR_MW_15	-	-
196.0	FTIR_CHANNEL_15	-	-
197.0	FTIR_CHANNEL_TS_15	-	-
198.0	FTIR_CHANNEL_DRY_15	NO	-
199.0	FTIR_NAME_16	-	-
200.0	FTIR_MW_16	-	-
201.0	Vehicle Type	2017 VW Jetta	-
202.0	Vehicle Info	-	-
203.0	Engine Type	Gasoline	-
204.0	Engine Info	1.4L	-
205.0	Engine Torque	-	Nm
206.0	Curb Idle Load	-	%
207.0	Idle Speed	-	rpm
208.0	HYBRID_OVC_REF_CO2_gkm	-	g/km
209.0	Engine Concept	1.00000	-
210.0	Alpha	1.93000	-

#	Text	Value	Unit
-	----	----	----
211.0	Beta	1.00000	-
212.0	Gamma	0.00000	-
213.0	Delta	0.00000	-
214.0	Epsilon	0.03200	-
215.0	X_C	83.00000	-
216.0	X_H	13.30000	-
217.0	X_N	0.00000	-
218.0	X_O	3.50000	-
219.0	X_S	0.00000	-
220.0	Fuel_Density	747.50000	-
221.0	rho_exhaust	1.29310	-
222.0	U_CO2	1.51800	-
223.0	U_CO	0.96600	-
224.0	U_NO	1.58700	-
225.0	U_NO2	1.58700	-
226.0	U_NOx	1.58700	-
227.0	U_HC	0.49900	-
228.0	U_NMHC	0.47100	-
229.0	U_CH4	0.55300	-
230.0	U_O2	1.10400	-
231.0	Fuel Type	2.00000	-
232.0	exhaust mass flow type (YES/NO)	YES	-
233.0	Distance Calculation Type	1.00000	-
234.0	Velocity Statistics Calculation Type	2.00000	-
235.0	RDE vehicle class	1.00000	-
236.0	TM_CITY0	-	s
237.0	TM_CITY1	-	s
238.0	TM_RURAL0	-	s
239.0	TM_RURAL1	-	s
240.0	TM_RURAL2_0	-	s

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M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Jetta /
Engine: Gasoline / 1.4L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
241.0	TM_RURAL2_1		s
242.0	Second Rural Part for Time Marks (NO		-
243.0	TM_MW0		s
244.0	TM_MW1		s
245.0	VELOCITY_LIMIT_STOP	2.00000	km/h
246.0	VELOCITY_LIMIT_URBAN	50.00000	km/h
247.0	VELOCITY_LIMIT_RURAL	75.00000	km/h
248.0	Intake Manifold Pressure Type	1.00000	-
249.0	Velocity	IFILE1:TM'OBD_Vehicle_Spee	km/h
250.0	Velocity TS	1.30000	s
251.0	Velocity FACTOR	1.00000	-
252.0	Coolant Temperature	IFILE1:TM'OBD_Engine_Coola	degC
253.0	Coolant Temperature TS	1.30000	s
254.0	Oil Temperature		degC
255.0	Oil Temperature TS	1.30000	s
256.0	Intake Manifold Temperature		degC
257.0	Intake Manifold Temp TS	1.30000	s
258.0	Intake Manifold Pressure	IFILE1:TM'OBD_Intake_manifo	kPa
259.0	Intake Manifold Pressure TS	1.30000	s
260.0	Throttle Position		%
261.0	Throttle TS	1.30000	s
262.0	TYP_IDLE_MASS_FLOW		kg/h
263.0	Torque Type	1.00000	-
264.0	Speed	IFILE1:TM'OBD_Engine_RPM	rpm
265.0	Speed TS	1.30000	s
266.0	Torque		Nm
267.0	Torque TS	1.30000	s
268.0	Friction Torque	N/A	Nm
269.0	Friction Torque TS	N/A	s
270.0	Reference Torque	N/A	Nm

#	Text	Value	Unit
-	----	----	----
271.0	Reference Torque TS	N/A	s
272.0	k_VELINE		-
273.0	D_VELINE		-
274.0	Fuel Flow Type	2.00000	-
275.0	Air Flow Type	1.00000	-
276.0	Fuel Rate		various
277.0	Air Rate		various
278.0	Fuel Rate TS	1.30000	s
279.0	No_Cylinders		-
280.0	Air Rate TS	1.30000	s
281.0	FTIR_CHANNEL_32		-
282.0	FTIR_CHANNEL_TS_32		-
283.0	FTIR_CHANNEL_DRY_32	NO	-
284.0	FTIR_NAME_33		-
285.0	FTIR_MW_33		-
286.0	FTIR_CHANNEL_33		-
287.0	FTIR_CHANNEL_TS_33		-
288.0	FTIR_CHANNEL_DRY_33	NO	-
289.0	FTIR_NAME_34		-
290.0	FTIR_MW_34		-
291.0	FTIR_CHANNEL_34		-
292.0	FTIR_CHANNEL_TS_34		-
293.0	FTIR_CHANNEL_DRY_34	NO	-
294.0	FTIR_NAME_35		-
295.0	FTIR_MW_35		-
296.0	FTIR_CHANNEL_35		-
297.0	FTIR_CHANNEL_TS_35		-
298.0	FTIR_CHANNEL_DRY_35	NO	-
299.0	FTIR_NAME_36		-
300.0	FTIR_MW_36		-

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Jetta /
Engine: Gasoline / 1.4L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
301.0	FTIR_CHANNEL_36		-
302.0	FTIR_CHANNEL_TS_36		-
303.0	FTIR_CHANNEL_DRY_36	NO	-
304.0	FTIR_NAME_37		-
305.0	FTIR_MW_37		-
306.0	FTIR_CHANNEL_37		-
307.0	FTIR_CHANNEL_TS_37		-
308.0	FTIR_CHANNEL_DRY_37	NO	-
309.0	FTIR_NAME_38		-
310.0	FTIR_MW_38		-
311.0	FTIR_CHANNEL_38		-
312.0	FTIR_CHANNEL_TS_38		-
313.0	FTIR_CHANNEL_DRY_38	NO	-
314.0	FTIR_NAME_39		-
315.0	FTIR_MW_39		-
316.0	FTIR_CHANNEL_39		-
317.0	FTIR_CHANNEL_TS_39		-
318.0	FTIR_CHANNEL_DRY_39	NO	-
319.0	FTIR_NAME_40		-
320.0	FTIR_MW_40		-
321.0	FTIR_CHANNEL_40		-
322.0	FTIR_CHANNEL_TS_40		-
323.0	FTIR_CHANNEL_DRY_40	NO	-
324.0	Legislation Type (1=HDIUT 2=EU H	4.00000	-
325.0	WholeTest_NOx_corr	5.00000	-
326.0	WholeTest_Hum_corr	2.00000	-
327.0	CD_Distance	0.00000	km
328.0	CD_NOx	0.00000	mg/km
329.0	CD_CO	0.00000	mg/km
330.0	CD_CO2	0.00000	g/km

#	Text	Value	Unit
-	----	----	----
331.0	CD_NMHC	0.00000	mg/km
332.0	CD_CH4	0.00000	mg/km
333.0	CD_THC	0.00000	mg/km
334.0	CD_PN		#/km
335.0	WLTC_LOW_SPEED_gkm		g/km
336.0	WLTC_LOW_SPEED_FAC	1.20000	-
337.0	WLTC_MEDIUM_SPEED_gkm		g/km
338.0	WLTC_HIGH_SPEED_gkm		g/km
339.0	WLTC_HIGH_SPEED_FAC	1.10000	-
340.0	WLTC_EXTRA_HIGH_SPEED_gkm		g/km
341.0	WLTC_EXTRA_HIGH_SPEED_FA	1.05000	-
342.0	TOL_NORMAL_DRIVING	25.00000	%
343.0	TOL_SEVERE_DRIVING	50.00000	%
344.0	Increase Tolerance Nomral Driving	NO	-
345.0	Bin1_min		km/h
346.0	Bin2_min		km/h
347.0	Bin3_min		km/h
348.0	Bin1_max		km/h
349.0	Bin2_max		km/h
350.0	Bin3_max		km/h
351.0	Clear_R0	125.40000	N
352.0	Clear_R1	0.29300	Nh/km
353.0	Clear_R2	0.02795	N*(h/km) ²
354.0	Clear_SMK	1470.00000	kg
355.0	Clear_Rated_Power	140.00000	kW
356.0	Clear_Ref_Velocity	70.00000	km/h
357.0	Clear_Ref_Acc	0.45000	m/s ²
358.0	Clear_Smooth	3.00000	s
359.0	EXTC_From_High_Temp	30.00000	degC
360.0	EXTC_To_High_Temp	35.00000	degC

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Jetta /
Engine: Gasoline / 1.4L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
361.0	EXTC_From_Low_Temp	-7.00000	degC
362.0	EXTC_To_Low_Temp	0.00000	degC
363.0	Euro 6d or Euro 6d temp	NO	-
364.0	EXTC_From_Altitude	700.00000	m
365.0	EXTC_To_Altitude	1300.00000	m
366.0	EXTC_CORR_FAC	1.60000	
367.0	weight cold start (YES/NO)	NO	-
368.0	precon and soak done (YES/NO)	NO	-
369.0	PATH_PRECON_FILE		
370.0	filter velocity (YES/NO)	NO	-
371.0	filter velocity auto(YES/NO)	NO	-
372.0	Ki_CO		
373.0	Ki_CO2		
374.0	Ki_NOx		
375.0	Ki_FACTOR_CO2 (YES/NO)	NO	-
376.0	Ki_OFFSET_CO2 (YES/NO)	NO	-
377.0	Ki_FACTOR_CO (YES/NO)	NO	-
378.0	Ki_OFFSET_CO (YES/NO)	NO	-
379.0	Ki_FACTOR_NOx (YES/NO)	NO	-
380.0	Ki_OFFSET_NOx (YES/NO)	NO	-
381.0	Ki_OFF (YES/NO)	NO	-
382.0	HD legislations	1.00000	-
383.0	RDE legislations	1.00000	-
384.0	Submission Documents (YES/NO)	NO	-
385.0	General Setup Parameters Text	Highway	-
386.0	Legislation Setup Parameters Text	Highway	-
387.0	Trip Info		-
388.0	IN_TIME_REF		-
389.0	Sub-Trip Start: Auto	YES	-
390.0	Sub-Trip Start: Seconds	N/A	s

#	Text	Value	Unit
-	----	----	----
391.0	Sub-Trip End: Auto	YES	-
392.0	Sub-Trip End: Seconds	N/A	s
393.0	Unit System	2.00000	-
394.0	Calculate: PM Emissions	NO	-
395.0	Calculate: PN Emissions	NO	-
396.0	Output: Summary	YES	-
397.0	Output: Emissions	YES	-
398.0	Output: Raw Data	YES	-
399.0	Output: Zero Span	YES	-
400.0	Output: Data Consistency	NO	-
401.0	Output: Window Plots	YES	-
402.0	Fuel Rate ECU vs. EU ISO16183	y = 10000000000.0000 x - 0.000 R ² =10000000000.000 SEE=	
403.0	PEMS post processing version	Rel_10_B192	
404.0	Concerto version	480.00000	
405.0	Concerto build	215.00000	
406.0	USERNAME	EFR	

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Jetta /
Engine: Gasoline / 1.4L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Mountain
Page: Trip Summary

Start Date: 09/06/2017
Start Time: 07:30:18.0



Trip Duration	3680.00	s	ave THC	9.75460	ppm	BS CO2	n/a	g/hphr
Trip Duration (a)	3680.00	s	ave NMHC	6.62092	ppm	BS CO	n/a	g/hphr
Trip Distance	29.62	mi	ave CH4	2.84880	ppm	BS THC	n/a	g/hphr
Trip Distance (a)	29.62	mi	ave CO	86.22791	ppm	BS NMHC	n/a	g/hphr
Trip Fuel Cons. (b)	n/a	kg	ave CO2	10.59394	%	BS CH4	n/a	g/hphr
Trip Fuel Cons. (ab)	n/a	kg	ave NOx	5.92607	ppm	BS NO (d)	n/a	g/hphr
Trip Fuel Cons. EU (ac)	2.74	kg	ave PM	n/a	mg/m3	BS NO2	n/a	g/hphr
Trip Fuel Cons. US (ac)	2.71	kg	ave Soot meas	n/a	mg/m3	BS NOx	n/a	g/hphr
Trip Fuel Cons. Volume (b)	n/a	gall	ave Soot	n/a	mg/m3	BS Soot	n/a	g/hphr
Trip Fuel Cons. Volume (ab)	n/a	gall	ave PN	n/a	#/cm3	BS Soot meas	n/a	g/hphr
Trip Fuel Cons. Volume EU (ac)	0.97	gall	tot THC	0.31925	g	BS PM	n/a	g/hphr
Trip Fuel Cons. Volume US (ac)	0.96	gall	tot NMHC	0.22459	g	BS PN	n/a	#/hpr
Trip Fuel Economy (b)	n/a	mpg_US	tot CH4	0.10942	g	DS CO2	276.85230	g/mi
Trip Fuel Economy (ab)	n/a	mpg_US	tot CO	21.99681	g	DS CO	0.74256	g/mi
Trip Fuel Economy EU (ac)	30.60	mpg_US	tot CO2	8201.19555	g	DS THC	0.01078	g/mi
Trip Fuel Economy US (ac)	30.98	mpg_US	tot NO (d)	0.29289	g	DS NMHC	0.00758	g/mi
Trip Av. Eng. Speed	1579.14	rpm	tot NO2	0.01808	g	DS CH4	0.00369	g/mi
Trip Av. Torque	n/a	lbft	tot NOx	0.28395	g	DS NO (d)	0.00989	g/mi
Trip Av. Power	n/a	hp	tot Soot	n/a	g	DS NO2	0.00061	g/mi
Trip Work	n/a	hphr	tot Soot meas	n/a	g	DS NOx	0.00959	g/mi
Trip Exhaust Mass	43.98	kg	tot PM	n/a	g	DS Soot	n/a	g/mi
Trip Exhaust Mass EU (ac)	n/a	kg	tot PN	n/a	#	DS Soot meas	n/a	g/mi
Trip Exhaust Mass US (ac)	n/a	kg	PM measurement type	0.00000	-	DS PM	n/a	g/mi
Trip Av. Amb. Temperature	69.23	deg_F	PM correction type	1.00000	alpha(HC)	DS PN	n/a	#/mi
Trip Av. Humidity	76.66	%	tot Soot on PM filter (estim.)	n/a	mg	FS CO2	n/a	g/kg
Fuel Type	Petrol (E10)		Soot --> PM simple scaling factor	1.00000	-	FS CO	n/a	g/kg
			Soot --> PM alpha scaling factor	0.00000	-	FS THC	n/a	g/kg
			Trip Av. Veh. Speed	28.97902	mi/hr	FS NMHC	n/a	g/kg
			Trip Velocity Zero	13.12500	%	FS CH4	n/a	g/kg
			Trip Velocity Urban	49.83696	%	FS NO (d)	n/a	g/kg
			Trip Velocity Rural	30.76087	%	FS NO2	n/a	g/kg
			Trip Velocity Motorway	19.40217	%	FS NOx	n/a	g/kg
						FS Soot	n/a	g/kg
						FS Soot meas	n/a	g/kg
						FS PM	n/a	g/kg
						FS PN	n/a	#/kg

(a) GAS PEMS measurement state only, (b) based on fuel rate input (ECU, Fuel Meter), (c) calculated from carbon balance
(d) NO calculated using molecular weight of NO2

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Jetta /
Engine: Gasoline / 1.4L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Mountain

Page: Trip Summary Drift Corrected

Start Date: 09/06/2017

Start Time: 07:30:18.0

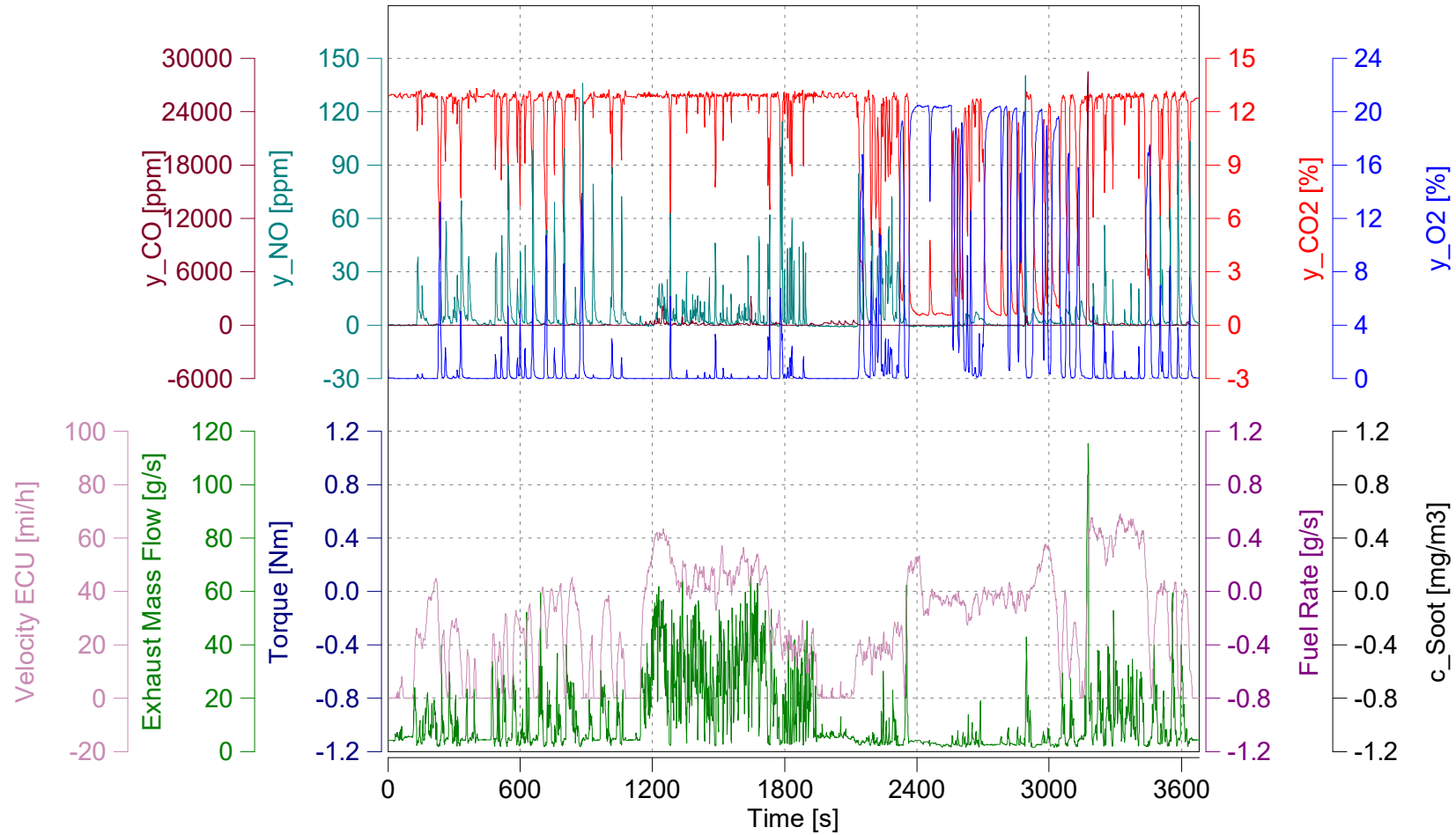


Trip Duration	3680.00	s	ave THC DC	13.12700	ppm	BS CO2 DC	n/a	g/hphr
Trip Duration (a)	3680.00	s	ave NMHC DC	10.18159	ppm	BS CO DC	n/a	g/hphr
Trip Distance	29.62	mi	ave CH4 DC	2.67764	ppm	BS THC DC	n/a	g/hphr
Trip Distance (a)	29.62	mi	ave CO DC	87.16720	ppm	BS NMHC DC	n/a	g/hphr
Trip Fuel Cons. (b)	n/a	kg	ave CO2 DC	10.59043	%	BS CH4 DC	n/a	g/hphr
Trip Fuel Cons. (ab)	n/a	kg	ave NOx DC	5.93365	ppm	BS NO DC (d)	n/a	g/hphr
Trip Fuel Cons. EU (ac)	2.74	kg	ave PM	n/a	mg/m3	BS NO2 DC	n/a	g/hphr
Trip Fuel Cons. US (ac)	2.71	kg	ave Soot meas	n/a	mg/m3	BS NOx DC	n/a	g/hphr
Trip Fuel Cons. Volume (b)	n/a	gall	ave Soot	n/a	mg/m3	BS Soot	n/a	g/hphr
Trip Fuel Cons. Volume (ab)	n/a	gall	ave PN DC	n/a	#/cm3	BS Soot meas	n/a	g/hphr
Trip Fuel Cons. Volume EU (ac)	0.97	gall	tot THC DC	0.42962	g	BS PM	n/a	g/hphr
Trip Fuel Cons. Volume US (ac)	0.96	gall	tot NMHC DC	0.32737	g	BS PN DC	n/a	#/hpr
Trip Fuel Economy (b)	n/a	mpg_US	tot CH4 DC	0.10724	g	DS CO2 DC	276.76054	g/mi
Trip Fuel Economy (ab)	n/a	mpg_US	tot CO DC	22.23643	g	DS CO DC	0.75065	g/mi
Trip Fuel Economy EU (ac)	30.60	mpg_US	tot CO2 DC	8198.47722	g	DS THC DC	0.01450	g/mi
Trip Fuel Economy US (ac)	30.98	mpg_US	tot NO DC (d)	0.29323	g	DS NMHC DC	0.01105	g/mi
Trip Av. Eng. Speed	1579.14	rpm	tot NO2 DC	0.01802	g	DS CH4 DC	0.00362	g/mi
Trip Av. Torque	n/a	lbft	tot NOx DC	0.28429	g	DS NO DC (d)	0.00990	g/mi
Trip Av. Power	n/a	hp	tot Soot	n/a	g	DS NO2 DC	0.00061	g/mi
Trip Work	n/a	hphr	tot Soot meas	n/a	g	DS NOx DC	0.00960	g/mi
Trip Exhaust Mass	43.98	kg	tot PM	n/a	g	DS Soot	n/a	g/mi
Trip Exhaust Mass EU (ac)	n/a	kg	tot PN DC	n/a	#	DS Soot meas	n/a	g/mi
Trip Exhaust Mass US (ac)	n/a	kg	PM measurement type	0.00000	-	DS PM	n/a	g/mi
Trip Av. Amb. Temperature	69.23	deg_F	PM correction type	1.00000	alpha(HC)	DS PN DC	n/a	#/mi
Trip Av. Humidity	76.66	%	tot Soot on PM filter (estim.)	n/a	mg	FS CO2 DC	n/a	g/kg
Fuel Type	Petrol (E10)		Soot --> PM simple scaling factor	1.00000	-	FS CO DC	n/a	g/kg
			Soot --> PM alpha scaling factor	0.00000	-	FS THC DC	n/a	g/kg
			Trip Av. Veh. Speed	28.97902	mi/hr	FS NMHC DC	n/a	g/kg
			Trip Velocity Zero	13.12500	%	FS CH4 DC	n/a	g/kg
			Trip Velocity Urban	49.83696	%	FS NO DC (d)	n/a	g/kg
			Trip Velocity Rural	30.76087	%	FS NO2 DC	n/a	g/kg
			Trip Velocity Motorway	19.40217	%	FS NOx DC	n/a	g/kg
						FS Soot	n/a	g/kg
						FS Soot meas	n/a	g/kg
						FS PM	n/a	g/kg
						FS PN DC	n/a	#/kg

(a) GAS PEMS measurement state only, (b) based on fuel rate input (ECU, Fuel Meter), (c) calculated from carbon balance
 (d) NO calculated using molecular weight of NO2

Concerto Version: 480 Build 215, Serial Number: 8468
 M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Jetta /
 Engine: Gasoline / 1.4L
 NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
 Dry / Wet Corr.: 2 - CFR40 §86.1342-90



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

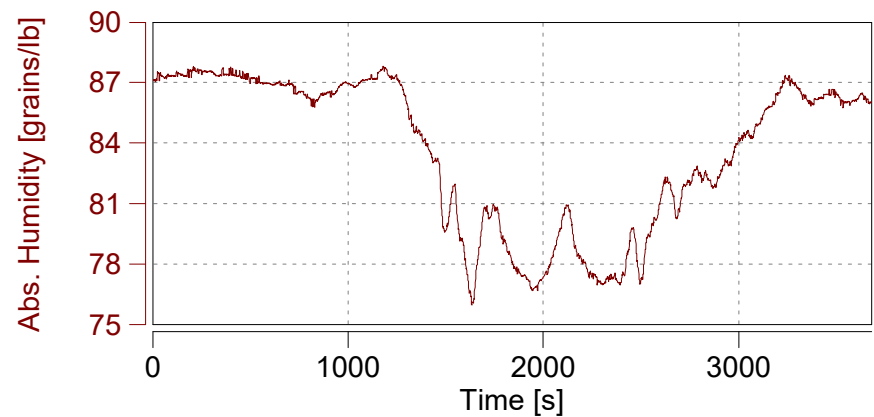
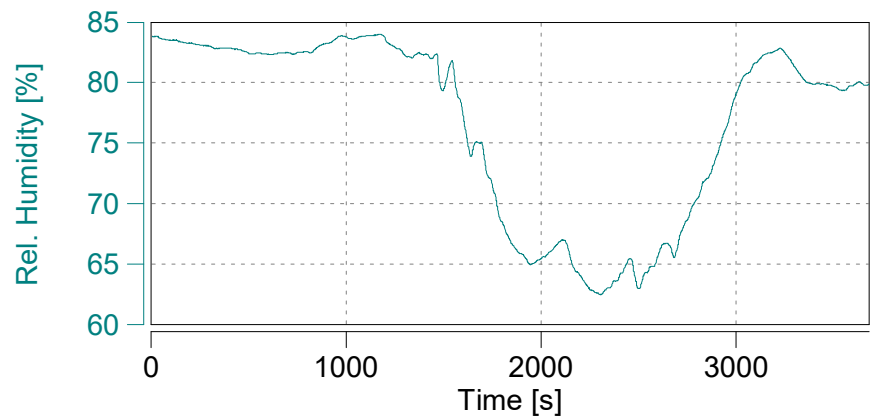
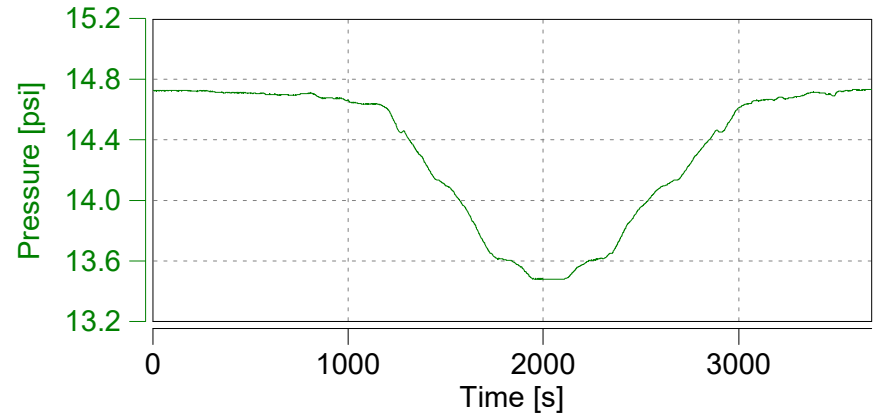
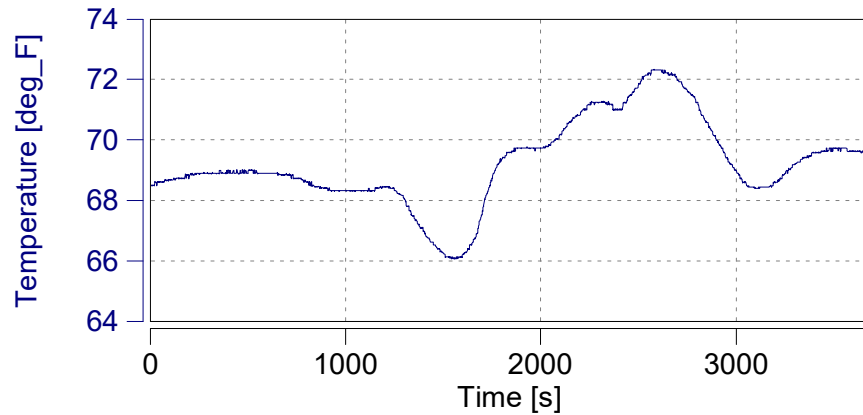
Vehicle: 2017 VW Jetta /
Engine: Gasoline / 1.4L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Mountain

Page: Ambient Conditions

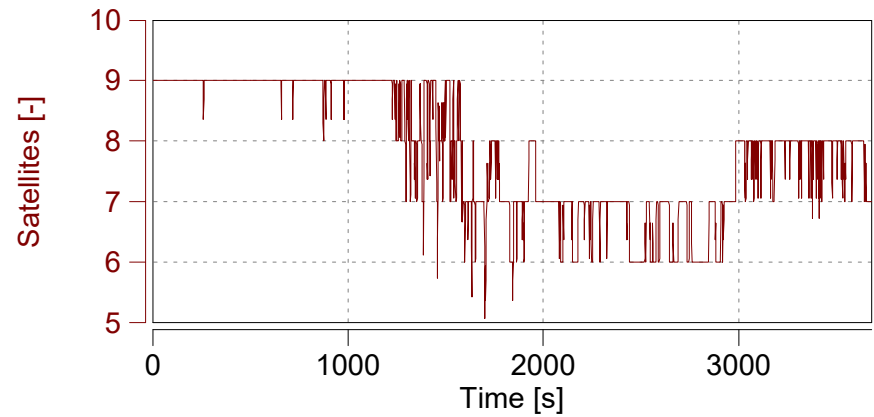
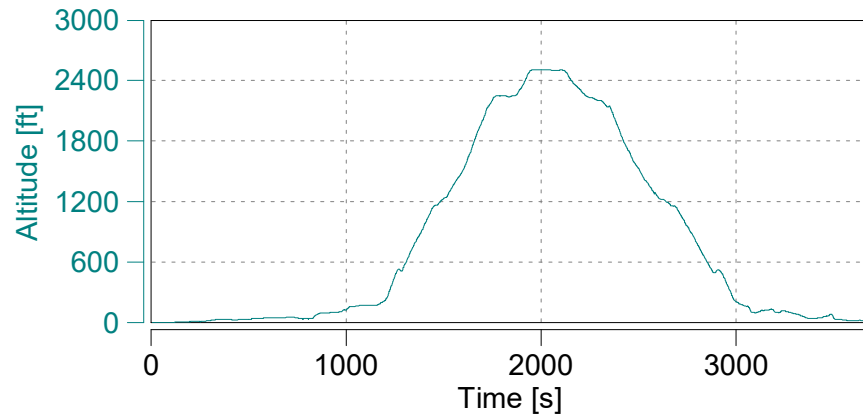
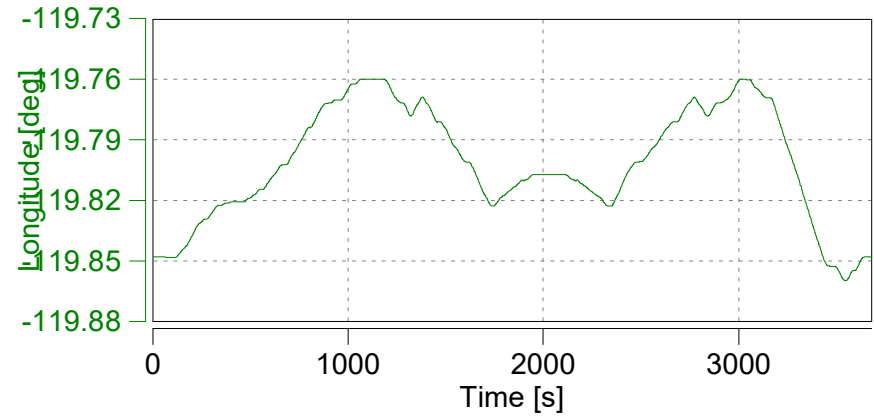
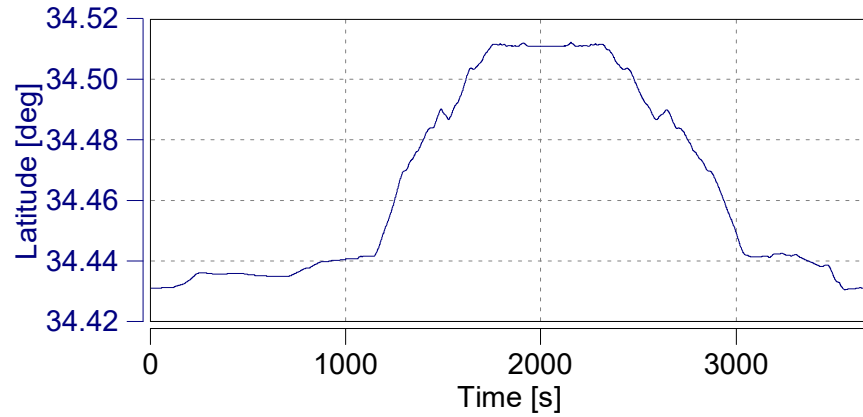
Start Date: 09/06/2017

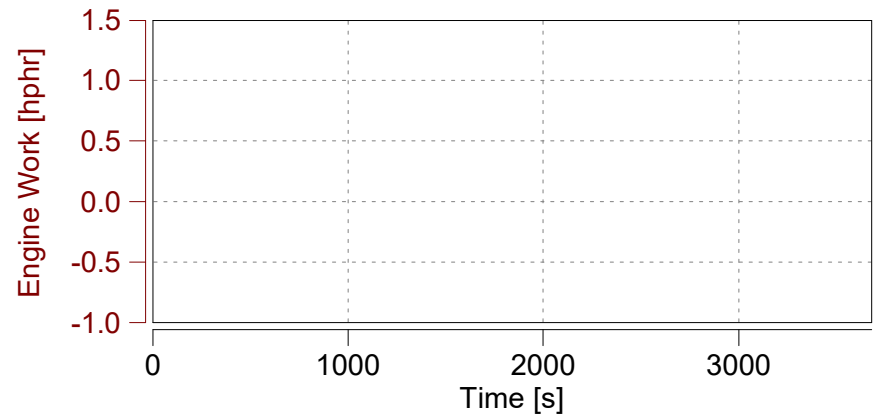
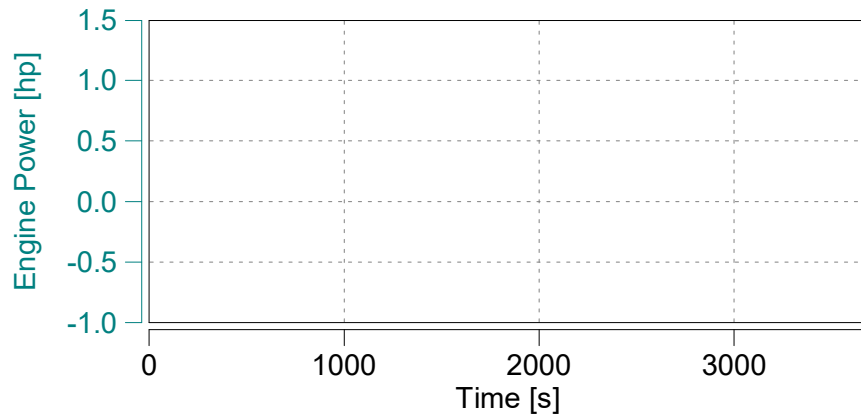
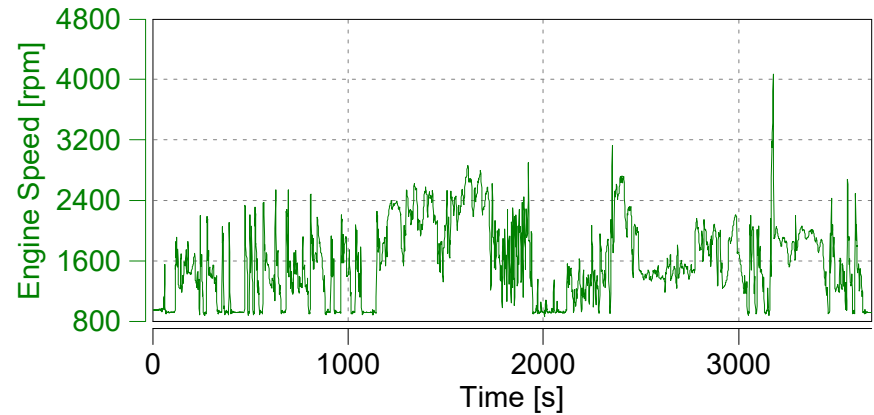
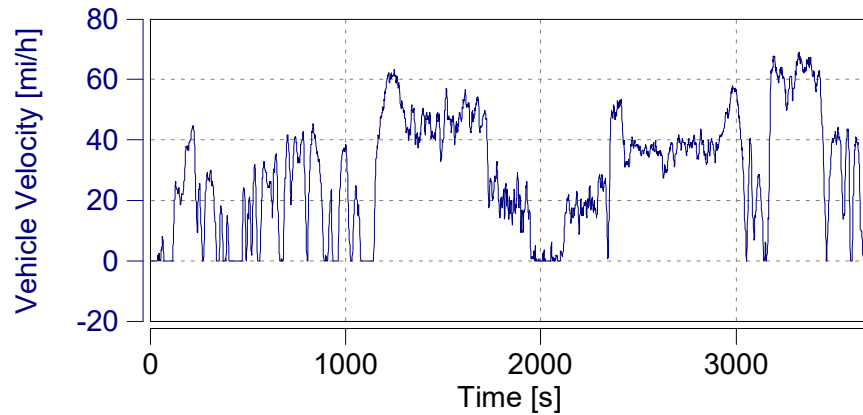
Start Time: 07:30:18.0

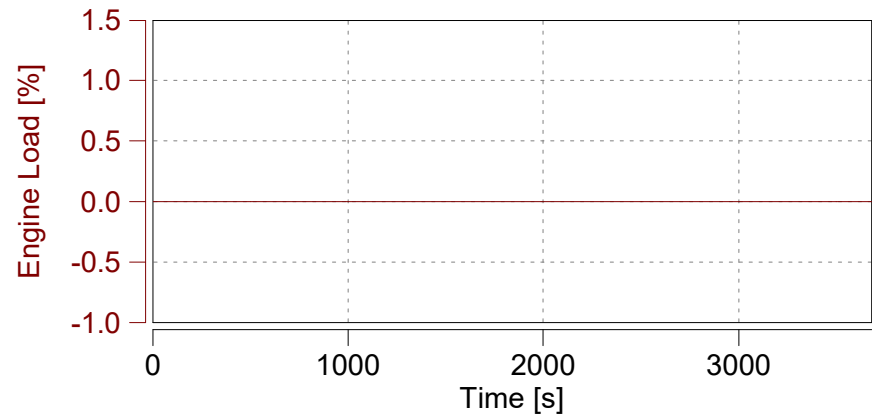
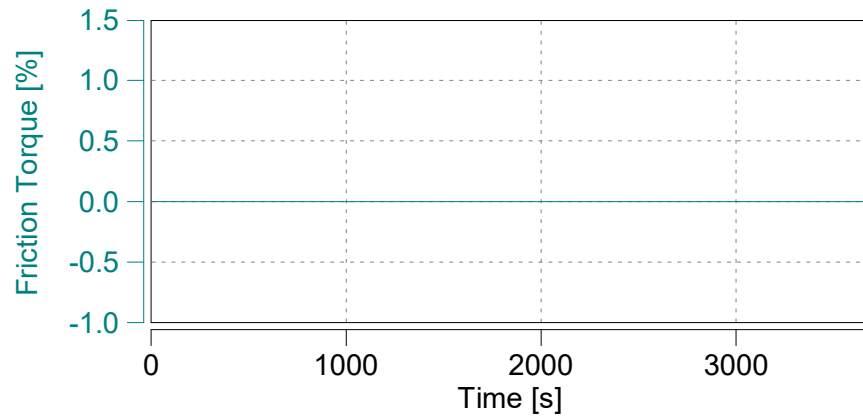
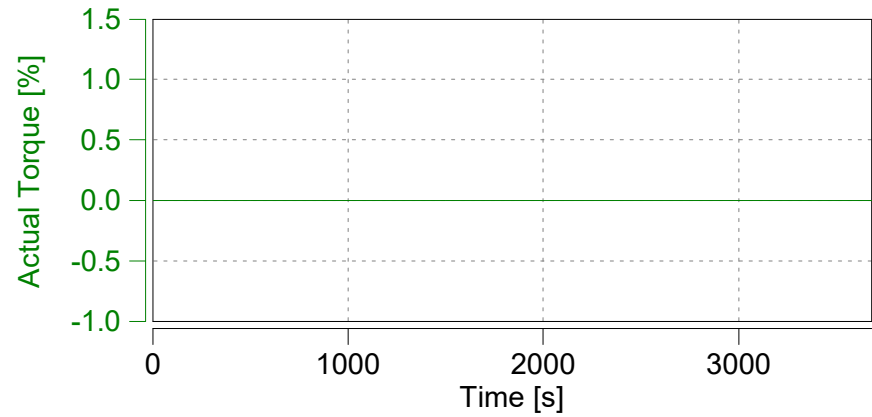
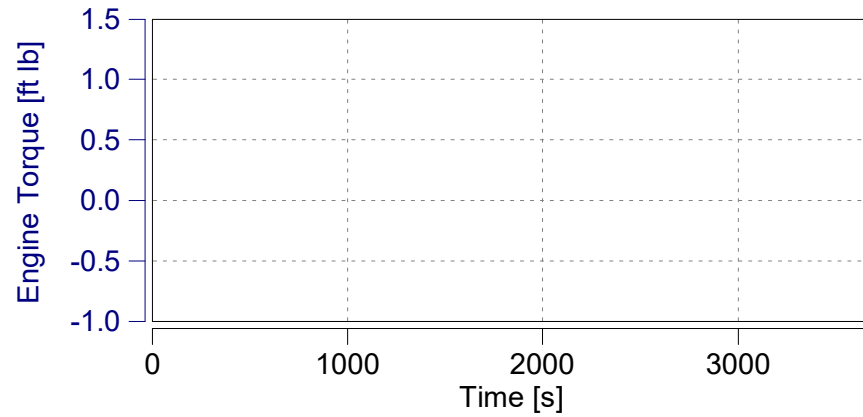


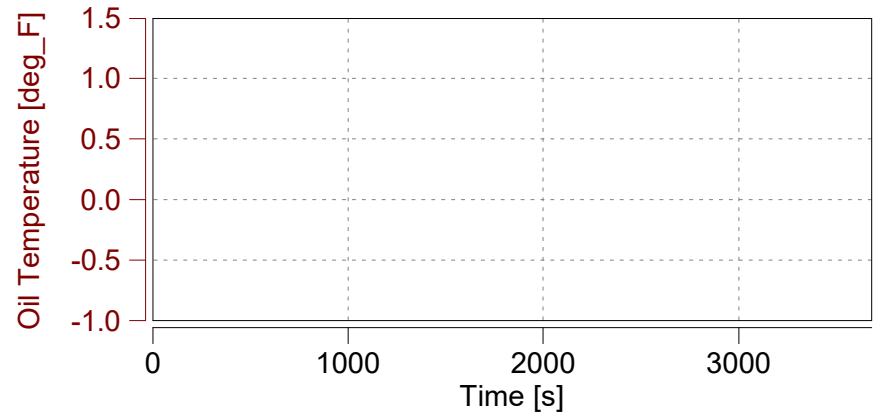
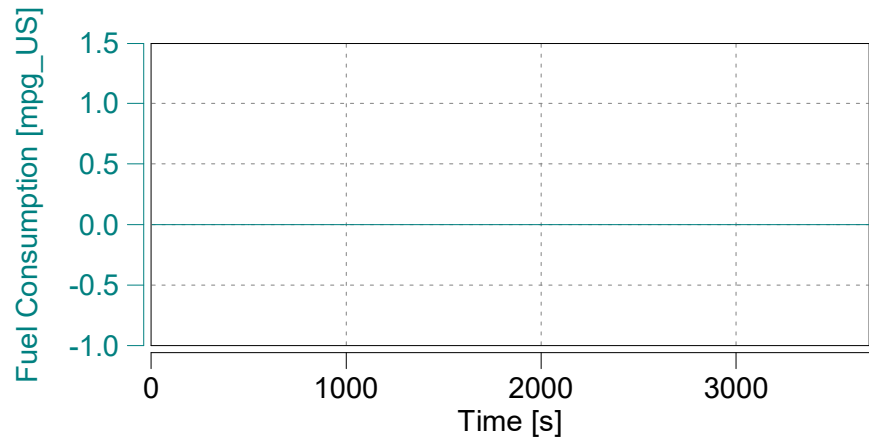
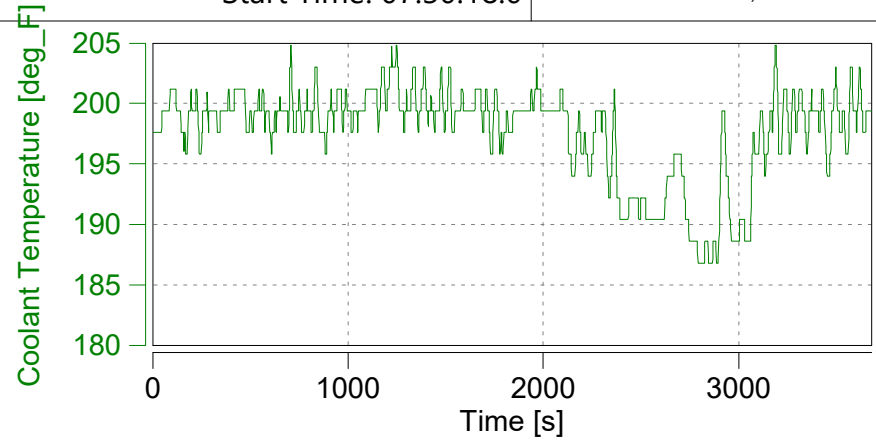
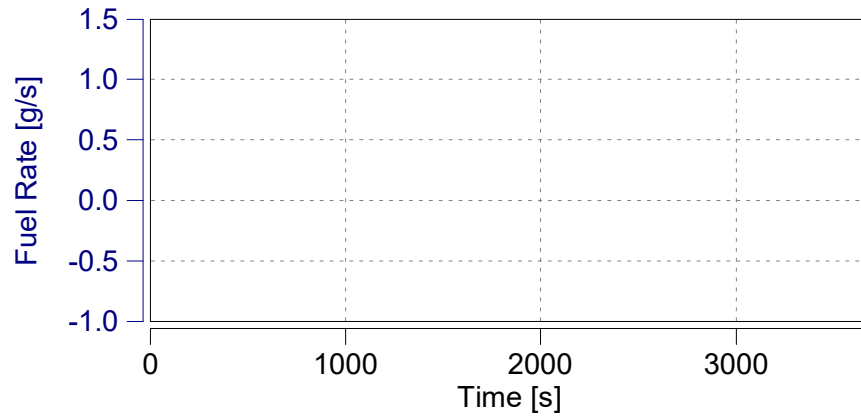
Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Jetta /
Engine: Gasoline / 1.4L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90







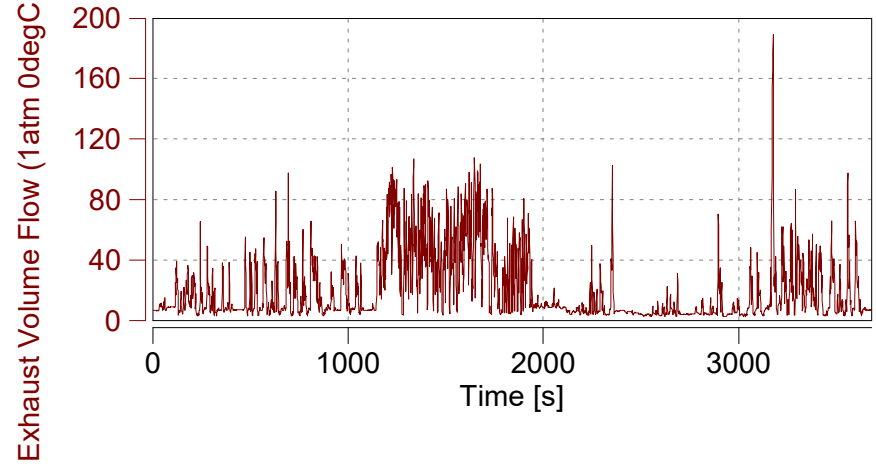
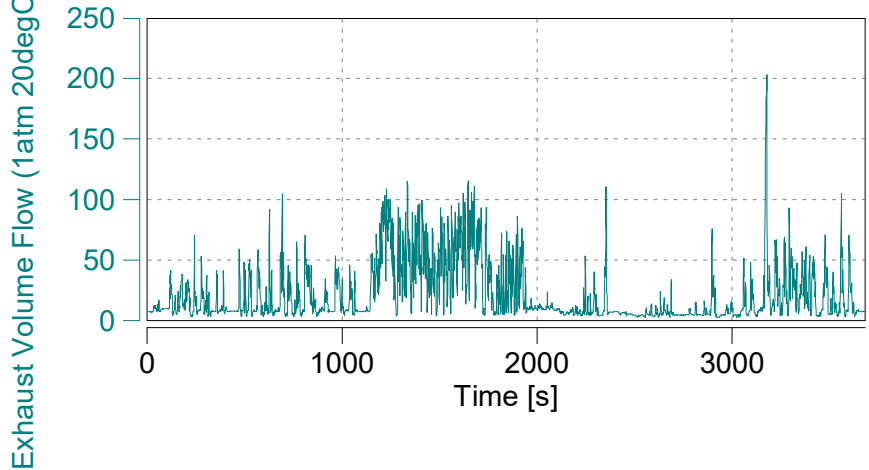
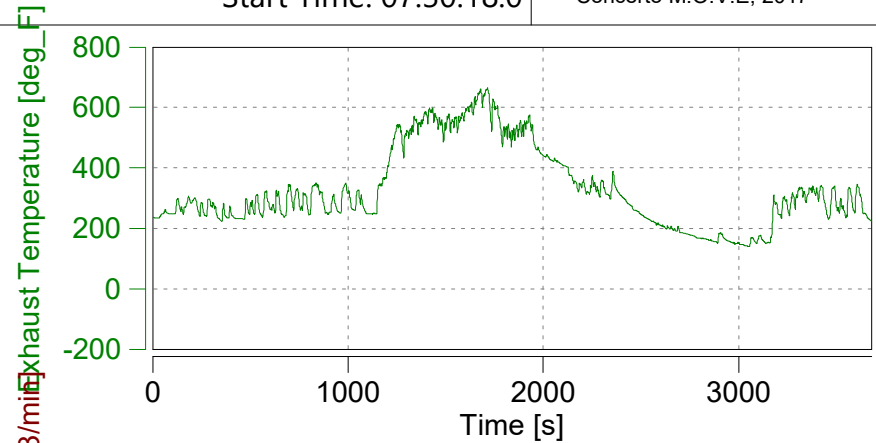
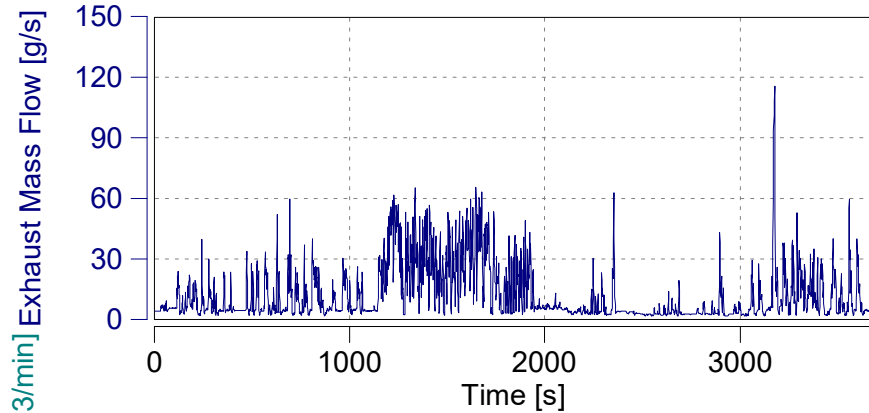


Case: Mountain

Page: Exhaust Flow (1)

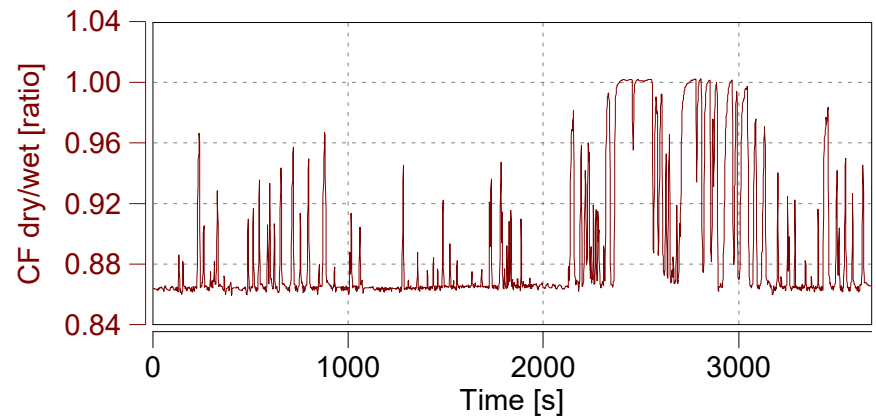
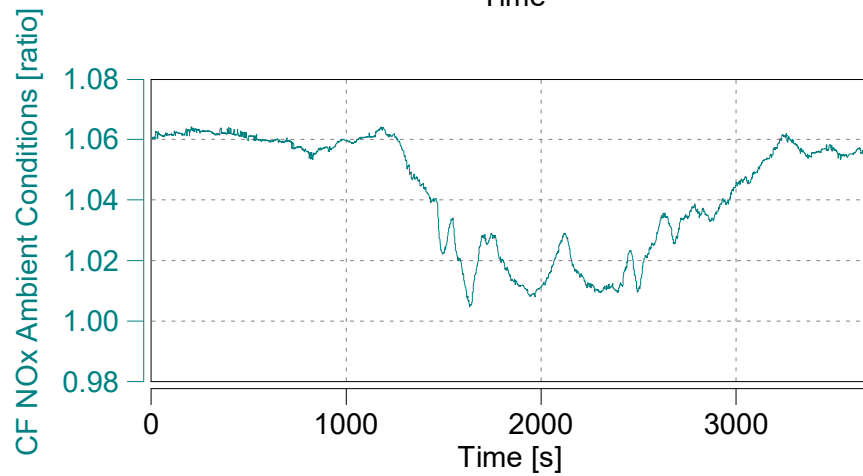
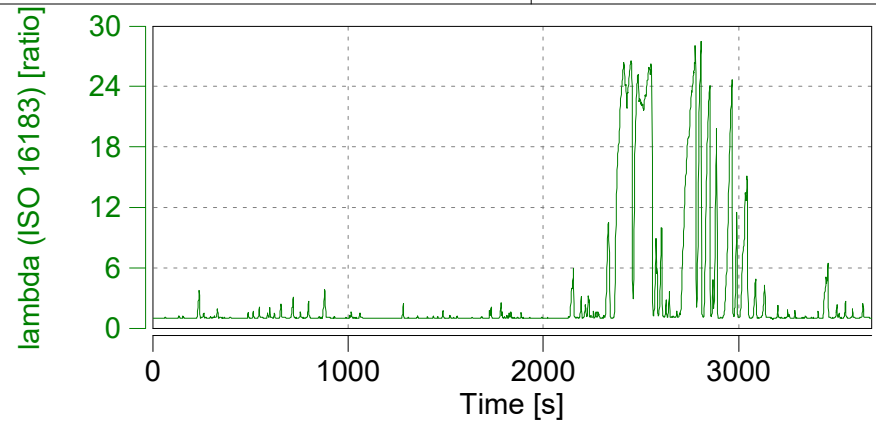
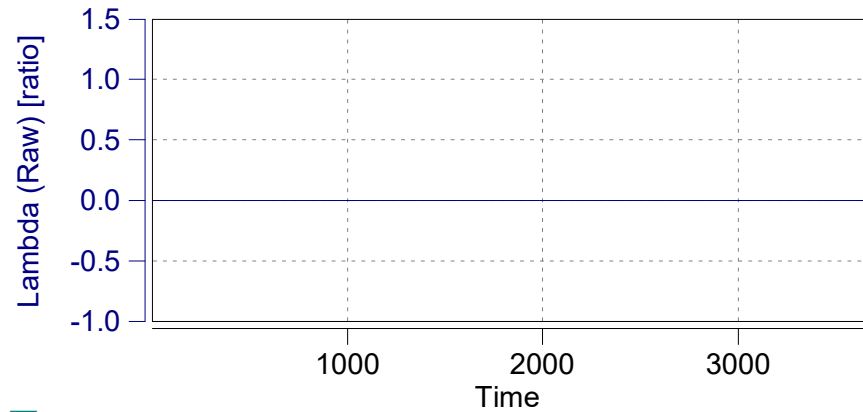
Start Date: 09/06/2017

Start Time: 07:30:18.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Jetta /
Engine: Gasoline / 1.4L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

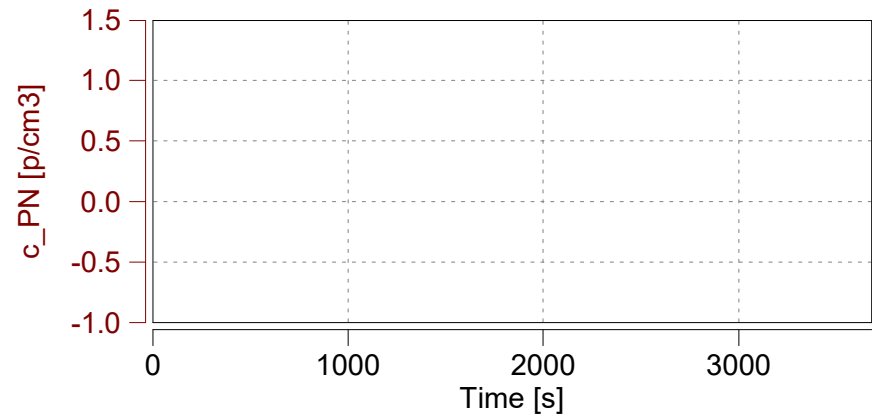
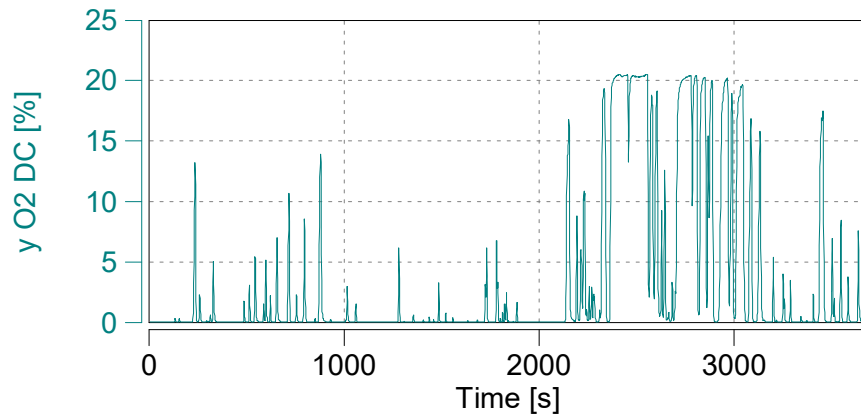
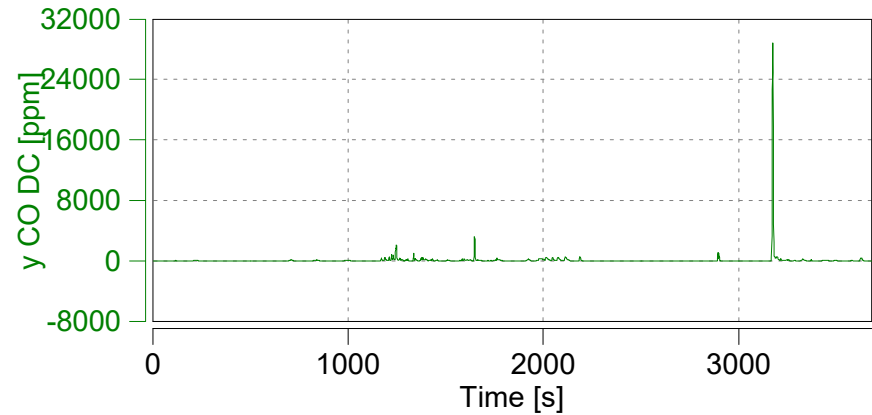
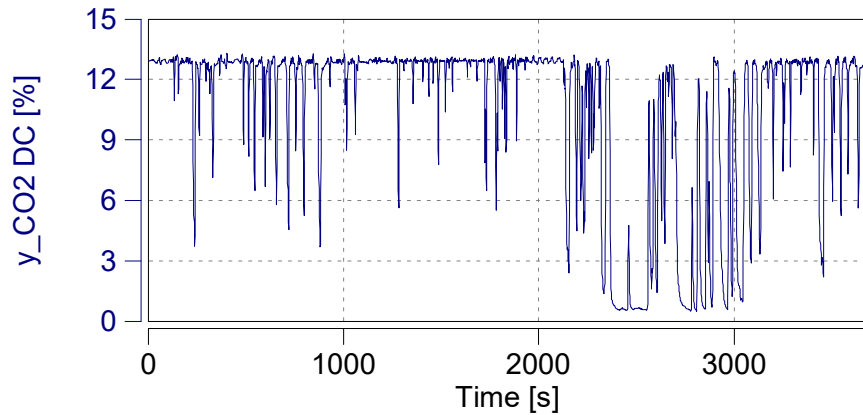


Case: Mountain

Page: Corrected Emissions (1)

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Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

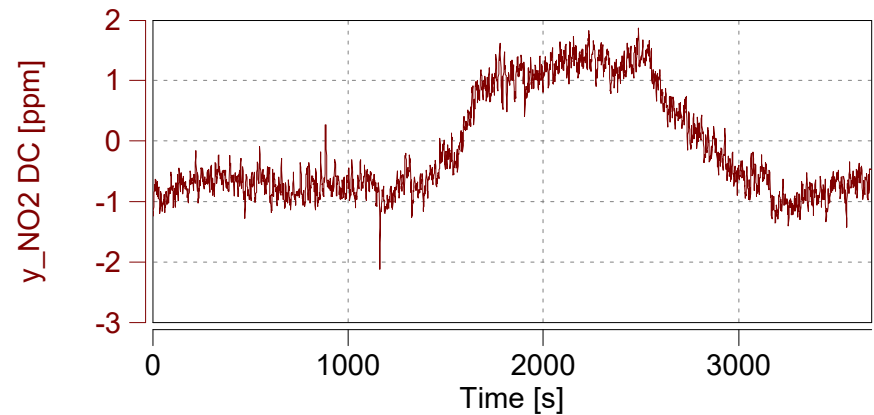
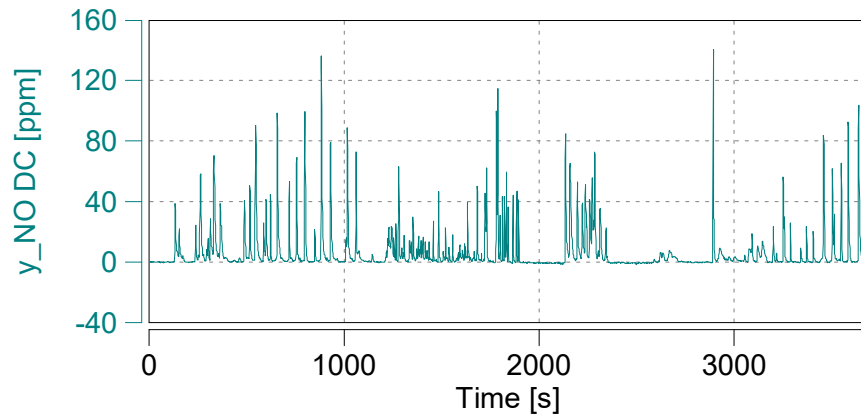
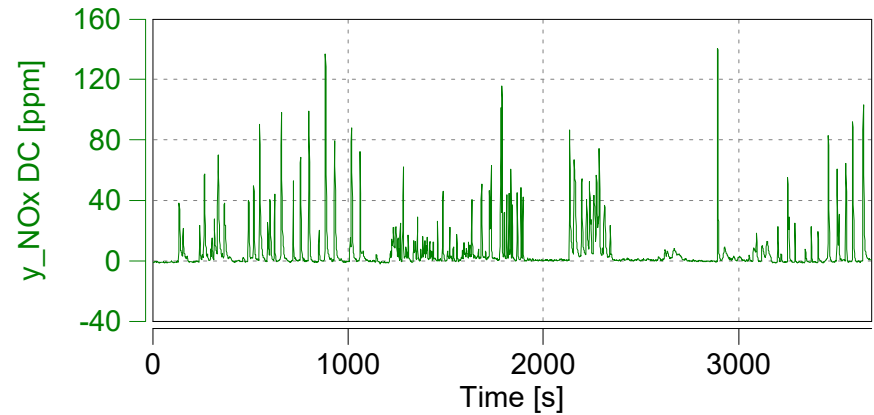
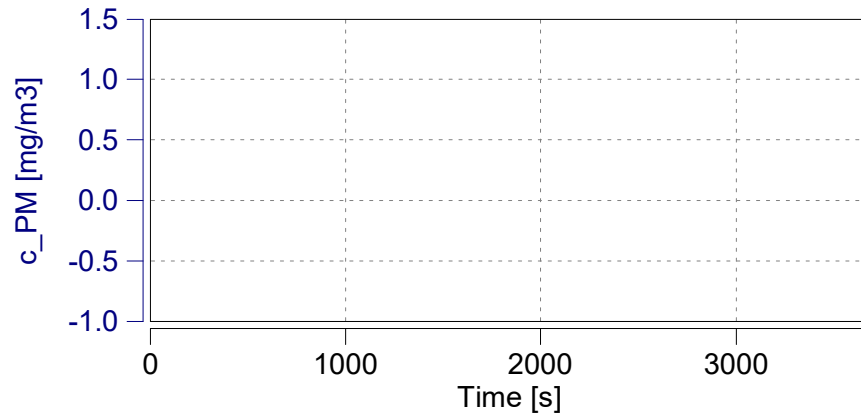
Vehicle: 2017 VW Jetta /
Engine: Gasoline / 1.4L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Mountain

Page: Corrected Emissions (2)

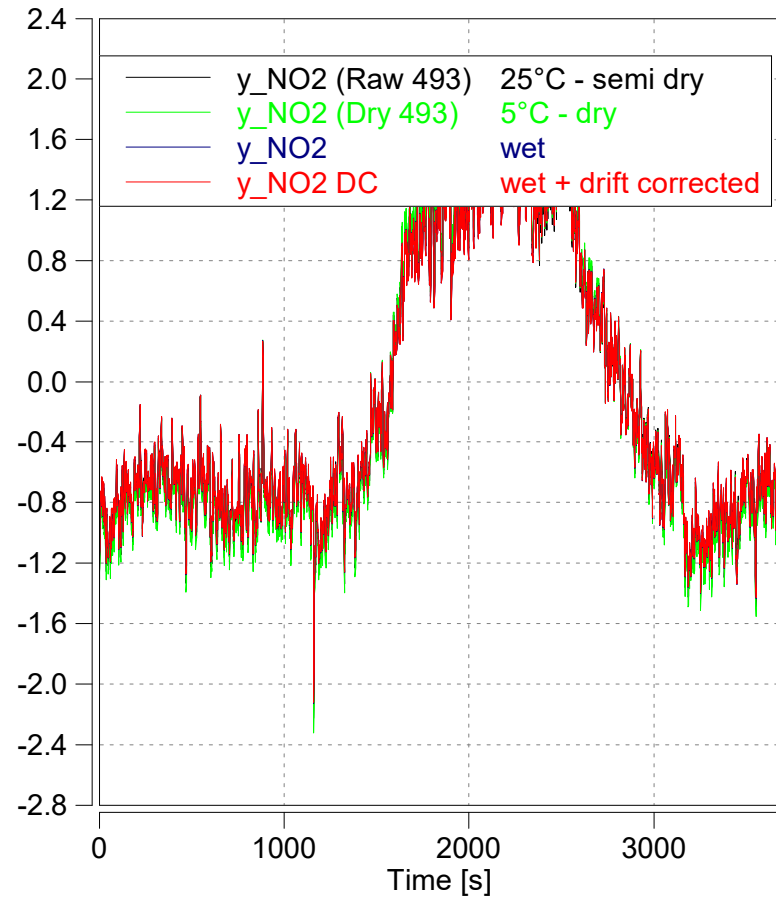
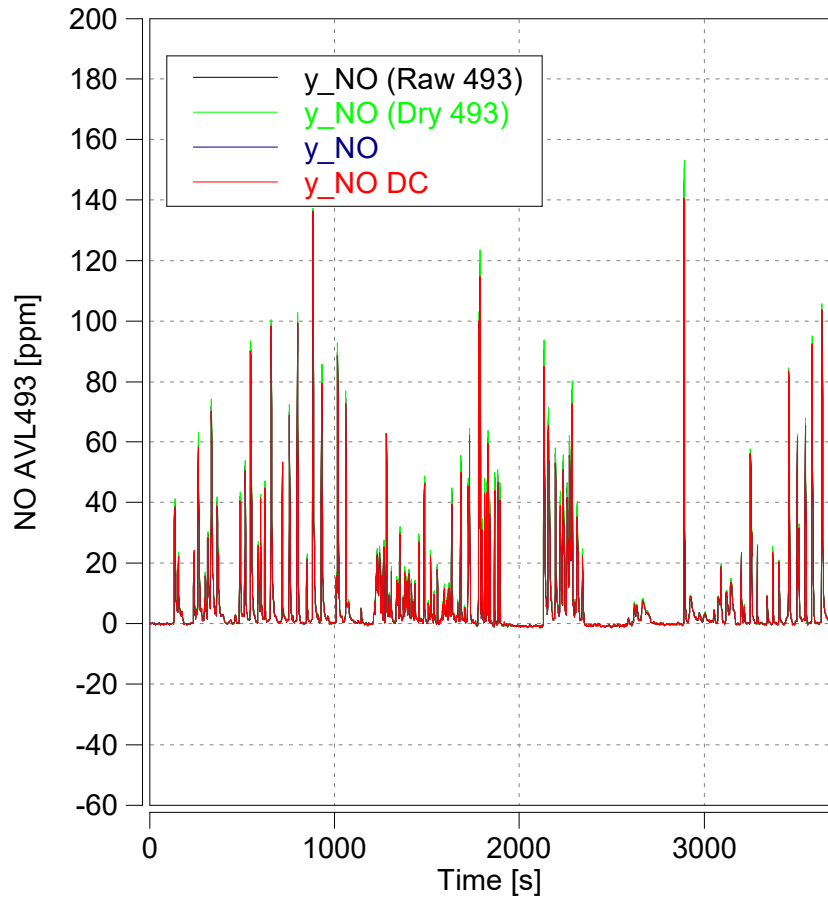
Start Date: 09/06/2017

Start Time: 07:30:18.0

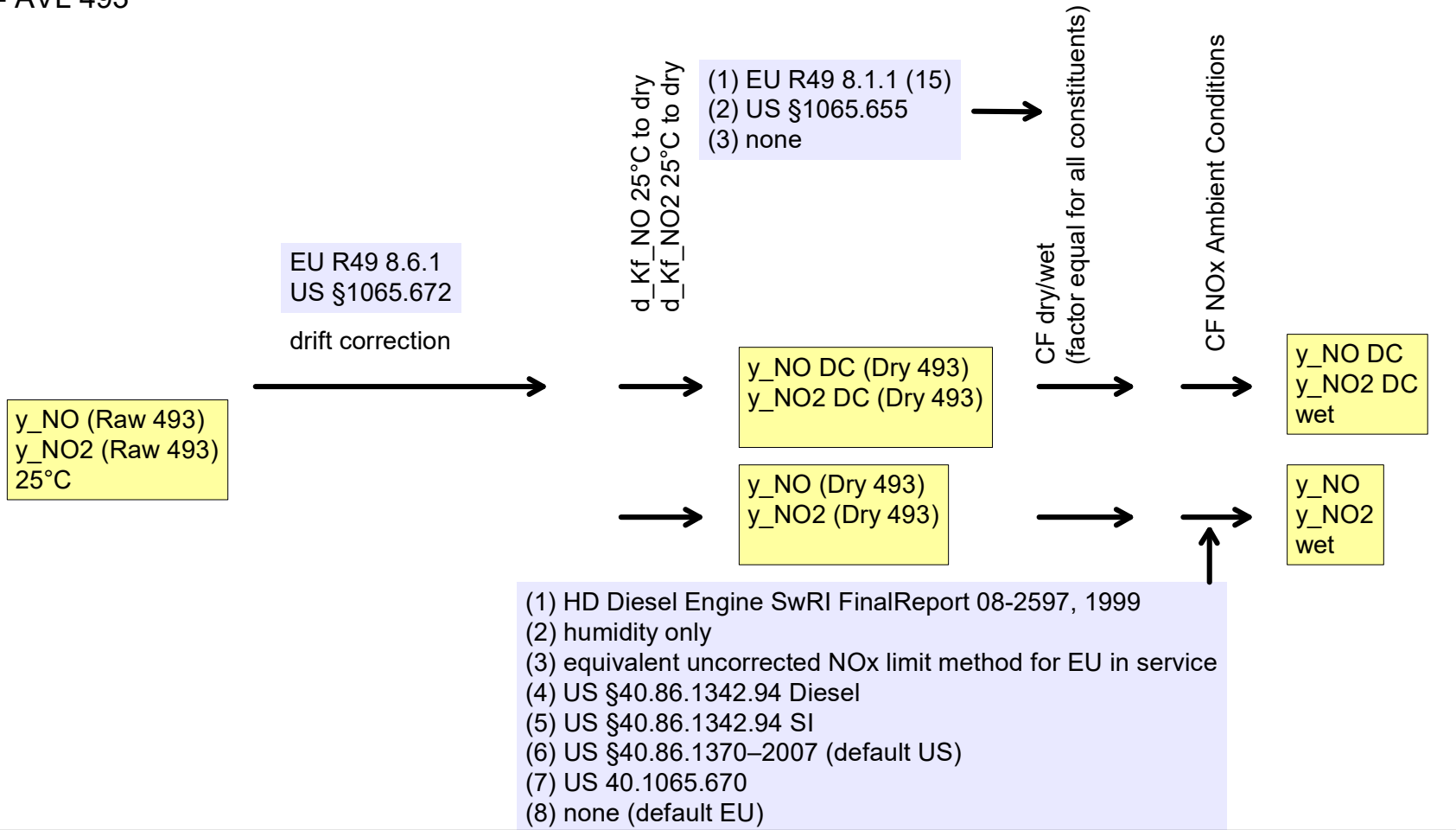


Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Jetta /
Engine: Gasoline / 1.4L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90



NOx - AVL 493

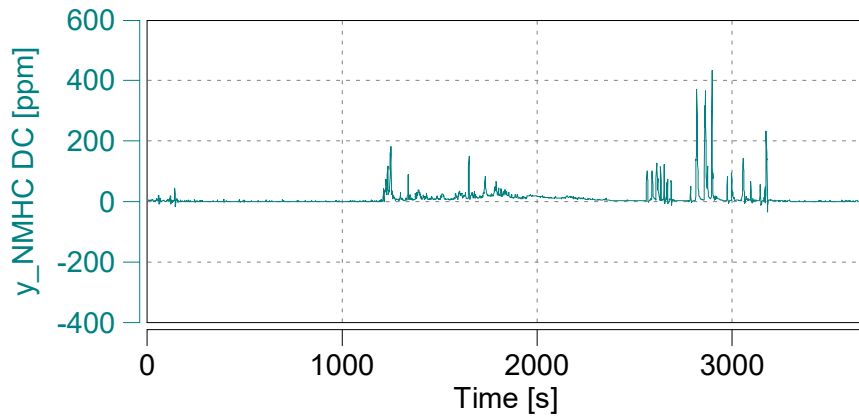
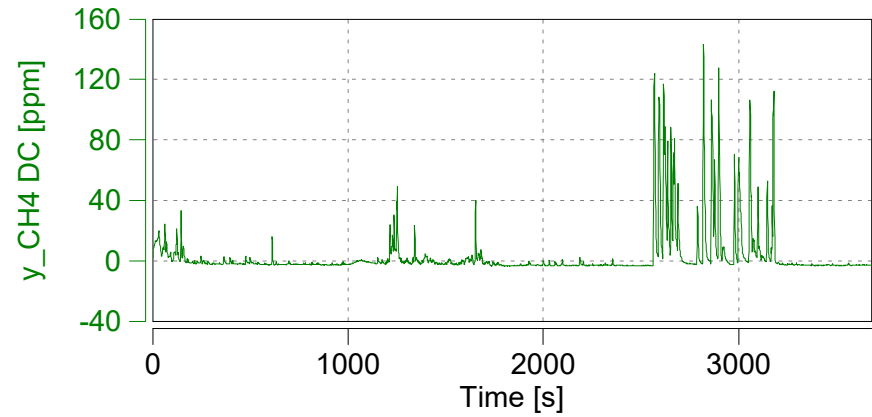
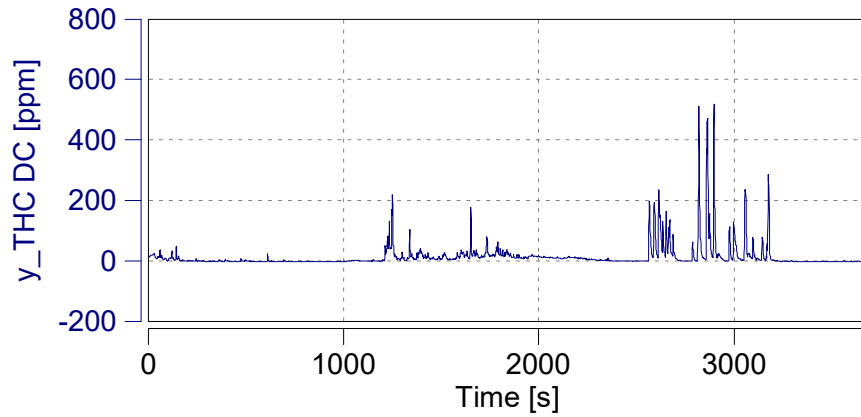


Case: Mountain

Page: Corrected Emissions (5)

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Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

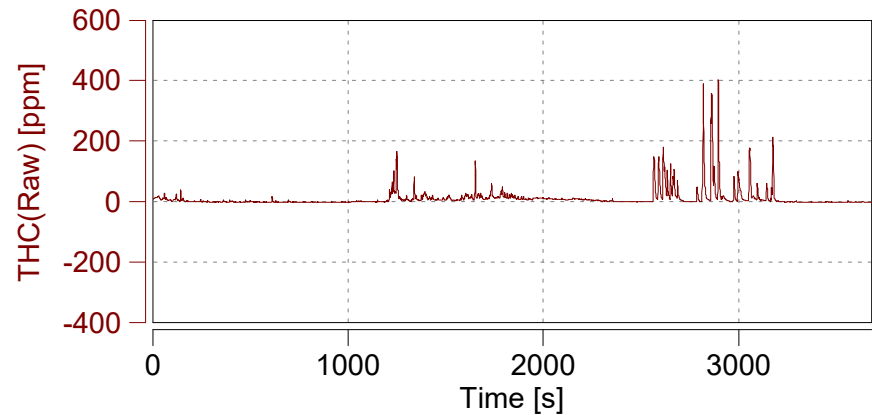
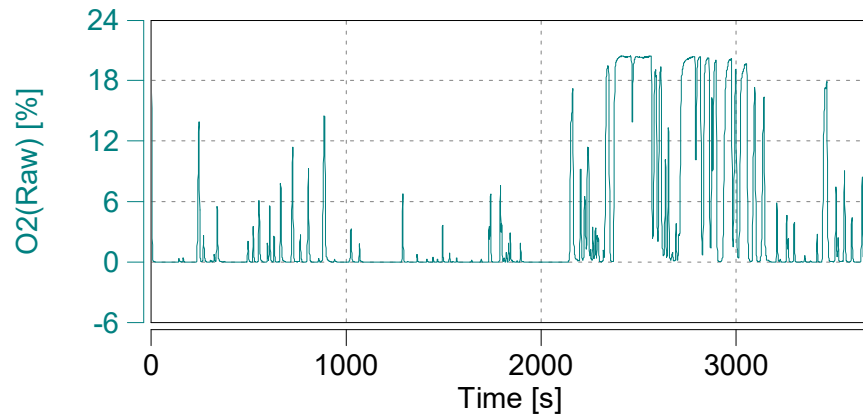
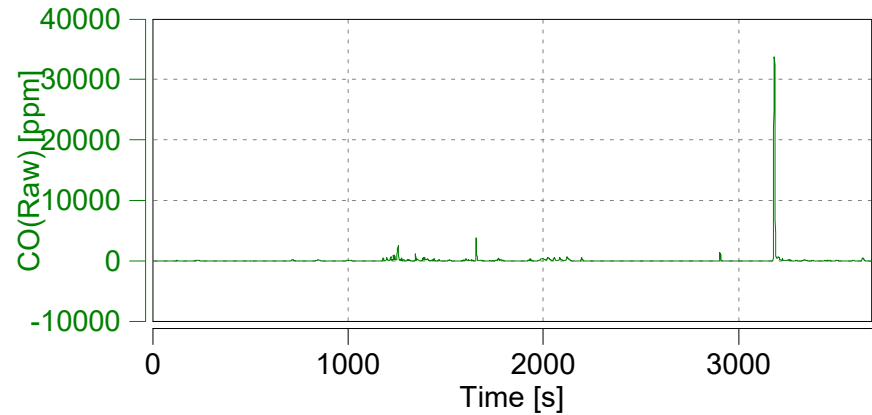
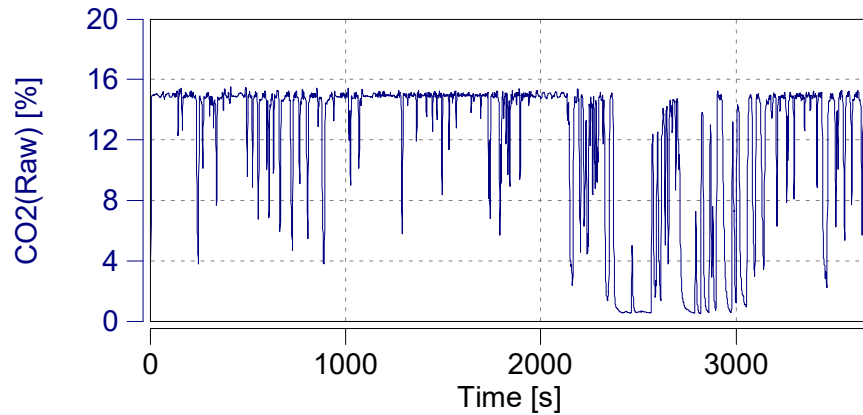
Vehicle: 2017 VW Jetta /
Engine: Gasoline / 1.4L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Mountain

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Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

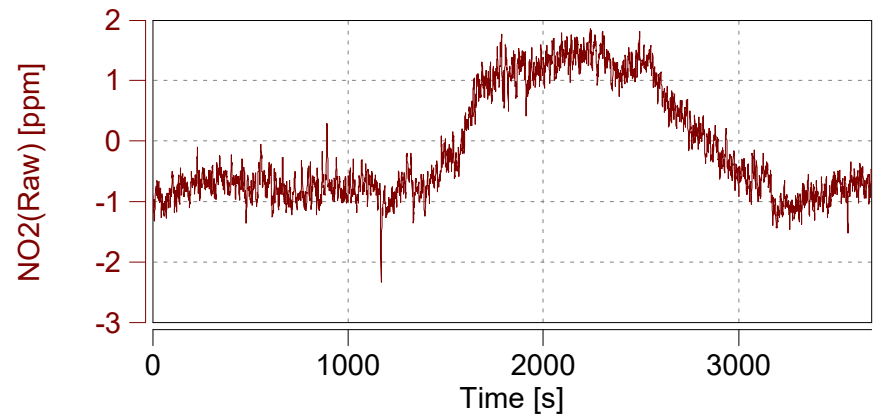
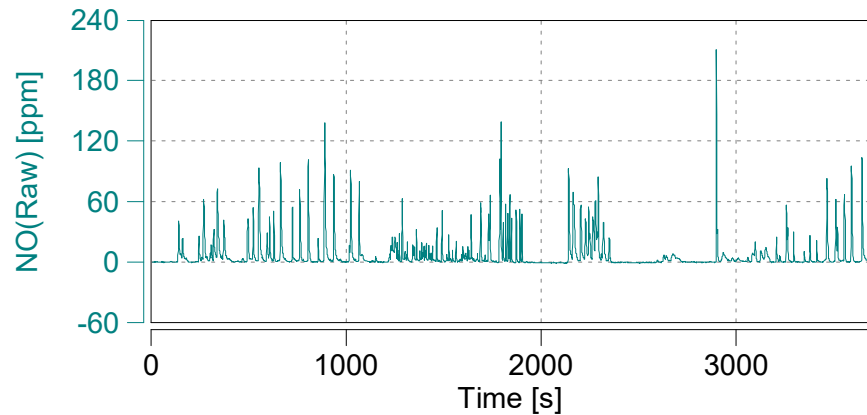
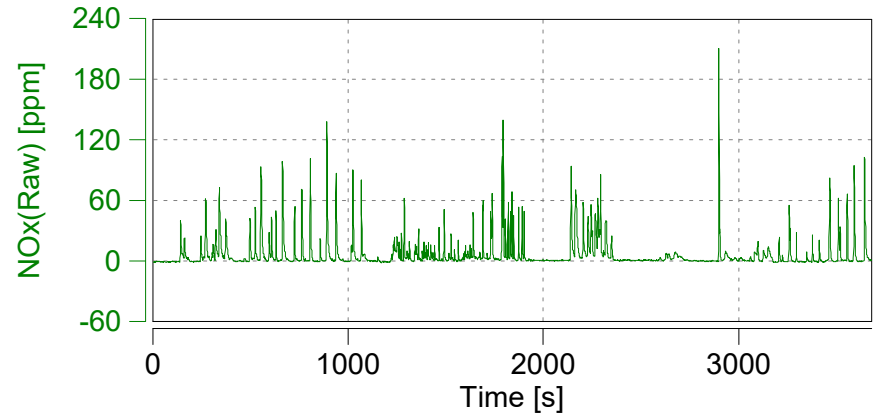
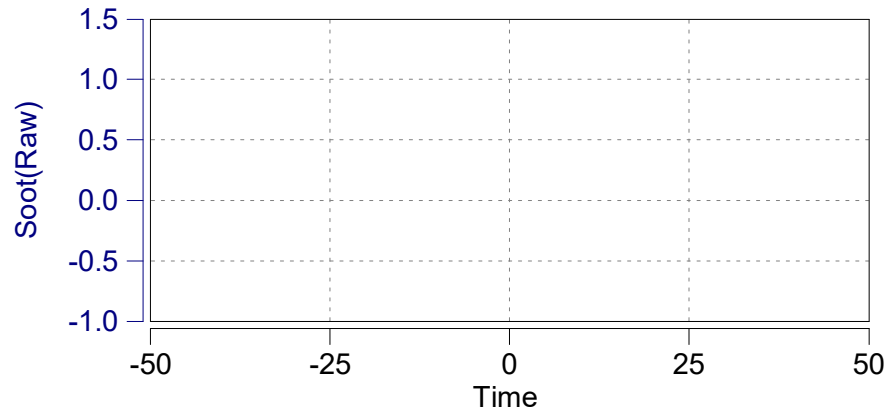
Vehicle: 2017 VW Jetta /
Engine: Gasoline / 1.4L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Mountain

Page: Emissions Raw Data (2)

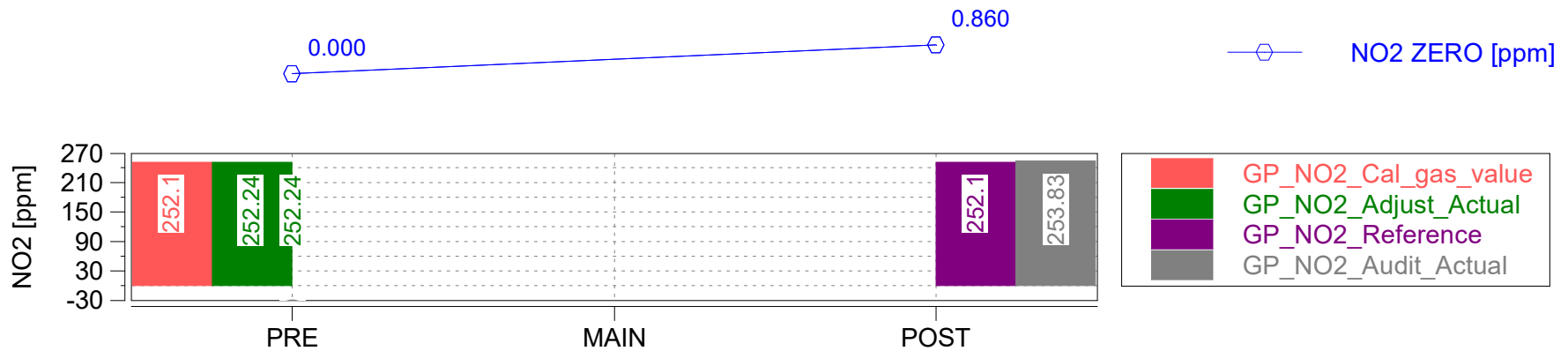
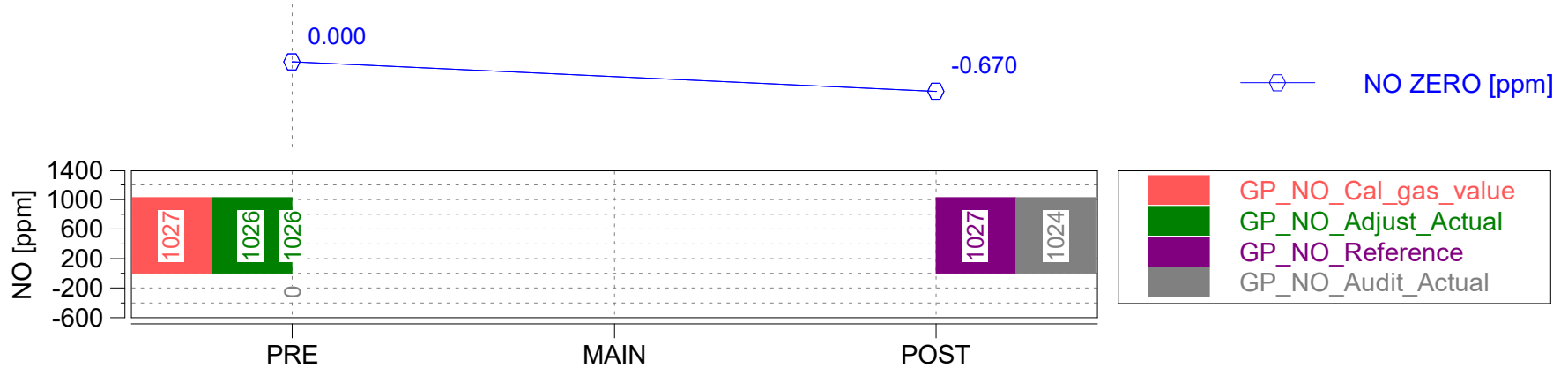
Start Date: 09/06/2017

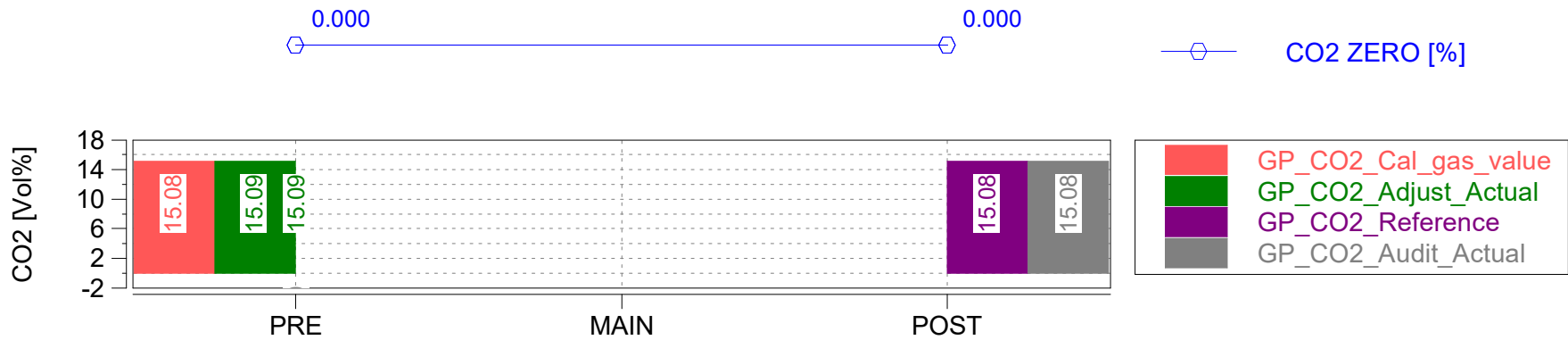
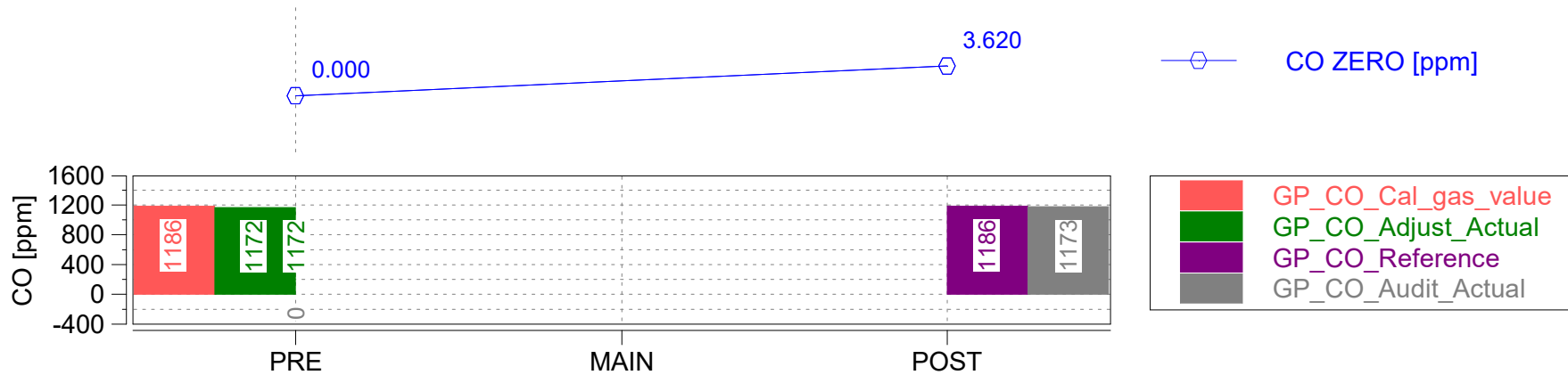
Start Time: 07:30:18.0

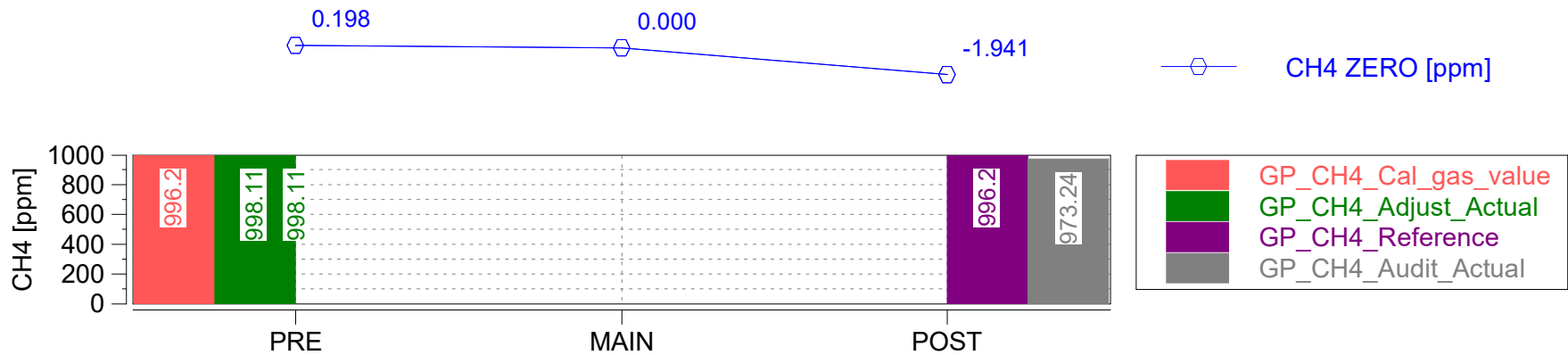
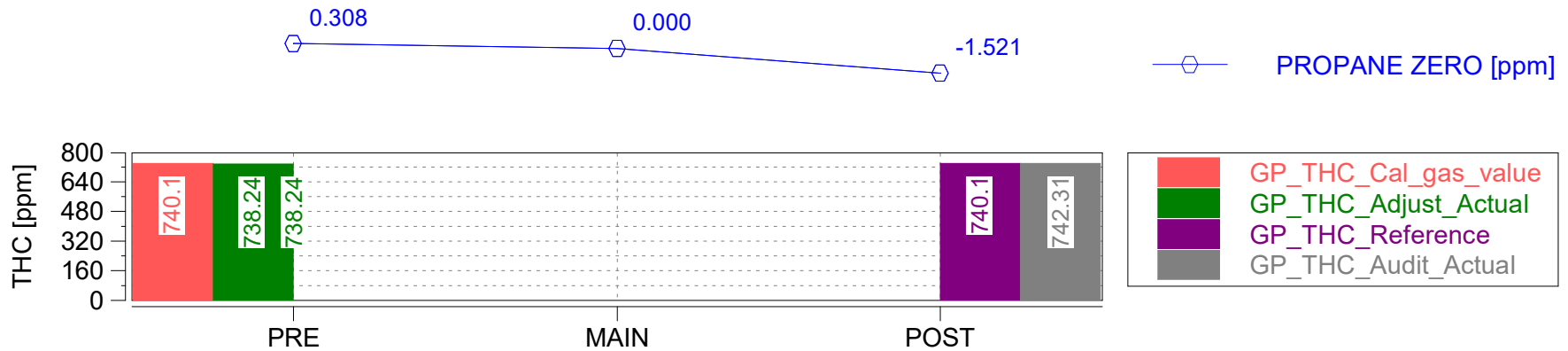


Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Jetta /
Engine: Gasoline / 1.4L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90







#	Text	Value	Unit
-	----	----	----
1.0	Test Start: Date	-	-
2.0	Test Start: Time	-	-
3.0	Ambient Temperature	IFILE1:TM'Temperature	deg C
4.0	Ambient Temperature TS	0.00000	s
5.0	Ambient Pressure	IFILE1:TM'Pressure	kPa
6.0	Ambient Pressure TS	0.00000	s
7.0	Humidity Type	1.00000	-
8.0	Amb. Rel. Humidity	IFILE1:TM'Humidity	%
9.0	Amb. Rel. Humidity	0.00000	s
10.0	GPS Latitude		deg
11.0	GPS Latitude TS	0.00000	s
12.0	GPS Longitude		deg
13.0	GPS Longitude TS	0.00000	s
14.0	Altitude		m
15.0	Altitude TS	0.00000	s
16.0	GPS Quality		-
17.0	GPS Quality TS	0.00000	s
18.0	GroundSpeed		km/h
19.0	GroundSpeed TS	0.00000	s
20.0	Altitude from topographical map		m
21.0	Altitude TS of topographical map		s
22.0	TRIP_AMBIENT_GPS_AVL	YES	-
23.0	CALC_GPS_GROUNDSPEED	NO	-
24.0	EXHAUST_FLOW_AVL	NO	-
25.0	EXHAUST_FLOW_AVL_EFM	YES	-
26.0	Exhaust Flow Type	2.00000	-
27.0	Mass Flow	IFILE1:TM'PitotEFM_ExhaustG	various
28.0	Mass Flow TS	0.80000	s
29.0	Exhaust Pressure		kPa
30.0	Exhaust Pressure TS	0.80000	s

#	Text	Value	Unit
-	----	----	----
31.0	Exhaust Delta Pressure		kPa
32.0	Exhaust Pressure Delta TS	0.80000	s
33.0	Exhaust Temperature	IFILE1:TM'PitotEFM_ExhaustG	degC
34.0	Exhaust Temperature TS	0.80000	s
35.0	Lambda	N/A	-
36.0	Lambda TS		s
37.0	CO2_DIL		%
38.0	CO2_DIL TS		s
39.0	CVS Volume Flow		m3/min
40.0	TimeShift_CVS_VOL_FLOW		s
41.0	IN_CVS_PRESSURE		kPa
42.0	TimeShift_CVS_PRESSURE		s
43.0	IN_CVS_TEMP		degC
44.0	TimeShift_CVS_TEMP		s
45.0	Dry to Wet Conversion CO2	YES	-
46.0	Dry to Wet Conversion O2	YES	-
47.0	Dry to Wet Conversion NO	NO	-
48.0	Dry to Wet Conversion NO2	NO	-
49.0	Dry to Wet Conversion THC	NO	-
50.0	Dry to Wet Conversion CH4	NO	-
51.0	Dry to Wet Conversion O2	NO	-
52.0	CO2	IFILE1:TM'GPiS_CO2	%
53.0	CO2 TS	-8.80000	s
54.0	OS	IFILE1:TM'GPiS_O2	%
55.0	O2 TS	-9.30000	s
56.0	CO	IFILE1:TM'GPiS_CO	ppm
57.0	CO TS	-8.80000	s
58.0	NO	IFILE1:TM'GPiS_NO	ppm
59.0	NO TS	-7.00000	s
60.0	NO2	IFILE1:TM'GPiS_NO2	ppm

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Jetta /
Engine: Gasoline / 1.4L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
61.0	NO2 TS	-7.00000	s
62.0	THC	IFILE1:TM'FIDiS_THC_C1	ppm
63.0	THC TS	0.00000	s
64.0	CH4	IFILE1:TM'FIDiS_CH4_C1	ppm
65.0	CH4 TS	0.00000	s
66.0	GAS_PEMS_Ethane_Efficiency	IFILE1:MOVE_AVL4925'GP_Et -	
67.0	GAS_PEMS_Methane_Efficiency	IFILE1:MOVE_AVL4925'GP_M -	
68.0	GAS_PEMS_Methane_Response	IFILE1:MOVE_AVL4925'GP_M -	
69.0	Zero Signal	IFILE1:TM'GPiS_STATE	0/1
70.0	Zero Signal TS	-7.00000	s
71.0	Zero Signal_FIDiS	IFILE1:TM'FIDiS_STATE	0/1
72.0	Zero Signal_FIDiS TS		s
73.0	Species Input Type	4.00000	-
74.0	GASPEMS=AVL493	NO	-
75.0	GASPEMS=AVL493_iX	NO	-
76.0	GASPEMS=AVL492	YES	-
77.0	GASPEMS=AVL4925	YES	-
78.0	PM: Type	4.00000	1=GFB+HC, 2=GFB, 3='PM=S
79.0	Filter ID from IFile	NO	-
80.0	Lab ID from IFile	NO	-
81.0	PM Filter: ID	N/A	ID
82.0	PM Filter: Lab	N/A	Name/ID
83.0	PM Filter: Weight before Test	N/A	mg
84.0	PM Filter: Weight after Test	N/A	mg
85.0	PM (HC Corr): Max. Exhaust Flow	N/A	scfm
86.0	Soot		mg/m3
87.0	Soot TS	-5.00000	s
88.0	Soot Sensor		mg/m3
89.0	Soot Sensor TS		s
90.0	PM Filter: Filter Flow Rate		l/min

#	Text	Value	Unit
-	----	----	----
91.0	PM Filter: Filter Flow Rate TS	-5.00000	s
92.0	PM Filter: Filter Dilution Ratio		-
93.0	PM Filter: Filter Dilution Ratio TS	-5.00000	s
94.0	PM Filter: Filter Trigger		-
95.0	PM Filter: Filter Trigger TS	-5.00000	s
96.0	PMPEMS=AVL494	YES	-
97.0	PMPEMS_AVL494_PROP_DIL	NO	-
98.0	PM dilution ratio min		-
99.0	PM_MaxExhaustFlowRate		-
100.0	PM_ExhaustFlow_Thresh		-
101.0	PM_total_flow_val		-
102.0	PM_total_flow_val_TS		-
103.0	PM_exh_mass_flow		-
104.0	PM_exh_mass_flow_TS		-
105.0	PN		#/cm3
106.0	TimeShift_PN		s
107.0	PN_STATE		-
108.0	PN TS STATE		s
109.0	PNPEMS_AVL496	NO	-
110.0	PN_CorrFactor	1.00000	
111.0	Time Alignment	1.00000	-
112.0	Time Alignment Dataset 1	N/A	0/1
113.0	Time Alignment Dataset 2	N/A	0/1
114.0	Time Alignment Thresh 1	N/A	-
115.0	Time Alignment Thresh 2	N/A	-
116.0			
117.0			
118.0			
119.0			
120.0			

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M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Jetta /
Engine: Gasoline / 1.4L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
121.0			
122.0	Trigger		0/1
123.0	Trigger TS		s
124.0	FTIR_NAME_1		-
125.0	FTIR_MW_1		-
126.0	FTIR_CHANNEL_1		-
127.0	FTIR_CHANNEL_TS_1		-
128.0	FTIR_CHANNEL_DRY_1	NO	-
129.0	FTIR_NAME_2		-
130.0	FTIR_MW_2		-
131.0	FTIR_CHANNEL_2		-
132.0	FTIR_CHANNEL_TS_2		-
133.0	FTIR_CHANNEL_DRY_2	NO	-
134.0	FTIR_NAME_3		-
135.0	FTIR_MW_3		-
136.0	FTIR_CHANNEL_3		-
137.0	FTIR_CHANNEL_TS_3		-
138.0	FTIR_CHANNEL_DRY_3	NO	-
139.0	FTIR_NAME_4		-
140.0	FTIR_MW_4		-
141.0	FTIR_CHANNEL_4		-
142.0	FTIR_CHANNEL_TS_4		-
143.0	FTIR_CHANNEL_DRY_4	NO	-
144.0	FTIR_NAME_5		-
145.0	FTIR_MW_5		-
146.0	FTIR_CHANNEL_5		-
147.0	FTIR_CHANNEL_TS_5		-
148.0	FTIR_CHANNEL_DRY_5	NO	-
149.0	FTIR_NAME_6		-
150.0	FTIR_MW_6		-

#	Text	Value	Unit
-	----	----	----
151.0	FTIR_CHANNEL_6		-
152.0	FTIR_CHANNEL_TS_6		-
153.0	FTIR_CHANNEL_DRY_6	NO	-
154.0	FTIR_NAME_7		-
155.0	FTIR_MW_7		-
156.0	FTIR_CHANNEL_7		-
157.0	FTIR_CHANNEL_TS_7		-
158.0	FTIR_CHANNEL_DRY_7	NO	-
159.0	FTIR_NAME_8		-
160.0	FTIR_MW_8		-
161.0	FTIR_CHANNEL_8		-
162.0	FTIR_CHANNEL_TS_8		-
163.0	FTIR_CHANNEL_DRY_8	NO	-
164.0	FTIR_NAME_9		-
165.0	FTIR_MW_9		-
166.0	FTIR_CHANNEL_9		-
167.0	FTIR_CHANNEL_TS_9		-
168.0	FTIR_CHANNEL_DRY_9	NO	-
169.0	FTIR_NAME_10		-
170.0	FTIR_MW_10		-
171.0	FTIR_CHANNEL_10		-
172.0	FTIR_CHANNEL_TS_10		-
173.0	FTIR_CHANNEL_DRY_10	NO	-
174.0	FTIR_NAME_11		-
175.0	FTIR_MW_11		-
176.0	FTIR_CHANNEL_11		-
177.0	FTIR_CHANNEL_TS_11		-
178.0	FTIR_CHANNEL_DRY_11	NO	-
179.0	FTIR_NAME_12		-
180.0	FTIR_MW_12		-

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Jetta /
Engine: Gasoline / 1.4L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
181.0	FTIR_CHANNEL_12		-
182.0	FTIR_CHANNEL_TS_12		-
183.0	FTIR_CHANNEL_DRY_12	NO	-
184.0	FTIR_NAME_13		-
185.0	FTIR_MW_13		-
186.0	FTIR_CHANNEL_13		-
187.0	FTIR_CHANNEL_TS_13		-
188.0	FTIR_CHANNEL_DRY_13	NO	-
189.0	FTIR_NAME_14		-
190.0	FTIR_MW_14		-
191.0	FTIR_CHANNEL_14		-
192.0	FTIR_CHANNEL_TS_14		-
193.0	FTIR_CHANNEL_DRY_14	NO	-
194.0	FTIR_NAME_15		-
195.0	FTIR_MW_15		-
196.0	FTIR_CHANNEL_15		-
197.0	FTIR_CHANNEL_TS_15		-
198.0	FTIR_CHANNEL_DRY_15	NO	-
199.0	FTIR_NAME_16		-
200.0	FTIR_MW_16		-
201.0	Vehicle Type	2017 VW Jetta	-
202.0	Vehicle Info		-
203.0	Engine Type	Gasoline	-
204.0	Engine Info	1.4L	-
205.0	Engine Torque		Nm
206.0	Curb Idle Load		%
207.0	Idle Speed		rpm
208.0	HYBRID_OVC_REF_CO2_gkm		g/km
209.0	Engine Concept	1.00000	-
210.0	Alpha	1.93000	-

#	Text	Value	Unit
-	----	----	----
211.0	Beta	1.00000	
212.0	Gamma	0.00000	
213.0	Delta	0.00000	
214.0	Epsilon	0.03200	
215.0	X_C	83.00000	
216.0	X_H	13.30000	
217.0	X_N	0.00000	
218.0	X_O	3.50000	
219.0	X_S	0.00000	
220.0	Fuel_Density	747.50000	
221.0	rho_exhaust	1.29310	
222.0	U_CO2	1.51800	
223.0	U_CO	0.96600	
224.0	U_NO	1.58700	
225.0	U_NO2	1.58700	
226.0	U_NOx	1.58700	
227.0	U_HC	0.49900	
228.0	U_NMHC	0.47100	
229.0	U_CH4	0.55300	
230.0	U_O2	1.10400	
231.0	Fuel Type	2.00000	-
232.0	exhaust mass flow type (YES/NO)	YES	-
233.0	Distance Calculation Type	1.00000	-
234.0	Velocity Statistics Calculation Type	2.00000	-
235.0	RDE vehicle class	1.00000	-
236.0	TM_CITY0		s
237.0	TM_CITY1		s
238.0	TM_RURAL0		s
239.0	TM_RURAL1		s
240.0	TM_RURAL2_0		s

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Jetta /
Engine: Gasoline / 1.4L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
241.0	TM_RURAL2_1		s
242.0	Second Rural Part for Time Marks (NO		-
243.0	TM_MW0		s
244.0	TM_MW1		s
245.0	VELOCITY_LIMIT_STOP	2.00000	km/h
246.0	VELOCITY_LIMIT_URBAN	50.00000	km/h
247.0	VELOCITY_LIMIT_RURAL	75.00000	km/h
248.0	Intake Manifold Pressure Type	1.00000	-
249.0	Velocity	IFILE1:TM'OBD_Vehicle_Spee	km/h
250.0	Velocity TS	1.30000	s
251.0	Velocity FACTOR	1.00000	-
252.0	Coolant Temperature	IFILE1:TM'OBD_Engine_Coola	degC
253.0	Coolant Temperature TS	1.30000	s
254.0	Oil Temperature		degC
255.0	Oil Temperature TS	1.30000	s
256.0	Intake Manifold Temperature		degC
257.0	Intake Manifold Temp TS	1.30000	s
258.0	Intake Manifold Pressure	IFILE1:TM'OBD_Intake_manifo	kPa
259.0	Intake Manifold Pressure TS	1.30000	s
260.0	Throttle Position		%
261.0	Throttle TS	1.30000	s
262.0	TYP_IDLE_MASS_FLOW		kg/h
263.0	Torque Type	1.00000	-
264.0	Speed	IFILE1:TM'OBD_Engine_RPM	rpm
265.0	Speed TS	1.30000	s
266.0	Torque		Nm
267.0	Torque TS	1.30000	s
268.0	Friction Torque	N/A	Nm
269.0	Friction Torque TS	N/A	s
270.0	Reference Torque	N/A	Nm

#	Text	Value	Unit
-	----	----	----
271.0	Reference Torque TS	N/A	s
272.0	k_VELINE		-
273.0	D_VELINE		-
274.0	Fuel Flow Type	2.00000	-
275.0	Air Flow Type	1.00000	-
276.0	Fuel Rate		various
277.0	Air Rate		various
278.0	Fuel Rate TS	1.30000	s
279.0	No_Cylinders		-
280.0	Air Rate TS	1.30000	s
281.0	FTIR_CHANNEL_32		-
282.0	FTIR_CHANNEL_TS_32		-
283.0	FTIR_CHANNEL_DRY_32	NO	-
284.0	FTIR_NAME_33		-
285.0	FTIR_MW_33		-
286.0	FTIR_CHANNEL_33		-
287.0	FTIR_CHANNEL_TS_33		-
288.0	FTIR_CHANNEL_DRY_33	NO	-
289.0	FTIR_NAME_34		-
290.0	FTIR_MW_34		-
291.0	FTIR_CHANNEL_34		-
292.0	FTIR_CHANNEL_TS_34		-
293.0	FTIR_CHANNEL_DRY_34	NO	-
294.0	FTIR_NAME_35		-
295.0	FTIR_MW_35		-
296.0	FTIR_CHANNEL_35		-
297.0	FTIR_CHANNEL_TS_35		-
298.0	FTIR_CHANNEL_DRY_35	NO	-
299.0	FTIR_NAME_36		-
300.0	FTIR_MW_36		-

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Jetta /
Engine: Gasoline / 1.4L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
301.0	FTIR_CHANNEL_36	-	-
302.0	FTIR_CHANNEL_TS_36	-	-
303.0	FTIR_CHANNEL_DRY_36	NO	-
304.0	FTIR_NAME_37	-	-
305.0	FTIR_MW_37	-	-
306.0	FTIR_CHANNEL_37	-	-
307.0	FTIR_CHANNEL_TS_37	-	-
308.0	FTIR_CHANNEL_DRY_37	NO	-
309.0	FTIR_NAME_38	-	-
310.0	FTIR_MW_38	-	-
311.0	FTIR_CHANNEL_38	-	-
312.0	FTIR_CHANNEL_TS_38	-	-
313.0	FTIR_CHANNEL_DRY_38	NO	-
314.0	FTIR_NAME_39	-	-
315.0	FTIR_MW_39	-	-
316.0	FTIR_CHANNEL_39	-	-
317.0	FTIR_CHANNEL_TS_39	-	-
318.0	FTIR_CHANNEL_DRY_39	NO	-
319.0	FTIR_NAME_40	-	-
320.0	FTIR_MW_40	-	-
321.0	FTIR_CHANNEL_40	-	-
322.0	FTIR_CHANNEL_TS_40	-	-
323.0	FTIR_CHANNEL_DRY_40	NO	-
324.0	Legislation Type (1=HDIUT 2=EU H	4.00000	-
325.0	WholeTest_NOx_corr	5.00000	-
326.0	WholeTest_Hum_corr	2.00000	-
327.0	CD_Distance	0.00000	km
328.0	CD_NOx	0.00000	mg/km
329.0	CD_CO	0.00000	mg/km
330.0	CD_CO2	0.00000	g/km

#	Text	Value	Unit
-	----	----	----
331.0	CD_NMHC	0.00000	mg/km
332.0	CD_CH4	0.00000	mg/km
333.0	CD_THC	0.00000	mg/km
334.0	CD_PN	-	#/km
335.0	WLTC_LOW_SPEED_gkm	-	g/km
336.0	WLTC_LOW_SPEED_FAC	1.20000	-
337.0	WLTC_MEDIUM_SPEED_gkm	-	g/km
338.0	WLTC_HIGH_SPEED_gkm	-	g/km
339.0	WLTC_HIGH_SPEED_FAC	1.10000	-
340.0	WLTC_EXTRA_HIGH_SPEED_gkm	-	g/km
341.0	WLTC_EXTRA_HIGH_SPEED_FA	1.05000	-
342.0	TOL_NORMAL_DRIVING	25.00000	%
343.0	TOL_SEVERE_DRIVING	50.00000	%
344.0	Increase Tolerance Nomral Driving	NO	-
345.0	Bin1_min	-	km/h
346.0	Bin2_min	-	km/h
347.0	Bin3_min	-	km/h
348.0	Bin1_max	-	km/h
349.0	Bin2_max	-	km/h
350.0	Bin3_max	-	km/h
351.0	Clear_R0	125.40000	N
352.0	Clear_R1	0.29300	Nh/km
353.0	Clear_R2	0.02795	N*(h/km) ²
354.0	Clear_SMK	1470.00000	kg
355.0	Clear_Rated_Power	140.00000	kW
356.0	Clear_Ref_Velocity	70.00000	km/h
357.0	Clear_Ref_Acc	0.45000	m/s ²
358.0	Clear_Smooth	3.00000	s
359.0	EXTC_From_High_Temp	30.00000	degC
360.0	EXTC_To_High_Temp	35.00000	degC

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Jetta /
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NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
361.0	EXTC_From_Low_Temp	-7.00000	degC
362.0	EXTC_To_Low_Temp	0.00000	degC
363.0	Euro 6d or Euro 6d temp	NO	-
364.0	EXTC_From_Altitude	700.00000	m
365.0	EXTC_To_Altitude	1300.00000	m
366.0	EXTC_CORR_FAC	1.60000	
367.0	weight cold start (YES/NO)	NO	-
368.0	precon and soak done (YES/NO)	NO	-
369.0	PATH_PRECON_FILE		
370.0	filter velocity (YES/NO)	NO	-
371.0	filter velocity auto(YES/NO)	NO	-
372.0	Ki_CO		
373.0	Ki_CO2		
374.0	Ki_NOx		
375.0	Ki_FACTOR_CO2 (YES/NO)	NO	-
376.0	Ki_OFFSET_CO2 (YES/NO)	NO	-
377.0	Ki_FACTOR_CO (YES/NO)	NO	-
378.0	Ki_OFFSET_CO (YES/NO)	NO	-
379.0	Ki_FACTOR_NOx (YES/NO)	NO	-
380.0	Ki_OFFSET_NOx (YES/NO)	NO	-
381.0	Ki_OFF (YES/NO)	NO	-
382.0	HD legislations	1.00000	-
383.0	RDE legislations	1.00000	-
384.0	Submission Documents (YES/NO)	NO	-
385.0	General Setup Parameters Text	Mountain	-
386.0	Legislation Setup Parameters Text	Mountain	-
387.0	Trip Info		-
388.0	IN_TIME_REF		-
389.0	Sub-Trip Start: Auto	YES	-
390.0	Sub-Trip Start: Seconds	N/A	s

#	Text	Value	Unit
-	----	----	----
391.0	Sub-Trip End: Auto	YES	-
392.0	Sub-Trip End: Seconds	N/A	s
393.0	Unit System	2.00000	-
394.0	Calculate: PM Emissions	NO	-
395.0	Calculate: PN Emissions	NO	-
396.0	Output: Summary	YES	-
397.0	Output: Emissions	YES	-
398.0	Output: Raw Data	YES	-
399.0	Output: Zero Span	YES	-
400.0	Output: Data Consistency	NO	-
401.0	Output: Window Plots	YES	-
402.0	Fuel Rate ECU vs. EU ISO16183	y = 10000000000.0000 x - 0.000 R ² =10000000000.000 SEE=	
403.0	PEMS post processing version	Rel_10_B192	
404.0	Concerto version	480.00000	
405.0	Concerto build	215.00000	
406.0	USERNAME	EFR	

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Jetta /
Engine: Gasoline / 1.4L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City
Page: Trip Summary

Start Date: 09/06/2017
Start Time: 07:30:18.0



Trip Duration	4061.00	s	ave THC	-0.04225	ppm	BS CO2	n/a	g/hphr
Trip Duration (a)	4061.00	s	ave NMHC	0.88029	ppm	BS CO	n/a	g/hphr
Trip Distance	16.23	mi	ave CH4	-0.83867	ppm	BS THC	n/a	g/hphr
Trip Distance (a)	16.23	mi	ave CO	1.07854	ppm	BS NMHC	n/a	g/hphr
Trip Fuel Cons. (b)	n/a	kg	ave CO2	12.33758	%	BS CH4	n/a	g/hphr
Trip Fuel Cons. (ab)	n/a	kg	ave NOx	6.60282	ppm	BS NO (d)	n/a	g/hphr
Trip Fuel Cons. EU (ac)	2.02	kg	ave PM	n/a	mg/m3	BS NO2	n/a	g/hphr
Trip Fuel Cons. US (ac)	1.99	kg	ave Soot meas	n/a	mg/m3	BS NOx	n/a	g/hphr
Trip Fuel Cons. Volume (b)	n/a	gall	ave Soot	n/a	mg/m3	BS Soot	n/a	g/hphr
Trip Fuel Cons. Volume (ab)	n/a	gall	ave PN	n/a	#/cm3	BS Soot meas	n/a	g/hphr
Trip Fuel Cons. Volume EU (ac)	0.71	gall	tot THC	0.01241	g	BS PM	n/a	g/hphr
Trip Fuel Cons. Volume US (ac)	0.70	gall	tot NMHC	0.01572	g	BS PN	n/a	#/hpr
Trip Fuel Economy (b)	n/a	mpg_US	tot CH4	0.00857	g	DS CO2	373.73930	g/mi
Trip Fuel Economy (ab)	n/a	mpg_US	tot CO	0.36409	g	DS CO	0.02243	g/mi
Trip Fuel Economy EU (ac)	22.73	mpg_US	tot CO2	6066.77067	g	DS THC	0.00076	g/mi
Trip Fuel Economy US (ac)	23.05	mpg_US	tot NO (d)	0.30453	g	DS NMHC	0.00097	g/mi
Trip Av. Eng. Speed	1242.06	rpm	tot NO2	0.00009	g	DS CH4	0.00053	g/mi
Trip Av. Torque	n/a	lbft	tot NOx	0.27079	g	DS NO (d)	0.01876	g/mi
Trip Av. Power	n/a	hp	tot Soot	n/a	g	DS NO2	0.00001	g/mi
Trip Work	n/a	hphr	tot Soot meas	n/a	g	DS NOx	0.01668	g/mi
Trip Exhaust Mass	31.69	kg	tot PM	n/a	g	DS Soot	n/a	g/mi
Trip Exhaust Mass EU (ac)	n/a	kg	tot PN	n/a	#	DS Soot meas	n/a	g/mi
Trip Exhaust Mass US (ac)	n/a	kg	PM measurement type	0.00000	-	DS PM	n/a	g/mi
Trip Av. Amb. Temperature	91.43	deg_F	PM correction type	1.00000	alpha(HC)	DS PN	n/a	#/mi
Trip Av. Humidity	41.65	%	tot Soot on PM filter (estim.)	n/a	mg	FS CO2	n/a	g/kg
Fuel Type	Petrol (E10)		Soot --> PM simple scaling factor	1.00000	-	FS CO	n/a	g/kg
			Soot --> PM alpha scaling factor	0.00000	-	FS THC	n/a	g/kg
			Trip Av. Veh. Speed	14.38992	mi/hr	FS NMHC	n/a	g/kg
			Trip Velocity Zero	27.28392	%	FS CH4	n/a	g/kg
			Trip Velocity Urban	90.76582	%	FS NO (d)	n/a	g/kg
			Trip Velocity Rural	6.69786	%	FS NO2	n/a	g/kg
			Trip Velocity Motorway	2.53632	%	FS NOx	n/a	g/kg
						FS Soot	n/a	g/kg
						FS Soot meas	n/a	g/kg
						FS PM	n/a	g/kg
						FS PN	n/a	#/kg

(a) GAS PEMS measurement state only, (b) based on fuel rate input (ECU, Fuel Meter), (c) calculated from carbon balance
(d) NO calculated using molecular weight of NO2

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Jetta /
Engine: Gasoline / 1.4L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Trip Summary Drift Corrected

Start Date: 09/06/2017

Start Time: 07:30:18.0

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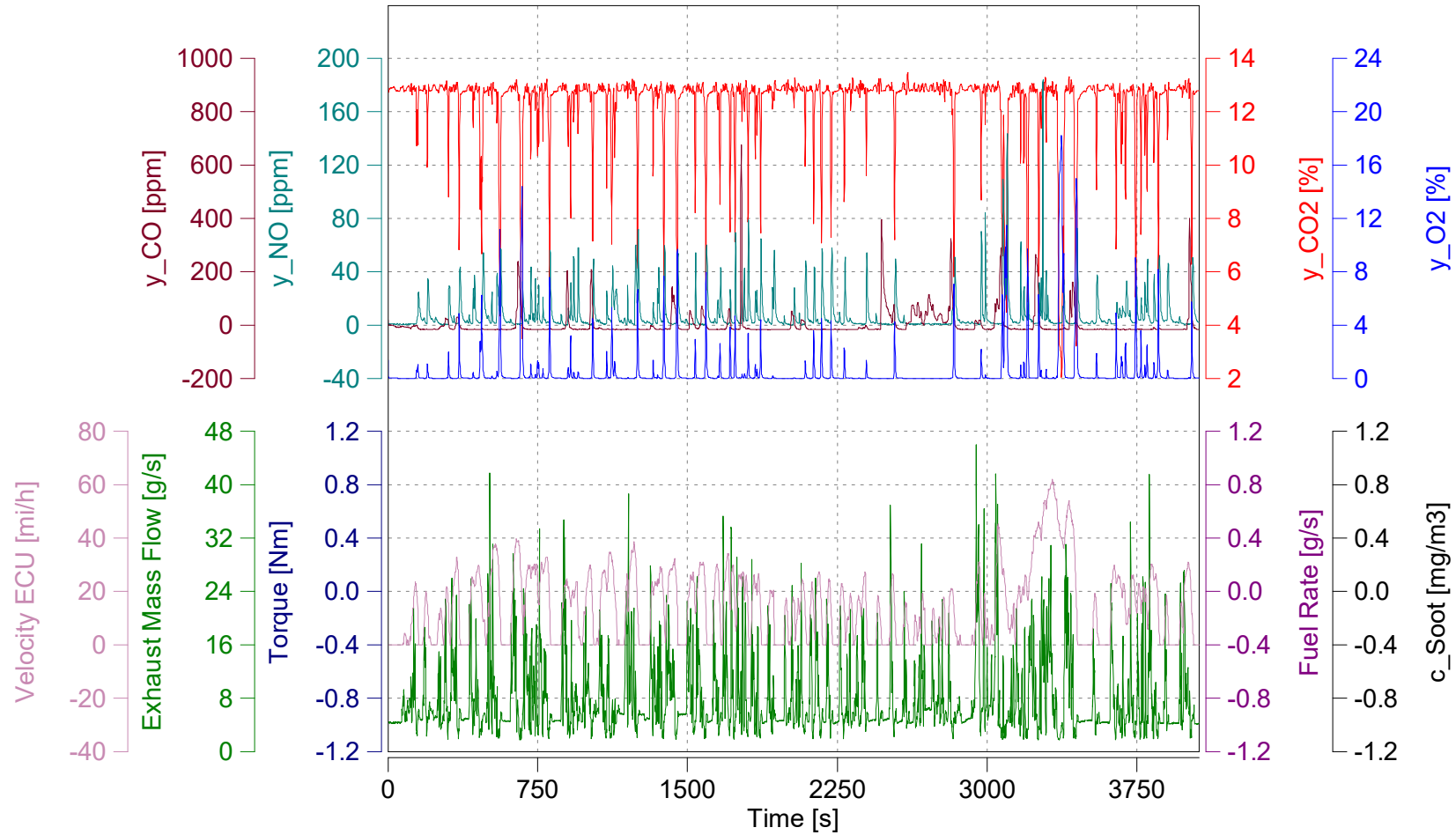
Concerto M.O.V.E, 2017

Trip Duration	4061.00	s	ave THC DC	-0.05685	ppm	BS CO2 DC	n/a	g/hphr
Trip Duration (a)	4061.00	s	ave NMHC DC	0.99665	ppm	BS CO DC	n/a	g/hphr
Trip Distance	16.23	mi	ave CH4 DC	-0.95773	ppm	BS THC DC	n/a	g/hphr
Trip Distance (a)	16.23	mi	ave CO DC	1.09029	ppm	BS NMHC DC	n/a	g/hphr
Trip Fuel Cons. (b)	n/a	kg	ave CO2 DC	12.33349	%	BS CH4 DC	n/a	g/hphr
Trip Fuel Cons. (ab)	n/a	kg	ave NOx DC	6.61420	ppm	BS NO DC (d)	n/a	g/hphr
Trip Fuel Cons. EU (ac)	2.02	kg	ave PM	n/a	mg/m3	BS NO2 DC	n/a	g/hphr
Trip Fuel Cons. US (ac)	1.99	kg	ave Soot meas	n/a	mg/m3	BS NOx DC	n/a	g/hphr
Trip Fuel Cons. Volume (b)	n/a	gall	ave Soot	n/a	mg/m3	BS Soot	n/a	g/hphr
Trip Fuel Cons. Volume (ab)	n/a	gall	ave PN DC	n/a	#/cm3	BS Soot meas	n/a	g/hphr
Trip Fuel Cons. Volume EU (ac)	0.71	gall	tot THC DC	0.01670	g	BS PM	n/a	g/hphr
Trip Fuel Cons. Volume US (ac)	0.70	gall	tot NMHC DC	0.01780	g	BS PN DC	n/a	#/hpr
Trip Fuel Economy (b)	n/a	mpg_US	tot CH4 DC	0.00833	g	DS CO2 DC	373.61542	g/mi
Trip Fuel Economy (ab)	n/a	mpg_US	tot CO DC	0.36805	g	DS CO DC	0.02267	g/mi
Trip Fuel Economy EU (ac)	22.73	mpg_US	tot CO2 DC	6064.75981	g	DS THC DC	0.00103	g/mi
Trip Fuel Economy US (ac)	23.05	mpg_US	tot NO DC (d)	0.30489	g	DS NMHC DC	0.00110	g/mi
Trip Av. Eng. Speed	1242.06	rpm	tot NO2 DC	0.00009	g	DS CH4 DC	0.00051	g/mi
Trip Av. Torque	n/a	lbft	tot NOx DC	0.27124	g	DS NO DC (d)	0.01878	g/mi
Trip Av. Power	n/a	hp	tot Soot	n/a	g	DS NO2 DC	0.00001	g/mi
Trip Work	n/a	hphr	tot Soot meas	n/a	g	DS NOx DC	0.01671	g/mi
Trip Exhaust Mass	31.69	kg	tot PM	n/a	g	DS Soot	n/a	g/mi
Trip Exhaust Mass EU (ac)	n/a	kg	tot PN DC	n/a	#	DS Soot meas	n/a	g/mi
Trip Exhaust Mass US (ac)	n/a	kg	PM measurement type	0.00000	-	DS PM	n/a	g/mi
Trip Av. Amb. Temperature	91.43	deg_F	PM correction type	1.00000	alpha(HC)	DS PN DC	n/a	#/mi
Trip Av. Humidity	41.65	%	tot Soot on PM filter (estim.)	n/a	mg	FS CO2 DC	n/a	g/kg
Fuel Type	Petrol (E10)		Soot --> PM simple scaling factor	1.00000	-	FS CO DC	n/a	g/kg
			Soot --> PM alpha scaling factor	0.00000	-	FS THC DC	n/a	g/kg
			Trip Av. Veh. Speed	14.38992	mi/hr	FS NMHC DC	n/a	g/kg
			Trip Velocity Zero	27.28392	%	FS CH4 DC	n/a	g/kg
			Trip Velocity Urban	90.76582	%	FS NO DC (d)	n/a	g/kg
			Trip Velocity Rural	6.69786	%	FS NO2 DC	n/a	g/kg
			Trip Velocity Motorway	2.53632	%	FS NOx DC	n/a	g/kg
						FS Soot	n/a	g/kg
						FS Soot meas	n/a	g/kg
						FS PM	n/a	g/kg
						FS PN DC	n/a	#/kg

(a) GAS PEMS measurement state only, (b) based on fuel rate input (ECU, Fuel Meter), (c) calculated from carbon balance
 (d) NO calculated using molecular weight of NO2

Concerto Version: 480 Build 215, Serial Number: 8468
 M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Jetta /
 Engine: Gasoline / 1.4L
 NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
 Dry / Wet Corr.: 2 - CFR40 §86.1342-90



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

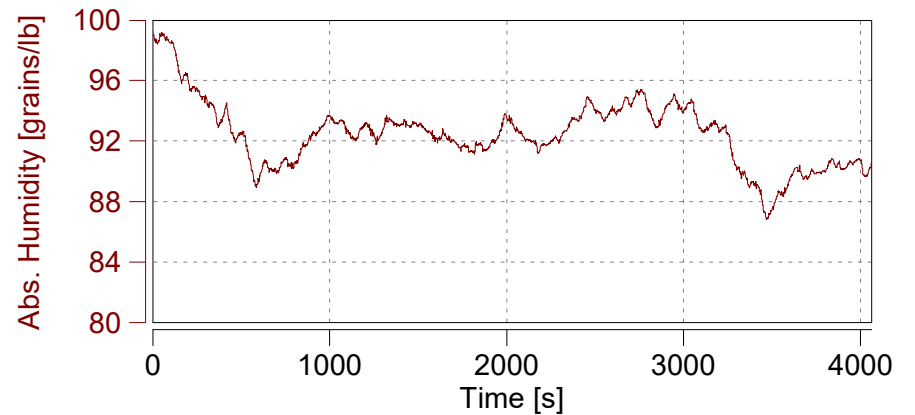
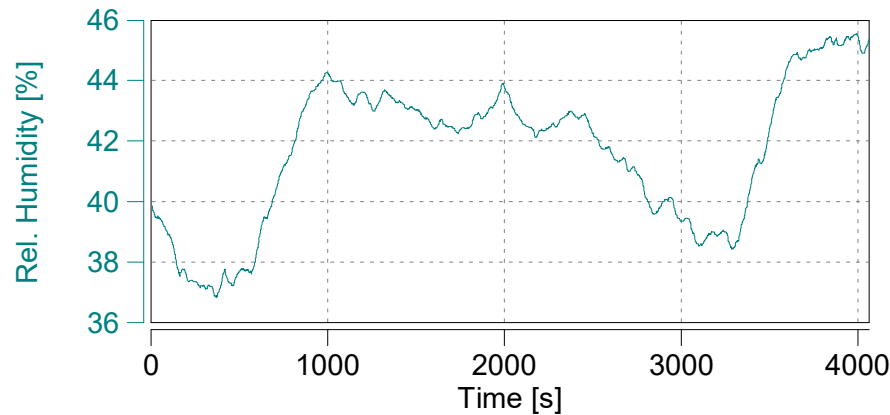
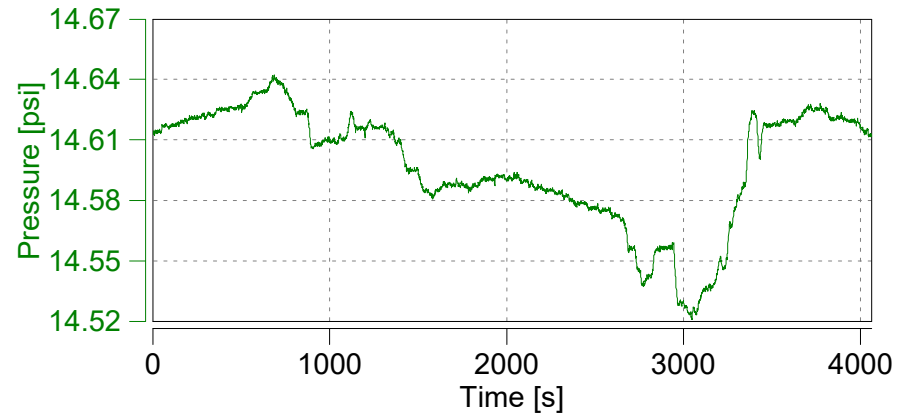
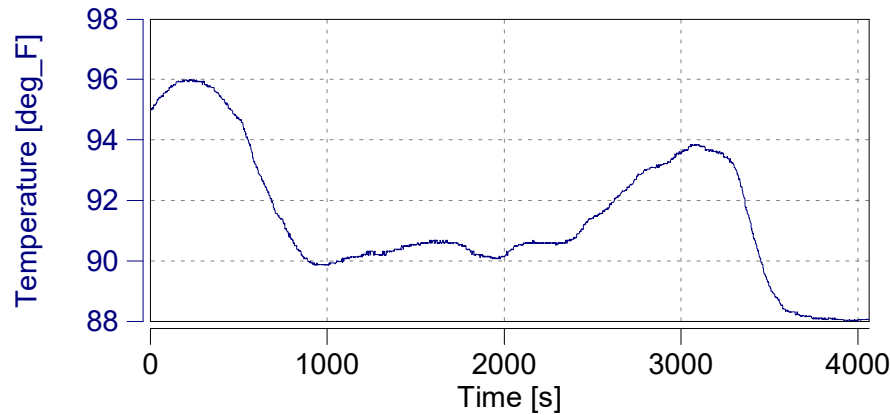
Vehicle: 2017 VW Jetta /
Engine: Gasoline / 1.4L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Ambient Conditions

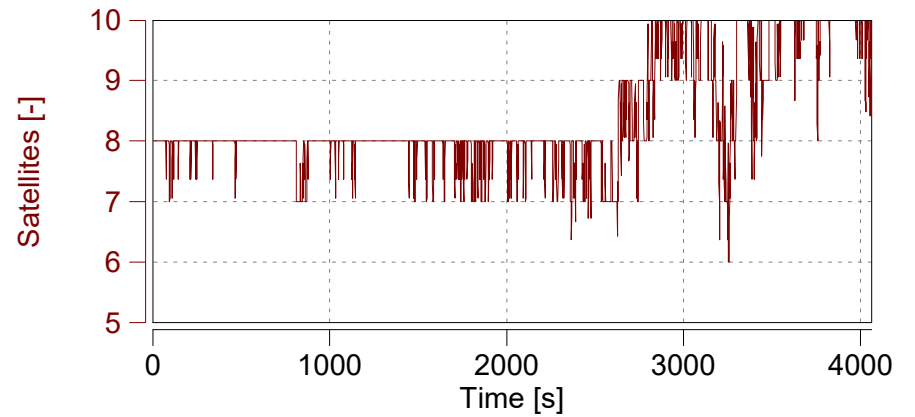
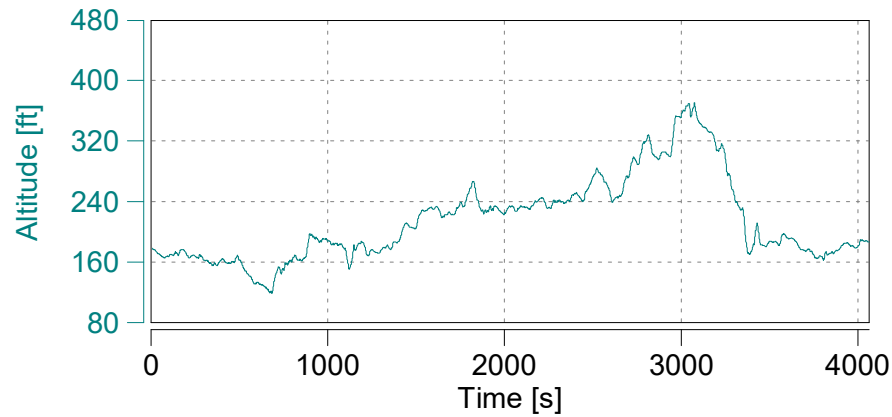
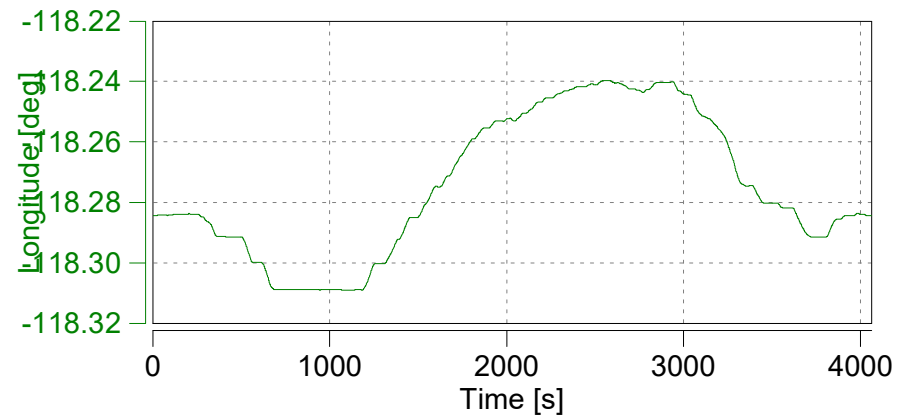
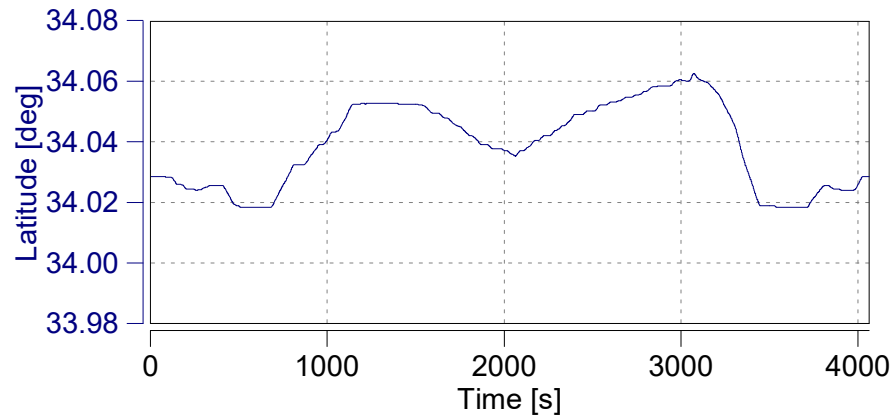
Start Date: 09/06/2017

Start Time: 07:30:18.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Jetta /
Engine: Gasoline / 1.4L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

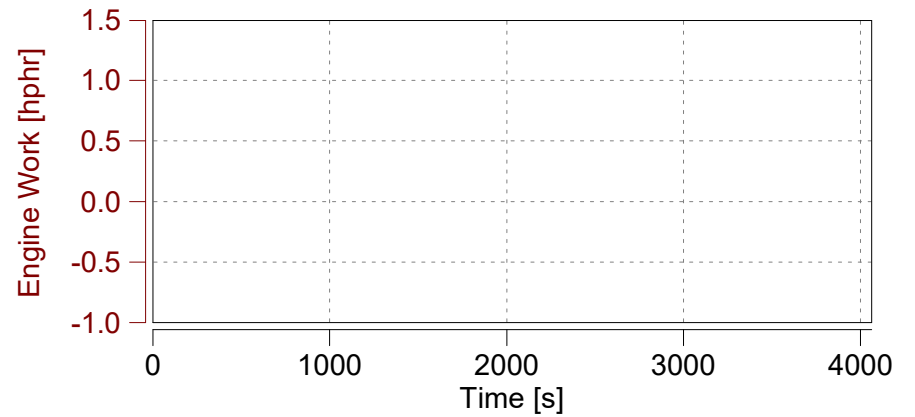
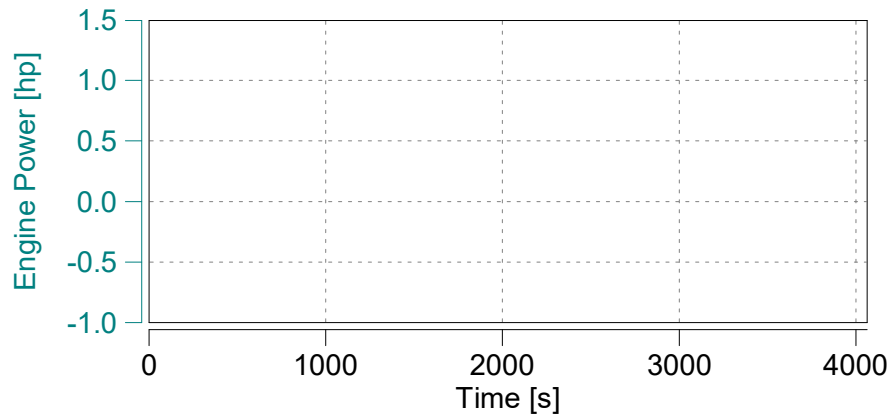
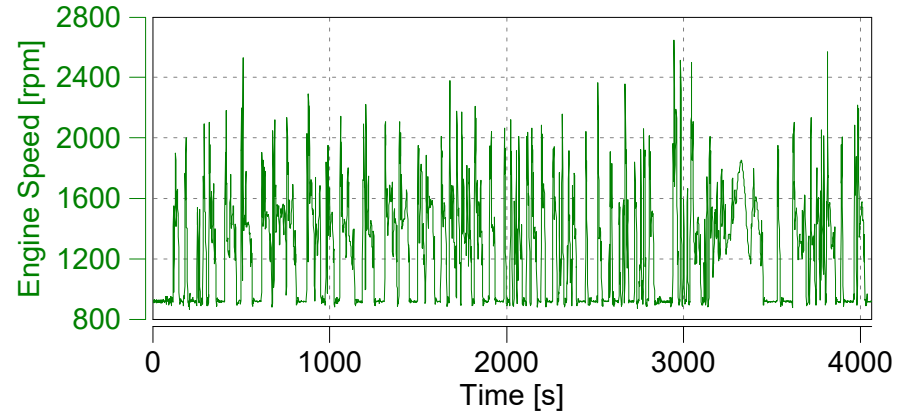
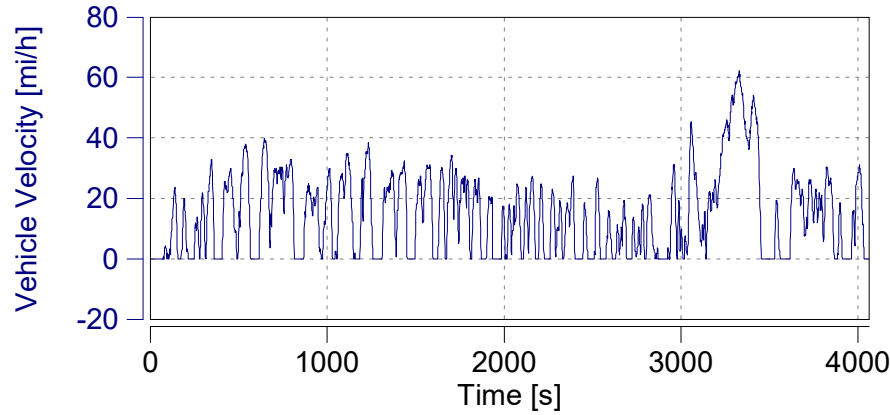


Case: City

Page: Engine (1)

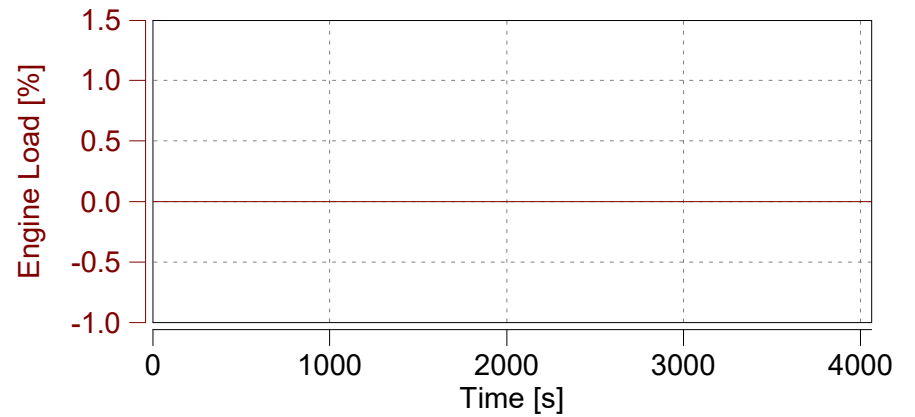
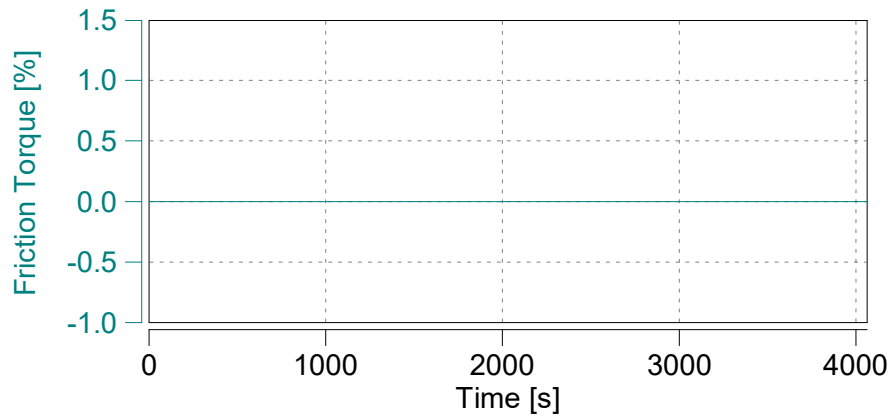
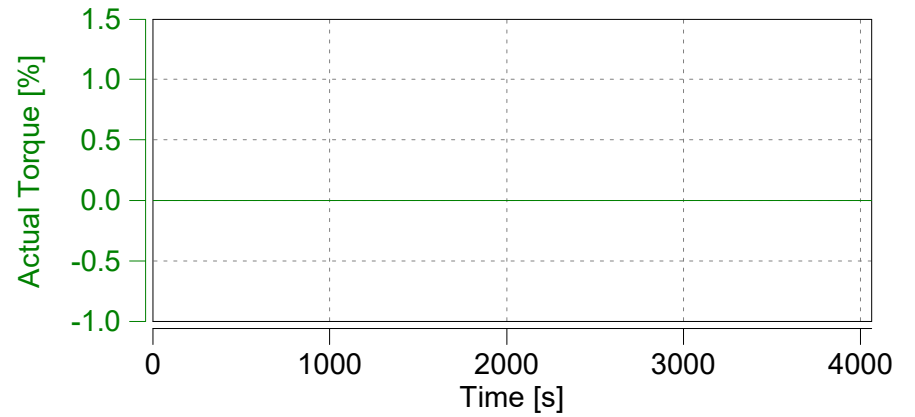
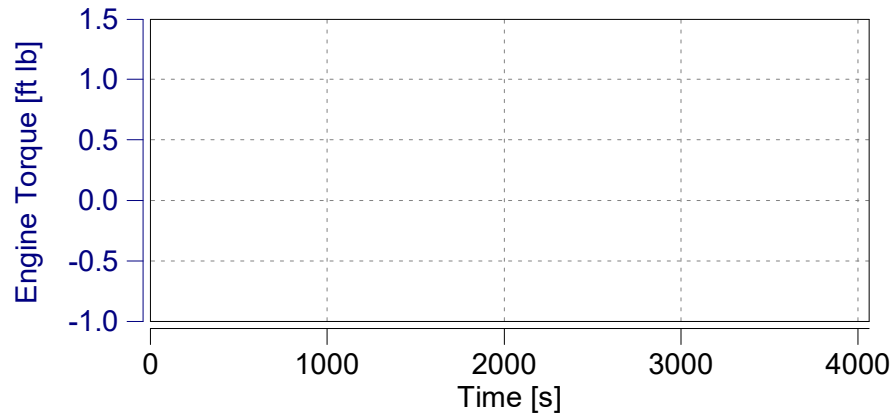
Start Date: 09/06/2017

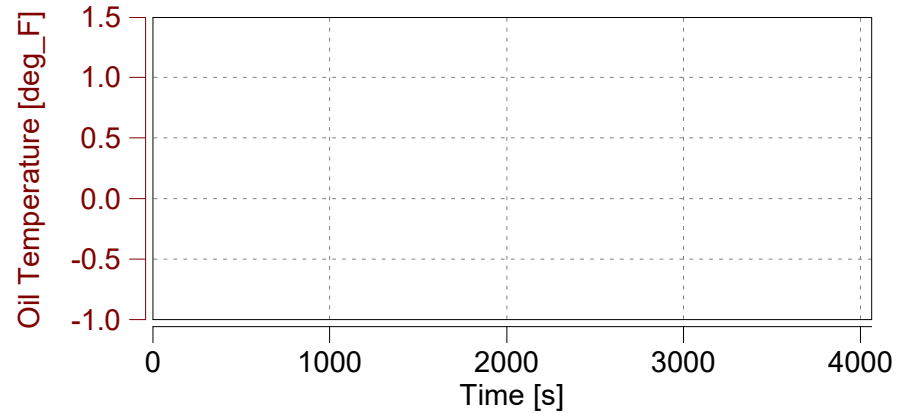
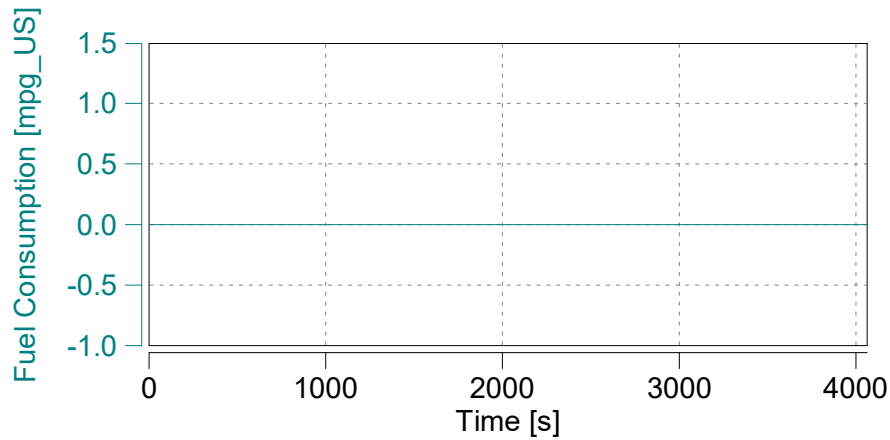
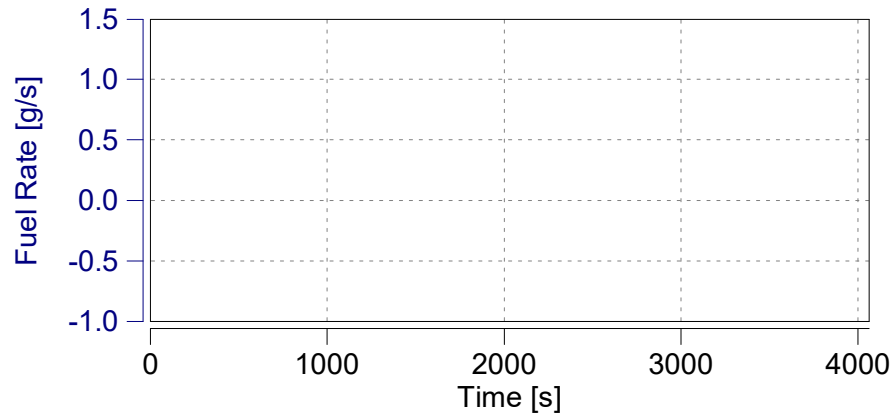
Start Time: 07:30:18.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Jetta /
Engine: Gasoline / 1.4L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90



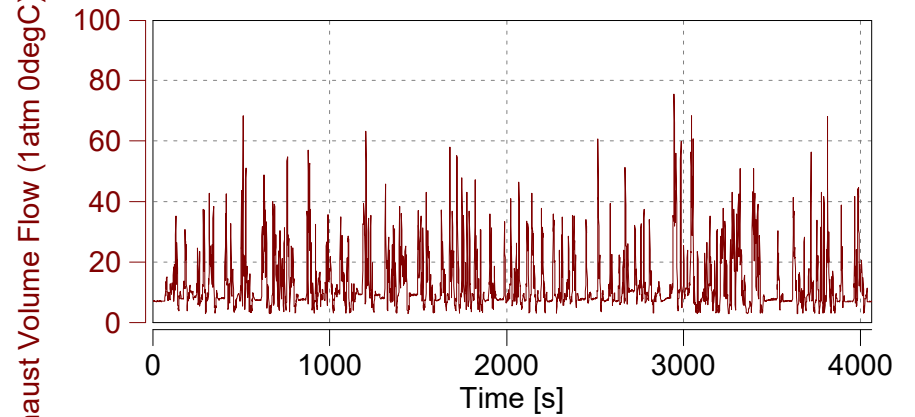
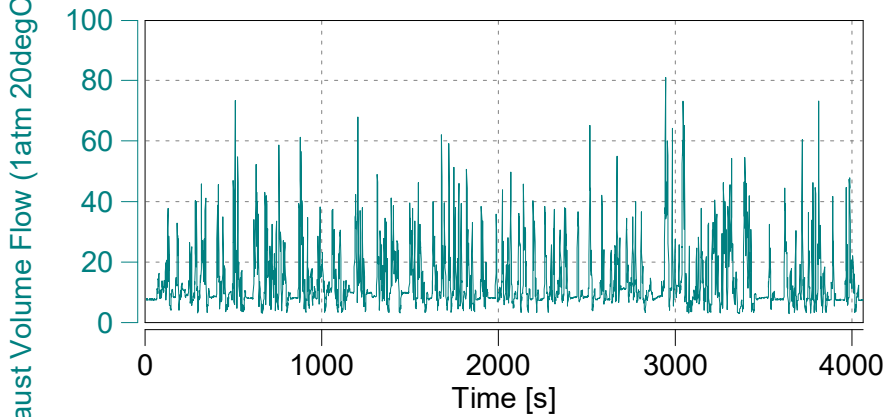
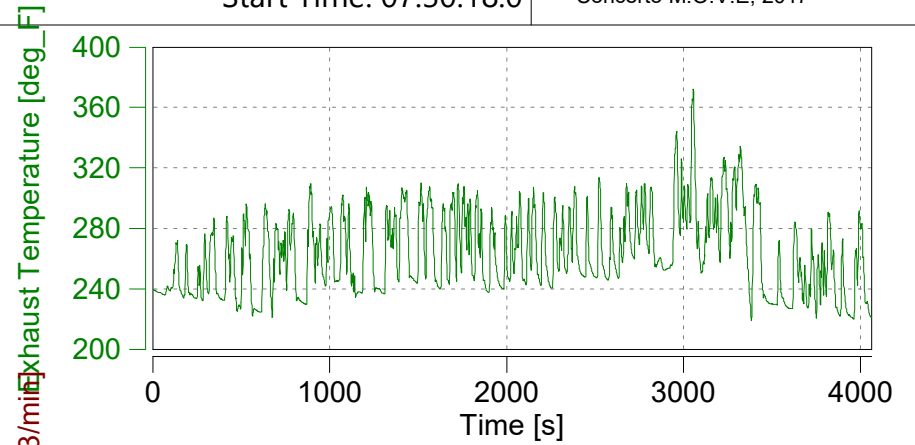
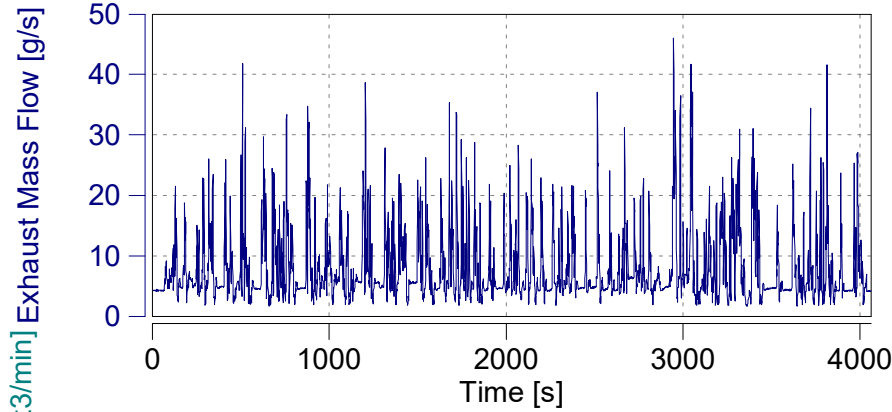


Case: City

Page: Exhaust Flow (1)

Start Date: 09/06/2017

Start Time: 07:30:18.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

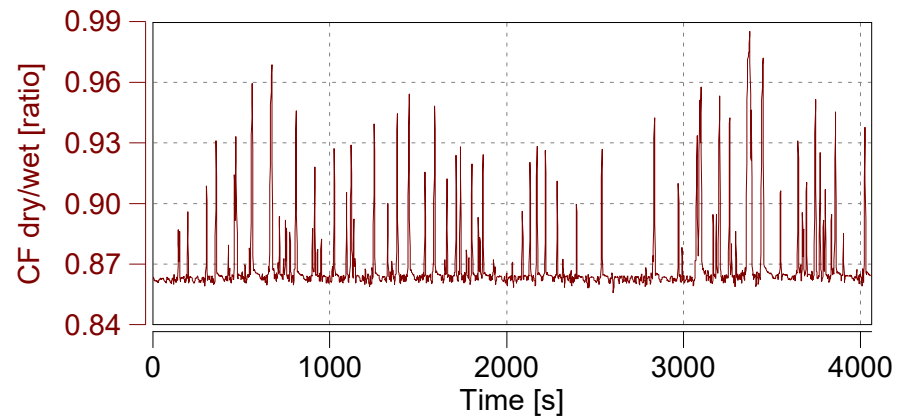
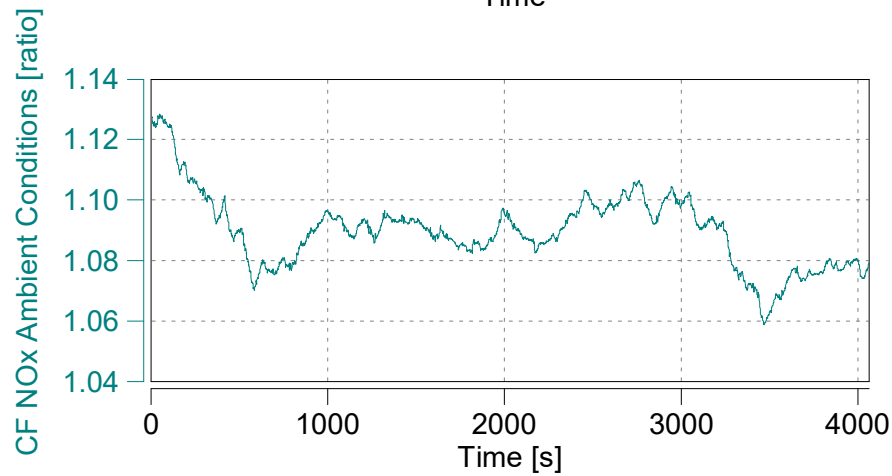
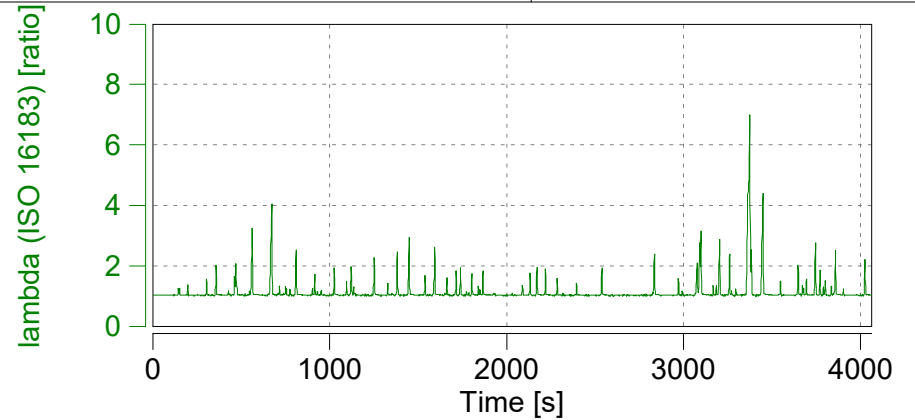
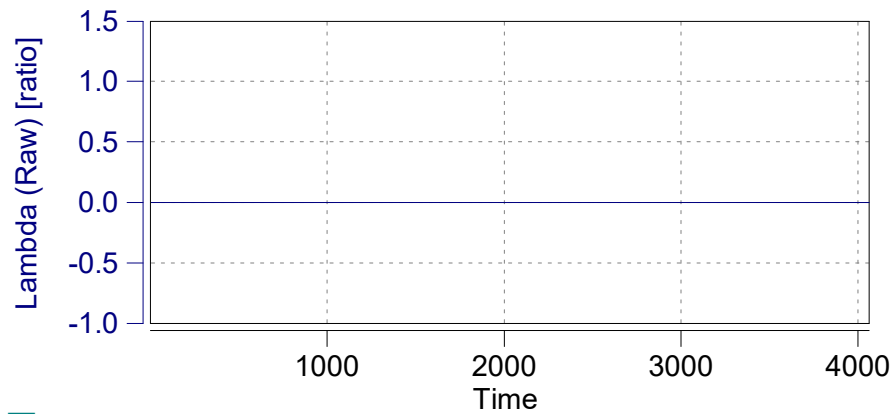
Vehicle: 2017 VW Jetta /
Engine: Gasoline / 1.4L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Exhaust Flow (2)

Start Date: 09/06/2017

Start Time: 07:30:18.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

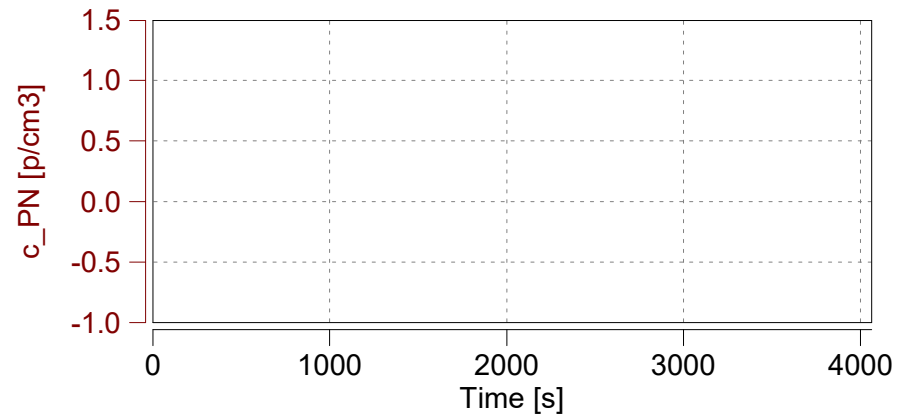
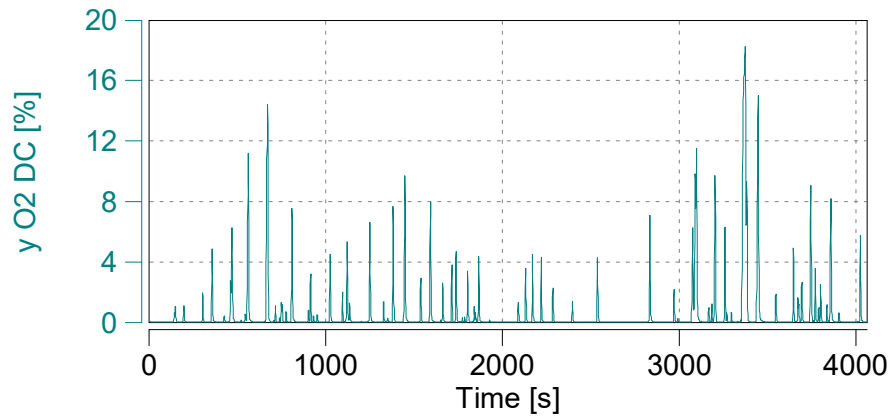
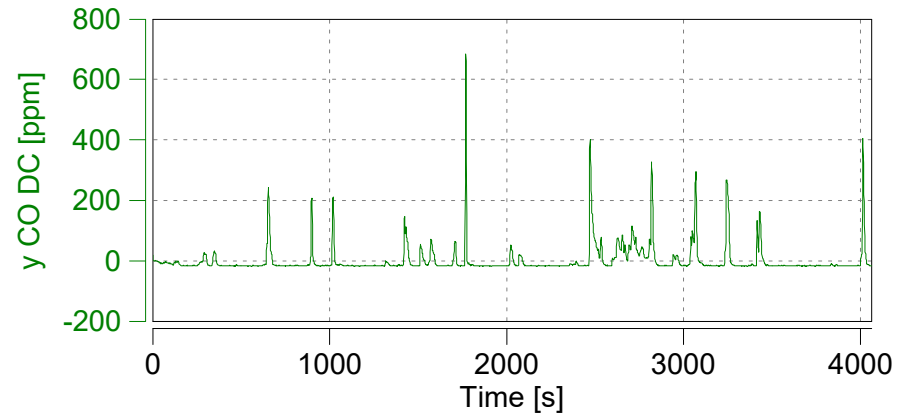
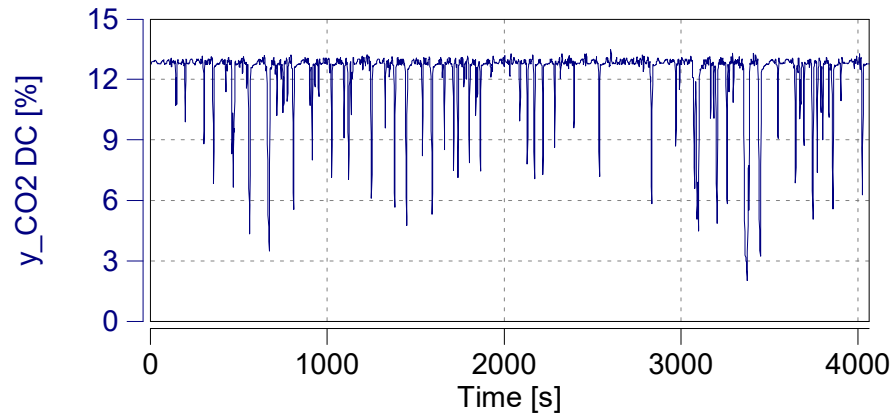
Vehicle: 2017 VW Jetta /
Engine: Gasoline / 1.4L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Corrected Emissions (1)

Start Date: 09/06/2017

Start Time: 07:30:18.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

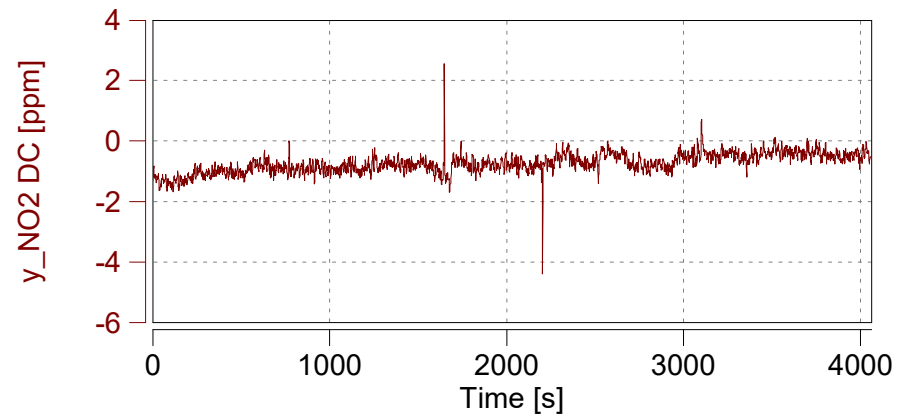
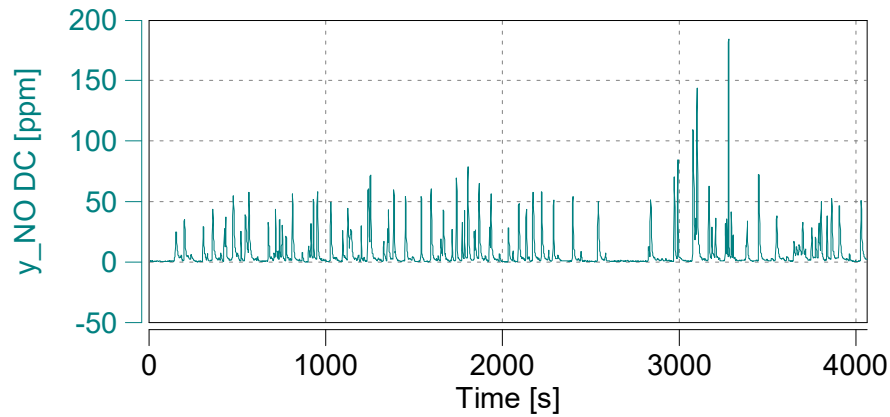
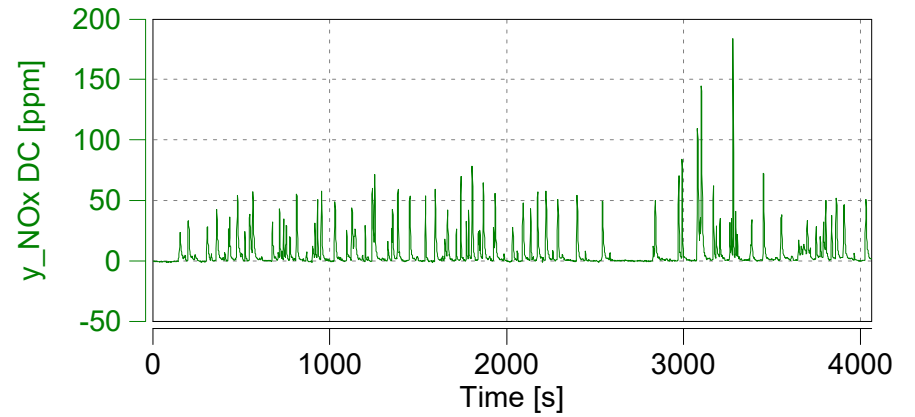
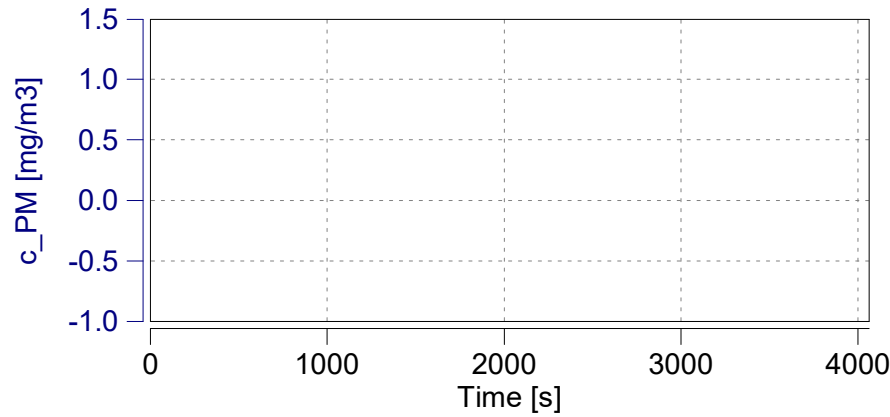
Vehicle: 2017 VW Jetta /
Engine: Gasoline / 1.4L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Corrected Emissions (2)

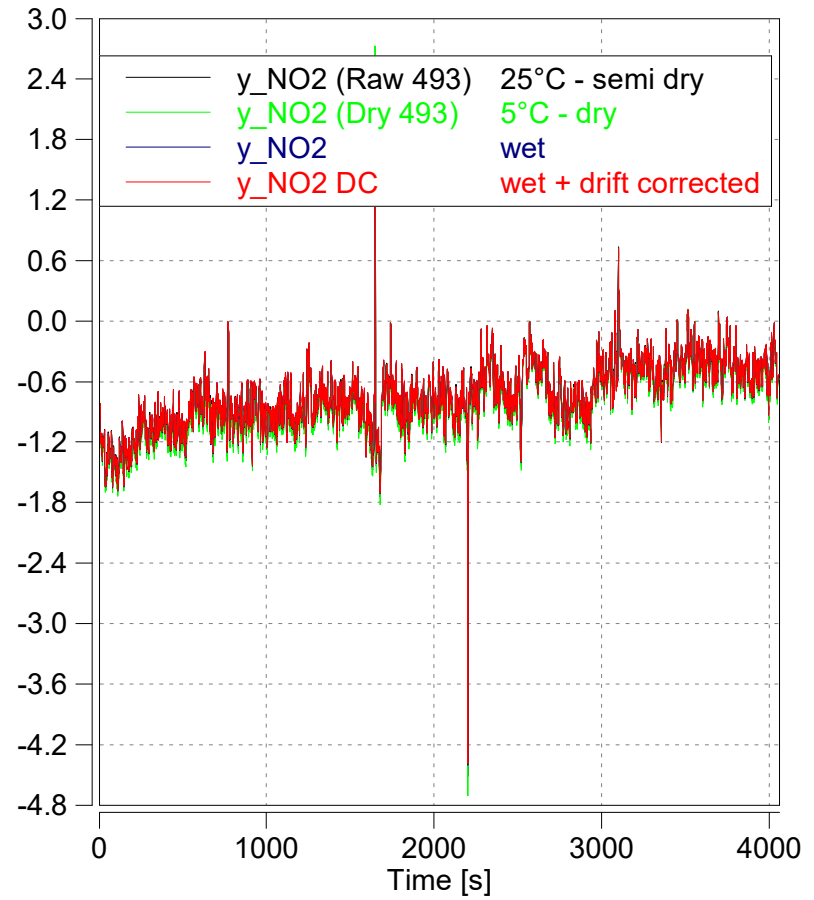
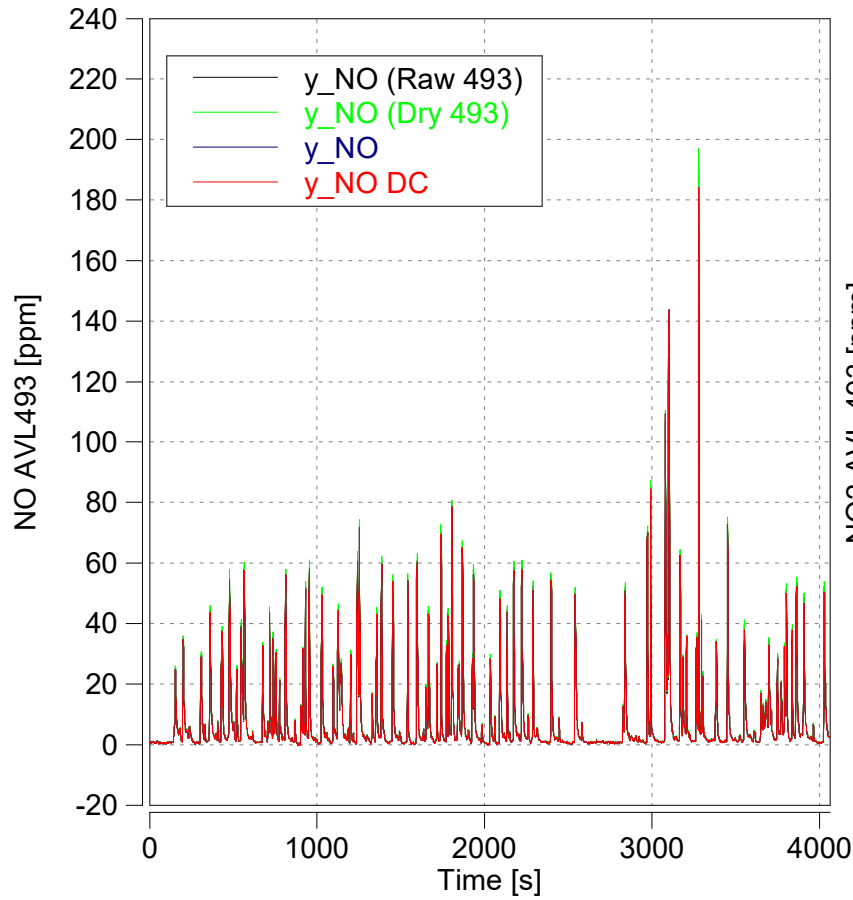
Start Date: 09/06/2017

Start Time: 07:30:18.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Jetta /
Engine: Gasoline / 1.4L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Jetta /
Engine: Gasoline / 1.4L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

NOx - AVL 493

y_NO (Raw 493)
y_NO2 (Raw 493)
25°C

EU R49 8.6.1
US §1065.672
drift correction

d_Kf_NO 25°C to dry
d_Kf_NO2 25°C to dry

- (1) EU R49 8.1.1 (15)
- (2) US §1065.655
- (3) none

y_NO DC (Dry 493)
y_NO2 DC (Dry 493)

y_NO (Dry 493)
y_NO2 (Dry 493)

CF dry/wet
(factor equal for all constituents)

CF NOx Ambient Conditions

y_NO DC
y_NO2 DC
wet

y_NO
y_NO2
wet

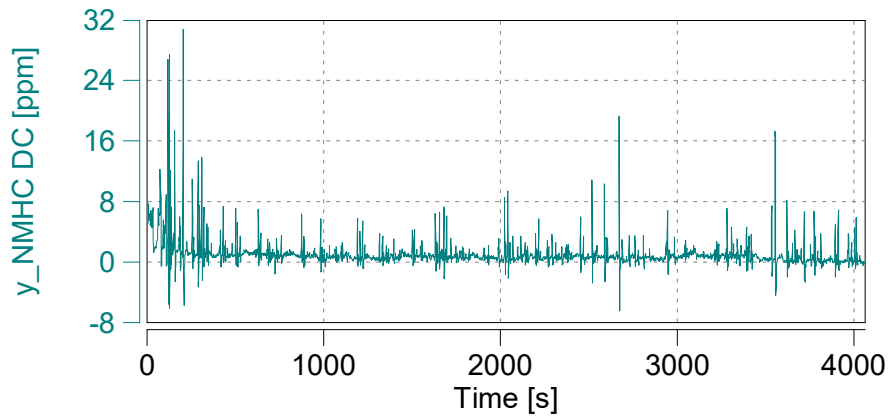
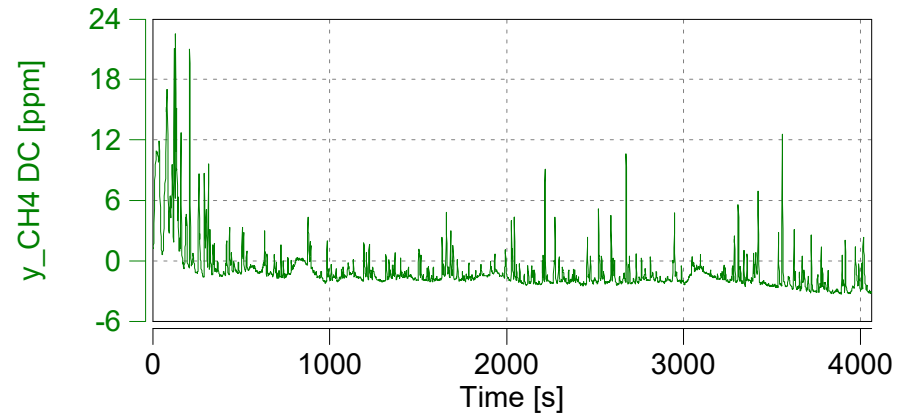
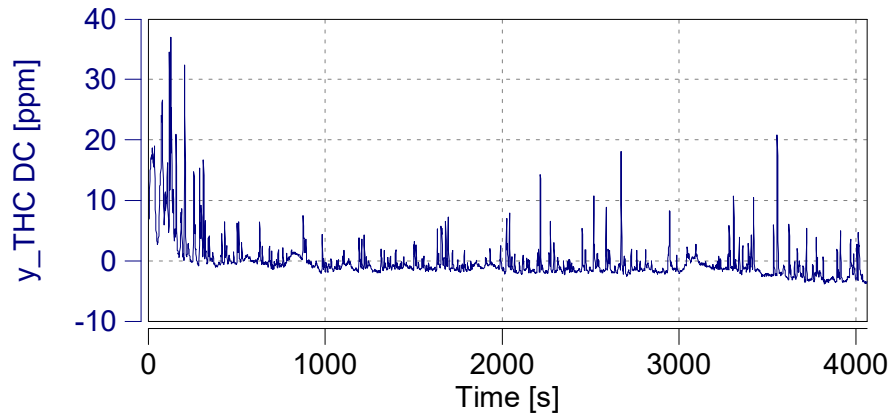
- (1) HD Diesel Engine SwRI FinalReport 08-2597, 1999
- (2) humidity only
- (3) equivalent uncorrected NOx limit method for EU in service
- (4) US §40.86.1342.94 Diesel
- (5) US §40.86.1342.94 SI
- (6) US §40.86.1370-2007 (default US)
- (7) US 40.1065.670
- (8) none (default EU)

Case: City

Page: Corrected Emissions (5)

Start Date: 09/06/2017

Start Time: 07:30:18.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

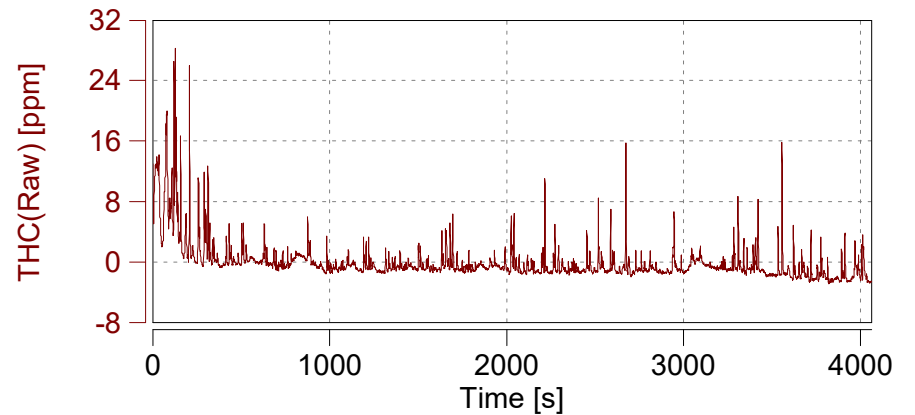
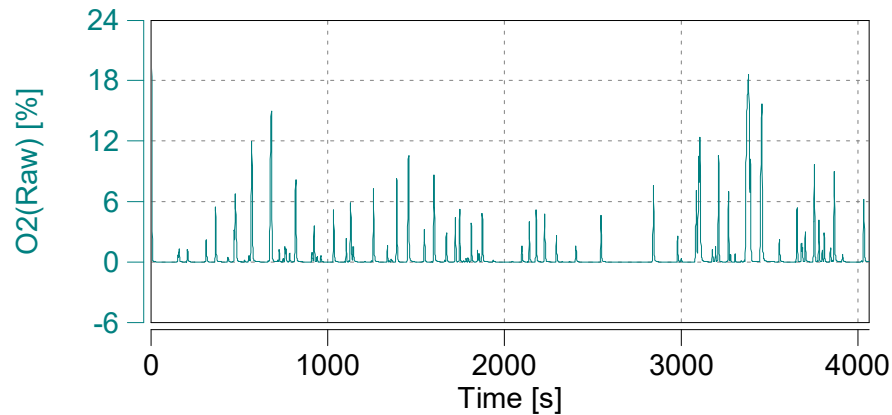
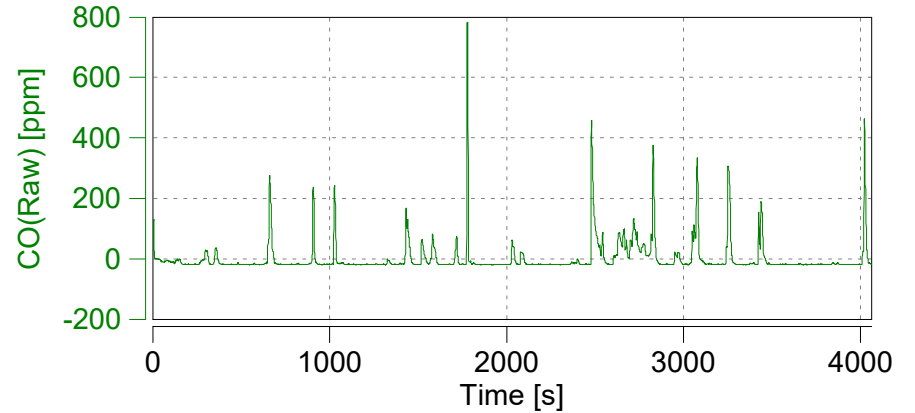
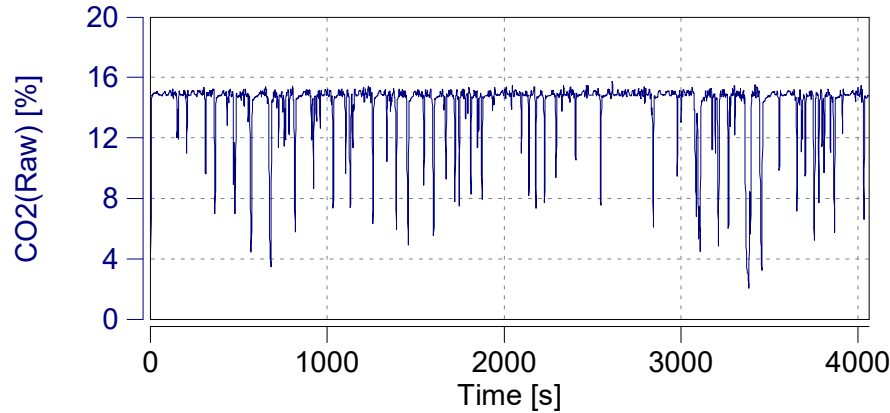
Vehicle: 2017 VW Jetta /
Engine: Gasoline / 1.4L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Emissions Raw Data (1)

Start Date: 09/06/2017

Start Time: 07:30:18.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

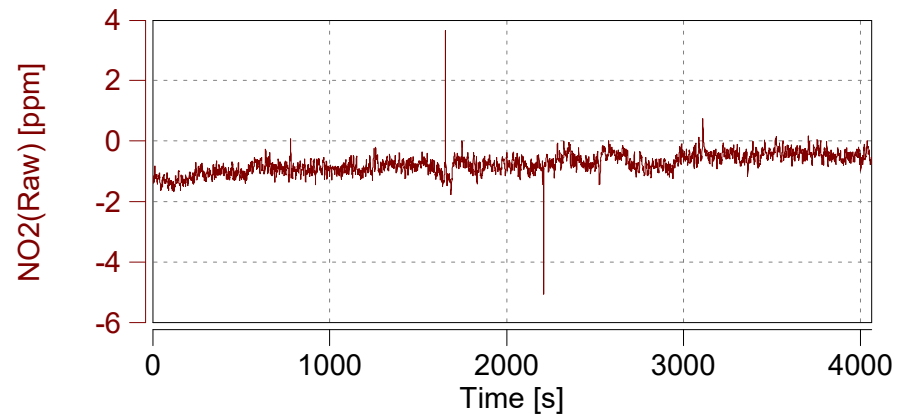
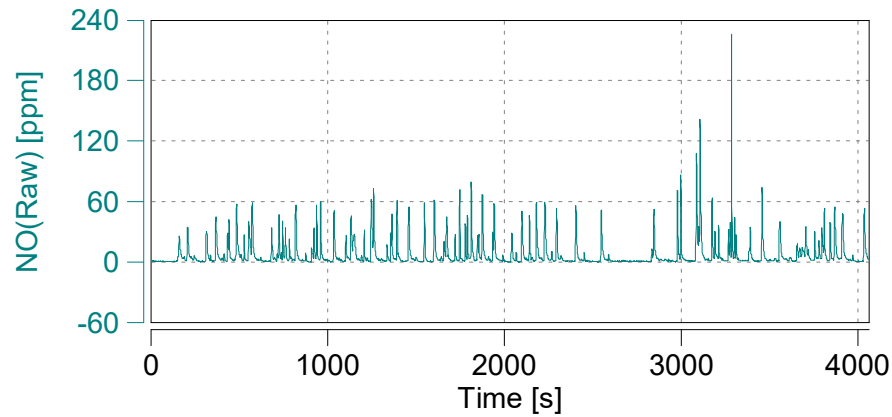
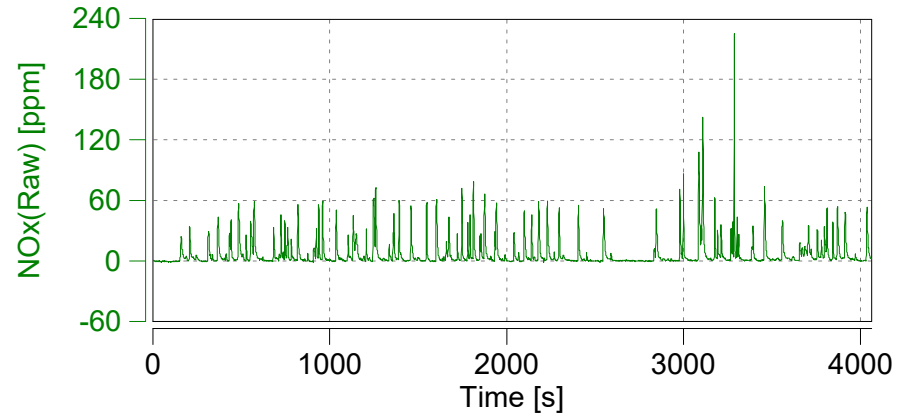
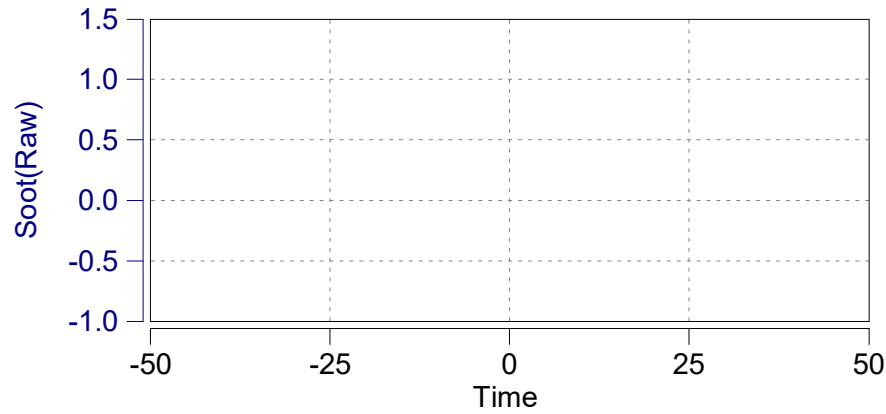
Vehicle: 2017 VW Jetta /
Engine: Gasoline / 1.4L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Emissions Raw Data (2)

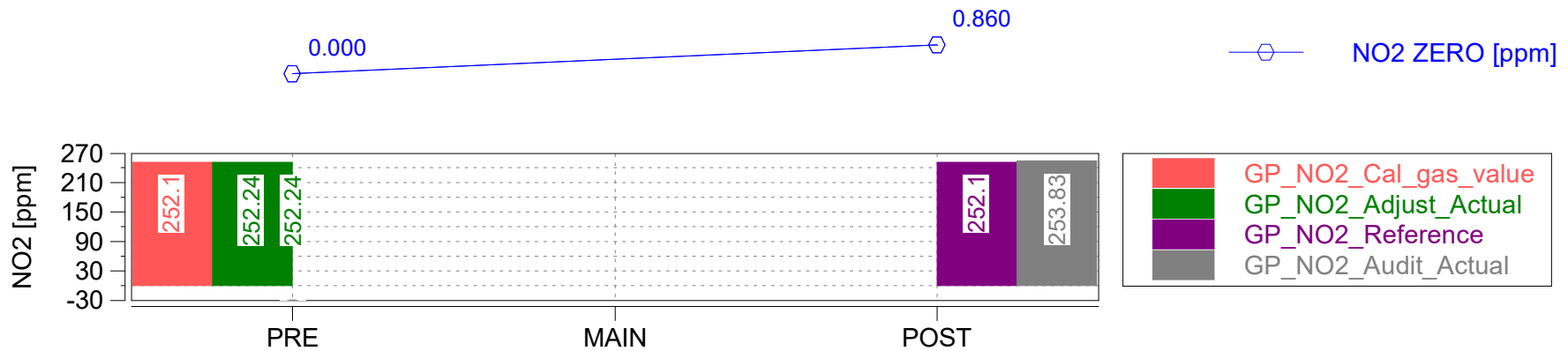
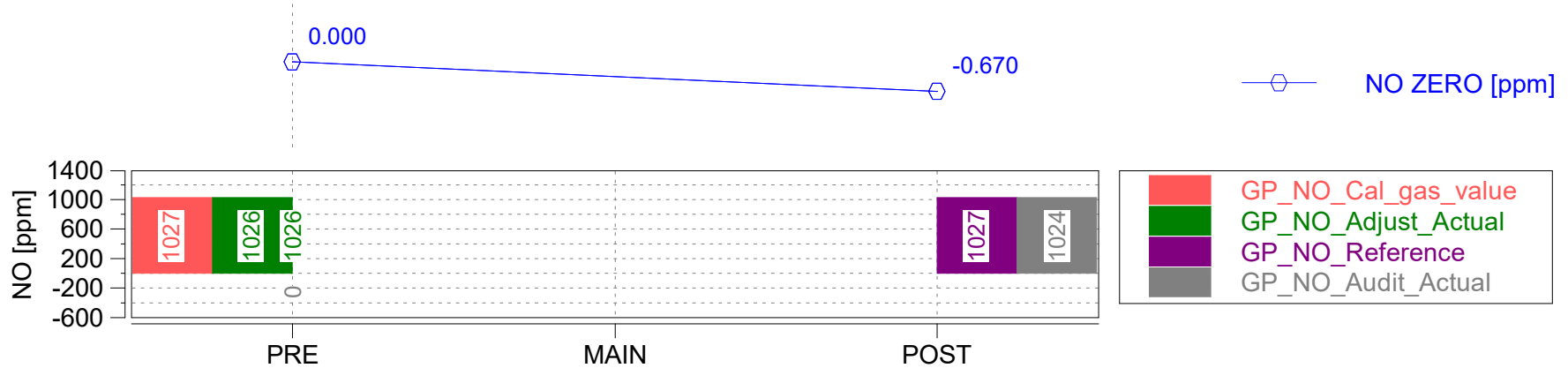
Start Date: 09/06/2017

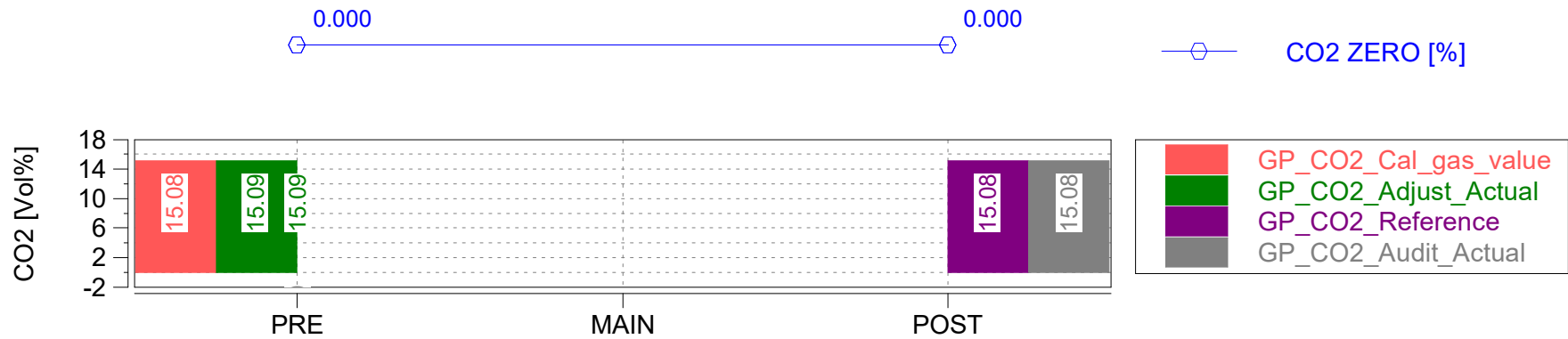
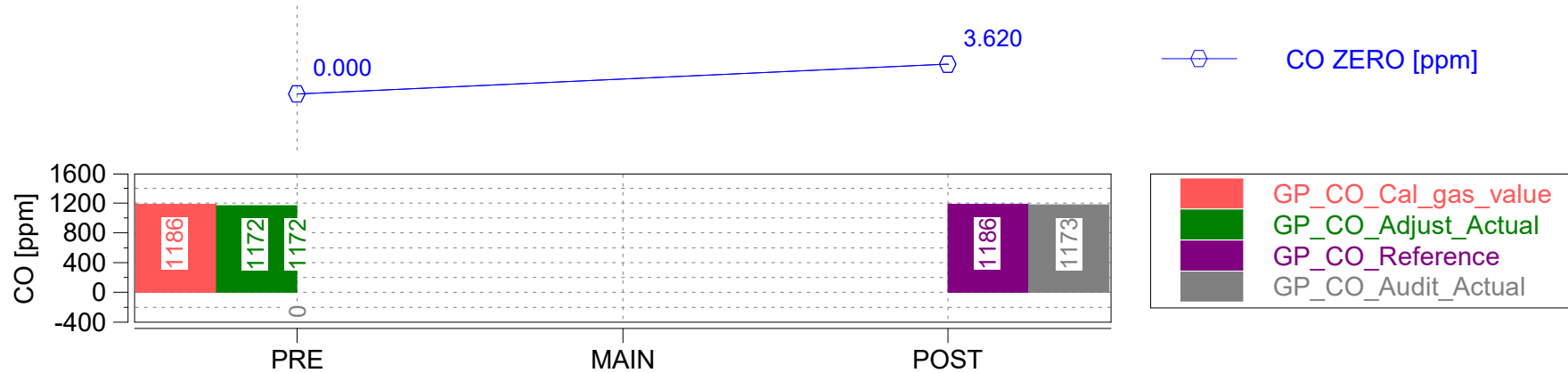
Start Time: 07:30:18.0

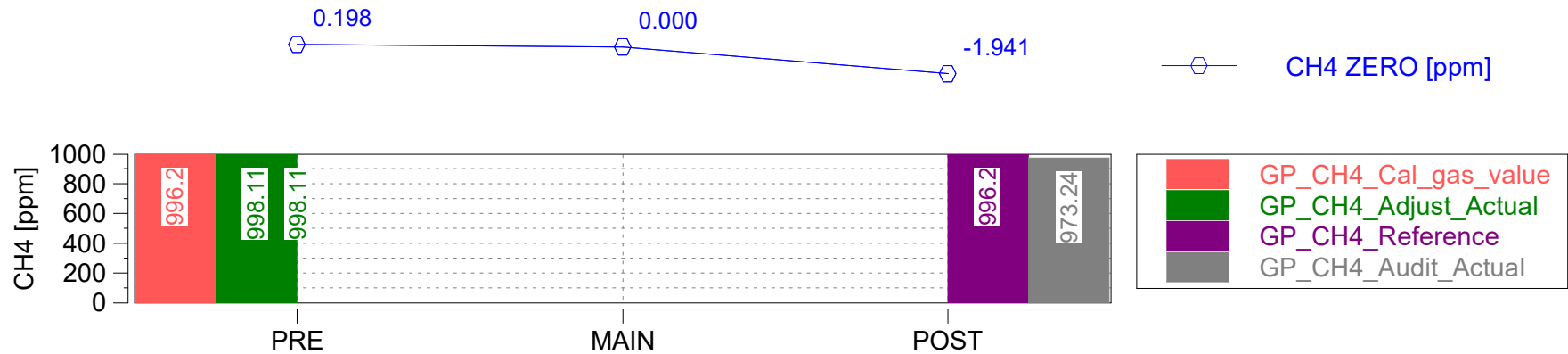
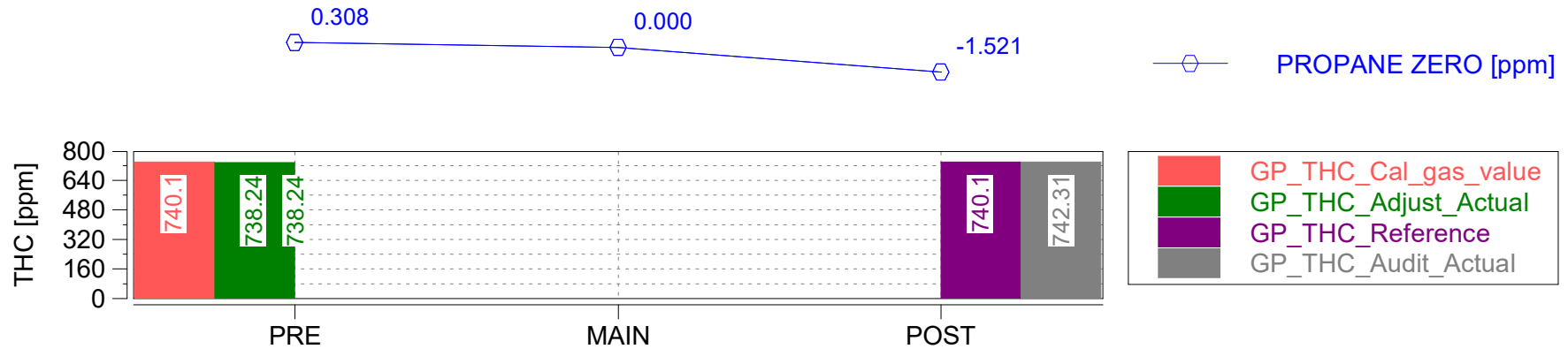


Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Jetta /
Engine: Gasoline / 1.4L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90







#	Text	Value	Unit
-	----	----	----
1.0	Test Start: Date	-	-
2.0	Test Start: Time	-	-
3.0	Ambient Temperature	IFILE1:TM'Temperature	deg C
4.0	Ambient Temperature TS	0.00000	s
5.0	Ambient Pressure	IFILE1:TM'Pressure	kPa
6.0	Ambient Pressure TS	0.00000	s
7.0	Humidity Type	1.00000	-
8.0	Amb. Rel. Humidity	IFILE1:TM'Humidity	%
9.0	Amb. Rel. Humidity	0.00000	s
10.0	GPS Latitude		deg
11.0	GPS Latitude TS	0.00000	s
12.0	GPS Longitude		deg
13.0	GPS Longitude TS	0.00000	s
14.0	Altitude		m
15.0	Altitude TS	0.00000	s
16.0	GPS Quality		-
17.0	GPS Quality TS	0.00000	s
18.0	GroundSpeed		km/h
19.0	GroundSpeed TS	0.00000	s
20.0	Altitude from topographical map		m
21.0	Altitude TS of topographical map		s
22.0	TRIP_AMBIENT_GPS_AVL	YES	-
23.0	CALC_GPS_GROUNDSPEED	NO	-
24.0	EXHAUST_FLOW_AVL	NO	-
25.0	EXHAUST_FLOW_AVL_EFM	YES	-
26.0	Exhaust Flow Type	2.00000	-
27.0	Mass Flow	IFILE1:TM'PitotEFM_ExhaustG	various
28.0	Mass Flow TS	0.80000	s
29.0	Exhaust Pressure		kPa
30.0	Exhaust Pressure TS	0.80000	s

#	Text	Value	Unit
-	----	----	----
31.0	Exhaust Delta Pressure		kPa
32.0	Exhaust Pressure Delta TS	0.80000	s
33.0	Exhaust Temperature	IFILE1:TM'PitotEFM_ExhaustG	degC
34.0	Exhaust Temperature TS	0.80000	s
35.0	Lambda	N/A	-
36.0	Lambda TS		s
37.0	CO2_DIL		%
38.0	CO2_DIL TS		s
39.0	CVS Volume Flow		m3/min
40.0	TimeShift_CVS_VOL_FLOW		s
41.0	IN_CVS_PRESSURE		kPa
42.0	TimeShift_CVS_PRESSURE		s
43.0	IN_CVS_TEMP		degC
44.0	TimeShift_CVS_TEMP		s
45.0	Dry to Wet Conversion CO2	YES	-
46.0	Dry to Wet Conversion O2	YES	-
47.0	Dry to Wet Conversion NO	NO	-
48.0	Dry to Wet Conversion NO2	NO	-
49.0	Dry to Wet Conversion THC	NO	-
50.0	Dry to Wet Conversion CH4	NO	-
51.0	Dry to Wet Conversion O2	NO	-
52.0	CO2	IFILE1:TM'GPiS_CO2	%
53.0	CO2 TS	-8.80000	s
54.0	OS	IFILE1:TM'GPiS_O2	%
55.0	O2 TS	-9.30000	s
56.0	CO	IFILE1:TM'GPiS_CO	ppm
57.0	CO TS	-8.80000	s
58.0	NO	IFILE1:TM'GPiS_NO	ppm
59.0	NO TS	-7.00000	s
60.0	NO2	IFILE1:TM'GPiS_NO2	ppm

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Jetta /
Engine: Gasoline / 1.4L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
61.0	NO2 TS	-7.00000	s
62.0	THC	IFILE1:TM'FIDiS_THC_C1	ppm
63.0	THC TS	0.00000	s
64.0	CH4	IFILE1:TM'FIDiS_CH4_C1	ppm
65.0	CH4 TS	0.00000	s
66.0	GAS_PEMS_Ethane_Efficiency	IFILE1:MOVE_AVL4925'GP_Et -	
67.0	GAS_PEMS_Methane_Efficiency	IFILE1:MOVE_AVL4925'GP_M -	
68.0	GAS_PEMS_Methane_Response	IFILE1:MOVE_AVL4925'GP_M -	
69.0	Zero Signal	IFILE1:TM'GPiS_STATE	0/1
70.0	Zero Signal TS	-7.00000	s
71.0	Zero Signal_FIDiS	IFILE1:TM'FIDiS_STATE	0/1
72.0	Zero Signal_FIDiS TS		s
73.0	Species Input Type	4.00000	-
74.0	GASPEMS=AVL493	NO	-
75.0	GASPEMS=AVL493_iX	NO	-
76.0	GASPEMS=AVL492	YES	-
77.0	GASPEMS=AVL4925	YES	-
78.0	PM: Type	4.00000	1=GFB+HC, 2=GFB, 3='PM=S
79.0	Filter ID from IFile	NO	-
80.0	Lab ID from IFile	NO	-
81.0	PM Filter: ID	N/A	ID
82.0	PM Filter: Lab	N/A	Name/ID
83.0	PM Filter: Weight before Test	N/A	mg
84.0	PM Filter: Weight after Test	N/A	mg
85.0	PM (HC Corr): Max. Exhaust Flow	N/A	scfm
86.0	Soot		mg/m3
87.0	Soot TS	-5.00000	s
88.0	Soot Sensor		mg/m3
89.0	Soot Sensor TS		s
90.0	PM Filter: Filter Flow Rate		l/min

#	Text	Value	Unit
-	----	----	----
91.0	PM Filter: Filter Flow Rate TS	-5.00000	s
92.0	PM Filter: Filter Dilution Ratio		-
93.0	PM Filter: Filter Dilution Ratio TS	-5.00000	s
94.0	PM Filter: Filter Trigger		-
95.0	PM Filter: Filter Trigger TS	-5.00000	s
96.0	PMPEMS=AVL494	YES	-
97.0	PMPEMS_AVL494_PROP_DIL	NO	-
98.0	PM dilution ratio min		-
99.0	PM_MaxExhaustFlowRate		-
100.0	PM_ExhaustFlow_Thresh		-
101.0	PM_total_flow_val		-
102.0	PM_total_flow_val_TS		-
103.0	PM_exh_mass_flow		-
104.0	PM_exh_mass_flow_TS		-
105.0	PN		#/cm3
106.0	TimeShift_PN		s
107.0	PN_STATE		-
108.0	PN TS STATE		s
109.0	PNPEMS_AVL496	NO	-
110.0	PN_CorrFactor	1.00000	
111.0	Time Alignment	1.00000	-
112.0	Time Alignment Dataset 1	N/A	0/1
113.0	Time Alignment Dataset 2	N/A	0/1
114.0	Time Alignment Thresh 1	N/A	-
115.0	Time Alignment Thresh 2	N/A	-
116.0			
117.0			
118.0			
119.0			
120.0			

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Jetta /
Engine: Gasoline / 1.4L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
121.0			
122.0	Trigger		0/1
123.0	Trigger TS		s
124.0	FTIR_NAME_1		-
125.0	FTIR_MW_1		-
126.0	FTIR_CHANNEL_1		-
127.0	FTIR_CHANNEL_TS_1		-
128.0	FTIR_CHANNEL_DRY_1	NO	-
129.0	FTIR_NAME_2		-
130.0	FTIR_MW_2		-
131.0	FTIR_CHANNEL_2		-
132.0	FTIR_CHANNEL_TS_2		-
133.0	FTIR_CHANNEL_DRY_2	NO	-
134.0	FTIR_NAME_3		-
135.0	FTIR_MW_3		-
136.0	FTIR_CHANNEL_3		-
137.0	FTIR_CHANNEL_TS_3		-
138.0	FTIR_CHANNEL_DRY_3	NO	-
139.0	FTIR_NAME_4		-
140.0	FTIR_MW_4		-
141.0	FTIR_CHANNEL_4		-
142.0	FTIR_CHANNEL_TS_4		-
143.0	FTIR_CHANNEL_DRY_4	NO	-
144.0	FTIR_NAME_5		-
145.0	FTIR_MW_5		-
146.0	FTIR_CHANNEL_5		-
147.0	FTIR_CHANNEL_TS_5		-
148.0	FTIR_CHANNEL_DRY_5	NO	-
149.0	FTIR_NAME_6		-
150.0	FTIR_MW_6		-

#	Text	Value	Unit
-	----	----	----
151.0	FTIR_CHANNEL_6		-
152.0	FTIR_CHANNEL_TS_6		-
153.0	FTIR_CHANNEL_DRY_6	NO	-
154.0	FTIR_NAME_7		-
155.0	FTIR_MW_7		-
156.0	FTIR_CHANNEL_7		-
157.0	FTIR_CHANNEL_TS_7		-
158.0	FTIR_CHANNEL_DRY_7	NO	-
159.0	FTIR_NAME_8		-
160.0	FTIR_MW_8		-
161.0	FTIR_CHANNEL_8		-
162.0	FTIR_CHANNEL_TS_8		-
163.0	FTIR_CHANNEL_DRY_8	NO	-
164.0	FTIR_NAME_9		-
165.0	FTIR_MW_9		-
166.0	FTIR_CHANNEL_9		-
167.0	FTIR_CHANNEL_TS_9		-
168.0	FTIR_CHANNEL_DRY_9	NO	-
169.0	FTIR_NAME_10		-
170.0	FTIR_MW_10		-
171.0	FTIR_CHANNEL_10		-
172.0	FTIR_CHANNEL_TS_10		-
173.0	FTIR_CHANNEL_DRY_10	NO	-
174.0	FTIR_NAME_11		-
175.0	FTIR_MW_11		-
176.0	FTIR_CHANNEL_11		-
177.0	FTIR_CHANNEL_TS_11		-
178.0	FTIR_CHANNEL_DRY_11	NO	-
179.0	FTIR_NAME_12		-
180.0	FTIR_MW_12		-

Concerto Version: 480 Build 215, Serial Number: 8468
 M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Jetta /
 Engine: Gasoline / 1.4L
 NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
 Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
181.0	FTIR_CHANNEL_12		-
182.0	FTIR_CHANNEL_TS_12		-
183.0	FTIR_CHANNEL_DRY_12	NO	-
184.0	FTIR_NAME_13		-
185.0	FTIR_MW_13		-
186.0	FTIR_CHANNEL_13		-
187.0	FTIR_CHANNEL_TS_13		-
188.0	FTIR_CHANNEL_DRY_13	NO	-
189.0	FTIR_NAME_14		-
190.0	FTIR_MW_14		-
191.0	FTIR_CHANNEL_14		-
192.0	FTIR_CHANNEL_TS_14		-
193.0	FTIR_CHANNEL_DRY_14	NO	-
194.0	FTIR_NAME_15		-
195.0	FTIR_MW_15		-
196.0	FTIR_CHANNEL_15		-
197.0	FTIR_CHANNEL_TS_15		-
198.0	FTIR_CHANNEL_DRY_15	NO	-
199.0	FTIR_NAME_16		-
200.0	FTIR_MW_16		-
201.0	Vehicle Type	2017 VW Jetta	-
202.0	Vehicle Info		-
203.0	Engine Type	Gasoline	-
204.0	Engine Info	1.4L	-
205.0	Engine Torque		Nm
206.0	Curb Idle Load		%
207.0	Idle Speed		rpm
208.0	HYBRID_OVC_REF_CO2_gkm		g/km
209.0	Engine Concept	1.00000	-
210.0	Alpha	1.93000	-

#	Text	Value	Unit
-	----	----	----
211.0	Beta	1.00000	
212.0	Gamma	0.00000	
213.0	Delta	0.00000	
214.0	Epsilon	0.03200	
215.0	X_C	83.00000	
216.0	X_H	13.30000	
217.0	X_N	0.00000	
218.0	X_O	3.50000	
219.0	X_S	0.00000	
220.0	Fuel_Density	747.50000	
221.0	rho_exhaust	1.29310	
222.0	U_CO2	1.51800	
223.0	U_CO	0.96600	
224.0	U_NO	1.58700	
225.0	U_NO2	1.58700	
226.0	U_NOx	1.58700	
227.0	U_HC	0.49900	
228.0	U_NMHC	0.47100	
229.0	U_CH4	0.55300	
230.0	U_O2	1.10400	
231.0	Fuel Type	2.00000	-
232.0	exhaust mass flow type (YES/NO)	YES	-
233.0	Distance Calculation Type	1.00000	-
234.0	Velocity Statistics Calculation Type	2.00000	-
235.0	RDE vehicle class	1.00000	-
236.0	TM_CITY0		s
237.0	TM_CITY1		s
238.0	TM_RURAL0		s
239.0	TM_RURAL1		s
240.0	TM_RURAL2_0		s

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Jetta /
Engine: Gasoline / 1.4L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
241.0	TM_RURAL2_1		s
242.0	Second Rural Part for Time Marks (NO		-
243.0	TM_MW0		s
244.0	TM_MW1		s
245.0	VELOCITY_LIMIT_STOP	2.00000	km/h
246.0	VELOCITY_LIMIT_URBAN	50.00000	km/h
247.0	VELOCITY_LIMIT_RURAL	75.00000	km/h
248.0	Intake Manifold Pressure Type	1.00000	-
249.0	Velocity	IFILE1:TM'OBD_Vehicle_Spee	km/h
250.0	Velocity TS	1.30000	s
251.0	Velocity FACTOR	1.00000	-
252.0	Coolant Temperature	IFILE1:TM'OBD_Engine_Coola	degC
253.0	Coolant Temperature TS	1.30000	s
254.0	Oil Temperature		degC
255.0	Oil Temperature TS	1.30000	s
256.0	Intake Manifold Temperature		degC
257.0	Intake Manifold Temp TS	1.30000	s
258.0	Intake Manifold Pressure	IFILE1:TM'OBD_Intake_manifo	kPa
259.0	Intake Manifold Pressure TS	1.30000	s
260.0	Throttle Position		%
261.0	Throttle TS	1.30000	s
262.0	TYP_IDLE_MASS_FLOW		kg/h
263.0	Torque Type	1.00000	-
264.0	Speed	IFILE1:TM'OBD_Engine_RPM	rpm
265.0	Speed TS	1.30000	s
266.0	Torque		Nm
267.0	Torque TS	1.30000	s
268.0	Friction Torque	N/A	Nm
269.0	Friction Torque TS	N/A	s
270.0	Reference Torque	N/A	Nm

#	Text	Value	Unit
-	----	----	----
271.0	Reference Torque TS	N/A	s
272.0	k_VELINE		-
273.0	D_VELINE		-
274.0	Fuel Flow Type	2.00000	-
275.0	Air Flow Type	1.00000	-
276.0	Fuel Rate		various
277.0	Air Rate		various
278.0	Fuel Rate TS	1.30000	s
279.0	No_Cylinders		-
280.0	Air Rate TS	1.30000	s
281.0	FTIR_CHANNEL_32		-
282.0	FTIR_CHANNEL_TS_32		-
283.0	FTIR_CHANNEL_DRY_32	NO	-
284.0	FTIR_NAME_33		-
285.0	FTIR_MW_33		-
286.0	FTIR_CHANNEL_33		-
287.0	FTIR_CHANNEL_TS_33		-
288.0	FTIR_CHANNEL_DRY_33	NO	-
289.0	FTIR_NAME_34		-
290.0	FTIR_MW_34		-
291.0	FTIR_CHANNEL_34		-
292.0	FTIR_CHANNEL_TS_34		-
293.0	FTIR_CHANNEL_DRY_34	NO	-
294.0	FTIR_NAME_35		-
295.0	FTIR_MW_35		-
296.0	FTIR_CHANNEL_35		-
297.0	FTIR_CHANNEL_TS_35		-
298.0	FTIR_CHANNEL_DRY_35	NO	-
299.0	FTIR_NAME_36		-
300.0	FTIR_MW_36		-

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Jetta /
Engine: Gasoline / 1.4L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
301.0	FTIR_CHANNEL_36	-	-
302.0	FTIR_CHANNEL_TS_36	-	-
303.0	FTIR_CHANNEL_DRY_36	NO	-
304.0	FTIR_NAME_37	-	-
305.0	FTIR_MW_37	-	-
306.0	FTIR_CHANNEL_37	-	-
307.0	FTIR_CHANNEL_TS_37	-	-
308.0	FTIR_CHANNEL_DRY_37	NO	-
309.0	FTIR_NAME_38	-	-
310.0	FTIR_MW_38	-	-
311.0	FTIR_CHANNEL_38	-	-
312.0	FTIR_CHANNEL_TS_38	-	-
313.0	FTIR_CHANNEL_DRY_38	NO	-
314.0	FTIR_NAME_39	-	-
315.0	FTIR_MW_39	-	-
316.0	FTIR_CHANNEL_39	-	-
317.0	FTIR_CHANNEL_TS_39	-	-
318.0	FTIR_CHANNEL_DRY_39	NO	-
319.0	FTIR_NAME_40	-	-
320.0	FTIR_MW_40	-	-
321.0	FTIR_CHANNEL_40	-	-
322.0	FTIR_CHANNEL_TS_40	-	-
323.0	FTIR_CHANNEL_DRY_40	NO	-
324.0	Legislation Type (1=HDIUT 2=EU H	4.00000	-
325.0	WholeTest_NOx_corr	5.00000	-
326.0	WholeTest_Hum_corr	2.00000	-
327.0	CD_Distance	0.00000	km
328.0	CD_NOx	0.00000	mg/km
329.0	CD_CO	0.00000	mg/km
330.0	CD_CO2	0.00000	g/km

#	Text	Value	Unit
-	----	----	----
331.0	CD_NMHC	0.00000	mg/km
332.0	CD_CH4	0.00000	mg/km
333.0	CD_THC	0.00000	mg/km
334.0	CD_PN	-	#/km
335.0	WLTC_LOW_SPEED_gkm	-	g/km
336.0	WLTC_LOW_SPEED_FAC	1.20000	-
337.0	WLTC_MEDIUM_SPEED_gkm	-	g/km
338.0	WLTC_HIGH_SPEED_gkm	-	g/km
339.0	WLTC_HIGH_SPEED_FAC	1.10000	-
340.0	WLTC_EXTRA_HIGH_SPEED_gkm	-	g/km
341.0	WLTC_EXTRA_HIGH_SPEED_FA	1.05000	-
342.0	TOL_NORMAL_DRIVING	25.00000	%
343.0	TOL_SEVERE_DRIVING	50.00000	%
344.0	Increase Tolerance Nomral Driving	NO	-
345.0	Bin1_min	-	km/h
346.0	Bin2_min	-	km/h
347.0	Bin3_min	-	km/h
348.0	Bin1_max	-	km/h
349.0	Bin2_max	-	km/h
350.0	Bin3_max	-	km/h
351.0	Clear_R0	125.40000	N
352.0	Clear_R1	0.29300	Nh/km
353.0	Clear_R2	0.02795	N*(h/km) ²
354.0	Clear_SMK	1470.00000	kg
355.0	Clear_Rated_Power	140.00000	kW
356.0	Clear_Ref_Velocity	70.00000	km/h
357.0	Clear_Ref_Acc	0.45000	m/s ²
358.0	Clear_Smooth	3.00000	s
359.0	EXTC_From_High_Temp	30.00000	degC
360.0	EXTC_To_High_Temp	35.00000	degC

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Jetta /
Engine: Gasoline / 1.4L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
361.0	EXTC_From_Low_Temp	-7.00000	degC
362.0	EXTC_To_Low_Temp	0.00000	degC
363.0	Euro 6d or Euro 6d temp	NO	-
364.0	EXTC_From_Altitude	700.00000	m
365.0	EXTC_To_Altitude	1300.00000	m
366.0	EXTC_CORR_FAC	1.60000	
367.0	weight cold start (YES/NO)	NO	-
368.0	precon and soak done (YES/NO)	NO	-
369.0	PATH_PRECON_FILE		
370.0	filter velocity (YES/NO)	NO	-
371.0	filter velocity auto(YES/NO)	NO	-
372.0	Ki_CO		
373.0	Ki_CO2		
374.0	Ki_NOx		
375.0	Ki_FACTOR_CO2 (YES/NO)	NO	-
376.0	Ki_OFFSET_CO2 (YES/NO)	NO	-
377.0	Ki_FACTOR_CO (YES/NO)	NO	-
378.0	Ki_OFFSET_CO (YES/NO)	NO	-
379.0	Ki_FACTOR_NOx (YES/NO)	NO	-
380.0	Ki_OFFSET_NOx (YES/NO)	NO	-
381.0	Ki_OFF (YES/NO)	NO	-
382.0	HD legislations	1.00000	-
383.0	RDE legislations	1.00000	-
384.0	Submission Documents (YES/NO)	NO	-
385.0	General Setup Parameters Text	City	-
386.0	Legislation Setup Parameters Text	City	-
387.0	Trip Info		-
388.0	IN_TIME_REF		-
389.0	Sub-Trip Start: Auto	YES	-
390.0	Sub-Trip Start: Seconds	N/A	s

#	Text	Value	Unit
-	----	----	----
391.0	Sub-Trip End: Auto	YES	-
392.0	Sub-Trip End: Seconds	N/A	s
393.0	Unit System	2.00000	-
394.0	Calculate: PM Emissions	NO	-
395.0	Calculate: PN Emissions	NO	-
396.0	Output: Summary	YES	-
397.0	Output: Emissions	YES	-
398.0	Output: Raw Data	YES	-
399.0	Output: Zero Span	YES	-
400.0	Output: Data Consistency	NO	-
401.0	Output: Window Plots	YES	-
402.0	Fuel Rate ECU vs. EU ISO16183	y = 10000000000.0000 x - 0.000 R ² =10000000000.000 SEE=	
403.0	PEMS post processing version	Rel_10_B192	
404.0	Concerto version	480.00000	
405.0	Concerto build	215.00000	
406.0	USERNAME	EFR	

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Jetta /
Engine: Gasoline / 1.4L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway
Page: Trip Summary

Start Date: 09/20/2017
Start Time: 07:29:33.0



Trip Duration	3442.00	s	ave THC	8.82190	ppm	BS CO2	n/a	g/hphr
Trip Duration (a)	3442.00	s	ave NMHC	11.64136	ppm	BS CO	n/a	g/hphr
Trip Distance	38.90	mi	ave CH4	-2.56314	ppm	BS THC	n/a	g/hphr
Trip Distance (a)	38.90	mi	ave CO	162.08016	ppm	BS NMHC	n/a	g/hphr
Trip Fuel Cons. (b)	n/a	kg	ave CO2	12.18054	%	BS CH4	n/a	g/hphr
Trip Fuel Cons. (ab)	n/a	kg	ave NOx	5.27228	ppm	BS NO (d)	n/a	g/hphr
Trip Fuel Cons. EU (ac)	4.47	kg	ave PM	n/a	mg/m3	BS NO2	n/a	g/hphr
Trip Fuel Cons. US (ac)	4.43	kg	ave Soot meas	n/a	mg/m3	BS NOx	n/a	g/hphr
Trip Fuel Cons. Volume (b)	n/a	gall	ave Soot	n/a	mg/m3	BS Soot	n/a	g/hphr
Trip Fuel Cons. Volume (ab)	n/a	gall	ave PN	n/a	#/cm3	BS Soot meas	n/a	g/hphr
Trip Fuel Cons. Volume EU (ac)	1.58	gall	tot THC	0.49354	g	BS PM	n/a	g/hphr
Trip Fuel Cons. Volume US (ac)	1.57	gall	tot NMHC	0.54373	g	BS PN	n/a	#/hpr
Trip Fuel Economy (b)	n/a	mpg_US	tot CH4	0.02870	g	DS CO2	346.20596	g/mi
Trip Fuel Economy (ab)	n/a	mpg_US	tot CO	12.19770	g	DS CO	0.31357	g/mi
Trip Fuel Economy EU (ac)	24.62	mpg_US	tot CO2	13467.01726	g	DS THC	0.01269	g/mi
Trip Fuel Economy US (ac)	24.82	mpg_US	tot NO (d)	0.30351	g	DS NMHC	0.01398	g/mi
Trip Av. Eng. Speed	1351.74	rpm	tot NO2	0.05243	g	DS CH4	0.00074	g/mi
Trip Av. Torque	n/a	lbft	tot NOx	0.35386	g	DS NO (d)	0.00780	g/mi
Trip Av. Power	n/a	hp	tot Soot	n/a	g	DS NO2	0.00135	g/mi
Trip Work	n/a	hphr	tot Soot meas	n/a	g	DS NOx	0.00910	g/mi
Trip Exhaust Mass	69.84	kg	tot PM	n/a	g	DS Soot	n/a	g/mi
Trip Exhaust Mass EU (ac)	n/a	kg	tot PN	n/a	#	DS Soot meas	n/a	g/mi
Trip Exhaust Mass US (ac)	n/a	kg	PM measurement type	0.00000	-	DS PM	n/a	g/mi
Trip Av. Amb. Temperature	74.88	deg_F	PM correction type	1.00000	alpha(HC)	DS PN	n/a	#/mi
Trip Av. Humidity	50.16	%	tot Soot on PM filter (estim.)	n/a	mg	FS CO2	n/a	g/kg
Fuel Type	Petrol (E10)		Soot --> PM simple scaling factor	1.00000	-	FS CO	n/a	g/kg
			Soot --> PM alpha scaling factor	0.00000	-	FS THC	n/a	g/kg
			Trip Av. Veh. Speed	40.68446	mi/hr	FS NMHC	n/a	g/kg
			Trip Velocity Zero	4.35793	%	FS CH4	n/a	g/kg
			Trip Velocity Urban	40.06392	%	FS NO (d)	n/a	g/kg
			Trip Velocity Rural	7.26322	%	FS NO2	n/a	g/kg
			Trip Velocity Motorway	52.67286	%	FS NOx	n/a	g/kg
						FS Soot	n/a	g/kg
						FS Soot meas	n/a	g/kg
						FS PM	n/a	g/kg
						FS PN	n/a	#/kg

(a) GAS PEMS measurement state only, (b) based on fuel rate input (ECU, Fuel Meter), (c) calculated from carbon balance
(d) NO calculated using molecular weight of NO2

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi Q7 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

Page: Trip Summary Drift Corrected

Start Date: 09/20/2017

Start Time: 07:29:33.0



Trip Duration	3442.00	s	ave THC DC	11.91452	ppm	BS CO2 DC	n/a	g/hphr
Trip Duration (a)	3442.00	s	ave NMHC DC	14.79460	ppm	BS CO DC	n/a	g/hphr
Trip Distance	38.90	mi	ave CH4 DC	-2.61826	ppm	BS THC DC	n/a	g/hphr
Trip Distance (a)	38.90	mi	ave CO DC	163.33409	ppm	BS NMHC DC	n/a	g/hphr
Trip Fuel Cons. (b)	n/a	kg	ave CO2 DC	12.18863	%	BS CH4 DC	n/a	g/hphr
Trip Fuel Cons. (ab)	n/a	kg	ave NOx DC	5.27481	ppm	BS NO DC (d)	n/a	g/hphr
Trip Fuel Cons. EU (ac)	4.47	kg	ave PM	n/a	mg/m3	BS NO2 DC	n/a	g/hphr
Trip Fuel Cons. US (ac)	4.43	kg	ave Soot meas	n/a	mg/m3	BS NOx DC	n/a	g/hphr
Trip Fuel Cons. Volume (b)	n/a	gall	ave Soot	n/a	mg/m3	BS Soot	n/a	g/hphr
Trip Fuel Cons. Volume (ab)	n/a	gall	ave PN DC	n/a	#/cm3	BS Soot meas	n/a	g/hphr
Trip Fuel Cons. Volume EU (ac)	1.58	gall	tot THC DC	0.66656	g	BS PM	n/a	g/hphr
Trip Fuel Cons. Volume US (ac)	1.57	gall	tot NMHC DC	0.69579	g	BS PN DC	n/a	#/hpr
Trip Fuel Economy (b)	n/a	mpg_US	tot CH4 DC	0.02755	g	DS CO2 DC	346.43569	g/mi
Trip Fuel Economy (ab)	n/a	mpg_US	tot CO DC	12.29206	g	DS CO DC	0.31600	g/mi
Trip Fuel Economy EU (ac)	24.62	mpg_US	tot CO2 DC	13475.95357	g	DS THC DC	0.01714	g/mi
Trip Fuel Economy US (ac)	24.82	mpg_US	tot NO DC (d)	0.30372	g	DS NMHC DC	0.01789	g/mi
Trip Av. Eng. Speed	1351.74	rpm	tot NO2 DC	0.05235	g	DS CH4 DC	0.00071	g/mi
Trip Av. Torque	n/a	lbft	tot NOx DC	0.35399	g	DS NO DC (d)	0.00781	g/mi
Trip Av. Power	n/a	hp	tot Soot	n/a	g	DS NO2 DC	0.00135	g/mi
Trip Work	n/a	hphr	tot Soot meas	n/a	g	DS NOx DC	0.00910	g/mi
Trip Exhaust Mass	69.84	kg	tot PM	n/a	g	DS Soot	n/a	g/mi
Trip Exhaust Mass EU (ac)	n/a	kg	tot PN DC	n/a	#	DS Soot meas	n/a	g/mi
Trip Exhaust Mass US (ac)	n/a	kg	PM measurement type	0.00000	-	DS PM	n/a	g/mi
Trip Av. Amb. Temperature	74.88	deg_F	PM correction type	1.00000	alpha(HC)	DS PN DC	n/a	#/mi
Trip Av. Humidity	50.16	%	tot Soot on PM filter (estim.)	n/a	mg	FS CO2 DC	n/a	g/kg
Fuel Type	Petrol (E10)		Soot --> PM simple scaling factor	1.00000	-	FS CO DC	n/a	g/kg
			Soot --> PM alpha scaling factor	0.00000	-	FS THC DC	n/a	g/kg
			Trip Av. Veh. Speed	40.68446	mi/hr	FS NMHC DC	n/a	g/kg
			Trip Velocity Zero	4.35793	%	FS CH4 DC	n/a	g/kg
			Trip Velocity Urban	40.06392	%	FS NO DC (d)	n/a	g/kg
			Trip Velocity Rural	7.26322	%	FS NO2 DC	n/a	g/kg
			Trip Velocity Motorway	52.67286	%	FS NOx DC	n/a	g/kg
						FS Soot	n/a	g/kg
						FS Soot meas	n/a	g/kg
						FS PM	n/a	g/kg
						FS PN DC	n/a	#/kg

(a) GAS PEMS measurement state only, (b) based on fuel rate input (ECU, Fuel Meter), (c) calculated from carbon balance
 (d) NO calculated using molecular weight of NO2

Concerto Version: 480 Build 215, Serial Number: 8468
 M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi Q7 /
 Engine: Gasoline / 3.0L
 NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
 Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

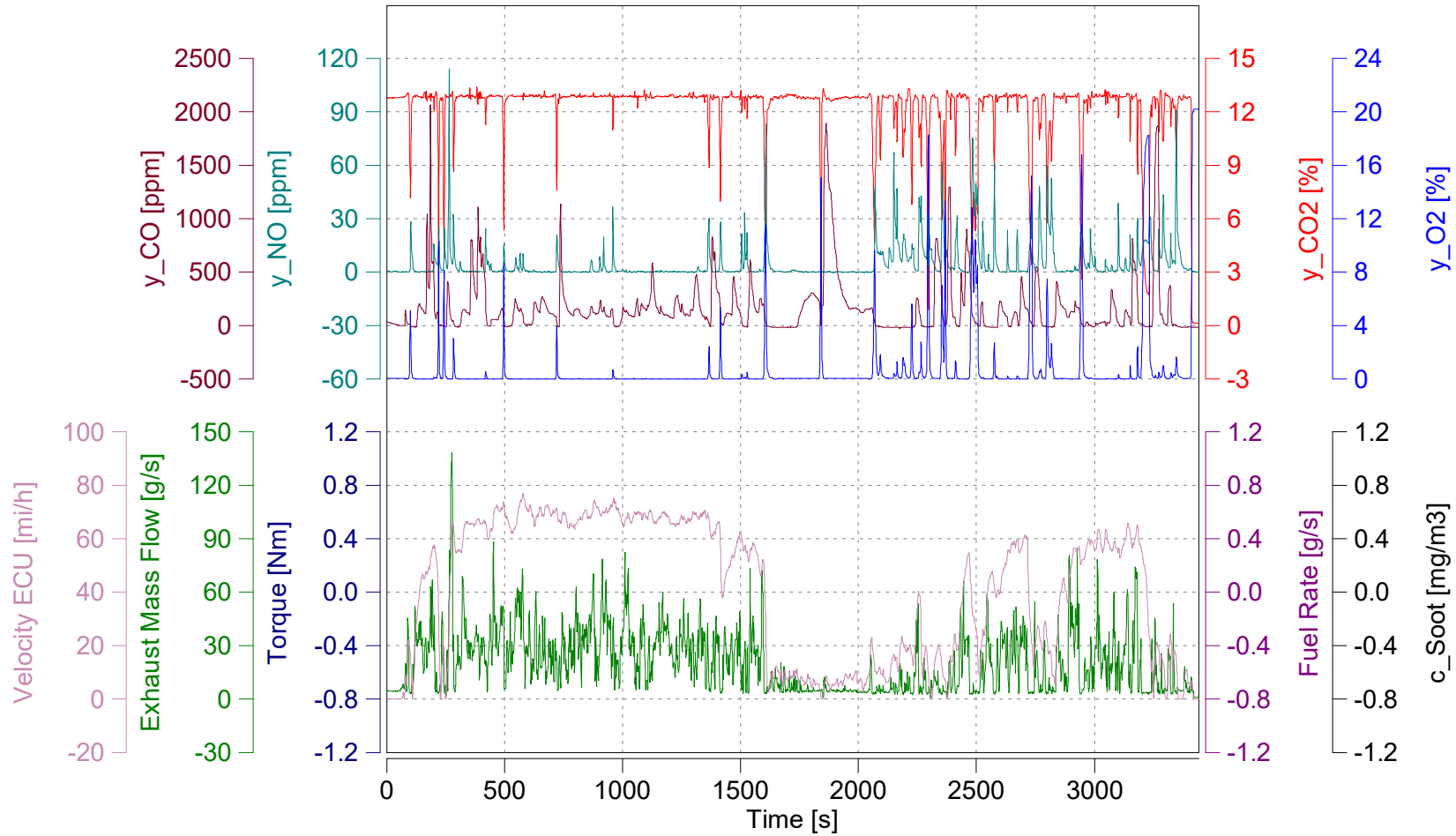
Page: Time Alignment Check

Start Date: 09/20/2017

Start Time: 07:29:33.0



Concerto M.O.V.E., 2017



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

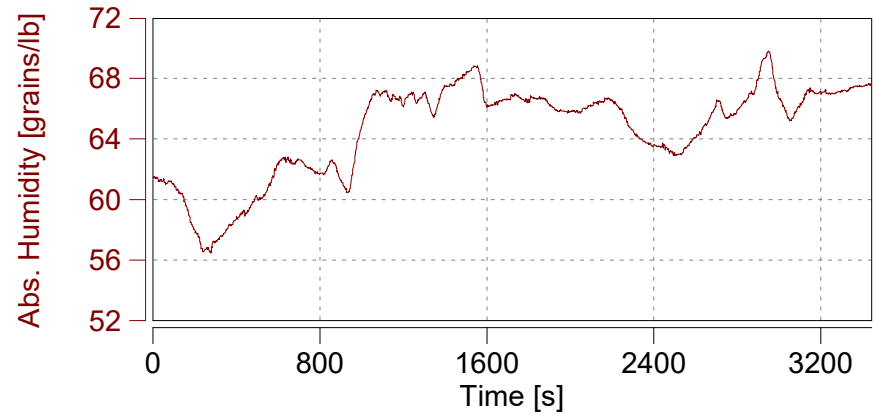
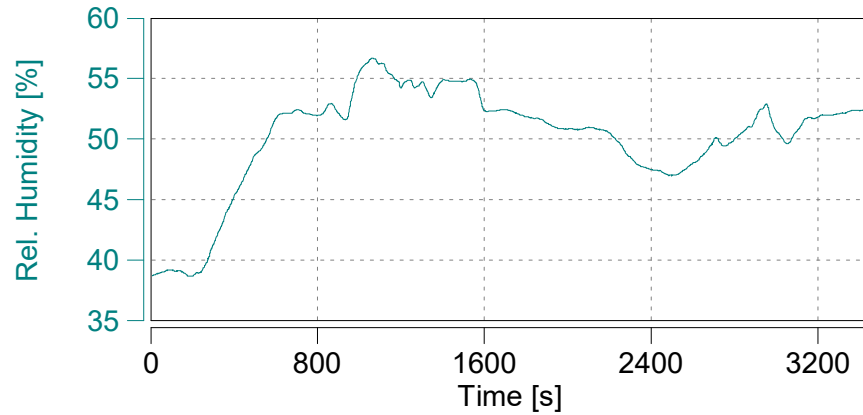
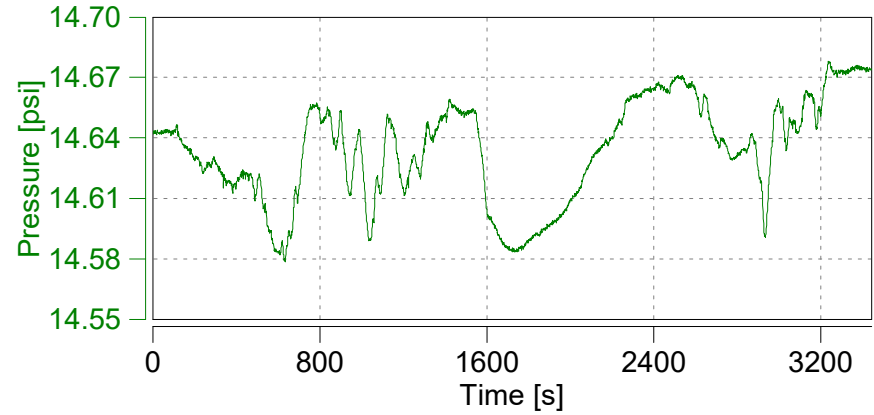
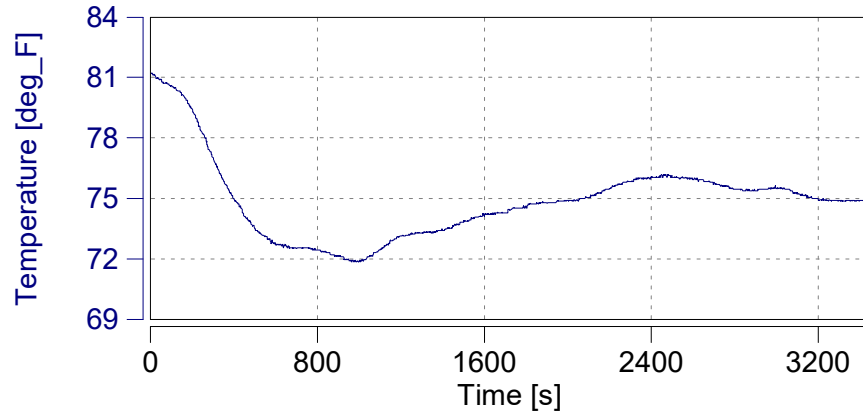
Vehicle: 2017 Audi Q7 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

Page: Ambient Conditions

Start Date: 09/20/2017

Start Time: 07:29:33.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

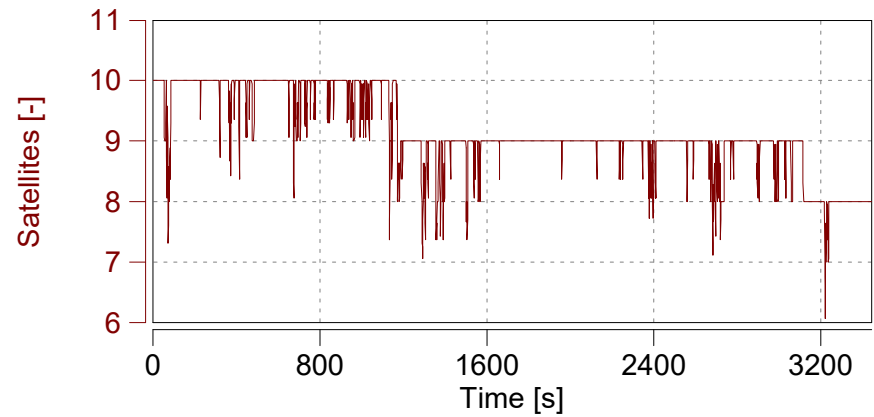
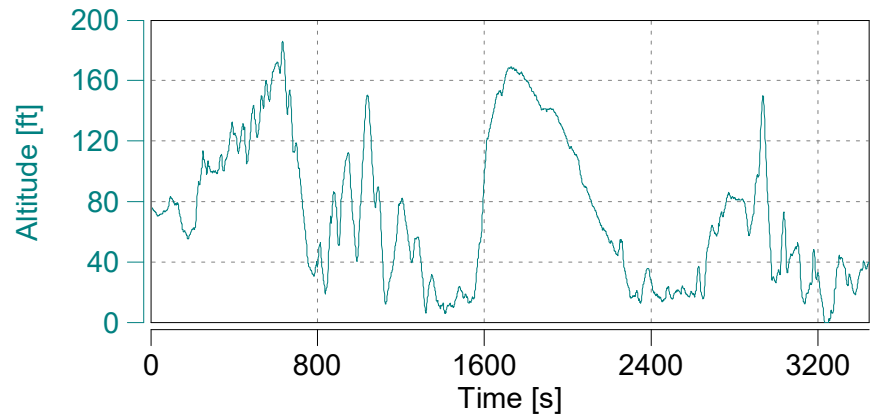
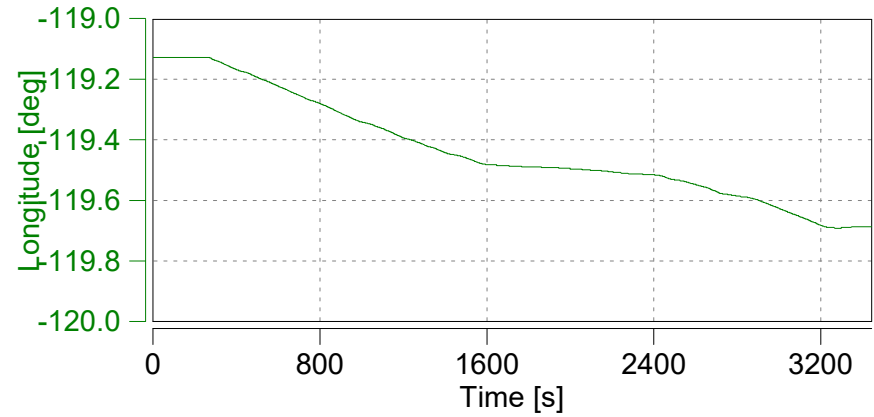
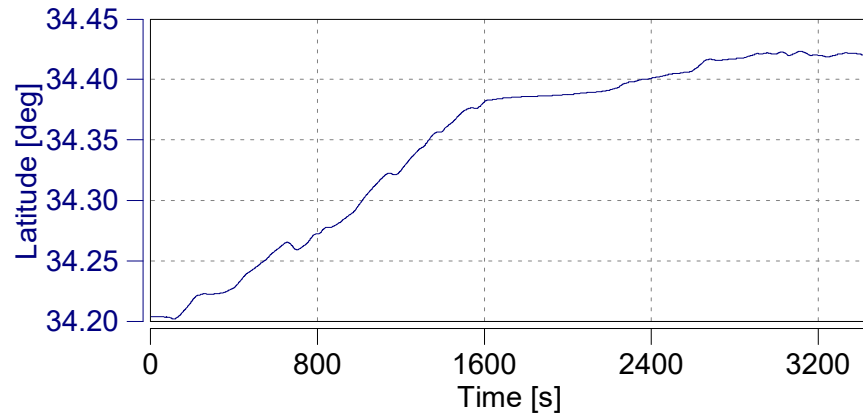
Vehicle: 2017 Audi Q7 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

Page: GPS

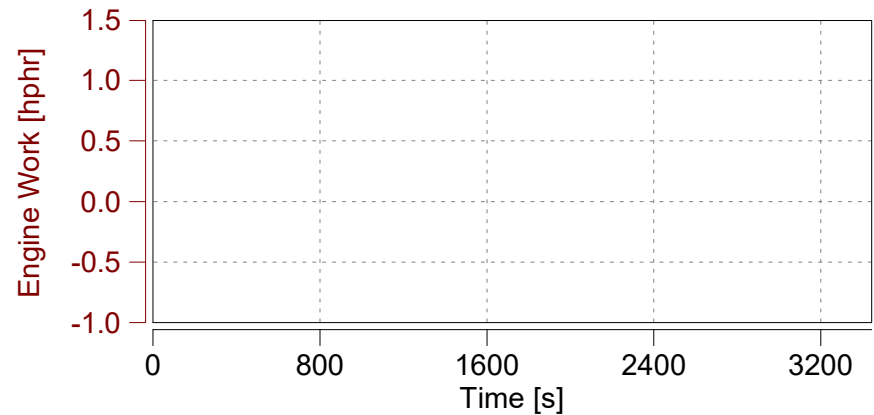
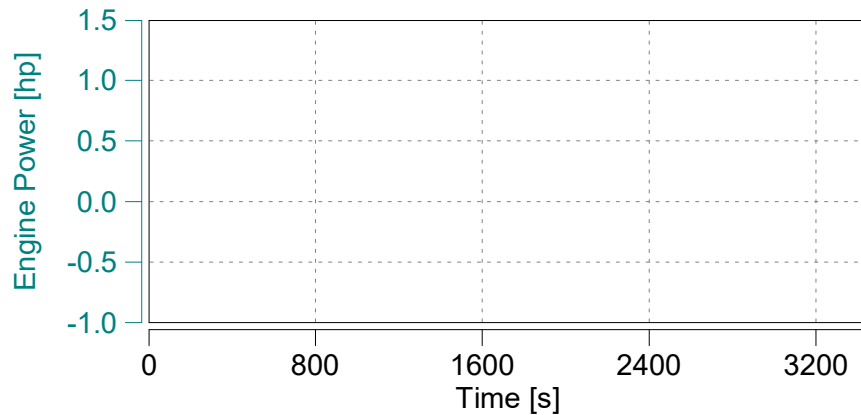
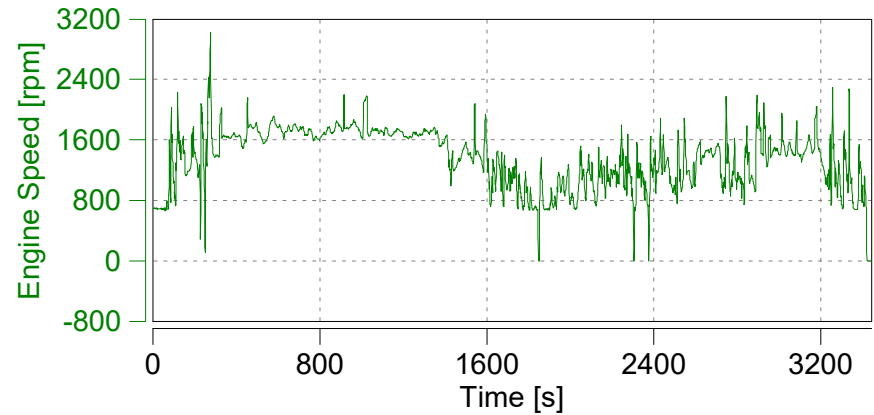
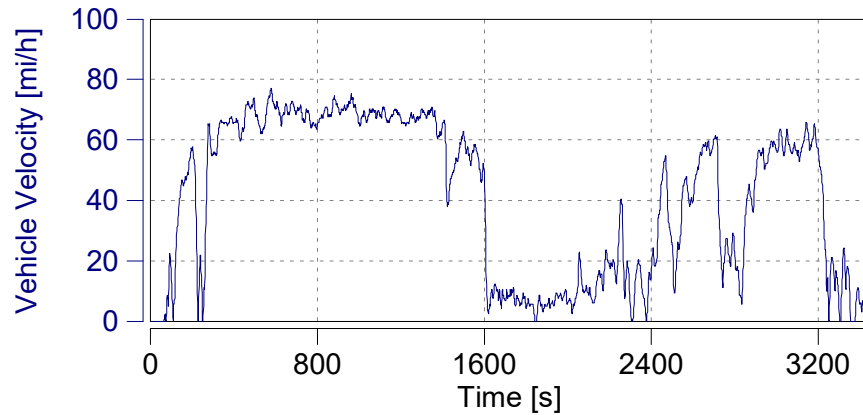
Start Date: 09/20/2017

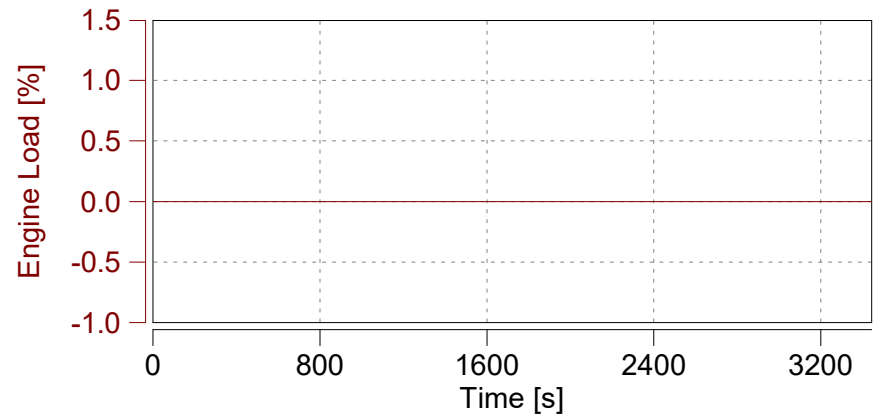
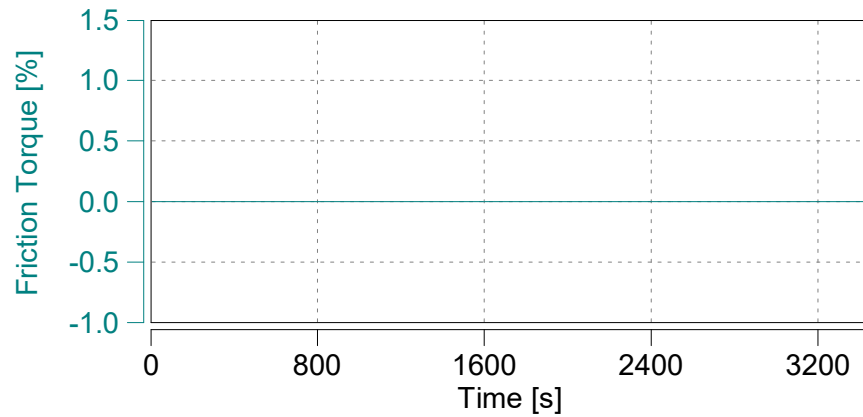
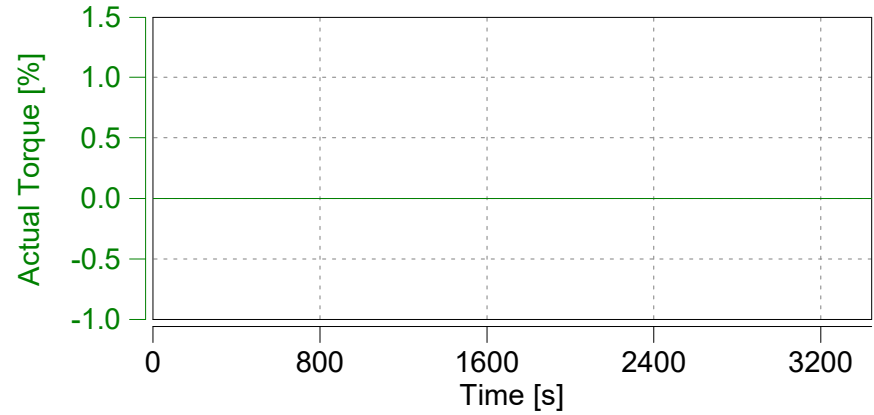
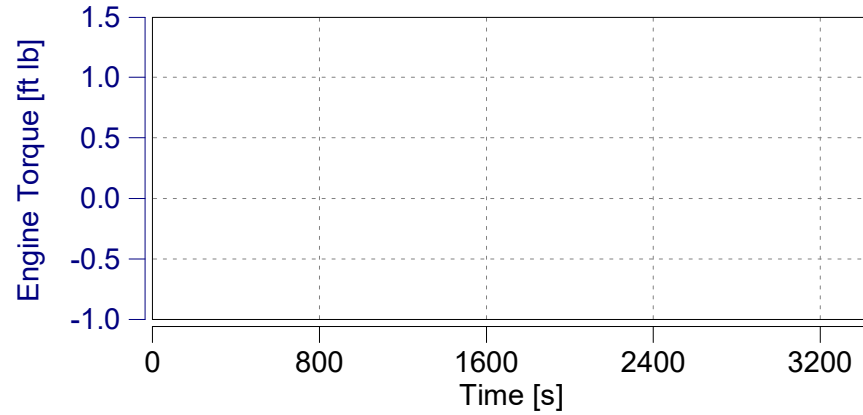
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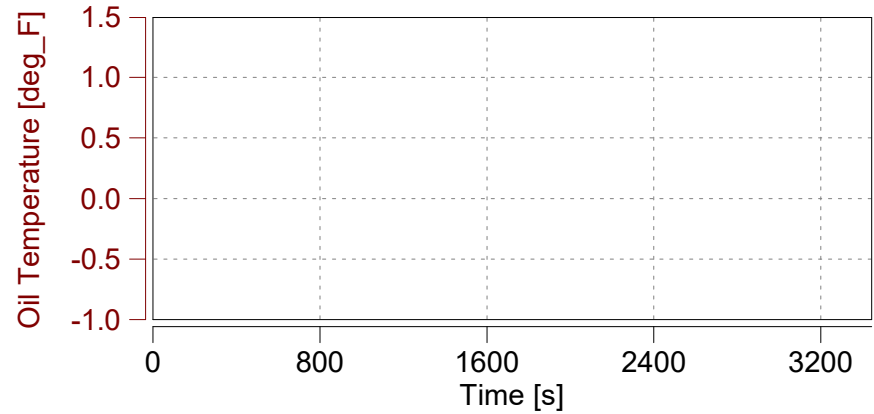
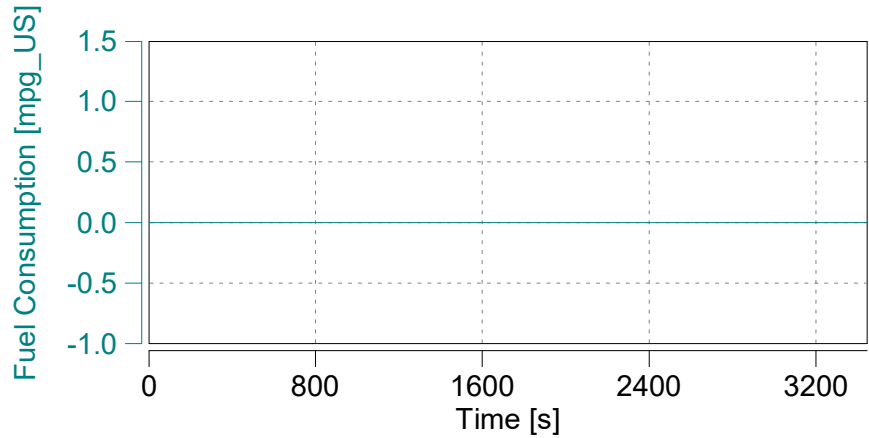
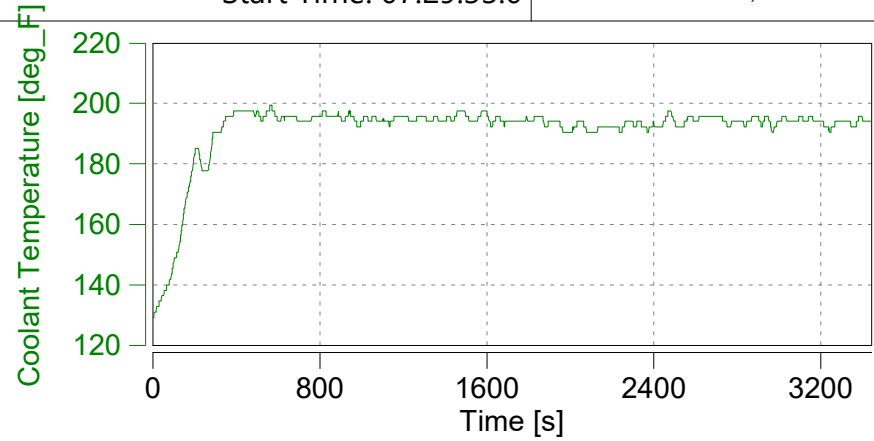
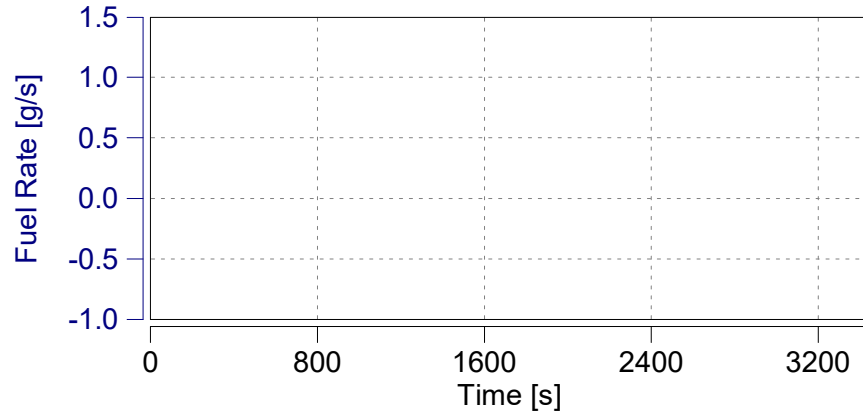


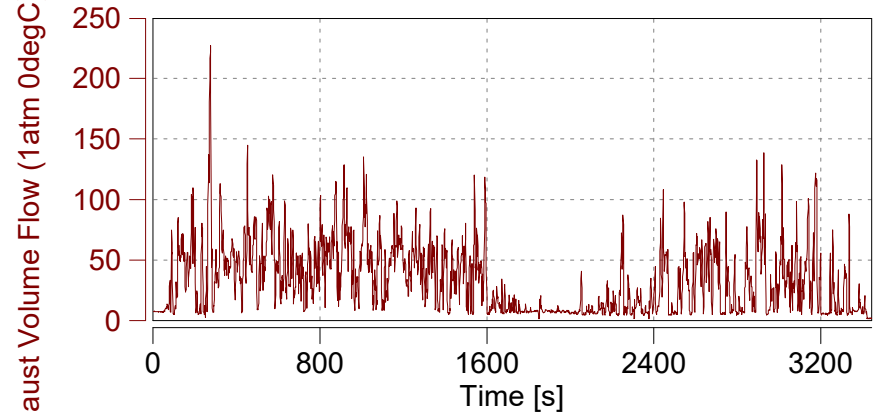
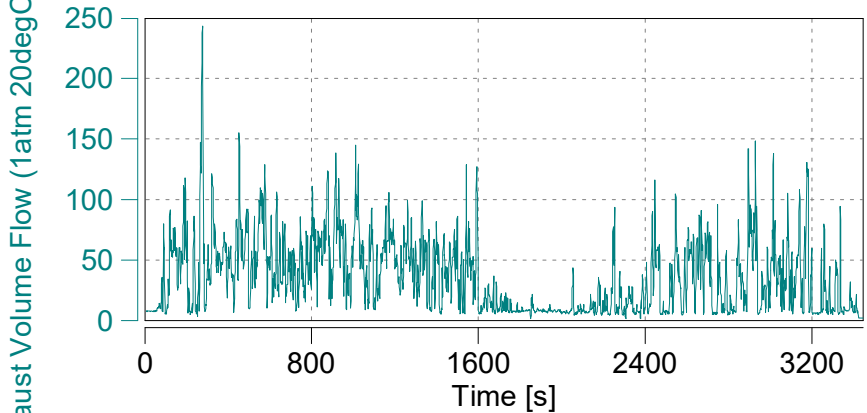
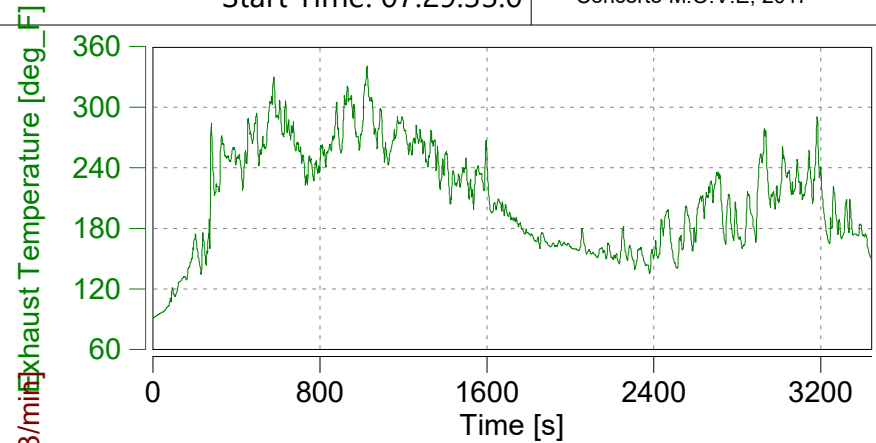
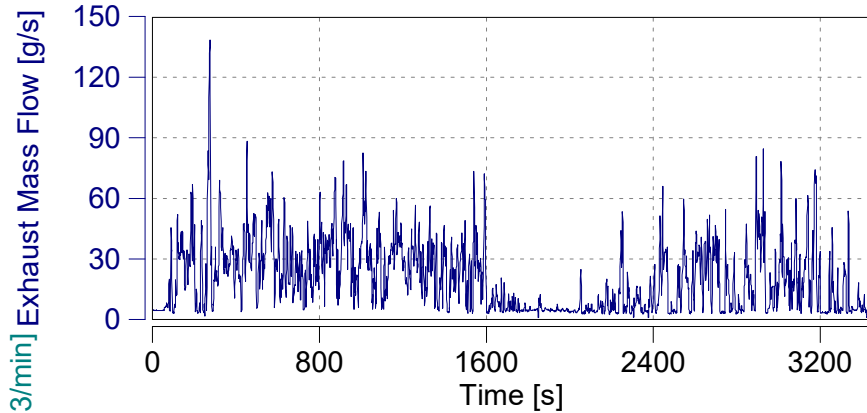
Concerto Version: 480 Build 215, Serial Number: 8468
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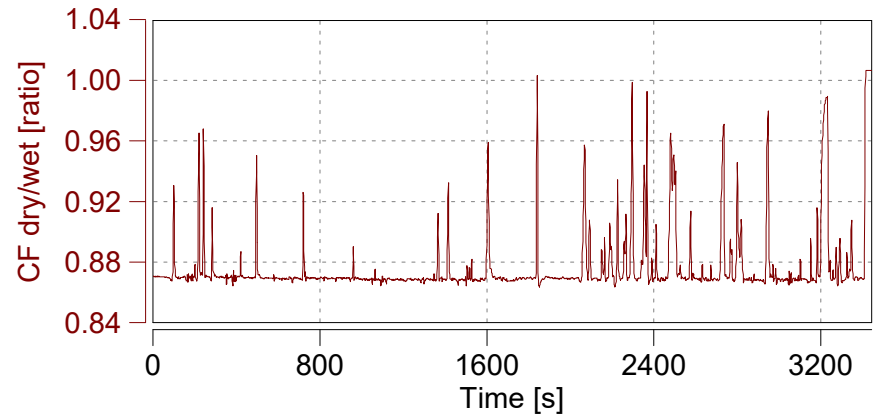
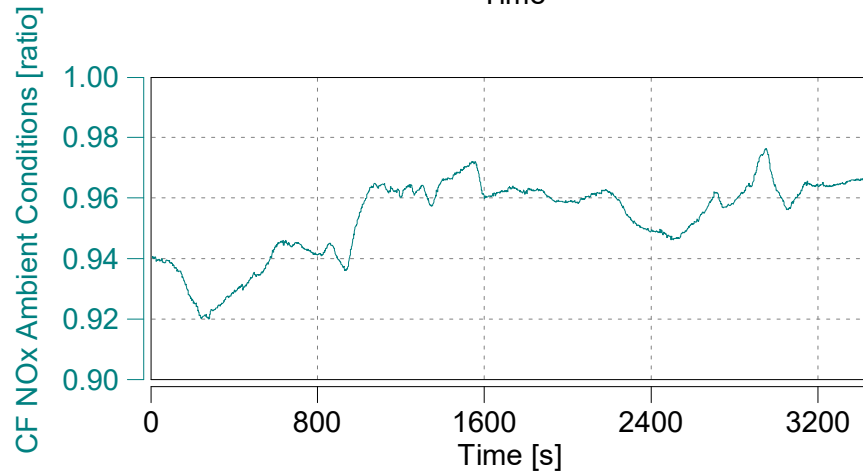
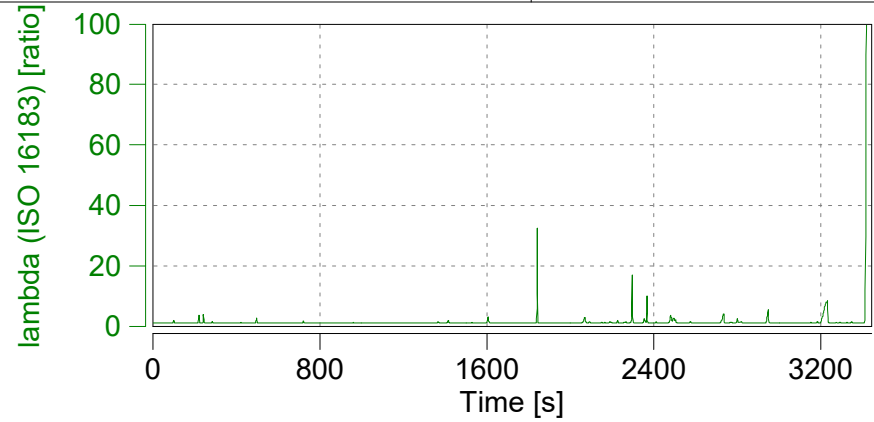
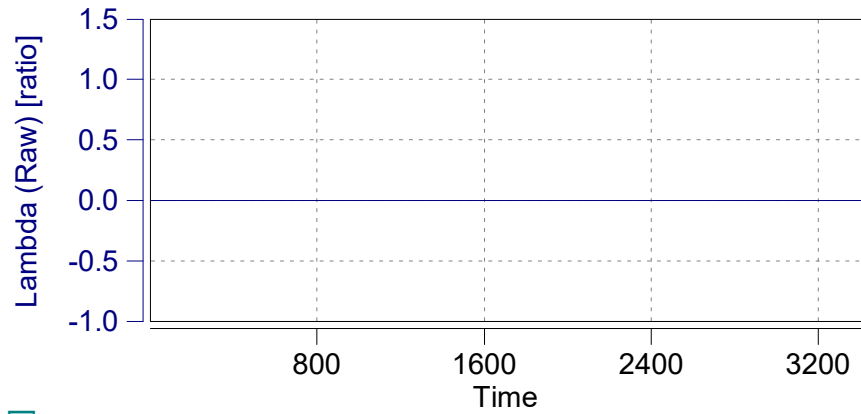
Vehicle: 2017 Audi Q7 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90









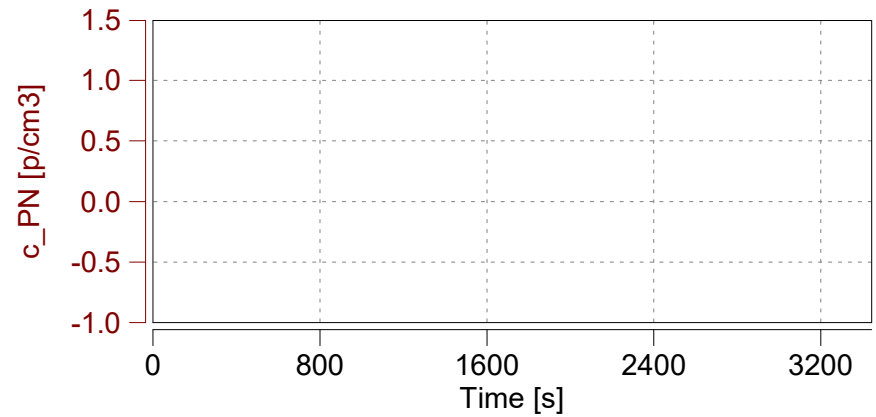
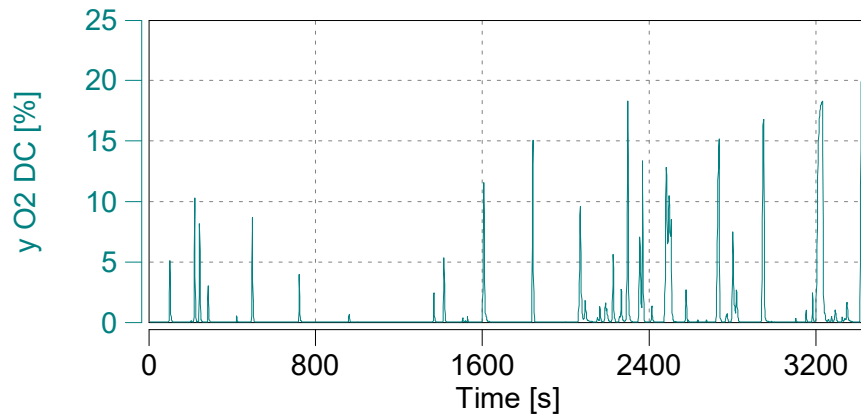
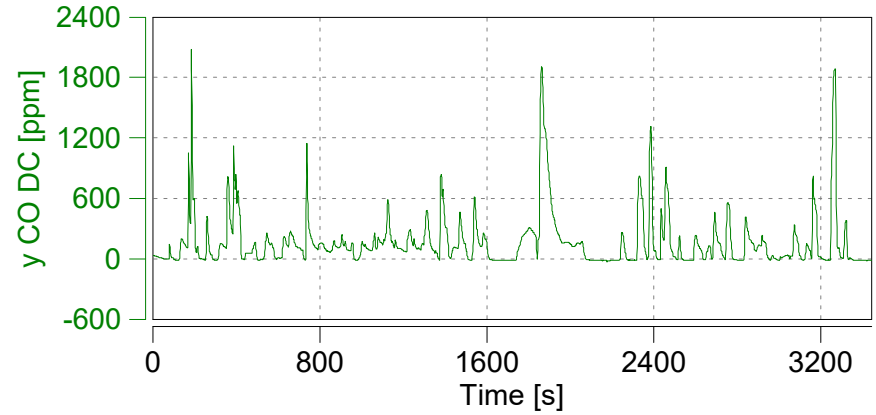
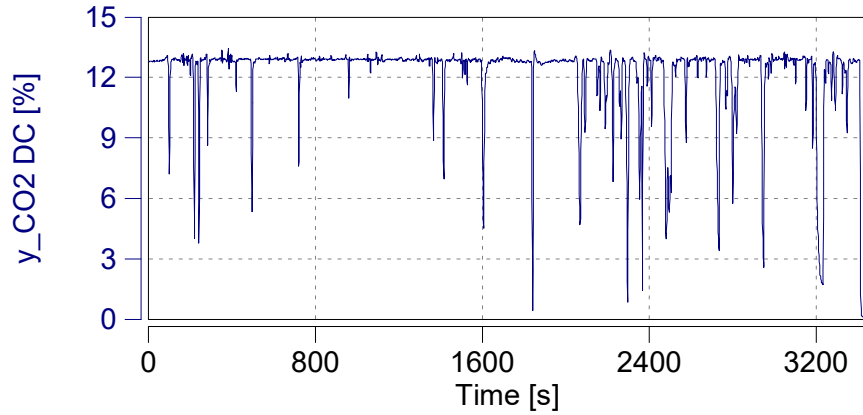


Case: Highway

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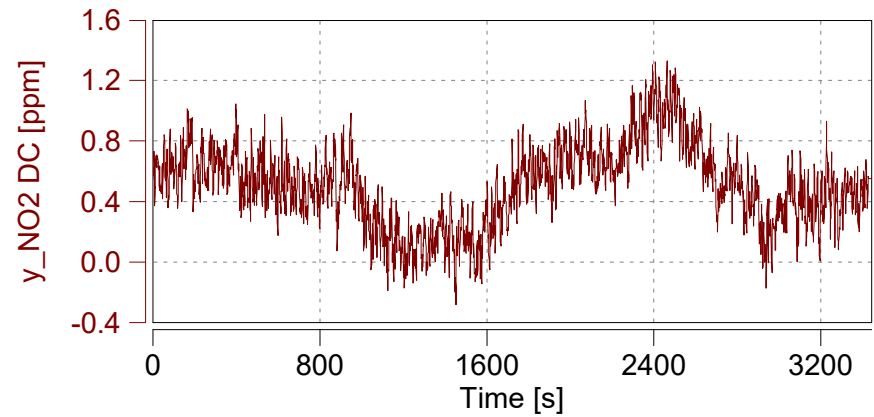
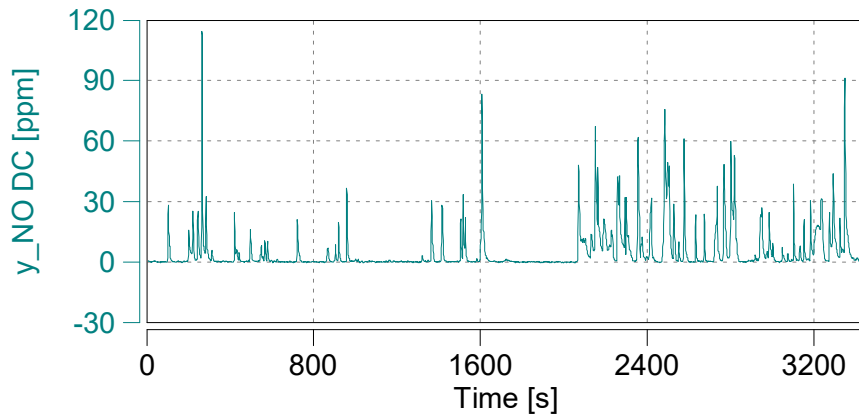
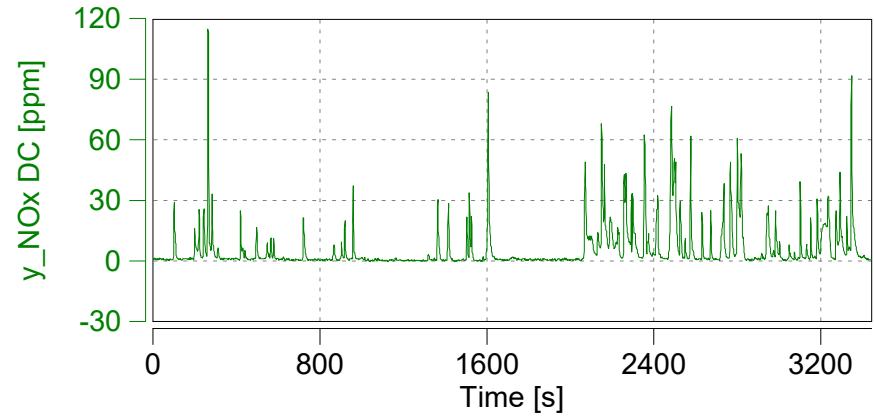
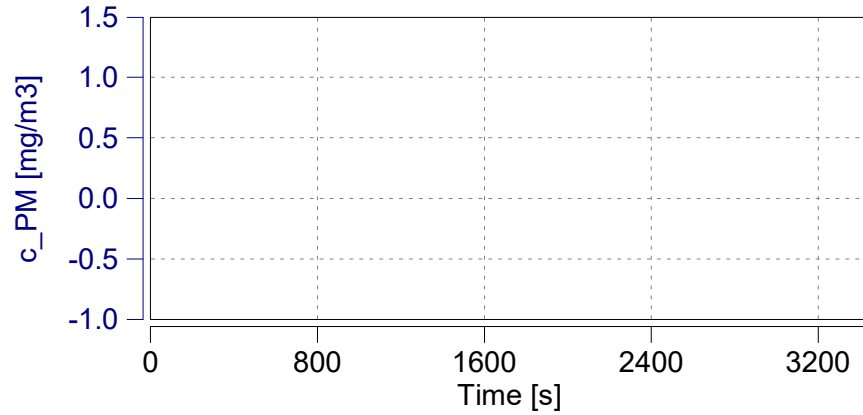
Vehicle: 2017 Audi Q7 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

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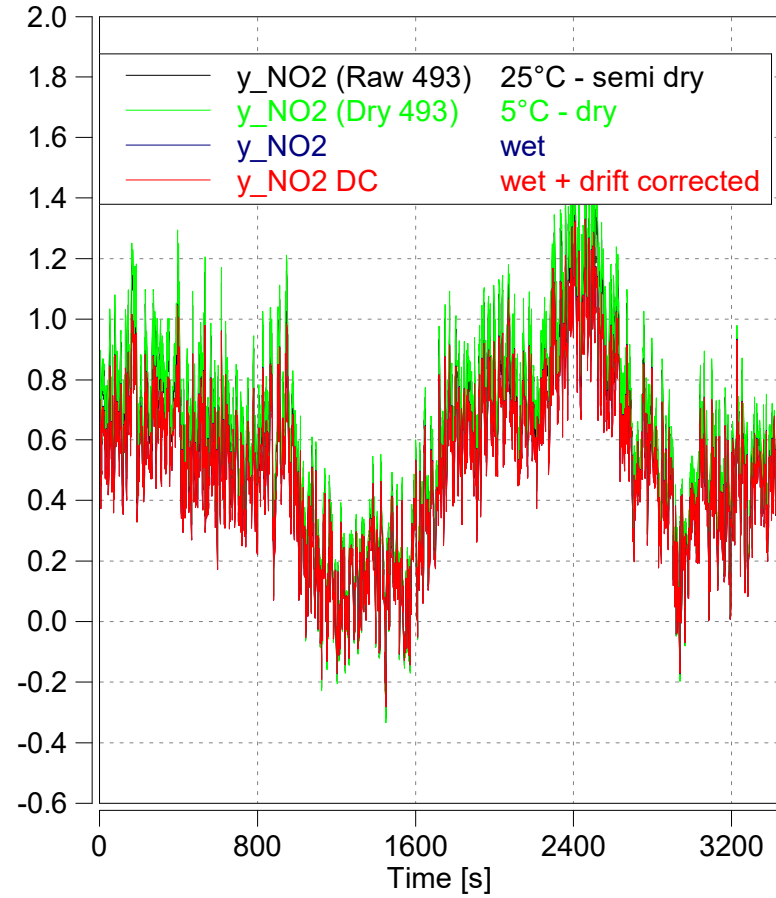
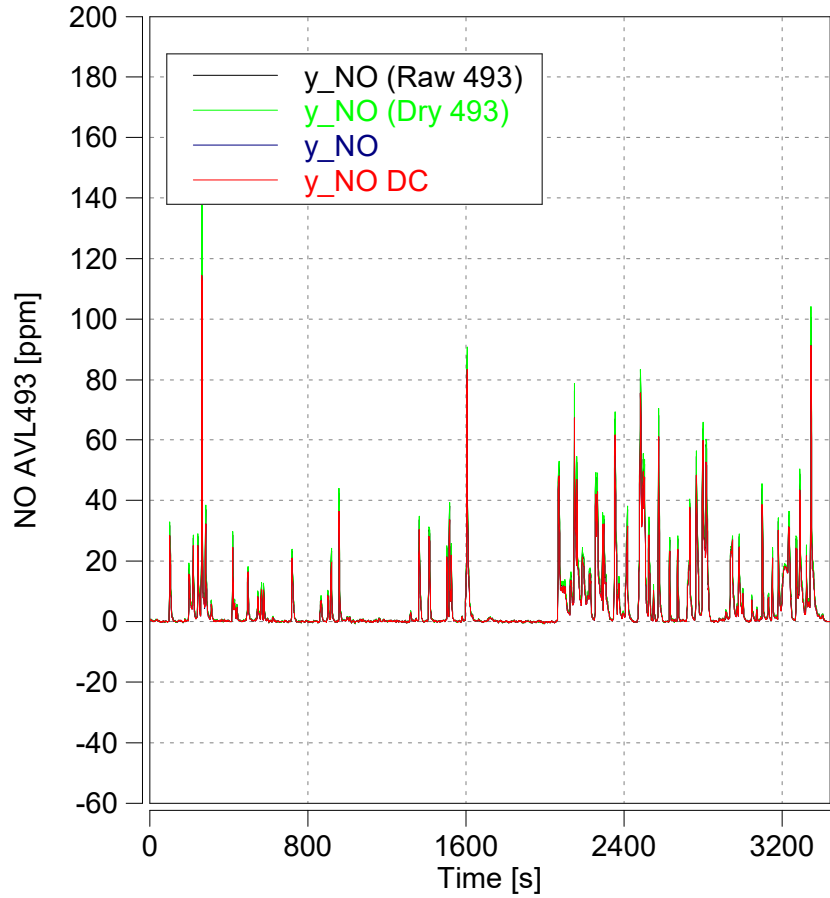
Start Date: 09/20/2017

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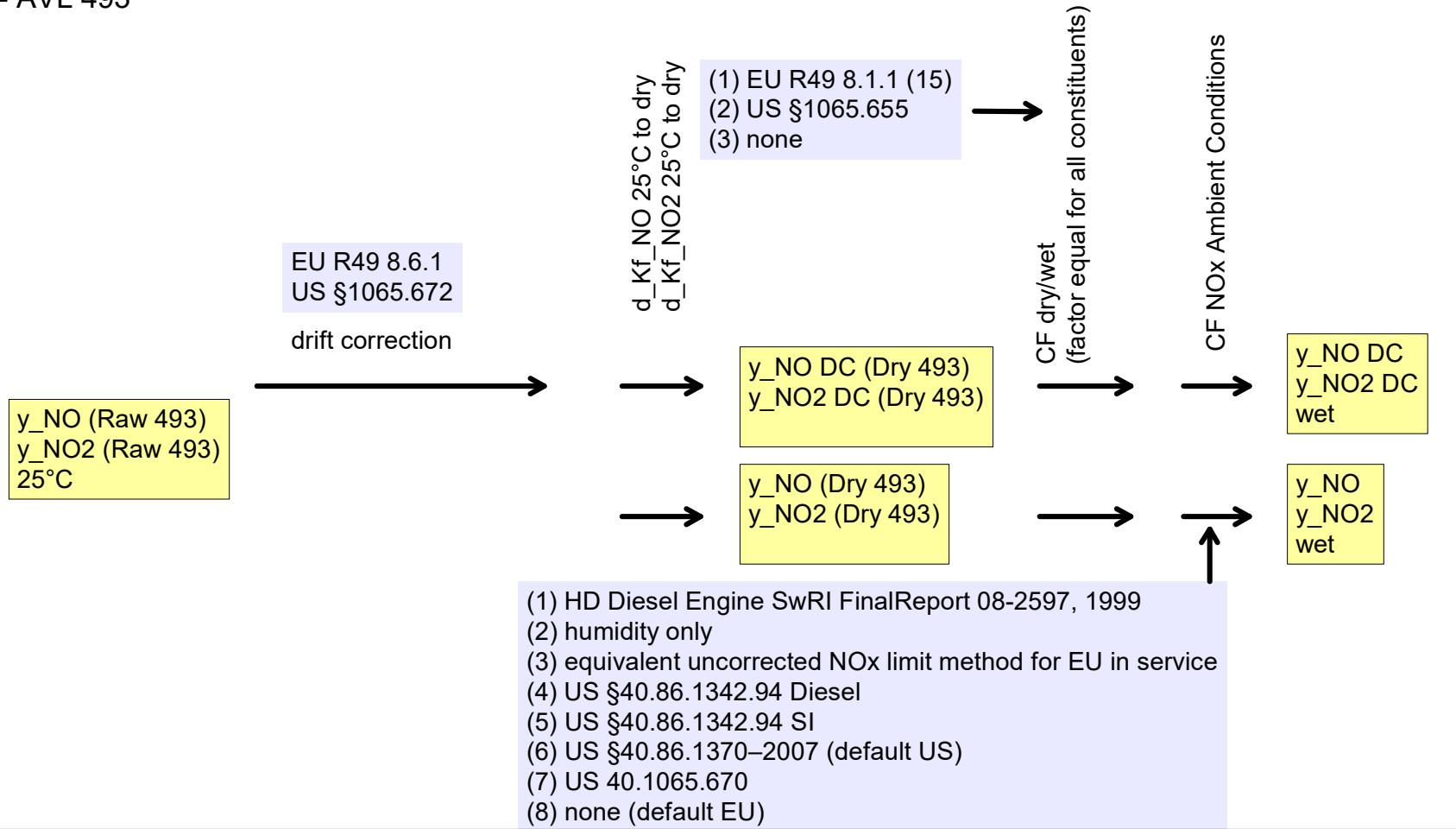
Vehicle: 2017 Audi Q7 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90



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M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi Q7 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

NOx - AVL 493

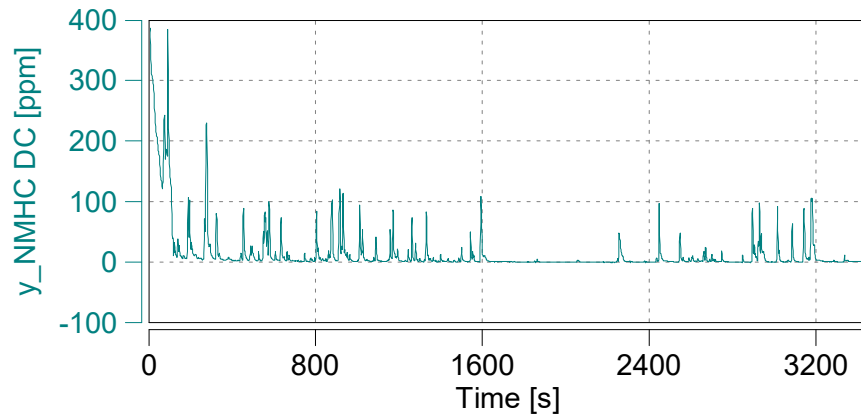
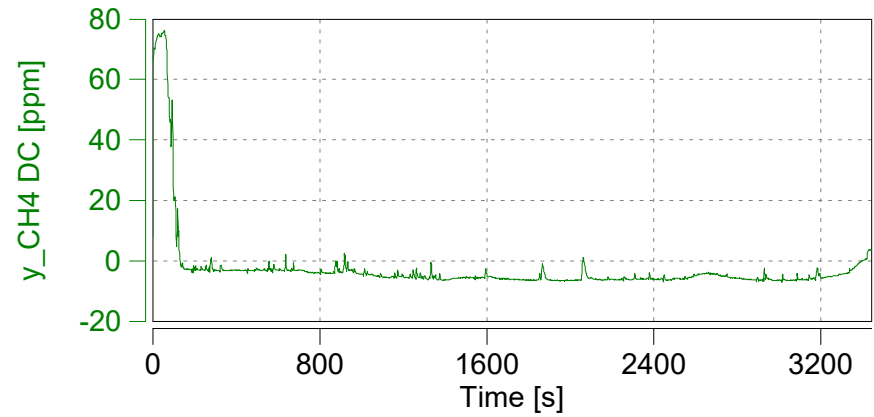
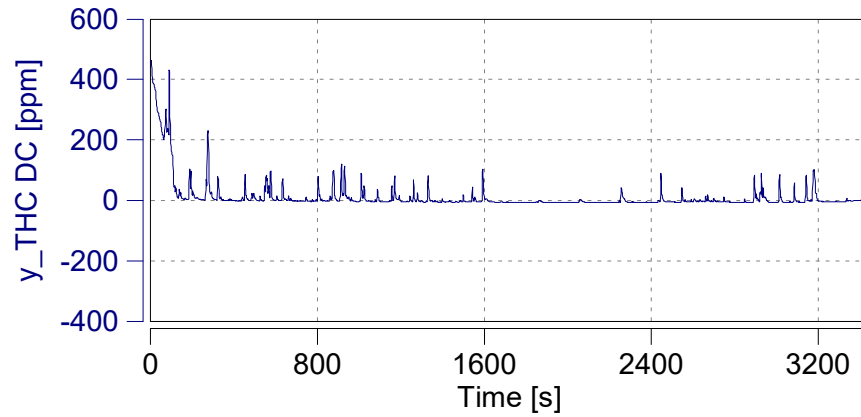


Case: Highway

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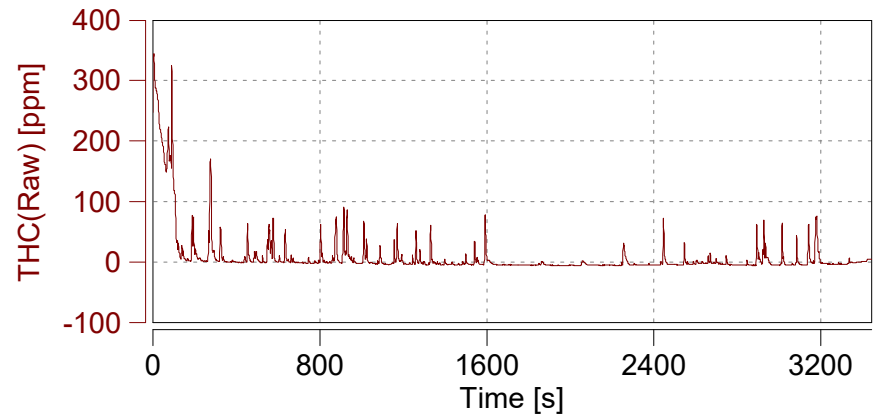
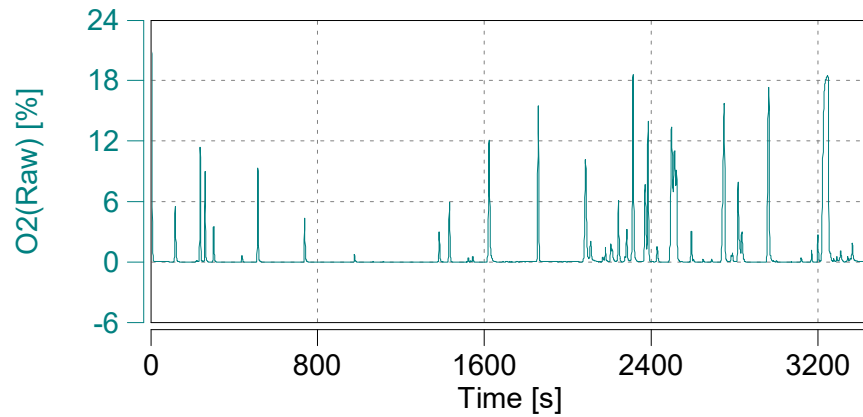
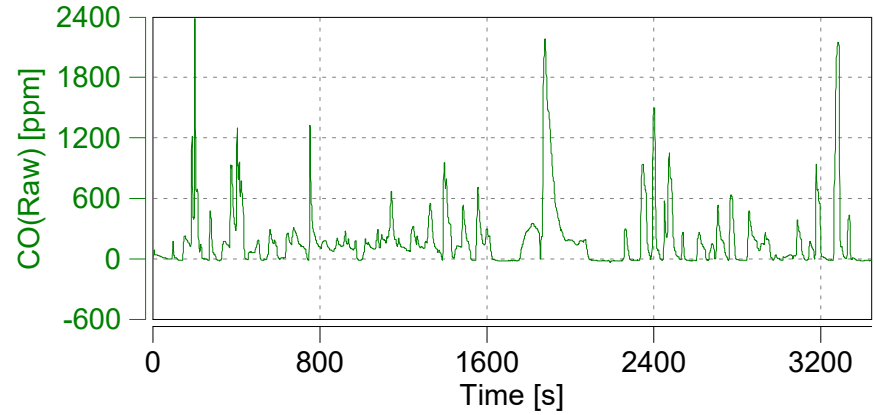
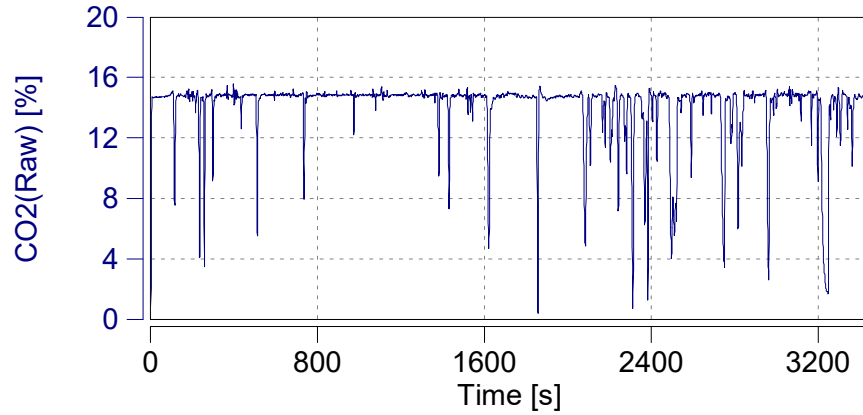
Vehicle: 2017 Audi Q7 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

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M.O.V.E Post-Processing: Rel_10_B192

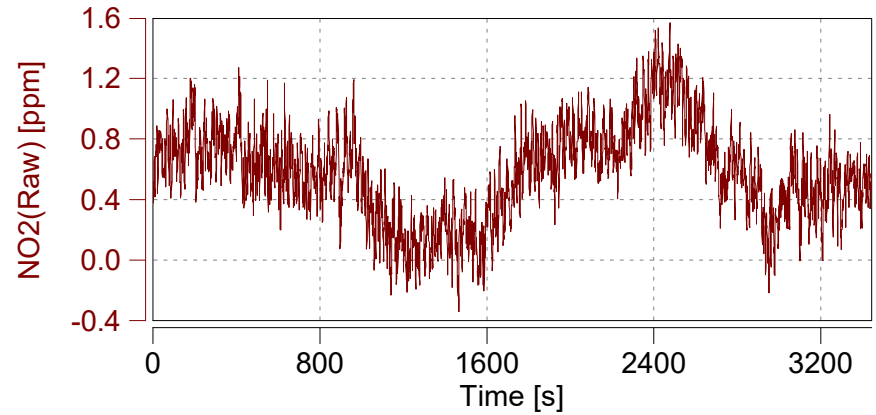
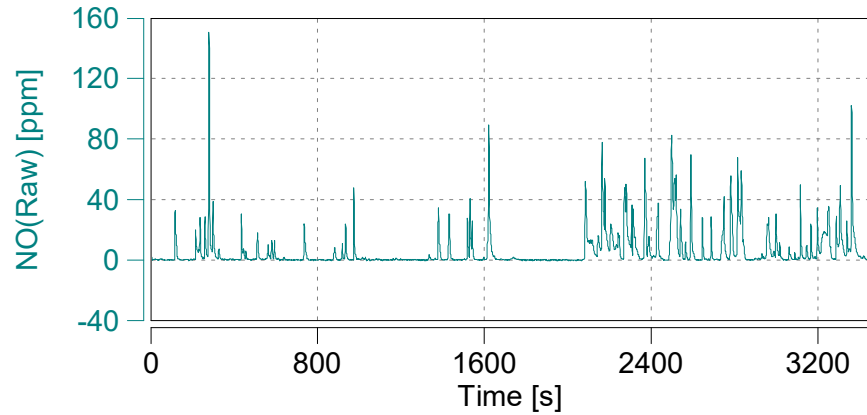
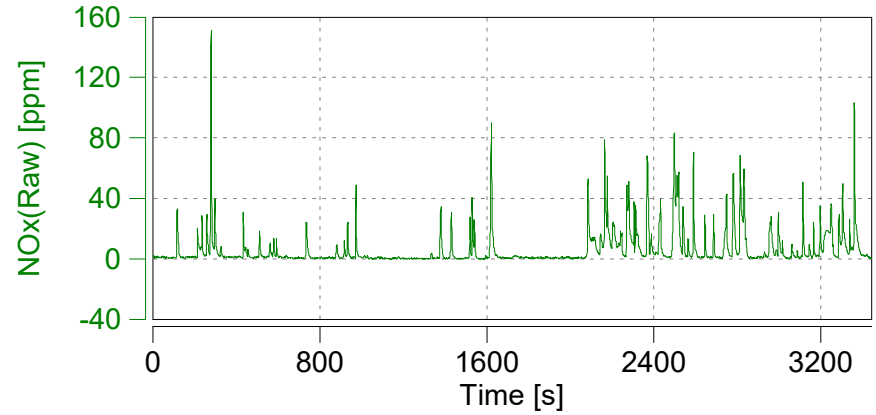
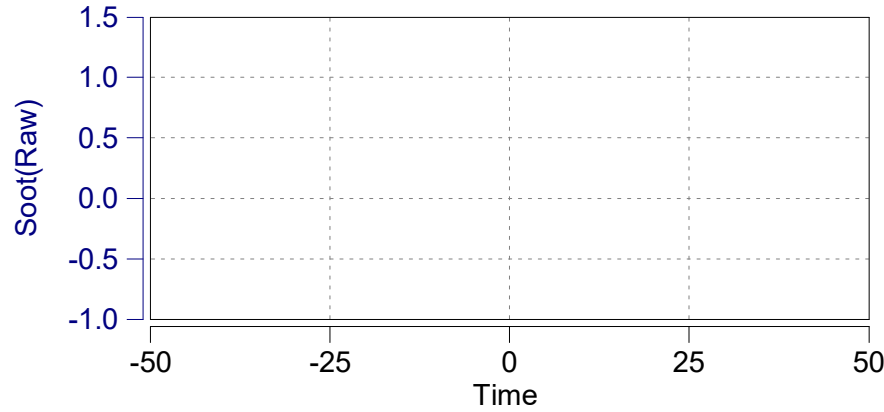
Vehicle: 2017 Audi Q7 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

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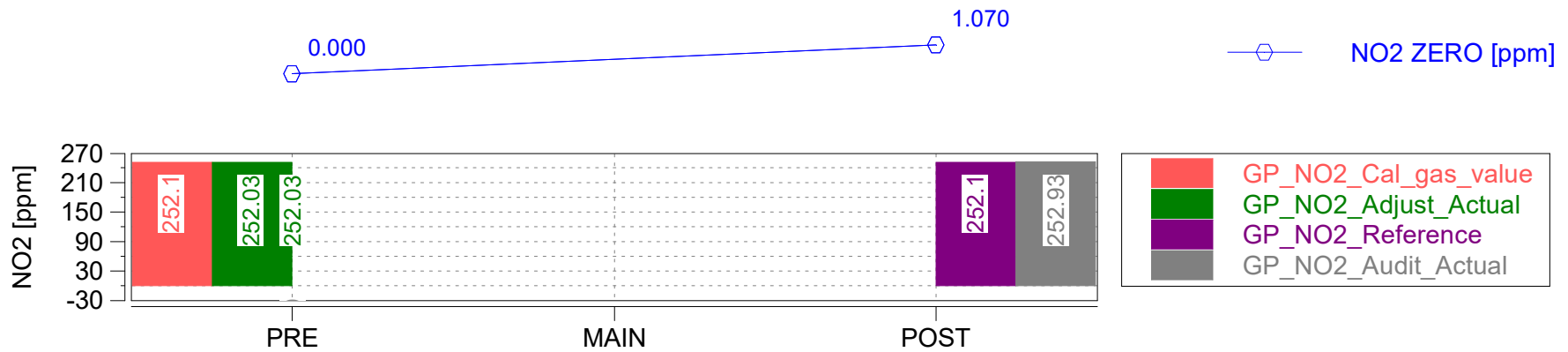
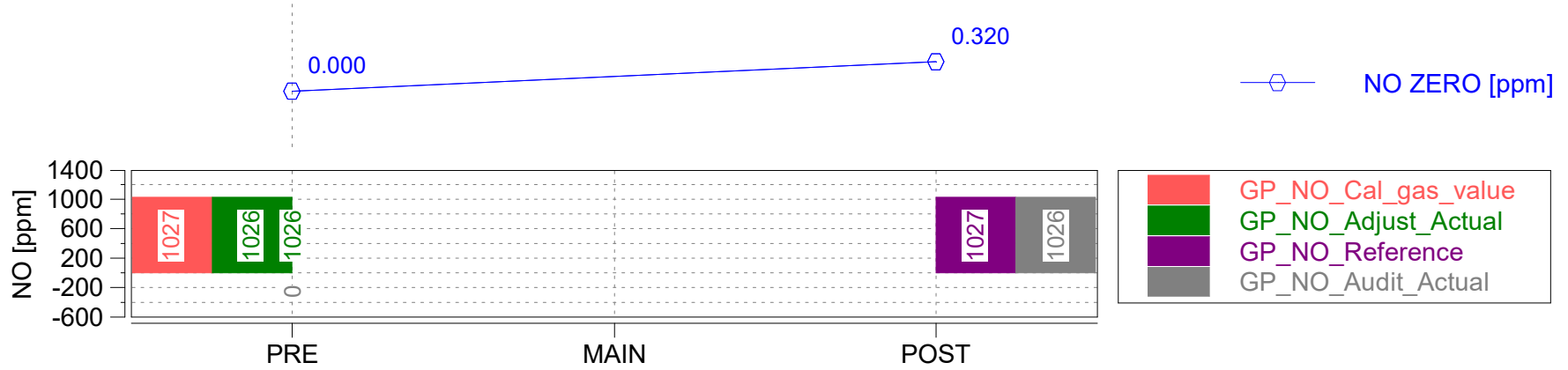
Start Date: 09/20/2017

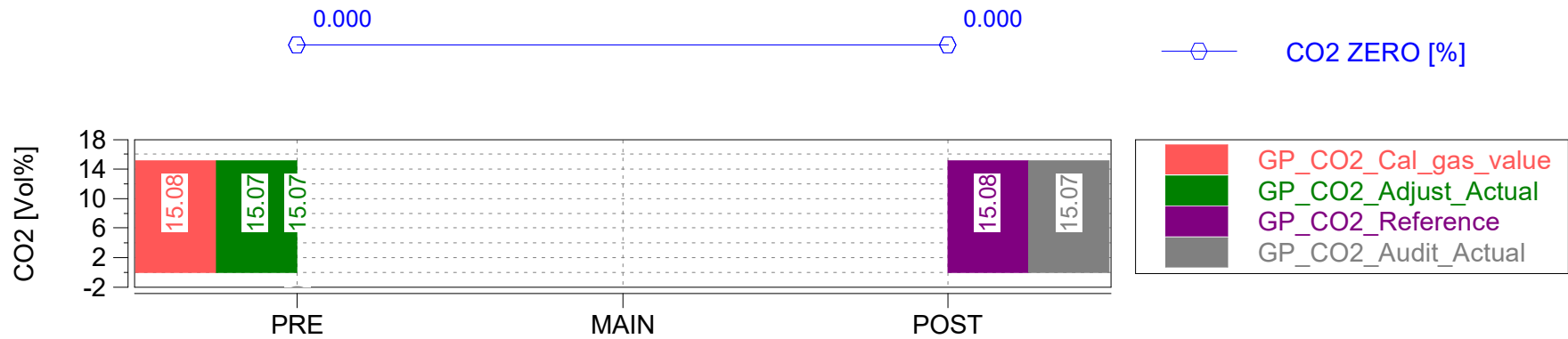
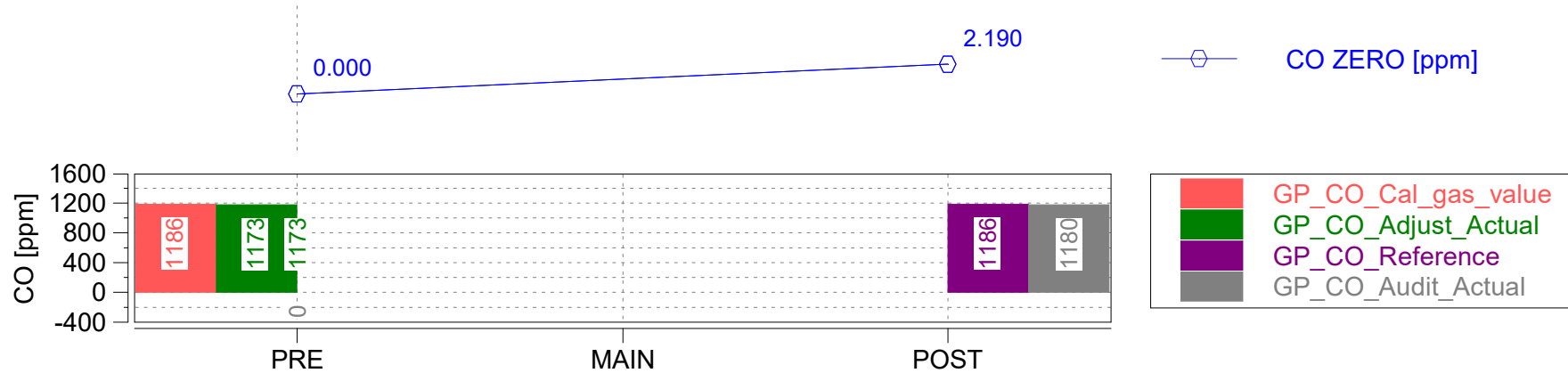
Start Time: 07:29:33.0

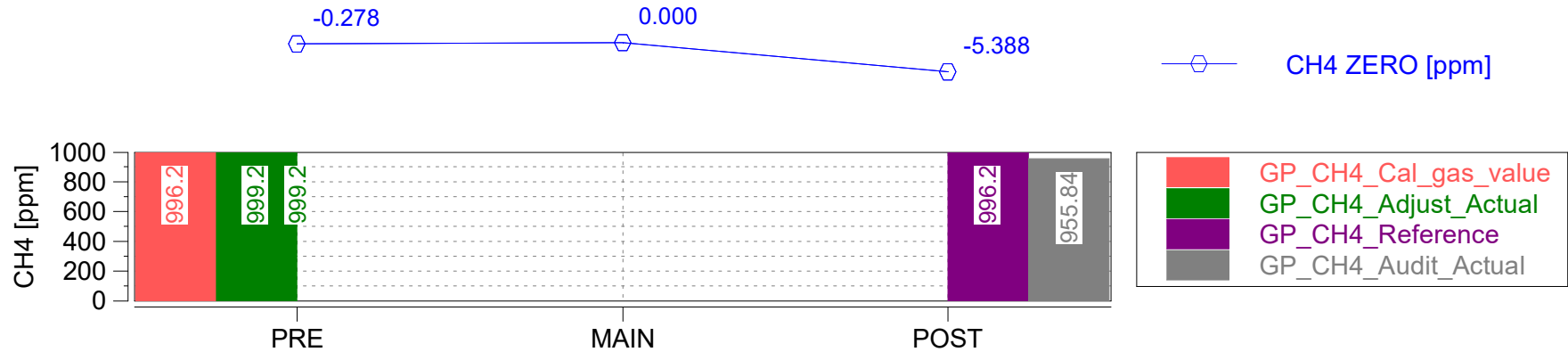
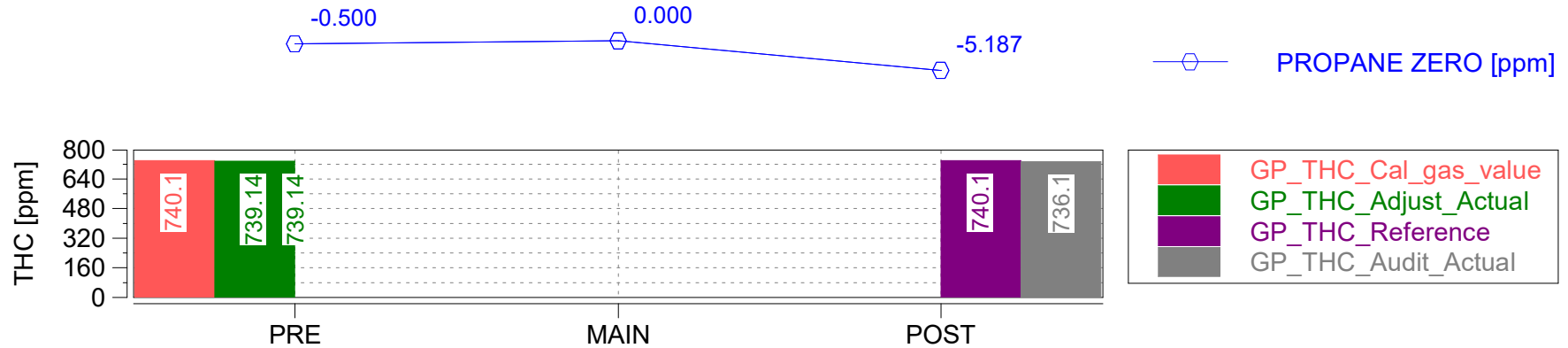


Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi Q7 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90







#	Text	Value	Unit
-	----	----	----
1.0	Test Start: Date	-	-
2.0	Test Start: Time	-	-
3.0	Ambient Temperature	IFILE1:TM'Temperature	deg C
4.0	Ambient Temperature TS	0.00000	s
5.0	Ambient Pressure	IFILE1:TM'Pressure	kPa
6.0	Ambient Pressure TS	0.00000	s
7.0	Humidity Type	1.00000	-
8.0	Amb. Rel. Humidity	IFILE1:TM'Humidity	%
9.0	Amb. Rel. Humidity	0.00000	s
10.0	GPS Latitude		deg
11.0	GPS Latitude TS	0.00000	s
12.0	GPS Longitude		deg
13.0	GPS Longitude TS	0.00000	s
14.0	Altitude		m
15.0	Altitude TS	0.00000	s
16.0	GPS Quality		-
17.0	GPS Quality TS	0.00000	s
18.0	GroundSpeed		km/h
19.0	GroundSpeed TS	0.00000	s
20.0	Altitude from topographical map		m
21.0	Altitude TS of topographical map		s
22.0	TRIP_AMBIENT_GPS_AVL	YES	-
23.0	CALC_GPS_GROUNDSPEED	NO	-
24.0	EXHAUST_FLOW_AVL	NO	-
25.0	EXHAUST_FLOW_AVL_EFM	YES	-
26.0	Exhaust Flow Type	2.00000	-
27.0	Mass Flow	IFILE1:TM'PitotEFM_ExhaustG	various
28.0	Mass Flow TS	1.70000	s
29.0	Exhaust Pressure		kPa
30.0	Exhaust Pressure TS	1.70000	s

#	Text	Value	Unit
-	----	----	----
31.0	Exhaust Delta Pressure		kPa
32.0	Exhaust Pressure Delta TS	1.70000	s
33.0	Exhaust Temperature	IFILE1:TM'PitotEFM_ExhaustG	degC
34.0	Exhaust Temperature TS	1.70000	s
35.0	Lambda	N/A	-
36.0	Lambda TS		s
37.0	CO2_DIL		%
38.0	CO2_DIL TS		s
39.0	CVS Volume Flow		m3/min
40.0	TimeShift_CVS_VOL_FLOW		s
41.0	IN_CVS_PRESSURE		kPa
42.0	TimeShift_CVS_PRESSURE		s
43.0	IN_CVS_TEMP		degC
44.0	TimeShift_CVS_TEMP		s
45.0	Dry to Wet Conversion CO2	YES	-
46.0	Dry to Wet Conversion O2	YES	-
47.0	Dry to Wet Conversion NO	NO	-
48.0	Dry to Wet Conversion NO2	NO	-
49.0	Dry to Wet Conversion THC	NO	-
50.0	Dry to Wet Conversion CH4	NO	-
51.0	Dry to Wet Conversion O2	NO	-
52.0	CO2	IFILE1:TM'GPiS_CO2	%
53.0	CO2 TS	-15.80000	s
54.0	OS	IFILE1:TM'GPiS_O2	%
55.0	O2 TS	-16.30000	s
56.0	CO	IFILE1:TM'GPiS_CO	ppm
57.0	CO TS	-15.80000	s
58.0	NO	IFILE1:TM'GPiS_NO	ppm
59.0	NO TS	-14.00000	s
60.0	NO2	IFILE1:TM'GPiS_NO2	ppm

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi Q7 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
61.0	NO2 TS	-14.00000	s
62.0	THC	IFILE1:TM'FIDiS_THC_C1	ppm
63.0	THC TS	0.00000	s
64.0	CH4	IFILE1:TM'FIDiS_CH4_C1	ppm
65.0	CH4 TS	0.00000	s
66.0	GAS_PEMS_Ethane_Efficiency	IFILE1:MOVE_AVL4925'GP_Et -	
67.0	GAS_PEMS_Methane_Efficiency	IFILE1:MOVE_AVL4925'GP_M -	
68.0	GAS_PEMS_Methane_Response	IFILE1:MOVE_AVL4925'GP_M -	
69.0	Zero Signal	IFILE1:TM'GPiS_STATE	0/1
70.0	Zero Signal TS	-14.00000	s
71.0	Zero Signal_FIDiS	IFILE1:TM'FIDiS_STATE	0/1
72.0	Zero Signal_FIDiS TS		s
73.0	Species Input Type	4.00000	-
74.0	GASPEMS=AVL493	NO	-
75.0	GASPEMS=AVL493_iX	NO	-
76.0	GASPEMS=AVL492	YES	-
77.0	GASPEMS=AVL4925	YES	-
78.0	PM: Type	4.00000	1=GFB+HC, 2=GFB, 3='PM=S
79.0	Filter ID from IFile	NO	-
80.0	Lab ID from IFile	NO	-
81.0	PM Filter: ID	N/A	ID
82.0	PM Filter: Lab	N/A	Name/ID
83.0	PM Filter: Weight before Test	N/A	mg
84.0	PM Filter: Weight after Test	N/A	mg
85.0	PM (HC Corr): Max. Exhaust Flow	N/A	scfm
86.0	Soot		mg/m3
87.0	Soot TS	-5.00000	s
88.0	Soot Sensor		mg/m3
89.0	Soot Sensor TS		s
90.0	PM Filter: Filter Flow Rate		l/min

#	Text	Value	Unit
-	----	----	----
91.0	PM Filter: Filter Flow Rate TS	-5.00000	s
92.0	PM Filter: Filter Dilution Ratio		-
93.0	PM Filter: Filter Dilution Ratio TS	-5.00000	s
94.0	PM Filter: Filter Trigger		-
95.0	PM Filter: Filter Trigger TS	-5.00000	s
96.0	PMPEMS=AVL494	YES	-
97.0	PMPEMS_AVL494_PROP_DIL	NO	-
98.0	PM dilution ratio min		-
99.0	PM_MaxExhaustFlowRate		-
100.0	PM_ExhaustFlow_Thresh		-
101.0	PM_total_flow_val		-
102.0	PM_total_flow_val_TS		-
103.0	PM_exh_mass_flow		-
104.0	PM_exh_mass_flow_TS		-
105.0	PN		#/cm3
106.0	TimeShift_PN		s
107.0	PN_STATE		-
108.0	PN TS STATE		s
109.0	PNPEMS_AVL496	NO	-
110.0	PN_CorrFactor	1.00000	
111.0	Time Alignment	1.00000	-
112.0	Time Alignment Dataset 1	N/A	0/1
113.0	Time Alignment Dataset 2	N/A	0/1
114.0	Time Alignment Thresh 1	N/A	-
115.0	Time Alignment Thresh 2	N/A	-
116.0			
117.0			
118.0			
119.0			
120.0			

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi Q7 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
121.0			
122.0	Trigger		0/1
123.0	Trigger TS		s
124.0	FTIR_NAME_1		-
125.0	FTIR_MW_1		-
126.0	FTIR_CHANNEL_1		-
127.0	FTIR_CHANNEL_TS_1		-
128.0	FTIR_CHANNEL_DRY_1	NO	-
129.0	FTIR_NAME_2		-
130.0	FTIR_MW_2		-
131.0	FTIR_CHANNEL_2		-
132.0	FTIR_CHANNEL_TS_2		-
133.0	FTIR_CHANNEL_DRY_2	NO	-
134.0	FTIR_NAME_3		-
135.0	FTIR_MW_3		-
136.0	FTIR_CHANNEL_3		-
137.0	FTIR_CHANNEL_TS_3		-
138.0	FTIR_CHANNEL_DRY_3	NO	-
139.0	FTIR_NAME_4		-
140.0	FTIR_MW_4		-
141.0	FTIR_CHANNEL_4		-
142.0	FTIR_CHANNEL_TS_4		-
143.0	FTIR_CHANNEL_DRY_4	NO	-
144.0	FTIR_NAME_5		-
145.0	FTIR_MW_5		-
146.0	FTIR_CHANNEL_5		-
147.0	FTIR_CHANNEL_TS_5		-
148.0	FTIR_CHANNEL_DRY_5	NO	-
149.0	FTIR_NAME_6		-
150.0	FTIR_MW_6		-

#	Text	Value	Unit
-	----	----	----
151.0	FTIR_CHANNEL_6		-
152.0	FTIR_CHANNEL_TS_6		-
153.0	FTIR_CHANNEL_DRY_6	NO	-
154.0	FTIR_NAME_7		-
155.0	FTIR_MW_7		-
156.0	FTIR_CHANNEL_7		-
157.0	FTIR_CHANNEL_TS_7		-
158.0	FTIR_CHANNEL_DRY_7	NO	-
159.0	FTIR_NAME_8		-
160.0	FTIR_MW_8		-
161.0	FTIR_CHANNEL_8		-
162.0	FTIR_CHANNEL_TS_8		-
163.0	FTIR_CHANNEL_DRY_8	NO	-
164.0	FTIR_NAME_9		-
165.0	FTIR_MW_9		-
166.0	FTIR_CHANNEL_9		-
167.0	FTIR_CHANNEL_TS_9		-
168.0	FTIR_CHANNEL_DRY_9	NO	-
169.0	FTIR_NAME_10		-
170.0	FTIR_MW_10		-
171.0	FTIR_CHANNEL_10		-
172.0	FTIR_CHANNEL_TS_10		-
173.0	FTIR_CHANNEL_DRY_10	NO	-
174.0	FTIR_NAME_11		-
175.0	FTIR_MW_11		-
176.0	FTIR_CHANNEL_11		-
177.0	FTIR_CHANNEL_TS_11		-
178.0	FTIR_CHANNEL_DRY_11	NO	-
179.0	FTIR_NAME_12		-
180.0	FTIR_MW_12		-

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Vehicle: 2017 Audi Q7 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
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#	Text	Value	Unit
-	----	----	----
181.0	FTIR_CHANNEL_12		-
182.0	FTIR_CHANNEL_TS_12		-
183.0	FTIR_CHANNEL_DRY_12	NO	-
184.0	FTIR_NAME_13		-
185.0	FTIR_MW_13		-
186.0	FTIR_CHANNEL_13		-
187.0	FTIR_CHANNEL_TS_13		-
188.0	FTIR_CHANNEL_DRY_13	NO	-
189.0	FTIR_NAME_14		-
190.0	FTIR_MW_14		-
191.0	FTIR_CHANNEL_14		-
192.0	FTIR_CHANNEL_TS_14		-
193.0	FTIR_CHANNEL_DRY_14	NO	-
194.0	FTIR_NAME_15		-
195.0	FTIR_MW_15		-
196.0	FTIR_CHANNEL_15		-
197.0	FTIR_CHANNEL_TS_15		-
198.0	FTIR_CHANNEL_DRY_15	NO	-
199.0	FTIR_NAME_16		-
200.0	FTIR_MW_16		-
201.0	Vehicle Type	2017 Audi Q7	-
202.0	Vehicle Info		-
203.0	Engine Type	Gasoline	-
204.0	Engine Info	3.0L	-
205.0	Engine Torque		Nm
206.0	Curb Idle Load		%
207.0	Idle Speed		rpm
208.0	HYBRID_OVC_REF_CO2_gkm		g/km
209.0	Engine Concept	1.00000	-
210.0	Alpha	1.93000	-

#	Text	Value	Unit
-	----	----	----
211.0	Beta	1.00000	
212.0	Gamma	0.00000	
213.0	Delta	0.00000	
214.0	Epsilon	0.03200	
215.0	X_C	83.00000	
216.0	X_H	13.30000	
217.0	X_N	0.00000	
218.0	X_O	3.50000	
219.0	X_S	0.00000	
220.0	Fuel_Density	747.50000	
221.0	rho_exhaust	1.29310	
222.0	U_CO2	1.51800	
223.0	U_CO	0.96600	
224.0	U_NO	1.58700	
225.0	U_NO2	1.58700	
226.0	U_NOx	1.58700	
227.0	U_HC	0.49900	
228.0	U_NMHC	0.47100	
229.0	U_CH4	0.55300	
230.0	U_O2	1.10400	
231.0	Fuel Type	2.00000	-
232.0	exhaust mass flow type (YES/NO)	YES	-
233.0	Distance Calculation Type	1.00000	-
234.0	Velocity Statistics Calculation Type	2.00000	-
235.0	RDE vehicle class	1.00000	-
236.0	TM_CITY0		s
237.0	TM_CITY1		s
238.0	TM_RURAL0		s
239.0	TM_RURAL1		s
240.0	TM_RURAL2_0		s

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi Q7 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
241.0	TM_RURAL2_1		s
242.0	Second Rural Part for Time Marks (NO		-
243.0	TM_MW0		s
244.0	TM_MW1		s
245.0	VELOCITY_LIMIT_STOP	2.00000	km/h
246.0	VELOCITY_LIMIT_URBAN	50.00000	km/h
247.0	VELOCITY_LIMIT_RURAL	75.00000	km/h
248.0	Intake Manifold Pressure Type	1.00000	-
249.0	Velocity	IFILE1:TM'OBD_Vehicle_Spee	km/h
250.0	Velocity TS	1.30000	s
251.0	Velocity FACTOR	1.00000	-
252.0	Coolant Temperature	IFILE1:TM'OBD_Engine_Coola	degC
253.0	Coolant Temperature TS	1.30000	s
254.0	Oil Temperature		degC
255.0	Oil Temperature TS	1.30000	s
256.0	Intake Manifold Temperature		degC
257.0	Intake Manifold Temp TS	1.30000	s
258.0	Intake Manifold Pressure	IFILE1:TM'OBD_Intake_manifo	kPa
259.0	Intake Manifold Pressure TS	1.30000	s
260.0	Throttle Position		%
261.0	Throttle TS	1.30000	s
262.0	TYP_IDLE_MASS_FLOW		kg/h
263.0	Torque Type	1.00000	-
264.0	Speed	IFILE1:TM'OBD_Engine_RPM	rpm
265.0	Speed TS	1.30000	s
266.0	Torque		Nm
267.0	Torque TS	1.30000	s
268.0	Friction Torque	N/A	Nm
269.0	Friction Torque TS	N/A	s
270.0	Reference Torque	N/A	Nm

#	Text	Value	Unit
-	----	----	----
271.0	Reference Torque TS	N/A	s
272.0	k_VELINE		-
273.0	D_VELINE		-
274.0	Fuel Flow Type	2.00000	-
275.0	Air Flow Type	1.00000	-
276.0	Fuel Rate		various
277.0	Air Rate		various
278.0	Fuel Rate TS	1.30000	s
279.0	No_Cylinders		-
280.0	Air Rate TS	1.30000	s
281.0	FTIR_CHANNEL_32		-
282.0	FTIR_CHANNEL_TS_32		-
283.0	FTIR_CHANNEL_DRY_32	NO	-
284.0	FTIR_NAME_33		-
285.0	FTIR_MW_33		-
286.0	FTIR_CHANNEL_33		-
287.0	FTIR_CHANNEL_TS_33		-
288.0	FTIR_CHANNEL_DRY_33	NO	-
289.0	FTIR_NAME_34		-
290.0	FTIR_MW_34		-
291.0	FTIR_CHANNEL_34		-
292.0	FTIR_CHANNEL_TS_34		-
293.0	FTIR_CHANNEL_DRY_34	NO	-
294.0	FTIR_NAME_35		-
295.0	FTIR_MW_35		-
296.0	FTIR_CHANNEL_35		-
297.0	FTIR_CHANNEL_TS_35		-
298.0	FTIR_CHANNEL_DRY_35	NO	-
299.0	FTIR_NAME_36		-
300.0	FTIR_MW_36		-

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi Q7 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
301.0	FTIR_CHANNEL_36	-	-
302.0	FTIR_CHANNEL_TS_36	-	-
303.0	FTIR_CHANNEL_DRY_36	NO	-
304.0	FTIR_NAME_37	-	-
305.0	FTIR_MW_37	-	-
306.0	FTIR_CHANNEL_37	-	-
307.0	FTIR_CHANNEL_TS_37	-	-
308.0	FTIR_CHANNEL_DRY_37	NO	-
309.0	FTIR_NAME_38	-	-
310.0	FTIR_MW_38	-	-
311.0	FTIR_CHANNEL_38	-	-
312.0	FTIR_CHANNEL_TS_38	-	-
313.0	FTIR_CHANNEL_DRY_38	NO	-
314.0	FTIR_NAME_39	-	-
315.0	FTIR_MW_39	-	-
316.0	FTIR_CHANNEL_39	-	-
317.0	FTIR_CHANNEL_TS_39	-	-
318.0	FTIR_CHANNEL_DRY_39	NO	-
319.0	FTIR_NAME_40	-	-
320.0	FTIR_MW_40	-	-
321.0	FTIR_CHANNEL_40	-	-
322.0	FTIR_CHANNEL_TS_40	-	-
323.0	FTIR_CHANNEL_DRY_40	NO	-
324.0	Legislation Type (1=HDIUT 2=EU H	4.00000	-
325.0	WholeTest_NOx_corr	5.00000	-
326.0	WholeTest_Hum_corr	2.00000	-
327.0	CD_Distance	0.00000	km
328.0	CD_NOx	0.00000	mg/km
329.0	CD_CO	0.00000	mg/km
330.0	CD_CO2	0.00000	g/km

#	Text	Value	Unit
-	----	----	----
331.0	CD_NMHC	0.00000	mg/km
332.0	CD_CH4	0.00000	mg/km
333.0	CD_THC	0.00000	mg/km
334.0	CD_PN	-	#/km
335.0	WLTC_LOW_SPEED_gkm	-	g/km
336.0	WLTC_LOW_SPEED_FAC	1.20000	-
337.0	WLTC_MEDIUM_SPEED_gkm	-	g/km
338.0	WLTC_HIGH_SPEED_gkm	-	g/km
339.0	WLTC_HIGH_SPEED_FAC	1.10000	-
340.0	WLTC_EXTRA_HIGH_SPEED_gkm	-	g/km
341.0	WLTC_EXTRA_HIGH_SPEED_FA	1.05000	-
342.0	TOL_NORMAL_DRIVING	25.00000	%
343.0	TOL_SEVERE_DRIVING	50.00000	%
344.0	Increase Tolerance Nomral Driving	NO	-
345.0	Bin1_min	-	km/h
346.0	Bin2_min	-	km/h
347.0	Bin3_min	-	km/h
348.0	Bin1_max	-	km/h
349.0	Bin2_max	-	km/h
350.0	Bin3_max	-	km/h
351.0	Clear_R0	125.40000	N
352.0	Clear_R1	0.29300	Nh/km
353.0	Clear_R2	0.02795	N*(h/km) ²
354.0	Clear_SMK	1470.00000	kg
355.0	Clear_Rated_Power	140.00000	kW
356.0	Clear_Ref_Velocity	70.00000	km/h
357.0	Clear_Ref_Acc	0.45000	m/s ²
358.0	Clear_Smooth	3.00000	s
359.0	EXTC_From_High_Temp	30.00000	degC
360.0	EXTC_To_High_Temp	35.00000	degC

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi Q7 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
361.0	EXTC_From_Low_Temp	-7.00000	degC
362.0	EXTC_To_Low_Temp	0.00000	degC
363.0	Euro 6d or Euro 6d temp	NO	-
364.0	EXTC_From_Altitude	700.00000	m
365.0	EXTC_To_Altitude	1300.00000	m
366.0	EXTC_CORR_FAC	1.60000	
367.0	weight cold start (YES/NO)	NO	-
368.0	precon and soak done (YES/NO)	NO	-
369.0	PATH_PRECON_FILE		
370.0	filter velocity (YES/NO)	NO	-
371.0	filter velocity auto(YES/NO)	NO	-
372.0	Ki_CO		
373.0	Ki_CO2		
374.0	Ki_NOx		
375.0	Ki_FACTOR_CO2 (YES/NO)	NO	-
376.0	Ki_OFFSET_CO2 (YES/NO)	NO	-
377.0	Ki_FACTOR_CO (YES/NO)	NO	-
378.0	Ki_OFFSET_CO (YES/NO)	NO	-
379.0	Ki_FACTOR_NOx (YES/NO)	NO	-
380.0	Ki_OFFSET_NOx (YES/NO)	NO	-
381.0	Ki_OFF (YES/NO)	NO	-
382.0	HD legislations	1.00000	-
383.0	RDE legislations	1.00000	-
384.0	Submission Documents (YES/NO)	NO	-
385.0	General Setup Parameters Text	Highway	-
386.0	Legislation Setup Parameters Text	Highway	-
387.0	Trip Info		-
388.0	IN_TIME_REF		-
389.0	Sub-Trip Start: Auto	YES	-
390.0	Sub-Trip Start: Seconds	N/A	s

#	Text	Value	Unit
-	----	----	----
391.0	Sub-Trip End: Auto	YES	-
392.0	Sub-Trip End: Seconds	N/A	s
393.0	Unit System	2.00000	-
394.0	Calculate: PM Emissions	NO	-
395.0	Calculate: PN Emissions	NO	-
396.0	Output: Summary	YES	-
397.0	Output: Emissions	YES	-
398.0	Output: Raw Data	YES	-
399.0	Output: Zero Span	YES	-
400.0	Output: Data Consistency	NO	-
401.0	Output: Window Plots	YES	-
402.0	Fuel Rate ECU vs. EU ISO16183	y = 10000000000.0000 x - 0.000 R ² =10000000000.000 SEE=	
403.0	PEMS post processing version	Rel_10_B192	
404.0	Concerto version	480.00000	
405.0	Concerto build	215.00000	
406.0	USERNAME	EFR	

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi Q7 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Mountain
Page: Trip Summary

Start Date: 09/20/2017
Start Time: 07:29:33.0



Trip Duration	3257.00	s	ave THC	2.37692	ppm	BS CO2	n/a	g/hphr
Trip Duration (a)	3257.00	s	ave NMHC	8.27441	ppm	BS CO	n/a	g/hphr
Trip Distance	28.81	mi	ave CH4	-5.36135	ppm	BS THC	n/a	g/hphr
Trip Distance (a)	28.81	mi	ave CO	87.20138	ppm	BS NMHC	n/a	g/hphr
Trip Fuel Cons. (b)	n/a	kg	ave CO2	10.21298	%	BS CH4	n/a	g/hphr
Trip Fuel Cons. (ab)	n/a	kg	ave NOx	8.73090	ppm	BS NO (d)	n/a	g/hphr
Trip Fuel Cons. EU (ac)	3.91	kg	ave PM	n/a	mg/m3	BS NO2	n/a	g/hphr
Trip Fuel Cons. US (ac)	3.87	kg	ave Soot meas	n/a	mg/m3	BS NOx	n/a	g/hphr
Trip Fuel Cons. Volume (b)	n/a	gall	ave Soot	n/a	mg/m3	BS Soot	n/a	g/hphr
Trip Fuel Cons. Volume (ab)	n/a	gall	ave PN	n/a	#/cm3	BS Soot meas	n/a	g/hphr
Trip Fuel Cons. Volume EU (ac)	1.38	gall	tot THC	0.47840	g	BS PM	n/a	g/hphr
Trip Fuel Cons. Volume US (ac)	1.37	gall	tot NMHC	0.57081	g	BS PN	n/a	#/hpr
Trip Fuel Economy (b)	n/a	mpg_US	tot CH4	0.00382	g	DS CO2	407.83680	g/mi
Trip Fuel Economy (ab)	n/a	mpg_US	tot CO	9.32595	g	DS CO	0.32369	g/mi
Trip Fuel Economy EU (ac)	20.87	mpg_US	tot CO2	11750.28697	g	DS THC	0.01660	g/mi
Trip Fuel Economy US (ac)	21.07	mpg_US	tot NO (d)	0.54539	g	DS NMHC	0.01981	g/mi
Trip Av. Eng. Speed	1323.55	rpm	tot NO2	0.03480	g	DS CH4	0.00013	g/mi
Trip Av. Torque	n/a	lbft	tot NOx	0.57511	g	DS NO (d)	0.01893	g/mi
Trip Av. Power	n/a	hp	tot Soot	n/a	g	DS NO2	0.00121	g/mi
Trip Work	n/a	hphr	tot Soot meas	n/a	g	DS NOx	0.01996	g/mi
Trip Exhaust Mass	63.40	kg	tot PM	n/a	g	DS Soot	n/a	g/mi
Trip Exhaust Mass EU (ac)	n/a	kg	tot PN	n/a	#	DS Soot meas	n/a	g/mi
Trip Exhaust Mass US (ac)	n/a	kg	PM measurement type	0.00000	-	DS PM	n/a	g/mi
Trip Av. Amb. Temperature	78.16	deg_F	PM correction type	1.00000	alpha(HC)	DS PN	n/a	#/mi
Trip Av. Humidity	48.29	%	tot Soot on PM filter (estim.)	n/a	mg	FS CO2	n/a	g/kg
Fuel Type	Petrol (E10)		Soot --> PM simple scaling factor	1.00000	-	FS CO	n/a	g/kg
			Soot --> PM alpha scaling factor	0.00000	-	FS THC	n/a	g/kg
			Trip Av. Veh. Speed	31.84541	mi/hr	FS NMHC	n/a	g/kg
			Trip Velocity Zero	12.40405	%	FS CH4	n/a	g/kg
			Trip Velocity Urban	43.65981	%	FS NO (d)	n/a	g/kg
			Trip Velocity Rural	30.42677	%	FS NO2	n/a	g/kg
			Trip Velocity Motorway	25.91342	%	FS NOx	n/a	g/kg
						FS Soot	n/a	g/kg
						FS Soot meas	n/a	g/kg
						FS PM	n/a	g/kg
						FS PN	n/a	#/kg

(a) GAS PEMS measurement state only, (b) based on fuel rate input (ECU, Fuel Meter), (c) calculated from carbon balance
(d) NO calculated using molecular weight of NO2

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi Q7 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Mountain

Page: Trip Summary Drift Corrected

Start Date: 09/20/2017

Start Time: 07:29:33.0

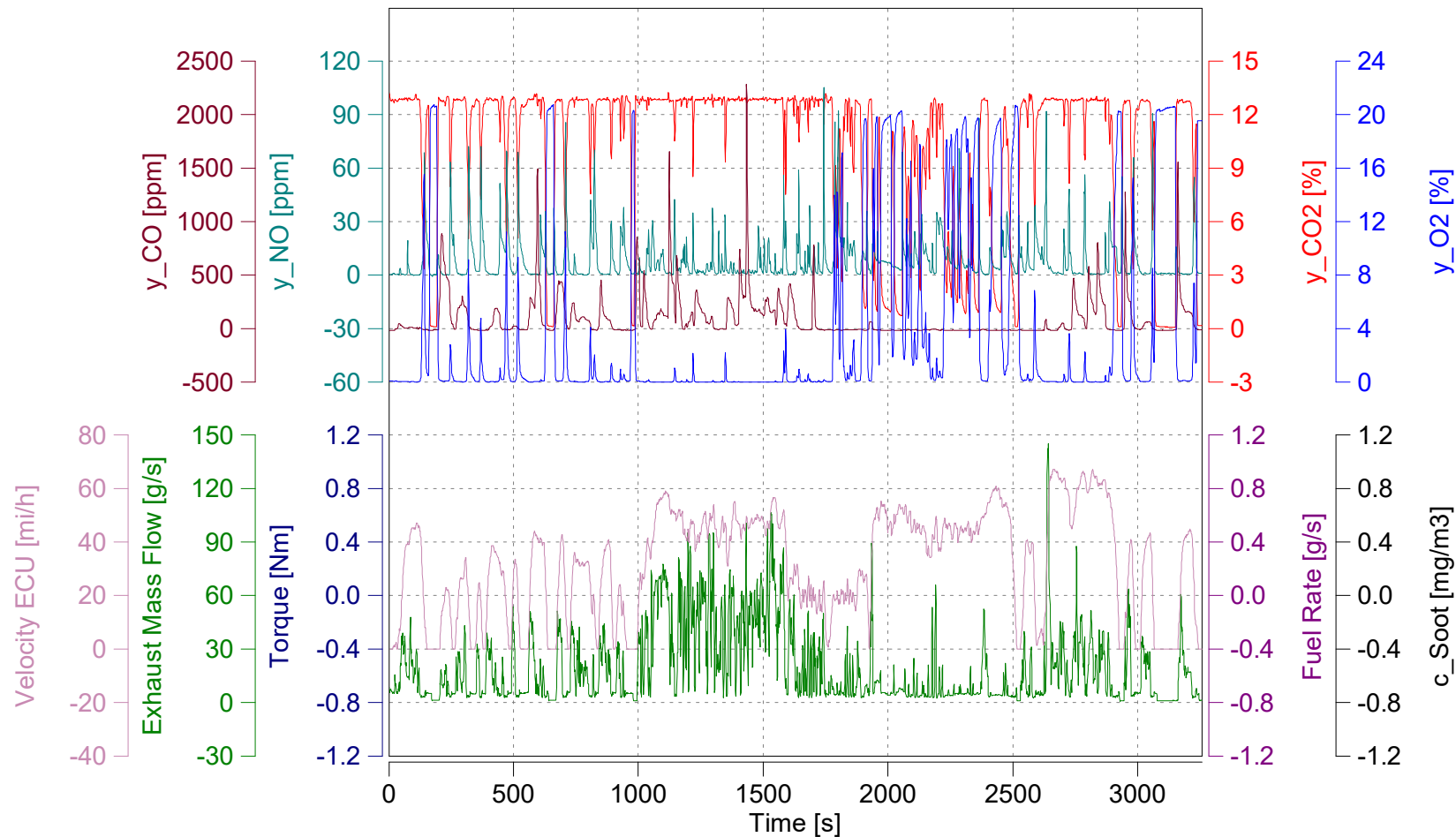


Trip Duration	3257.00	s	ave THC DC	3.21018	ppm	BS CO2 DC	n/a	g/hphr
Trip Duration (a)	3257.00	s	ave NMHC DC	9.16474	ppm	BS CO DC	n/a	g/hphr
Trip Distance	28.81	mi	ave CH4 DC	-5.41324	ppm	BS THC DC	n/a	g/hphr
Trip Distance (a)	28.81	mi	ave CO DC	87.87601	ppm	BS NMHC DC	n/a	g/hphr
Trip Fuel Cons. (b)	n/a	kg	ave CO2 DC	10.21975	%	BS CH4 DC	n/a	g/hphr
Trip Fuel Cons. (ab)	n/a	kg	ave NOx DC	8.73606	ppm	BS NO DC (d)	n/a	g/hphr
Trip Fuel Cons. EU (ac)	3.91	kg	ave PM	n/a	mg/m3	BS NO2 DC	n/a	g/hphr
Trip Fuel Cons. US (ac)	3.87	kg	ave Soot meas	n/a	mg/m3	BS NOx DC	n/a	g/hphr
Trip Fuel Cons. Volume (b)	n/a	gall	ave Soot	n/a	mg/m3	BS Soot	n/a	g/hphr
Trip Fuel Cons. Volume (ab)	n/a	gall	ave PN DC	n/a	#/cm3	BS Soot meas	n/a	g/hphr
Trip Fuel Cons. Volume EU (ac)	1.38	gall	tot THC DC	0.64611	g	BS PM	n/a	g/hphr
Trip Fuel Cons. Volume US (ac)	1.37	gall	tot NMHC DC	0.72300	g	BS PN DC	n/a	#/hpr
Trip Fuel Economy (b)	n/a	mpg_US	tot CH4 DC	0.00250	g	DS CO2 DC	408.10743	g/mi
Trip Fuel Economy (ab)	n/a	mpg_US	tot CO DC	9.39810	g	DS CO DC	0.32620	g/mi
Trip Fuel Economy EU (ac)	20.87	mpg_US	tot CO2 DC	11758.08411	g	DS THC DC	0.02243	g/mi
Trip Fuel Economy US (ac)	21.07	mpg_US	tot NO DC (d)	0.54577	g	DS NMHC DC	0.02509	g/mi
Trip Av. Eng. Speed	1323.55	rpm	tot NO2 DC	0.03475	g	DS CH4 DC	0.00009	g/mi
Trip Av. Torque	n/a	lbft	tot NOx DC	0.57544	g	DS NO DC (d)	0.01894	g/mi
Trip Av. Power	n/a	hp	tot Soot	n/a	g	DS NO2 DC	0.00121	g/mi
Trip Work	n/a	hphr	tot Soot meas	n/a	g	DS NOx DC	0.01997	g/mi
Trip Exhaust Mass	63.40	kg	tot PM	n/a	g	DS Soot	n/a	g/mi
Trip Exhaust Mass EU (ac)	n/a	kg	tot PN DC	n/a	#	DS Soot meas	n/a	g/mi
Trip Exhaust Mass US (ac)	n/a	kg	PM measurement type	0.00000	-	DS PM	n/a	g/mi
Trip Av. Amb. Temperature	78.16	deg_F	PM correction type	1.00000	alpha(HC)	DS PN DC	n/a	#/mi
Trip Av. Humidity	48.29	%	tot Soot on PM filter (estim.)	n/a	mg	FS CO2 DC	n/a	g/kg
Fuel Type	Petrol (E10)		Soot --> PM simple scaling factor	1.00000	-	FS CO DC	n/a	g/kg
			Soot --> PM alpha scaling factor	0.00000	-	FS THC DC	n/a	g/kg
			Trip Av. Veh. Speed	31.84541	mi/hr	FS NMHC DC	n/a	g/kg
			Trip Velocity Zero	12.40405	%	FS CH4 DC	n/a	g/kg
			Trip Velocity Urban	43.65981	%	FS NO DC (d)	n/a	g/kg
			Trip Velocity Rural	30.42677	%	FS NO2 DC	n/a	g/kg
			Trip Velocity Motorway	25.91342	%	FS NOx DC	n/a	g/kg
						FS Soot	n/a	g/kg
						FS Soot meas	n/a	g/kg
						FS PM	n/a	g/kg
						FS PN DC	n/a	#/kg

(a) GAS PEMS measurement state only, (b) based on fuel rate input (ECU, Fuel Meter), (c) calculated from carbon balance
 (d) NO calculated using molecular weight of NO2

Concerto Version: 480 Build 215, Serial Number: 8468
 M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi Q7 /
 Engine: Gasoline / 3.0L
 NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
 Dry / Wet Corr.: 2 - CFR40 §86.1342-90



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

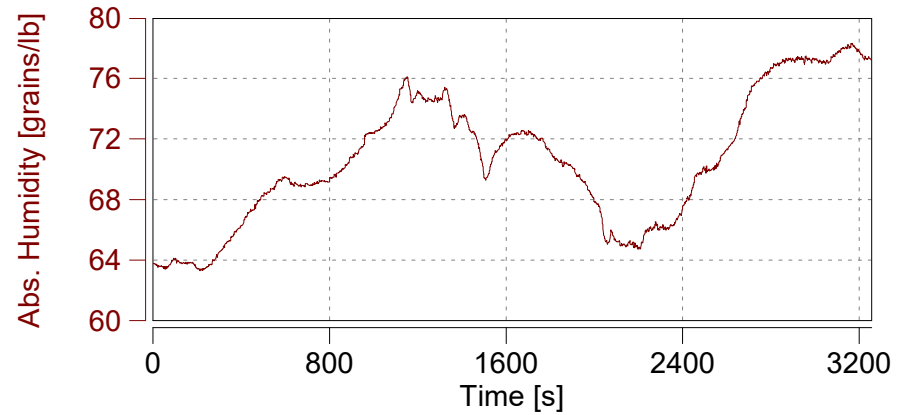
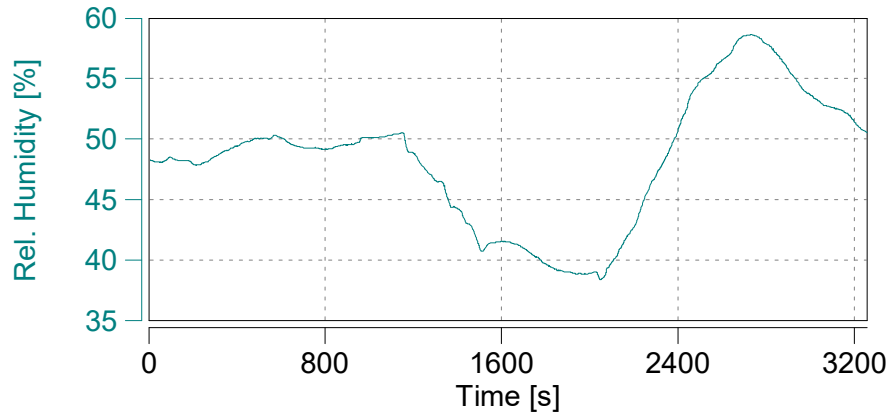
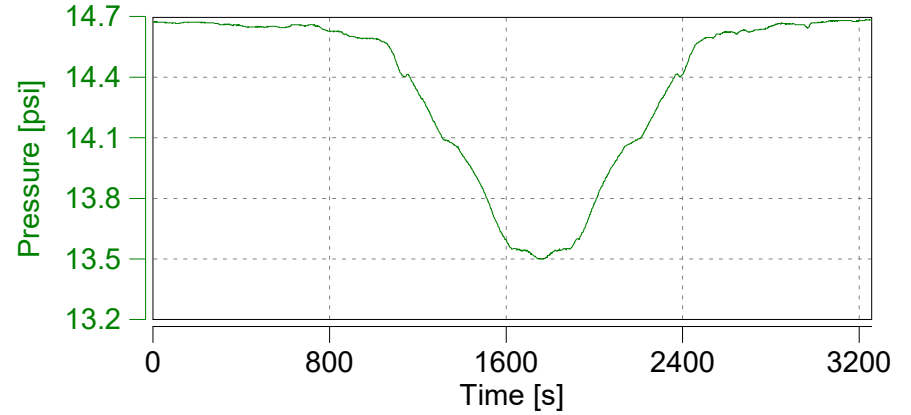
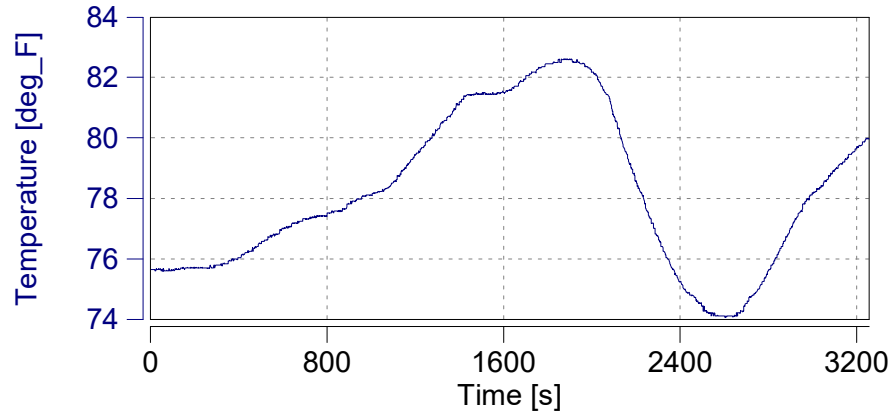
Vehicle: 2017 Audi Q7 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Mountain

Page: Ambient Conditions

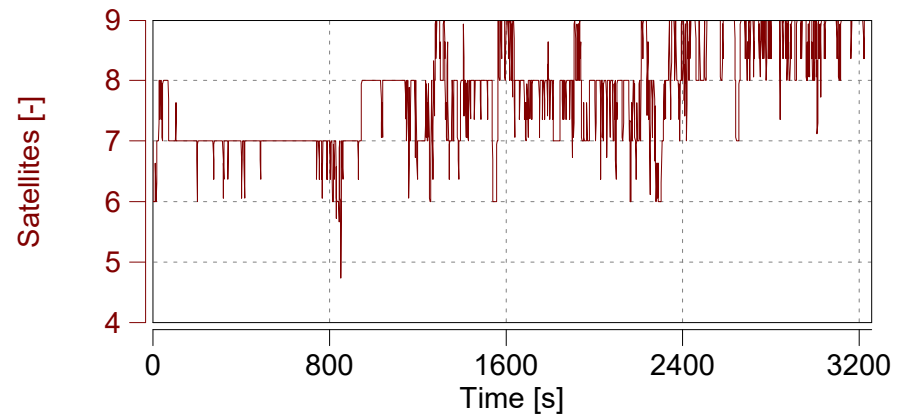
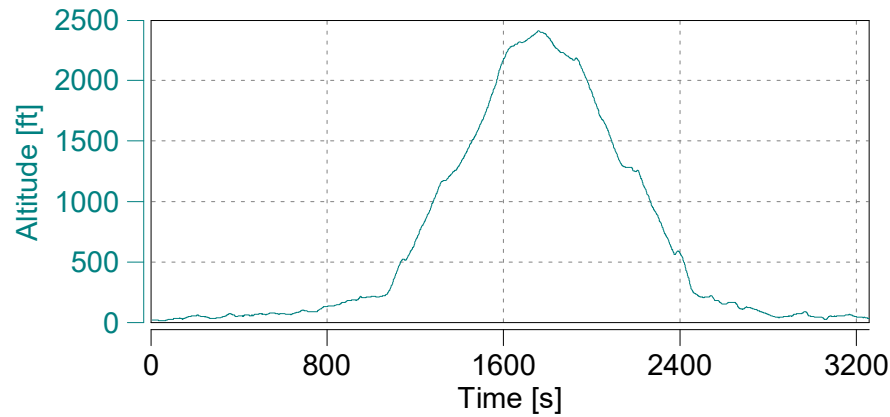
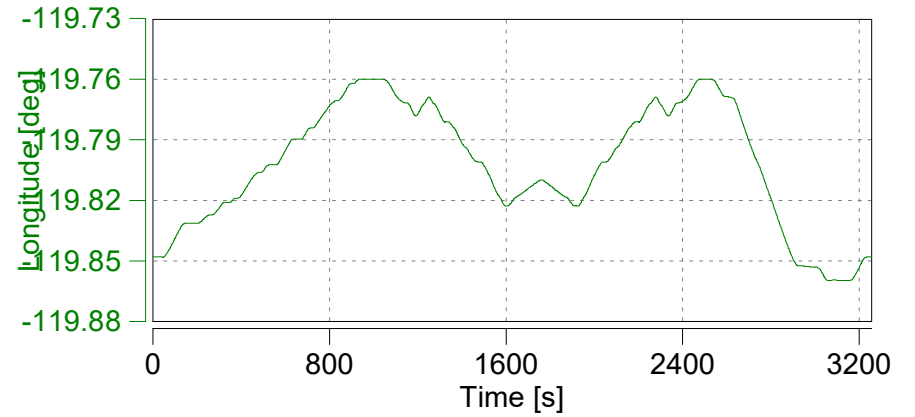
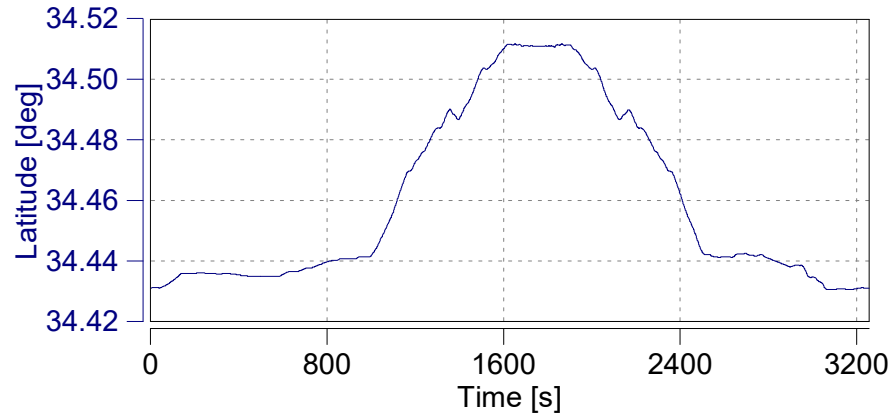
Start Date: 09/20/2017

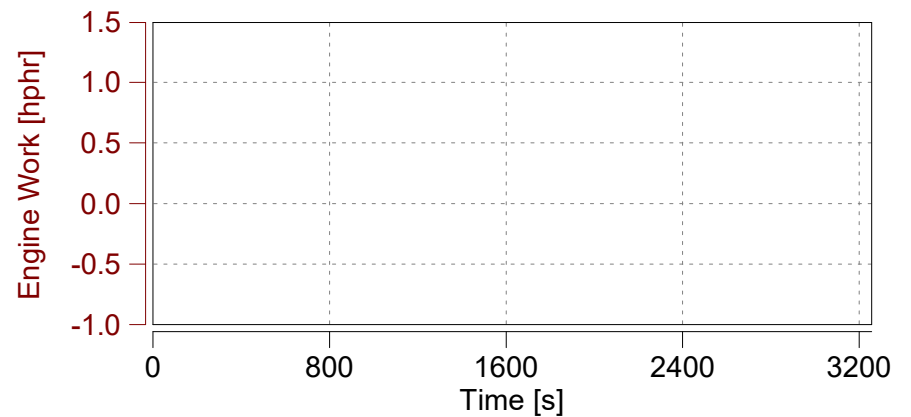
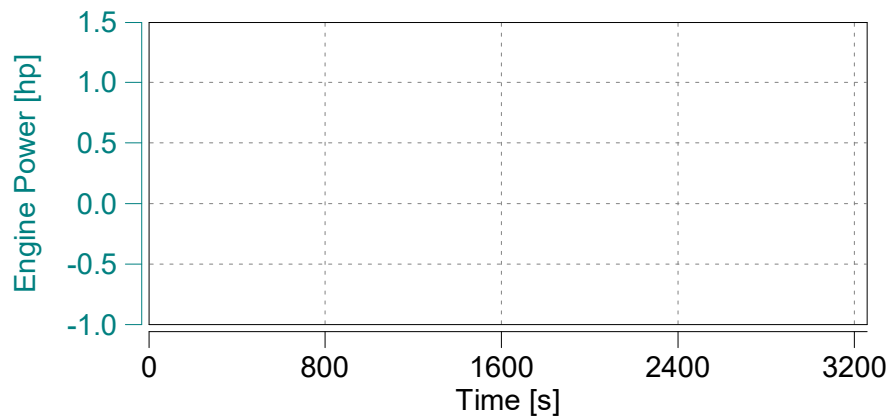
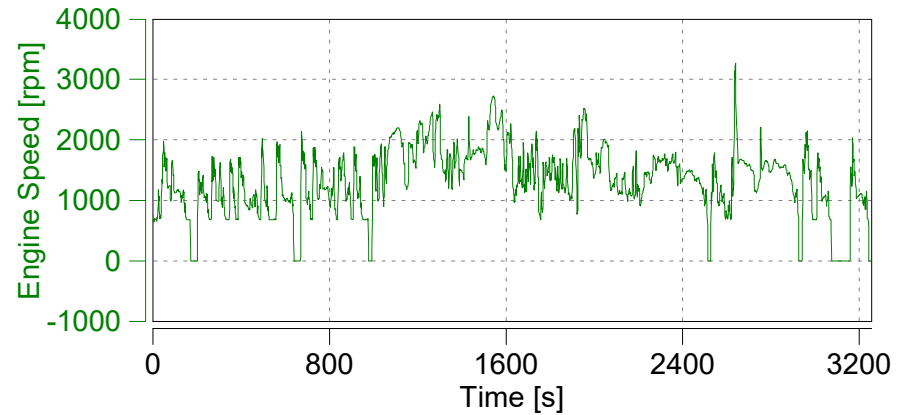
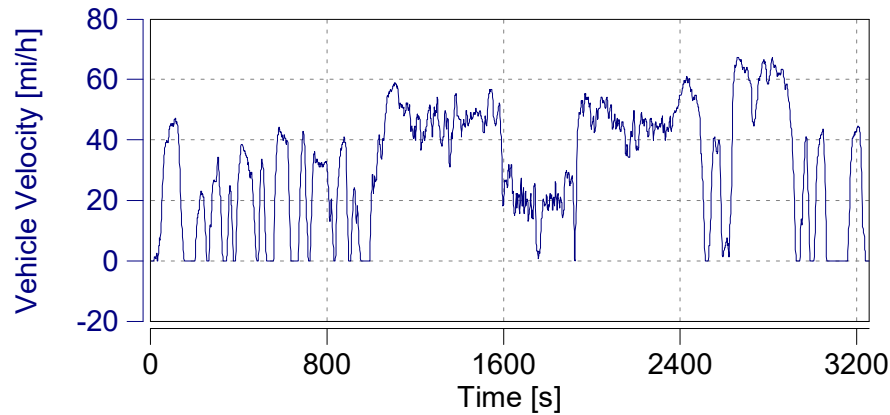
Start Time: 07:29:33.0

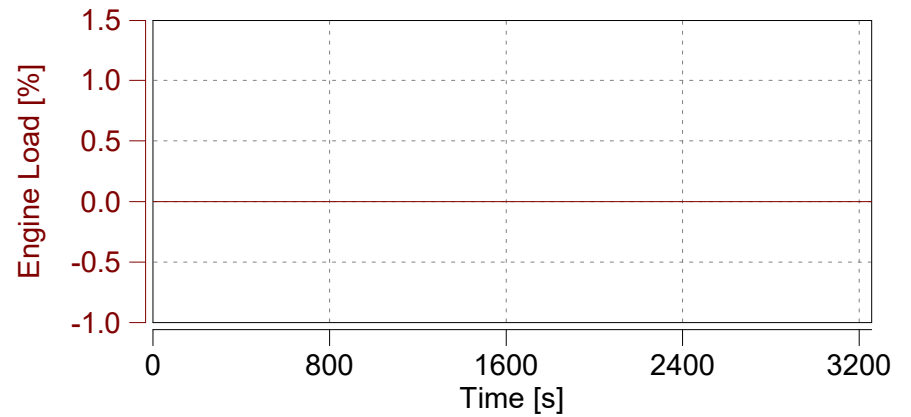
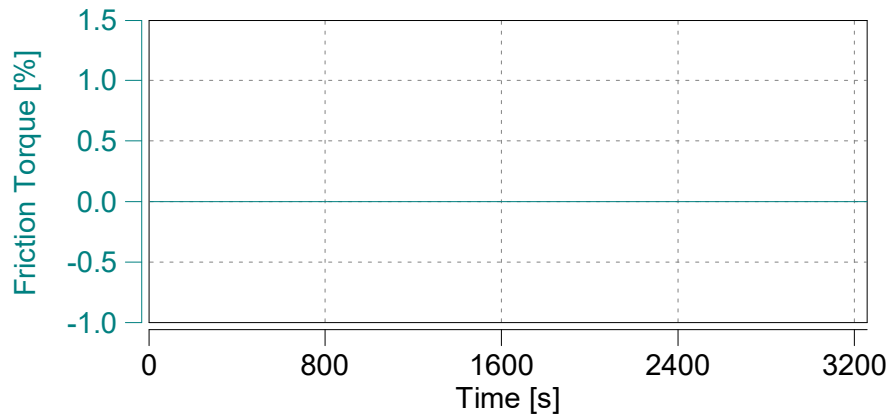
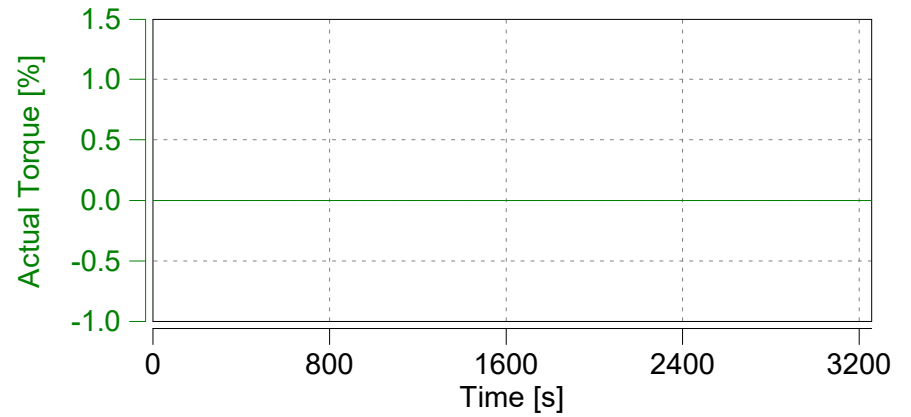
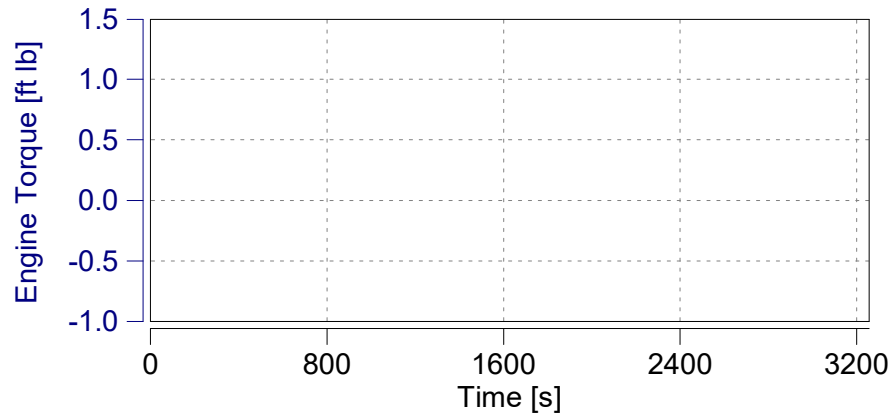


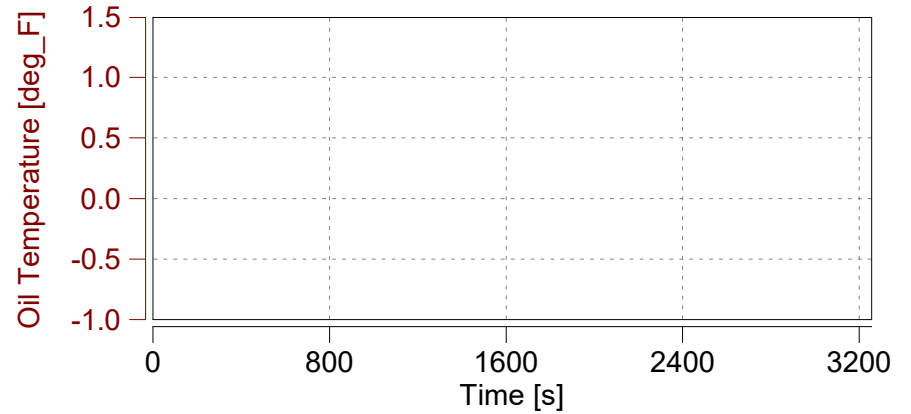
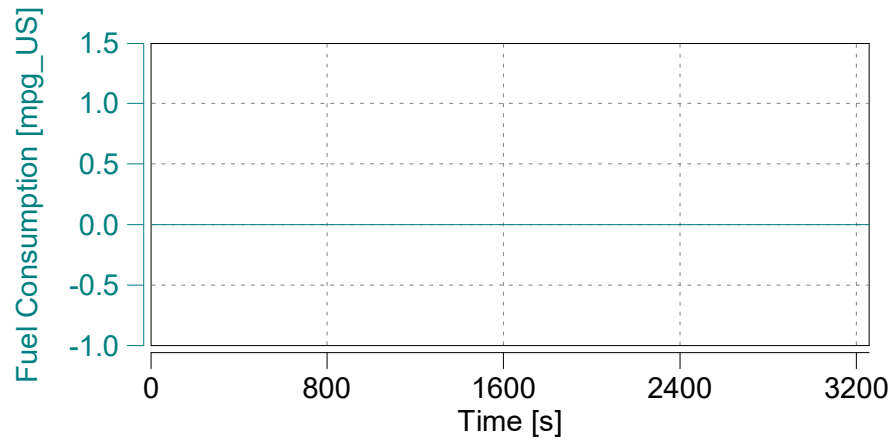
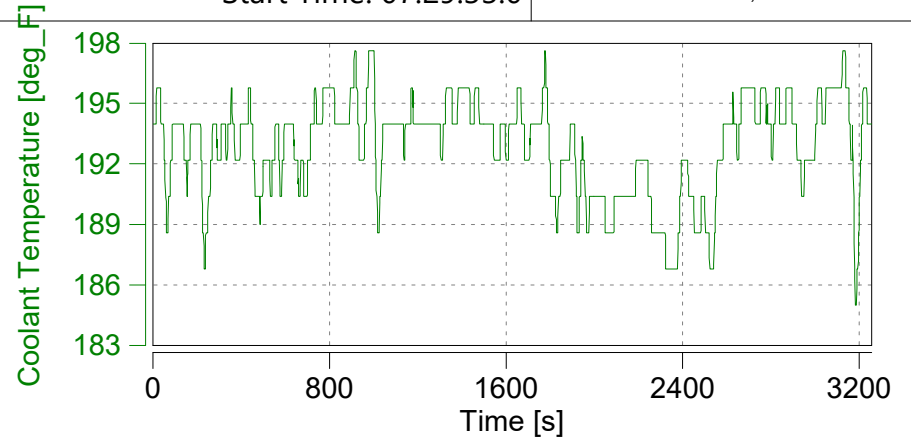
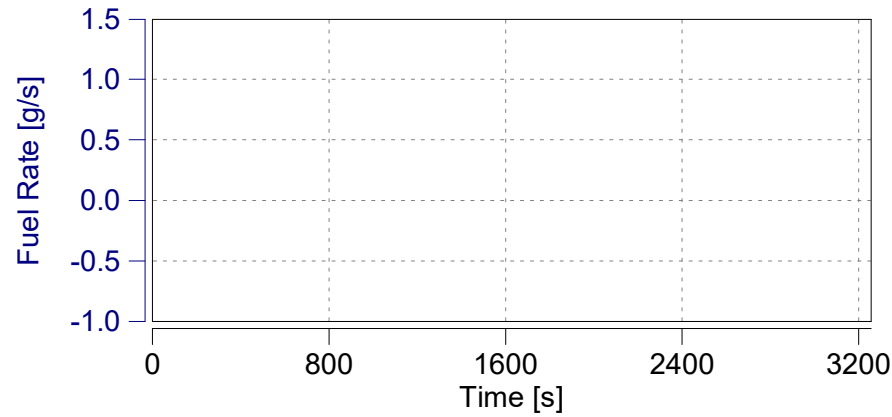
Concerto Version: 480 Build 215, Serial Number: 8468
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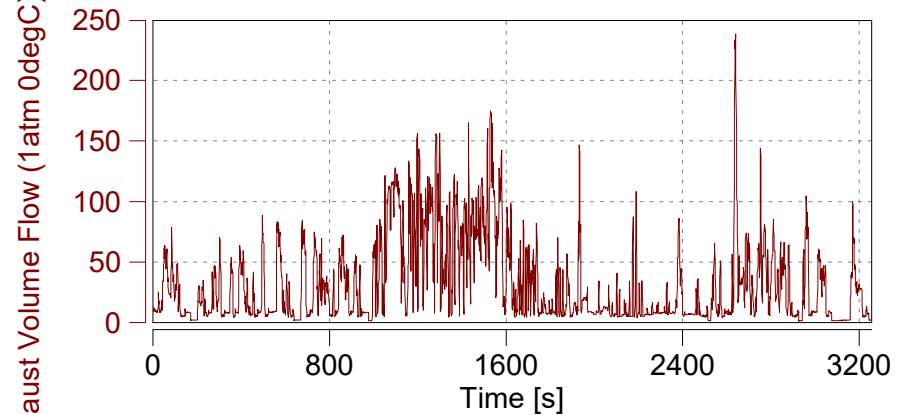
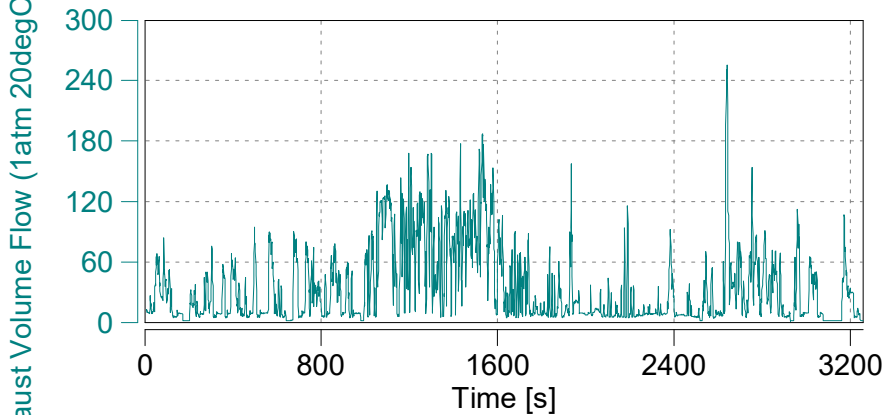
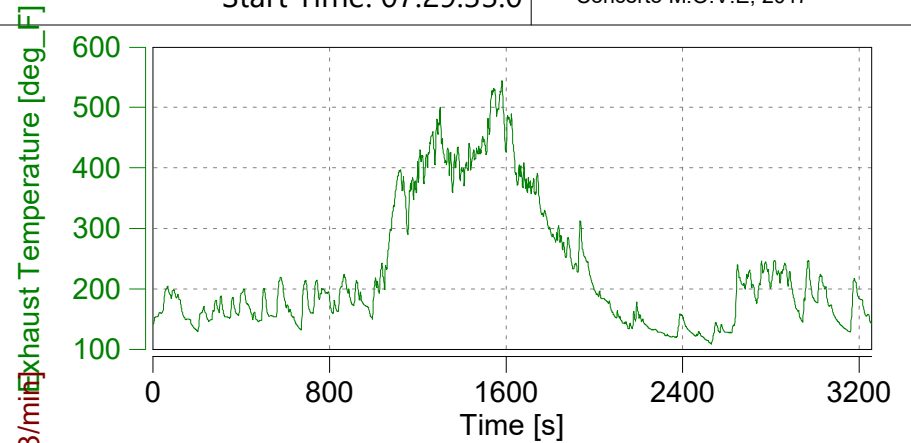
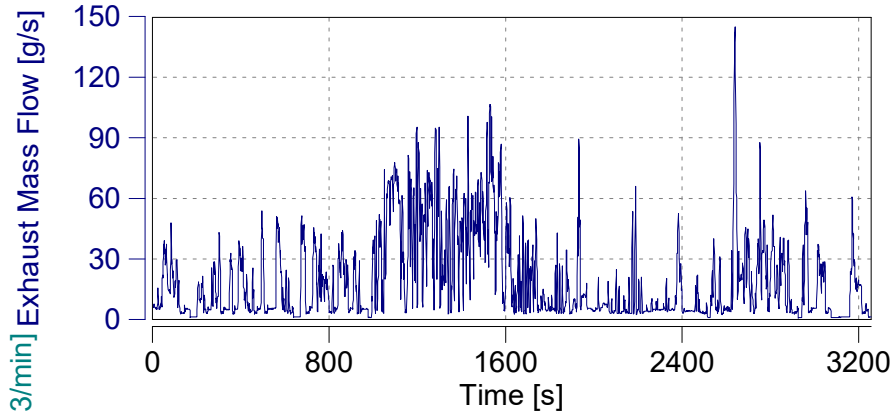
Vehicle: 2017 Audi Q7 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90





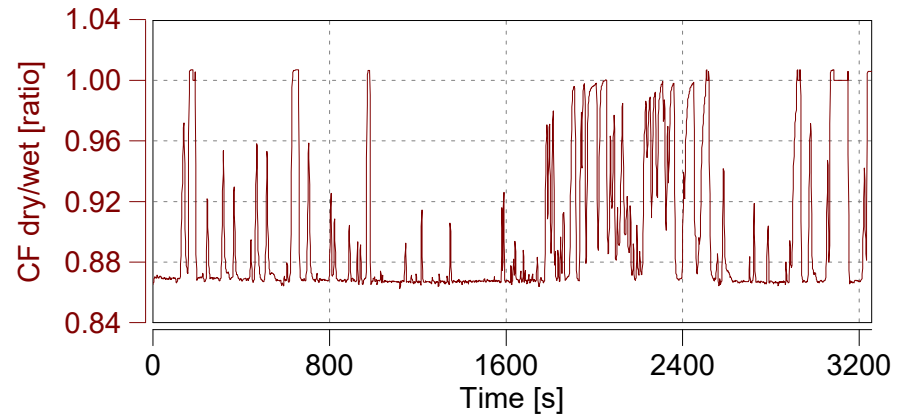
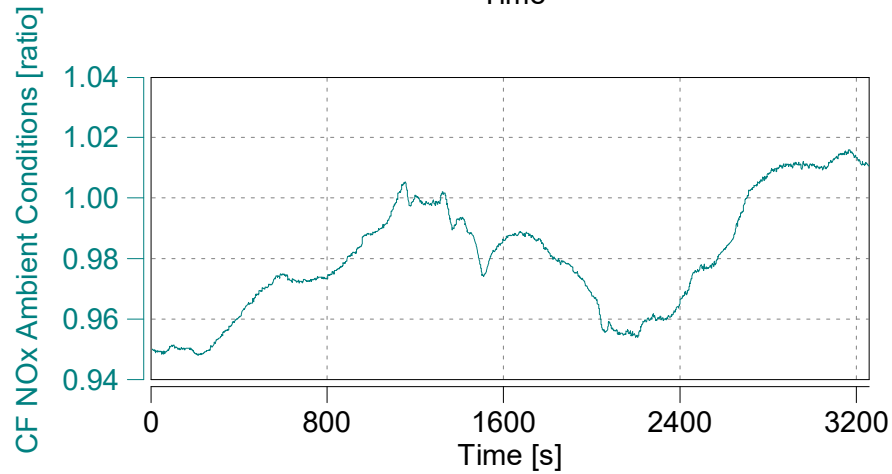
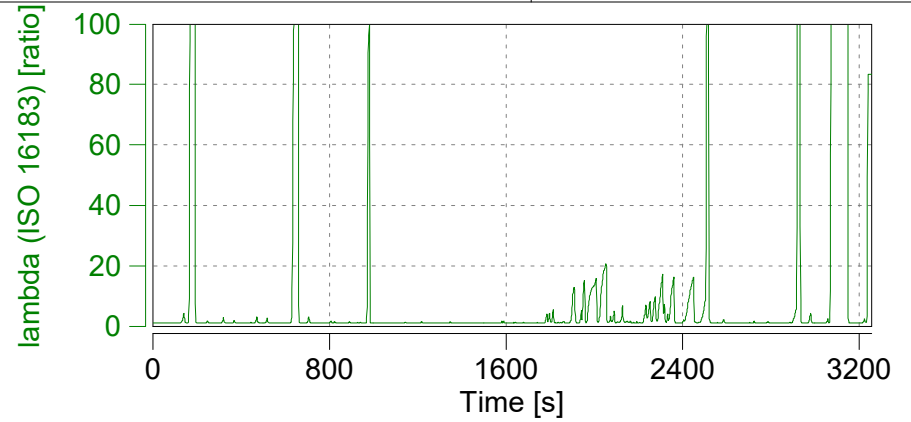
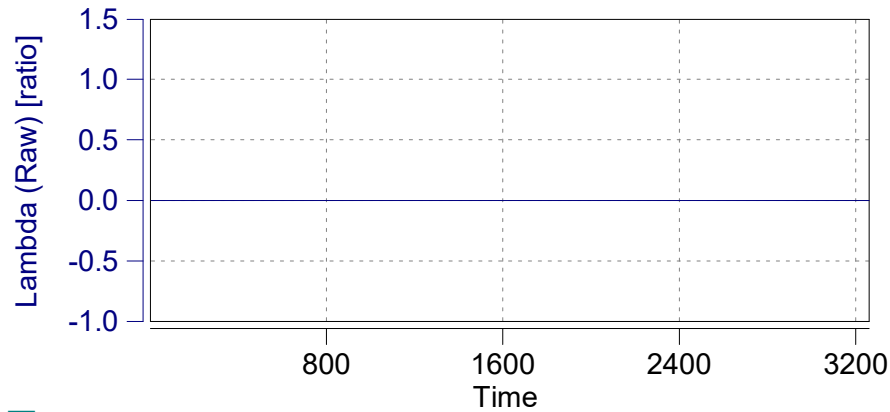






Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi Q7 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

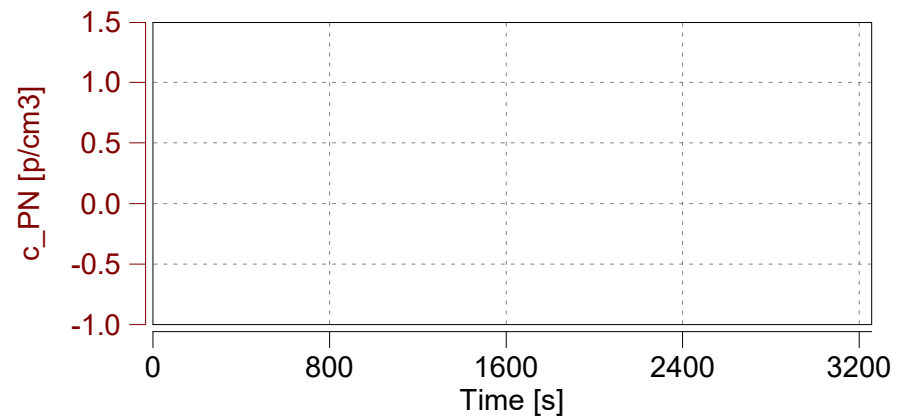
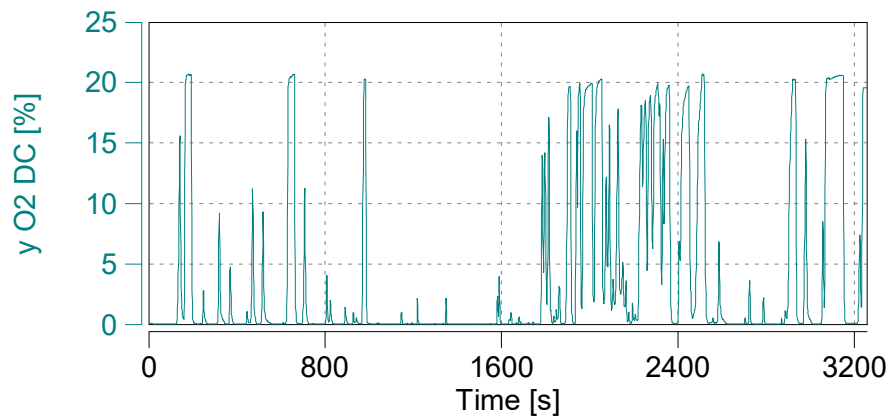
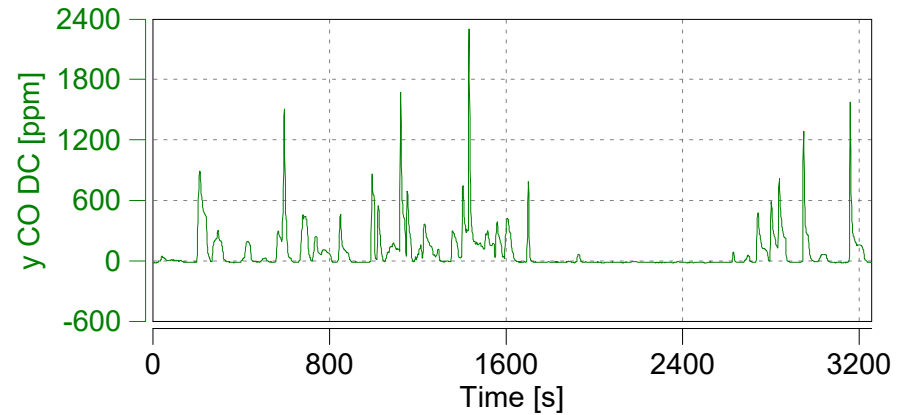
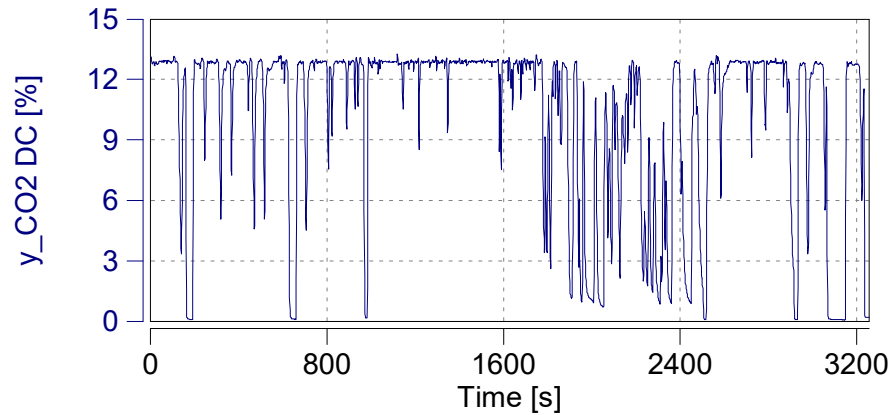


Case: Mountain

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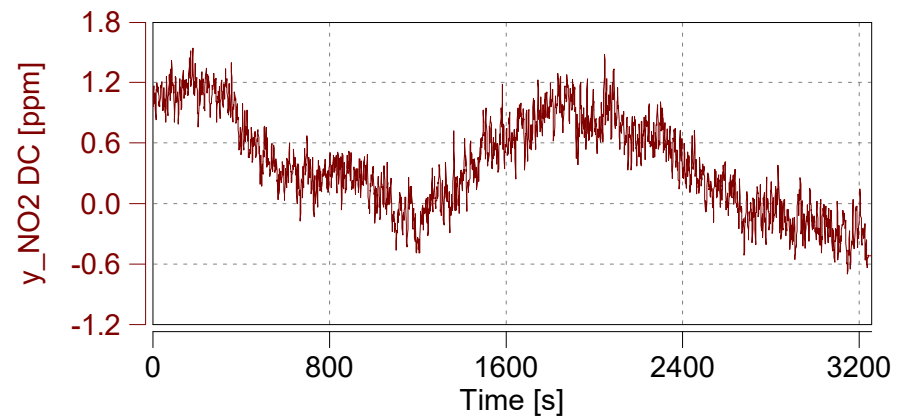
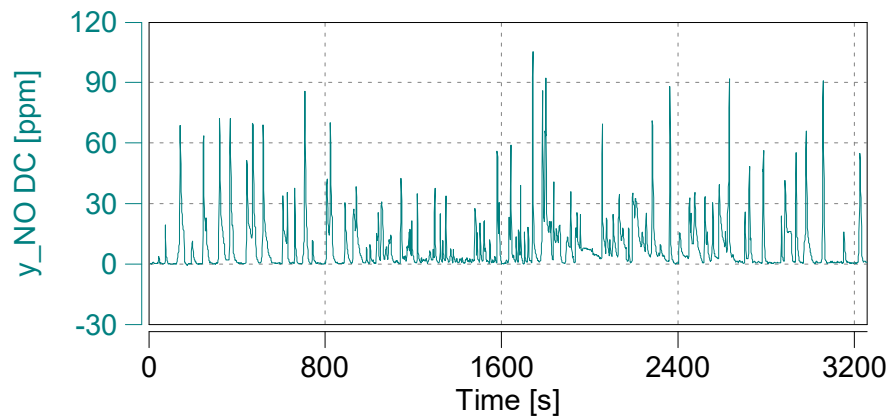
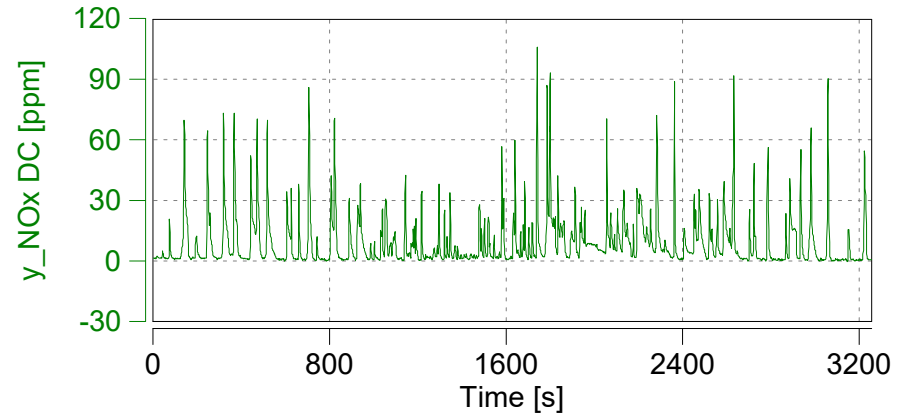
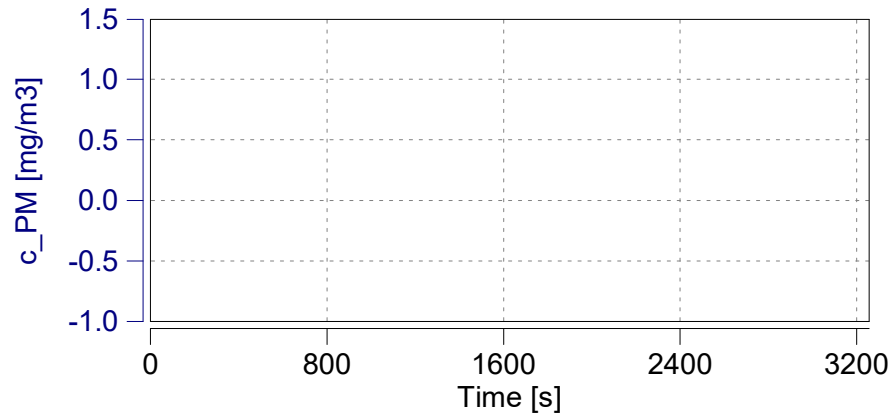
Vehicle: 2017 Audi Q7 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Mountain

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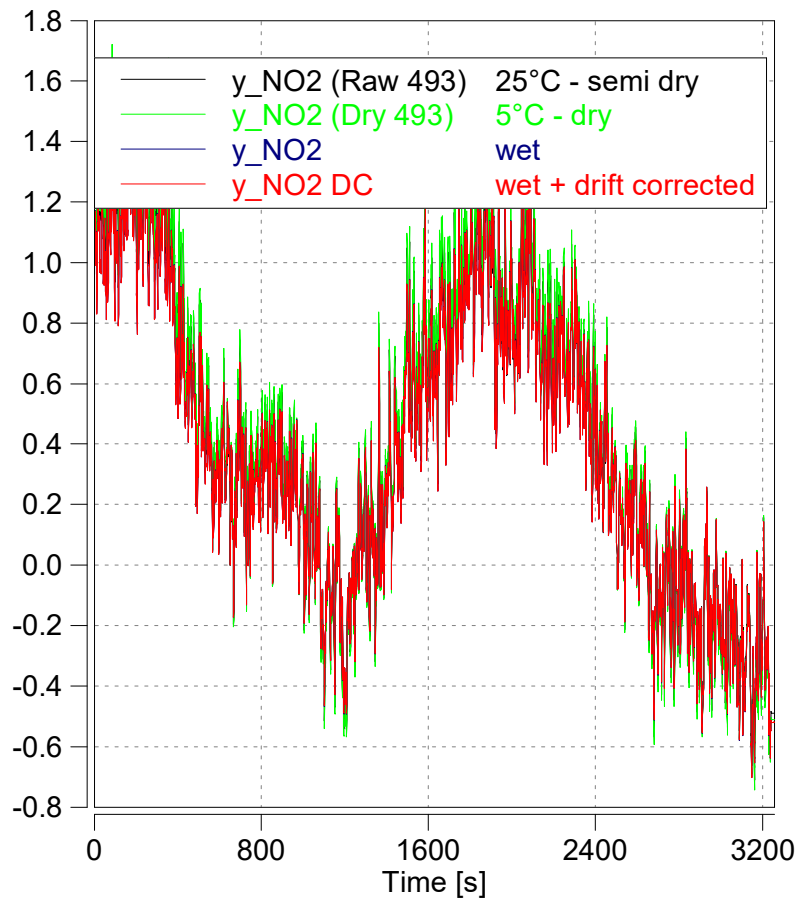
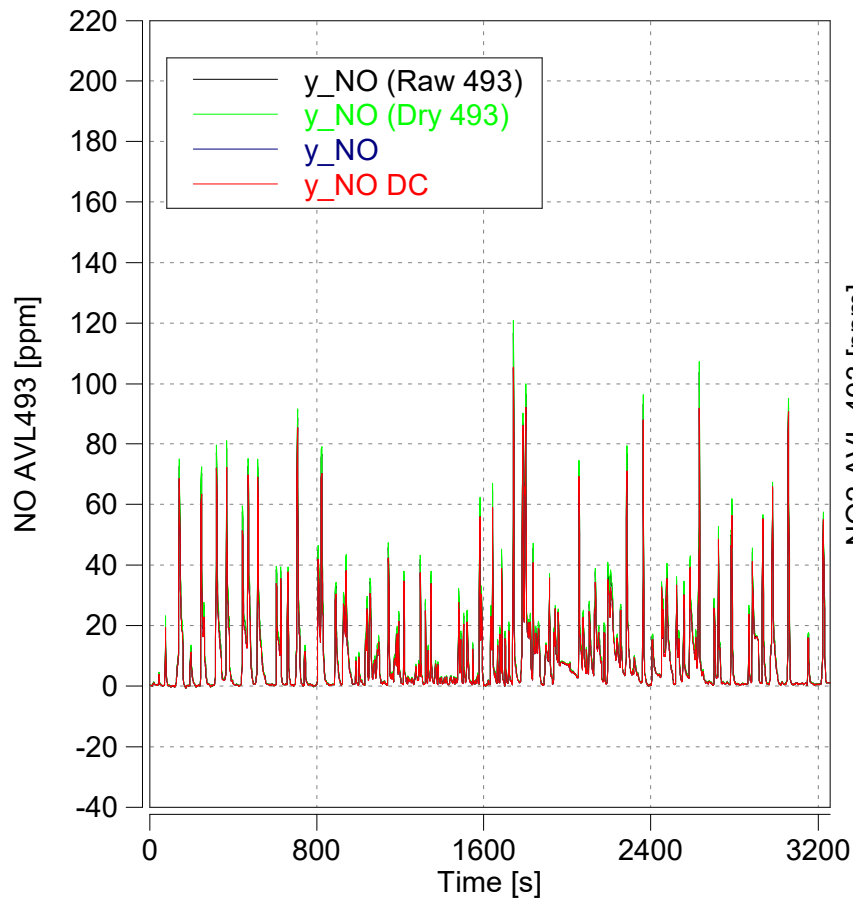
Start Date: 09/20/2017

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M.O.V.E Post-Processing: Rel_10_B192

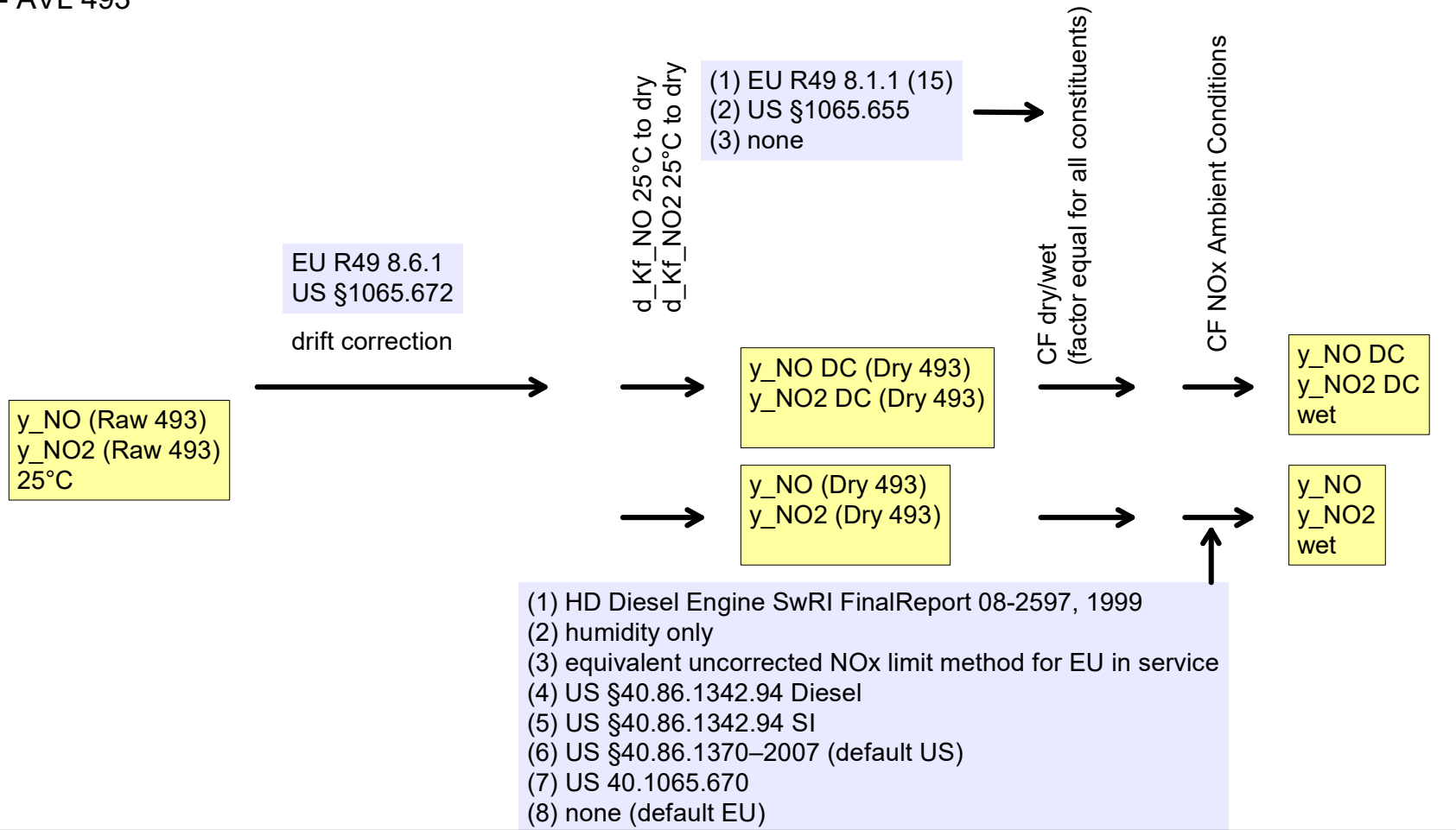
Vehicle: 2017 Audi Q7 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi Q7 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

NOx - AVL 493

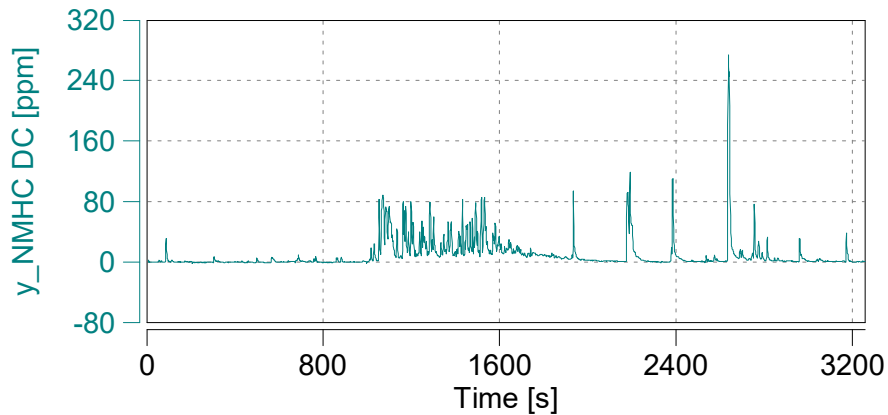
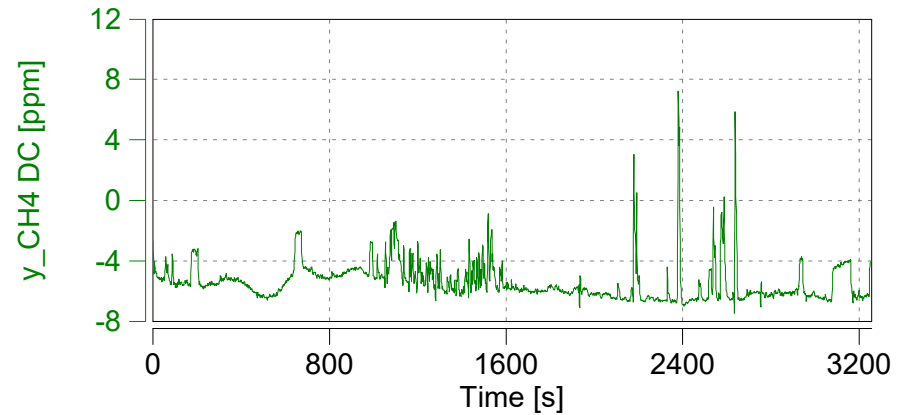
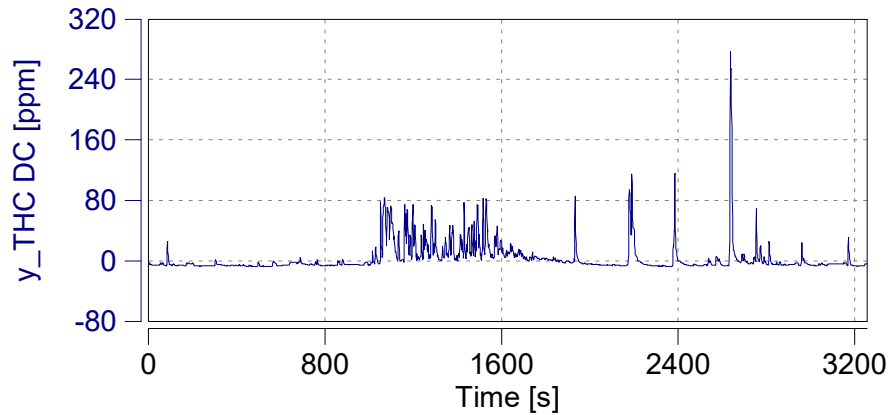


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M.O.V.E Post-Processing: Rel_10_B192

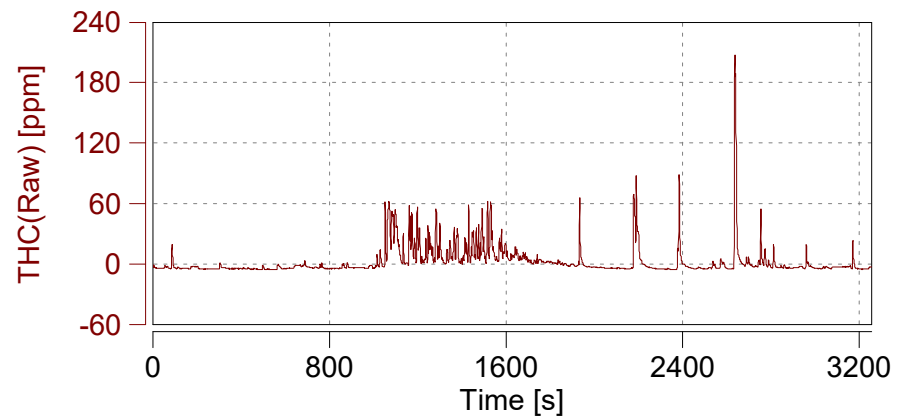
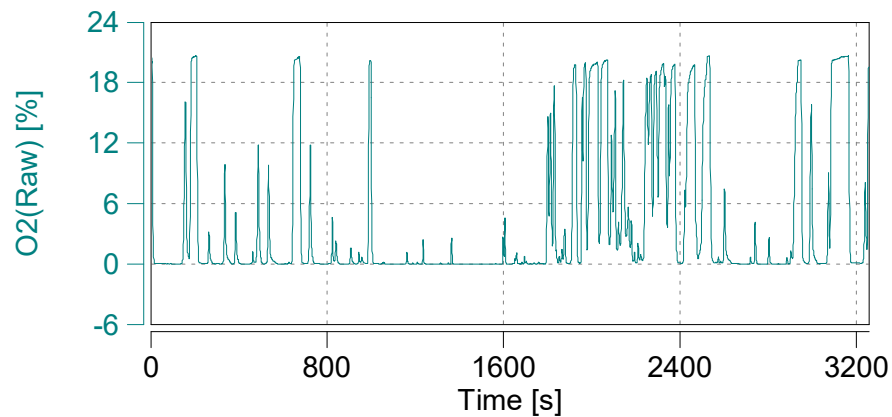
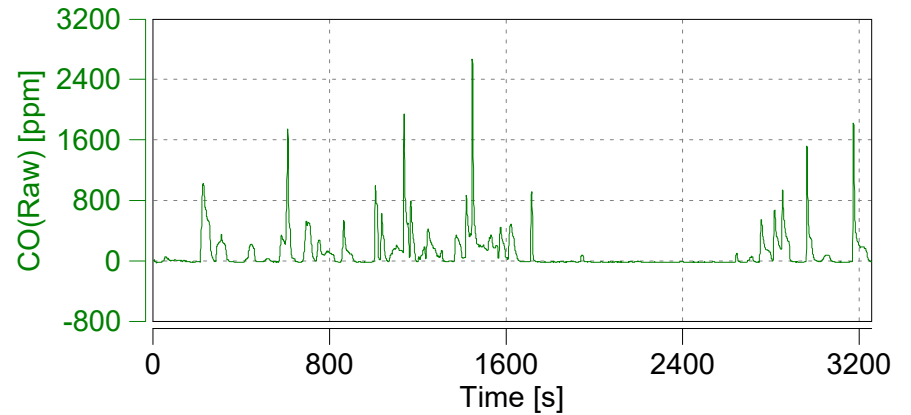
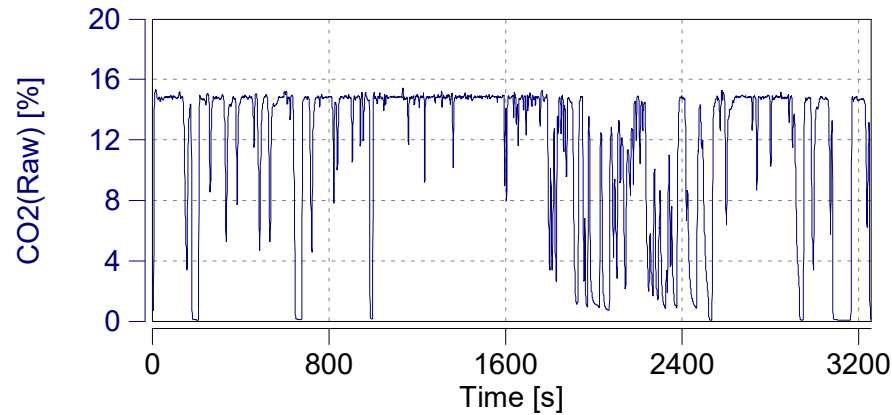
Vehicle: 2017 Audi Q7 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Mountain

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Concerto Version: 480 Build 215, Serial Number: 8468
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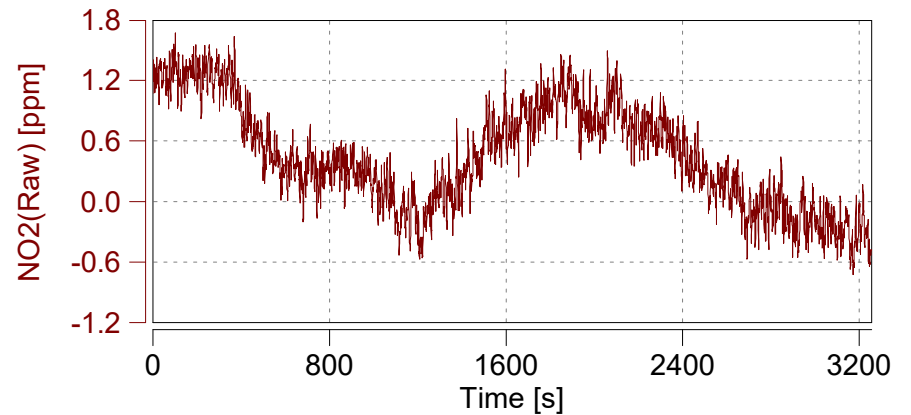
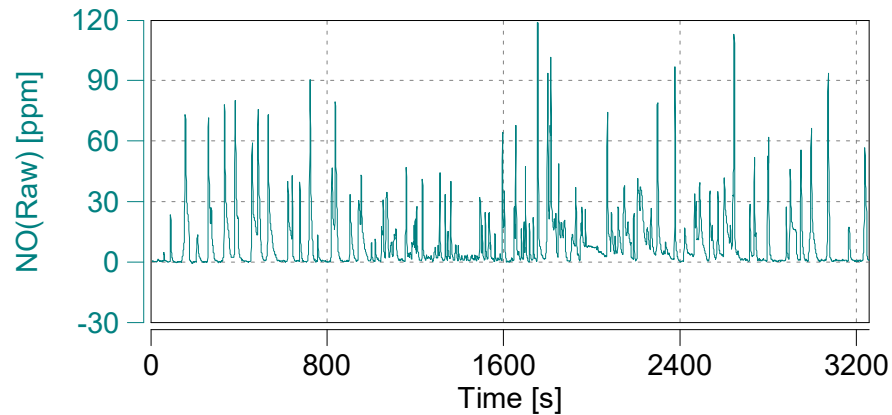
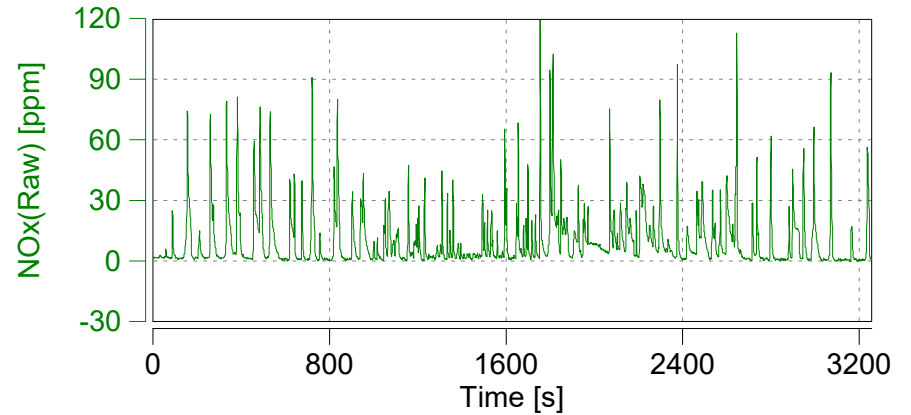
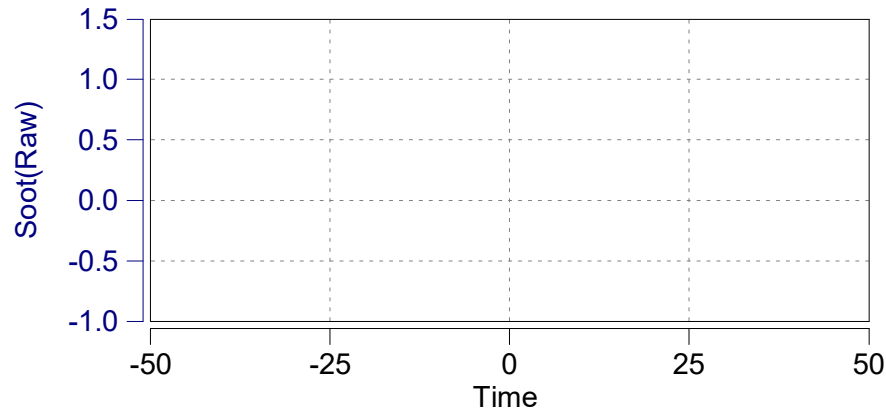
Vehicle: 2017 Audi Q7 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Mountain

Page: Emissions Raw Data (2)

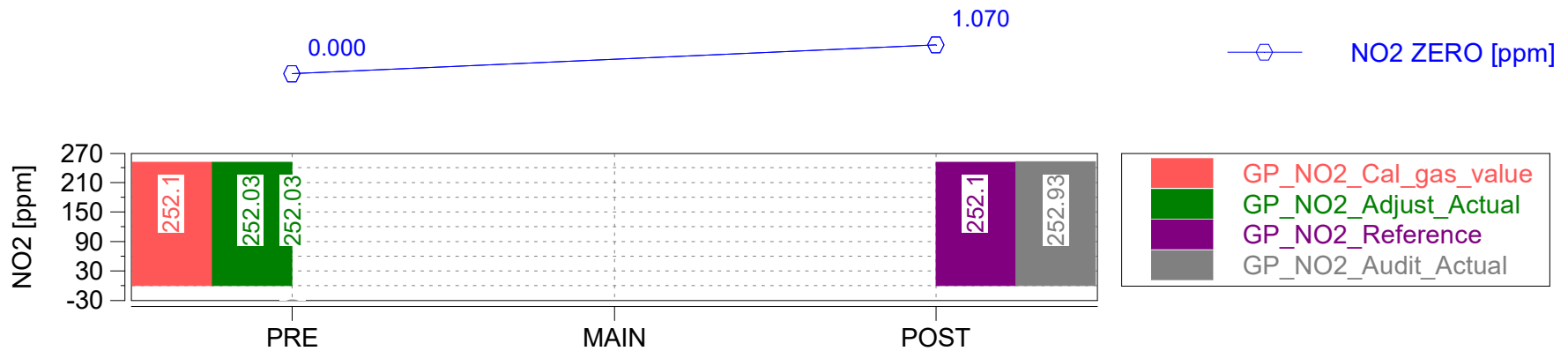
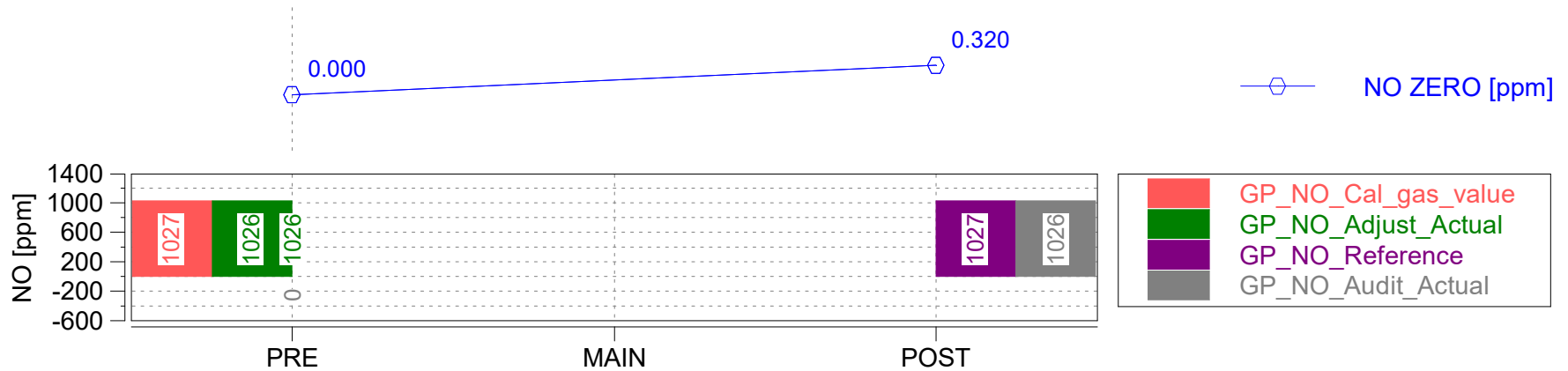
Start Date: 09/20/2017

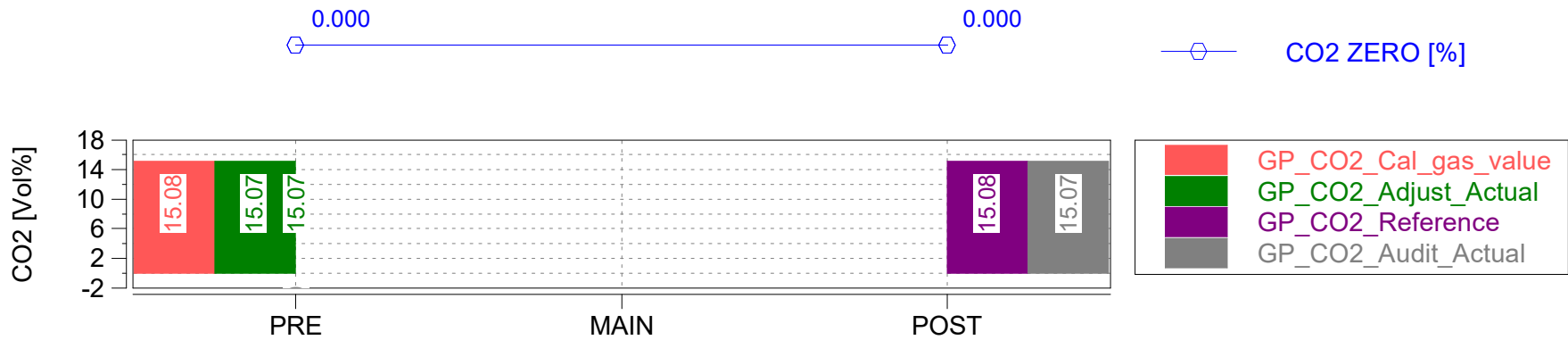
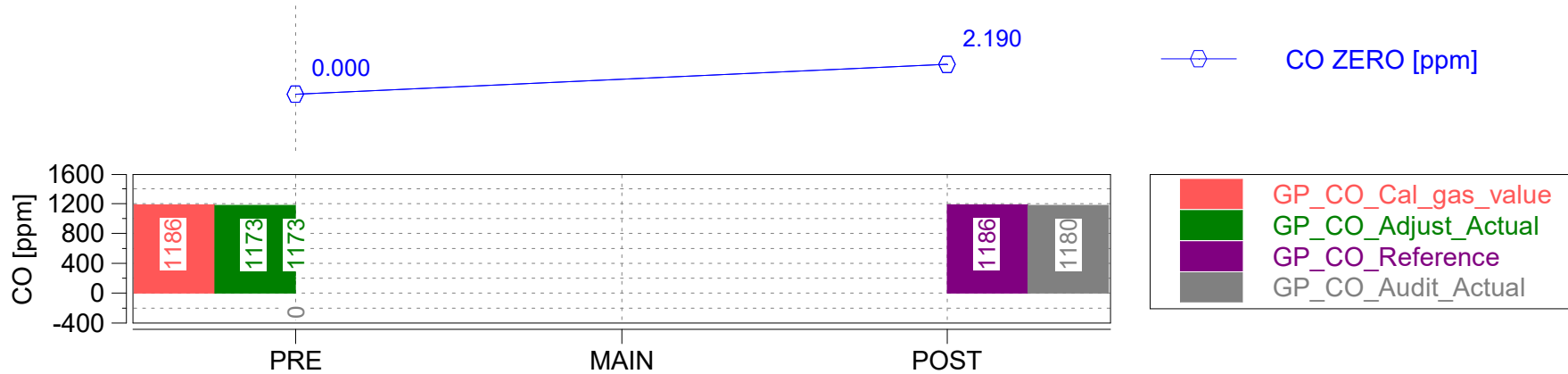
Start Time: 07:29:33.0

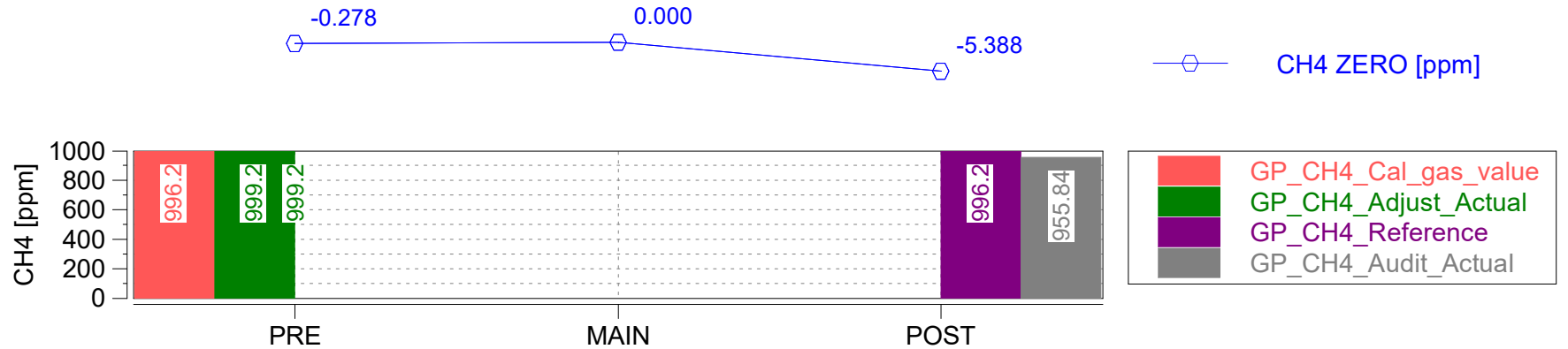
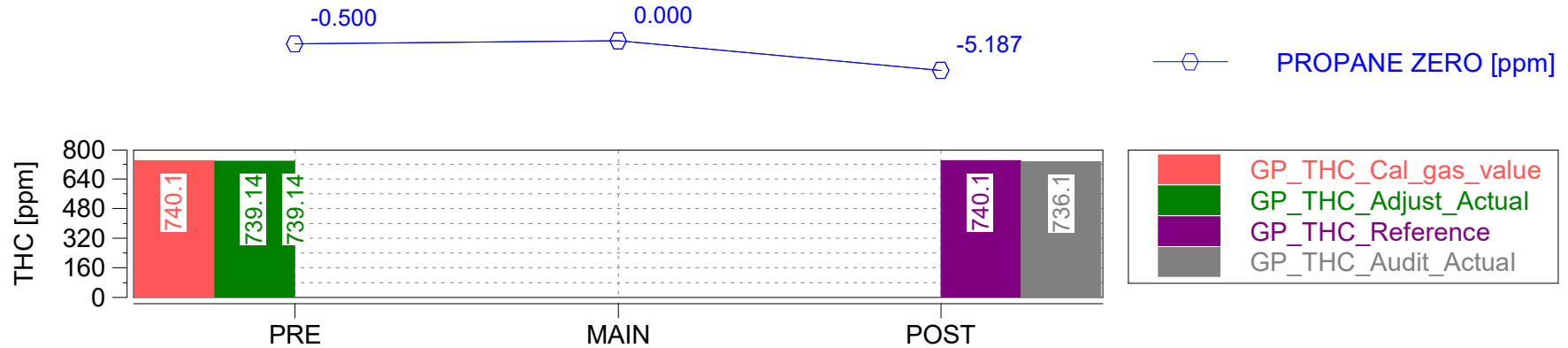


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M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi Q7 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90







#	Text	Value	Unit
-	----	----	----
1.0	Test Start: Date	-	-
2.0	Test Start: Time	-	-
3.0	Ambient Temperature	IFILE1:TM'Temperature	deg C
4.0	Ambient Temperature TS	0.00000	s
5.0	Ambient Pressure	IFILE1:TM'Pressure	kPa
6.0	Ambient Pressure TS	0.00000	s
7.0	Humidity Type	1.00000	-
8.0	Amb. Rel. Humidity	IFILE1:TM'Humidity	%
9.0	Amb. Rel. Humidity	0.00000	s
10.0	GPS Latitude		deg
11.0	GPS Latitude TS	0.00000	s
12.0	GPS Longitude		deg
13.0	GPS Longitude TS	0.00000	s
14.0	Altitude		m
15.0	Altitude TS	0.00000	s
16.0	GPS Quality		-
17.0	GPS Quality TS	0.00000	s
18.0	GroundSpeed		km/h
19.0	GroundSpeed TS	0.00000	s
20.0	Altitude from topographical map		m
21.0	Altitude TS of topographical map		s
22.0	TRIP_AMBIENT_GPS_AVL	YES	-
23.0	CALC_GPS_GROUNDSPEED	NO	-
24.0	EXHAUST_FLOW_AVL	NO	-
25.0	EXHAUST_FLOW_AVL_EFM	YES	-
26.0	Exhaust Flow Type	2.00000	-
27.0	Mass Flow	IFILE1:TM'PitotEFM_ExhaustG	various
28.0	Mass Flow TS	1.70000	s
29.0	Exhaust Pressure		kPa
30.0	Exhaust Pressure TS	1.70000	s

#	Text	Value	Unit
-	----	----	----
31.0	Exhaust Delta Pressure		kPa
32.0	Exhaust Pressure Delta TS	1.70000	s
33.0	Exhaust Temperature	IFILE1:TM'PitotEFM_ExhaustG	degC
34.0	Exhaust Temperature TS	1.70000	s
35.0	Lambda	N/A	-
36.0	Lambda TS		s
37.0	CO2_DIL		%
38.0	CO2_DIL TS		s
39.0	CVS Volume Flow		m3/min
40.0	TimeShift_CVS_VOL_FLOW		s
41.0	IN_CVS_PRESSURE		kPa
42.0	TimeShift_CVS_PRESSURE		s
43.0	IN_CVS_TEMP		degC
44.0	TimeShift_CVS_TEMP		s
45.0	Dry to Wet Conversion CO2	YES	-
46.0	Dry to Wet Conversion O2	YES	-
47.0	Dry to Wet Conversion NO	NO	-
48.0	Dry to Wet Conversion NO2	NO	-
49.0	Dry to Wet Conversion THC	NO	-
50.0	Dry to Wet Conversion CH4	NO	-
51.0	Dry to Wet Conversion O2	NO	-
52.0	CO2	IFILE1:TM'GPiS_CO2	%
53.0	CO2 TS	-15.80000	s
54.0	OS	IFILE1:TM'GPiS_O2	%
55.0	O2 TS	-16.30000	s
56.0	CO	IFILE1:TM'GPiS_CO	ppm
57.0	CO TS	-15.80000	s
58.0	NO	IFILE1:TM'GPiS_NO	ppm
59.0	NO TS	-14.00000	s
60.0	NO2	IFILE1:TM'GPiS_NO2	ppm

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M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi Q7 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
61.0	NO2 TS	-14.00000	s
62.0	THC	IFILE1:TM'FIDiS_THC_C1	ppm
63.0	THC TS	0.00000	s
64.0	CH4	IFILE1:TM'FIDiS_CH4_C1	ppm
65.0	CH4 TS	0.00000	s
66.0	GAS_PEMS_Ethane_Efficiency	IFILE1:MOVE_AVL4925'GP_Et -	
67.0	GAS_PEMS_Methane_Efficiency	IFILE1:MOVE_AVL4925'GP_M -	
68.0	GAS_PEMS_Methane_Response	IFILE1:MOVE_AVL4925'GP_M -	
69.0	Zero Signal	IFILE1:TM'GPiS_STATE	0/1
70.0	Zero Signal TS	-14.00000	s
71.0	Zero Signal_FIDiS	IFILE1:TM'FIDiS_STATE	0/1
72.0	Zero Signal_FIDiS TS		s
73.0	Species Input Type	4.00000	-
74.0	GASPEMS=AVL493	NO	-
75.0	GASPEMS=AVL493_iX	NO	-
76.0	GASPEMS=AVL492	YES	-
77.0	GASPEMS=AVL4925	YES	-
78.0	PM: Type	4.00000	1=GFB+HC, 2=GFB, 3='PM=S
79.0	Filter ID from IFile	NO	-
80.0	Lab ID from IFile	NO	-
81.0	PM Filter: ID	N/A	ID
82.0	PM Filter: Lab	N/A	Name/ID
83.0	PM Filter: Weight before Test	N/A	mg
84.0	PM Filter: Weight after Test	N/A	mg
85.0	PM (HC Corr): Max. Exhaust Flow	N/A	scfm
86.0	Soot		mg/m3
87.0	Soot TS	-5.00000	s
88.0	Soot Sensor		mg/m3
89.0	Soot Sensor TS		s
90.0	PM Filter: Filter Flow Rate		l/min

#	Text	Value	Unit
-	----	----	----
91.0	PM Filter: Filter Flow Rate TS	-5.00000	s
92.0	PM Filter: Filter Dilution Ratio		-
93.0	PM Filter: Filter Dilution Ratio TS	-5.00000	s
94.0	PM Filter: Filter Trigger		-
95.0	PM Filter: Filter Trigger TS	-5.00000	s
96.0	PMPEMS=AVL494	YES	-
97.0	PMPEMS_AVL494_PROP_DIL	NO	-
98.0	PM dilution ratio min		-
99.0	PM_MaxExhaustFlowRate		-
100.0	PM_ExhaustFlow_Thresh		-
101.0	PM_total_flow_val		-
102.0	PM_total_flow_val_TS		-
103.0	PM_exh_mass_flow		-
104.0	PM_exh_mass_flow_TS		-
105.0	PN		#/cm3
106.0	TimeShift_PN		s
107.0	PN_STATE		-
108.0	PN TS STATE		s
109.0	PNPEMS_AVL496	NO	-
110.0	PN_CorrFactor	1.00000	
111.0	Time Alignment	1.00000	-
112.0	Time Alignment Dataset 1	N/A	0/1
113.0	Time Alignment Dataset 2	N/A	0/1
114.0	Time Alignment Thresh 1	N/A	-
115.0	Time Alignment Thresh 2	N/A	-
116.0			
117.0			
118.0			
119.0			
120.0			

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi Q7 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
121.0			
122.0	Trigger		0/1
123.0	Trigger TS		s
124.0	FTIR_NAME_1		-
125.0	FTIR_MW_1		-
126.0	FTIR_CHANNEL_1		-
127.0	FTIR_CHANNEL_TS_1		-
128.0	FTIR_CHANNEL_DRY_1	NO	-
129.0	FTIR_NAME_2		-
130.0	FTIR_MW_2		-
131.0	FTIR_CHANNEL_2		-
132.0	FTIR_CHANNEL_TS_2		-
133.0	FTIR_CHANNEL_DRY_2	NO	-
134.0	FTIR_NAME_3		-
135.0	FTIR_MW_3		-
136.0	FTIR_CHANNEL_3		-
137.0	FTIR_CHANNEL_TS_3		-
138.0	FTIR_CHANNEL_DRY_3	NO	-
139.0	FTIR_NAME_4		-
140.0	FTIR_MW_4		-
141.0	FTIR_CHANNEL_4		-
142.0	FTIR_CHANNEL_TS_4		-
143.0	FTIR_CHANNEL_DRY_4	NO	-
144.0	FTIR_NAME_5		-
145.0	FTIR_MW_5		-
146.0	FTIR_CHANNEL_5		-
147.0	FTIR_CHANNEL_TS_5		-
148.0	FTIR_CHANNEL_DRY_5	NO	-
149.0	FTIR_NAME_6		-
150.0	FTIR_MW_6		-

#	Text	Value	Unit
-	----	----	----
151.0	FTIR_CHANNEL_6		-
152.0	FTIR_CHANNEL_TS_6		-
153.0	FTIR_CHANNEL_DRY_6	NO	-
154.0	FTIR_NAME_7		-
155.0	FTIR_MW_7		-
156.0	FTIR_CHANNEL_7		-
157.0	FTIR_CHANNEL_TS_7		-
158.0	FTIR_CHANNEL_DRY_7	NO	-
159.0	FTIR_NAME_8		-
160.0	FTIR_MW_8		-
161.0	FTIR_CHANNEL_8		-
162.0	FTIR_CHANNEL_TS_8		-
163.0	FTIR_CHANNEL_DRY_8	NO	-
164.0	FTIR_NAME_9		-
165.0	FTIR_MW_9		-
166.0	FTIR_CHANNEL_9		-
167.0	FTIR_CHANNEL_TS_9		-
168.0	FTIR_CHANNEL_DRY_9	NO	-
169.0	FTIR_NAME_10		-
170.0	FTIR_MW_10		-
171.0	FTIR_CHANNEL_10		-
172.0	FTIR_CHANNEL_TS_10		-
173.0	FTIR_CHANNEL_DRY_10	NO	-
174.0	FTIR_NAME_11		-
175.0	FTIR_MW_11		-
176.0	FTIR_CHANNEL_11		-
177.0	FTIR_CHANNEL_TS_11		-
178.0	FTIR_CHANNEL_DRY_11	NO	-
179.0	FTIR_NAME_12		-
180.0	FTIR_MW_12		-

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi Q7 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
181.0	FTIR_CHANNEL_12		-
182.0	FTIR_CHANNEL_TS_12		-
183.0	FTIR_CHANNEL_DRY_12	NO	-
184.0	FTIR_NAME_13		-
185.0	FTIR_MW_13		-
186.0	FTIR_CHANNEL_13		-
187.0	FTIR_CHANNEL_TS_13		-
188.0	FTIR_CHANNEL_DRY_13	NO	-
189.0	FTIR_NAME_14		-
190.0	FTIR_MW_14		-
191.0	FTIR_CHANNEL_14		-
192.0	FTIR_CHANNEL_TS_14		-
193.0	FTIR_CHANNEL_DRY_14	NO	-
194.0	FTIR_NAME_15		-
195.0	FTIR_MW_15		-
196.0	FTIR_CHANNEL_15		-
197.0	FTIR_CHANNEL_TS_15		-
198.0	FTIR_CHANNEL_DRY_15	NO	-
199.0	FTIR_NAME_16		-
200.0	FTIR_MW_16		-
201.0	Vehicle Type	2017 Audi Q7	-
202.0	Vehicle Info		-
203.0	Engine Type	Gasoline	-
204.0	Engine Info	3.0L	-
205.0	Engine Torque		Nm
206.0	Curb Idle Load		%
207.0	Idle Speed		rpm
208.0	HYBRID_OVC_REF_CO2_gkm		g/km
209.0	Engine Concept	1.00000	-
210.0	Alpha	1.93000	-

#	Text	Value	Unit
-	----	----	----
211.0	Beta	1.00000	
212.0	Gamma	0.00000	
213.0	Delta	0.00000	
214.0	Epsilon	0.03200	
215.0	X_C	83.00000	
216.0	X_H	13.30000	
217.0	X_N	0.00000	
218.0	X_O	3.50000	
219.0	X_S	0.00000	
220.0	Fuel_Density	747.50000	
221.0	rho_exhaust	1.29310	
222.0	U_CO2	1.51800	
223.0	U_CO	0.96600	
224.0	U_NO	1.58700	
225.0	U_NO2	1.58700	
226.0	U_NOx	1.58700	
227.0	U_HC	0.49900	
228.0	U_NMHC	0.47100	
229.0	U_CH4	0.55300	
230.0	U_O2	1.10400	
231.0	Fuel Type	2.00000	-
232.0	exhaust mass flow type (YES/NO)	YES	-
233.0	Distance Calculation Type	1.00000	-
234.0	Velocity Statistics Calculation Type	2.00000	-
235.0	RDE vehicle class	1.00000	-
236.0	TM_CITY0		s
237.0	TM_CITY1		s
238.0	TM_RURAL0		s
239.0	TM_RURAL1		s
240.0	TM_RURAL2_0		s

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi Q7 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
241.0	TM_RURAL2_1		s
242.0	Second Rural Part for Time Marks (NO		-
243.0	TM_MW0		s
244.0	TM_MW1		s
245.0	VELOCITY_LIMIT_STOP	2.00000	km/h
246.0	VELOCITY_LIMIT_URBAN	50.00000	km/h
247.0	VELOCITY_LIMIT_RURAL	75.00000	km/h
248.0	Intake Manifold Pressure Type	1.00000	-
249.0	Velocity	IFILE1:TM'OBD_Vehicle_Spee	km/h
250.0	Velocity TS	1.30000	s
251.0	Velocity FACTOR	1.00000	-
252.0	Coolant Temperature	IFILE1:TM'OBD_Engine_Coola	degC
253.0	Coolant Temperature TS	1.30000	s
254.0	Oil Temperature		degC
255.0	Oil Temperature TS	1.30000	s
256.0	Intake Manifold Temperature		degC
257.0	Intake Manifold Temp TS	1.30000	s
258.0	Intake Manifold Pressure	IFILE1:TM'OBD_Intake_manifo	kPa
259.0	Intake Manifold Pressure TS	1.30000	s
260.0	Throttle Position		%
261.0	Throttle TS	1.30000	s
262.0	TYP_IDLE_MASS_FLOW		kg/h
263.0	Torque Type	1.00000	-
264.0	Speed	IFILE1:TM'OBD_Engine_RPM	rpm
265.0	Speed TS	1.30000	s
266.0	Torque		Nm
267.0	Torque TS	1.30000	s
268.0	Friction Torque	N/A	Nm
269.0	Friction Torque TS	N/A	s
270.0	Reference Torque	N/A	Nm

#	Text	Value	Unit
-	----	----	----
271.0	Reference Torque TS	N/A	s
272.0	k_VELINE		-
273.0	D_VELINE		-
274.0	Fuel Flow Type	2.00000	-
275.0	Air Flow Type	1.00000	-
276.0	Fuel Rate		various
277.0	Air Rate		various
278.0	Fuel Rate TS	1.30000	s
279.0	No_Cylinders		-
280.0	Air Rate TS	1.30000	s
281.0	FTIR_CHANNEL_32		-
282.0	FTIR_CHANNEL_TS_32		-
283.0	FTIR_CHANNEL_DRY_32	NO	-
284.0	FTIR_NAME_33		-
285.0	FTIR_MW_33		-
286.0	FTIR_CHANNEL_33		-
287.0	FTIR_CHANNEL_TS_33		-
288.0	FTIR_CHANNEL_DRY_33	NO	-
289.0	FTIR_NAME_34		-
290.0	FTIR_MW_34		-
291.0	FTIR_CHANNEL_34		-
292.0	FTIR_CHANNEL_TS_34		-
293.0	FTIR_CHANNEL_DRY_34	NO	-
294.0	FTIR_NAME_35		-
295.0	FTIR_MW_35		-
296.0	FTIR_CHANNEL_35		-
297.0	FTIR_CHANNEL_TS_35		-
298.0	FTIR_CHANNEL_DRY_35	NO	-
299.0	FTIR_NAME_36		-
300.0	FTIR_MW_36		-

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi Q7 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
301.0	FTIR_CHANNEL_36	-	-
302.0	FTIR_CHANNEL_TS_36	-	-
303.0	FTIR_CHANNEL_DRY_36	NO	-
304.0	FTIR_NAME_37	-	-
305.0	FTIR_MW_37	-	-
306.0	FTIR_CHANNEL_37	-	-
307.0	FTIR_CHANNEL_TS_37	-	-
308.0	FTIR_CHANNEL_DRY_37	NO	-
309.0	FTIR_NAME_38	-	-
310.0	FTIR_MW_38	-	-
311.0	FTIR_CHANNEL_38	-	-
312.0	FTIR_CHANNEL_TS_38	-	-
313.0	FTIR_CHANNEL_DRY_38	NO	-
314.0	FTIR_NAME_39	-	-
315.0	FTIR_MW_39	-	-
316.0	FTIR_CHANNEL_39	-	-
317.0	FTIR_CHANNEL_TS_39	-	-
318.0	FTIR_CHANNEL_DRY_39	NO	-
319.0	FTIR_NAME_40	-	-
320.0	FTIR_MW_40	-	-
321.0	FTIR_CHANNEL_40	-	-
322.0	FTIR_CHANNEL_TS_40	-	-
323.0	FTIR_CHANNEL_DRY_40	NO	-
324.0	Legislation Type (1=HDIUT 2=EU H	4.00000	-
325.0	WholeTest_NOx_corr	5.00000	-
326.0	WholeTest_Hum_corr	2.00000	-
327.0	CD_Distance	0.00000	km
328.0	CD_NOx	0.00000	mg/km
329.0	CD_CO	0.00000	mg/km
330.0	CD_CO2	0.00000	g/km

#	Text	Value	Unit
-	----	----	----
331.0	CD_NMHC	0.00000	mg/km
332.0	CD_CH4	0.00000	mg/km
333.0	CD_THC	0.00000	mg/km
334.0	CD_PN	-	#/km
335.0	WLTC_LOW_SPEED_gkm	-	g/km
336.0	WLTC_LOW_SPEED_FAC	1.20000	-
337.0	WLTC_MEDIUM_SPEED_gkm	-	g/km
338.0	WLTC_HIGH_SPEED_gkm	-	g/km
339.0	WLTC_HIGH_SPEED_FAC	1.10000	-
340.0	WLTC_EXTRA_HIGH_SPEED_gkm	-	g/km
341.0	WLTC_EXTRA_HIGH_SPEED_FA	1.05000	-
342.0	TOL_NORMAL_DRIVING	25.00000	%
343.0	TOL_SEVERE_DRIVING	50.00000	%
344.0	Increase Tolerance Nomral Driving	NO	-
345.0	Bin1_min	-	km/h
346.0	Bin2_min	-	km/h
347.0	Bin3_min	-	km/h
348.0	Bin1_max	-	km/h
349.0	Bin2_max	-	km/h
350.0	Bin3_max	-	km/h
351.0	Clear_R0	125.40000	N
352.0	Clear_R1	0.29300	Nh/km
353.0	Clear_R2	0.02795	N*(h/km) ²
354.0	Clear_SMK	1470.00000	kg
355.0	Clear_Rated_Power	140.00000	kW
356.0	Clear_Ref_Velocity	70.00000	km/h
357.0	Clear_Ref_Acc	0.45000	m/s ²
358.0	Clear_Smooth	3.00000	s
359.0	EXTC_From_High_Temp	30.00000	degC
360.0	EXTC_To_High_Temp	35.00000	degC

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi Q7 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
361.0	EXTC_From_Low_Temp	-7.00000	degC
362.0	EXTC_To_Low_Temp	0.00000	degC
363.0	Euro 6d or Euro 6d temp	NO	-
364.0	EXTC_From_Altitude	700.00000	m
365.0	EXTC_To_Altitude	1300.00000	m
366.0	EXTC_CORR_FAC	1.60000	
367.0	weight cold start (YES/NO)	NO	-
368.0	precon and soak done (YES/NO)	NO	-
369.0	PATH_PRECON_FILE		
370.0	filter velocity (YES/NO)	NO	-
371.0	filter velocity auto(YES/NO)	NO	-
372.0	Ki_CO		
373.0	Ki_CO2		
374.0	Ki_NOx		
375.0	Ki_FACTOR_CO2 (YES/NO)	NO	-
376.0	Ki_OFFSET_CO2 (YES/NO)	NO	-
377.0	Ki_FACTOR_CO (YES/NO)	NO	-
378.0	Ki_OFFSET_CO (YES/NO)	NO	-
379.0	Ki_FACTOR_NOx (YES/NO)	NO	-
380.0	Ki_OFFSET_NOx (YES/NO)	NO	-
381.0	Ki_OFF (YES/NO)	NO	-
382.0	HD legislations	1.00000	-
383.0	RDE legislations	1.00000	-
384.0	Submission Documents (YES/NO)	NO	-
385.0	General Setup Parameters Text	Mountain	-
386.0	Legislation Setup Parameters Text	Mountain	-
387.0	Trip Info		-
388.0	IN_TIME_REF		-
389.0	Sub-Trip Start: Auto	YES	-
390.0	Sub-Trip Start: Seconds	N/A	s

#	Text	Value	Unit
-	----	----	----
391.0	Sub-Trip End: Auto	YES	-
392.0	Sub-Trip End: Seconds	N/A	s
393.0	Unit System	2.00000	-
394.0	Calculate: PM Emissions	NO	-
395.0	Calculate: PN Emissions	NO	-
396.0	Output: Summary	YES	-
397.0	Output: Emissions	YES	-
398.0	Output: Raw Data	YES	-
399.0	Output: Zero Span	YES	-
400.0	Output: Data Consistency	NO	-
401.0	Output: Window Plots	YES	-
402.0	Fuel Rate ECU vs. EU ISO16183	y = 10000000000.0000 x - 0.000 R ² =10000000000.000 SEE=	
403.0	PEMS post processing version	Rel_10_B192	
404.0	Concerto version	480.00000	
405.0	Concerto build	215.00000	
406.0	USERNAME	EFR	

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi Q7 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City
Page: Trip Summary

Start Date: 09/20/2017
Start Time: 07:29:33.0



Trip Duration	4188.00	s	ave THC	-4.31375	ppm	BS CO2	n/a	g/hphr
Trip Duration (a)	4188.00	s	ave NMHC	1.38872	ppm	BS CO	n/a	g/hphr
Trip Distance	16.19	mi	ave CH4	-5.18406	ppm	BS THC	n/a	g/hphr
Trip Distance (a)	16.19	mi	ave CO	61.60124	ppm	BS NMHC	n/a	g/hphr
Trip Fuel Cons. (b)	n/a	kg	ave CO2	12.16117	%	BS CH4	n/a	g/hphr
Trip Fuel Cons. (ab)	n/a	kg	ave NOx	11.82631	ppm	BS NO (d)	n/a	g/hphr
Trip Fuel Cons. EU (ac)	2.72	kg	ave PM	n/a	mg/m3	BS NO2	n/a	g/hphr
Trip Fuel Cons. US (ac)	2.69	kg	ave Soot meas	n/a	mg/m3	BS NOx	n/a	g/hphr
Trip Fuel Cons. Volume (b)	n/a	gall	ave Soot	n/a	mg/m3	BS Soot	n/a	g/hphr
Trip Fuel Cons. Volume (ab)	n/a	gall	ave PN	n/a	#/cm3	BS Soot meas	n/a	g/hphr
Trip Fuel Cons. Volume EU (ac)	0.96	gall	tot THC	0.00752	g	BS PM	n/a	g/hphr
Trip Fuel Cons. Volume US (ac)	0.95	gall	tot NMHC	0.03613	g	BS PN	n/a	#/hpr
Trip Fuel Economy (b)	n/a	mpg_US	tot CH4	0.00000	g	DS CO2	505.79868	g/mi
Trip Fuel Economy (ab)	n/a	mpg_US	tot CO	3.84467	g	DS CO	0.23751	g/mi
Trip Fuel Economy EU (ac)	16.84	mpg_US	tot CO2	8187.65531	g	DS THC	0.00046	g/mi
Trip Fuel Economy US (ac)	17.00	mpg_US	tot NO (d)	0.45677	g	DS NMHC	0.00223	g/mi
Trip Av. Eng. Speed	1024.61	rpm	tot NO2	0.06146	g	DS CH4	0.00000	g/mi
Trip Av. Torque	n/a	lbft	tot NOx	0.51822	g	DS NO (d)	0.02822	g/mi
Trip Av. Power	n/a	hp	tot Soot	n/a	g	DS NO2	0.00380	g/mi
Trip Work	n/a	hphr	tot Soot meas	n/a	g	DS NOx	0.03201	g/mi
Trip Exhaust Mass	43.04	kg	tot PM	n/a	g	DS Soot	n/a	g/mi
Trip Exhaust Mass EU (ac)	n/a	kg	tot PN	n/a	#	DS Soot meas	n/a	g/mi
Trip Exhaust Mass US (ac)	n/a	kg	PM measurement type	0.00000	-	DS PM	n/a	g/mi
Trip Av. Amb. Temperature	93.62	deg_F	PM correction type	1.00000	alpha(HC)	DS PN	n/a	#/mi
Trip Av. Humidity	30.91	%	tot Soot on PM filter (estim.)	n/a	mg	FS CO2	n/a	g/kg
Fuel Type	Petrol (E10)		Soot --> PM simple scaling factor	1.00000	-	FS CO	n/a	g/kg
			Soot --> PM alpha scaling factor	0.00000	-	FS THC	n/a	g/kg
			Trip Av. Veh. Speed	13.91482	mi/hr	FS NMHC	n/a	g/kg
			Trip Velocity Zero	24.66571	%	FS CH4	n/a	g/kg
			Trip Velocity Urban	91.11748	%	FS NO (d)	n/a	g/kg
			Trip Velocity Rural	6.61414	%	FS NO2	n/a	g/kg
			Trip Velocity Motorway	2.26839	%	FS NOx	n/a	g/kg
						FS Soot	n/a	g/kg
						FS Soot meas	n/a	g/kg
						FS PM	n/a	g/kg
						FS PN	n/a	#/kg

(a) GAS PEMS measurement state only, (b) based on fuel rate input (ECU, Fuel Meter), (c) calculated from carbon balance
(d) NO calculated using molecular weight of NO2

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi Q7 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

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Concerto M.O.V.E, 2017

Trip Duration	4188.00	s	ave THC DC	-5.82598	ppm	BS CO2 DC	n/a	g/hphr
Trip Duration (a)	4188.00	s	ave NMHC DC	-0.17286	ppm	BS CO DC	n/a	g/hphr
Trip Distance	16.19	mi	ave CH4 DC	-5.13920	ppm	BS THC DC	n/a	g/hphr
Trip Distance (a)	16.19	mi	ave CO DC	62.07782	ppm	BS NMHC DC	n/a	g/hphr
Trip Fuel Cons. (b)	n/a	kg	ave CO2 DC	12.16924	%	BS CH4 DC	n/a	g/hphr
Trip Fuel Cons. (ab)	n/a	kg	ave NOx DC	11.83249	ppm	BS NO DC (d)	n/a	g/hphr
Trip Fuel Cons. EU (ac)	2.72	kg	ave PM	n/a	mg/m3	BS NO2 DC	n/a	g/hphr
Trip Fuel Cons. US (ac)	2.69	kg	ave Soot meas	n/a	mg/m3	BS NOx DC	n/a	g/hphr
Trip Fuel Cons. Volume (b)	n/a	gall	ave Soot	n/a	mg/m3	BS Soot	n/a	g/hphr
Trip Fuel Cons. Volume (ab)	n/a	gall	ave PN DC	n/a	#/cm3	BS Soot meas	n/a	g/hphr
Trip Fuel Cons. Volume EU (ac)	0.96	gall	tot THC DC	0.01015	g	BS PM	n/a	g/hphr
Trip Fuel Cons. Volume US (ac)	0.95	gall	tot NMHC DC	0.01774	g	BS PN DC	n/a	#/hpr
Trip Fuel Economy (b)	n/a	mpg_US	tot CH4 DC	0.00000	g	DS CO2 DC	506.13431	g/mi
Trip Fuel Economy (ab)	n/a	mpg_US	tot CO DC	3.87442	g	DS CO DC	0.23935	g/mi
Trip Fuel Economy EU (ac)	16.84	mpg_US	tot CO2 DC	8193.08839	g	DS THC DC	0.00063	g/mi
Trip Fuel Economy US (ac)	17.00	mpg_US	tot NO DC (d)	0.45709	g	DS NMHC DC	0.00110	g/mi
Trip Av. Eng. Speed	1024.61	rpm	tot NO2 DC	0.06137	g	DS CH4 DC	0.00000	g/mi
Trip Av. Torque	n/a	lbft	tot NOx DC	0.51844	g	DS NO DC (d)	0.02824	g/mi
Trip Av. Power	n/a	hp	tot Soot	n/a	g	DS NO2 DC	0.00379	g/mi
Trip Work	n/a	hphr	tot Soot meas	n/a	g	DS NOx DC	0.03203	g/mi
Trip Exhaust Mass	43.04	kg	tot PM	n/a	g	DS Soot	n/a	g/mi
Trip Exhaust Mass EU (ac)	n/a	kg	tot PN DC	n/a	#	DS Soot meas	n/a	g/mi
Trip Exhaust Mass US (ac)	n/a	kg	PM measurement type	0.00000	-	DS PM	n/a	g/mi
Trip Av. Amb. Temperature	93.62	deg_F	PM correction type	1.00000	alpha(HC)	DS PN DC	n/a	#/mi
Trip Av. Humidity	30.91	%	tot Soot on PM filter (estim.)	n/a	mg	FS CO2 DC	n/a	g/kg
Fuel Type	Petrol (E10)		Soot --> PM simple scaling factor	1.00000	-	FS CO DC	n/a	g/kg
			Soot --> PM alpha scaling factor	0.00000	-	FS THC DC	n/a	g/kg
			Trip Av. Veh. Speed	13.91482	mi/hr	FS NMHC DC	n/a	g/kg
			Trip Velocity Zero	24.66571	%	FS CH4 DC	n/a	g/kg
			Trip Velocity Urban	91.11748	%	FS NO DC (d)	n/a	g/kg
			Trip Velocity Rural	6.61414	%	FS NO2 DC	n/a	g/kg
			Trip Velocity Motorway	2.26839	%	FS NOx DC	n/a	g/kg
						FS Soot	n/a	g/kg
						FS Soot meas	n/a	g/kg
						FS PM	n/a	g/kg
						FS PN DC	n/a	#/kg

(a) GAS PEMS measurement state only, (b) based on fuel rate input (ECU, Fuel Meter), (c) calculated from carbon balance
 (d) NO calculated using molecular weight of NO2

Concerto Version: 480 Build 215, Serial Number: 8468
 M.O.V.E Post-Processing: Rel_10_B192

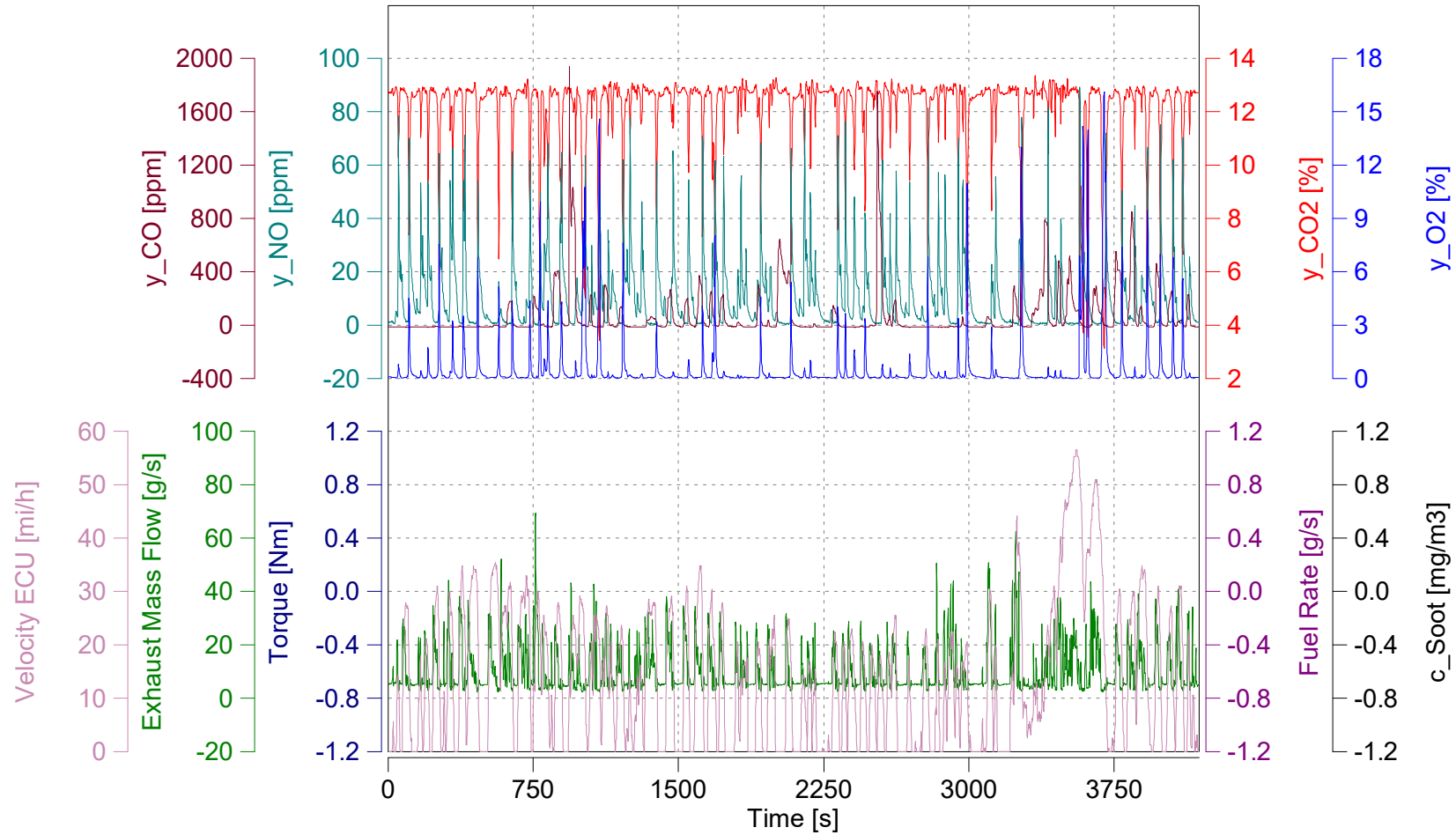
Vehicle: 2017 Audi Q7 /
 Engine: Gasoline / 3.0L
 NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
 Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

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Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

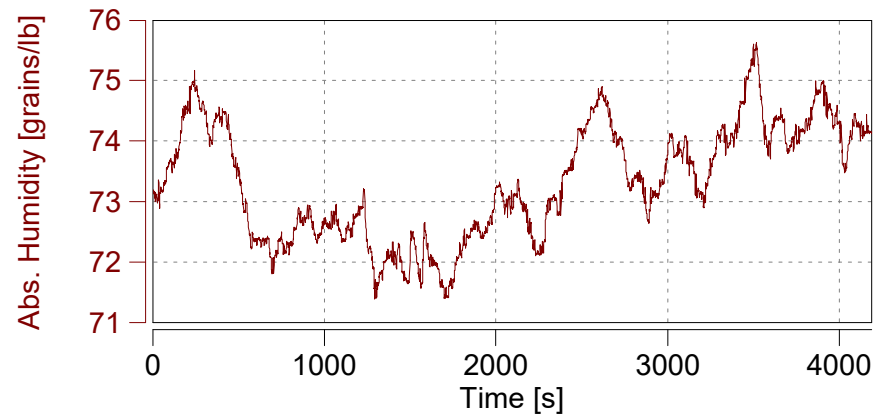
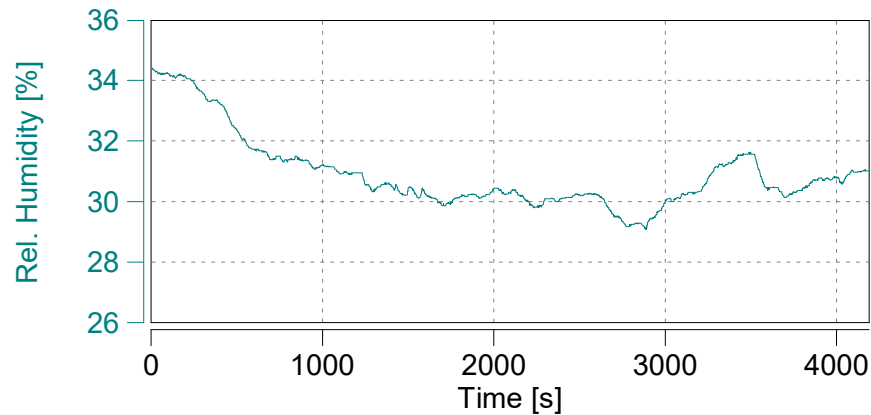
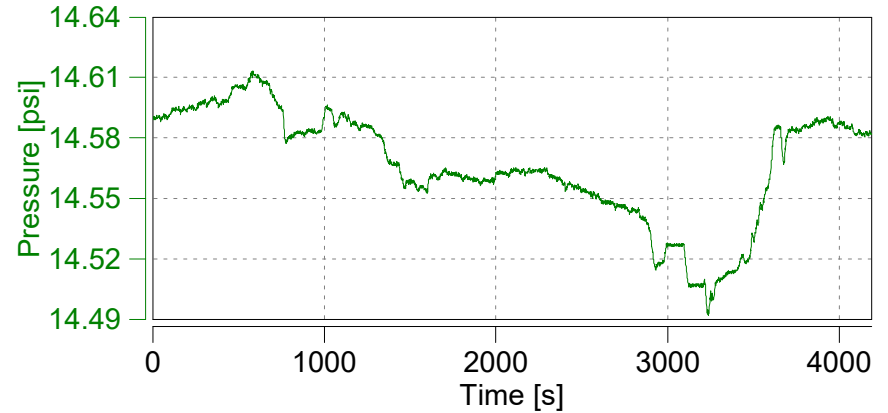
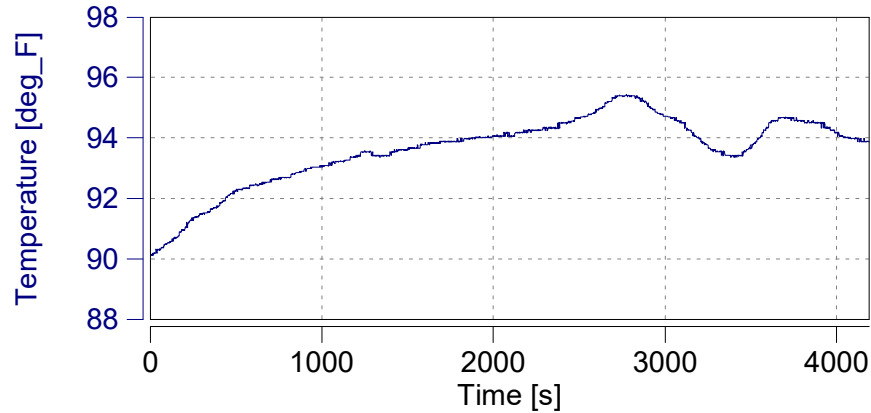
Vehicle: 2017 Audi Q7 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Ambient Conditions

Start Date: 09/20/2017

Start Time: 07:29:33.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

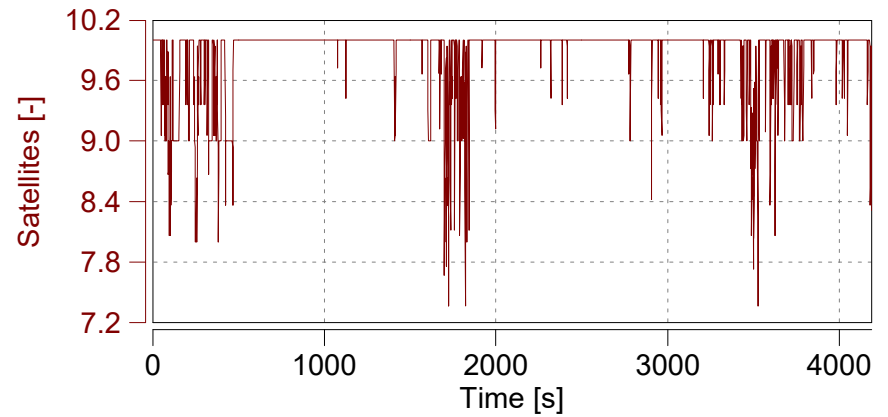
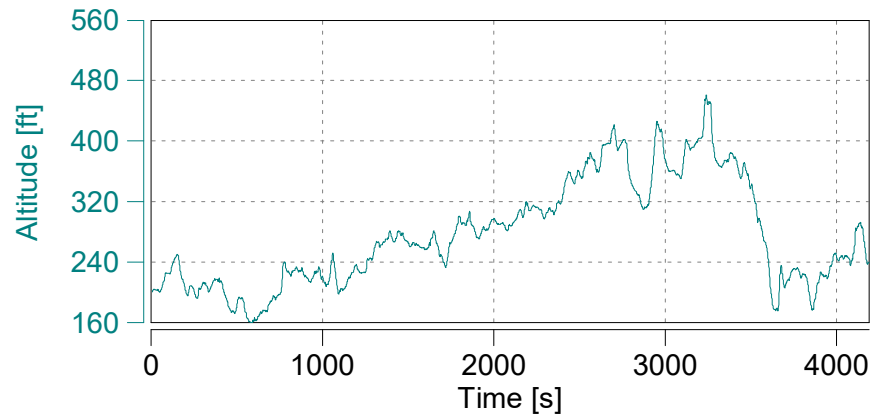
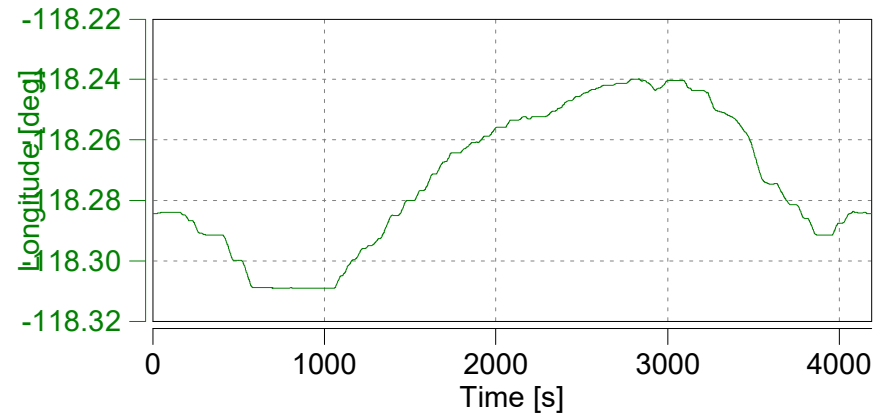
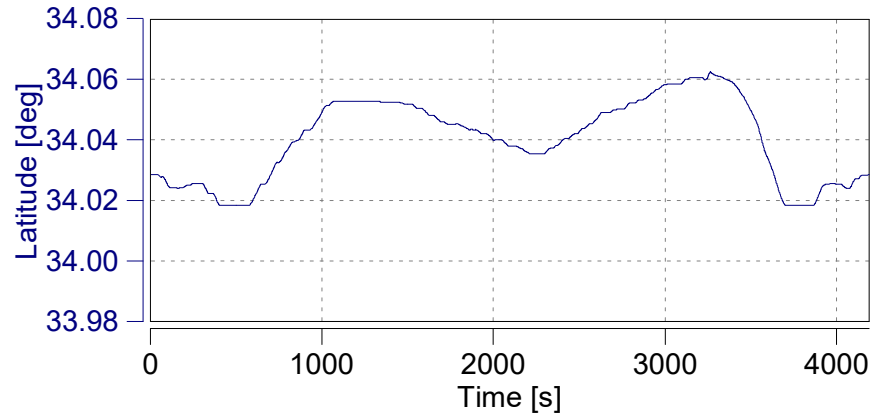
Vehicle: 2017 Audi Q7 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: GPS

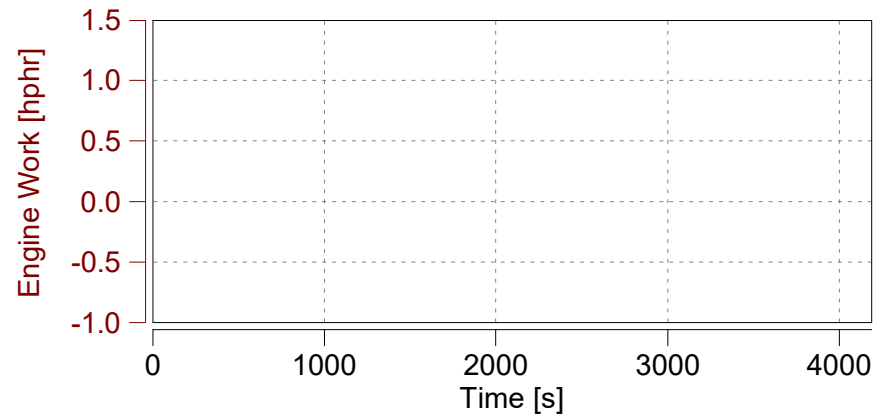
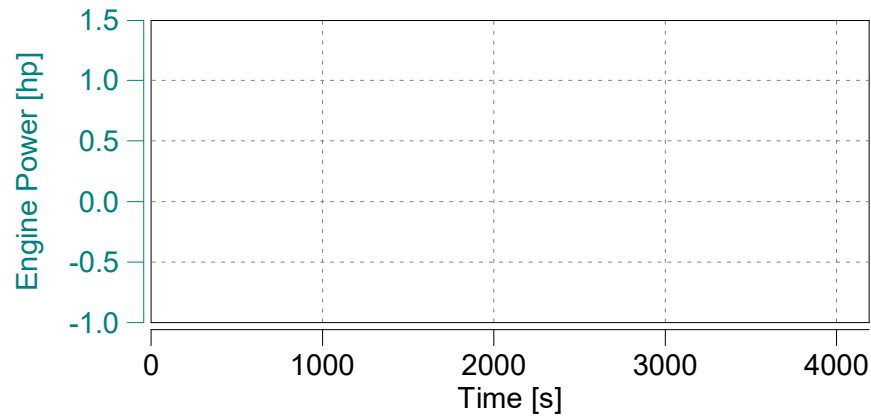
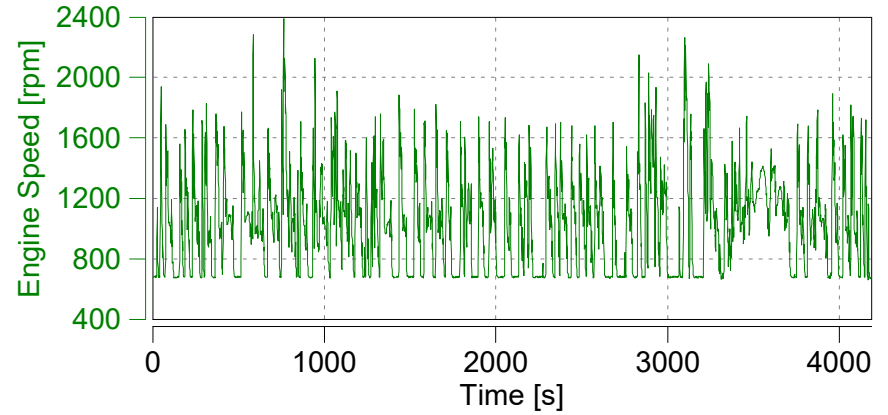
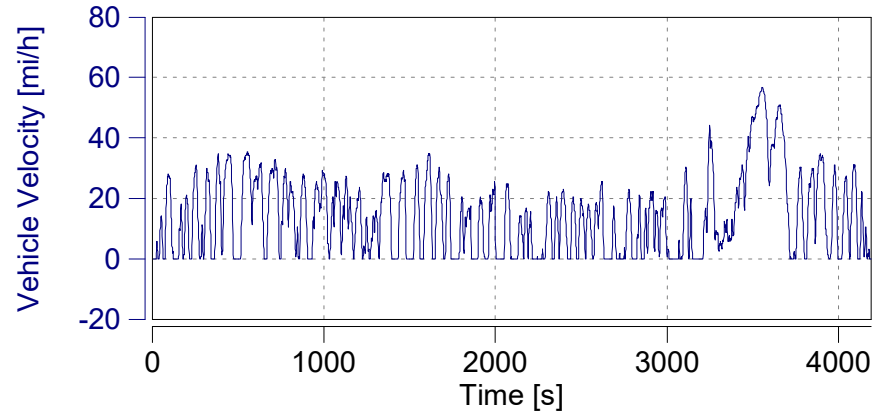
Start Date: 09/20/2017

Start Time: 07:29:33.0



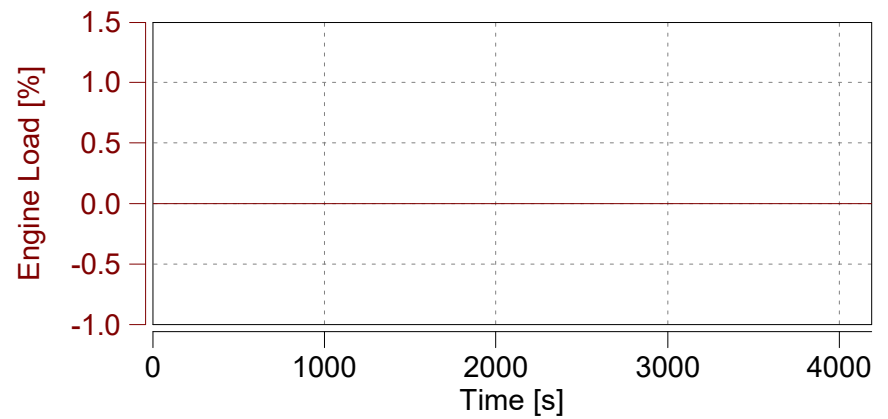
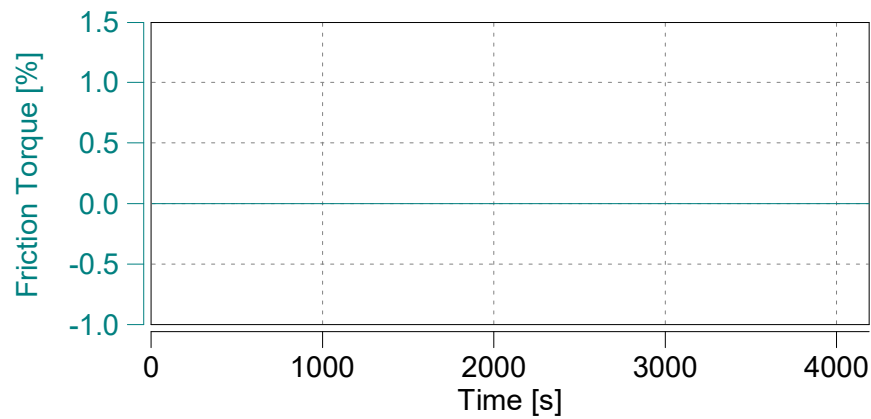
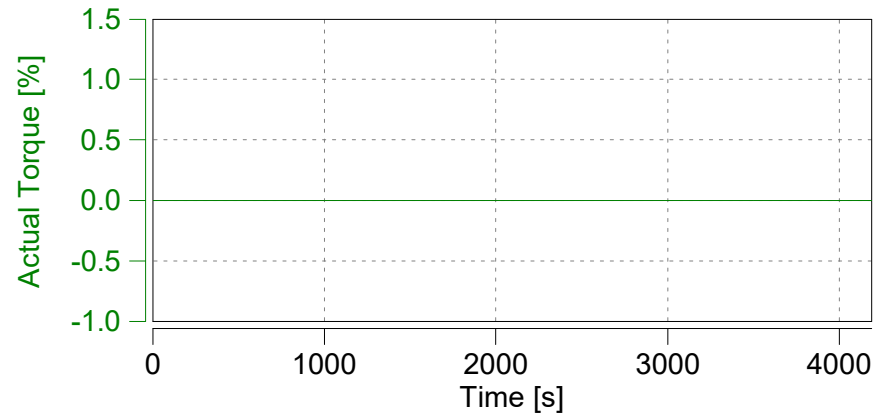
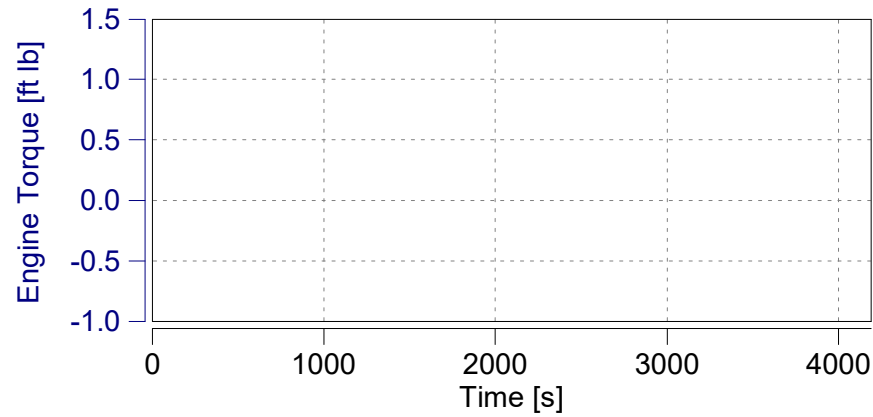
Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

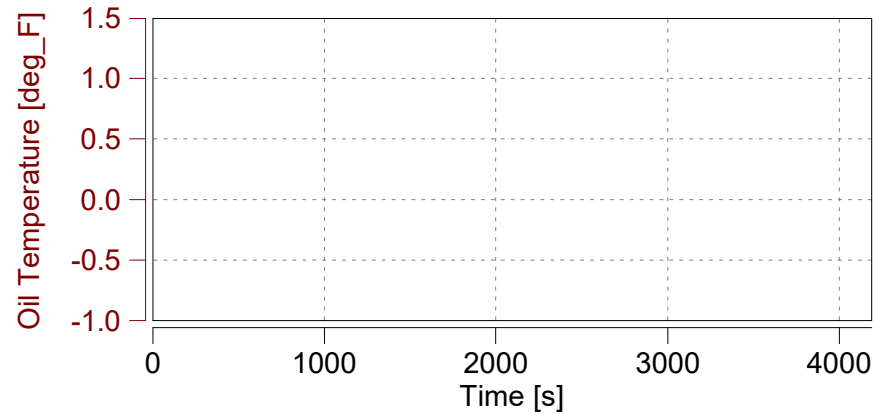
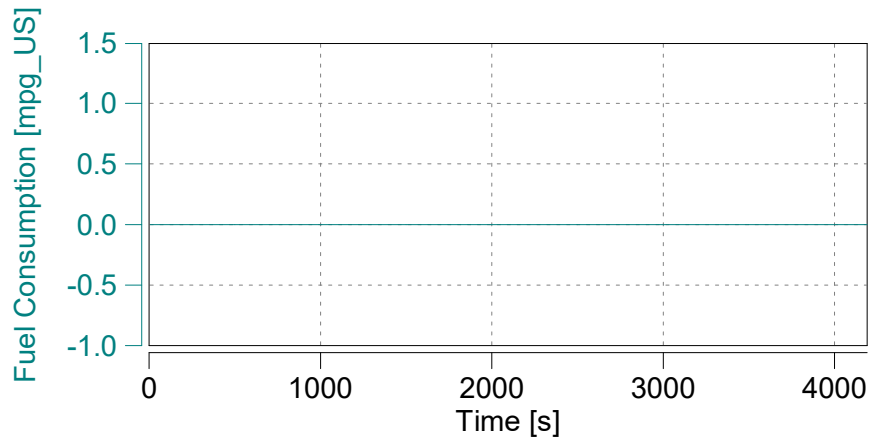
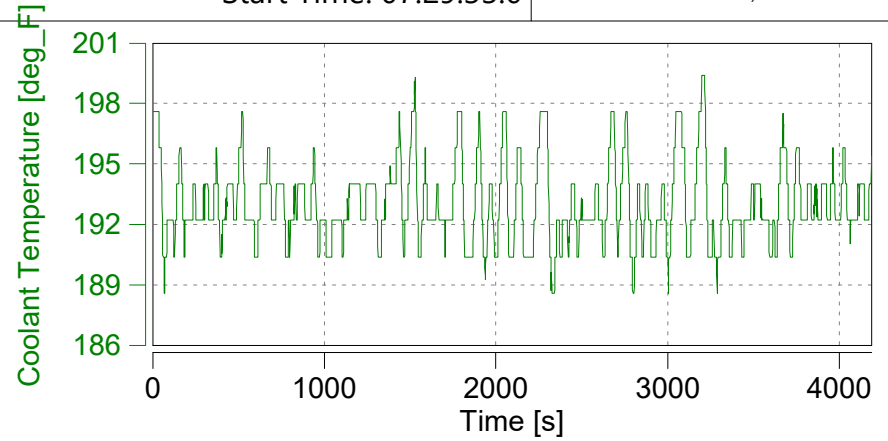
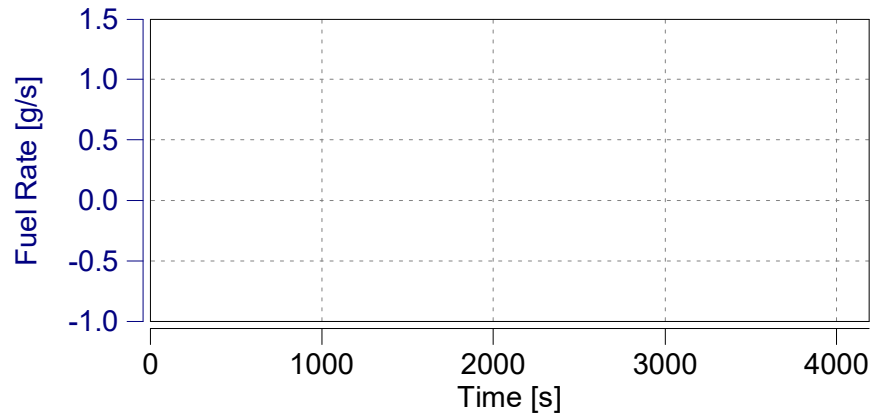
Vehicle: 2017 Audi Q7 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi Q7 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90



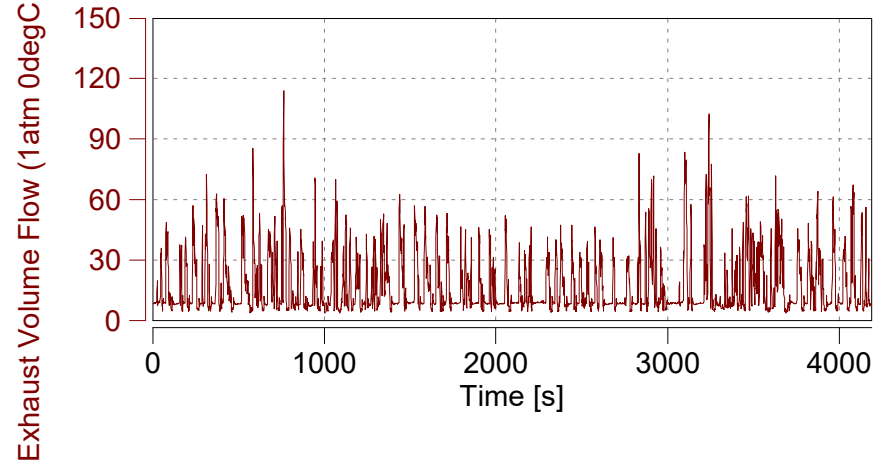
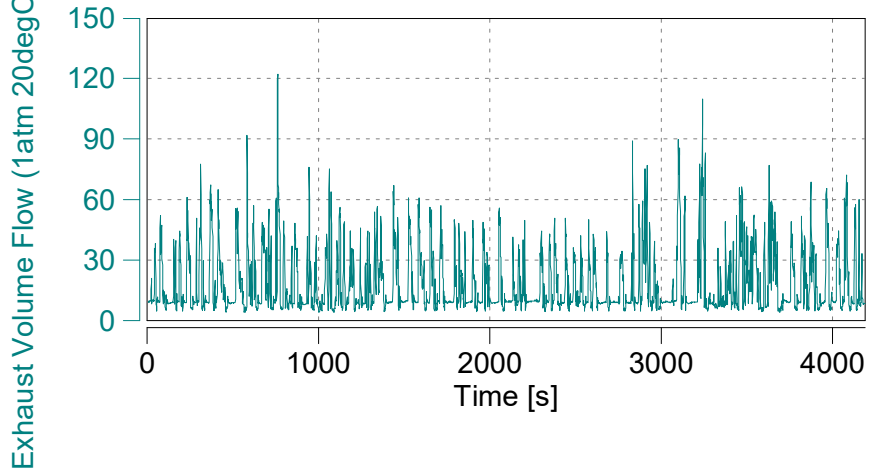
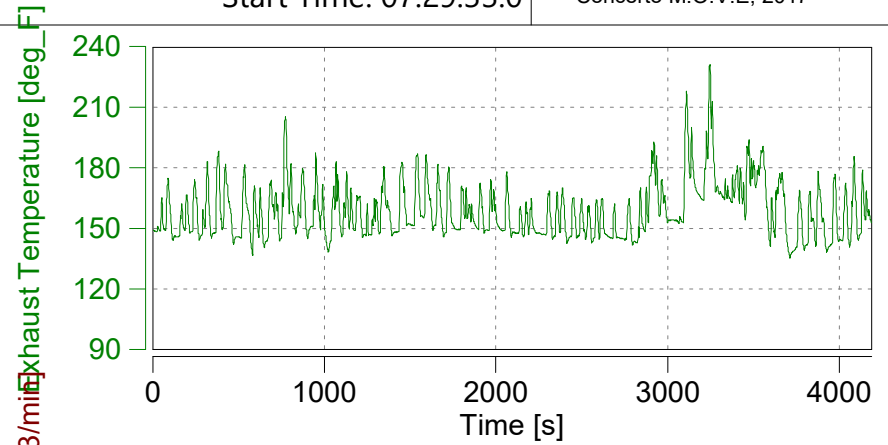
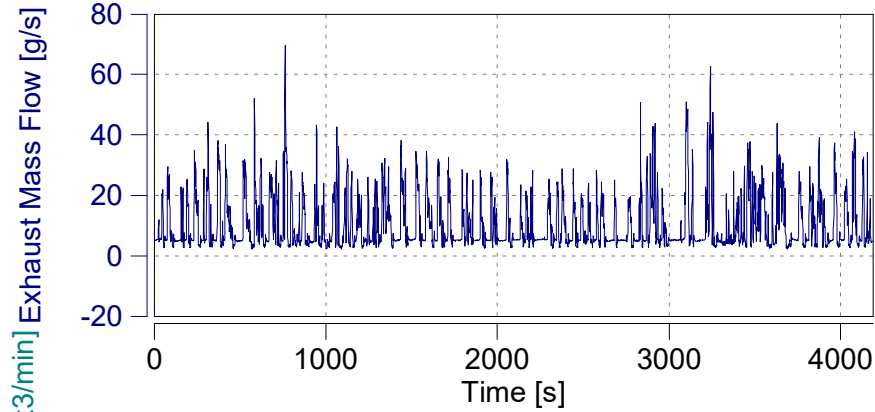


Case: City

Page: Exhaust Flow (1)

Start Date: 09/20/2017

Start Time: 07:29:33.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

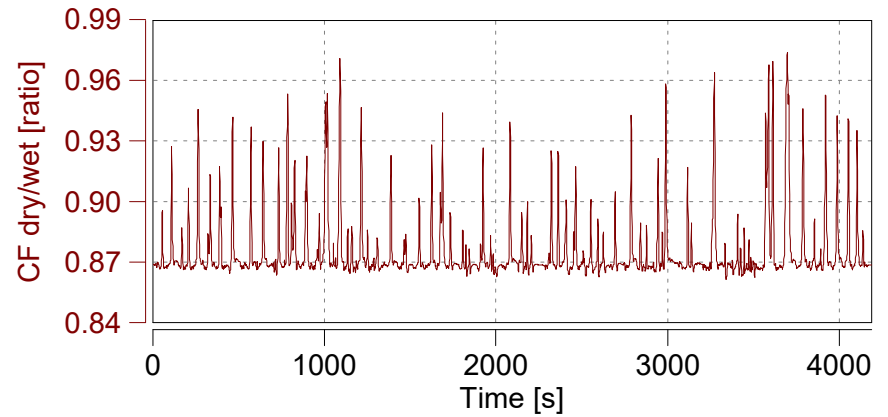
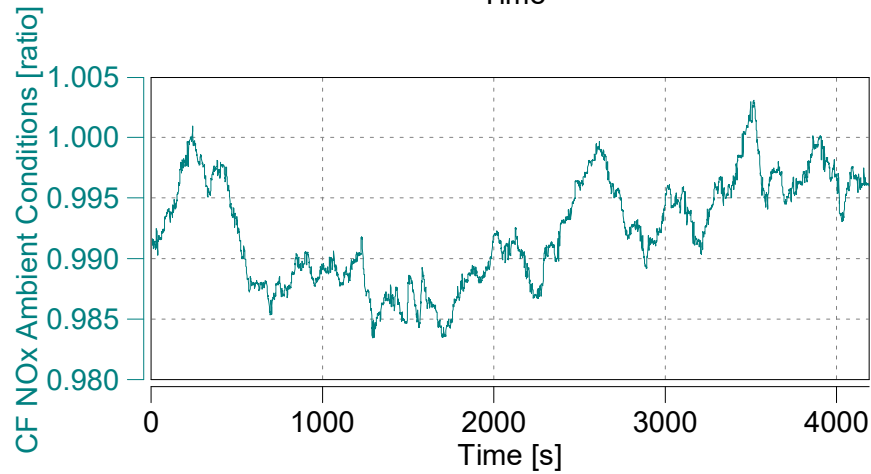
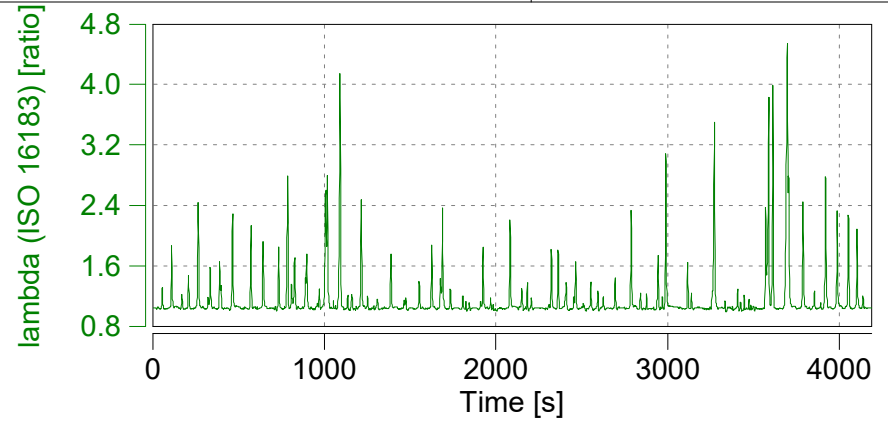
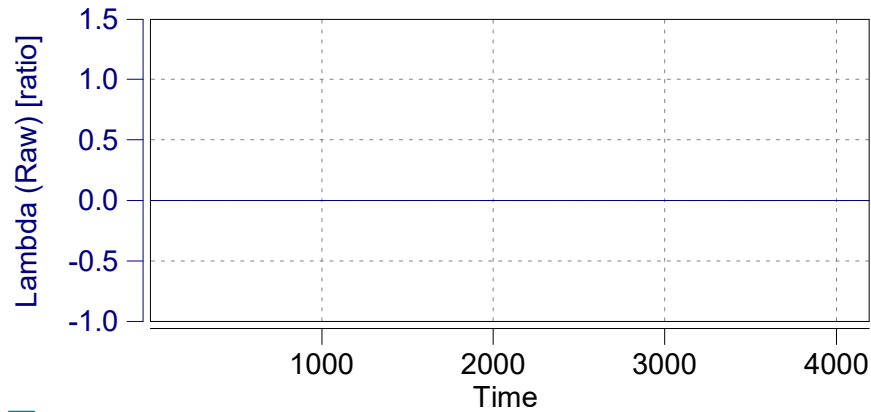
Vehicle: 2017 Audi Q7 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Exhaust Flow (2)

Start Date: 09/20/2017

Start Time: 07:29:33.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

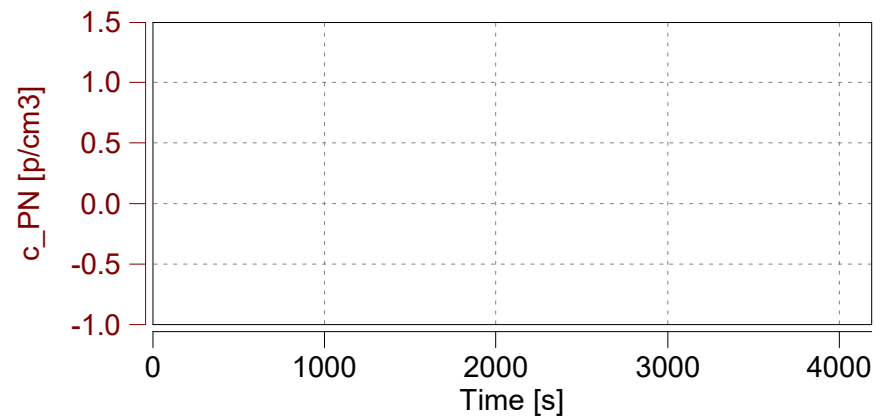
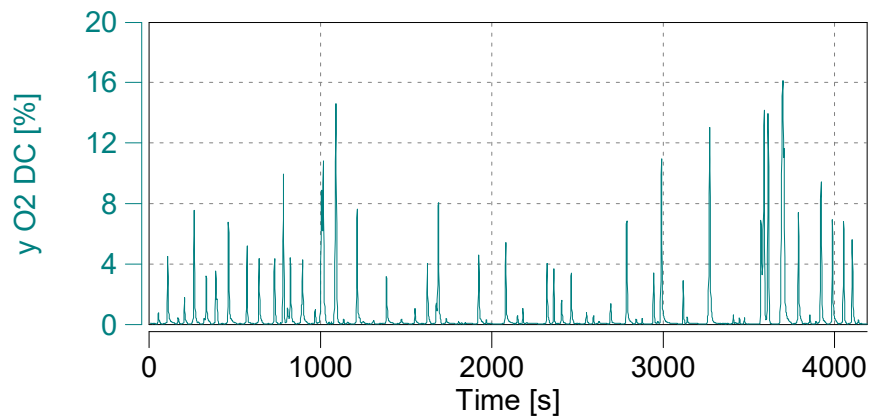
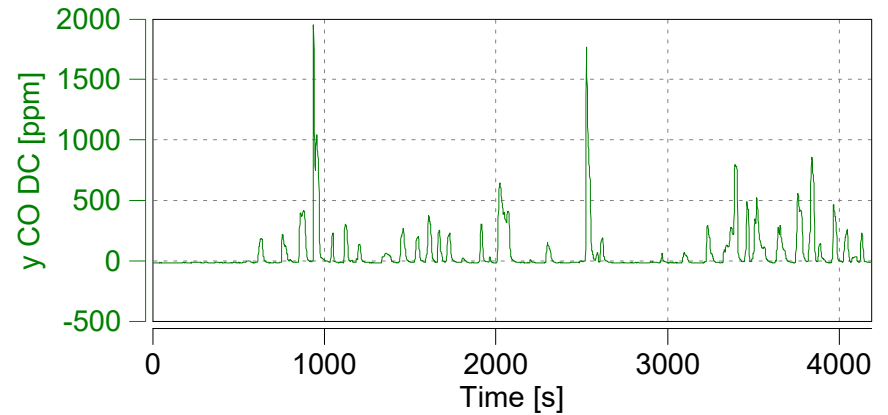
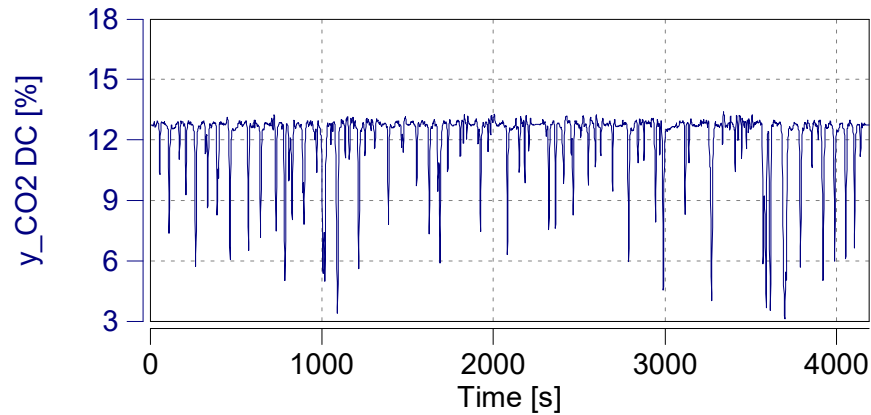
Vehicle: 2017 Audi Q7 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Corrected Emissions (1)

Start Date: 09/20/2017

Start Time: 07:29:33.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

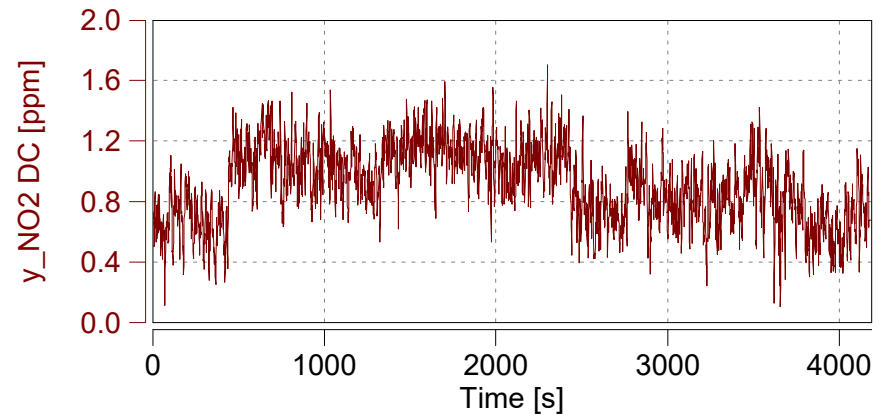
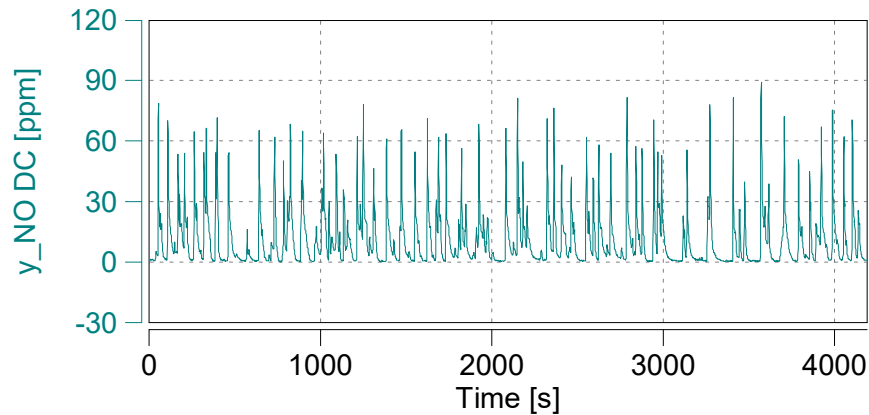
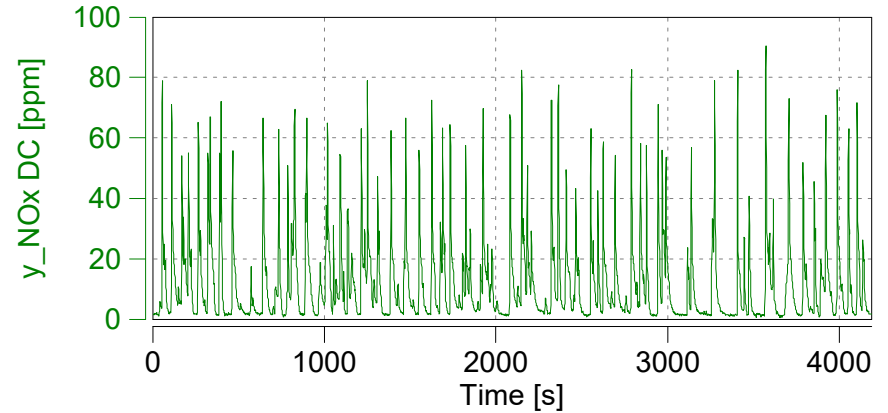
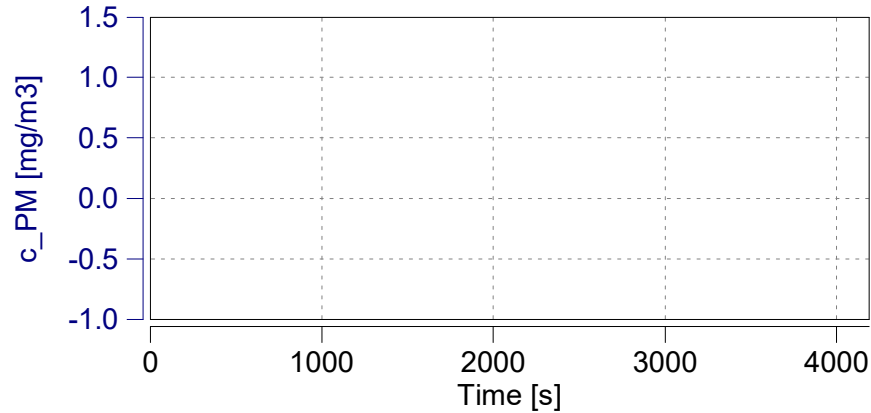
Vehicle: 2017 Audi Q7 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Corrected Emissions (2)

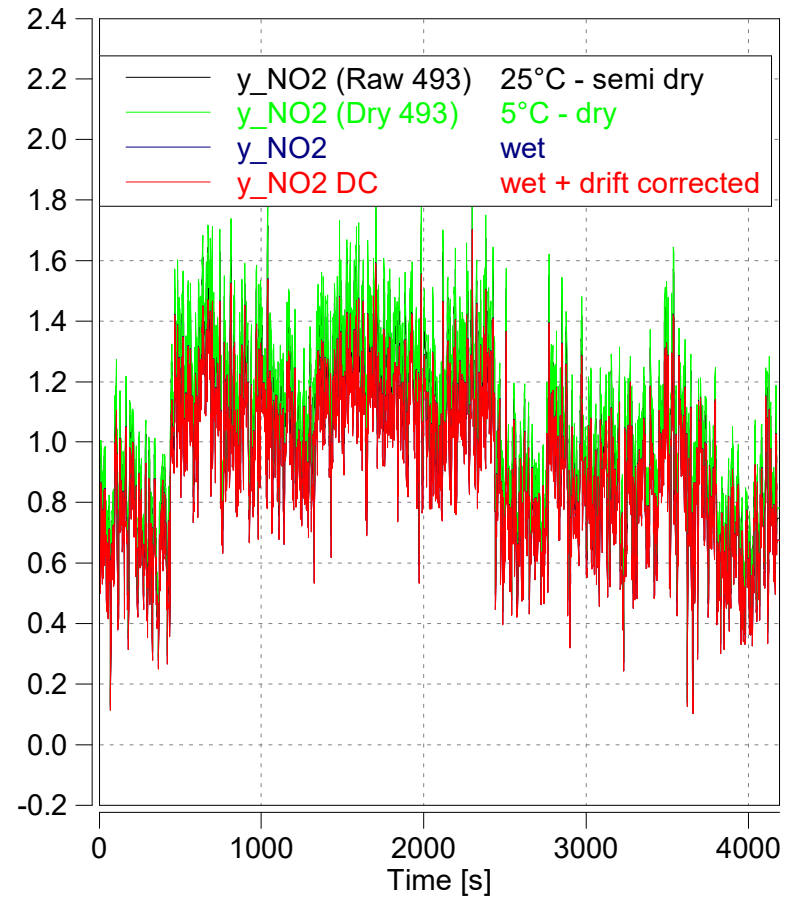
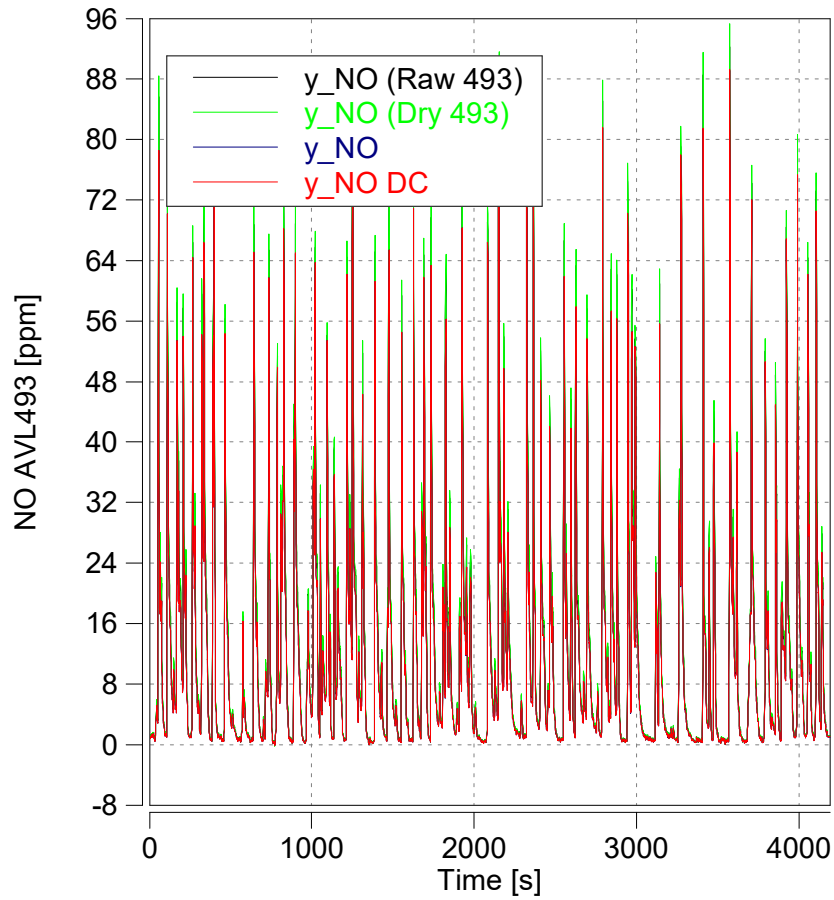
Start Date: 09/20/2017

Start Time: 07:29:33.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi Q7 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90



NOx - AVL 493

y_NO (Raw 493)
y_NO2 (Raw 493)
25°C

EU R49 8.6.1
US §1065.672
drift correction

d_Kf_NO 25°C to dry
d_Kf_NO2 25°C to dry

- (1) EU R49 8.1.1 (15)
- (2) US §1065.655
- (3) none

y_NO DC (Dry 493)
y_NO2 DC (Dry 493)

y_NO (Dry 493)
y_NO2 (Dry 493)

CF dry/wet
(factor equal for all constituents)

CF NOx Ambient Conditions

y_NO DC
y_NO2 DC
wet

y_NO
y_NO2
wet

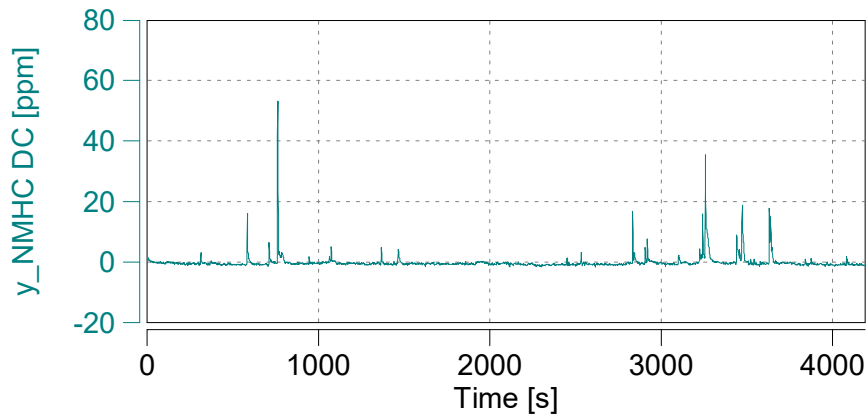
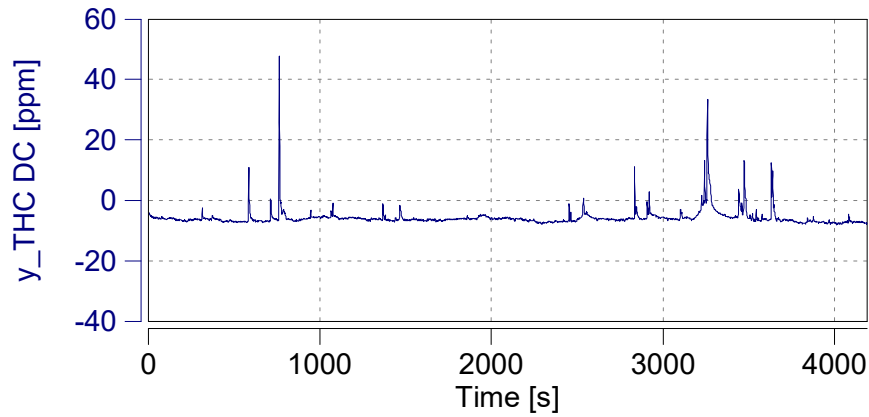
- (1) HD Diesel Engine SwRI FinalReport 08-2597, 1999
- (2) humidity only
- (3) equivalent uncorrected NOx limit method for EU in service
- (4) US §40.86.1342.94 Diesel
- (5) US §40.86.1342.94 SI
- (6) US §40.86.1370-2007 (default US)
- (7) US 40.1065.670
- (8) none (default EU)

Case: City

Page: Corrected Emissions (5)

Start Date: 09/20/2017

Start Time: 07:29:33.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

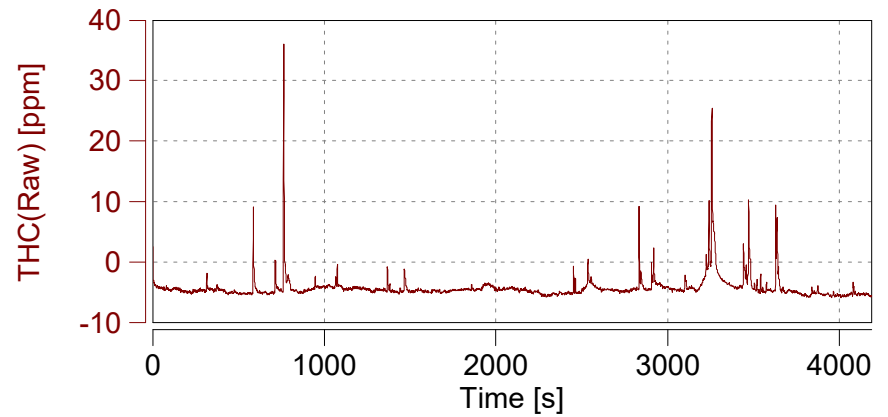
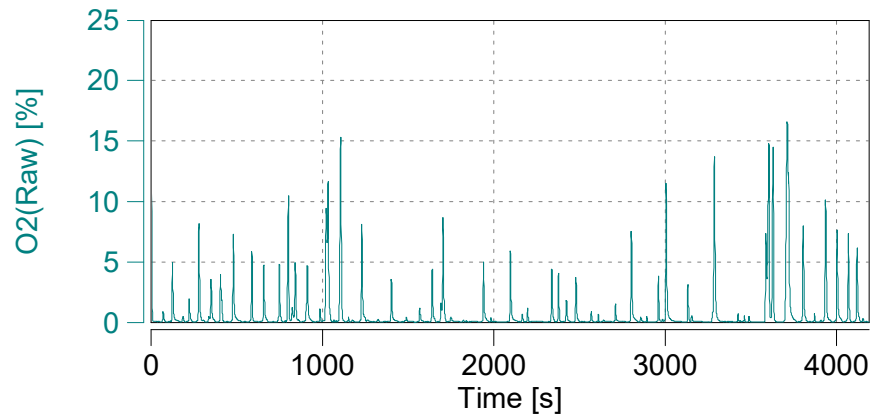
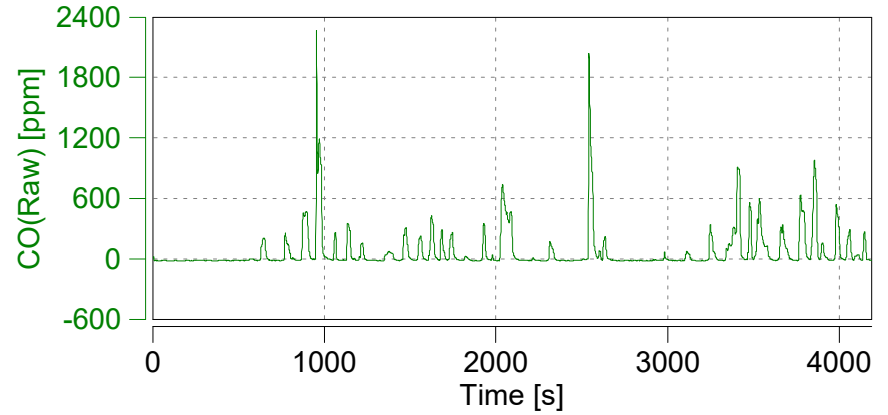
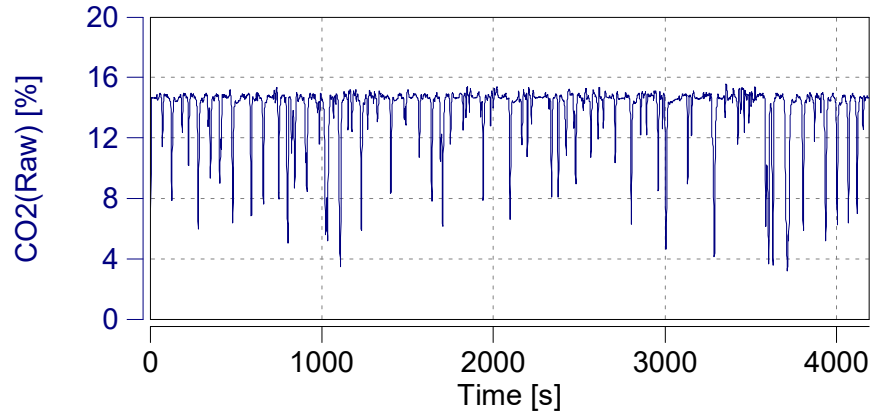
Vehicle: 2017 Audi Q7 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Emissions Raw Data (1)

Start Date: 09/20/2017

Start Time: 07:29:33.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

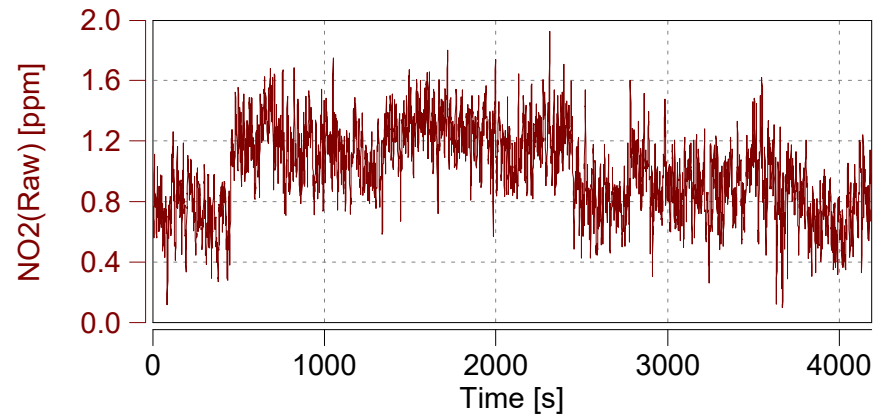
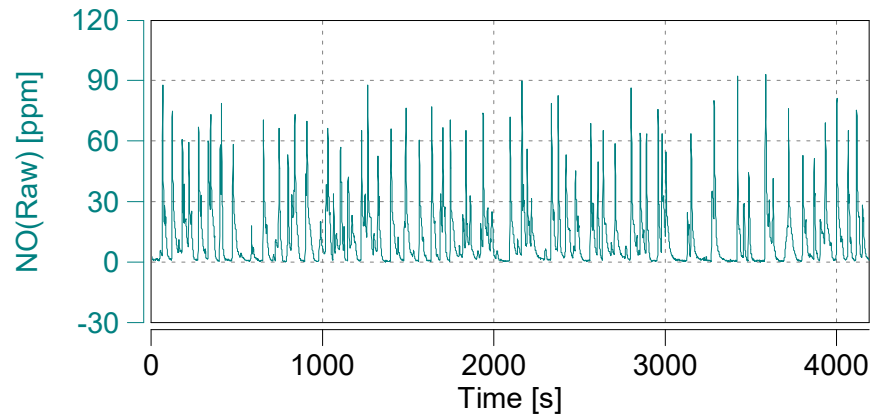
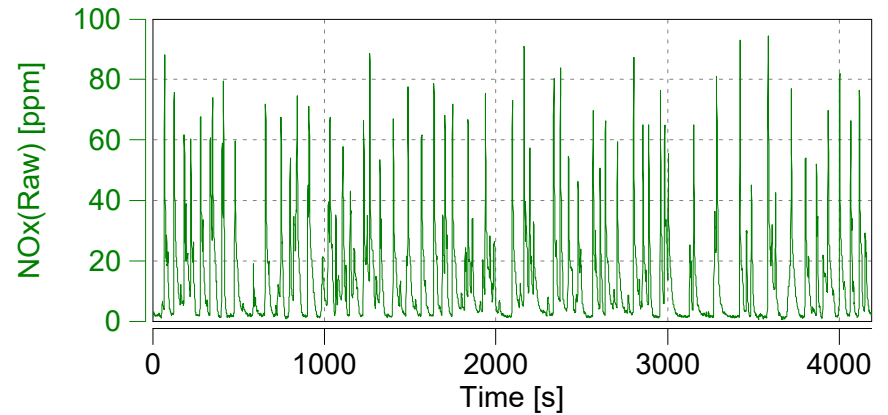
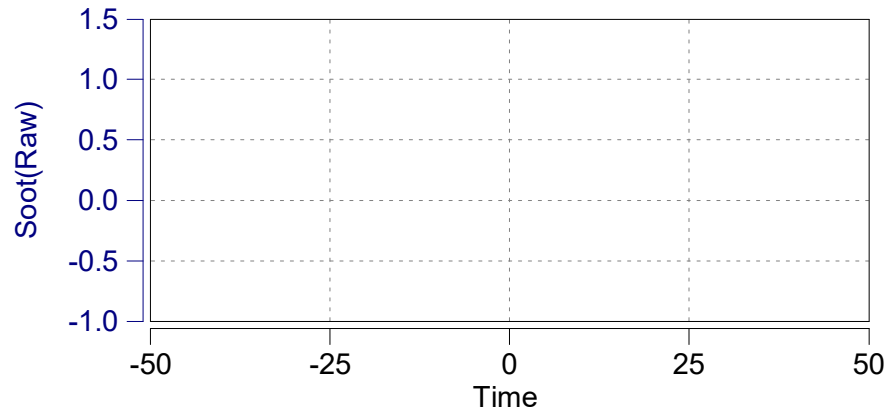
Vehicle: 2017 Audi Q7 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Emissions Raw Data (2)

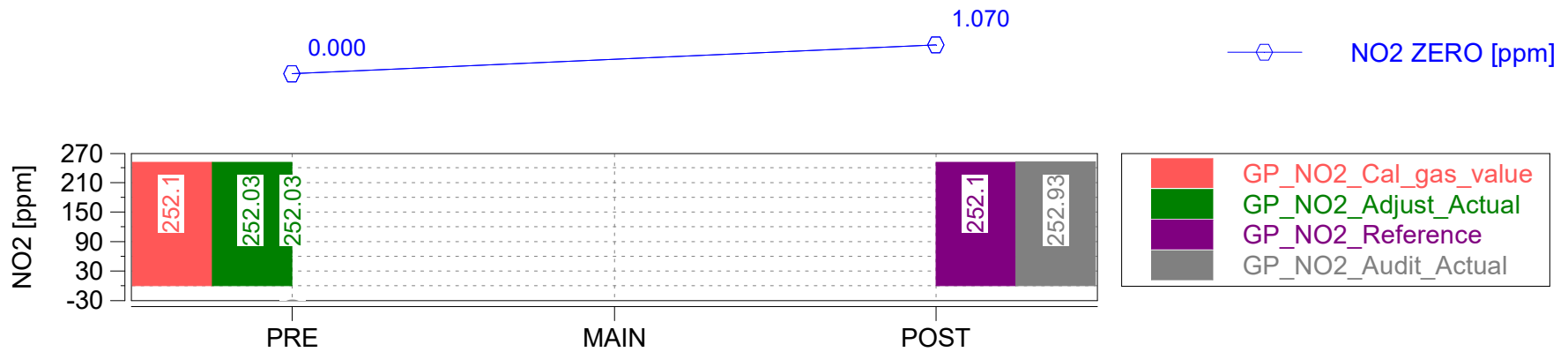
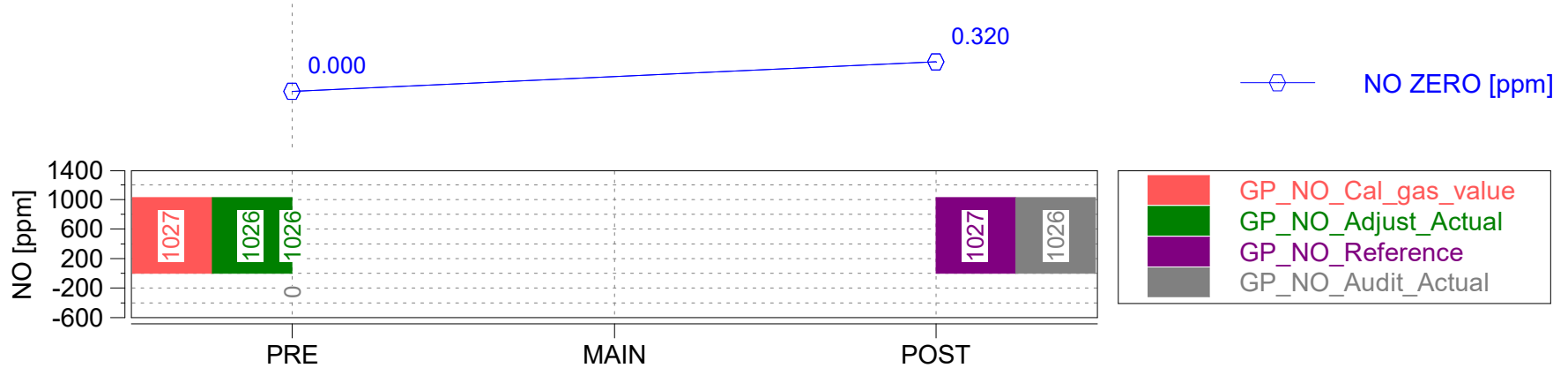
Start Date: 09/20/2017

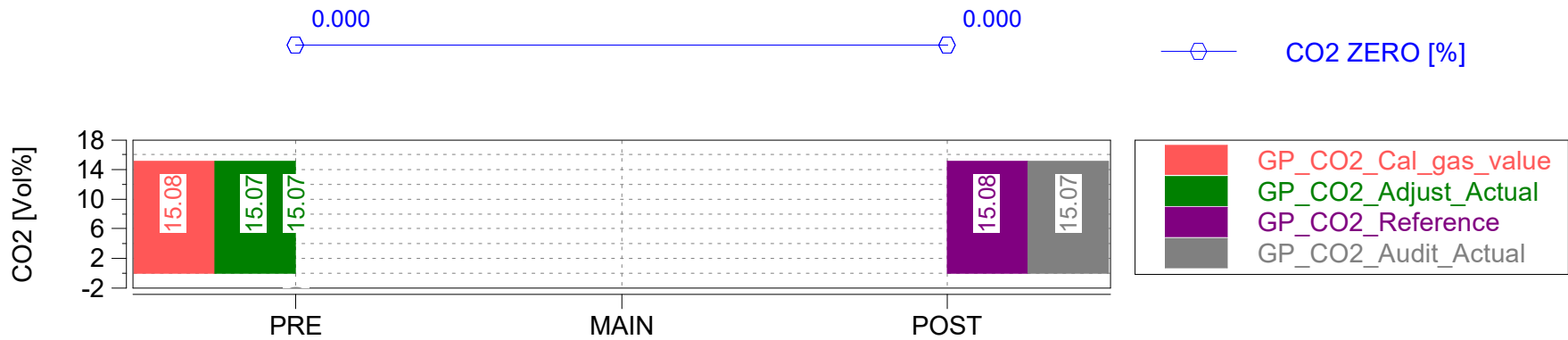
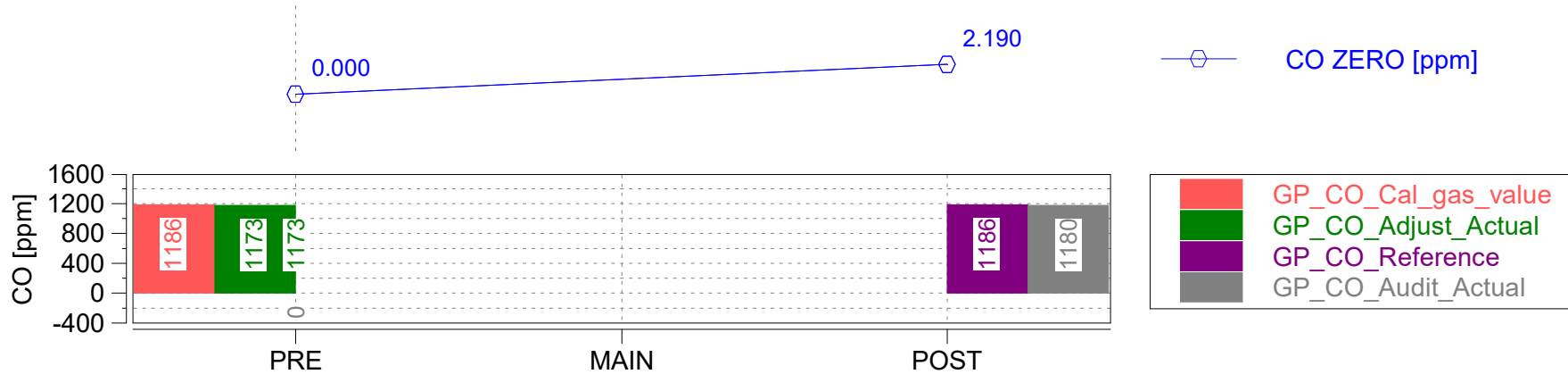
Start Time: 07:29:33.0

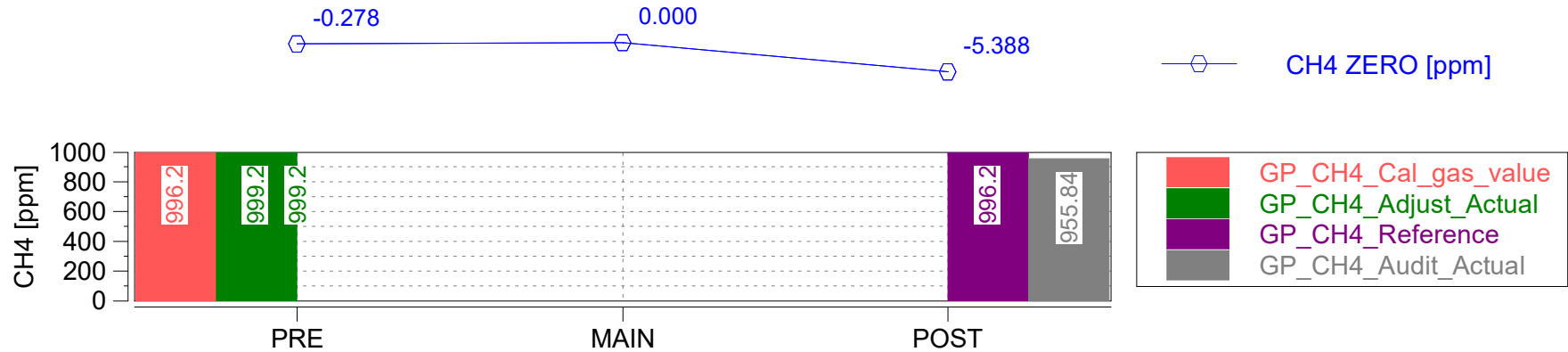
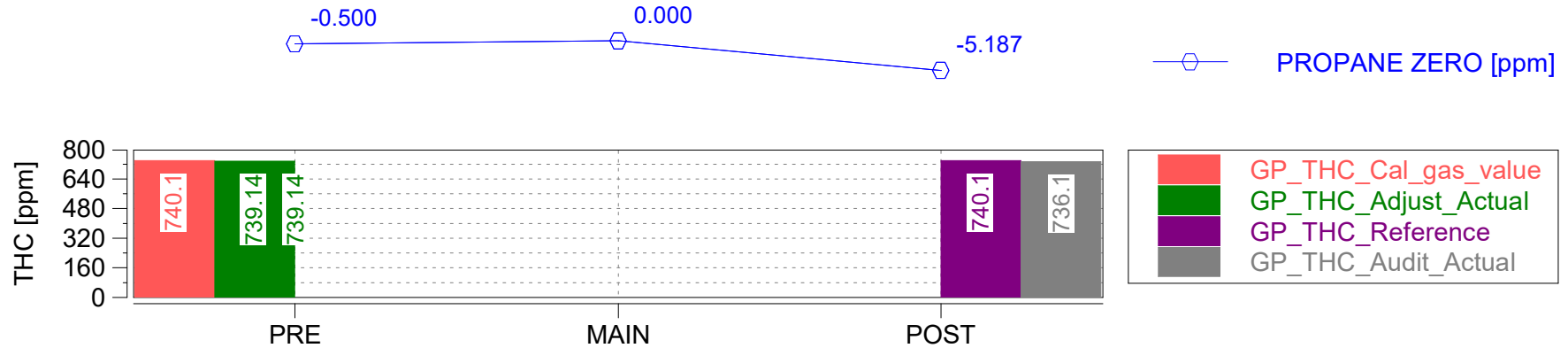


Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi Q7 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90







#	Text	Value	Unit
-	----	----	----
1.0	Test Start: Date	-	-
2.0	Test Start: Time	-	-
3.0	Ambient Temperature	IFILE1:TM'Temperature	deg C
4.0	Ambient Temperature TS	0.00000	s
5.0	Ambient Pressure	IFILE1:TM'Pressure	kPa
6.0	Ambient Pressure TS	0.00000	s
7.0	Humidity Type	1.00000	-
8.0	Amb. Rel. Humidity	IFILE1:TM'Humidity	%
9.0	Amb. Rel. Humidity	0.00000	s
10.0	GPS Latitude		deg
11.0	GPS Latitude TS	0.00000	s
12.0	GPS Longitude		deg
13.0	GPS Longitude TS	0.00000	s
14.0	Altitude		m
15.0	Altitude TS	0.00000	s
16.0	GPS Quality		-
17.0	GPS Quality TS	0.00000	s
18.0	GroundSpeed		km/h
19.0	GroundSpeed TS	0.00000	s
20.0	Altitude from topographical map		m
21.0	Altitude TS of topographical map		s
22.0	TRIP_AMBIENT_GPS_AVL	YES	-
23.0	CALC_GPS_GROUNDSPEED	NO	-
24.0	EXHAUST_FLOW_AVL	NO	-
25.0	EXHAUST_FLOW_AVL_EFM	YES	-
26.0	Exhaust Flow Type	2.00000	-
27.0	Mass Flow	IFILE1:TM'PitotEFM_ExhaustG	various
28.0	Mass Flow TS	1.70000	s
29.0	Exhaust Pressure		kPa
30.0	Exhaust Pressure TS	1.70000	s

#	Text	Value	Unit
-	----	----	----
31.0	Exhaust Delta Pressure		kPa
32.0	Exhaust Pressure Delta TS	1.70000	s
33.0	Exhaust Temperature	IFILE1:TM'PitotEFM_ExhaustG	degC
34.0	Exhaust Temperature TS	1.70000	s
35.0	Lambda	N/A	-
36.0	Lambda TS		s
37.0	CO2_DIL		%
38.0	CO2_DIL TS		s
39.0	CVS Volume Flow		m3/min
40.0	TimeShift_CVS_VOL_FLOW		s
41.0	IN_CVS_PRESSURE		kPa
42.0	TimeShift_CVS_PRESSURE		s
43.0	IN_CVS_TEMP		degC
44.0	TimeShift_CVS_TEMP		s
45.0	Dry to Wet Conversion CO2	YES	-
46.0	Dry to Wet Conversion O2	YES	-
47.0	Dry to Wet Conversion NO	NO	-
48.0	Dry to Wet Conversion NO2	NO	-
49.0	Dry to Wet Conversion THC	NO	-
50.0	Dry to Wet Conversion CH4	NO	-
51.0	Dry to Wet Conversion O2	NO	-
52.0	CO2	IFILE1:TM'GPiS_CO2	%
53.0	CO2 TS	-15.80000	s
54.0	OS	IFILE1:TM'GPiS_O2	%
55.0	O2 TS	-16.30000	s
56.0	CO	IFILE1:TM'GPiS_CO	ppm
57.0	CO TS	-15.80000	s
58.0	NO	IFILE1:TM'GPiS_NO	ppm
59.0	NO TS	-14.00000	s
60.0	NO2	IFILE1:TM'GPiS_NO2	ppm

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi Q7 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
61.0	NO2 TS	-14.00000	s
62.0	THC	IFILE1:TM'FIDiS_THC_C1	ppm
63.0	THC TS	0.00000	s
64.0	CH4	IFILE1:TM'FIDiS_CH4_C1	ppm
65.0	CH4 TS	0.00000	s
66.0	GAS_PEMS_Ethane_Efficiency	IFILE1:MOVE_AVL4925'GP_Et -	
67.0	GAS_PEMS_Methane_Efficiency	IFILE1:MOVE_AVL4925'GP_M -	
68.0	GAS_PEMS_Methane_Response	IFILE1:MOVE_AVL4925'GP_M -	
69.0	Zero Signal	IFILE1:TM'GPiS_STATE	0/1
70.0	Zero Signal TS	-14.00000	s
71.0	Zero Signal_FIDiS	IFILE1:TM'FIDiS_STATE	0/1
72.0	Zero Signal_FIDiS TS		s
73.0	Species Input Type	4.00000	-
74.0	GASPEMS=AVL493	NO	-
75.0	GASPEMS=AVL493_iX	NO	-
76.0	GASPEMS=AVL492	YES	-
77.0	GASPEMS=AVL4925	YES	-
78.0	PM: Type	4.00000	1=GFB+HC, 2=GFB, 3='PM=S
79.0	Filter ID from IFile	NO	-
80.0	Lab ID from IFile	NO	-
81.0	PM Filter: ID	N/A	ID
82.0	PM Filter: Lab	N/A	Name/ID
83.0	PM Filter: Weight before Test	N/A	mg
84.0	PM Filter: Weight after Test	N/A	mg
85.0	PM (HC Corr): Max. Exhaust Flow	N/A	scfm
86.0	Soot		mg/m3
87.0	Soot TS	-5.00000	s
88.0	Soot Sensor		mg/m3
89.0	Soot Sensor TS		s
90.0	PM Filter: Filter Flow Rate		l/min

#	Text	Value	Unit
-	----	----	----
91.0	PM Filter: Filter Flow Rate TS	-5.00000	s
92.0	PM Filter: Filter Dilution Ratio		-
93.0	PM Filter: Filter Dilution Ratio TS	-5.00000	s
94.0	PM Filter: Filter Trigger		-
95.0	PM Filter: Filter Trigger TS	-5.00000	s
96.0	PMPEMS=AVL494	YES	-
97.0	PMPEMS_AVL494_PROP_DIL	NO	-
98.0	PM dilution ratio min		-
99.0	PM_MaxExhaustFlowRate		-
100.0	PM_ExhaustFlow_Thresh		-
101.0	PM_total_flow_val		-
102.0	PM_total_flow_val_TS		-
103.0	PM_exh_mass_flow		-
104.0	PM_exh_mass_flow_TS		-
105.0	PN		#/cm3
106.0	TimeShift_PN		s
107.0	PN_STATE		-
108.0	PN TS STATE		s
109.0	PNPEMS_AVL496	NO	-
110.0	PN_CorrFactor	1.00000	
111.0	Time Alignment	1.00000	-
112.0	Time Alignment Dataset 1	N/A	0/1
113.0	Time Alignment Dataset 2	N/A	0/1
114.0	Time Alignment Thresh 1	N/A	-
115.0	Time Alignment Thresh 2	N/A	-
116.0			
117.0			
118.0			
119.0			
120.0			

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi Q7 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
121.0			
122.0	Trigger		0/1
123.0	Trigger TS		s
124.0	FTIR_NAME_1		-
125.0	FTIR_MW_1		-
126.0	FTIR_CHANNEL_1		-
127.0	FTIR_CHANNEL_TS_1		-
128.0	FTIR_CHANNEL_DRY_1	NO	-
129.0	FTIR_NAME_2		-
130.0	FTIR_MW_2		-
131.0	FTIR_CHANNEL_2		-
132.0	FTIR_CHANNEL_TS_2		-
133.0	FTIR_CHANNEL_DRY_2	NO	-
134.0	FTIR_NAME_3		-
135.0	FTIR_MW_3		-
136.0	FTIR_CHANNEL_3		-
137.0	FTIR_CHANNEL_TS_3		-
138.0	FTIR_CHANNEL_DRY_3	NO	-
139.0	FTIR_NAME_4		-
140.0	FTIR_MW_4		-
141.0	FTIR_CHANNEL_4		-
142.0	FTIR_CHANNEL_TS_4		-
143.0	FTIR_CHANNEL_DRY_4	NO	-
144.0	FTIR_NAME_5		-
145.0	FTIR_MW_5		-
146.0	FTIR_CHANNEL_5		-
147.0	FTIR_CHANNEL_TS_5		-
148.0	FTIR_CHANNEL_DRY_5	NO	-
149.0	FTIR_NAME_6		-
150.0	FTIR_MW_6		-

#	Text	Value	Unit
-	----	----	----
151.0	FTIR_CHANNEL_6		-
152.0	FTIR_CHANNEL_TS_6		-
153.0	FTIR_CHANNEL_DRY_6	NO	-
154.0	FTIR_NAME_7		-
155.0	FTIR_MW_7		-
156.0	FTIR_CHANNEL_7		-
157.0	FTIR_CHANNEL_TS_7		-
158.0	FTIR_CHANNEL_DRY_7	NO	-
159.0	FTIR_NAME_8		-
160.0	FTIR_MW_8		-
161.0	FTIR_CHANNEL_8		-
162.0	FTIR_CHANNEL_TS_8		-
163.0	FTIR_CHANNEL_DRY_8	NO	-
164.0	FTIR_NAME_9		-
165.0	FTIR_MW_9		-
166.0	FTIR_CHANNEL_9		-
167.0	FTIR_CHANNEL_TS_9		-
168.0	FTIR_CHANNEL_DRY_9	NO	-
169.0	FTIR_NAME_10		-
170.0	FTIR_MW_10		-
171.0	FTIR_CHANNEL_10		-
172.0	FTIR_CHANNEL_TS_10		-
173.0	FTIR_CHANNEL_DRY_10	NO	-
174.0	FTIR_NAME_11		-
175.0	FTIR_MW_11		-
176.0	FTIR_CHANNEL_11		-
177.0	FTIR_CHANNEL_TS_11		-
178.0	FTIR_CHANNEL_DRY_11	NO	-
179.0	FTIR_NAME_12		-
180.0	FTIR_MW_12		-

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi Q7 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
181.0	FTIR_CHANNEL_12		-
182.0	FTIR_CHANNEL_TS_12		-
183.0	FTIR_CHANNEL_DRY_12	NO	-
184.0	FTIR_NAME_13		-
185.0	FTIR_MW_13		-
186.0	FTIR_CHANNEL_13		-
187.0	FTIR_CHANNEL_TS_13		-
188.0	FTIR_CHANNEL_DRY_13	NO	-
189.0	FTIR_NAME_14		-
190.0	FTIR_MW_14		-
191.0	FTIR_CHANNEL_14		-
192.0	FTIR_CHANNEL_TS_14		-
193.0	FTIR_CHANNEL_DRY_14	NO	-
194.0	FTIR_NAME_15		-
195.0	FTIR_MW_15		-
196.0	FTIR_CHANNEL_15		-
197.0	FTIR_CHANNEL_TS_15		-
198.0	FTIR_CHANNEL_DRY_15	NO	-
199.0	FTIR_NAME_16		-
200.0	FTIR_MW_16		-
201.0	Vehicle Type	2017 Audi Q7	-
202.0	Vehicle Info		-
203.0	Engine Type	Gasoline	-
204.0	Engine Info	3.0L	-
205.0	Engine Torque		Nm
206.0	Curb Idle Load		%
207.0	Idle Speed		rpm
208.0	HYBRID_OVC_REF_CO2_gkm		g/km
209.0	Engine Concept	1.00000	-
210.0	Alpha	1.93000	-

#	Text	Value	Unit
-	----	----	----
211.0	Beta	1.00000	
212.0	Gamma	0.00000	
213.0	Delta	0.00000	
214.0	Epsilon	0.03200	
215.0	X_C	83.00000	
216.0	X_H	13.30000	
217.0	X_N	0.00000	
218.0	X_O	3.50000	
219.0	X_S	0.00000	
220.0	Fuel_Density	747.50000	
221.0	rho_exhaust	1.29310	
222.0	U_CO2	1.51800	
223.0	U_CO	0.96600	
224.0	U_NO	1.58700	
225.0	U_NO2	1.58700	
226.0	U_NOx	1.58700	
227.0	U_HC	0.49900	
228.0	U_NMHC	0.47100	
229.0	U_CH4	0.55300	
230.0	U_O2	1.10400	
231.0	Fuel Type	2.00000	-
232.0	exhaust mass flow type (YES/NO)	YES	-
233.0	Distance Calculation Type	1.00000	-
234.0	Velocity Statistics Calculation Type	2.00000	-
235.0	RDE vehicle class	1.00000	-
236.0	TM_CITY0		s
237.0	TM_CITY1		s
238.0	TM_RURAL0		s
239.0	TM_RURAL1		s
240.0	TM_RURAL2_0		s

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi Q7 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
241.0	TM_RURAL2_1		s
242.0	Second Rural Part for Time Marks (NO		-
243.0	TM_MW0		s
244.0	TM_MW1		s
245.0	VELOCITY_LIMIT_STOP	2.00000	km/h
246.0	VELOCITY_LIMIT_URBAN	50.00000	km/h
247.0	VELOCITY_LIMIT_RURAL	75.00000	km/h
248.0	Intake Manifold Pressure Type	1.00000	-
249.0	Velocity	IFILE1:TM'OBD_Vehicle_Spee	km/h
250.0	Velocity TS	1.30000	s
251.0	Velocity FACTOR	1.00000	-
252.0	Coolant Temperature	IFILE1:TM'OBD_Engine_Coola	degC
253.0	Coolant Temperature TS	1.30000	s
254.0	Oil Temperature		degC
255.0	Oil Temperature TS	1.30000	s
256.0	Intake Manifold Temperature		degC
257.0	Intake Manifold Temp TS	1.30000	s
258.0	Intake Manifold Pressure	IFILE1:TM'OBD_Intake_manifo	kPa
259.0	Intake Manifold Pressure TS	1.30000	s
260.0	Throttle Position		%
261.0	Throttle TS	1.30000	s
262.0	TYP_IDLE_MASS_FLOW		kg/h
263.0	Torque Type	1.00000	-
264.0	Speed	IFILE1:TM'OBD_Engine_RPM	rpm
265.0	Speed TS	1.30000	s
266.0	Torque		Nm
267.0	Torque TS	1.30000	s
268.0	Friction Torque	N/A	Nm
269.0	Friction Torque TS	N/A	s
270.0	Reference Torque	N/A	Nm

#	Text	Value	Unit
-	----	----	----
271.0	Reference Torque TS	N/A	s
272.0	k_VELINE		-
273.0	D_VELINE		-
274.0	Fuel Flow Type	2.00000	-
275.0	Air Flow Type	1.00000	-
276.0	Fuel Rate		various
277.0	Air Rate		various
278.0	Fuel Rate TS	1.30000	s
279.0	No_Cylinders		-
280.0	Air Rate TS	1.30000	s
281.0	FTIR_CHANNEL_32		-
282.0	FTIR_CHANNEL_TS_32		-
283.0	FTIR_CHANNEL_DRY_32	NO	-
284.0	FTIR_NAME_33		-
285.0	FTIR_MW_33		-
286.0	FTIR_CHANNEL_33		-
287.0	FTIR_CHANNEL_TS_33		-
288.0	FTIR_CHANNEL_DRY_33	NO	-
289.0	FTIR_NAME_34		-
290.0	FTIR_MW_34		-
291.0	FTIR_CHANNEL_34		-
292.0	FTIR_CHANNEL_TS_34		-
293.0	FTIR_CHANNEL_DRY_34	NO	-
294.0	FTIR_NAME_35		-
295.0	FTIR_MW_35		-
296.0	FTIR_CHANNEL_35		-
297.0	FTIR_CHANNEL_TS_35		-
298.0	FTIR_CHANNEL_DRY_35	NO	-
299.0	FTIR_NAME_36		-
300.0	FTIR_MW_36		-

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi Q7 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
301.0	FTIR_CHANNEL_36		-
302.0	FTIR_CHANNEL_TS_36		-
303.0	FTIR_CHANNEL_DRY_36	NO	-
304.0	FTIR_NAME_37		-
305.0	FTIR_MW_37		-
306.0	FTIR_CHANNEL_37		-
307.0	FTIR_CHANNEL_TS_37		-
308.0	FTIR_CHANNEL_DRY_37	NO	-
309.0	FTIR_NAME_38		-
310.0	FTIR_MW_38		-
311.0	FTIR_CHANNEL_38		-
312.0	FTIR_CHANNEL_TS_38		-
313.0	FTIR_CHANNEL_DRY_38	NO	-
314.0	FTIR_NAME_39		-
315.0	FTIR_MW_39		-
316.0	FTIR_CHANNEL_39		-
317.0	FTIR_CHANNEL_TS_39		-
318.0	FTIR_CHANNEL_DRY_39	NO	-
319.0	FTIR_NAME_40		-
320.0	FTIR_MW_40		-
321.0	FTIR_CHANNEL_40		-
322.0	FTIR_CHANNEL_TS_40		-
323.0	FTIR_CHANNEL_DRY_40	NO	-
324.0	Legislation Type (1=HDIUT 2=EU H	4.00000	-
325.0	WholeTest_NOx_corr	5.00000	-
326.0	WholeTest_Hum_corr	2.00000	-
327.0	CD_Distance	0.00000	km
328.0	CD_NOx	0.00000	mg/km
329.0	CD_CO	0.00000	mg/km
330.0	CD_CO2	0.00000	g/km

#	Text	Value	Unit
-	----	----	----
331.0	CD_NMHC	0.00000	mg/km
332.0	CD_CH4	0.00000	mg/km
333.0	CD_THC	0.00000	mg/km
334.0	CD_PN		#/km
335.0	WLTC_LOW_SPEED_gkm		g/km
336.0	WLTC_LOW_SPEED_FAC	1.20000	-
337.0	WLTC_MEDIUM_SPEED_gkm		g/km
338.0	WLTC_HIGH_SPEED_gkm		g/km
339.0	WLTC_HIGH_SPEED_FAC	1.10000	-
340.0	WLTC_EXTRA_HIGH_SPEED_gkm		g/km
341.0	WLTC_EXTRA_HIGH_SPEED_FA	1.05000	-
342.0	TOL_NORMAL_DRIVING	25.00000	%
343.0	TOL_SEVERE_DRIVING	50.00000	%
344.0	Increase Tolerance Nomral Driving	NO	-
345.0	Bin1_min		km/h
346.0	Bin2_min		km/h
347.0	Bin3_min		km/h
348.0	Bin1_max		km/h
349.0	Bin2_max		km/h
350.0	Bin3_max		km/h
351.0	Clear_R0	125.40000	N
352.0	Clear_R1	0.29300	Nh/km
353.0	Clear_R2	0.02795	N*(h/km) ²
354.0	Clear_SMK	1470.00000	kg
355.0	Clear_Rated_Power	140.00000	kW
356.0	Clear_Ref_Velocity	70.00000	km/h
357.0	Clear_Ref_Acc	0.45000	m/s ²
358.0	Clear_Smooth	3.00000	s
359.0	EXTC_From_High_Temp	30.00000	degC
360.0	EXTC_To_High_Temp	35.00000	degC

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi Q7 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
361.0	EXTC_From_Low_Temp	-7.00000	degC
362.0	EXTC_To_Low_Temp	0.00000	degC
363.0	Euro 6d or Euro 6d temp	NO	-
364.0	EXTC_From_Altitude	700.00000	m
365.0	EXTC_To_Altitude	1300.00000	m
366.0	EXTC_CORR_FAC	1.60000	
367.0	weight cold start (YES/NO)	NO	-
368.0	precon and soak done (YES/NO)	NO	-
369.0	PATH_PRECON_FILE		
370.0	filter velocity (YES/NO)	NO	-
371.0	filter velocity auto(YES/NO)	NO	-
372.0	Ki_CO		
373.0	Ki_CO2		
374.0	Ki_NOx		
375.0	Ki_FACTOR_CO2 (YES/NO)	NO	-
376.0	Ki_OFFSET_CO2 (YES/NO)	NO	-
377.0	Ki_FACTOR_CO (YES/NO)	NO	-
378.0	Ki_OFFSET_CO (YES/NO)	NO	-
379.0	Ki_FACTOR_NOx (YES/NO)	NO	-
380.0	Ki_OFFSET_NOx (YES/NO)	NO	-
381.0	Ki_OFF (YES/NO)	NO	-
382.0	HD legislations	1.00000	-
383.0	RDE legislations	1.00000	-
384.0	Submission Documents (YES/NO)	NO	-
385.0	General Setup Parameters Text	City	-
386.0	Legislation Setup Parameters Text	City	-
387.0	Trip Info		-
388.0	IN_TIME_REF		-
389.0	Sub-Trip Start: Auto	YES	-
390.0	Sub-Trip Start: Seconds	N/A	s

#	Text	Value	Unit
-	----	----	----
391.0	Sub-Trip End: Auto	YES	-
392.0	Sub-Trip End: Seconds	N/A	s
393.0	Unit System	2.00000	-
394.0	Calculate: PM Emissions	NO	-
395.0	Calculate: PN Emissions	NO	-
396.0	Output: Summary	YES	-
397.0	Output: Emissions	YES	-
398.0	Output: Raw Data	YES	-
399.0	Output: Zero Span	YES	-
400.0	Output: Data Consistency	NO	-
401.0	Output: Window Plots	YES	-
402.0	Fuel Rate ECU vs. EU ISO16183	y = 10000000000.0000 x - 0.000 R ² =10000000000.000 SEE=	
403.0	PEMS post processing version	Rel_10_B192	
404.0	Concerto version	480.00000	
405.0	Concerto build	215.00000	
406.0	USERNAME	EFR	

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi Q7 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway
Page: Trip Summary

Start Date: 09/21/2017
Start Time: 07:20:08.0



Trip Duration	3201.00	s	ave THC	11.83446	ppm	BS CO2	n/a	g/hphr
Trip Duration (a)	3201.00	s	ave NMHC	10.97542	ppm	BS CO	n/a	g/hphr
Trip Distance	38.97	mi	ave CH4	0.78094	ppm	BS THC	n/a	g/hphr
Trip Distance (a)	38.97	mi	ave CO	311.10743	ppm	BS NMHC	n/a	g/hphr
Trip Fuel Cons. (b)	n/a	kg	ave CO2	12.56384	%	BS CH4	n/a	g/hphr
Trip Fuel Cons. (ab)	n/a	kg	ave NOx	5.85053	ppm	BS NO (d)	n/a	g/hphr
Trip Fuel Cons. EU (ac)	3.93	kg	ave PM	n/a	mg/m3	BS NO2	n/a	g/hphr
Trip Fuel Cons. US (ac)	3.89	kg	ave Soot meas	n/a	mg/m3	BS NOx	n/a	g/hphr
Trip Fuel Cons. Volume (b)	n/a	gall	ave Soot	n/a	mg/m3	BS Soot	n/a	g/hphr
Trip Fuel Cons. Volume (ab)	n/a	gall	ave PN	n/a	#/cm3	BS Soot meas	n/a	g/hphr
Trip Fuel Cons. Volume EU (ac)	1.39	gall	tot THC	0.44401	g	BS PM	n/a	g/hphr
Trip Fuel Cons. Volume US (ac)	1.38	gall	tot NMHC	0.36097	g	BS PN	n/a	#/hpr
Trip Fuel Economy (b)	n/a	mpg_US	tot CH4	0.10309	g	DS CO2	302.45217	g/mi
Trip Fuel Economy (ab)	n/a	mpg_US	tot CO	30.84879	g	DS CO	0.79158	g/mi
Trip Fuel Economy EU (ac)	28.08	mpg_US	tot CO2	11786.91811	g	DS THC	0.01139	g/mi
Trip Fuel Economy US (ac)	28.34	mpg_US	tot NO (d)	0.41205	g	DS NMHC	0.00926	g/mi
Trip Av. Eng. Speed	1643.38	rpm	tot NO2	0.11795	g	DS CH4	0.00265	g/mi
Trip Av. Torque	n/a	lbft	tot NOx	0.52881	g	DS NO (d)	0.01057	g/mi
Trip Av. Power	n/a	hp	tot Soot	n/a	g	DS NO2	0.00303	g/mi
Trip Work	n/a	hphr	tot Soot meas	n/a	g	DS NOx	0.01357	g/mi
Trip Exhaust Mass	60.63	kg	tot PM	n/a	g	DS Soot	n/a	g/mi
Trip Exhaust Mass EU (ac)	n/a	kg	tot PN	n/a	#	DS Soot meas	n/a	g/mi
Trip Exhaust Mass US (ac)	n/a	kg	PM measurement type	0.00000	-	DS PM	n/a	g/mi
Trip Av. Amb. Temperature	64.33	deg_F	PM correction type	1.00000	alpha(HC)	DS PN	n/a	#/mi
Trip Av. Humidity	75.59	%	tot Soot on PM filter (estim.)	n/a	mg	FS CO2	n/a	g/kg
Fuel Type	Petrol (E10)		Soot --> PM simple scaling factor	1.00000	-	FS CO	n/a	g/kg
			Soot --> PM alpha scaling factor	0.00000	-	FS THC	n/a	g/kg
			Trip Av. Veh. Speed	43.82888	mi/hr	FS NMHC	n/a	g/kg
			Trip Velocity Zero	3.71759	%	FS CH4	n/a	g/kg
			Trip Velocity Urban	36.36364	%	FS NO (d)	n/a	g/kg
			Trip Velocity Rural	4.56107	%	FS NO2	n/a	g/kg
			Trip Velocity Motorway	59.07529	%	FS NOx	n/a	g/kg
						FS Soot	n/a	g/kg
						FS Soot meas	n/a	g/kg
						FS PM	n/a	g/kg
						FS PN	n/a	#/kg

(a) GAS PEMS measurement state only, (b) based on fuel rate input (ECU, Fuel Meter), (c) calculated from carbon balance
(d) NO calculated using molecular weight of NO2

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi Q5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

Page: Trip Summary Drift Corrected

Start Date: 09/21/2017

Start Time: 07:20:08.0

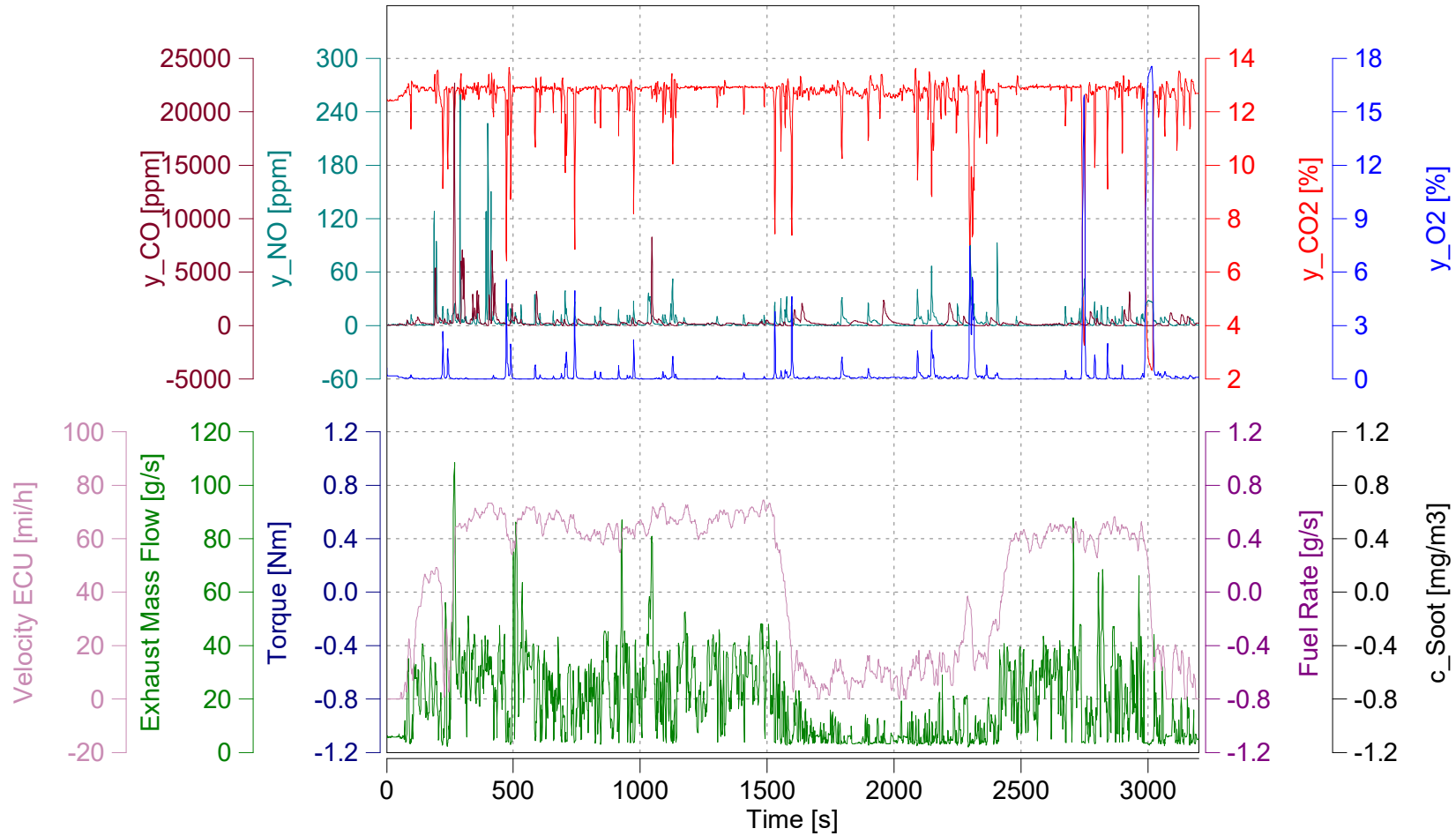


Trip Duration	3201.00	s	ave THC DC	16.01894	ppm	BS CO2 DC	n/a	g/hphr
Trip Duration (a)	3201.00	s	ave NMHC DC	15.04685	ppm	BS CO DC	n/a	g/hphr
Trip Distance	38.97	mi	ave CH4 DC	0.88372	ppm	BS THC DC	n/a	g/hphr
Trip Distance (a)	38.97	mi	ave CO DC	313.88765	ppm	BS NMHC DC	n/a	g/hphr
Trip Fuel Cons. (b)	n/a	kg	ave CO2 DC	12.56801	%	BS CH4 DC	n/a	g/hphr
Trip Fuel Cons. (ab)	n/a	kg	ave NOx DC	5.80835	ppm	BS NO DC (d)	n/a	g/hphr
Trip Fuel Cons. EU (ac)	3.93	kg	ave PM	n/a	mg/m3	BS NO2 DC	n/a	g/hphr
Trip Fuel Cons. US (ac)	3.89	kg	ave Soot meas	n/a	mg/m3	BS NOx DC	n/a	g/hphr
Trip Fuel Cons. Volume (b)	n/a	gall	ave Soot	n/a	mg/m3	BS Soot	n/a	g/hphr
Trip Fuel Cons. Volume (ab)	n/a	gall	ave PN DC	n/a	#/cm3	BS Soot meas	n/a	g/hphr
Trip Fuel Cons. Volume EU (ac)	1.39	gall	tot THC DC	0.60100	g	BS PM	n/a	g/hphr
Trip Fuel Cons. Volume US (ac)	1.38	gall	tot NMHC DC	0.50525	g	BS PN DC	n/a	#/hpr
Trip Fuel Economy (b)	n/a	mpg_US	tot CH4 DC	0.09991	g	DS CO2 DC	302.55248	g/mi
Trip Fuel Economy (ab)	n/a	mpg_US	tot CO DC	31.13001	g	DS CO DC	0.79880	g/mi
Trip Fuel Economy EU (ac)	28.08	mpg_US	tot CO2 DC	11790.82754	g	DS THC DC	0.01542	g/mi
Trip Fuel Economy US (ac)	28.34	mpg_US	tot NO DC (d)	0.41312	g	DS NMHC DC	0.01296	g/mi
Trip Av. Eng. Speed	1643.38	rpm	tot NO2 DC	0.11504	g	DS CH4 DC	0.00256	g/mi
Trip Av. Torque	n/a	lbft	tot NOx DC	0.52697	g	DS NO DC (d)	0.01060	g/mi
Trip Av. Power	n/a	hp	tot Soot	n/a	g	DS NO2 DC	0.00295	g/mi
Trip Work	n/a	hphr	tot Soot meas	n/a	g	DS NOx DC	0.01352	g/mi
Trip Exhaust Mass	60.63	kg	tot PM	n/a	g	DS Soot	n/a	g/mi
Trip Exhaust Mass EU (ac)	n/a	kg	tot PN DC	n/a	#	DS Soot meas	n/a	g/mi
Trip Exhaust Mass US (ac)	n/a	kg	PM measurement type	0.00000	-	DS PM	n/a	g/mi
Trip Av. Amb. Temperature	64.33	deg_F	PM correction type	1.00000	alpha(HC)	DS PN DC	n/a	#/mi
Trip Av. Humidity	75.59	%	tot Soot on PM filter (estim.)	n/a	mg	FS CO2 DC	n/a	g/kg
Fuel Type	Petrol (E10)		Soot --> PM simple scaling factor	1.00000	-	FS CO DC	n/a	g/kg
			Soot --> PM alpha scaling factor	0.00000	-	FS THC DC	n/a	g/kg
			Trip Av. Veh. Speed	43.82888	mi/hr	FS NMHC DC	n/a	g/kg
			Trip Velocity Zero	3.71759	%	FS CH4 DC	n/a	g/kg
			Trip Velocity Urban	36.36364	%	FS NO DC (d)	n/a	g/kg
			Trip Velocity Rural	4.56107	%	FS NO2 DC	n/a	g/kg
			Trip Velocity Motorway	59.07529	%	FS NOx DC	n/a	g/kg
						FS Soot	n/a	g/kg
						FS Soot meas	n/a	g/kg
						FS PM	n/a	g/kg
						FS PN DC	n/a	#/kg

(a) GAS PEMS measurement state only, (b) based on fuel rate input (ECU, Fuel Meter), (c) calculated from carbon balance
 (d) NO calculated using molecular weight of NO2

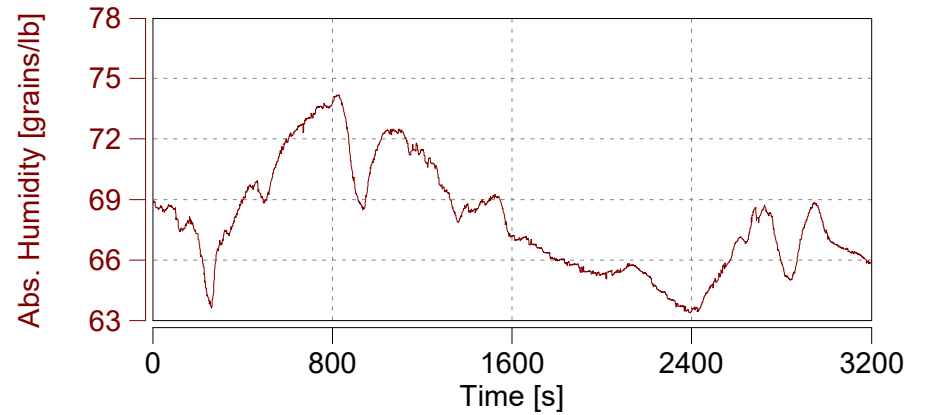
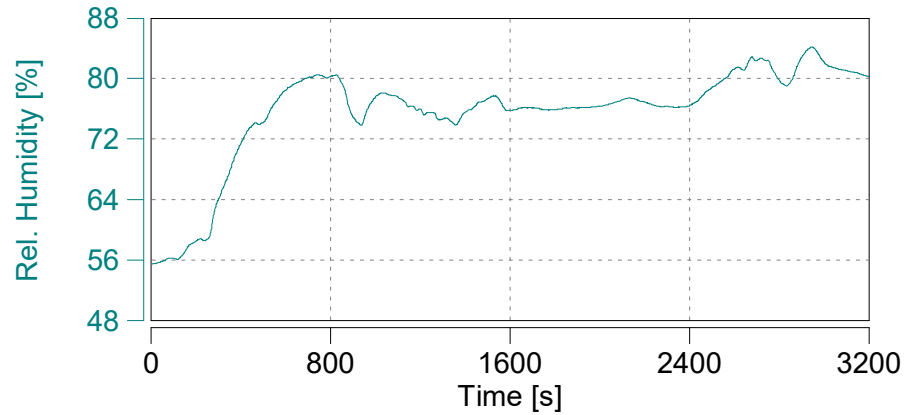
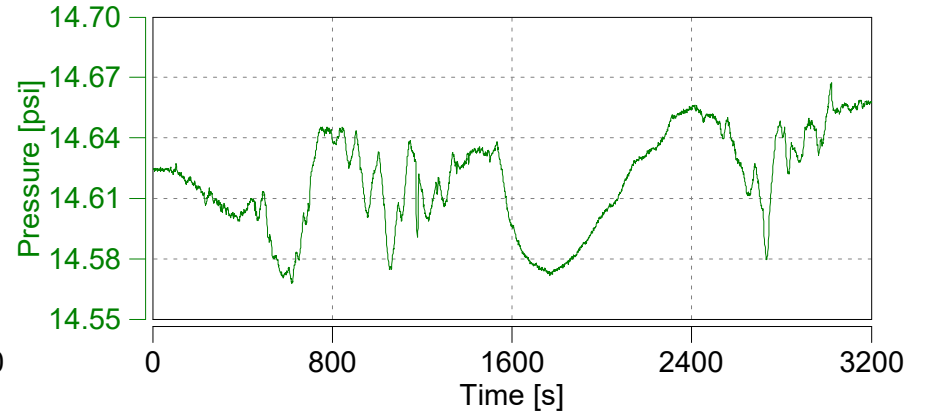
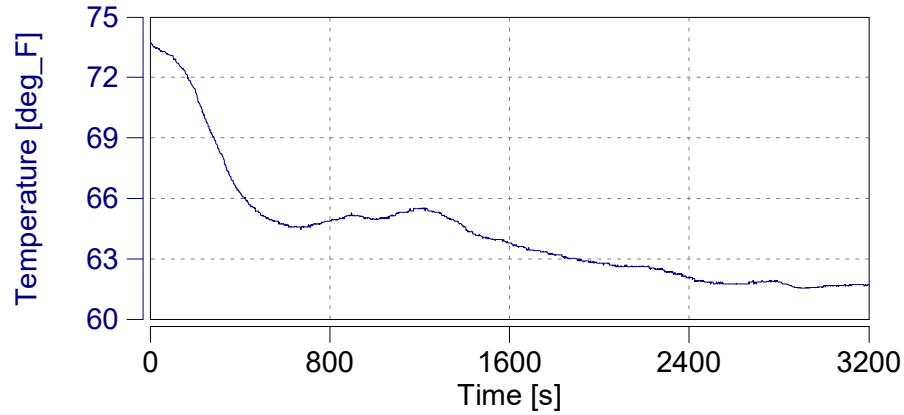
Concerto Version: 480 Build 215, Serial Number: 8468
 M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi Q5 /
 Engine: Gasoline / 2.0L
 NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
 Dry / Wet Corr.: 2 - CFR40 §86.1342-90



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi Q5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

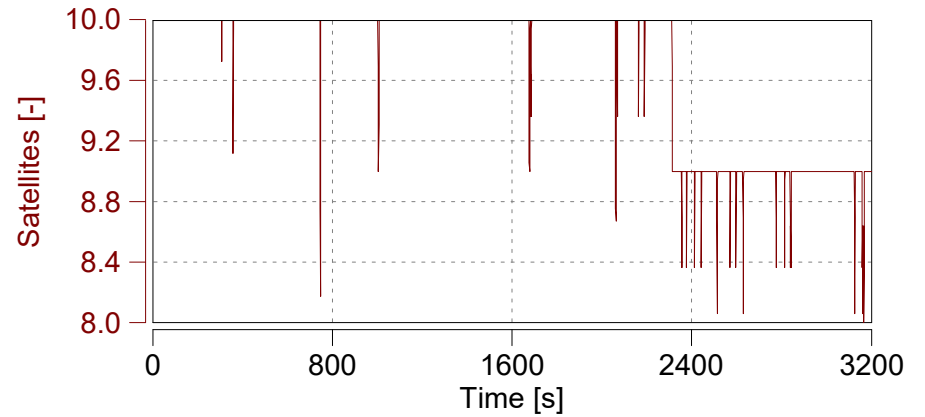
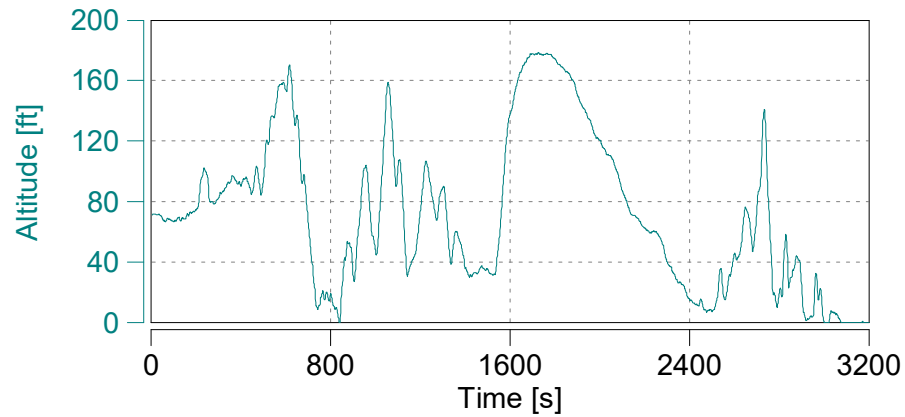
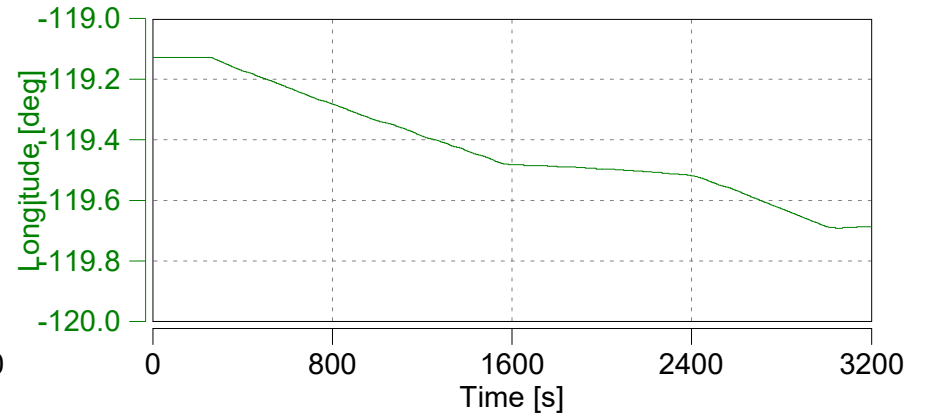
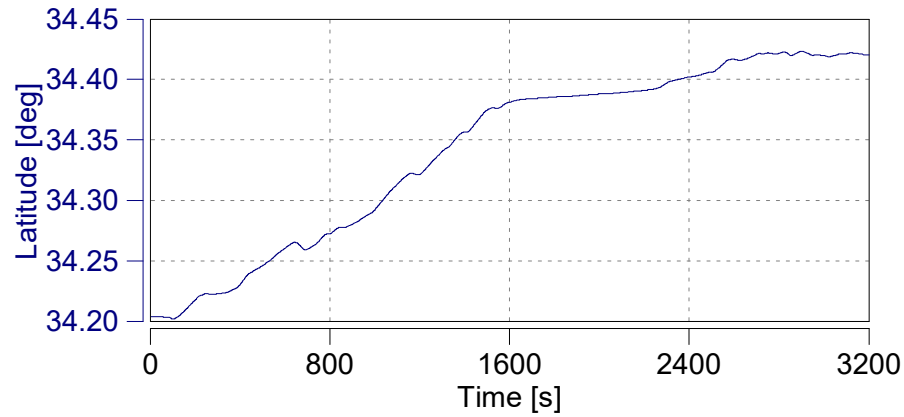


Case: Highway

Page: GPS

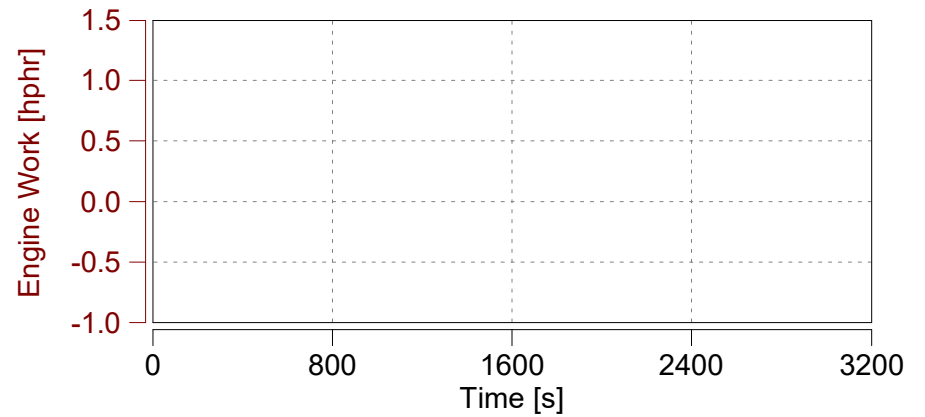
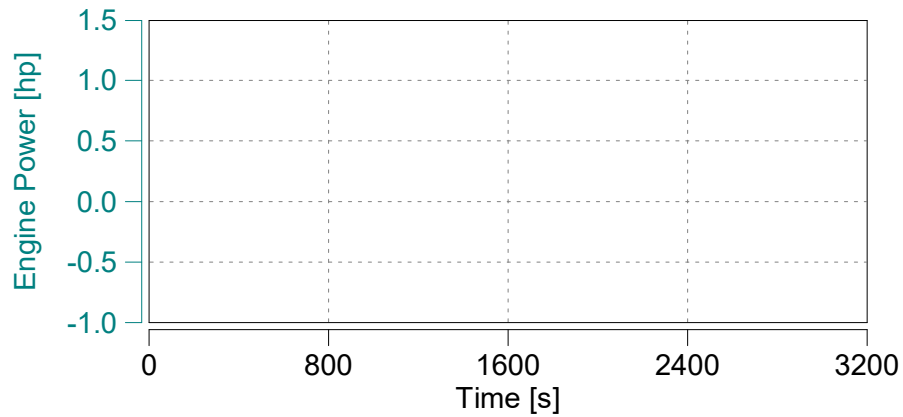
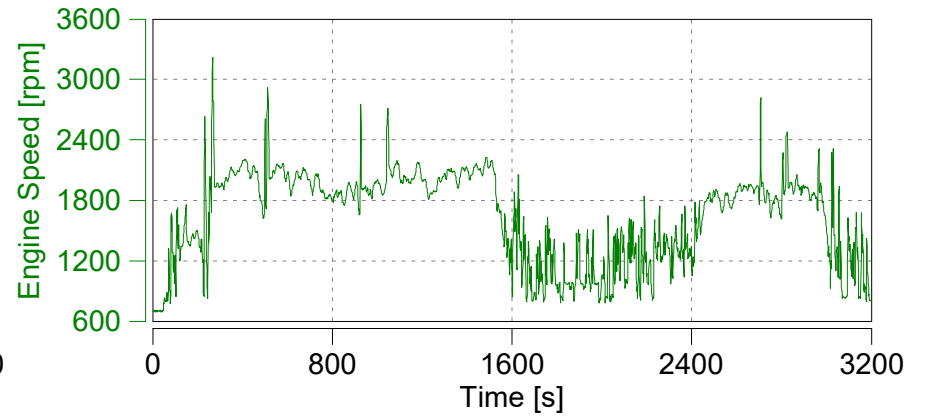
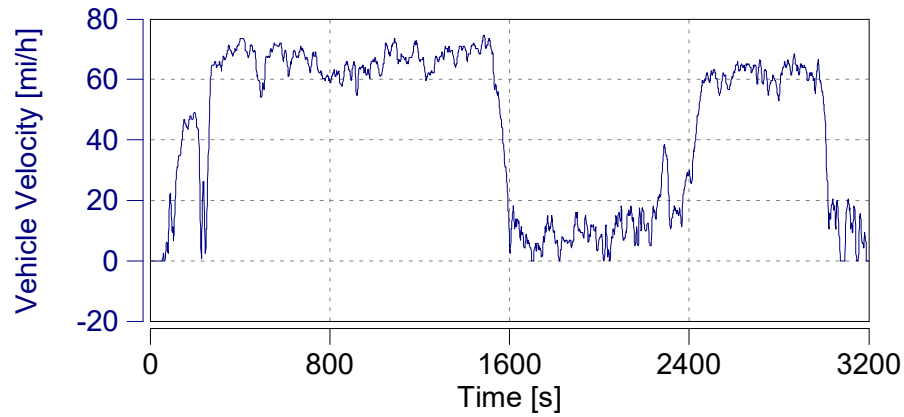
Start Date: 09/21/2017

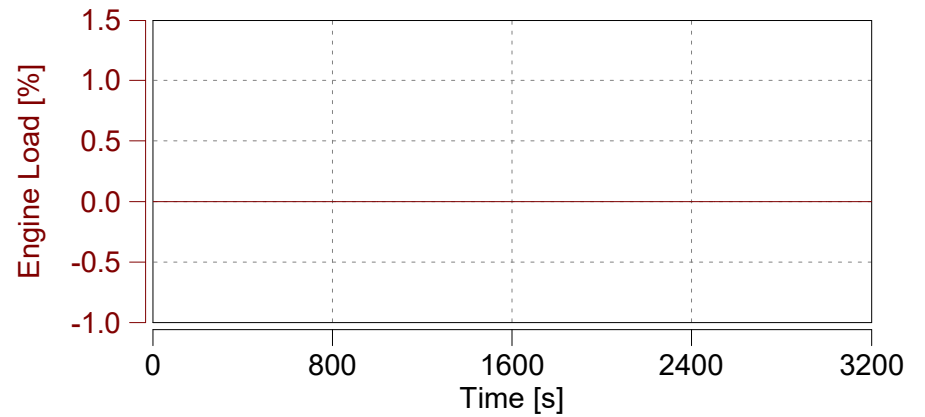
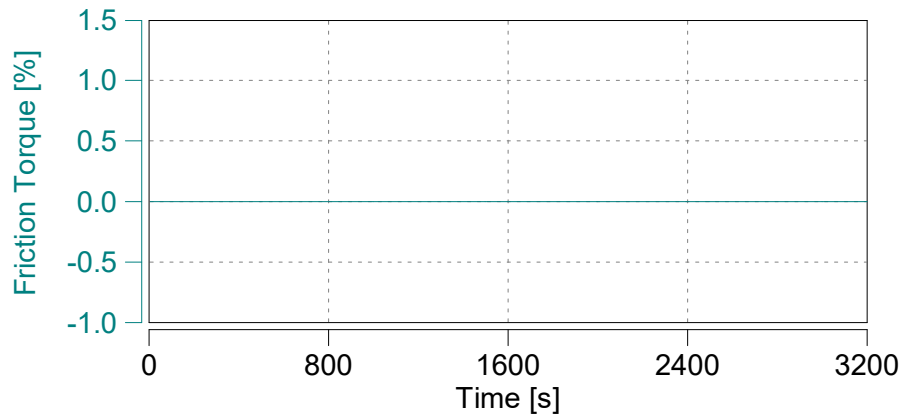
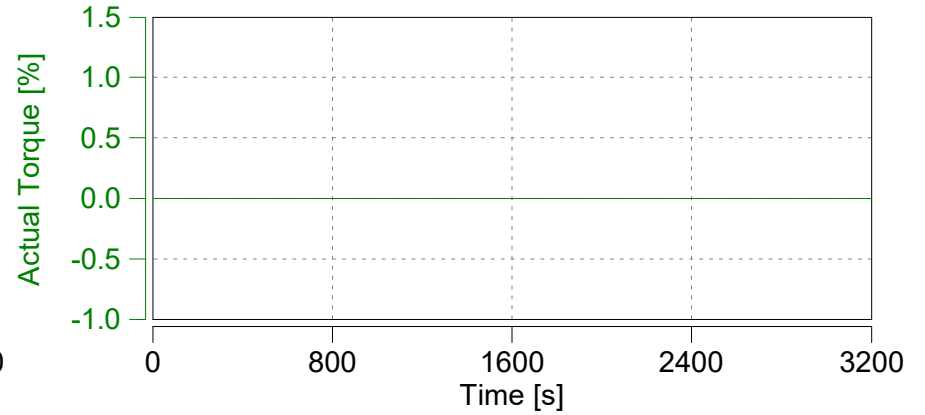
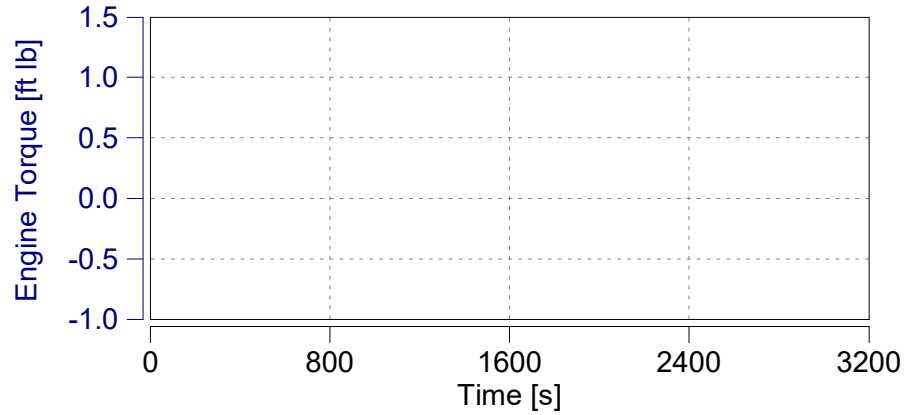
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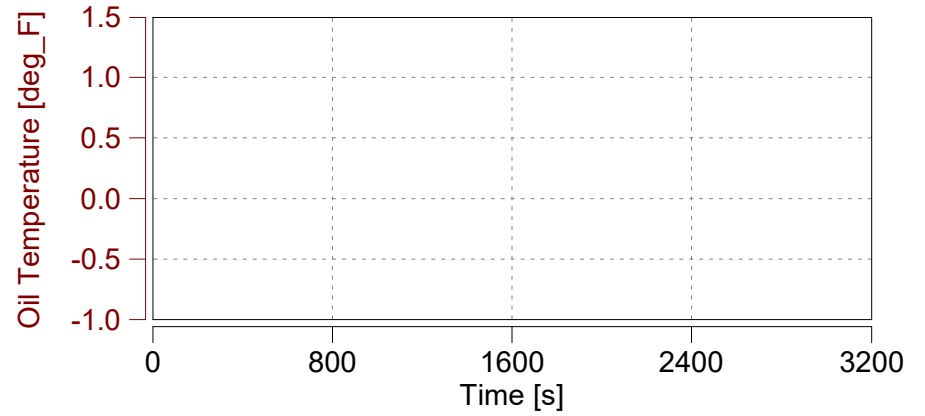
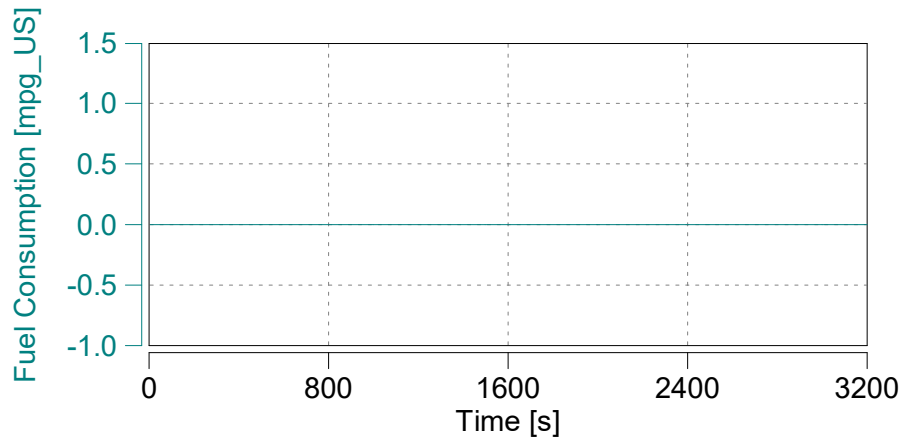
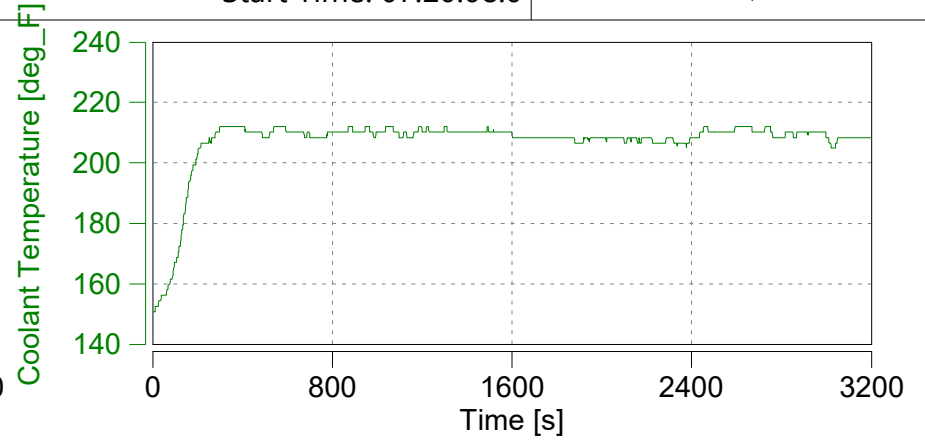
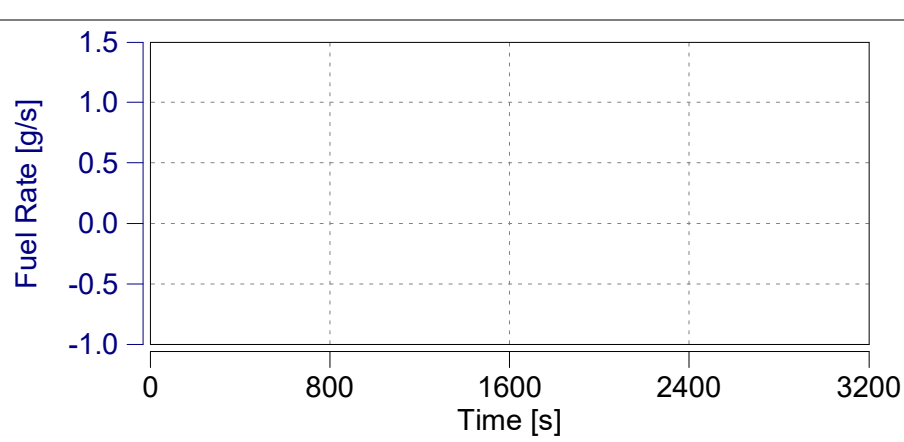


Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi Q5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90





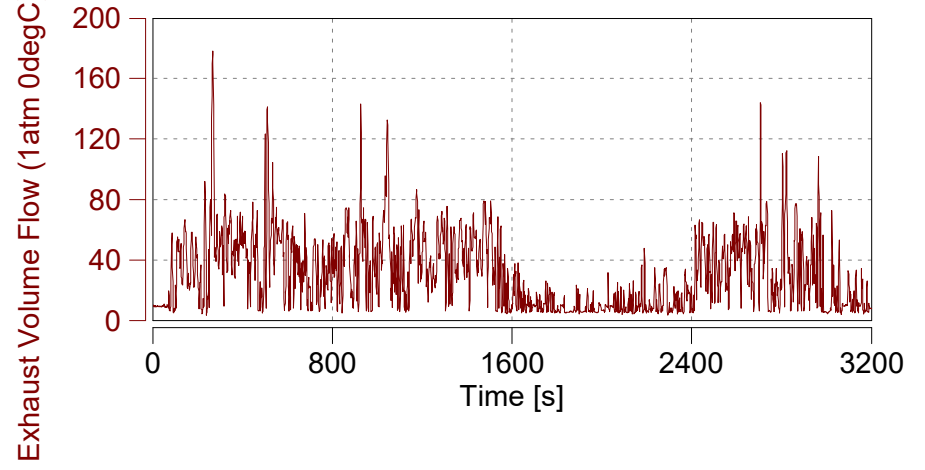
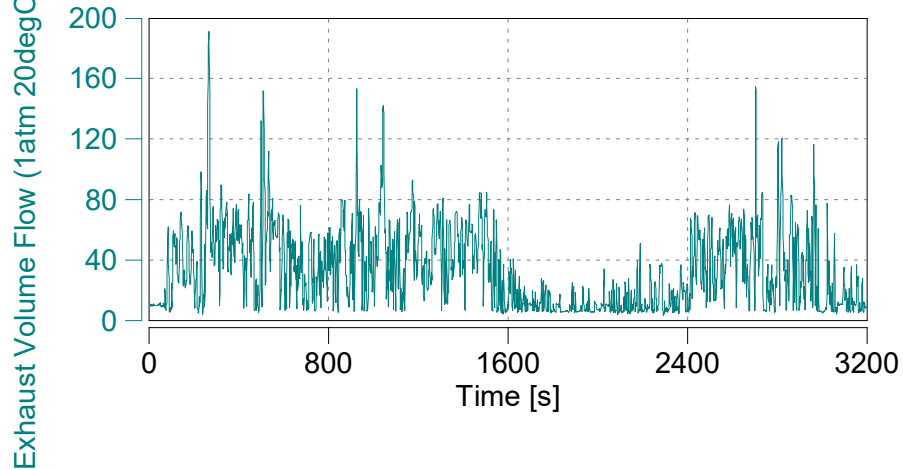
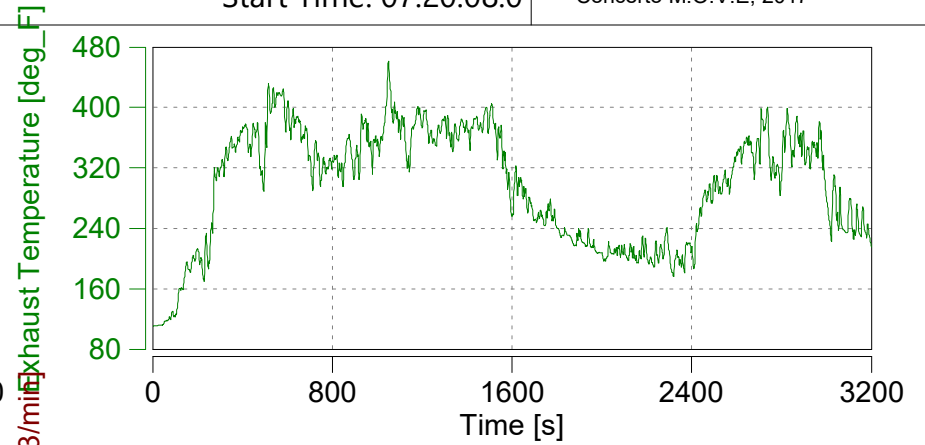
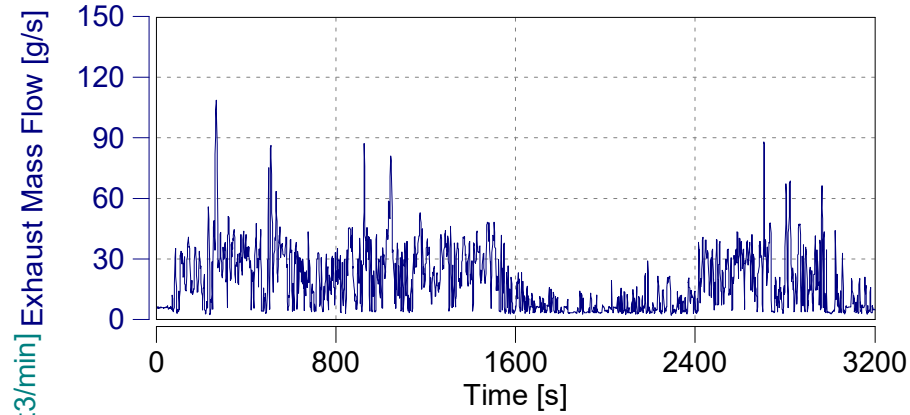


Case: Highway

Page: Exhaust Flow (1)

Start Date: 09/21/2017

Start Time: 07:20:08.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

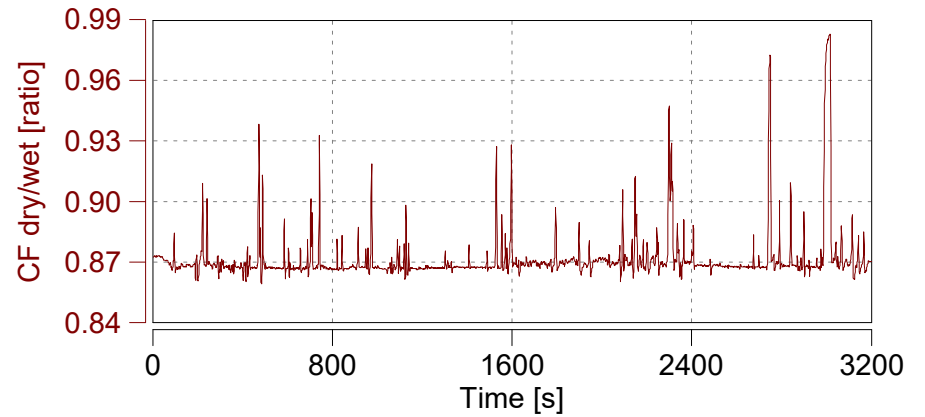
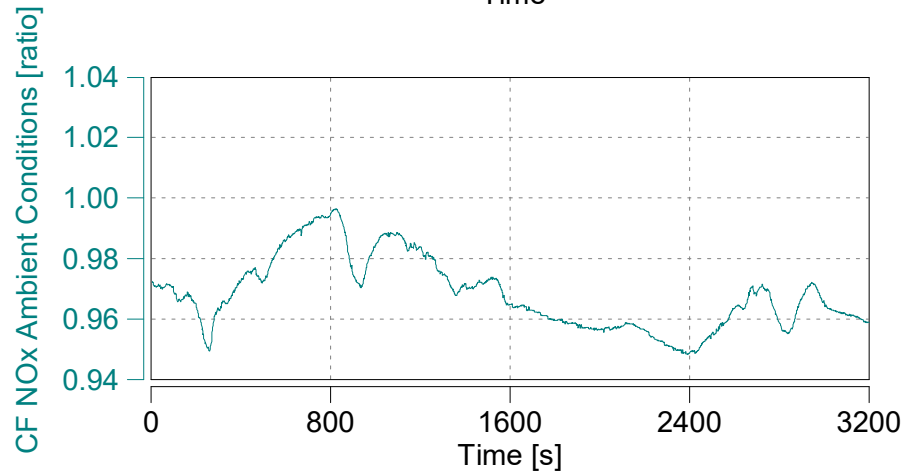
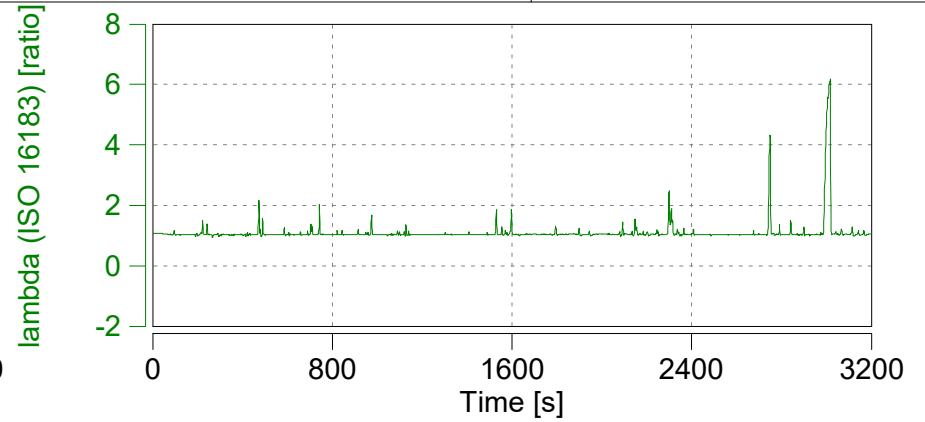
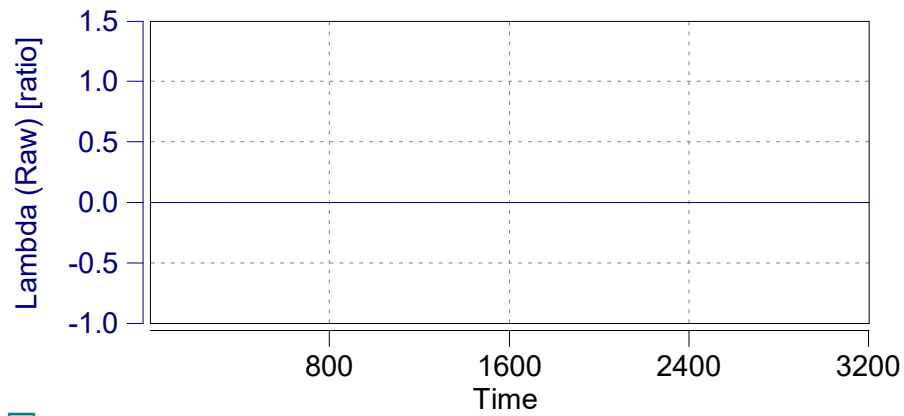
Vehicle: 2017 Audi Q5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

Page: Exhaust Flow (2)

Start Date: 09/21/2017

Start Time: 07:20:08.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

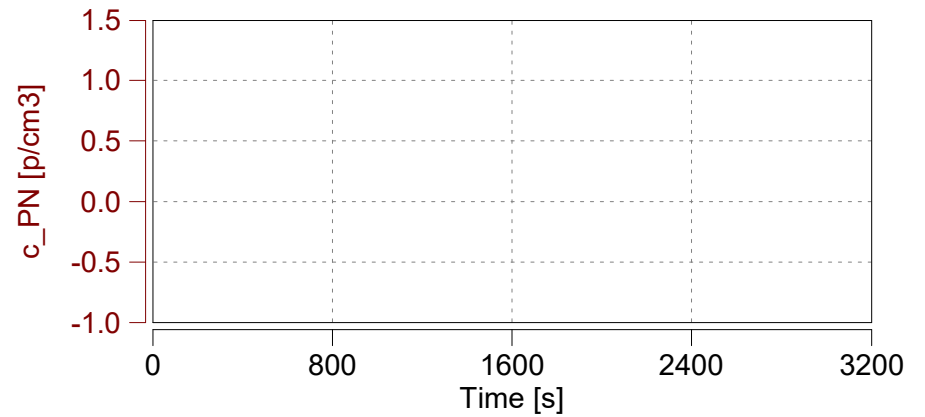
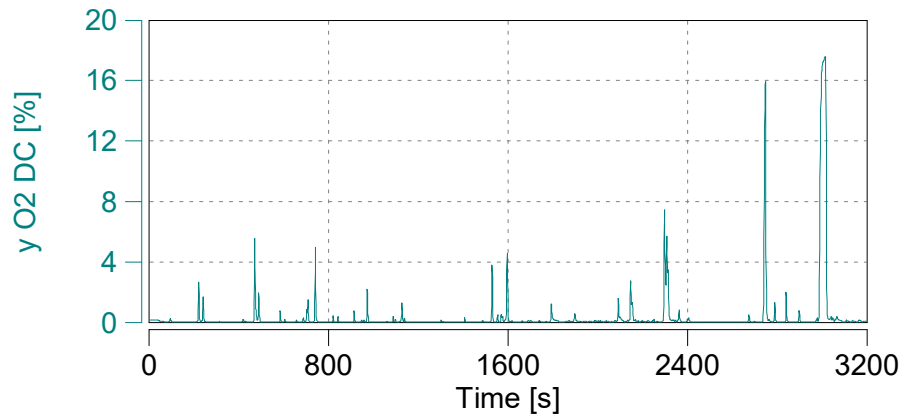
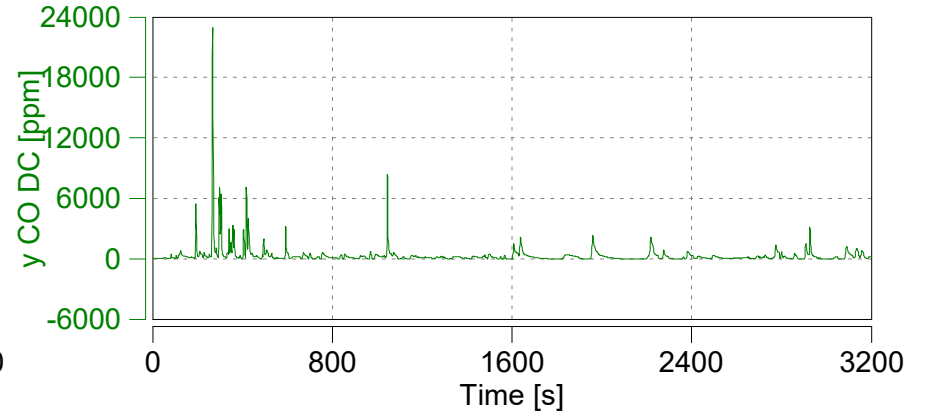
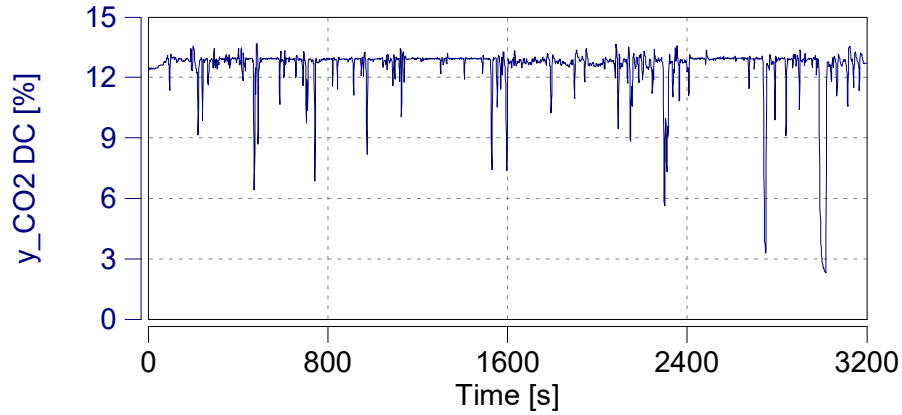
Vehicle: 2017 Audi Q5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

Page: Corrected Emissions (1)

Start Date: 09/21/2017

Start Time: 07:20:08.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

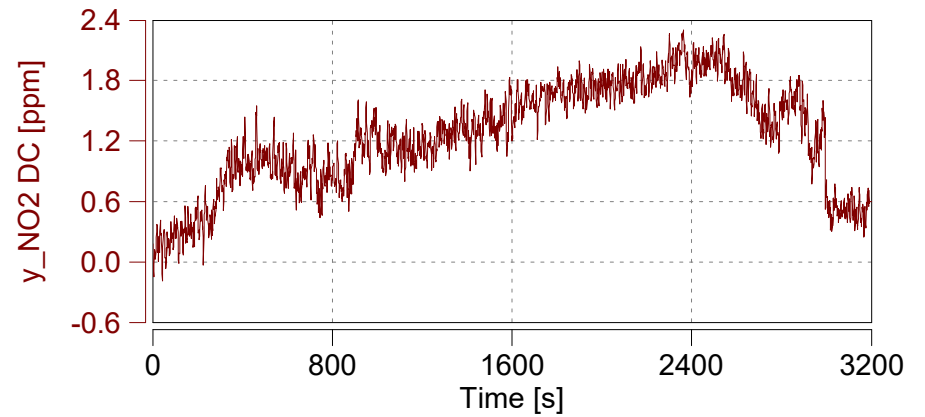
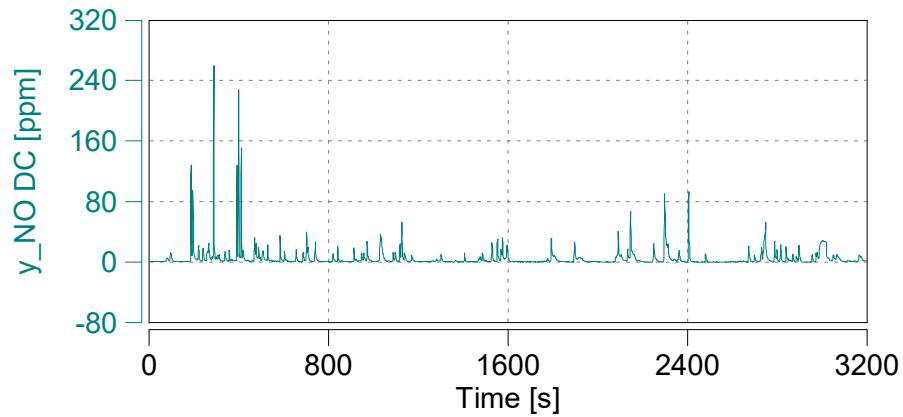
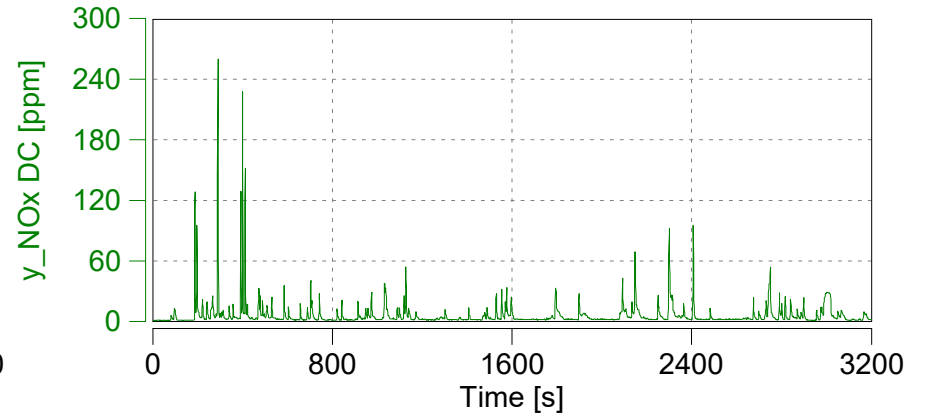
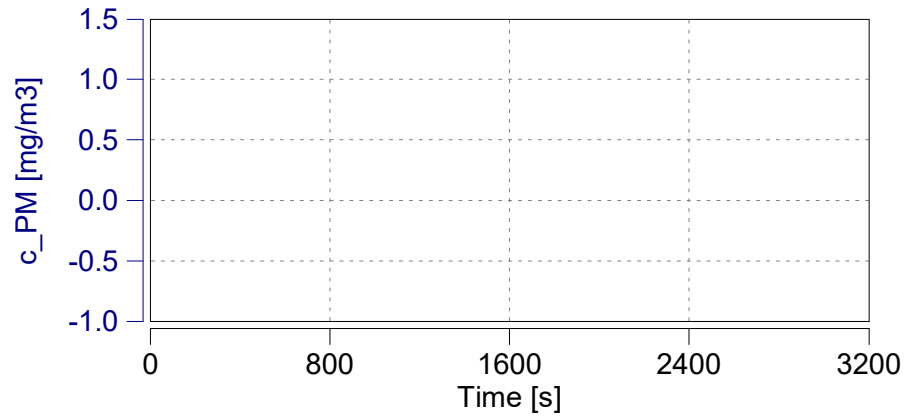
Vehicle: 2017 Audi Q5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

Page: Corrected Emissions (2)

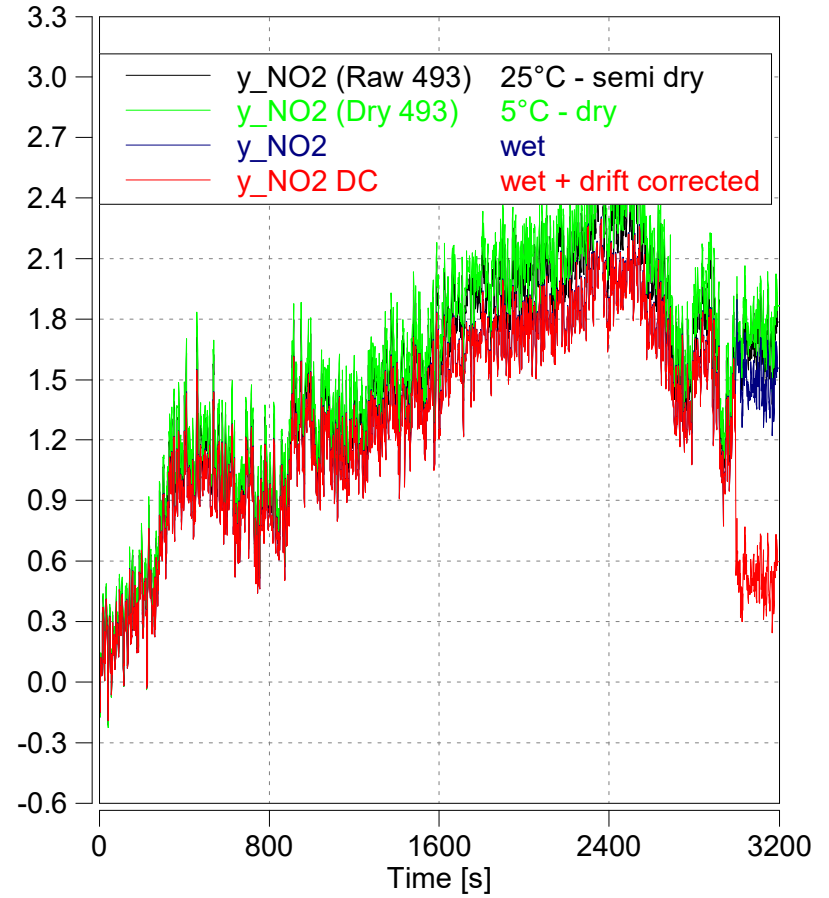
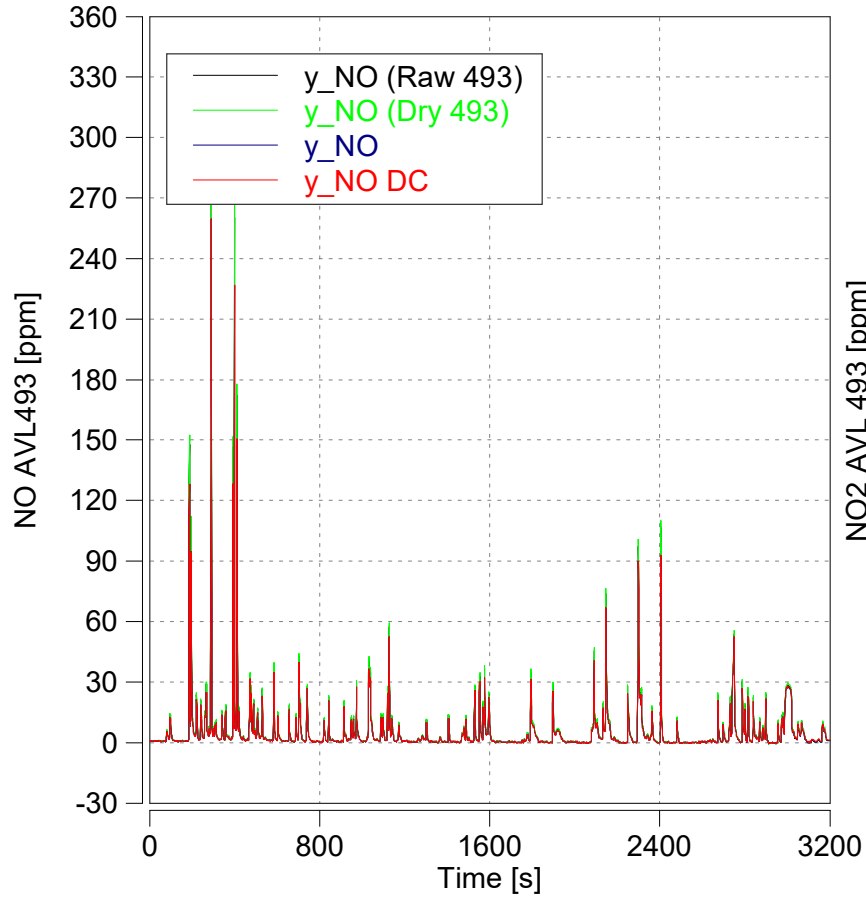
Start Date: 09/21/2017

Start Time: 07:20:08.0

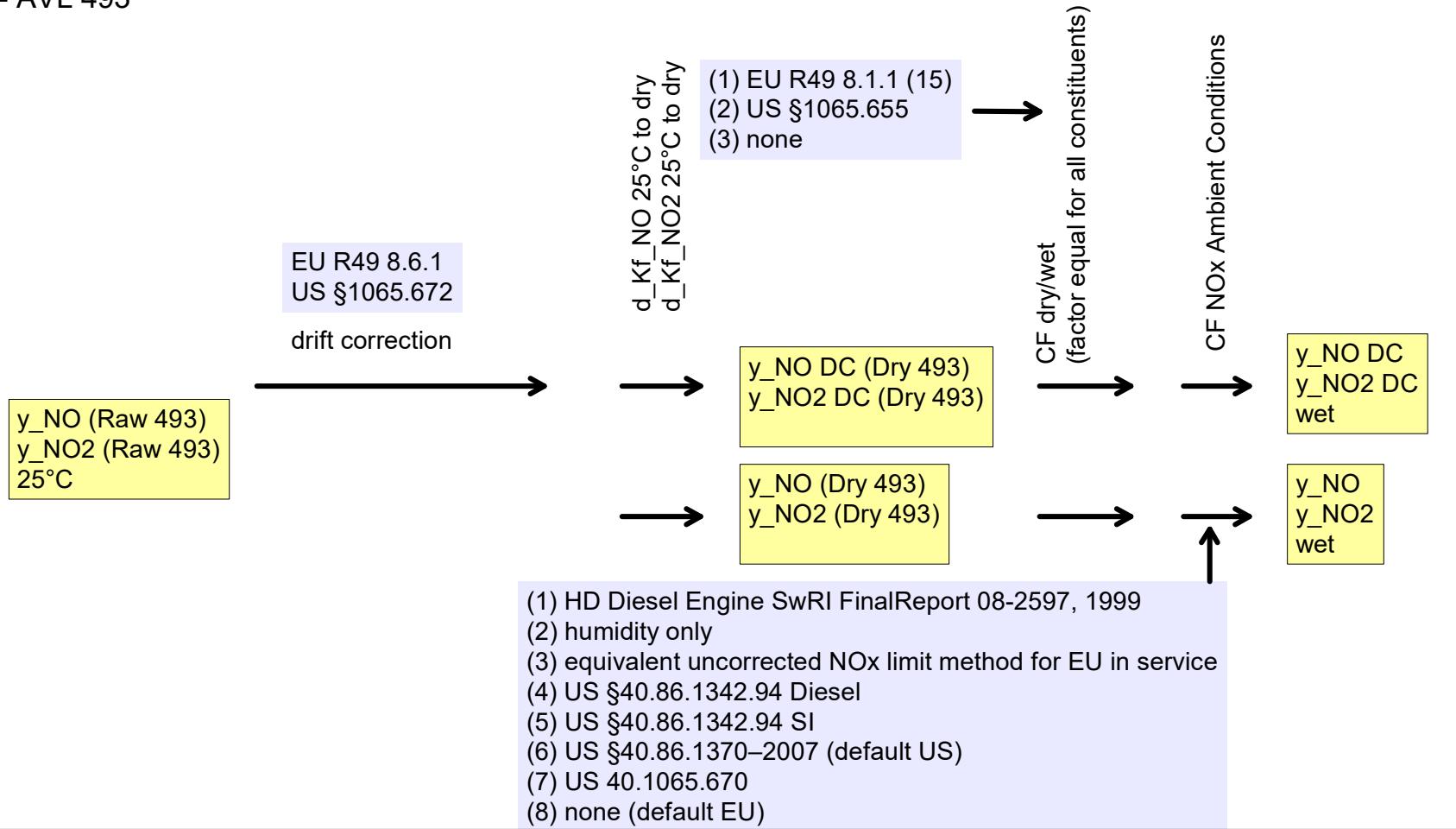


Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi Q5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90



NOx - AVL 493

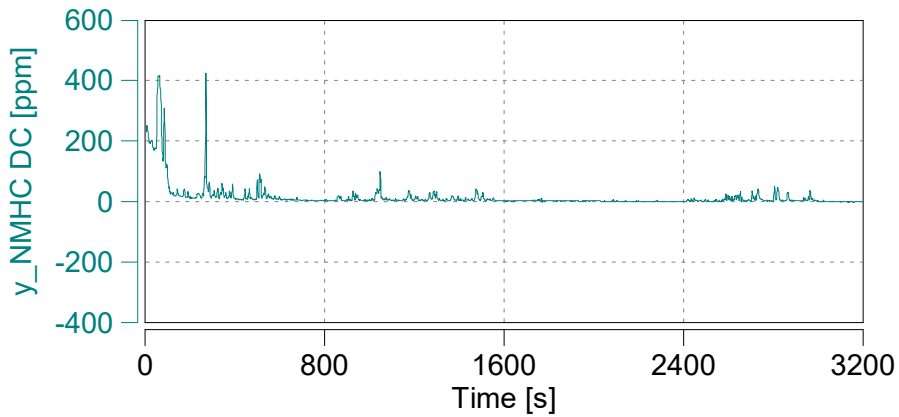
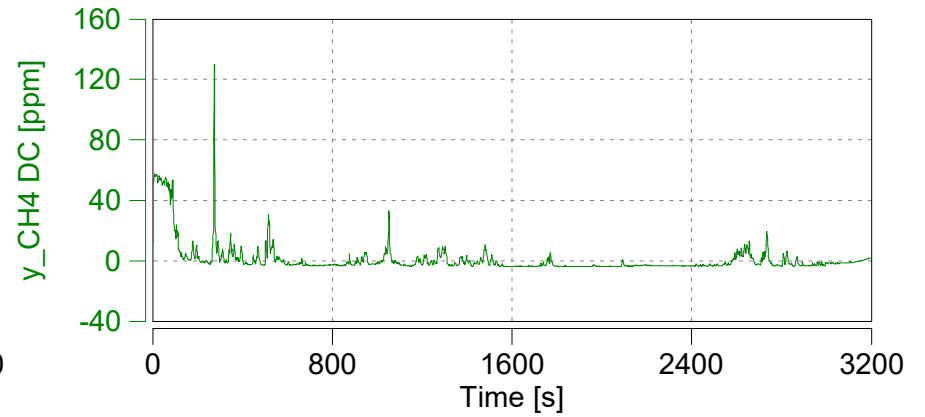
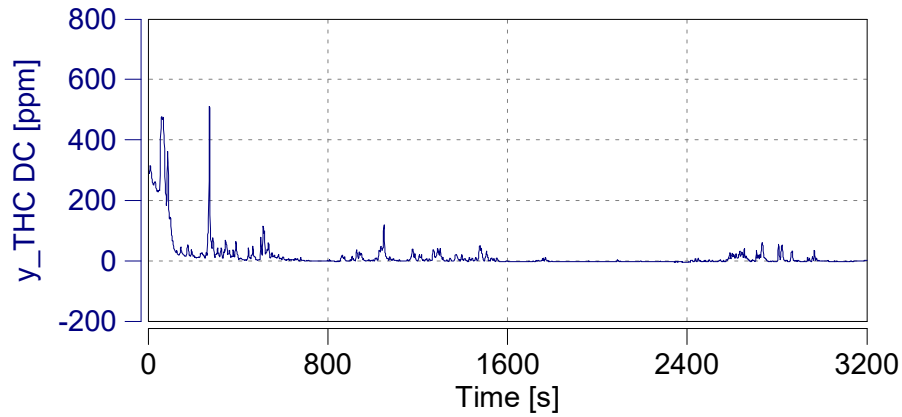


Case: Highway

Page: Corrected Emissions (5)

Start Date: 09/21/2017

Start Time: 07:20:08.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

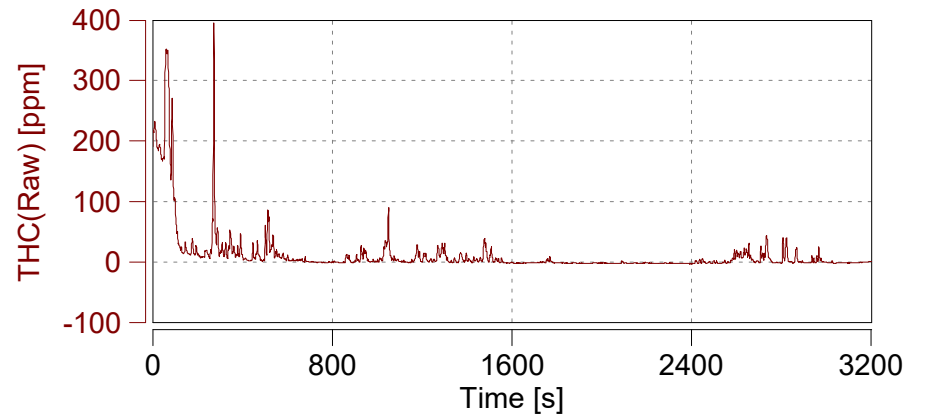
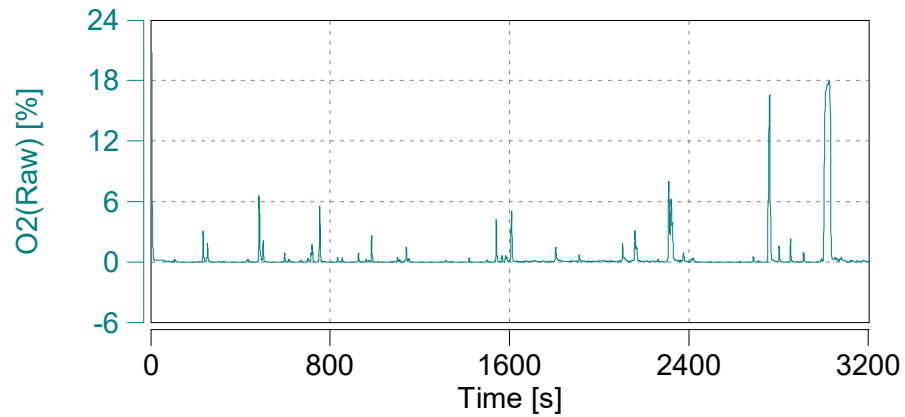
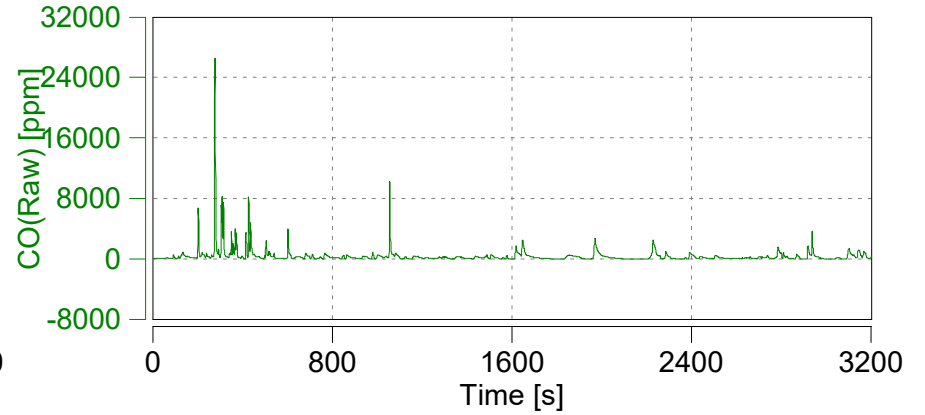
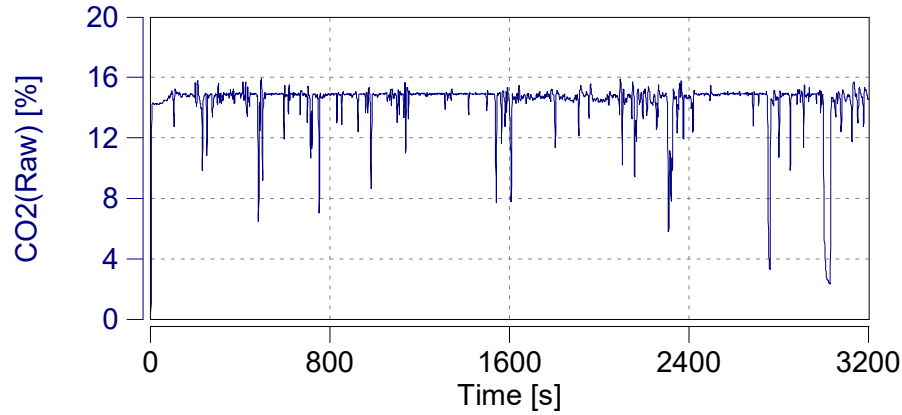
Vehicle: 2017 Audi Q5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

Page: Emissions Raw Data (1)

Start Date: 09/21/2017

Start Time: 07:20:08.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

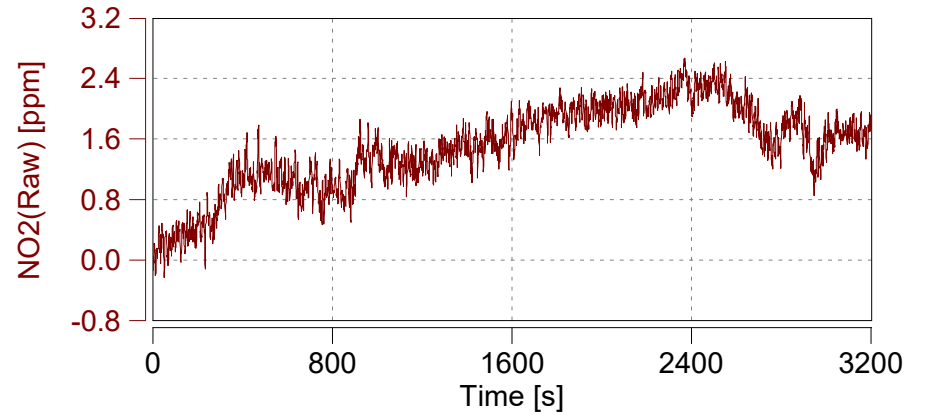
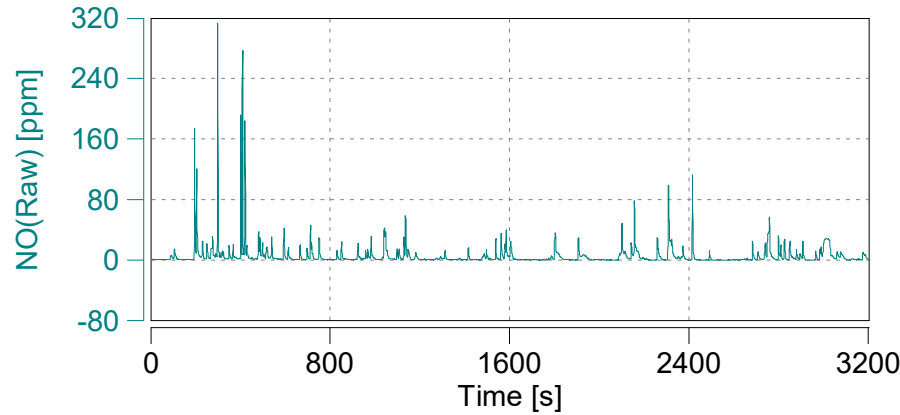
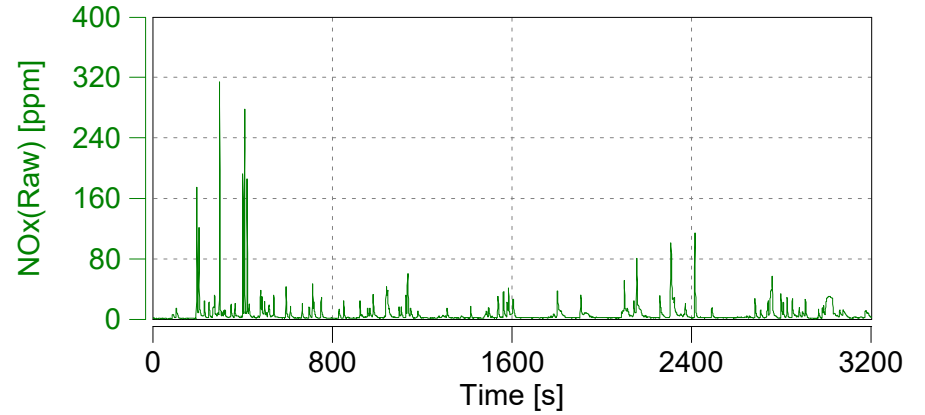
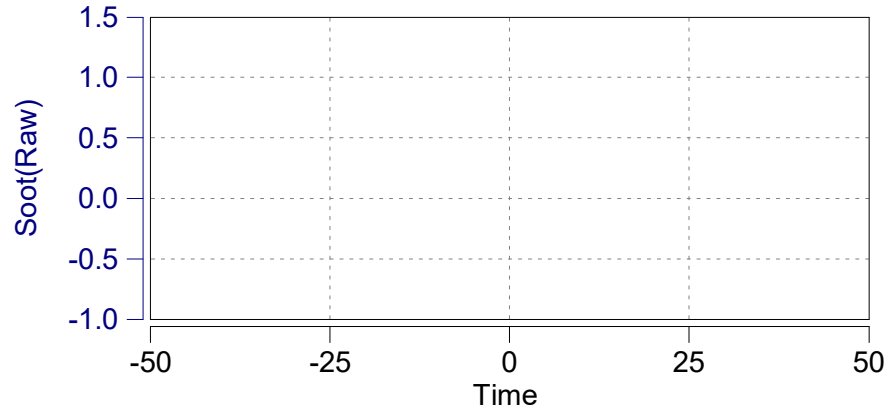
Vehicle: 2017 Audi Q5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

Page: Emissions Raw Data (2)

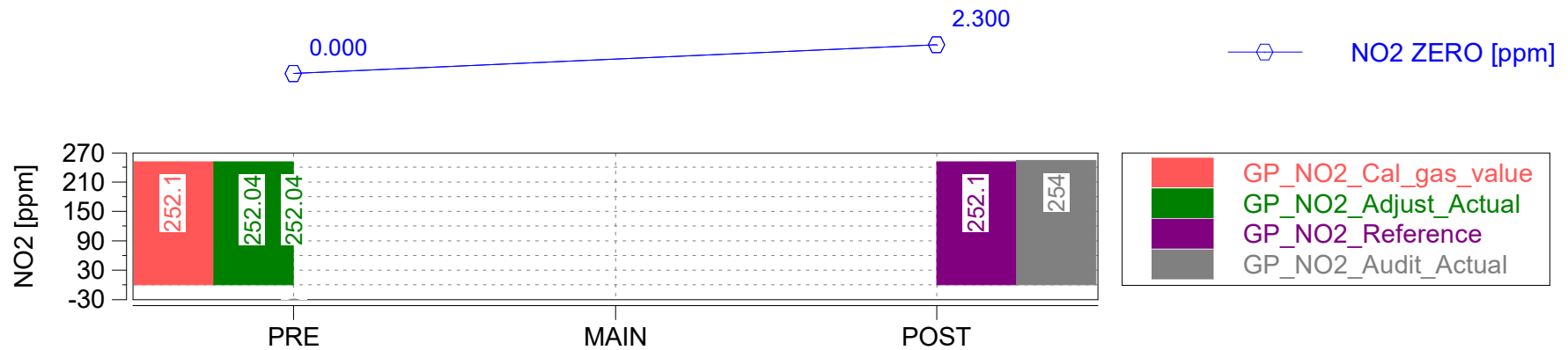
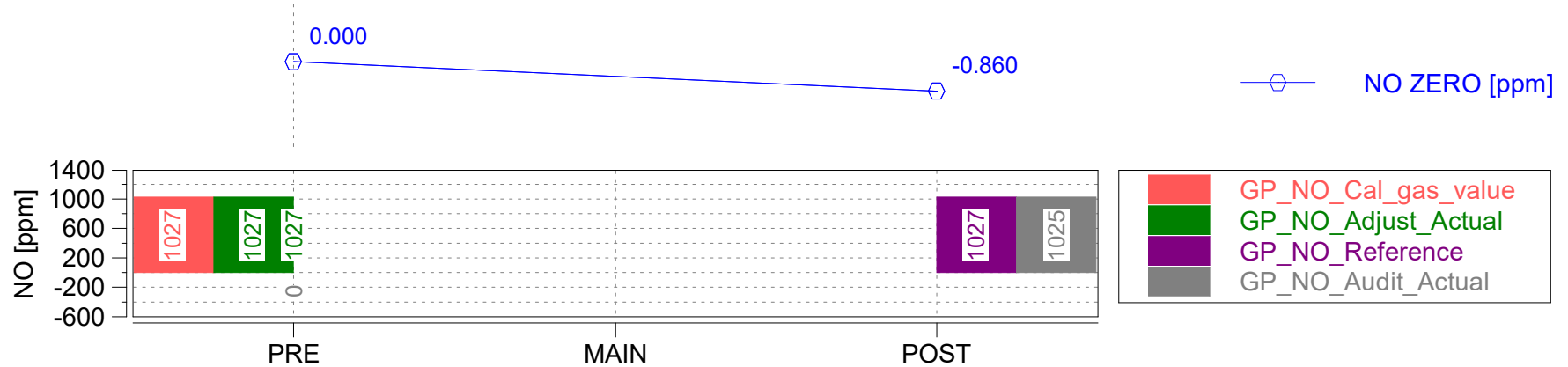
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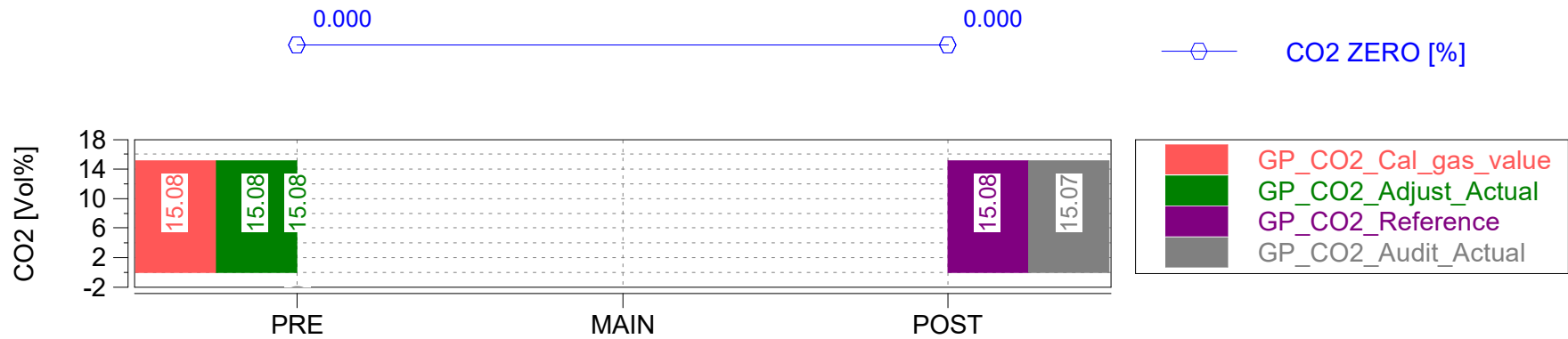
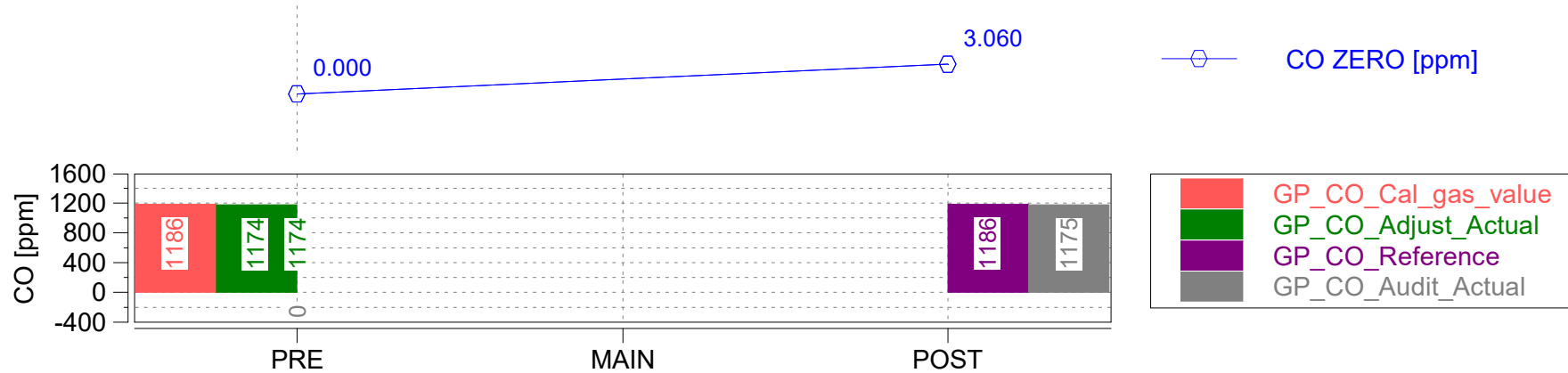
Start Time: 07:20:08.0

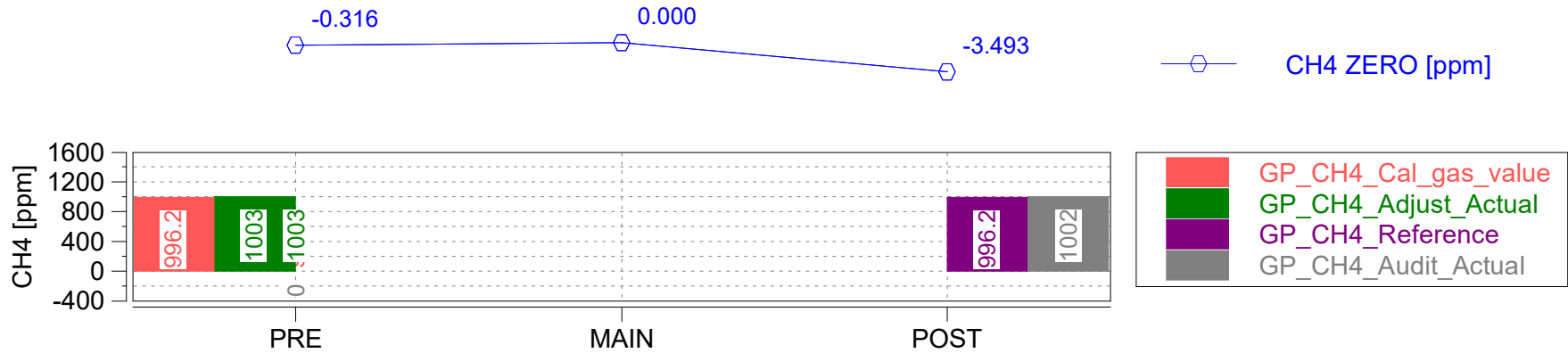
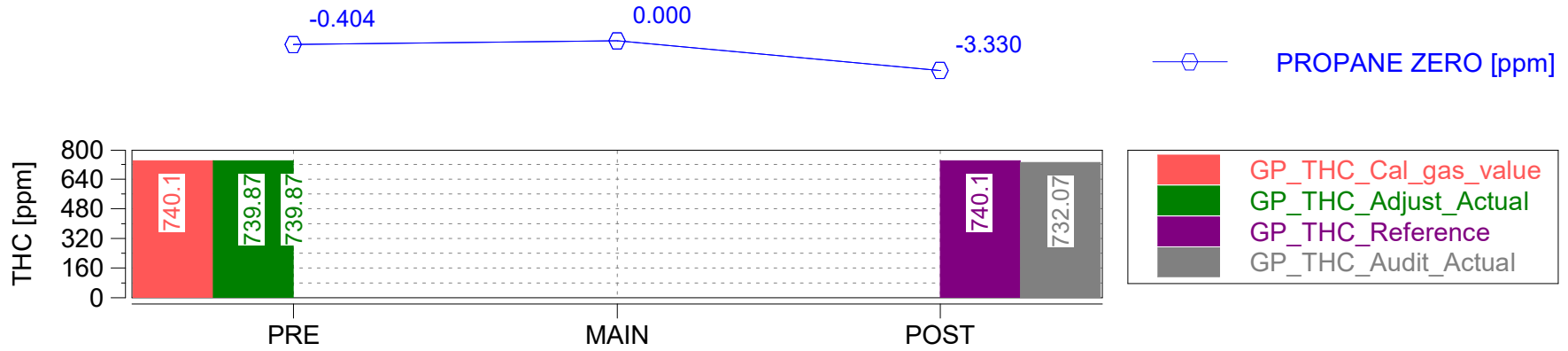


Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi Q5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90







#	Text	Value	Unit
-	----	----	----
1.0	Test Start: Date	-	-
2.0	Test Start: Time	-	-
3.0	Ambient Temperature	IFILE1:TM'Temperature	deg C
4.0	Ambient Temperature TS	0.00000	s
5.0	Ambient Pressure	IFILE1:TM'Pressure	kPa
6.0	Ambient Pressure TS	0.00000	s
7.0	Humidity Type	1.00000	-
8.0	Amb. Rel. Humidity	IFILE1:TM'Humidity	%
9.0	Amb. Rel. Humidity	0.00000	s
10.0	GPS Latitude		deg
11.0	GPS Latitude TS	0.00000	s
12.0	GPS Longitude		deg
13.0	GPS Longitude TS	0.00000	s
14.0	Altitude		m
15.0	Altitude TS	0.00000	s
16.0	GPS Quality		-
17.0	GPS Quality TS	0.00000	s
18.0	GroundSpeed		km/h
19.0	GroundSpeed TS	0.00000	s
20.0	Altitude from topographical map		m
21.0	Altitude TS of topographical map		s
22.0	TRIP_AMBIENT_GPS_AVL	YES	-
23.0	CALC_GPS_GROUNDSPEED	NO	-
24.0	EXHAUST_FLOW_AVL	NO	-
25.0	EXHAUST_FLOW_AVL_EFM	YES	-
26.0	Exhaust Flow Type	2.00000	-
27.0	Mass Flow	IFILE1:TM'PitotEFM_ExhaustG	various
28.0	Mass Flow TS	1.30000	s
29.0	Exhaust Pressure		kPa
30.0	Exhaust Pressure TS	1.30000	s

#	Text	Value	Unit
-	----	----	----
31.0	Exhaust Delta Pressure		kPa
32.0	Exhaust Pressure Delta TS	1.30000	s
33.0	Exhaust Temperature	IFILE1:TM'PitotEFM_ExhaustG	degC
34.0	Exhaust Temperature TS	1.30000	s
35.0	Lambda	N/A	-
36.0	Lambda TS		s
37.0	CO2_DIL		%
38.0	CO2_DIL TS		s
39.0	CVS Volume Flow		m3/min
40.0	TimeShift_CVS_VOL_FLOW		s
41.0	IN_CVS_PRESSURE		kPa
42.0	TimeShift_CVS_PRESSURE		s
43.0	IN_CVS_TEMP		degC
44.0	TimeShift_CVS_TEMP		s
45.0	Dry to Wet Conversion CO2	YES	-
46.0	Dry to Wet Conversion O2	YES	-
47.0	Dry to Wet Conversion NO	NO	-
48.0	Dry to Wet Conversion NO2	NO	-
49.0	Dry to Wet Conversion THC	NO	-
50.0	Dry to Wet Conversion CH4	NO	-
51.0	Dry to Wet Conversion O2	NO	-
52.0	CO2	IFILE1:TM'GPiS_CO2	%
53.0	CO2 TS	-10.30000	s
54.0	OS	IFILE1:TM'GPiS_O2	%
55.0	O2 TS	-10.80000	s
56.0	CO	IFILE1:TM'GPiS_CO	ppm
57.0	CO TS	-10.30000	s
58.0	NO	IFILE1:TM'GPiS_NO	ppm
59.0	NO TS	-8.50000	s
60.0	NO2	IFILE1:TM'GPiS_NO2	ppm

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi Q5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
61.0	NO2 TS	-8.50000	s
62.0	THC	IFILE1:TM'FIDiS_THC_C1	ppm
63.0	THC TS	0.00000	s
64.0	CH4	IFILE1:TM'FIDiS_CH4_C1	ppm
65.0	CH4 TS	0.00000	s
66.0	GAS_PEMS_Ethane_Efficiency	IFILE1:MOVE_AVL4925'GP_Et -	
67.0	GAS_PEMS_Methane_Efficiency	IFILE1:MOVE_AVL4925'GP_M -	
68.0	GAS_PEMS_Methane_Response	IFILE1:MOVE_AVL4925'GP_M -	
69.0	Zero Signal	IFILE1:TM'GPiS_STATE	0/1
70.0	Zero Signal TS	-8.50000	s
71.0	Zero Signal_FIDiS	IFILE1:TM'FIDiS_STATE	0/1
72.0	Zero Signal_FIDiS TS		s
73.0	Species Input Type	4.00000	-
74.0	GASPEMS=AVL493	NO	-
75.0	GASPEMS=AVL493_iX	NO	-
76.0	GASPEMS=AVL492	YES	-
77.0	GASPEMS=AVL4925	YES	-
78.0	PM: Type	4.00000	1=GFB+HC, 2=GFB, 3='PM=S
79.0	Filter ID from IFile	NO	-
80.0	Lab ID from IFile	NO	-
81.0	PM Filter: ID	N/A	ID
82.0	PM Filter: Lab	N/A	Name/ID
83.0	PM Filter: Weight before Test	N/A	mg
84.0	PM Filter: Weight after Test	N/A	mg
85.0	PM (HC Corr): Max. Exhaust Flow	N/A	scfm
86.0	Soot		mg/m3
87.0	Soot TS	-5.00000	s
88.0	Soot Sensor		mg/m3
89.0	Soot Sensor TS		s
90.0	PM Filter: Filter Flow Rate		l/min

#	Text	Value	Unit
-	----	----	----
91.0	PM Filter: Filter Flow Rate TS	-5.00000	s
92.0	PM Filter: Filter Dilution Ratio		-
93.0	PM Filter: Filter Dilution Ratio TS	-5.00000	s
94.0	PM Filter: Filter Trigger		-
95.0	PM Filter: Filter Trigger TS	-5.00000	s
96.0	PMPEMS=AVL494	YES	-
97.0	PMPEMS_AVL494_PROP_DIL	NO	-
98.0	PM dilution ratio min		-
99.0	PM_MaxExhaustFlowRate		-
100.0	PM_ExhaustFlow_Thresh		-
101.0	PM_total_flow_val		-
102.0	PM_total_flow_val_TS		-
103.0	PM_exh_mass_flow		-
104.0	PM_exh_mass_flow_TS		-
105.0	PN		#/cm3
106.0	TimeShift_PN		s
107.0	PN_STATE		-
108.0	PN TS STATE		s
109.0	PNPEMS_AVL496	NO	-
110.0	PN_CorrFactor	1.00000	
111.0	Time Alignment	1.00000	-
112.0	Time Alignment Dataset 1	N/A	0/1
113.0	Time Alignment Dataset 2	N/A	0/1
114.0	Time Alignment Thresh 1	N/A	-
115.0	Time Alignment Thresh 2	N/A	-
116.0			
117.0			
118.0			
119.0			
120.0			

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi Q5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
121.0			
122.0	Trigger		0/1
123.0	Trigger TS		s
124.0	FTIR_NAME_1		-
125.0	FTIR_MW_1		-
126.0	FTIR_CHANNEL_1		-
127.0	FTIR_CHANNEL_TS_1		-
128.0	FTIR_CHANNEL_DRY_1	NO	-
129.0	FTIR_NAME_2		-
130.0	FTIR_MW_2		-
131.0	FTIR_CHANNEL_2		-
132.0	FTIR_CHANNEL_TS_2		-
133.0	FTIR_CHANNEL_DRY_2	NO	-
134.0	FTIR_NAME_3		-
135.0	FTIR_MW_3		-
136.0	FTIR_CHANNEL_3		-
137.0	FTIR_CHANNEL_TS_3		-
138.0	FTIR_CHANNEL_DRY_3	NO	-
139.0	FTIR_NAME_4		-
140.0	FTIR_MW_4		-
141.0	FTIR_CHANNEL_4		-
142.0	FTIR_CHANNEL_TS_4		-
143.0	FTIR_CHANNEL_DRY_4	NO	-
144.0	FTIR_NAME_5		-
145.0	FTIR_MW_5		-
146.0	FTIR_CHANNEL_5		-
147.0	FTIR_CHANNEL_TS_5		-
148.0	FTIR_CHANNEL_DRY_5	NO	-
149.0	FTIR_NAME_6		-
150.0	FTIR_MW_6		-

#	Text	Value	Unit
-	----	----	----
151.0	FTIR_CHANNEL_6		-
152.0	FTIR_CHANNEL_TS_6		-
153.0	FTIR_CHANNEL_DRY_6	NO	-
154.0	FTIR_NAME_7		-
155.0	FTIR_MW_7		-
156.0	FTIR_CHANNEL_7		-
157.0	FTIR_CHANNEL_TS_7		-
158.0	FTIR_CHANNEL_DRY_7	NO	-
159.0	FTIR_NAME_8		-
160.0	FTIR_MW_8		-
161.0	FTIR_CHANNEL_8		-
162.0	FTIR_CHANNEL_TS_8		-
163.0	FTIR_CHANNEL_DRY_8	NO	-
164.0	FTIR_NAME_9		-
165.0	FTIR_MW_9		-
166.0	FTIR_CHANNEL_9		-
167.0	FTIR_CHANNEL_TS_9		-
168.0	FTIR_CHANNEL_DRY_9	NO	-
169.0	FTIR_NAME_10		-
170.0	FTIR_MW_10		-
171.0	FTIR_CHANNEL_10		-
172.0	FTIR_CHANNEL_TS_10		-
173.0	FTIR_CHANNEL_DRY_10	NO	-
174.0	FTIR_NAME_11		-
175.0	FTIR_MW_11		-
176.0	FTIR_CHANNEL_11		-
177.0	FTIR_CHANNEL_TS_11		-
178.0	FTIR_CHANNEL_DRY_11	NO	-
179.0	FTIR_NAME_12		-
180.0	FTIR_MW_12		-

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi Q5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
181.0	FTIR_CHANNEL_12		-
182.0	FTIR_CHANNEL_TS_12		-
183.0	FTIR_CHANNEL_DRY_12	NO	-
184.0	FTIR_NAME_13		-
185.0	FTIR_MW_13		-
186.0	FTIR_CHANNEL_13		-
187.0	FTIR_CHANNEL_TS_13		-
188.0	FTIR_CHANNEL_DRY_13	NO	-
189.0	FTIR_NAME_14		-
190.0	FTIR_MW_14		-
191.0	FTIR_CHANNEL_14		-
192.0	FTIR_CHANNEL_TS_14		-
193.0	FTIR_CHANNEL_DRY_14	NO	-
194.0	FTIR_NAME_15		-
195.0	FTIR_MW_15		-
196.0	FTIR_CHANNEL_15		-
197.0	FTIR_CHANNEL_TS_15		-
198.0	FTIR_CHANNEL_DRY_15	NO	-
199.0	FTIR_NAME_16		-
200.0	FTIR_MW_16		-
201.0	Vehicle Type	2017 Audi Q5	-
202.0	Vehicle Info		-
203.0	Engine Type	Gasoline	-
204.0	Engine Info	2.0L	-
205.0	Engine Torque		Nm
206.0	Curb Idle Load		%
207.0	Idle Speed		rpm
208.0	HYBRID_OVC_REF_CO2_gkm		g/km
209.0	Engine Concept	1.00000	-
210.0	Alpha	1.93000	-

#	Text	Value	Unit
-	----	----	----
211.0	Beta	1.00000	
212.0	Gamma	0.00000	
213.0	Delta	0.00000	
214.0	Epsilon	0.03200	
215.0	X_C	83.00000	
216.0	X_H	13.30000	
217.0	X_N	0.00000	
218.0	X_O	3.50000	
219.0	X_S	0.00000	
220.0	Fuel_Density	747.50000	
221.0	rho_exhaust	1.29310	
222.0	U_CO2	1.51800	
223.0	U_CO	0.96600	
224.0	U_NO	1.58700	
225.0	U_NO2	1.58700	
226.0	U_NOx	1.58700	
227.0	U_HC	0.49900	
228.0	U_NMHC	0.47100	
229.0	U_CH4	0.55300	
230.0	U_O2	1.10400	
231.0	Fuel Type	2.00000	-
232.0	exhaust mass flow type (YES/NO)	YES	-
233.0	Distance Calculation Type	1.00000	-
234.0	Velocity Statistics Calculation Type	2.00000	-
235.0	RDE vehicle class	1.00000	-
236.0	TM_CITY0		s
237.0	TM_CITY1		s
238.0	TM_RURAL0		s
239.0	TM_RURAL1		s
240.0	TM_RURAL2_0		s

Concerto Version: 480 Build 215, Serial Number: 8468
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Vehicle: 2017 Audi Q5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
241.0	TM_RURAL2_1		s
242.0	Second Rural Part for Time Marks (NO		-
243.0	TM_MW0		s
244.0	TM_MW1		s
245.0	VELOCITY_LIMIT_STOP	2.00000	km/h
246.0	VELOCITY_LIMIT_URBAN	50.00000	km/h
247.0	VELOCITY_LIMIT_RURAL	75.00000	km/h
248.0	Intake Manifold Pressure Type	1.00000	-
249.0	Velocity	IFILE1:TM'OBD_Vehicle_Spee	km/h
250.0	Velocity TS	1.40000	s
251.0	Velocity FACTOR	1.00000	-
252.0	Coolant Temperature	IFILE1:TM'OBD_Engine_Coola	degC
253.0	Coolant Temperature TS	1.40000	s
254.0	Oil Temperature		degC
255.0	Oil Temperature TS	1.40000	s
256.0	Intake Manifold Temperature		degC
257.0	Intake Manifold Temp TS	1.40000	s
258.0	Intake Manifold Pressure	IFILE1:TM'OBD_Intake_manifo	kPa
259.0	Intake Manifold Pressure TS	1.40000	s
260.0	Throttle Position		%
261.0	Throttle TS	1.40000	s
262.0	TYP_IDLE_MASS_FLOW		kg/h
263.0	Torque Type	1.00000	-
264.0	Speed	IFILE1:TM'OBD_Engine_RPM	rpm
265.0	Speed TS	1.40000	s
266.0	Torque		Nm
267.0	Torque TS	1.40000	s
268.0	Friction Torque	N/A	Nm
269.0	Friction Torque TS	N/A	s
270.0	Reference Torque	N/A	Nm

#	Text	Value	Unit
-	----	----	----
271.0	Reference Torque TS	N/A	s
272.0	k_VELINE		-
273.0	D_VELINE		-
274.0	Fuel Flow Type	2.00000	-
275.0	Air Flow Type	1.00000	-
276.0	Fuel Rate		various
277.0	Air Rate		various
278.0	Fuel Rate TS	1.40000	s
279.0	No_Cylinders		-
280.0	Air Rate TS	1.40000	s
281.0	FTIR_CHANNEL_32		-
282.0	FTIR_CHANNEL_TS_32		-
283.0	FTIR_CHANNEL_DRY_32	NO	-
284.0	FTIR_NAME_33		-
285.0	FTIR_MW_33		-
286.0	FTIR_CHANNEL_33		-
287.0	FTIR_CHANNEL_TS_33		-
288.0	FTIR_CHANNEL_DRY_33	NO	-
289.0	FTIR_NAME_34		-
290.0	FTIR_MW_34		-
291.0	FTIR_CHANNEL_34		-
292.0	FTIR_CHANNEL_TS_34		-
293.0	FTIR_CHANNEL_DRY_34	NO	-
294.0	FTIR_NAME_35		-
295.0	FTIR_MW_35		-
296.0	FTIR_CHANNEL_35		-
297.0	FTIR_CHANNEL_TS_35		-
298.0	FTIR_CHANNEL_DRY_35	NO	-
299.0	FTIR_NAME_36		-
300.0	FTIR_MW_36		-

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi Q5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
301.0	FTIR_CHANNEL_36		-
302.0	FTIR_CHANNEL_TS_36		-
303.0	FTIR_CHANNEL_DRY_36	NO	-
304.0	FTIR_NAME_37		-
305.0	FTIR_MW_37		-
306.0	FTIR_CHANNEL_37		-
307.0	FTIR_CHANNEL_TS_37		-
308.0	FTIR_CHANNEL_DRY_37	NO	-
309.0	FTIR_NAME_38		-
310.0	FTIR_MW_38		-
311.0	FTIR_CHANNEL_38		-
312.0	FTIR_CHANNEL_TS_38		-
313.0	FTIR_CHANNEL_DRY_38	NO	-
314.0	FTIR_NAME_39		-
315.0	FTIR_MW_39		-
316.0	FTIR_CHANNEL_39		-
317.0	FTIR_CHANNEL_TS_39		-
318.0	FTIR_CHANNEL_DRY_39	NO	-
319.0	FTIR_NAME_40		-
320.0	FTIR_MW_40		-
321.0	FTIR_CHANNEL_40		-
322.0	FTIR_CHANNEL_TS_40		-
323.0	FTIR_CHANNEL_DRY_40	NO	-
324.0	Legislation Type (1=HDIUT 2=EU H	4.00000	-
325.0	WholeTest_NOx_corr	5.00000	-
326.0	WholeTest_Hum_corr	2.00000	-
327.0	CD_Distance	0.00000	km
328.0	CD_NOx	0.00000	mg/km
329.0	CD_CO	0.00000	mg/km
330.0	CD_CO2	0.00000	g/km

#	Text	Value	Unit
-	----	----	----
331.0	CD_NMHC	0.00000	mg/km
332.0	CD_CH4	0.00000	mg/km
333.0	CD_THC	0.00000	mg/km
334.0	CD_PN		#/km
335.0	WLTC_LOW_SPEED_gkm		g/km
336.0	WLTC_LOW_SPEED_FAC	1.20000	-
337.0	WLTC_MEDIUM_SPEED_gkm		g/km
338.0	WLTC_HIGH_SPEED_gkm		g/km
339.0	WLTC_HIGH_SPEED_FAC	1.10000	-
340.0	WLTC_EXTRA_HIGH_SPEED_gkm		g/km
341.0	WLTC_EXTRA_HIGH_SPEED_FA	1.05000	-
342.0	TOL_NORMAL_DRIVING	25.00000	%
343.0	TOL_SEVERE_DRIVING	50.00000	%
344.0	Increase Tolerance Nomral Driving	NO	-
345.0	Bin1_min		km/h
346.0	Bin2_min		km/h
347.0	Bin3_min		km/h
348.0	Bin1_max		km/h
349.0	Bin2_max		km/h
350.0	Bin3_max		km/h
351.0	Clear_R0	125.40000	N
352.0	Clear_R1	0.29300	Nh/km
353.0	Clear_R2	0.02795	N*(h/km) ²
354.0	Clear_SMK	1470.00000	kg
355.0	Clear_Rated_Power	140.00000	kW
356.0	Clear_Ref_Velocity	70.00000	km/h
357.0	Clear_Ref_Acc	0.45000	m/s ²
358.0	Clear_Smooth	3.00000	s
359.0	EXTC_From_High_Temp	30.00000	degC
360.0	EXTC_To_High_Temp	35.00000	degC

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi Q5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
361.0	EXTC_From_Low_Temp	-7.00000	degC
362.0	EXTC_To_Low_Temp	0.00000	degC
363.0	Euro 6d or Euro 6d temp	NO	-
364.0	EXTC_From_Altitude	700.00000	m
365.0	EXTC_To_Altitude	1300.00000	m
366.0	EXTC_CORR_FAC	1.60000	
367.0	weight cold start (YES/NO)	NO	-
368.0	precon and soak done (YES/NO)	NO	-
369.0	PATH_PRECON_FILE		
370.0	filter velocity (YES/NO)	NO	-
371.0	filter velocity auto(YES/NO)	NO	-
372.0	Ki_CO		
373.0	Ki_CO2		
374.0	Ki_NOx		
375.0	Ki_FACTOR_CO2 (YES/NO)	NO	-
376.0	Ki_OFFSET_CO2 (YES/NO)	NO	-
377.0	Ki_FACTOR_CO (YES/NO)	NO	-
378.0	Ki_OFFSET_CO (YES/NO)	NO	-
379.0	Ki_FACTOR_NOx (YES/NO)	NO	-
380.0	Ki_OFFSET_NOx (YES/NO)	NO	-
381.0	Ki_OFF (YES/NO)	NO	-
382.0	HD legislations	1.00000	-
383.0	RDE legislations	1.00000	-
384.0	Submission Documents (YES/NO)	NO	-
385.0	General Setup Parameters Text	Highway	-
386.0	Legislation Setup Parameters Text	Highway	-
387.0	Trip Info		-
388.0	IN_TIME_REF		-
389.0	Sub-Trip Start: Auto	YES	-
390.0	Sub-Trip Start: Seconds	N/A	s

#	Text	Value	Unit
-	----	----	----
391.0	Sub-Trip End: Auto	YES	-
392.0	Sub-Trip End: Seconds	N/A	s
393.0	Unit System	2.00000	-
394.0	Calculate: PM Emissions	NO	-
395.0	Calculate: PN Emissions	NO	-
396.0	Output: Summary	YES	-
397.0	Output: Emissions	YES	-
398.0	Output: Raw Data	YES	-
399.0	Output: Zero Span	YES	-
400.0	Output: Data Consistency	NO	-
401.0	Output: Window Plots	YES	-
402.0	Fuel Rate ECU vs. EU ISO16183	$y = 10000000000.0000 x - 0.000 R^2=10000000000.000 SEE=$	
403.0	PEMS post processing version	Rel_10_B192	
404.0	Concerto version	480.00000	
405.0	Concerto build	215.00000	
406.0	USERNAME	EFR	

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi Q5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Mountain
Page: Trip Summary

Start Date: 09/21/2017
Start Time: 07:20:08.0



Trip Duration	3333.00	s	ave THC	1.34827	ppm	BS CO2	n/a	g/hphr
Trip Duration (a)	3333.00	s	ave NMHC	4.91093	ppm	BS CO	n/a	g/hphr
Trip Distance	28.86	mi	ave CH4	-3.23878	ppm	BS THC	n/a	g/hphr
Trip Distance (a)	28.86	mi	ave CO	212.92201	ppm	BS NMHC	n/a	g/hphr
Trip Fuel Cons. (b)	n/a	kg	ave CO2	11.37701	%	BS CH4	n/a	g/hphr
Trip Fuel Cons. (ab)	n/a	kg	ave NOx	10.32137	ppm	BS NO (d)	n/a	g/hphr
Trip Fuel Cons. EU (ac)	3.46	kg	ave PM	n/a	mg/m3	BS NO2	n/a	g/hphr
Trip Fuel Cons. US (ac)	3.44	kg	ave Soot meas	n/a	mg/m3	BS NOx	n/a	g/hphr
Trip Fuel Cons. Volume (b)	n/a	gall	ave Soot	n/a	mg/m3	BS Soot	n/a	g/hphr
Trip Fuel Cons. Volume (ab)	n/a	gall	ave PN	n/a	#/cm3	BS Soot meas	n/a	g/hphr
Trip Fuel Cons. Volume EU (ac)	1.22	gall	tot THC	0.19432	g	BS PM	n/a	g/hphr
Trip Fuel Cons. Volume US (ac)	1.22	gall	tot NMHC	0.21386	g	BS PN	n/a	#/hpr
Trip Fuel Economy (b)	n/a	mpg_US	tot CH4	0.02469	g	DS CO2	361.72598	g/mi
Trip Fuel Economy (ab)	n/a	mpg_US	tot CO	14.56694	g	DS CO	0.50470	g/mi
Trip Fuel Economy EU (ac)	23.58	mpg_US	tot CO2	10440.31975	g	DS THC	0.00673	g/mi
Trip Fuel Economy US (ac)	23.74	mpg_US	tot NO (d)	0.59767	g	DS NMHC	0.00741	g/mi
Trip Av. Eng. Speed	1570.51	rpm	tot NO2	0.27033	g	DS CH4	0.00086	g/mi
Trip Av. Torque	n/a	lbft	tot NOx	0.85745	g	DS NO (d)	0.02071	g/mi
Trip Av. Power	n/a	hp	tot Soot	n/a	g	DS NO2	0.00937	g/mi
Trip Work	n/a	hphr	tot Soot meas	n/a	g	DS NOx	0.02971	g/mi
Trip Exhaust Mass	54.96	kg	tot PM	n/a	g	DS Soot	n/a	g/mi
Trip Exhaust Mass EU (ac)	n/a	kg	tot PN	n/a	#	DS Soot meas	n/a	g/mi
Trip Exhaust Mass US (ac)	n/a	kg	PM measurement type	0.00000	-	DS PM	n/a	g/mi
Trip Av. Amb. Temperature	62.80	deg_F	PM correction type	1.00000	alpha(HC)	DS PN	n/a	#/mi
Trip Av. Humidity	68.39	%	tot Soot on PM filter (estim.)	n/a	mg	FS CO2	n/a	g/kg
Fuel Type	Petrol (E10)		Soot --> PM simple scaling factor	1.00000	-	FS CO	n/a	g/kg
			Soot --> PM alpha scaling factor	0.00000	-	FS THC	n/a	g/kg
			Trip Av. Veh. Speed	31.17463	mi/hr	FS NMHC	n/a	g/kg
			Trip Velocity Zero	9.57096	%	FS CH4	n/a	g/kg
			Trip Velocity Urban	45.81458	%	FS NO (d)	n/a	g/kg
			Trip Velocity Rural	30.30303	%	FS NO2	n/a	g/kg
			Trip Velocity Motorway	23.88239	%	FS NOx	n/a	g/kg
						FS Soot	n/a	g/kg
						FS Soot meas	n/a	g/kg
						FS PM	n/a	g/kg
						FS PN	n/a	#/kg

(a) GAS PEMS measurement state only, (b) based on fuel rate input (ECU, Fuel Meter), (c) calculated from carbon balance
(d) NO calculated using molecular weight of NO2

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi Q5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Mountain

Page: Trip Summary Drift Corrected

Start Date: 09/21/2017

Start Time: 07:20:08.0

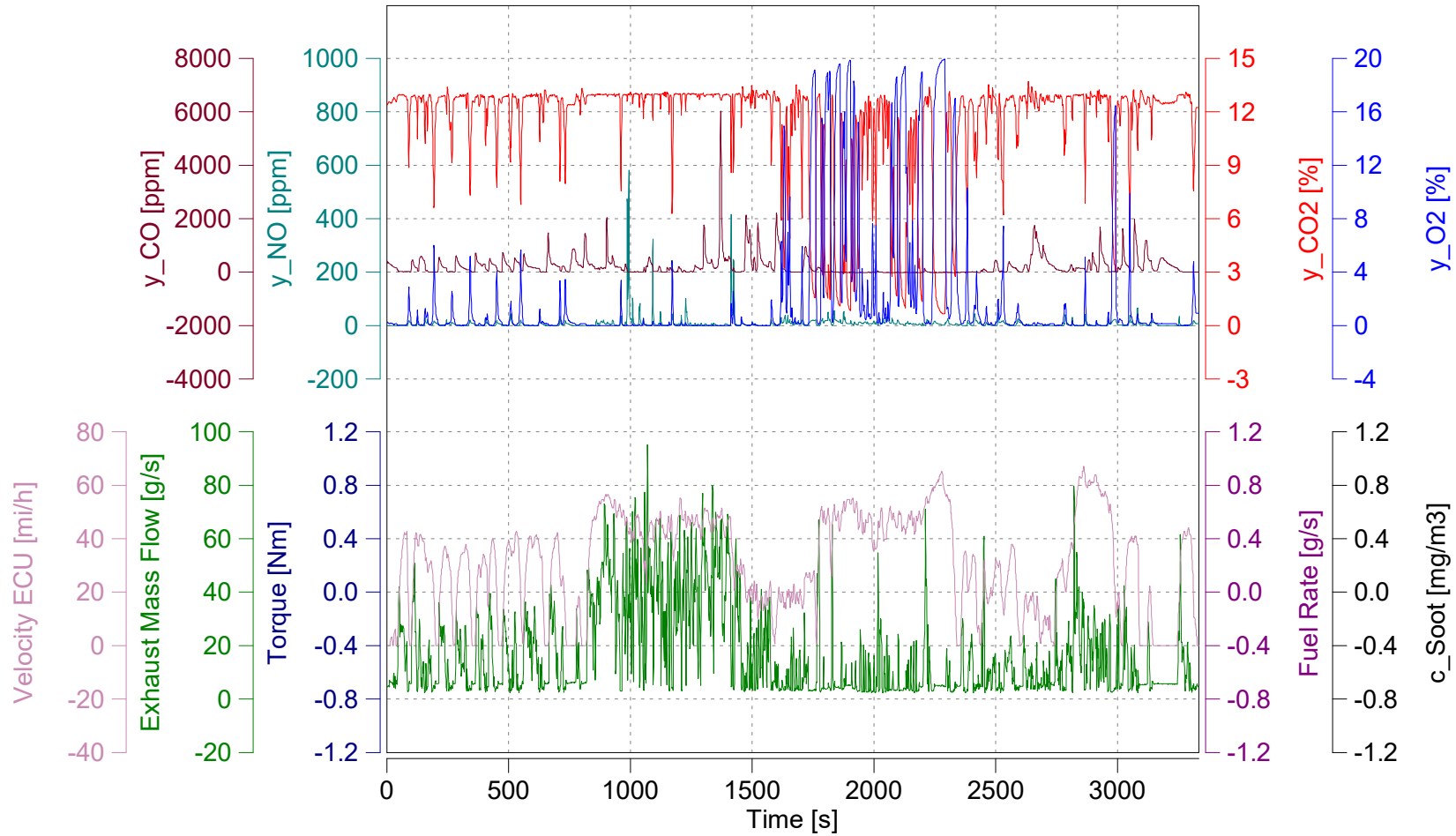


Trip Duration	3333.00	s	ave THC DC	1.82499	ppm	BS CO2 DC	n/a	g/hphr
Trip Duration (a)	3333.00	s	ave NMHC DC	5.24912	ppm	BS CO DC	n/a	g/hphr
Trip Distance	28.86	mi	ave CH4 DC	-3.11285	ppm	BS THC DC	n/a	g/hphr
Trip Distance (a)	28.86	mi	ave CO DC	214.86960	ppm	BS NMHC DC	n/a	g/hphr
Trip Fuel Cons. (b)	n/a	kg	ave CO2 DC	11.38078	%	BS CH4 DC	n/a	g/hphr
Trip Fuel Cons. (ab)	n/a	kg	ave NOx DC	10.31287	ppm	BS NO DC (d)	n/a	g/hphr
Trip Fuel Cons. EU (ac)	3.46	kg	ave PM	n/a	mg/m3	BS NO2 DC	n/a	g/hphr
Trip Fuel Cons. US (ac)	3.44	kg	ave Soot meas	n/a	mg/m3	BS NOx DC	n/a	g/hphr
Trip Fuel Cons. Volume (b)	n/a	gall	ave Soot	n/a	mg/m3	BS Soot	n/a	g/hphr
Trip Fuel Cons. Volume (ab)	n/a	gall	ave PN DC	n/a	#/cm3	BS Soot meas	n/a	g/hphr
Trip Fuel Cons. Volume EU (ac)	1.22	gall	tot THC DC	0.26302	g	BS PM	n/a	g/hphr
Trip Fuel Cons. Volume US (ac)	1.22	gall	tot NMHC DC	0.26840	g	BS PN DC	n/a	#/hpr
Trip Fuel Economy (b)	n/a	mpg_US	tot CH4 DC	0.02414	g	DS CO2 DC	361.84595	g/mi
Trip Fuel Economy (ab)	n/a	mpg_US	tot CO DC	14.70018	g	DS CO DC	0.50932	g/mi
Trip Fuel Economy EU (ac)	23.58	mpg_US	tot CO2 DC	10443.78255	g	DS THC DC	0.00911	g/mi
Trip Fuel Economy US (ac)	23.74	mpg_US	tot NO DC (d)	0.59787	g	DS NMHC DC	0.00930	g/mi
Trip Av. Eng. Speed	1570.51	rpm	tot NO2 DC	0.26934	g	DS CH4 DC	0.00084	g/mi
Trip Av. Torque	n/a	lbft	tot NOx DC	0.85667	g	DS NO DC (d)	0.02071	g/mi
Trip Av. Power	n/a	hp	tot Soot	n/a	g	DS NO2 DC	0.00933	g/mi
Trip Work	n/a	hphr	tot Soot meas	n/a	g	DS NOx DC	0.02968	g/mi
Trip Exhaust Mass	54.96	kg	tot PM	n/a	g	DS Soot	n/a	g/mi
Trip Exhaust Mass EU (ac)	n/a	kg	tot PN DC	n/a	#	DS Soot meas	n/a	g/mi
Trip Exhaust Mass US (ac)	n/a	kg	PM measurement type	0.00000	-	DS PM	n/a	g/mi
Trip Av. Amb. Temperature	62.80	deg_F	PM correction type	1.00000	alpha(HC)	DS PN DC	n/a	#/mi
Trip Av. Humidity	68.39	%	tot Soot on PM filter (estim.)	n/a	mg	FS CO2 DC	n/a	g/kg
Fuel Type	Petrol (E10)		Soot --> PM simple scaling factor	1.00000	-	FS CO DC	n/a	g/kg
			Soot --> PM alpha scaling factor	0.00000	-	FS THC DC	n/a	g/kg
			Trip Av. Veh. Speed	31.17463	mi/hr	FS NMHC DC	n/a	g/kg
			Trip Velocity Zero	9.57096	%	FS CH4 DC	n/a	g/kg
			Trip Velocity Urban	45.81458	%	FS NO DC (d)	n/a	g/kg
			Trip Velocity Rural	30.30303	%	FS NO2 DC	n/a	g/kg
			Trip Velocity Motorway	23.88239	%	FS NOx DC	n/a	g/kg
						FS Soot	n/a	g/kg
						FS Soot meas	n/a	g/kg
						FS PM	n/a	g/kg
						FS PN DC	n/a	#/kg

(a) GAS PEMS measurement state only, (b) based on fuel rate input (ECU, Fuel Meter), (c) calculated from carbon balance
 (d) NO calculated using molecular weight of NO2

Concerto Version: 480 Build 215, Serial Number: 8468
 M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi Q5 /
 Engine: Gasoline / 2.0L
 NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
 Dry / Wet Corr.: 2 - CFR40 §86.1342-90



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

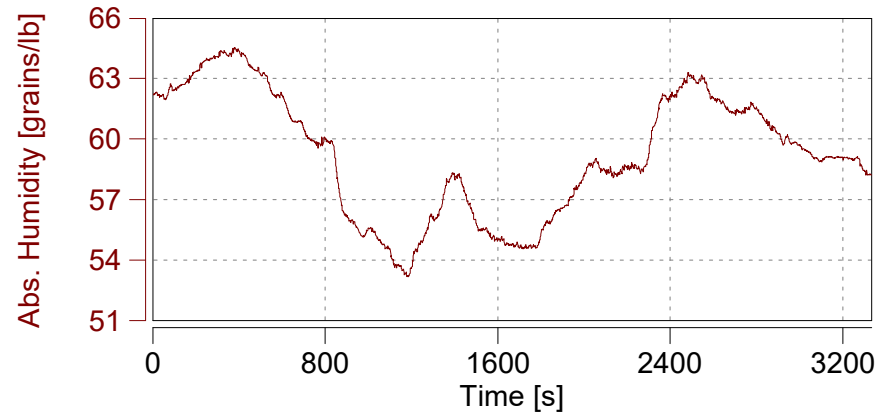
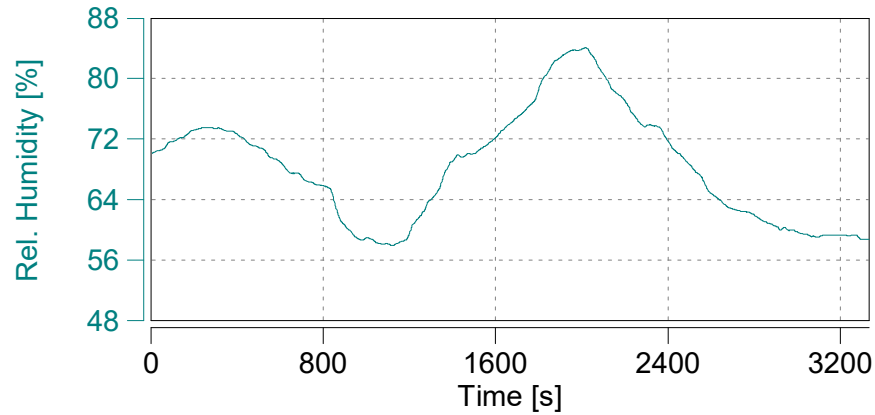
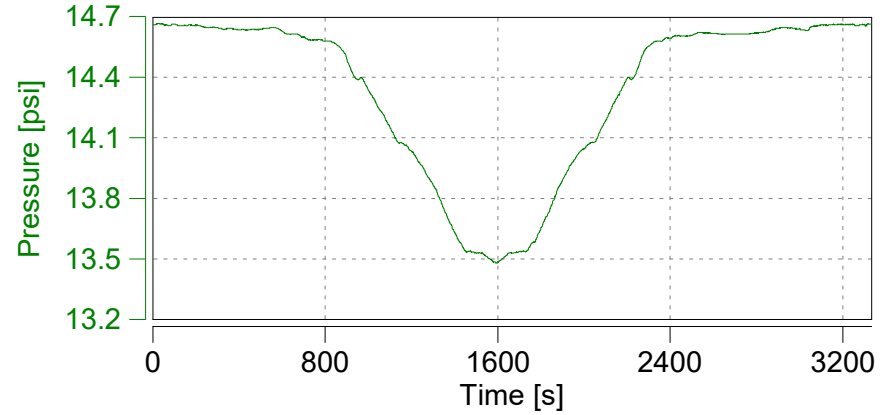
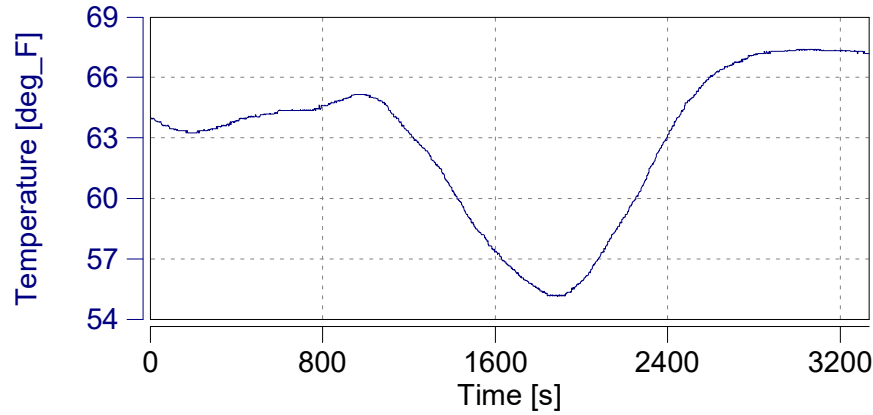
Vehicle: 2017 Audi Q5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Mountain

Page: Ambient Conditions

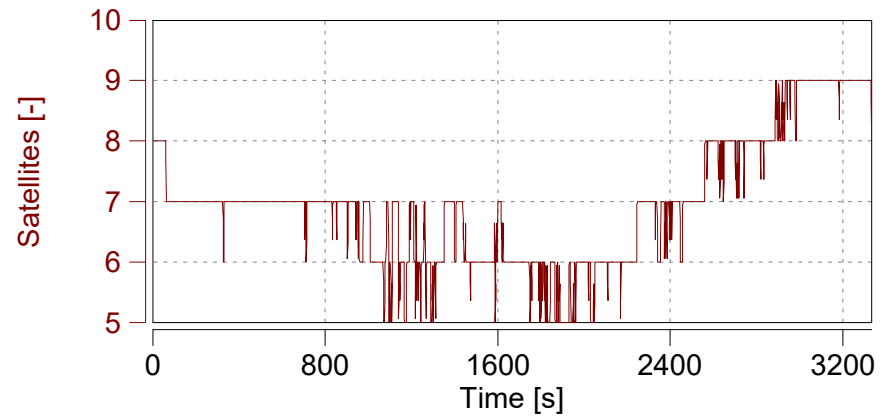
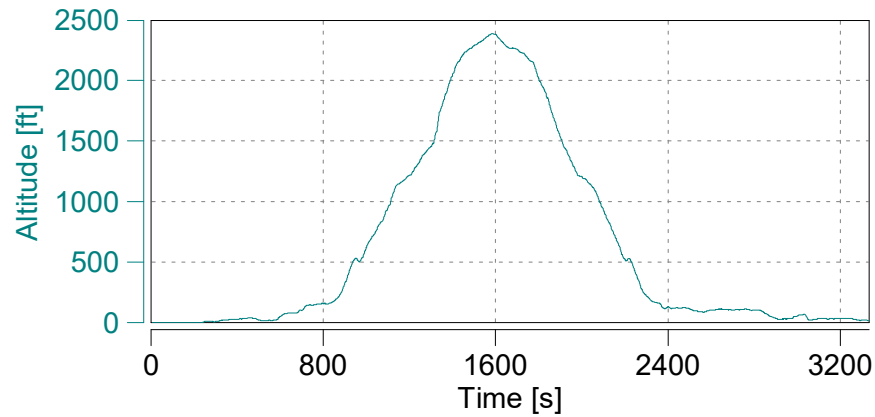
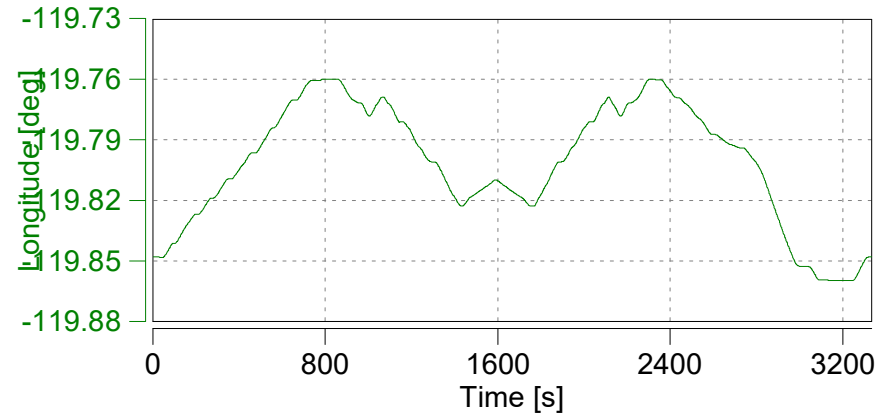
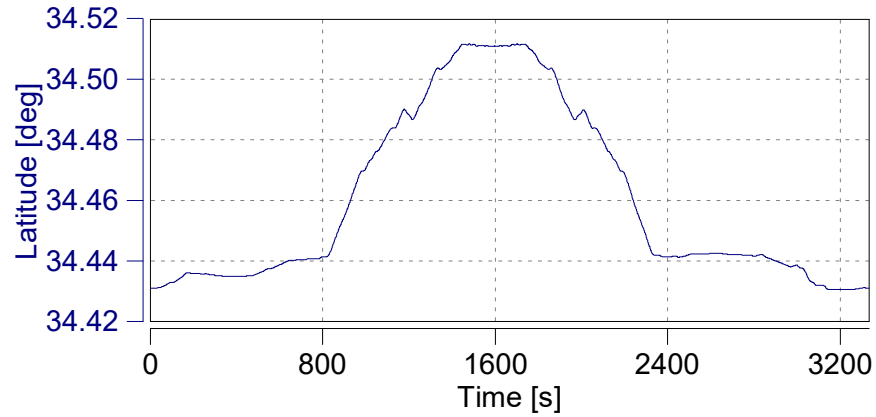
Start Date: 09/21/2017

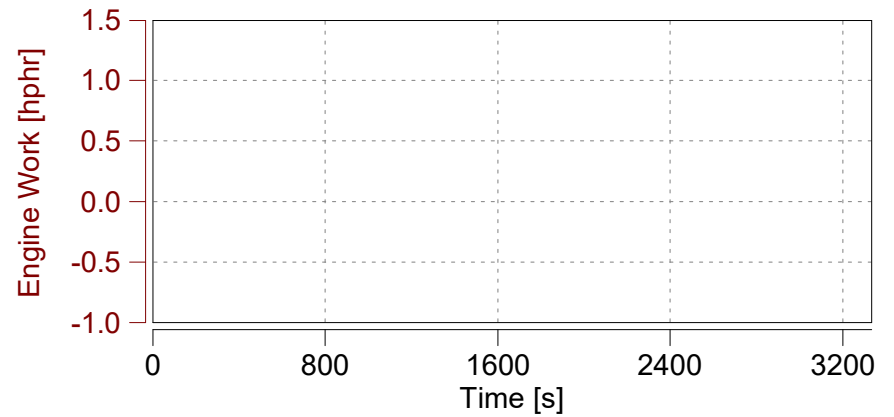
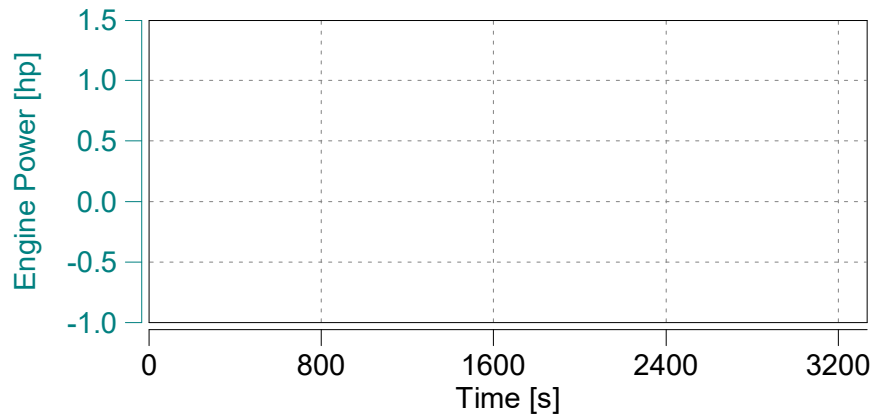
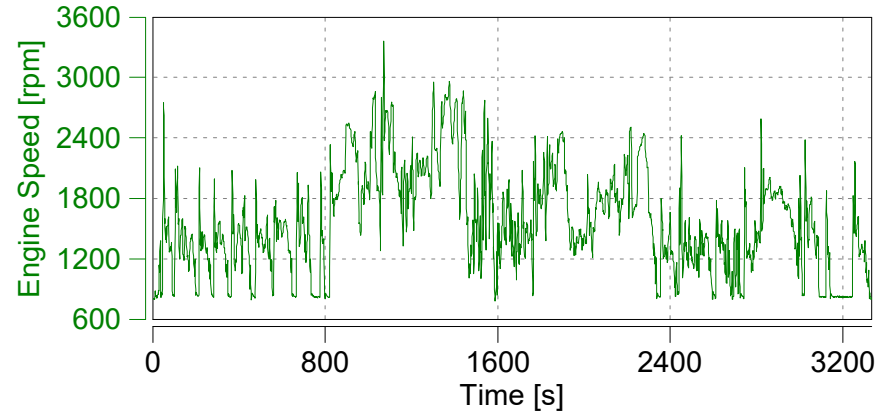
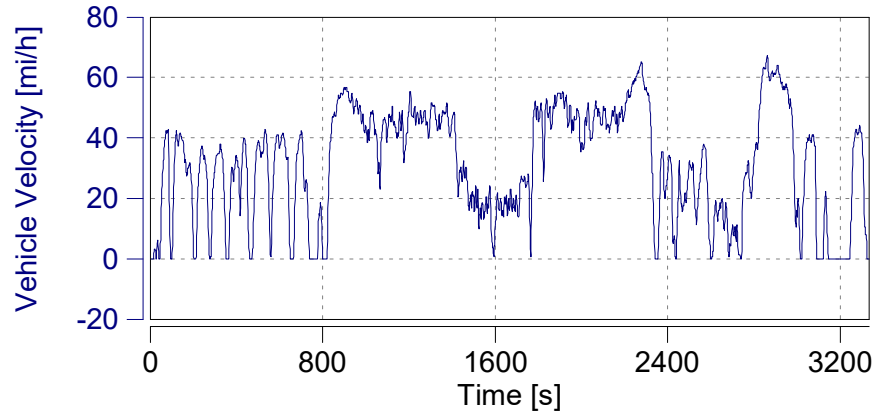
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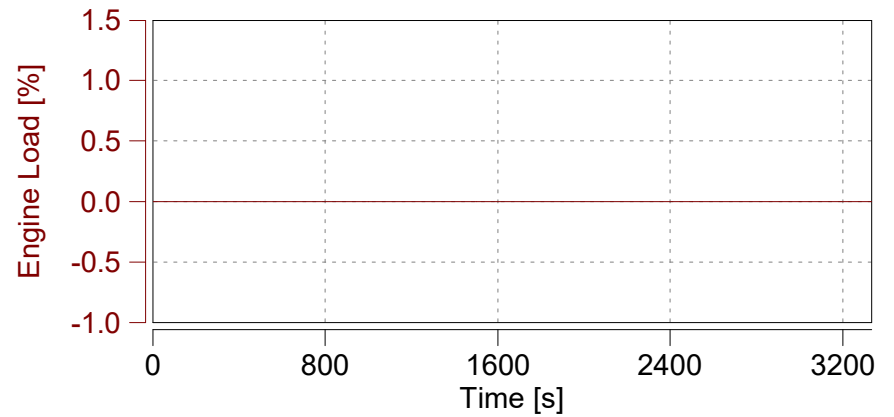
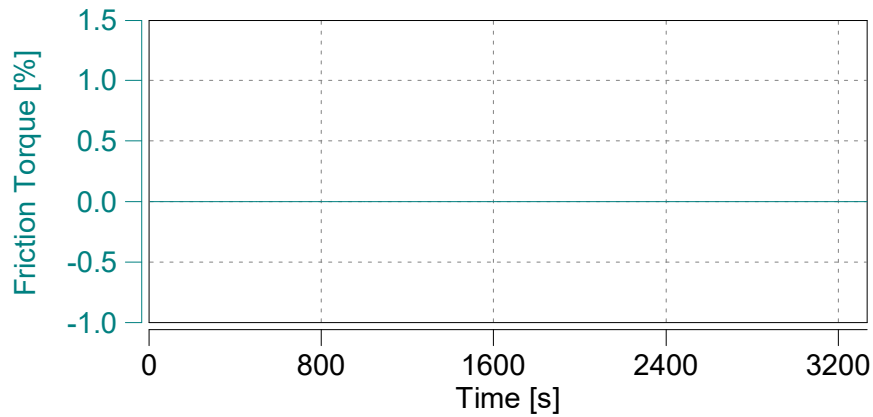
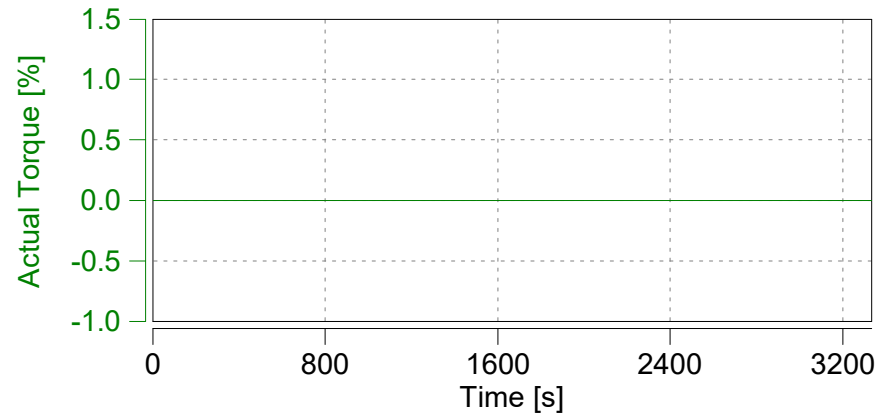
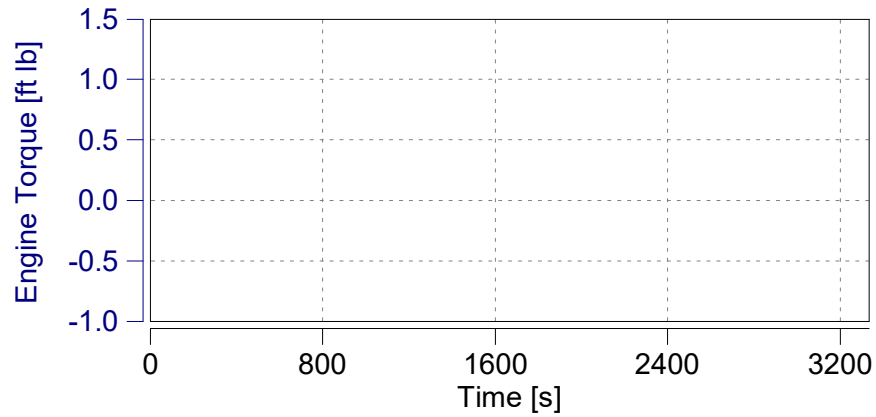


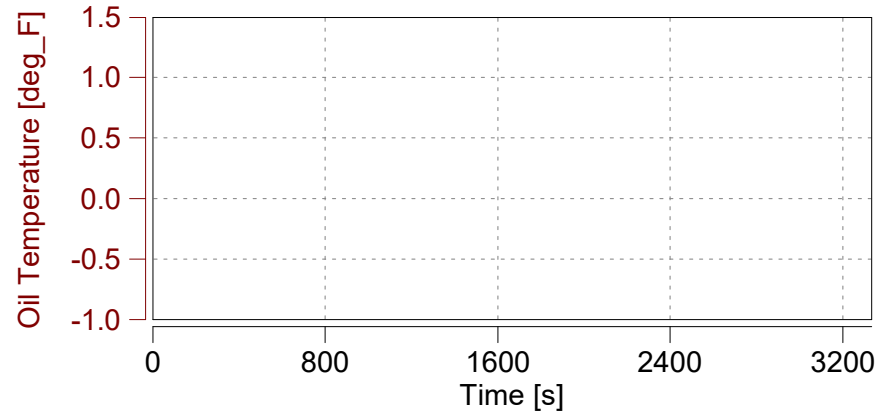
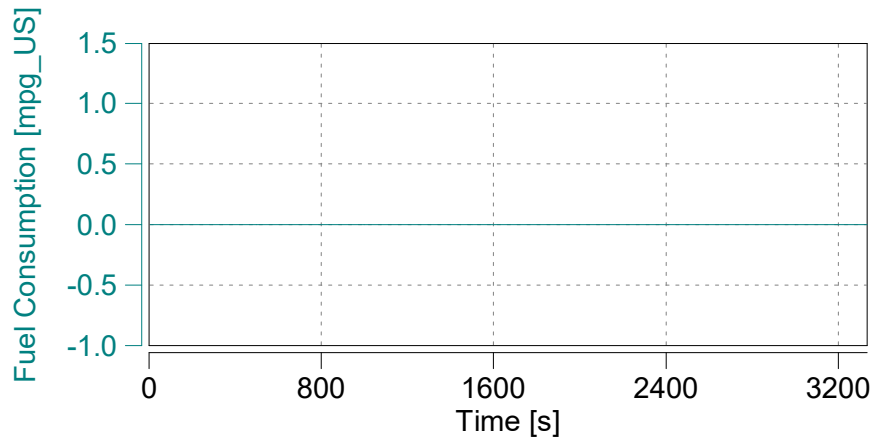
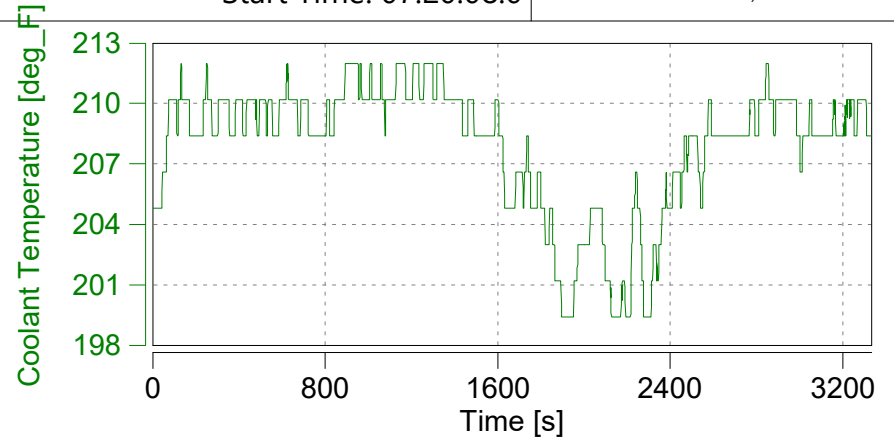
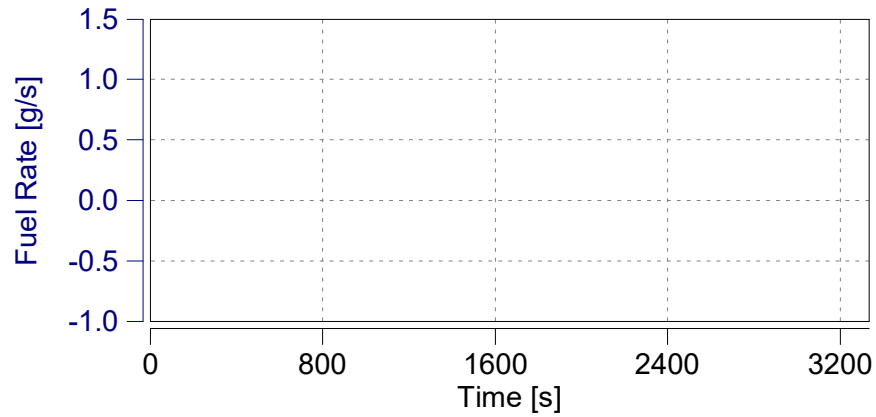
Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

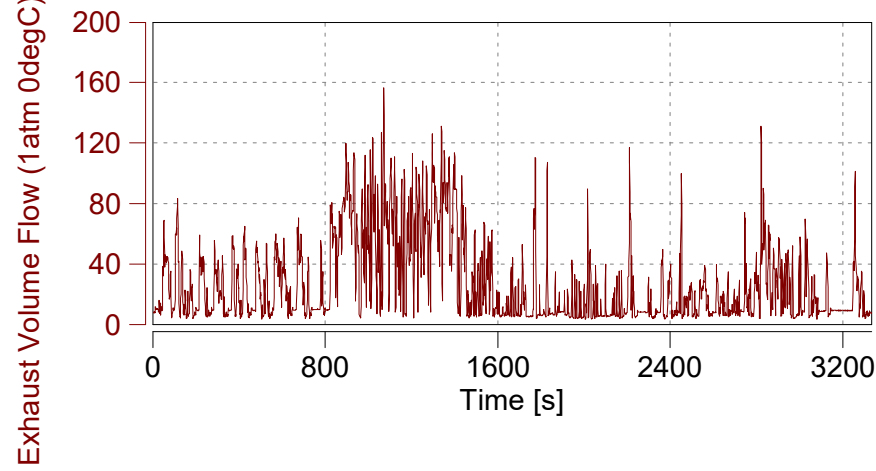
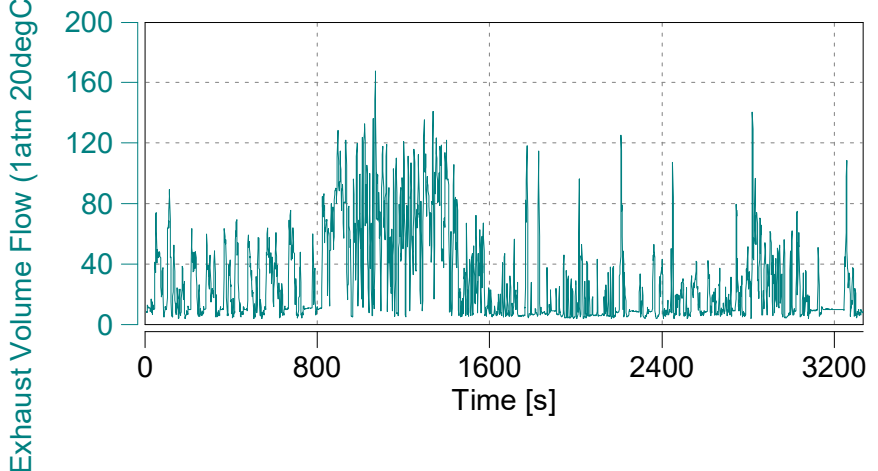
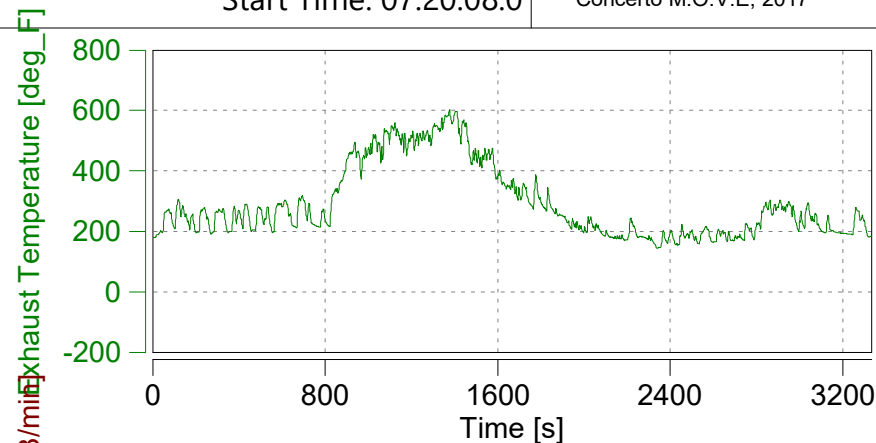
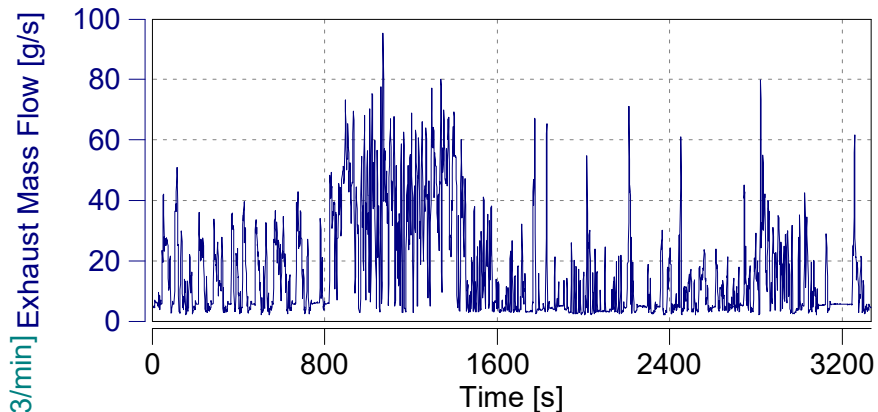
Vehicle: 2017 Audi Q5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

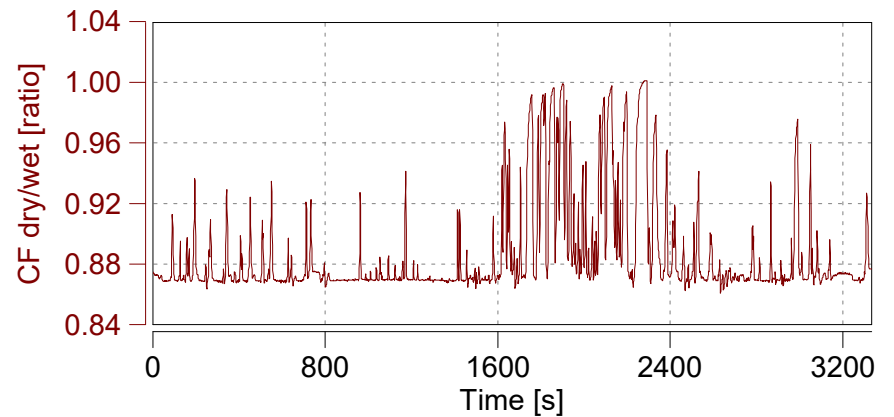
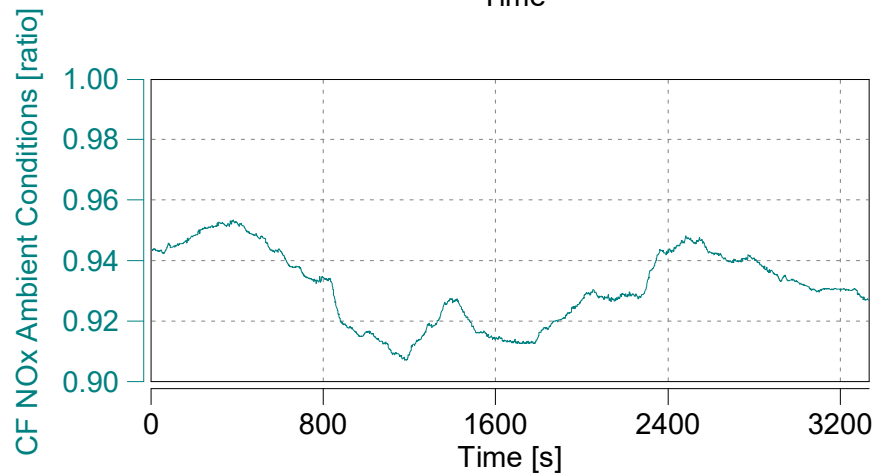
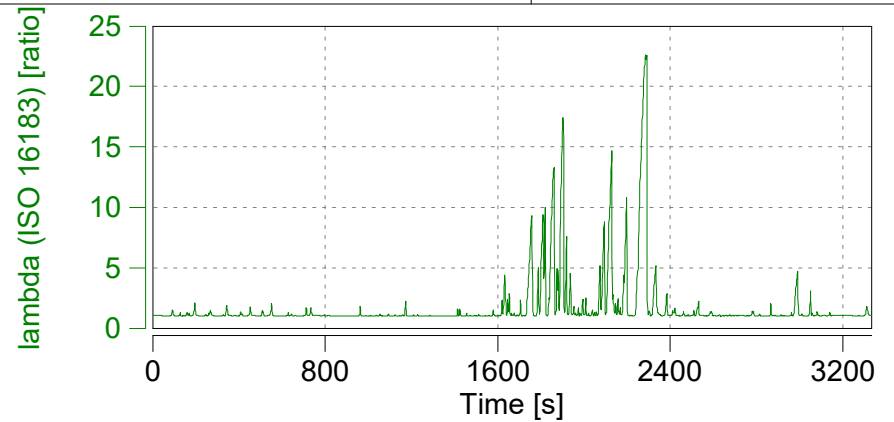
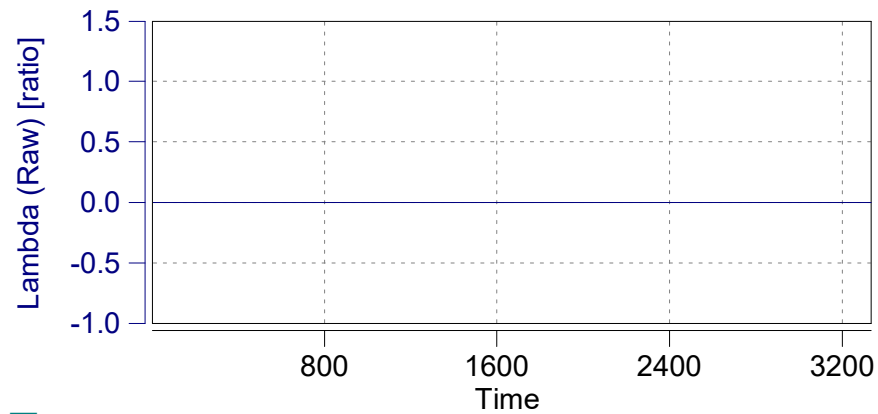










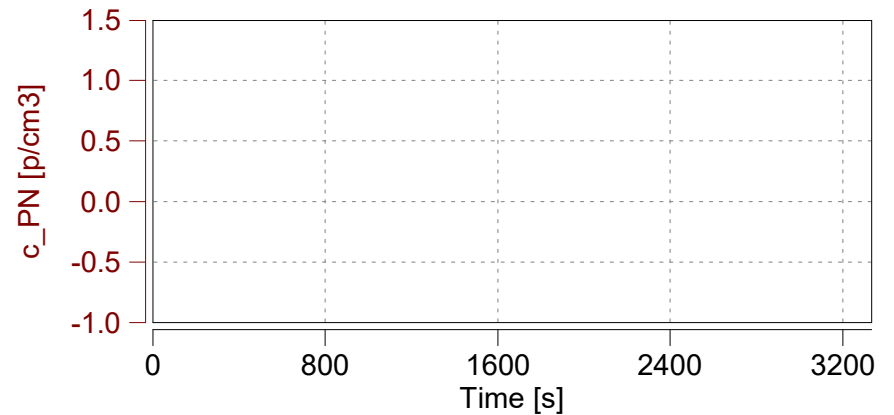
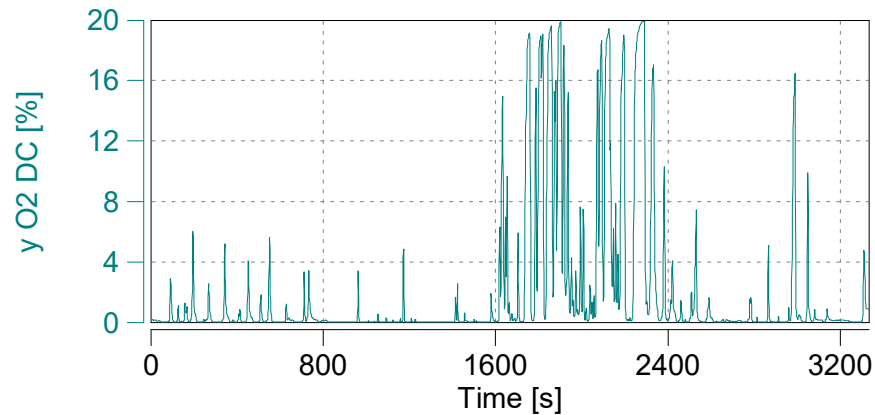
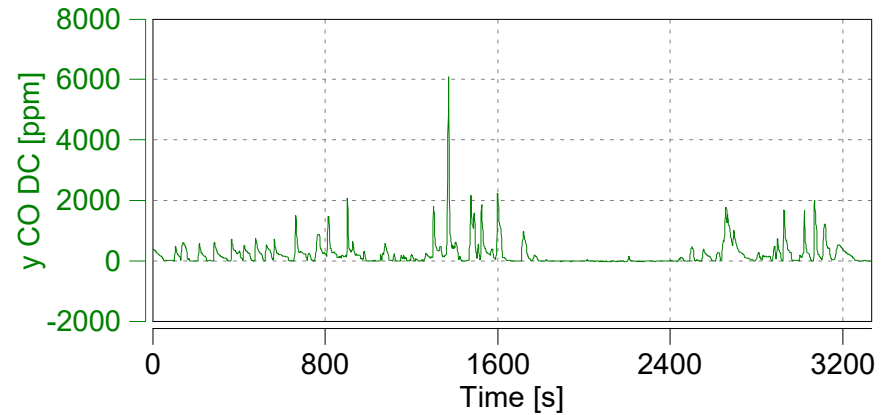
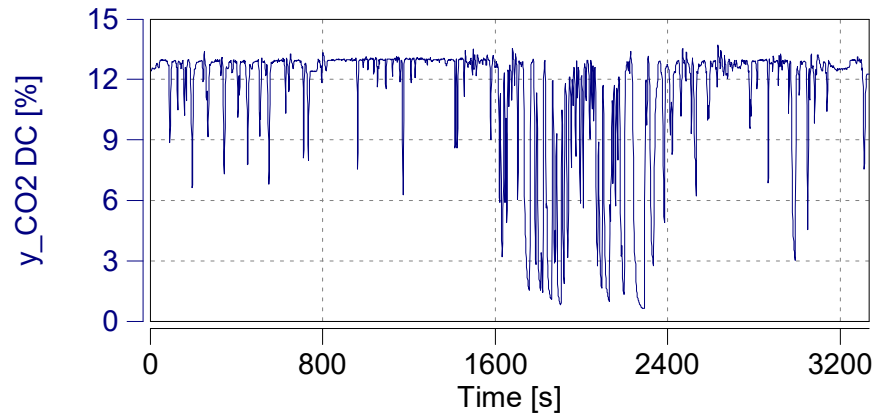


Case: Mountain

Page: Corrected Emissions (1)

Start Date: 09/21/2017

Start Time: 07:20:08.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

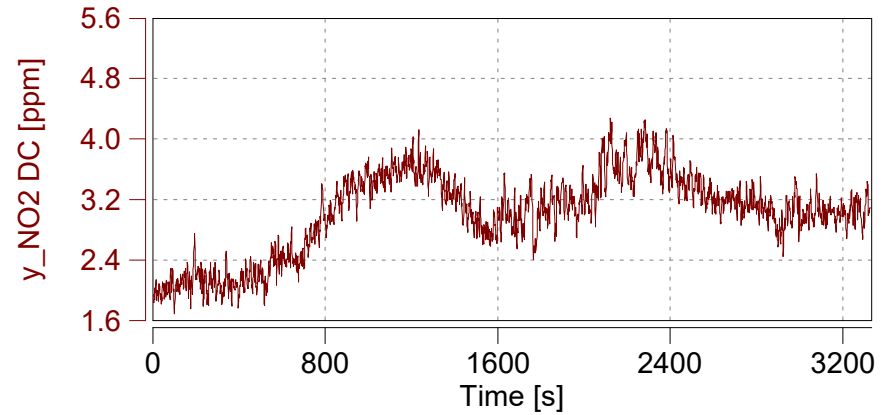
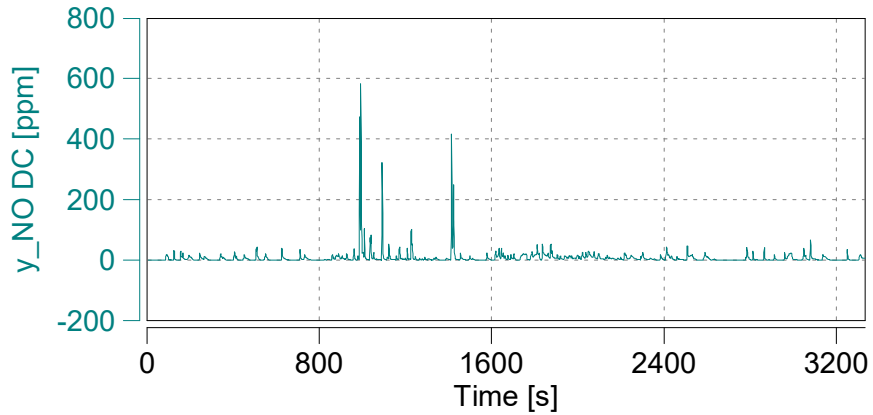
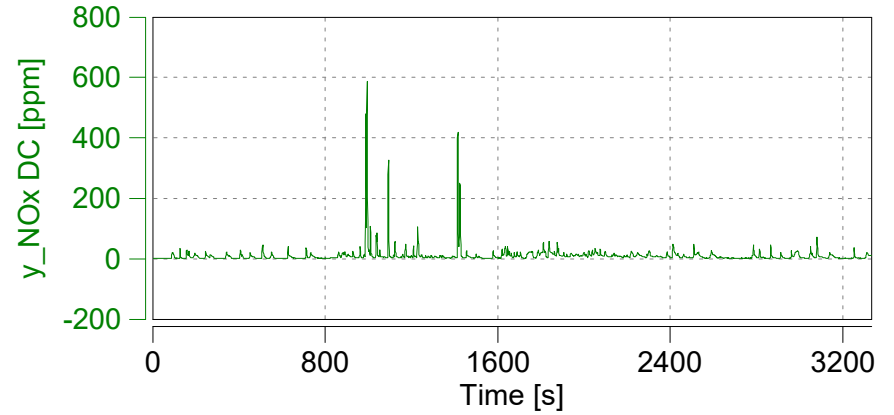
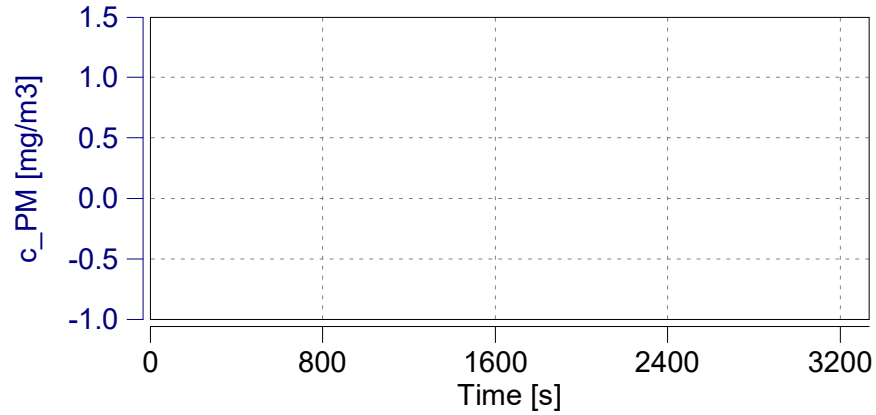
Vehicle: 2017 Audi Q5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Mountain

Page: Corrected Emissions (2)

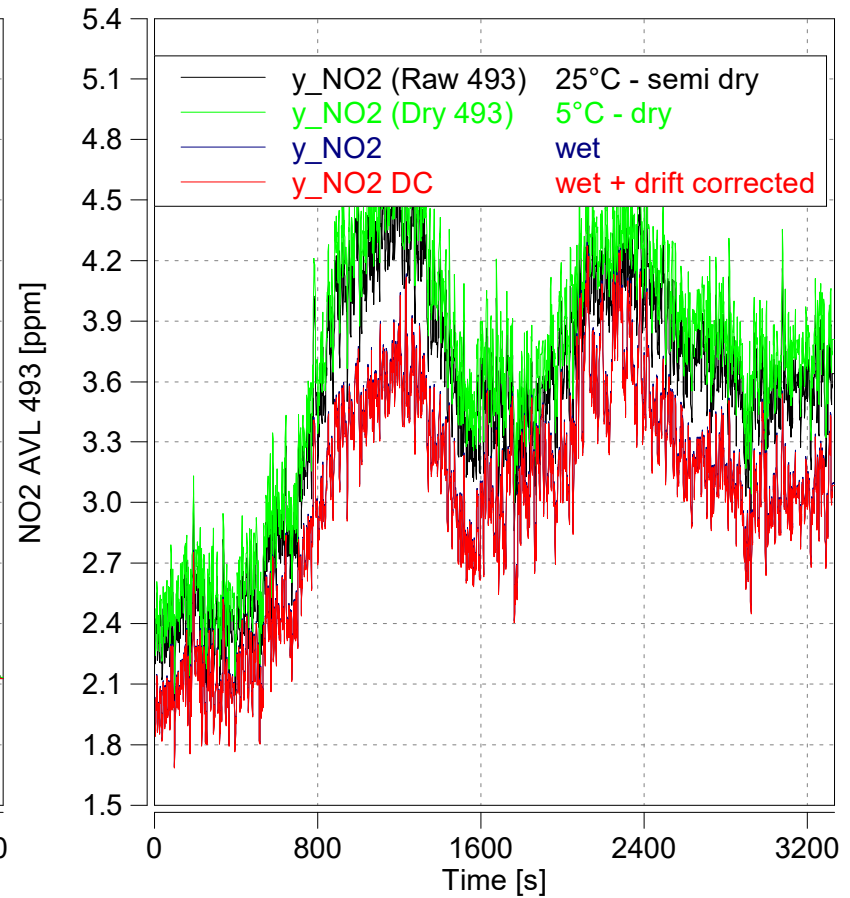
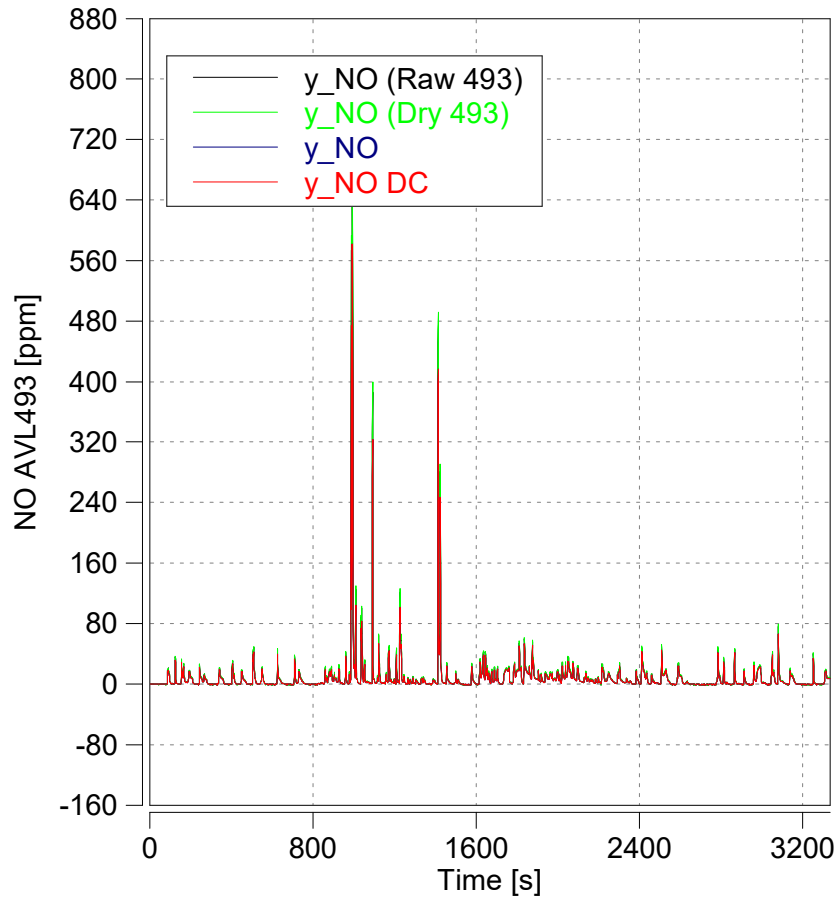
Start Date: 09/21/2017

Start Time: 07:20:08.0

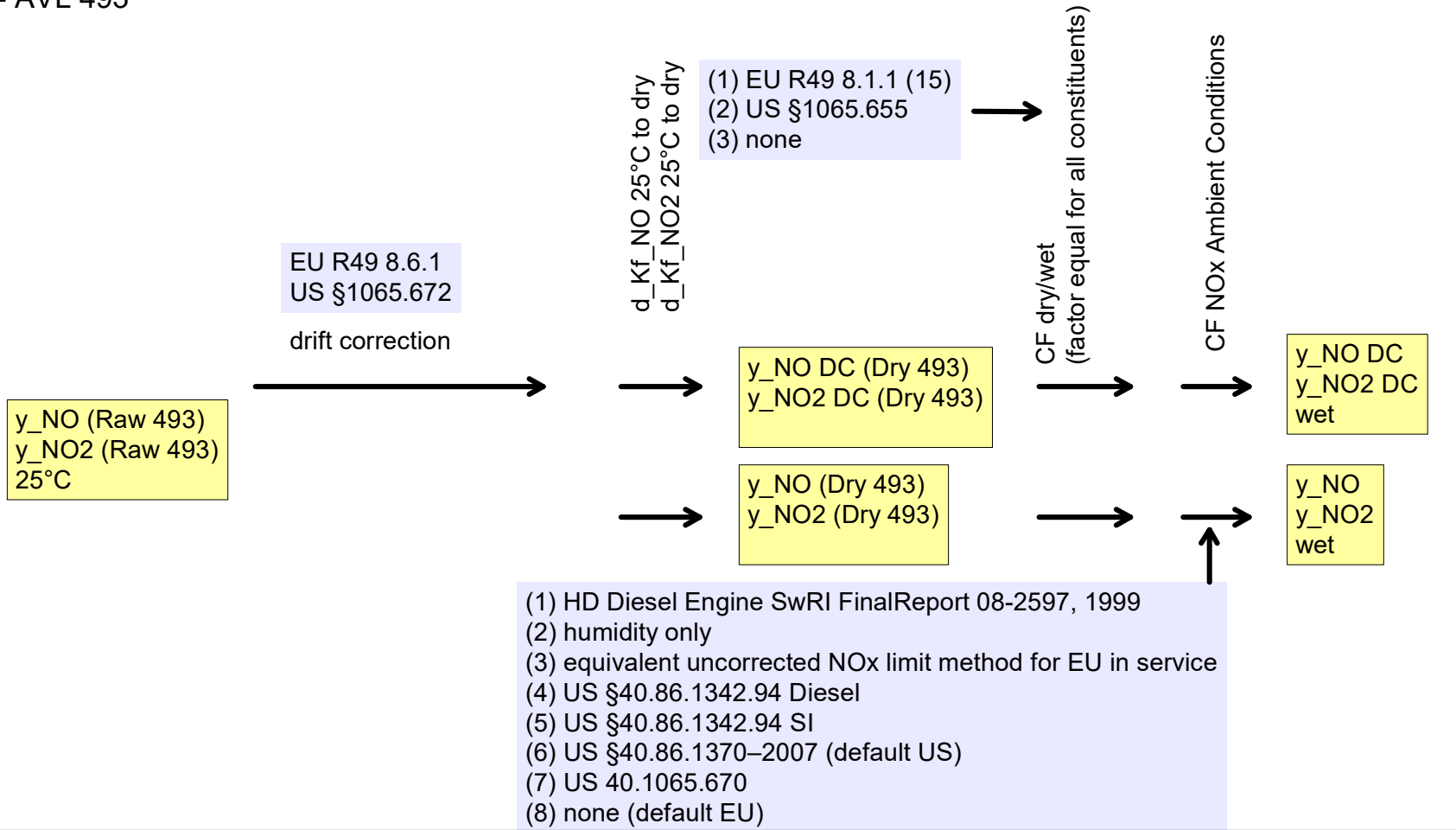


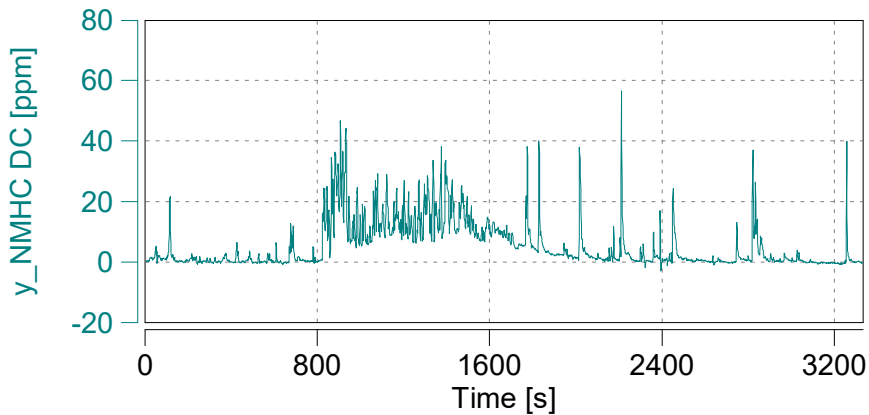
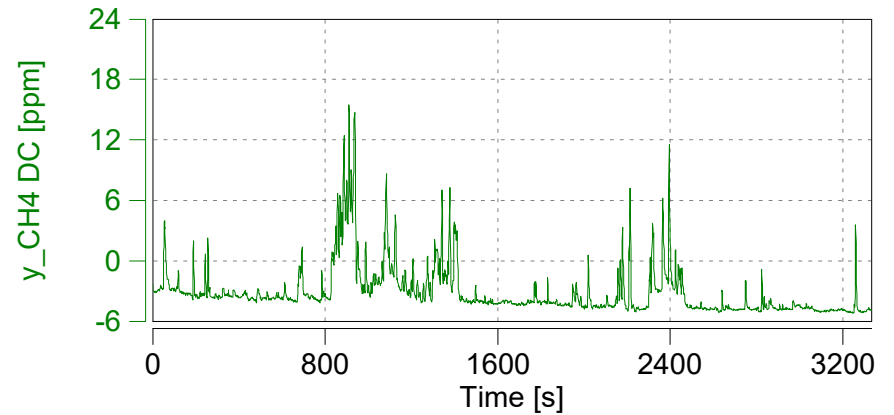
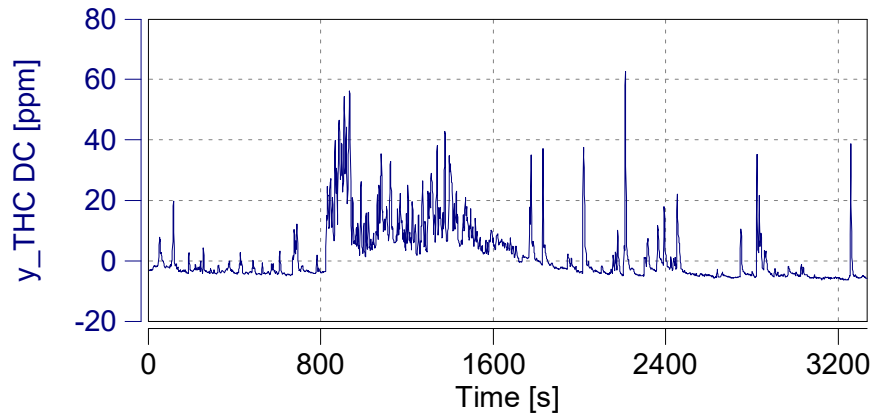
Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi Q5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90



NOx - AVL 493



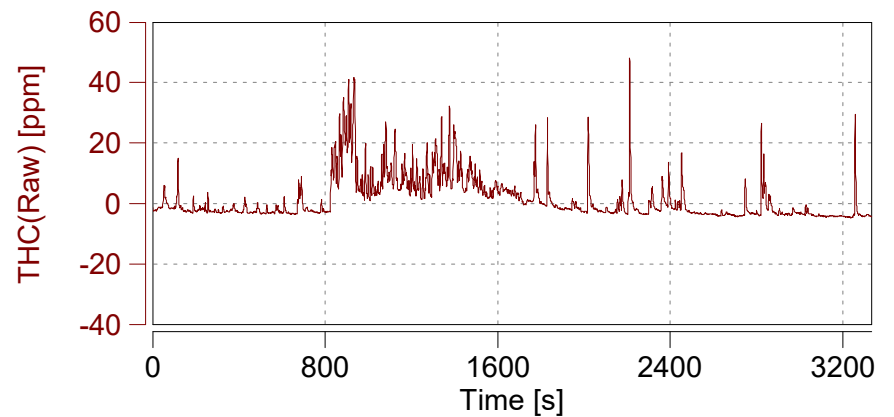
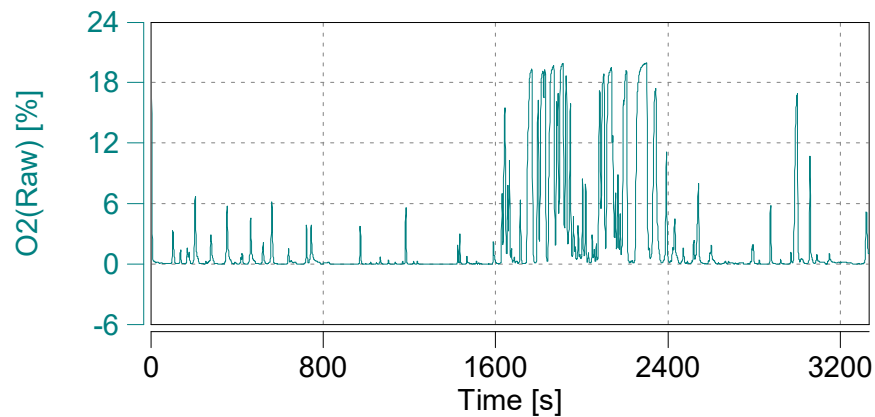
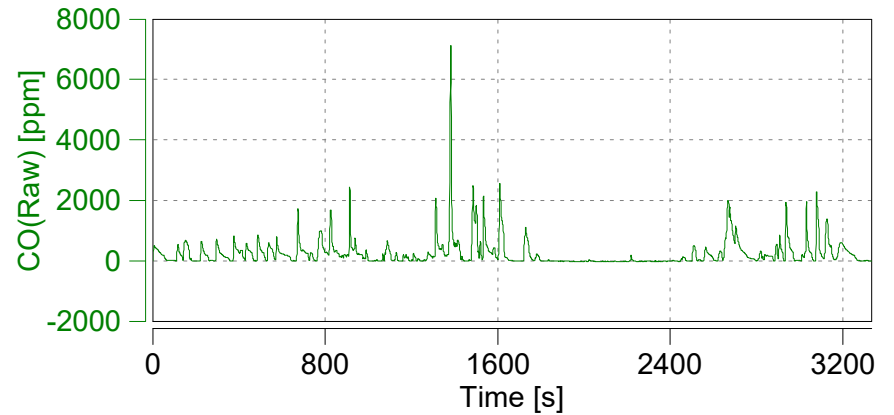
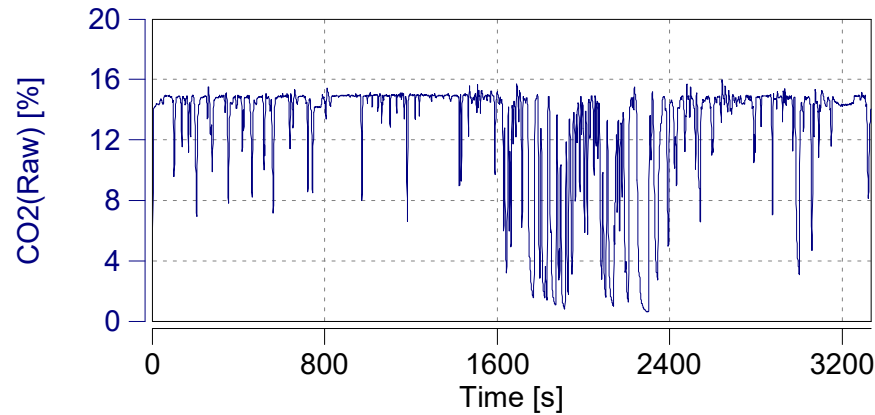


Case: Mountain

Page: Emissions Raw Data (1)

Start Date: 09/21/2017

Start Time: 07:20:08.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

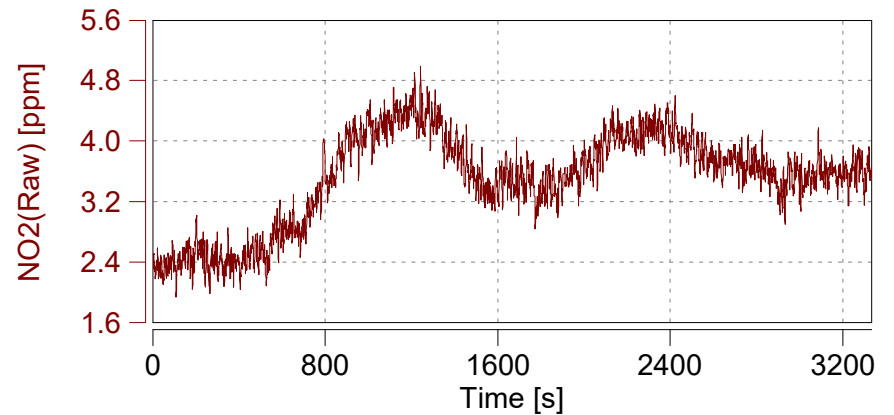
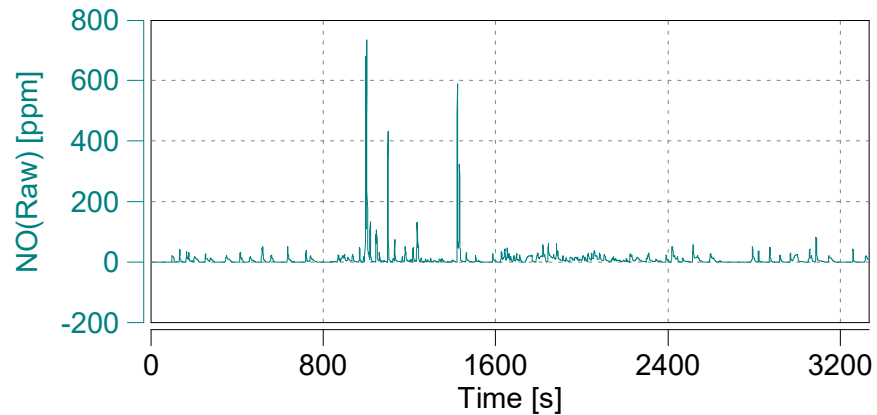
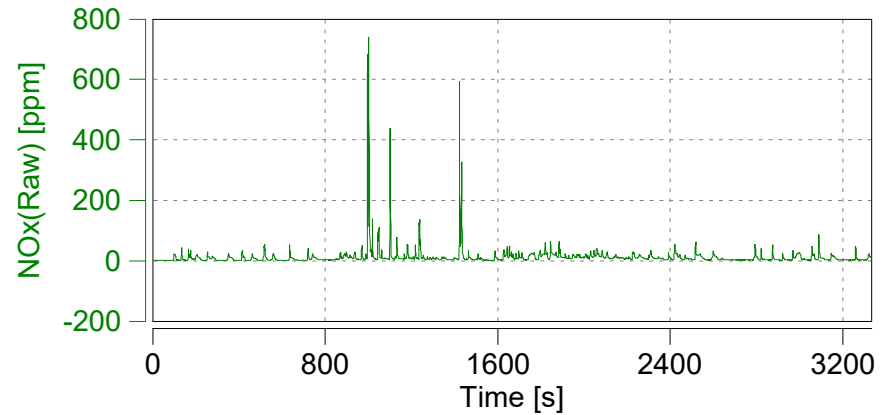
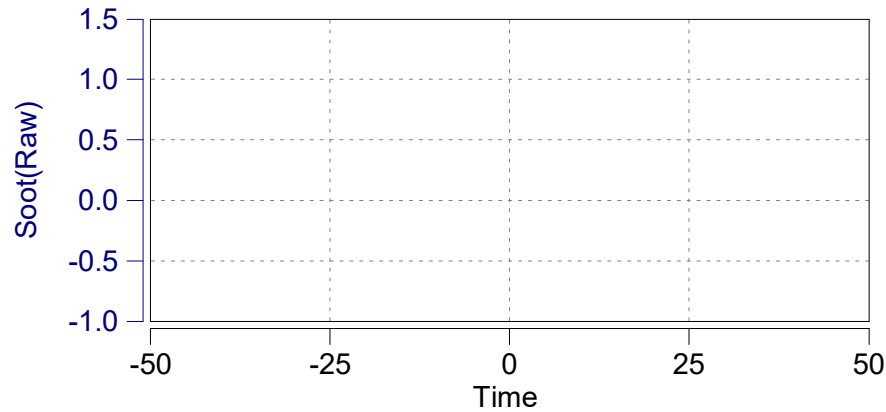
Vehicle: 2017 Audi Q5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Mountain

Page: Emissions Raw Data (2)

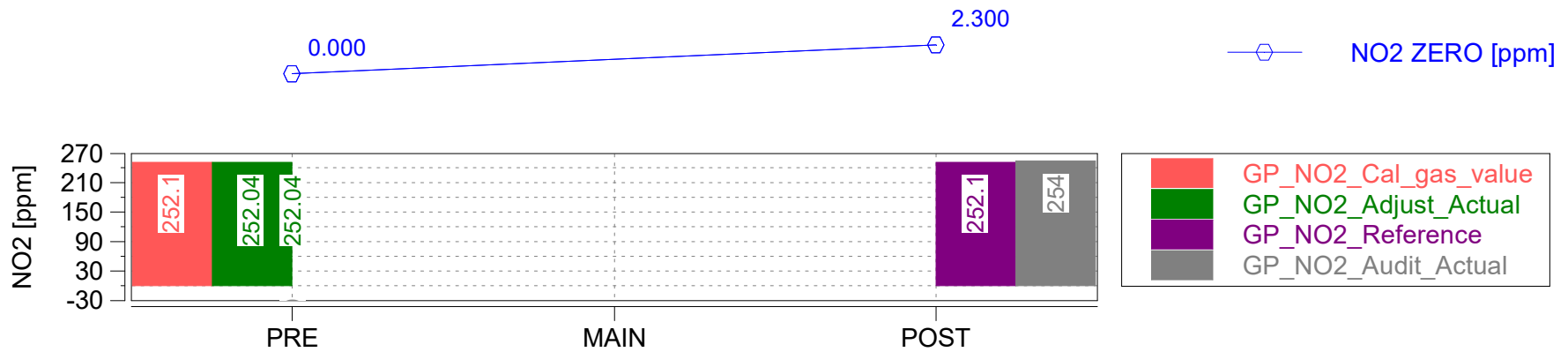
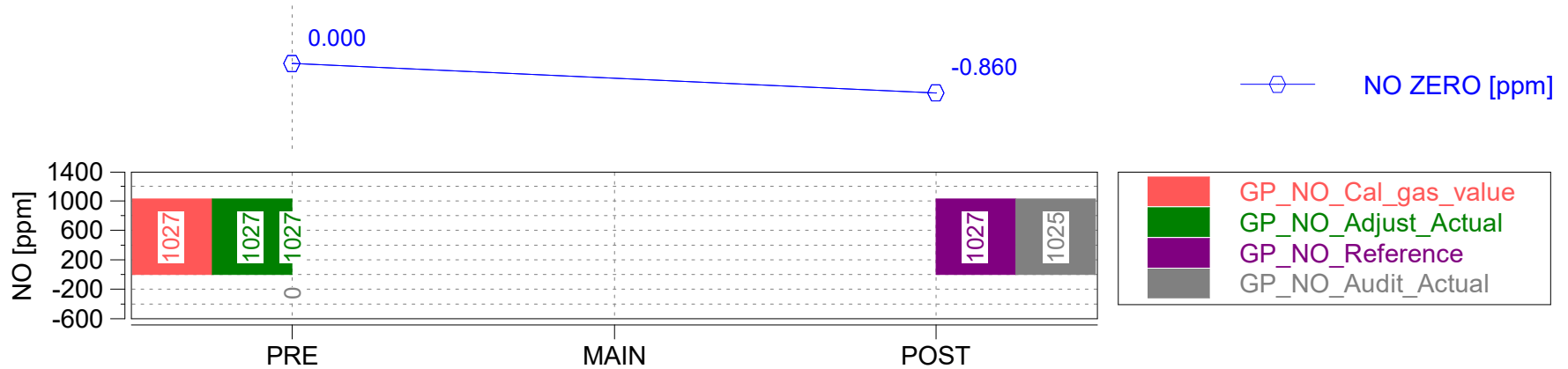
Start Date: 09/21/2017

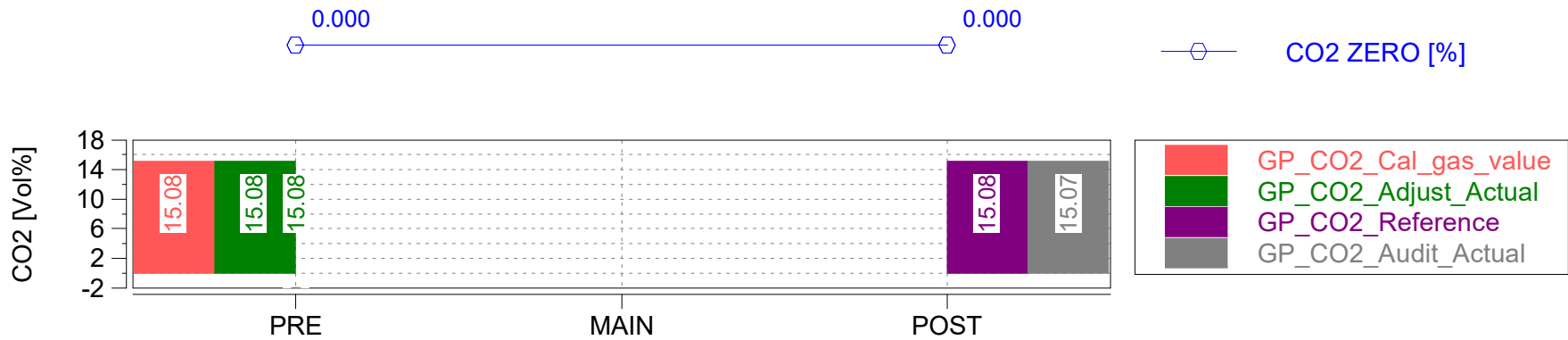
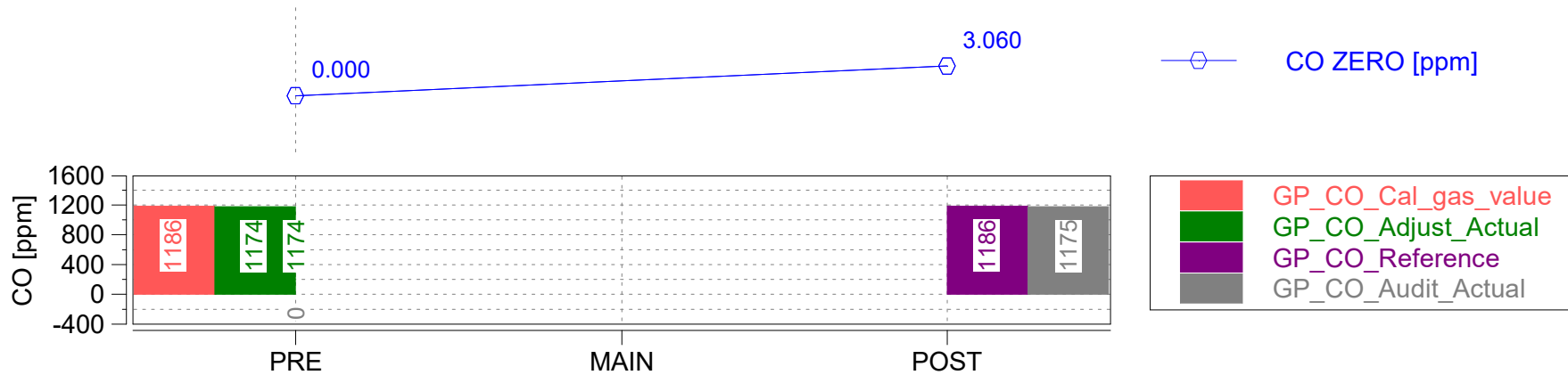
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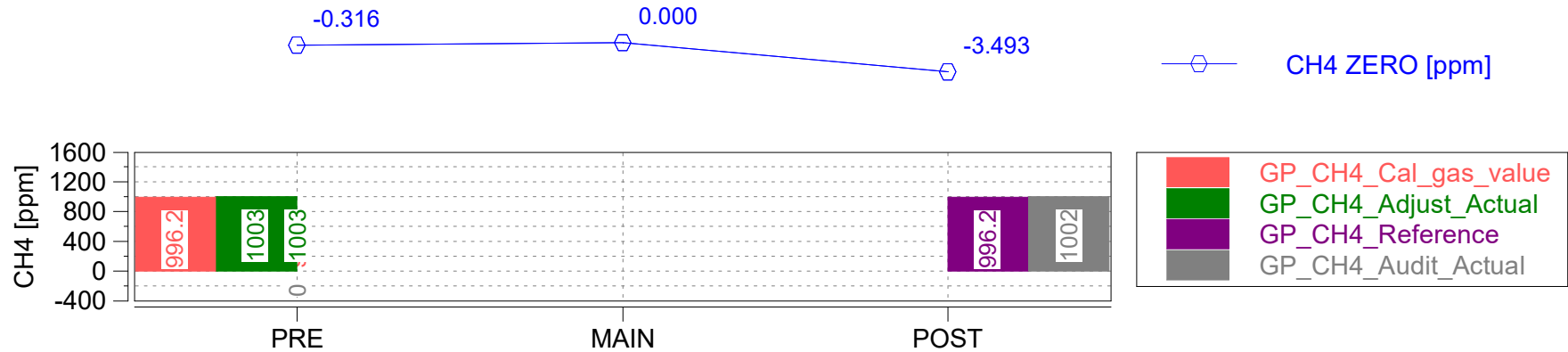
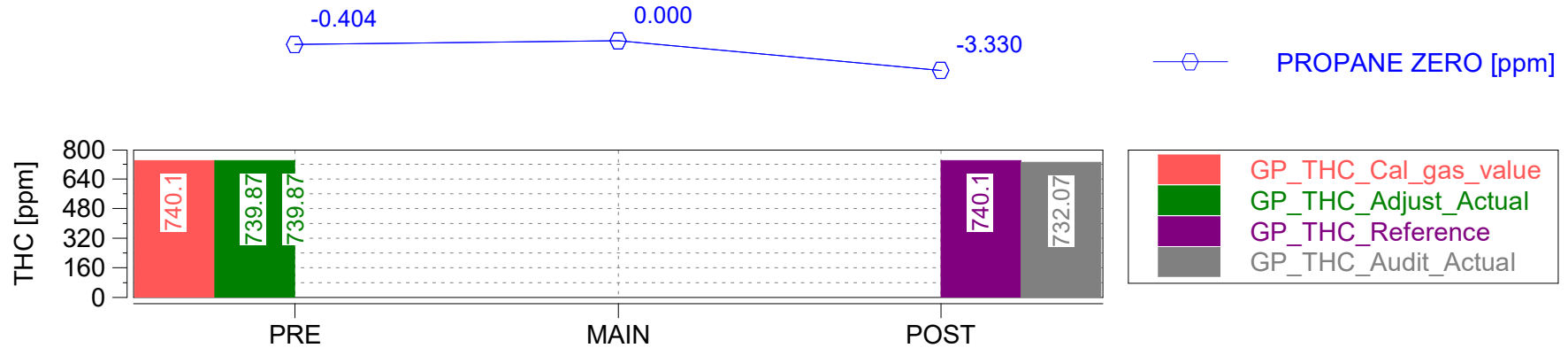


Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi Q5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90







#	Text	Value	Unit
-	----	----	----
1.0	Test Start: Date	-	-
2.0	Test Start: Time	-	-
3.0	Ambient Temperature	IFILE1:TM'Temperature	deg C
4.0	Ambient Temperature TS	0.00000	s
5.0	Ambient Pressure	IFILE1:TM'Pressure	kPa
6.0	Ambient Pressure TS	0.00000	s
7.0	Humidity Type	1.00000	-
8.0	Amb. Rel. Humidity	IFILE1:TM'Humidity	%
9.0	Amb. Rel. Humidity	0.00000	s
10.0	GPS Latitude		deg
11.0	GPS Latitude TS	0.00000	s
12.0	GPS Longitude		deg
13.0	GPS Longitude TS	0.00000	s
14.0	Altitude		m
15.0	Altitude TS	0.00000	s
16.0	GPS Quality		-
17.0	GPS Quality TS	0.00000	s
18.0	GroundSpeed		km/h
19.0	GroundSpeed TS	0.00000	s
20.0	Altitude from topographical map		m
21.0	Altitude TS of topographical map		s
22.0	TRIP_AMBIENT_GPS_AVL	YES	-
23.0	CALC_GPS_GROUNDSPEED	NO	-
24.0	EXHAUST_FLOW_AVL	NO	-
25.0	EXHAUST_FLOW_AVL_EFM	YES	-
26.0	Exhaust Flow Type	2.00000	-
27.0	Mass Flow	IFILE1:TM'PitotEFM_ExhaustG	various
28.0	Mass Flow TS	1.30000	s
29.0	Exhaust Pressure		kPa
30.0	Exhaust Pressure TS	1.30000	s

#	Text	Value	Unit
-	----	----	----
31.0	Exhaust Delta Pressure		kPa
32.0	Exhaust Pressure Delta TS	1.30000	s
33.0	Exhaust Temperature	IFILE1:TM'PitotEFM_ExhaustG	degC
34.0	Exhaust Temperature TS	1.30000	s
35.0	Lambda	N/A	-
36.0	Lambda TS		s
37.0	CO2_DIL		%
38.0	CO2_DIL TS		s
39.0	CVS Volume Flow		m3/min
40.0	TimeShift_CVS_VOL_FLOW		s
41.0	IN_CVS_PRESSURE		kPa
42.0	TimeShift_CVS_PRESSURE		s
43.0	IN_CVS_TEMP		degC
44.0	TimeShift_CVS_TEMP		s
45.0	Dry to Wet Conversion CO2	YES	-
46.0	Dry to Wet Conversion O2	YES	-
47.0	Dry to Wet Conversion NO	NO	-
48.0	Dry to Wet Conversion NO2	NO	-
49.0	Dry to Wet Conversion THC	NO	-
50.0	Dry to Wet Conversion CH4	NO	-
51.0	Dry to Wet Conversion O2	NO	-
52.0	CO2	IFILE1:TM'GPiS_CO2	%
53.0	CO2 TS	-10.30000	s
54.0	OS	IFILE1:TM'GPiS_O2	%
55.0	O2 TS	-10.80000	s
56.0	CO	IFILE1:TM'GPiS_CO	ppm
57.0	CO TS	-10.30000	s
58.0	NO	IFILE1:TM'GPiS_NO	ppm
59.0	NO TS	-8.50000	s
60.0	NO2	IFILE1:TM'GPiS_NO2	ppm

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi Q5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
61.0	NO2 TS	-8.50000	s
62.0	THC	IFILE1:TM'FIDiS_THC_C1	ppm
63.0	THC TS	0.00000	s
64.0	CH4	IFILE1:TM'FIDiS_CH4_C1	ppm
65.0	CH4 TS	0.00000	s
66.0	GAS_PEMS_Ethane_Efficiency	IFILE1:MOVE_AVL4925'GP_Et -	
67.0	GAS_PEMS_Methane_Efficiency	IFILE1:MOVE_AVL4925'GP_M -	
68.0	GAS_PEMS_Methane_Response	IFILE1:MOVE_AVL4925'GP_M -	
69.0	Zero Signal	IFILE1:TM'GPiS_STATE	0/1
70.0	Zero Signal TS	-8.50000	s
71.0	Zero Signal_FIDiS	IFILE1:TM'FIDiS_STATE	0/1
72.0	Zero Signal_FIDiS TS		s
73.0	Species Input Type	4.00000	-
74.0	GASPEMS=AVL493	NO	-
75.0	GASPEMS=AVL493_iX	NO	-
76.0	GASPEMS=AVL492	YES	-
77.0	GASPEMS=AVL4925	YES	-
78.0	PM: Type	4.00000	1=GFB+HC, 2=GFB, 3='PM=S
79.0	Filter ID from IFile	NO	-
80.0	Lab ID from IFile	NO	-
81.0	PM Filter: ID	N/A	ID
82.0	PM Filter: Lab	N/A	Name/ID
83.0	PM Filter: Weight before Test	N/A	mg
84.0	PM Filter: Weight after Test	N/A	mg
85.0	PM (HC Corr): Max. Exhaust Flow	N/A	scfm
86.0	Soot		mg/m3
87.0	Soot TS	-5.00000	s
88.0	Soot Sensor		mg/m3
89.0	Soot Sensor TS		s
90.0	PM Filter: Filter Flow Rate		l/min

#	Text	Value	Unit
-	----	----	----
91.0	PM Filter: Filter Flow Rate TS	-5.00000	s
92.0	PM Filter: Filter Dilution Ratio		-
93.0	PM Filter: Filter Dilution Ratio TS	-5.00000	s
94.0	PM Filter: Filter Trigger		-
95.0	PM Filter: Filter Trigger TS	-5.00000	s
96.0	PMPEMS=AVL494	YES	-
97.0	PMPEMS_AVL494_PROP_DIL	NO	-
98.0	PM dilution ratio min		-
99.0	PM_MaxExhaustFlowRate		-
100.0	PM_ExhaustFlow_Thresh		-
101.0	PM_total_flow_val		-
102.0	PM_total_flow_val_TS		-
103.0	PM_exh_mass_flow		-
104.0	PM_exh_mass_flow_TS		-
105.0	PN		#/cm3
106.0	TimeShift_PN		s
107.0	PN_STATE		-
108.0	PN TS STATE		s
109.0	PNPEMS_AVL496	NO	-
110.0	PN_CorrFactor	1.00000	
111.0	Time Alignment	1.00000	-
112.0	Time Alignment Dataset 1	N/A	0/1
113.0	Time Alignment Dataset 2	N/A	0/1
114.0	Time Alignment Thresh 1	N/A	-
115.0	Time Alignment Thresh 2	N/A	-
116.0			
117.0			
118.0			
119.0			
120.0			

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi Q5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
121.0			
122.0	Trigger		0/1
123.0	Trigger TS		s
124.0	FTIR_NAME_1		-
125.0	FTIR_MW_1		-
126.0	FTIR_CHANNEL_1		-
127.0	FTIR_CHANNEL_TS_1		-
128.0	FTIR_CHANNEL_DRY_1	NO	-
129.0	FTIR_NAME_2		-
130.0	FTIR_MW_2		-
131.0	FTIR_CHANNEL_2		-
132.0	FTIR_CHANNEL_TS_2		-
133.0	FTIR_CHANNEL_DRY_2	NO	-
134.0	FTIR_NAME_3		-
135.0	FTIR_MW_3		-
136.0	FTIR_CHANNEL_3		-
137.0	FTIR_CHANNEL_TS_3		-
138.0	FTIR_CHANNEL_DRY_3	NO	-
139.0	FTIR_NAME_4		-
140.0	FTIR_MW_4		-
141.0	FTIR_CHANNEL_4		-
142.0	FTIR_CHANNEL_TS_4		-
143.0	FTIR_CHANNEL_DRY_4	NO	-
144.0	FTIR_NAME_5		-
145.0	FTIR_MW_5		-
146.0	FTIR_CHANNEL_5		-
147.0	FTIR_CHANNEL_TS_5		-
148.0	FTIR_CHANNEL_DRY_5	NO	-
149.0	FTIR_NAME_6		-
150.0	FTIR_MW_6		-

#	Text	Value	Unit
-	----	----	----
151.0	FTIR_CHANNEL_6		-
152.0	FTIR_CHANNEL_TS_6		-
153.0	FTIR_CHANNEL_DRY_6	NO	-
154.0	FTIR_NAME_7		-
155.0	FTIR_MW_7		-
156.0	FTIR_CHANNEL_7		-
157.0	FTIR_CHANNEL_TS_7		-
158.0	FTIR_CHANNEL_DRY_7	NO	-
159.0	FTIR_NAME_8		-
160.0	FTIR_MW_8		-
161.0	FTIR_CHANNEL_8		-
162.0	FTIR_CHANNEL_TS_8		-
163.0	FTIR_CHANNEL_DRY_8	NO	-
164.0	FTIR_NAME_9		-
165.0	FTIR_MW_9		-
166.0	FTIR_CHANNEL_9		-
167.0	FTIR_CHANNEL_TS_9		-
168.0	FTIR_CHANNEL_DRY_9	NO	-
169.0	FTIR_NAME_10		-
170.0	FTIR_MW_10		-
171.0	FTIR_CHANNEL_10		-
172.0	FTIR_CHANNEL_TS_10		-
173.0	FTIR_CHANNEL_DRY_10	NO	-
174.0	FTIR_NAME_11		-
175.0	FTIR_MW_11		-
176.0	FTIR_CHANNEL_11		-
177.0	FTIR_CHANNEL_TS_11		-
178.0	FTIR_CHANNEL_DRY_11	NO	-
179.0	FTIR_NAME_12		-
180.0	FTIR_MW_12		-

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi Q5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
181.0	FTIR_CHANNEL_12		-
182.0	FTIR_CHANNEL_TS_12		-
183.0	FTIR_CHANNEL_DRY_12	NO	-
184.0	FTIR_NAME_13		-
185.0	FTIR_MW_13		-
186.0	FTIR_CHANNEL_13		-
187.0	FTIR_CHANNEL_TS_13		-
188.0	FTIR_CHANNEL_DRY_13	NO	-
189.0	FTIR_NAME_14		-
190.0	FTIR_MW_14		-
191.0	FTIR_CHANNEL_14		-
192.0	FTIR_CHANNEL_TS_14		-
193.0	FTIR_CHANNEL_DRY_14	NO	-
194.0	FTIR_NAME_15		-
195.0	FTIR_MW_15		-
196.0	FTIR_CHANNEL_15		-
197.0	FTIR_CHANNEL_TS_15		-
198.0	FTIR_CHANNEL_DRY_15	NO	-
199.0	FTIR_NAME_16		-
200.0	FTIR_MW_16		-
201.0	Vehicle Type	2017 Audi Q5	-
202.0	Vehicle Info		-
203.0	Engine Type	Gasoline	-
204.0	Engine Info	2.0L	-
205.0	Engine Torque		Nm
206.0	Curb Idle Load		%
207.0	Idle Speed		rpm
208.0	HYBRID_OVC_REF_CO2_gkm		g/km
209.0	Engine Concept	1.00000	-
210.0	Alpha	1.93000	-

#	Text	Value	Unit
-	----	----	----
211.0	Beta	1.00000	
212.0	Gamma	0.00000	
213.0	Delta	0.00000	
214.0	Epsilon	0.03200	
215.0	X_C	83.00000	
216.0	X_H	13.30000	
217.0	X_N	0.00000	
218.0	X_O	3.50000	
219.0	X_S	0.00000	
220.0	Fuel_Density	747.50000	
221.0	rho_exhaust	1.29310	
222.0	U_CO2	1.51800	
223.0	U_CO	0.96600	
224.0	U_NO	1.58700	
225.0	U_NO2	1.58700	
226.0	U_NOx	1.58700	
227.0	U_HC	0.49900	
228.0	U_NMHC	0.47100	
229.0	U_CH4	0.55300	
230.0	U_O2	1.10400	
231.0	Fuel Type	2.00000	-
232.0	exhaust mass flow type (YES/NO)	YES	-
233.0	Distance Calculation Type	1.00000	-
234.0	Velocity Statistics Calculation Type	2.00000	-
235.0	RDE vehicle class	1.00000	-
236.0	TM_CITY0		s
237.0	TM_CITY1		s
238.0	TM_RURAL0		s
239.0	TM_RURAL1		s
240.0	TM_RURAL2_0		s

Concerto Version: 480 Build 215, Serial Number: 8468
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Vehicle: 2017 Audi Q5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
241.0	TM_RURAL2_1		s
242.0	Second Rural Part for Time Marks (NO		-
243.0	TM_MW0		s
244.0	TM_MW1		s
245.0	VELOCITY_LIMIT_STOP	2.00000	km/h
246.0	VELOCITY_LIMIT_URBAN	50.00000	km/h
247.0	VELOCITY_LIMIT_RURAL	75.00000	km/h
248.0	Intake Manifold Pressure Type	1.00000	-
249.0	Velocity	IFILE1:TM'OBD_Vehicle_Spee	km/h
250.0	Velocity TS	1.40000	s
251.0	Velocity FACTOR	1.00000	-
252.0	Coolant Temperature	IFILE1:TM'OBD_Engine_Coola	degC
253.0	Coolant Temperature TS	1.40000	s
254.0	Oil Temperature		degC
255.0	Oil Temperature TS	1.40000	s
256.0	Intake Manifold Temperature		degC
257.0	Intake Manifold Temp TS	1.40000	s
258.0	Intake Manifold Pressure	IFILE1:TM'OBD_Intake_manifo	kPa
259.0	Intake Manifold Pressure TS	1.40000	s
260.0	Throttle Position		%
261.0	Throttle TS	1.40000	s
262.0	TYP_IDLE_MASS_FLOW		kg/h
263.0	Torque Type	1.00000	-
264.0	Speed	IFILE1:TM'OBD_Engine_RPM	rpm
265.0	Speed TS	1.40000	s
266.0	Torque		Nm
267.0	Torque TS	1.40000	s
268.0	Friction Torque	N/A	Nm
269.0	Friction Torque TS	N/A	s
270.0	Reference Torque	N/A	Nm

#	Text	Value	Unit
-	----	----	----
271.0	Reference Torque TS	N/A	s
272.0	k_VELINE		-
273.0	D_VELINE		-
274.0	Fuel Flow Type	2.00000	-
275.0	Air Flow Type	1.00000	-
276.0	Fuel Rate		various
277.0	Air Rate		various
278.0	Fuel Rate TS	1.40000	s
279.0	No_Cylinders		-
280.0	Air Rate TS	1.40000	s
281.0	FTIR_CHANNEL_32		-
282.0	FTIR_CHANNEL_TS_32		-
283.0	FTIR_CHANNEL_DRY_32	NO	-
284.0	FTIR_NAME_33		-
285.0	FTIR_MW_33		-
286.0	FTIR_CHANNEL_33		-
287.0	FTIR_CHANNEL_TS_33		-
288.0	FTIR_CHANNEL_DRY_33	NO	-
289.0	FTIR_NAME_34		-
290.0	FTIR_MW_34		-
291.0	FTIR_CHANNEL_34		-
292.0	FTIR_CHANNEL_TS_34		-
293.0	FTIR_CHANNEL_DRY_34	NO	-
294.0	FTIR_NAME_35		-
295.0	FTIR_MW_35		-
296.0	FTIR_CHANNEL_35		-
297.0	FTIR_CHANNEL_TS_35		-
298.0	FTIR_CHANNEL_DRY_35	NO	-
299.0	FTIR_NAME_36		-
300.0	FTIR_MW_36		-

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi Q5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
301.0	FTIR_CHANNEL_36		-
302.0	FTIR_CHANNEL_TS_36		-
303.0	FTIR_CHANNEL_DRY_36	NO	-
304.0	FTIR_NAME_37		-
305.0	FTIR_MW_37		-
306.0	FTIR_CHANNEL_37		-
307.0	FTIR_CHANNEL_TS_37		-
308.0	FTIR_CHANNEL_DRY_37	NO	-
309.0	FTIR_NAME_38		-
310.0	FTIR_MW_38		-
311.0	FTIR_CHANNEL_38		-
312.0	FTIR_CHANNEL_TS_38		-
313.0	FTIR_CHANNEL_DRY_38	NO	-
314.0	FTIR_NAME_39		-
315.0	FTIR_MW_39		-
316.0	FTIR_CHANNEL_39		-
317.0	FTIR_CHANNEL_TS_39		-
318.0	FTIR_CHANNEL_DRY_39	NO	-
319.0	FTIR_NAME_40		-
320.0	FTIR_MW_40		-
321.0	FTIR_CHANNEL_40		-
322.0	FTIR_CHANNEL_TS_40		-
323.0	FTIR_CHANNEL_DRY_40	NO	-
324.0	Legislation Type (1=HDIUT 2=EU H	4.00000	-
325.0	WholeTest_NOx_corr	5.00000	-
326.0	WholeTest_Hum_corr	2.00000	-
327.0	CD_Distance	0.00000	km
328.0	CD_NOx	0.00000	mg/km
329.0	CD_CO	0.00000	mg/km
330.0	CD_CO2	0.00000	g/km

#	Text	Value	Unit
-	----	----	----
331.0	CD_NMHC	0.00000	mg/km
332.0	CD_CH4	0.00000	mg/km
333.0	CD_THC	0.00000	mg/km
334.0	CD_PN		#/km
335.0	WLTC_LOW_SPEED_gkm		g/km
336.0	WLTC_LOW_SPEED_FAC	1.20000	-
337.0	WLTC_MEDIUM_SPEED_gkm		g/km
338.0	WLTC_HIGH_SPEED_gkm		g/km
339.0	WLTC_HIGH_SPEED_FAC	1.10000	-
340.0	WLTC_EXTRA_HIGH_SPEED_gkm		g/km
341.0	WLTC_EXTRA_HIGH_SPEED_FA	1.05000	-
342.0	TOL_NORMAL_DRIVING	25.00000	%
343.0	TOL_SEVERE_DRIVING	50.00000	%
344.0	Increase Tolerance Nomral Driving	NO	-
345.0	Bin1_min		km/h
346.0	Bin2_min		km/h
347.0	Bin3_min		km/h
348.0	Bin1_max		km/h
349.0	Bin2_max		km/h
350.0	Bin3_max		km/h
351.0	Clear_R0	125.40000	N
352.0	Clear_R1	0.29300	Nh/km
353.0	Clear_R2	0.02795	N*(h/km) ²
354.0	Clear_SMK	1470.00000	kg
355.0	Clear_Rated_Power	140.00000	kW
356.0	Clear_Ref_Velocity	70.00000	km/h
357.0	Clear_Ref_Acc	0.45000	m/s ²
358.0	Clear_Smooth	3.00000	s
359.0	EXTC_From_High_Temp	30.00000	degC
360.0	EXTC_To_High_Temp	35.00000	degC

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi Q5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
361.0	EXTC_From_Low_Temp	-7.00000	degC
362.0	EXTC_To_Low_Temp	0.00000	degC
363.0	Euro 6d or Euro 6d temp	NO	-
364.0	EXTC_From_Altitude	700.00000	m
365.0	EXTC_To_Altitude	1300.00000	m
366.0	EXTC_CORR_FAC	1.60000	
367.0	weight cold start (YES/NO)	NO	-
368.0	precon and soak done (YES/NO)	NO	-
369.0	PATH_PRECON_FILE		
370.0	filter velocity (YES/NO)	NO	-
371.0	filter velocity auto(YES/NO)	NO	-
372.0	Ki_CO		
373.0	Ki_CO2		
374.0	Ki_NOx		
375.0	Ki_FACTOR_CO2 (YES/NO)	NO	-
376.0	Ki_OFFSET_CO2 (YES/NO)	NO	-
377.0	Ki_FACTOR_CO (YES/NO)	NO	-
378.0	Ki_OFFSET_CO (YES/NO)	NO	-
379.0	Ki_FACTOR_NOx (YES/NO)	NO	-
380.0	Ki_OFFSET_NOx (YES/NO)	NO	-
381.0	Ki_OFF (YES/NO)	NO	-
382.0	HD legislations	1.00000	-
383.0	RDE legislations	1.00000	-
384.0	Submission Documents (YES/NO)	NO	-
385.0	General Setup Parameters Text	Mountain	-
386.0	Legislation Setup Parameters Text	Mountain	-
387.0	Trip Info		-
388.0	IN_TIME_REF		-
389.0	Sub-Trip Start: Auto	YES	-
390.0	Sub-Trip Start: Seconds	N/A	s

#	Text	Value	Unit
-	----	----	----
391.0	Sub-Trip End: Auto	YES	-
392.0	Sub-Trip End: Seconds	N/A	s
393.0	Unit System	2.00000	-
394.0	Calculate: PM Emissions	NO	-
395.0	Calculate: PN Emissions	NO	-
396.0	Output: Summary	YES	-
397.0	Output: Emissions	YES	-
398.0	Output: Raw Data	YES	-
399.0	Output: Zero Span	YES	-
400.0	Output: Data Consistency	NO	-
401.0	Output: Window Plots	YES	-
402.0	Fuel Rate ECU vs. EU ISO16183	y = 10000000000.0000 x - 0.000 R ² =10000000000.000 SEE=	
403.0	PEMS post processing version	Rel_10_B192	
404.0	Concerto version	480.00000	
405.0	Concerto build	215.00000	
406.0	USERNAME	EFR	

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi Q5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City
Page: Trip Summary

Start Date: 09/21/2017
Start Time: 07:20:08.0



Trip Duration	3749.00	s	ave THC	-1.50278	ppm	BS CO2	n/a	g/hphr
Trip Duration (a)	3749.00	s	ave NMHC	2.06447	ppm	BS CO	n/a	g/hphr
Trip Distance	16.13	mi	ave CH4	-3.24296	ppm	BS THC	n/a	g/hphr
Trip Distance (a)	16.13	mi	ave CO	475.39999	ppm	BS NMHC	n/a	g/hphr
Trip Fuel Cons. (b)	n/a	kg	ave CO2	12.32915	%	BS CH4	n/a	g/hphr
Trip Fuel Cons. (ab)	n/a	kg	ave NOx	6.80700	ppm	BS NO (d)	n/a	g/hphr
Trip Fuel Cons. EU (ac)	2.65	kg	ave PM	n/a	mg/m3	BS NO2	n/a	g/hphr
Trip Fuel Cons. US (ac)	2.62	kg	ave Soot meas	n/a	mg/m3	BS NOx	n/a	g/hphr
Trip Fuel Cons. Volume (b)	n/a	gall	ave Soot	n/a	mg/m3	BS Soot	n/a	g/hphr
Trip Fuel Cons. Volume (ab)	n/a	gall	ave PN	n/a	#/cm3	BS Soot meas	n/a	g/hphr
Trip Fuel Cons. Volume EU (ac)	0.94	gall	tot THC	0.05303	g	BS PM	n/a	g/hphr
Trip Fuel Cons. Volume US (ac)	0.93	gall	tot NMHC	0.07193	g	BS PN	n/a	#/hpr
Trip Fuel Economy (b)	n/a	mpg_US	tot CH4	0.01125	g	DS CO2	492.97719	g/mi
Trip Fuel Economy (ab)	n/a	mpg_US	tot CO	20.19619	g	DS CO	1.25205	g/mi
Trip Fuel Economy EU (ac)	17.21	mpg_US	tot CO2	7951.94195	g	DS THC	0.00329	g/mi
Trip Fuel Economy US (ac)	17.39	mpg_US	tot NO (d)	0.28717	g	DS NMHC	0.00446	g/mi
Trip Av. Eng. Speed	1195.45	rpm	tot NO2	0.06603	g	DS CH4	0.00070	g/mi
Trip Av. Torque	n/a	lbft	tot NOx	0.35122	g	DS NO (d)	0.01780	g/mi
Trip Av. Power	n/a	hp	tot Soot	n/a	g	DS NO2	0.00409	g/mi
Trip Work	n/a	hphr	tot Soot meas	n/a	g	DS NOx	0.02177	g/mi
Trip Exhaust Mass	41.48	kg	tot PM	n/a	g	DS Soot	n/a	g/mi
Trip Exhaust Mass EU (ac)	n/a	kg	tot PN	n/a	#	DS Soot meas	n/a	g/mi
Trip Exhaust Mass US (ac)	n/a	kg	PM measurement type	0.00000	-	DS PM	n/a	g/mi
Trip Av. Amb. Temperature	75.51	deg_F	PM correction type	1.00000	alpha(HC)	DS PN	n/a	#/mi
Trip Av. Humidity	57.23	%	tot Soot on PM filter (estim.)	n/a	mg	FS CO2	n/a	g/kg
Fuel Type	Petrol (E10)		Soot --> PM simple scaling factor	1.00000	-	FS CO	n/a	g/kg
			Soot --> PM alpha scaling factor	0.00000	-	FS THC	n/a	g/kg
			Trip Av. Veh. Speed	15.48936	mi/hr	FS NMHC	n/a	g/kg
			Trip Velocity Zero	29.10109	%	FS CH4	n/a	g/kg
			Trip Velocity Urban	84.50253	%	FS NO (d)	n/a	g/kg
			Trip Velocity Rural	11.52307	%	FS NO2	n/a	g/kg
			Trip Velocity Motorway	3.97439	%	FS NOx	n/a	g/kg
						FS Soot	n/a	g/kg
						FS Soot meas	n/a	g/kg
						FS PM	n/a	g/kg
						FS PN	n/a	#/kg

(a) GAS PEMS measurement state only, (b) based on fuel rate input (ECU, Fuel Meter), (c) calculated from carbon balance
(d) NO calculated using molecular weight of NO2

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi Q5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Trip Summary Drift Corrected

Start Date: 09/21/2017

Start Time: 07:20:08.0

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Concerto M.O.V.E, 2017

Trip Duration	3749.00	s	ave THC DC	-2.03415	ppm	BS CO2 DC	n/a	g/hphr
Trip Duration (a)	3749.00	s	ave NMHC DC	1.35168	ppm	BS CO DC	n/a	g/hphr
Trip Distance	16.13	mi	ave CH4 DC	-3.07802	ppm	BS THC DC	n/a	g/hphr
Trip Distance (a)	16.13	mi	ave CO DC	479.74847	ppm	BS NMHC DC	n/a	g/hphr
Trip Fuel Cons. (b)	n/a	kg	ave CO2 DC	12.33324	%	BS CH4 DC	n/a	g/hphr
Trip Fuel Cons. (ab)	n/a	kg	ave NOx DC	6.80531	ppm	BS NO DC (d)	n/a	g/hphr
Trip Fuel Cons. EU (ac)	2.65	kg	ave PM	n/a	mg/m3	BS NO2 DC	n/a	g/hphr
Trip Fuel Cons. US (ac)	2.62	kg	ave Soot meas	n/a	mg/m3	BS NOx DC	n/a	g/hphr
Trip Fuel Cons. Volume (b)	n/a	gall	ave Soot	n/a	mg/m3	BS Soot	n/a	g/hphr
Trip Fuel Cons. Volume (ab)	n/a	gall	ave PN DC	n/a	#/cm3	BS Soot meas	n/a	g/hphr
Trip Fuel Cons. Volume EU (ac)	0.94	gall	tot THC DC	0.07178	g	BS PM	n/a	g/hphr
Trip Fuel Cons. Volume US (ac)	0.93	gall	tot NMHC DC	0.07586	g	BS PN DC	n/a	#/hpr
Trip Fuel Economy (b)	n/a	mpg_US	tot CH4 DC	0.01107	g	DS CO2 DC	493.14070	g/mi
Trip Fuel Economy (ab)	n/a	mpg_US	tot CO DC	20.38092	g	DS CO DC	1.26351	g/mi
Trip Fuel Economy EU (ac)	17.21	mpg_US	tot CO2 DC	7954.57941	g	DS THC DC	0.00445	g/mi
Trip Fuel Economy US (ac)	17.39	mpg_US	tot NO DC (d)	0.28727	g	DS NMHC DC	0.00470	g/mi
Trip Av. Eng. Speed	1195.45	rpm	tot NO2 DC	0.06579	g	DS CH4 DC	0.00069	g/mi
Trip Av. Torque	n/a	lbft	tot NOx DC	0.35108	g	DS NO DC (d)	0.01781	g/mi
Trip Av. Power	n/a	hp	tot Soot	n/a	g	DS NO2 DC	0.00408	g/mi
Trip Work	n/a	hphr	tot Soot meas	n/a	g	DS NOx DC	0.02177	g/mi
Trip Exhaust Mass	41.48	kg	tot PM	n/a	g	DS Soot	n/a	g/mi
Trip Exhaust Mass EU (ac)	n/a	kg	tot PN DC	n/a	#	DS Soot meas	n/a	g/mi
Trip Exhaust Mass US (ac)	n/a	kg	PM measurement type	0.00000	-	DS PM	n/a	g/mi
Trip Av. Amb. Temperature	75.51	deg_F	PM correction type	1.00000	alpha(HC)	DS PN DC	n/a	#/mi
Trip Av. Humidity	57.23	%	tot Soot on PM filter (estim.)	n/a	mg	FS CO2 DC	n/a	g/kg
Fuel Type	Petrol (E10)		Soot --> PM simple scaling factor	1.00000	-	FS CO DC	n/a	g/kg
			Soot --> PM alpha scaling factor	0.00000	-	FS THC DC	n/a	g/kg
			Trip Av. Veh. Speed	15.48936	mi/hr	FS NMHC DC	n/a	g/kg
			Trip Velocity Zero	29.10109	%	FS CH4 DC	n/a	g/kg
			Trip Velocity Urban	84.50253	%	FS NO DC (d)	n/a	g/kg
			Trip Velocity Rural	11.52307	%	FS NO2 DC	n/a	g/kg
			Trip Velocity Motorway	3.97439	%	FS NOx DC	n/a	g/kg
						FS Soot	n/a	g/kg
						FS Soot meas	n/a	g/kg
						FS PM	n/a	g/kg
						FS PN DC	n/a	#/kg

(a) GAS PEMS measurement state only, (b) based on fuel rate input (ECU, Fuel Meter), (c) calculated from carbon balance
 (d) NO calculated using molecular weight of NO2

Concerto Version: 480 Build 215, Serial Number: 8468
 M.O.V.E Post-Processing: Rel_10_B192

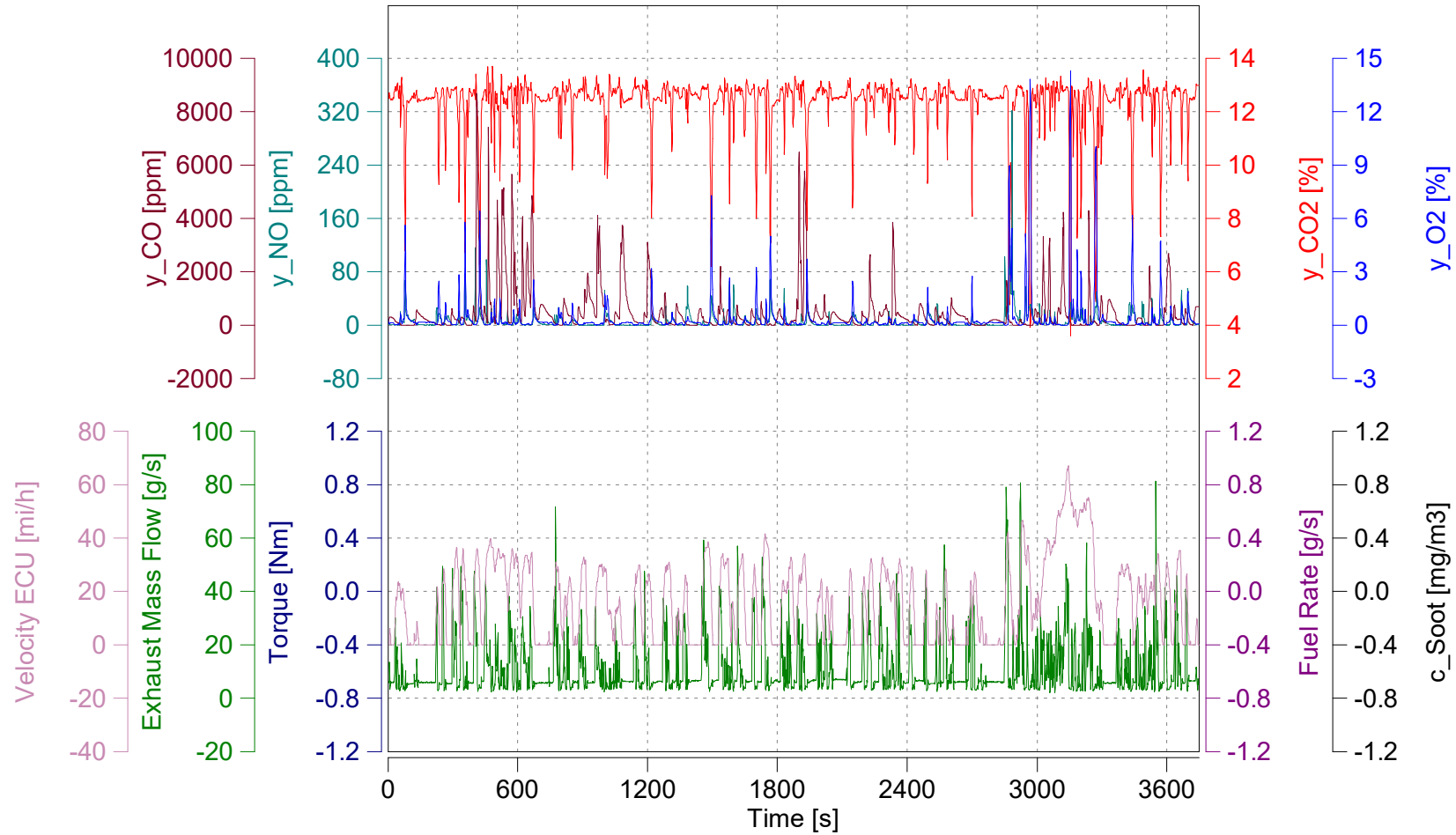
Vehicle: 2017 Audi Q5 /
 Engine: Gasoline / 2.0L
 NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
 Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Time Alignment Check

Start Date: 09/21/2017

Start Time: 07:20:08.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

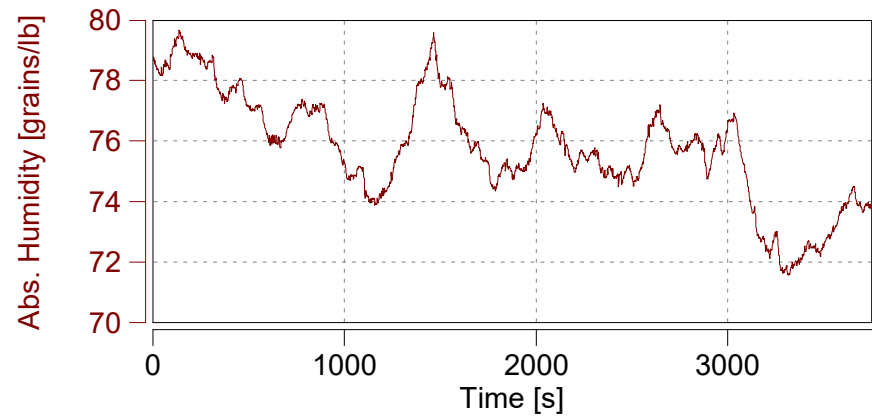
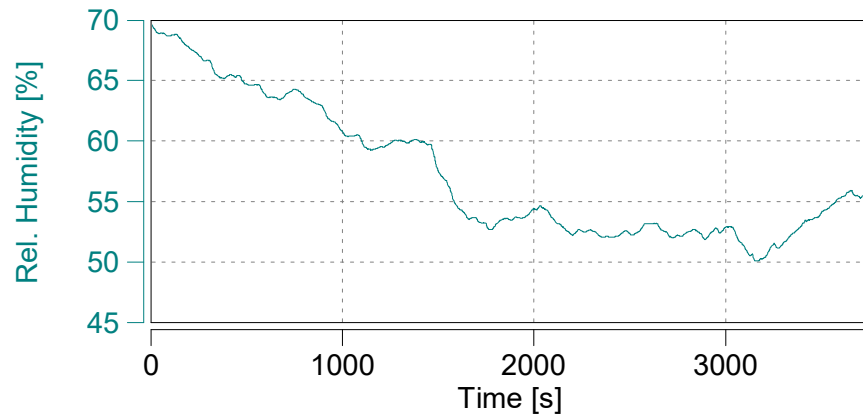
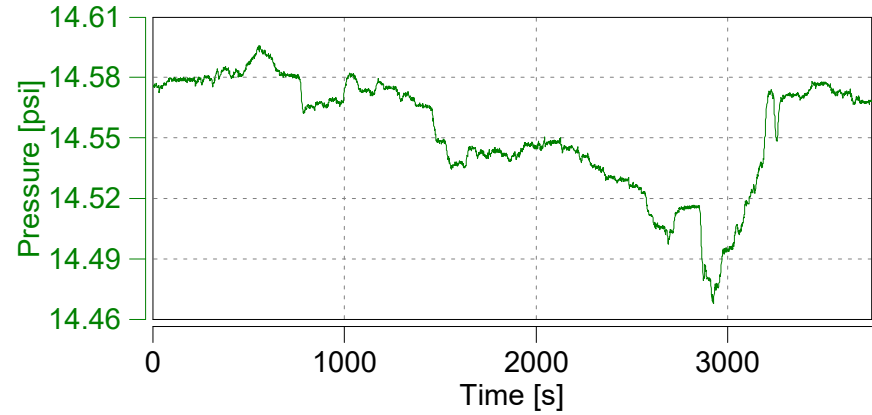
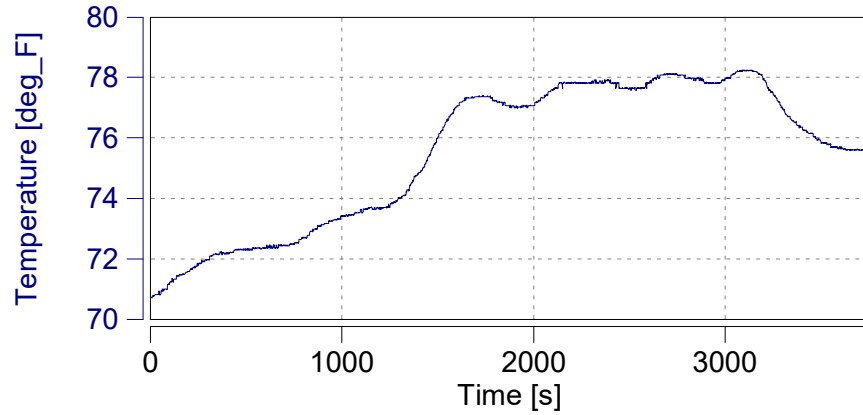
Vehicle: 2017 Audi Q5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Ambient Conditions

Start Date: 09/21/2017

Start Time: 07:20:08.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

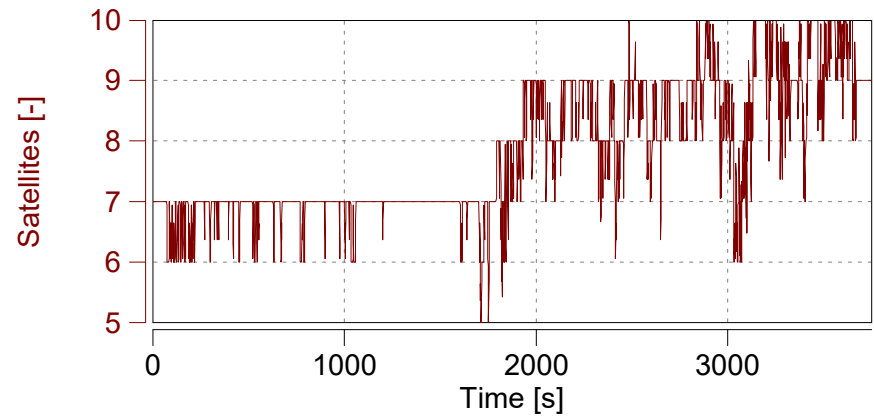
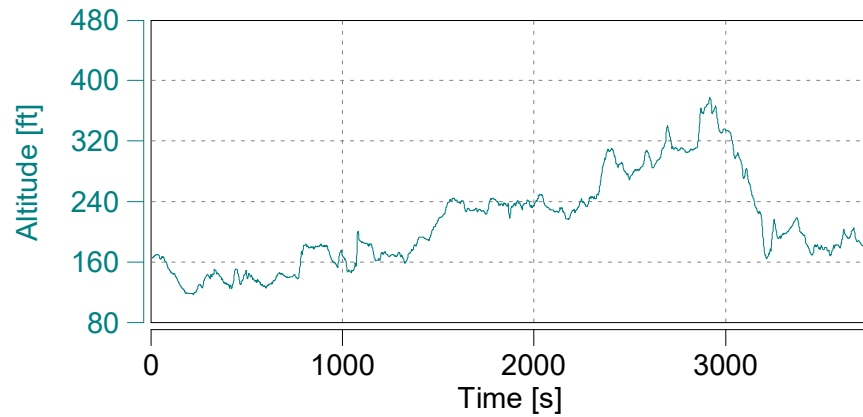
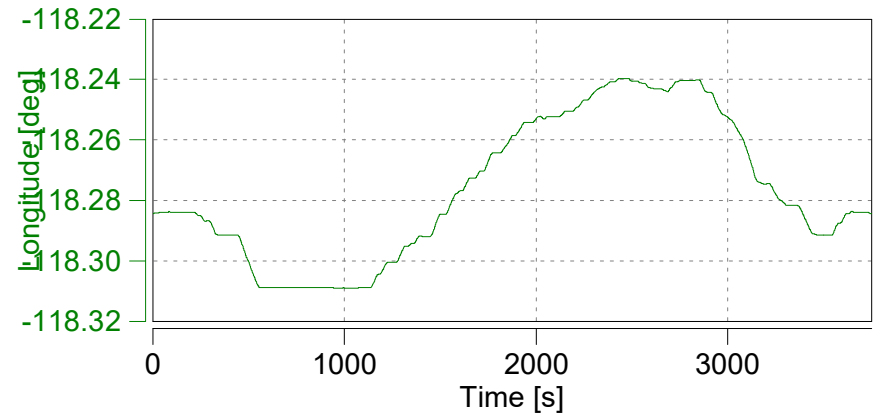
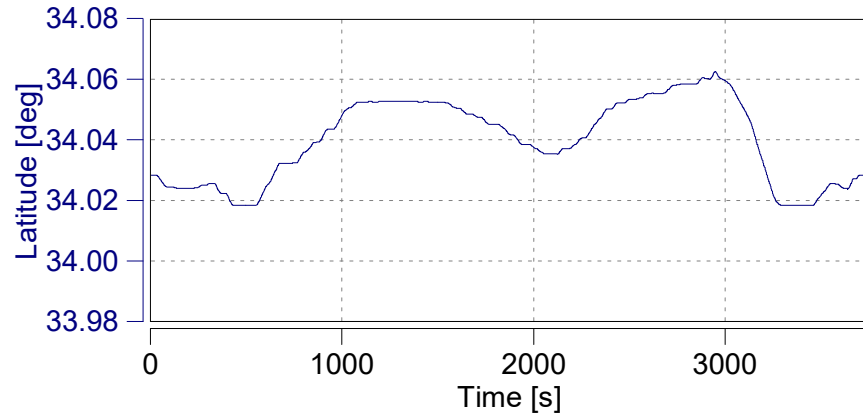
Vehicle: 2017 Audi Q5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: GPS

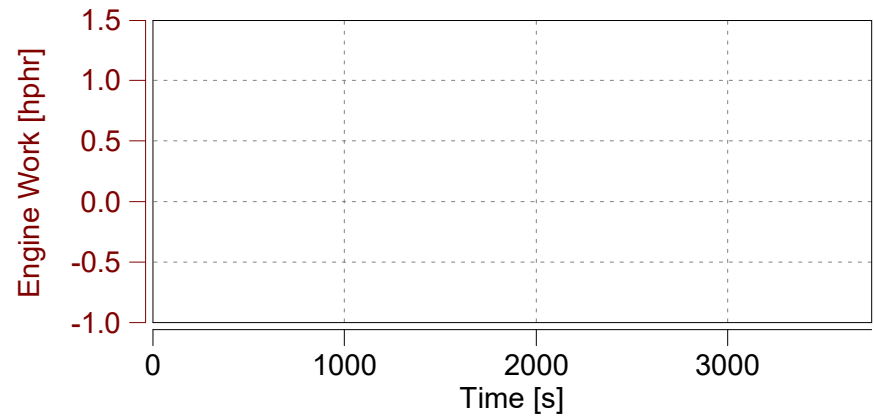
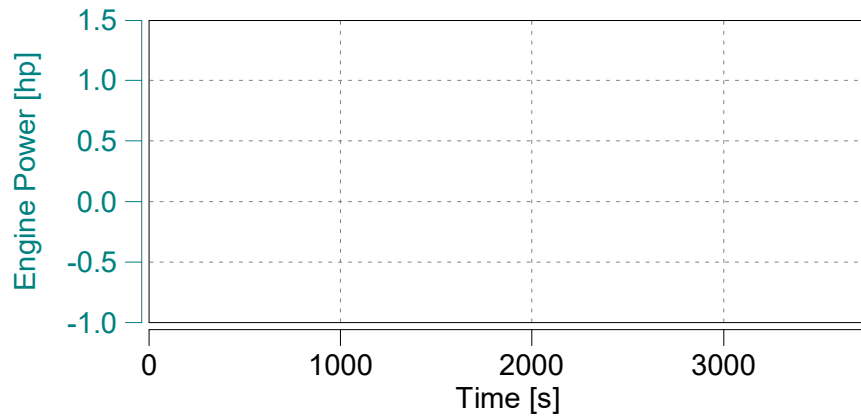
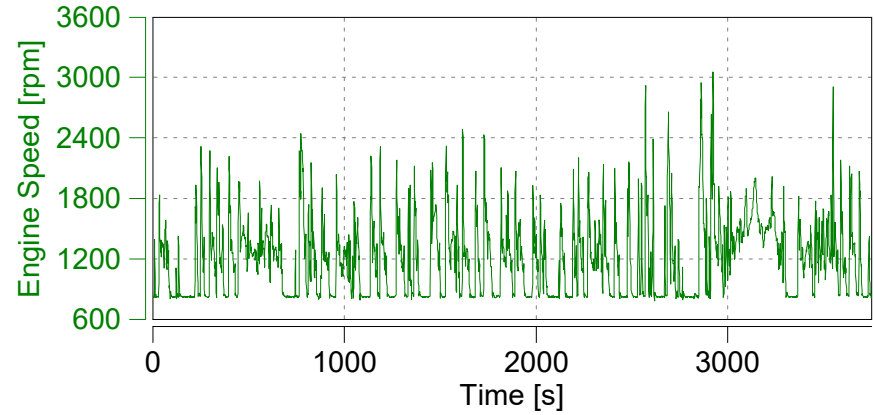
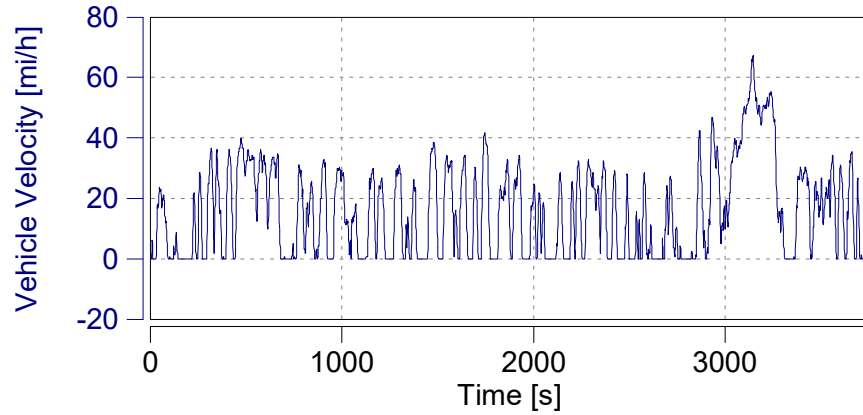
Start Date: 09/21/2017

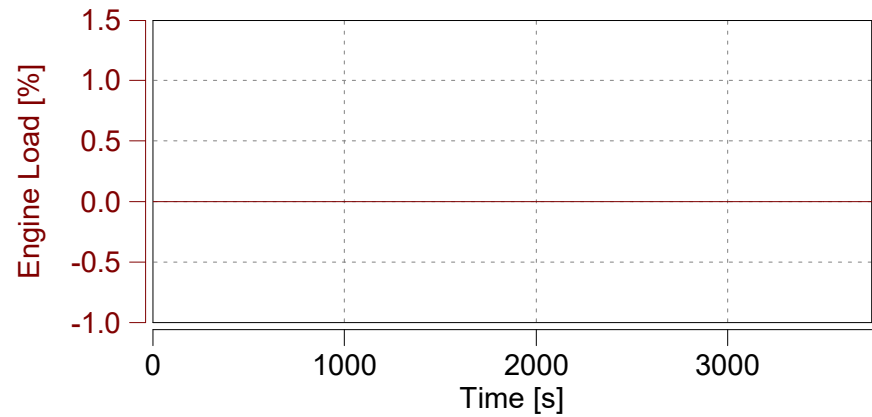
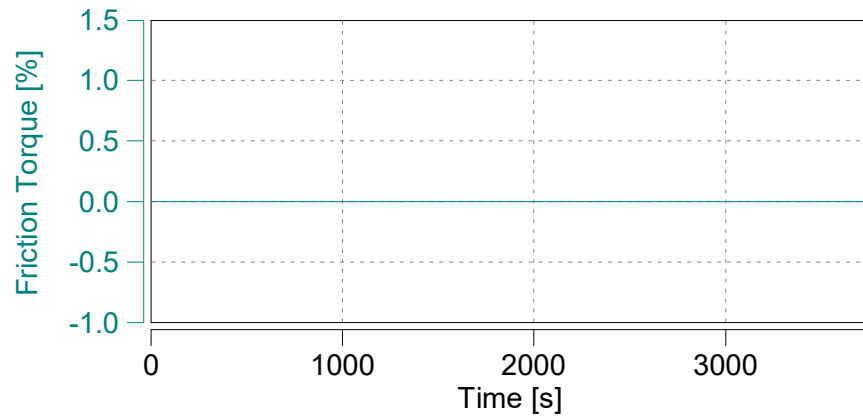
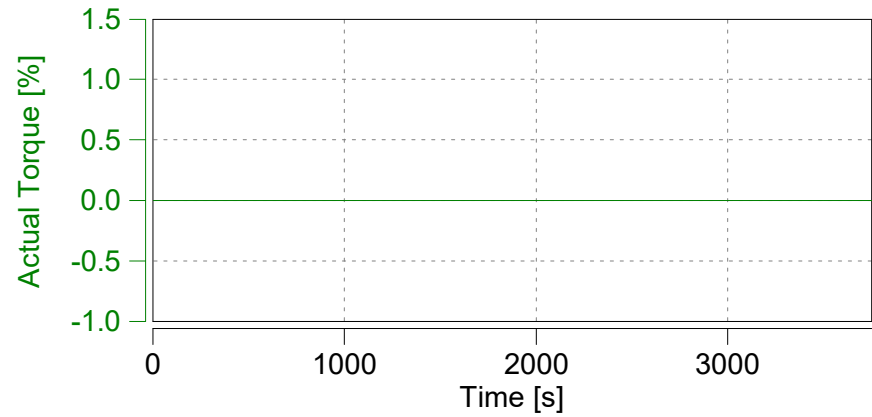
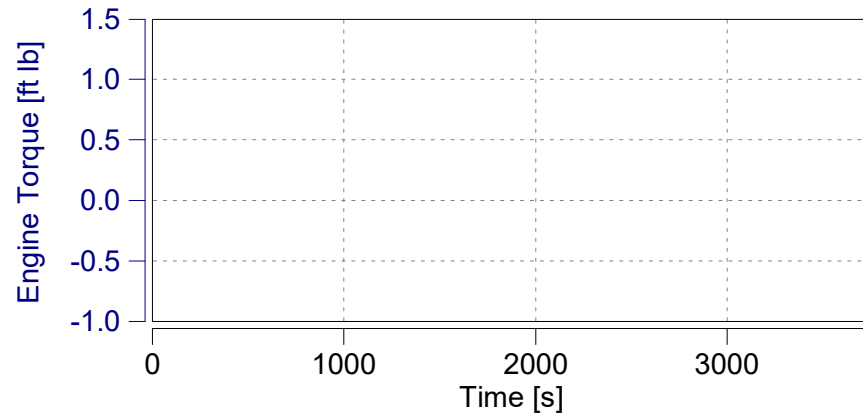
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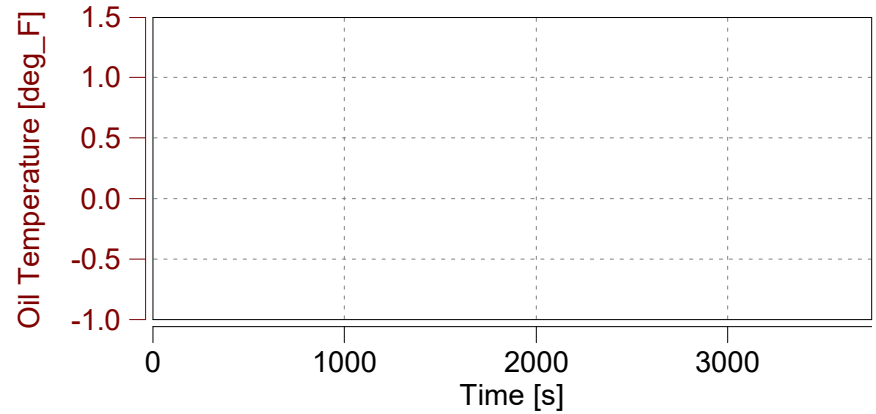
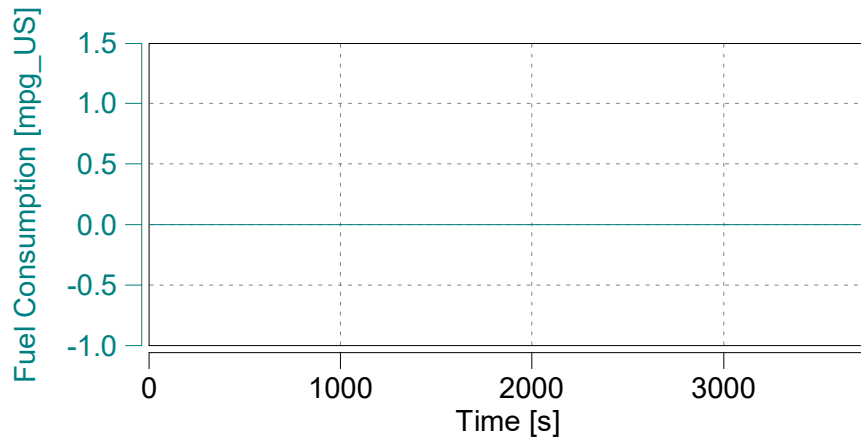
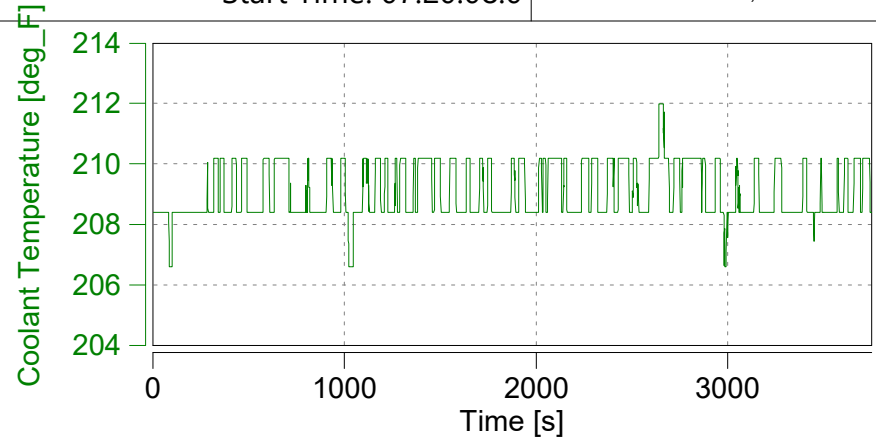
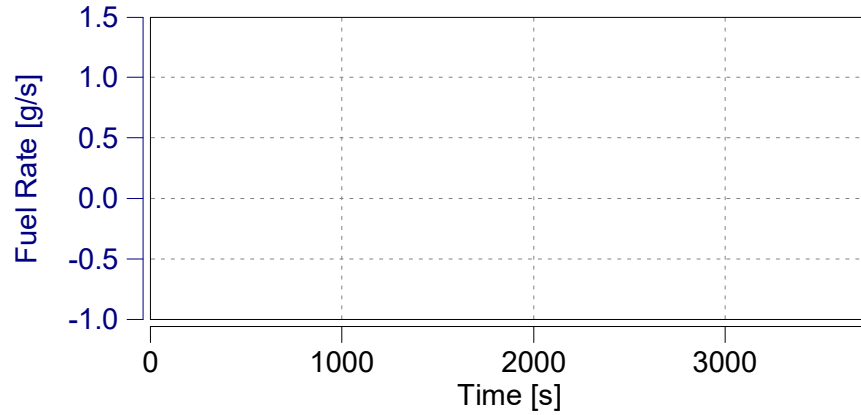


Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi Q5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90





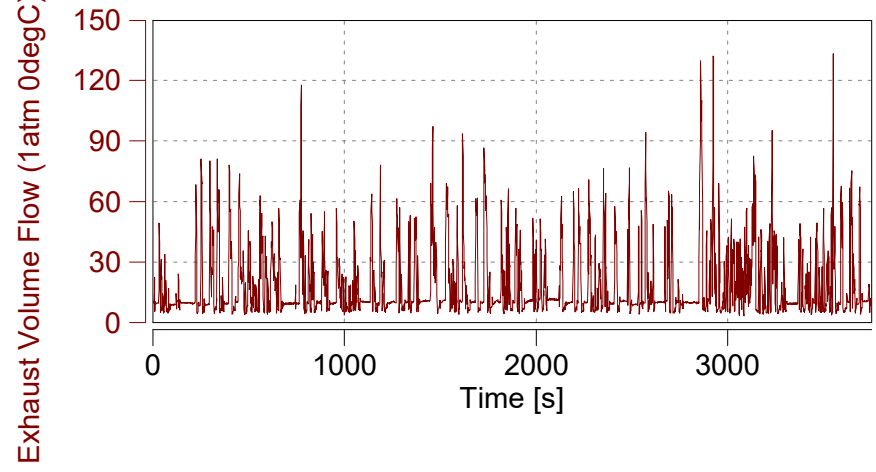
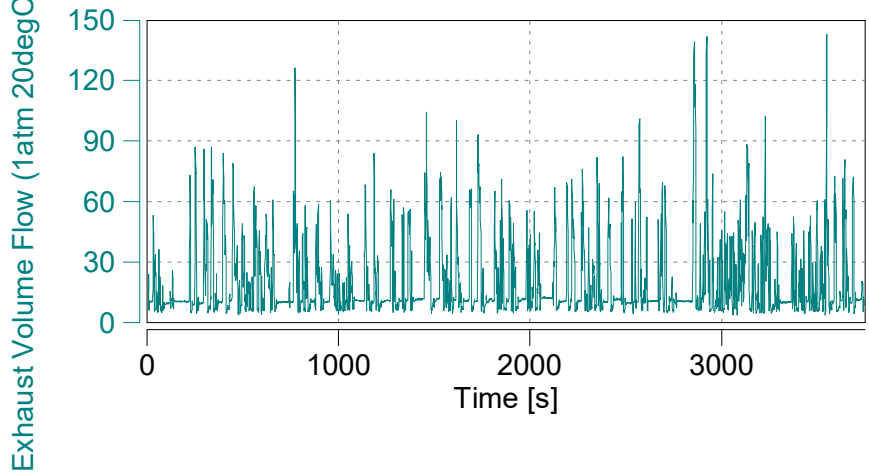
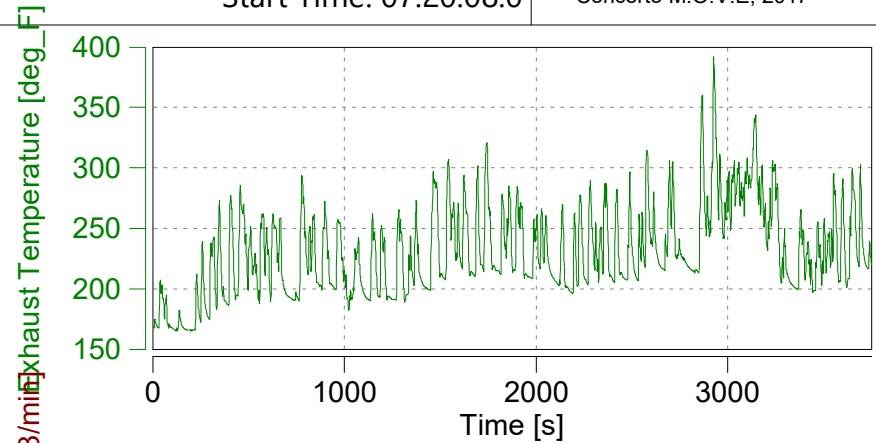
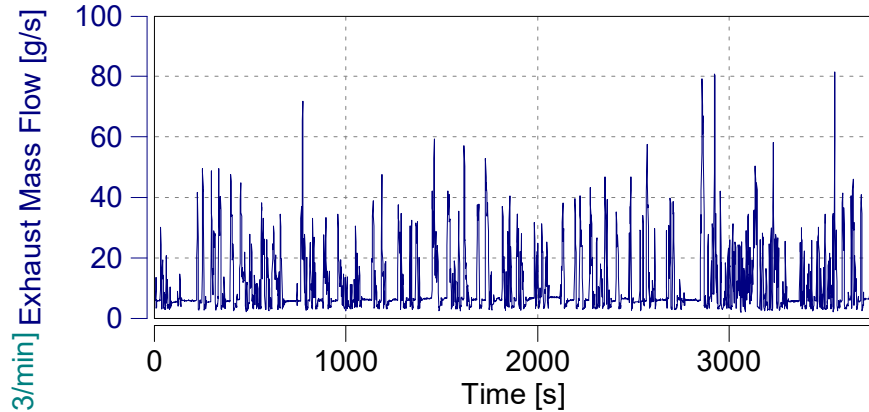


Case: City

Page: Exhaust Flow (1)

Start Date: 09/21/2017

Start Time: 07:20:08.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

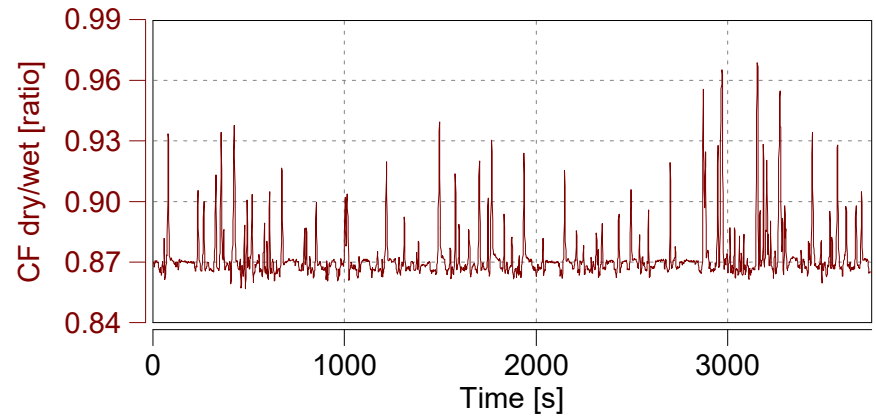
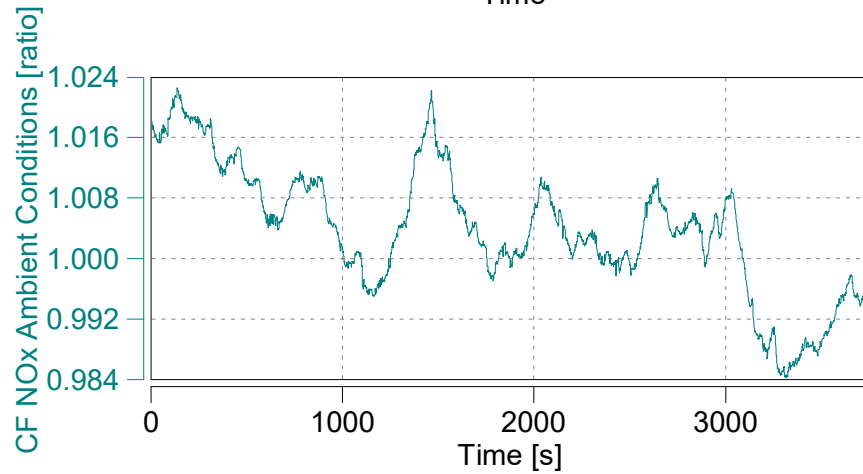
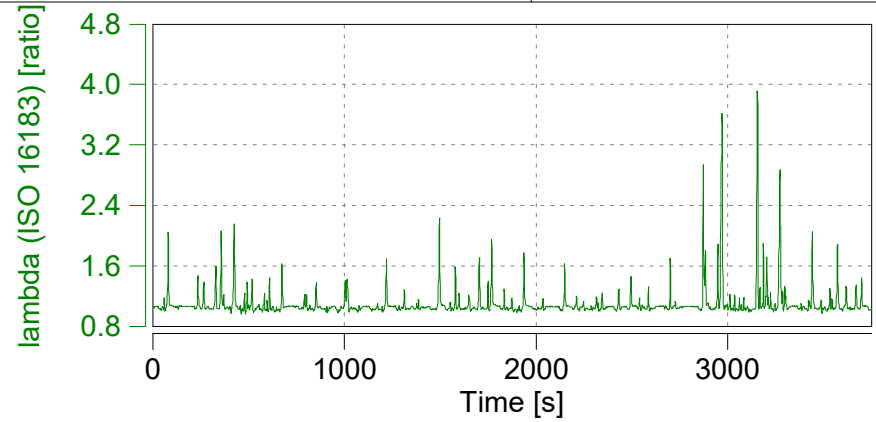
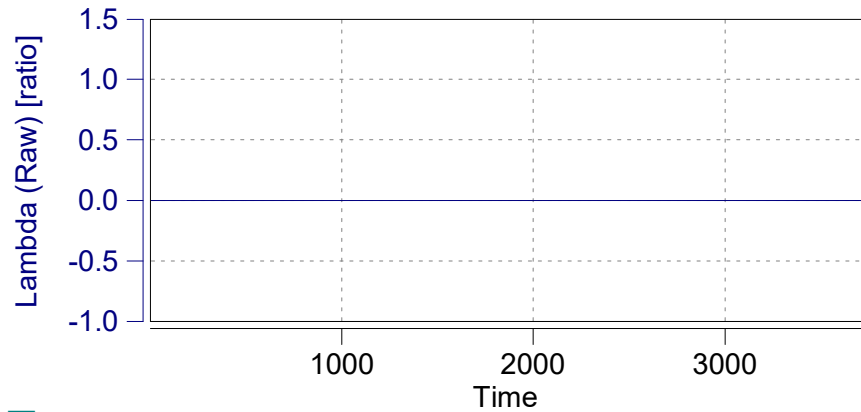
Vehicle: 2017 Audi Q5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Exhaust Flow (2)

Start Date: 09/21/2017

Start Time: 07:20:08.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

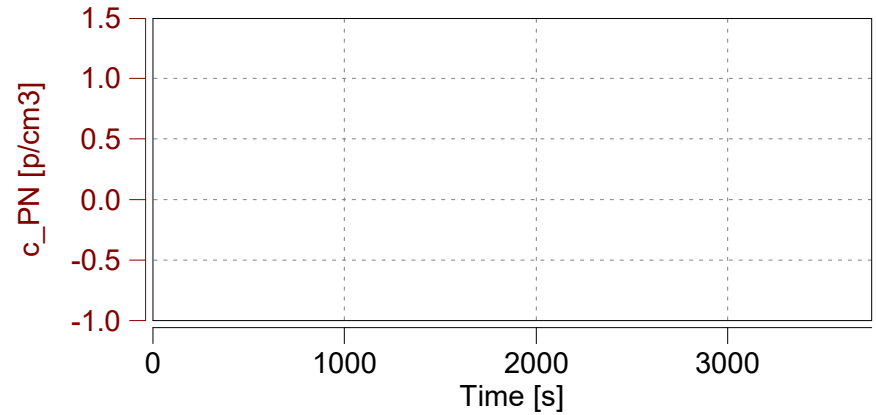
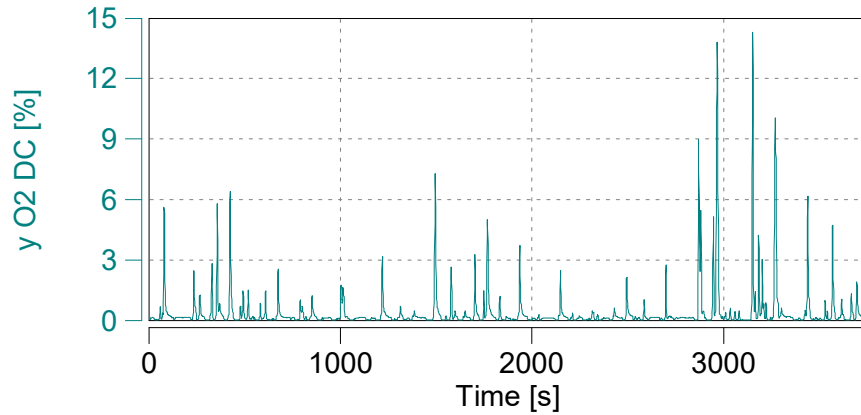
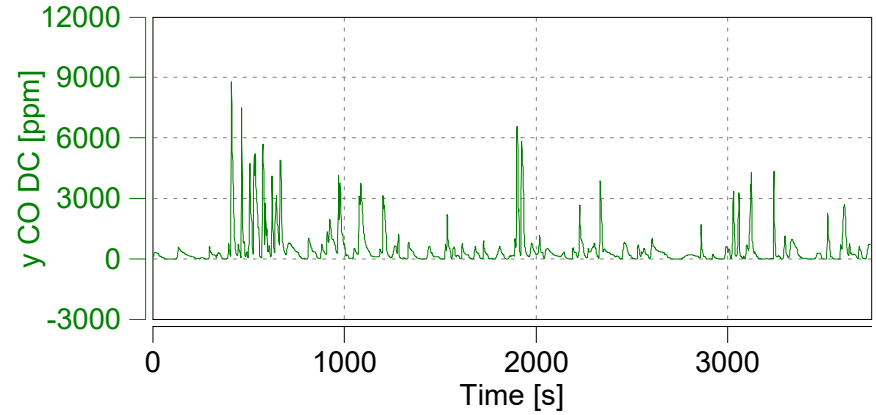
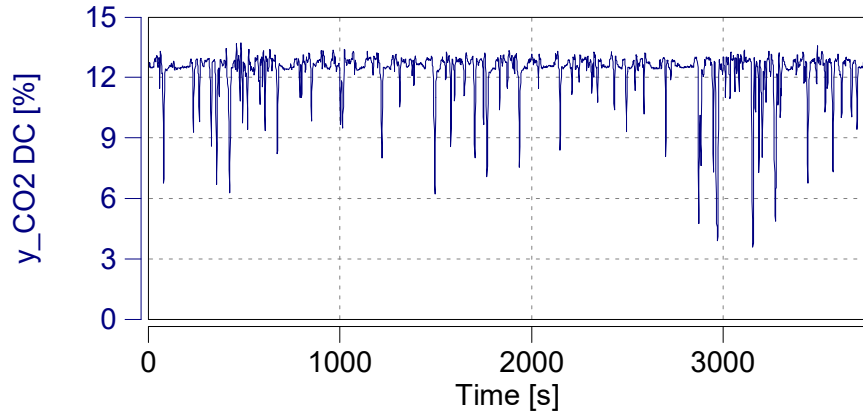
Vehicle: 2017 Audi Q5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Corrected Emissions (1)

Start Date: 09/21/2017

Start Time: 07:20:08.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

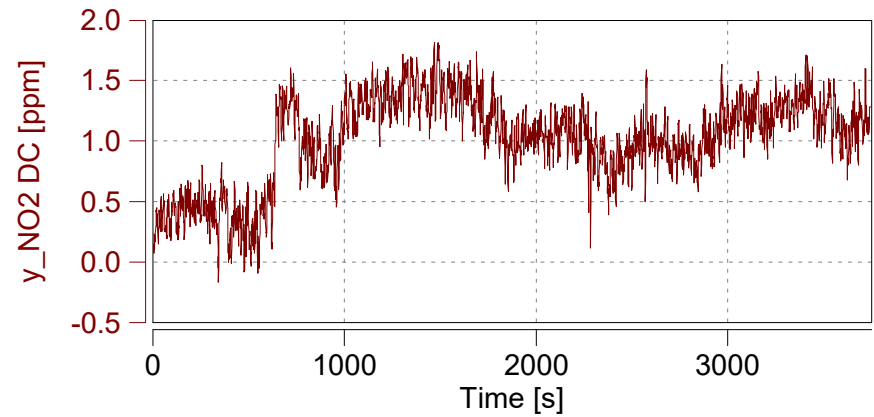
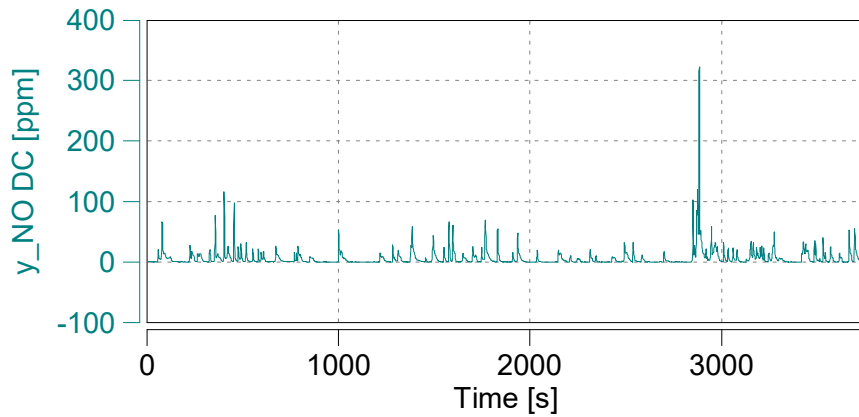
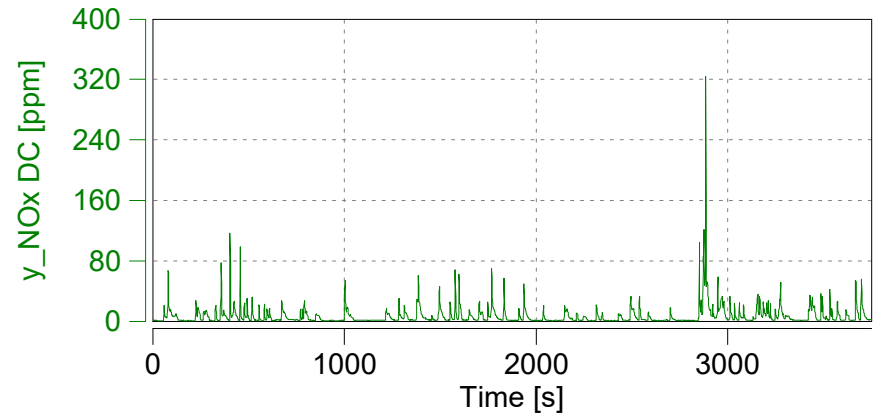
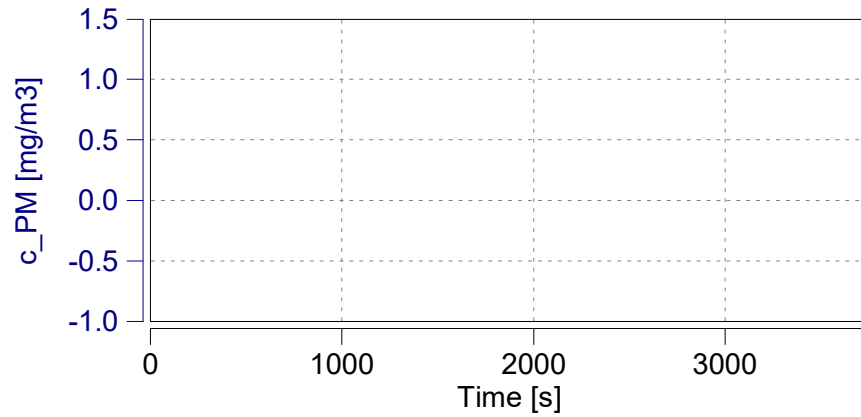
Vehicle: 2017 Audi Q5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Corrected Emissions (2)

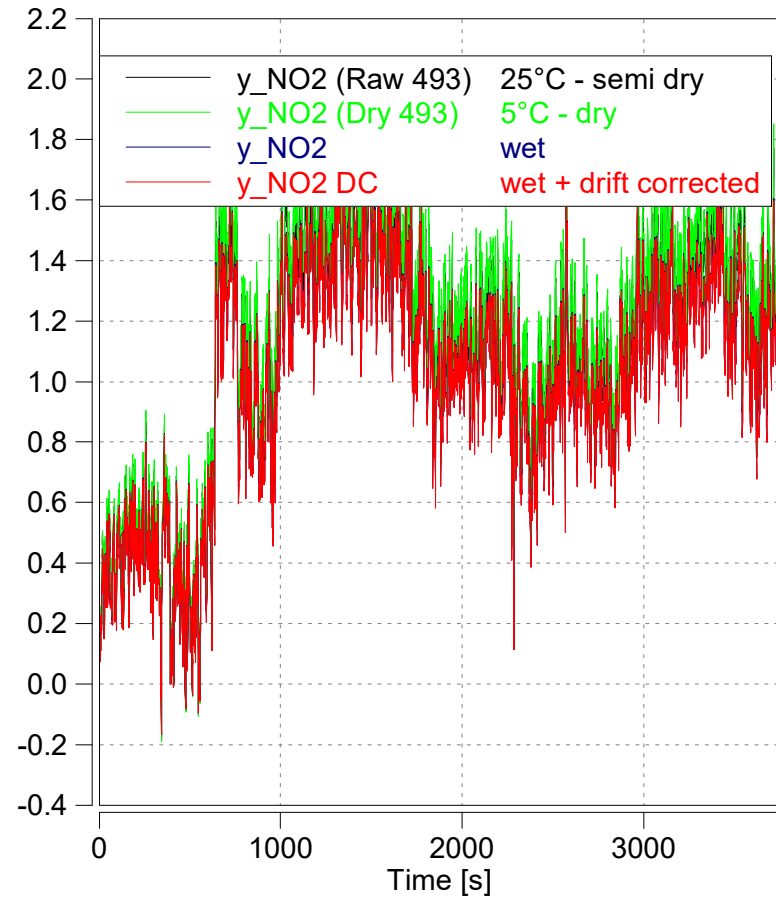
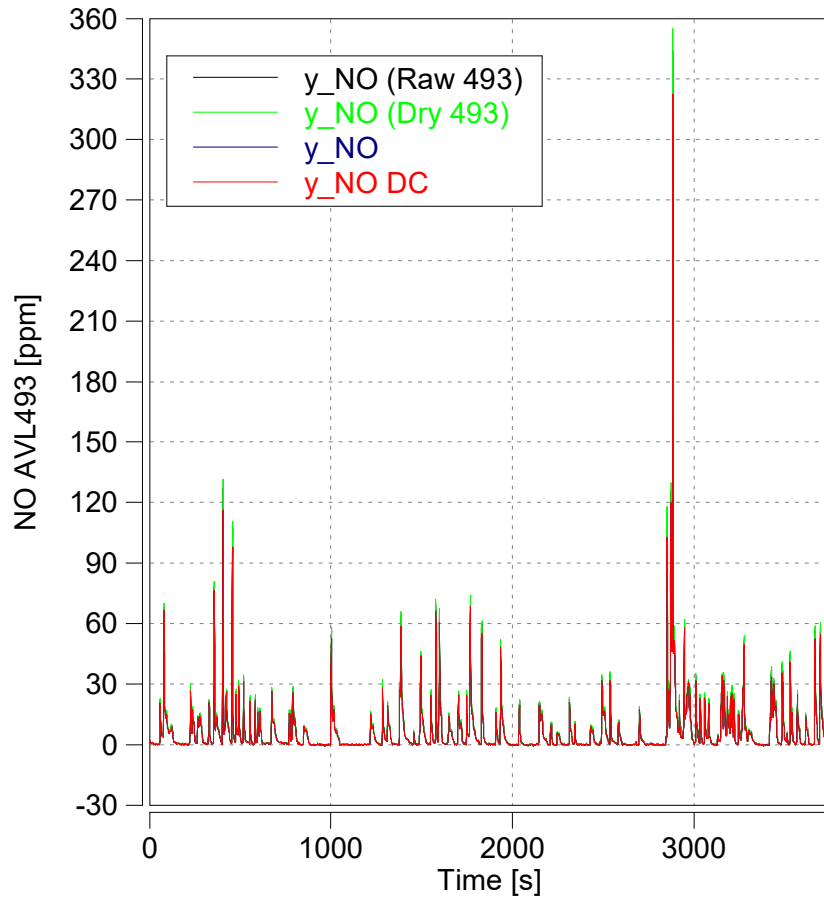
Start Date: 09/21/2017

Start Time: 07:20:08.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

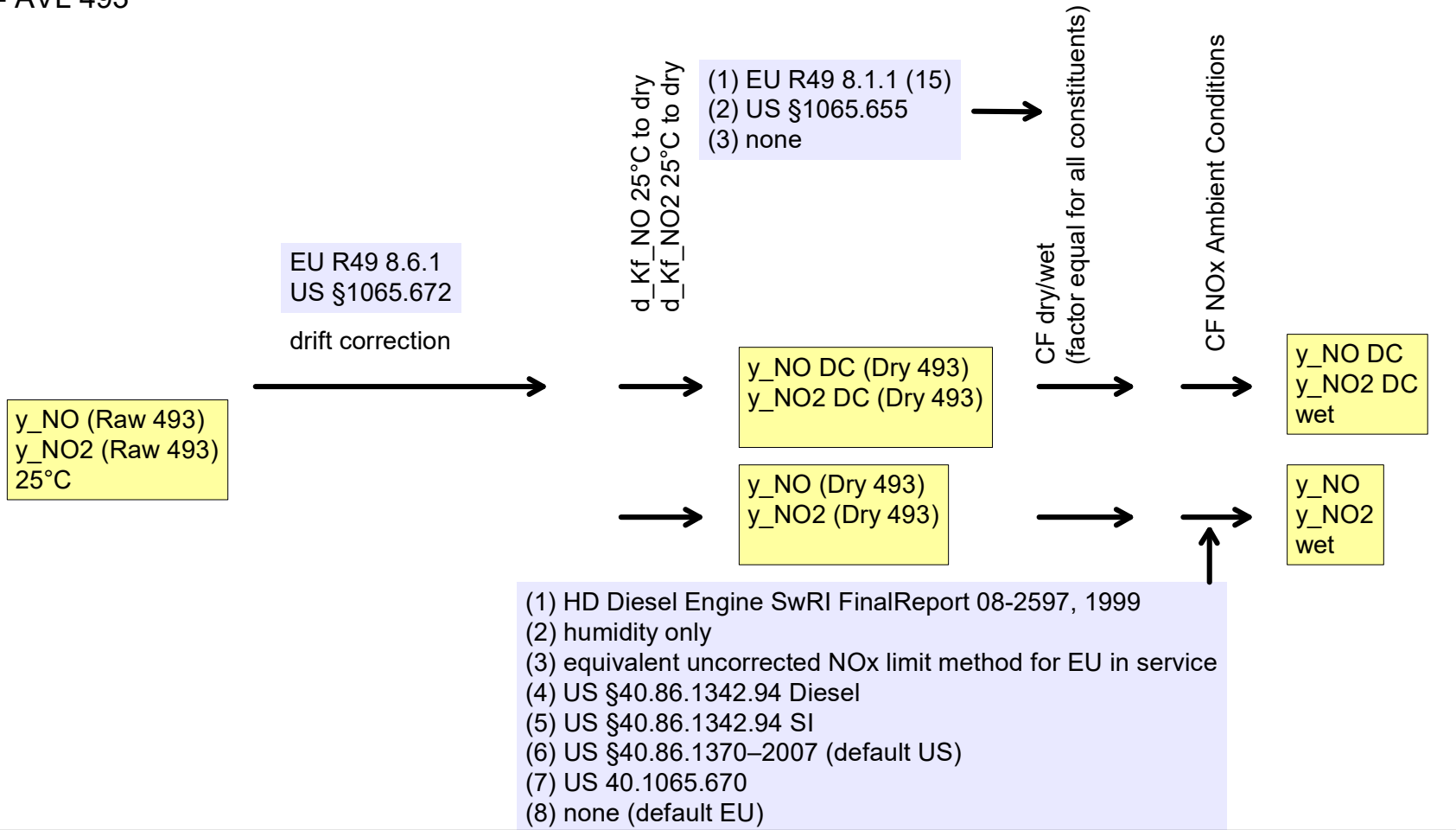
Vehicle: 2017 Audi Q5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi Q5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

NOx - AVL 493

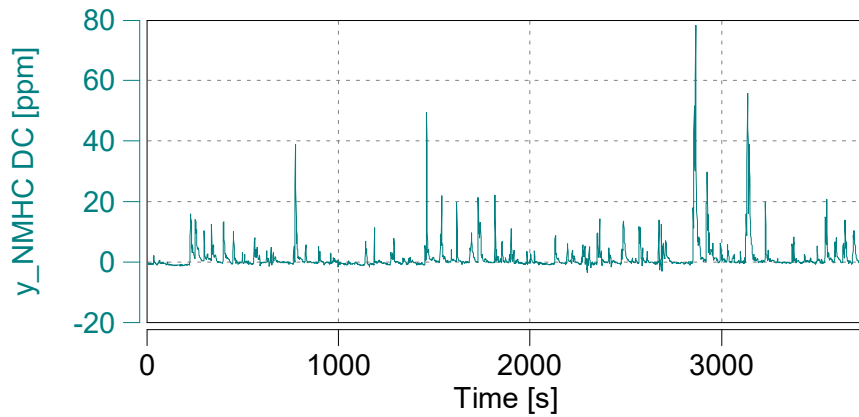
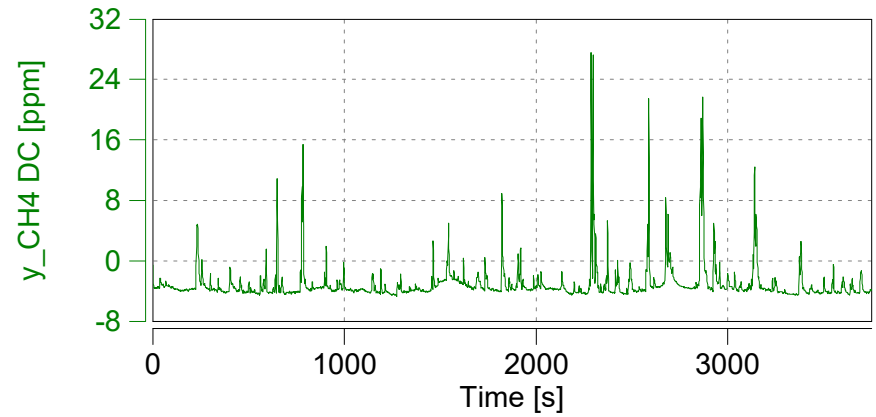
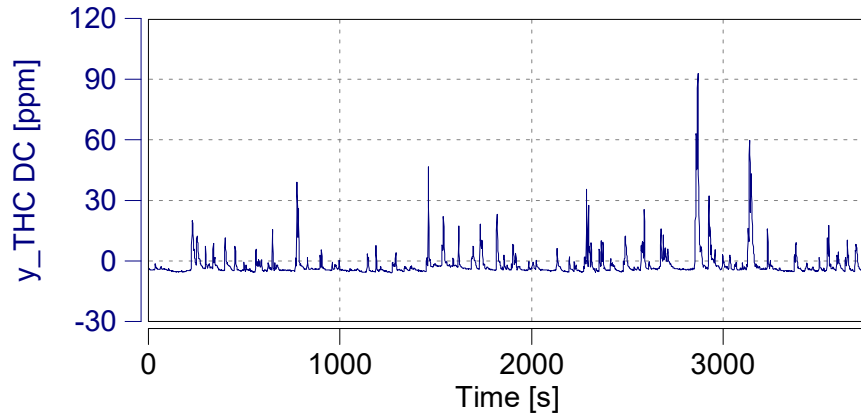


Case: City

Page: Corrected Emissions (5)

Start Date: 09/21/2017

Start Time: 07:20:08.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

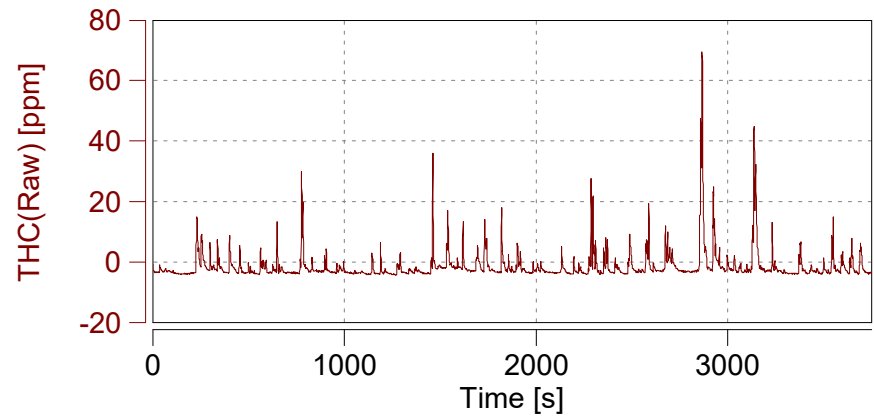
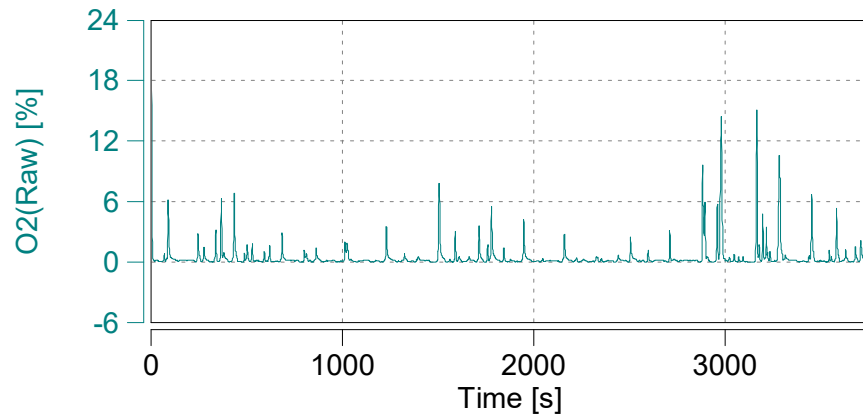
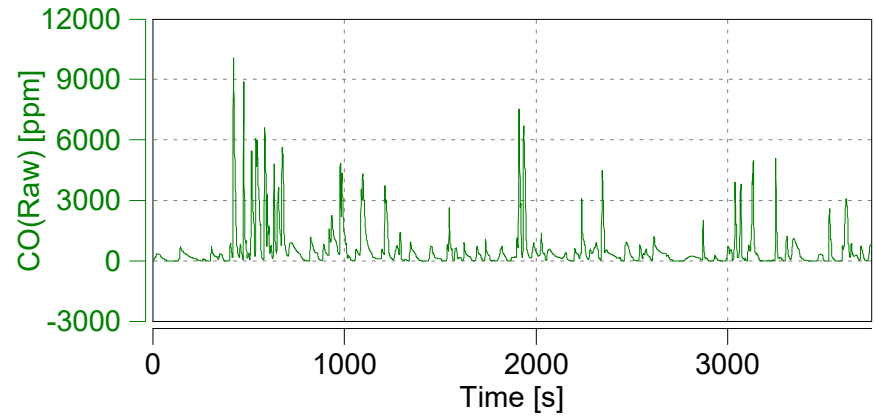
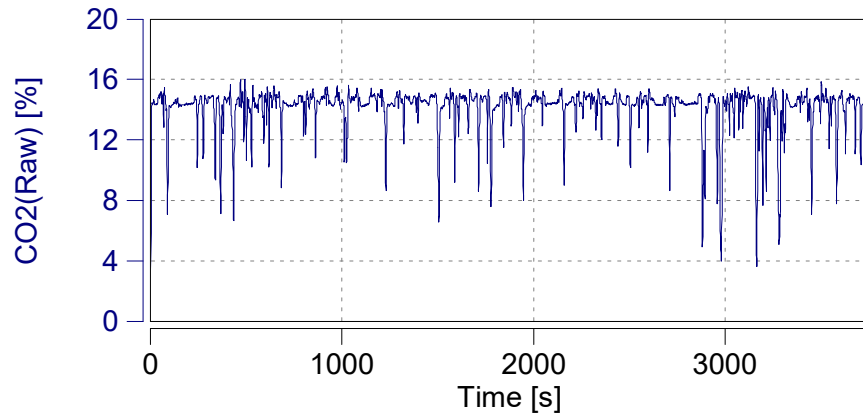
Vehicle: 2017 Audi Q5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Emissions Raw Data (1)

Start Date: 09/21/2017

Start Time: 07:20:08.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

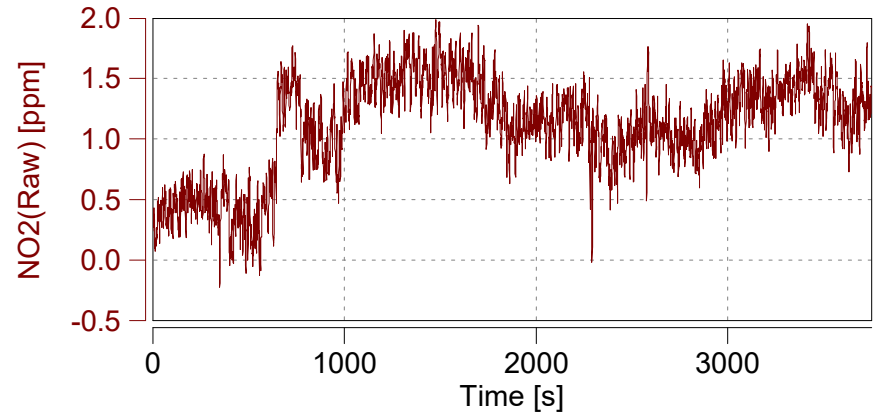
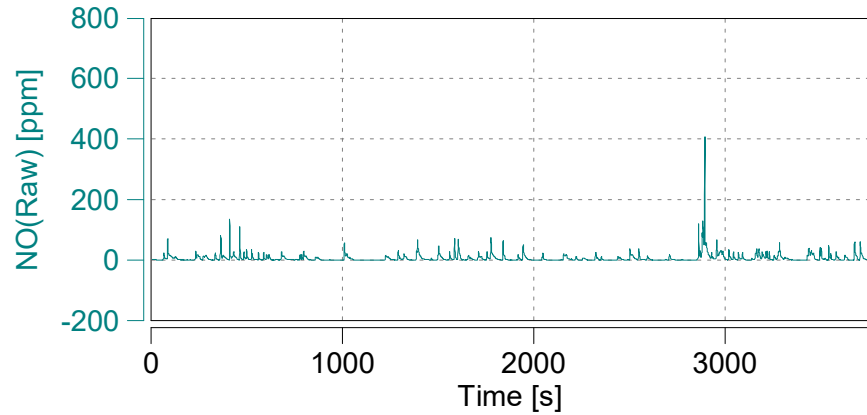
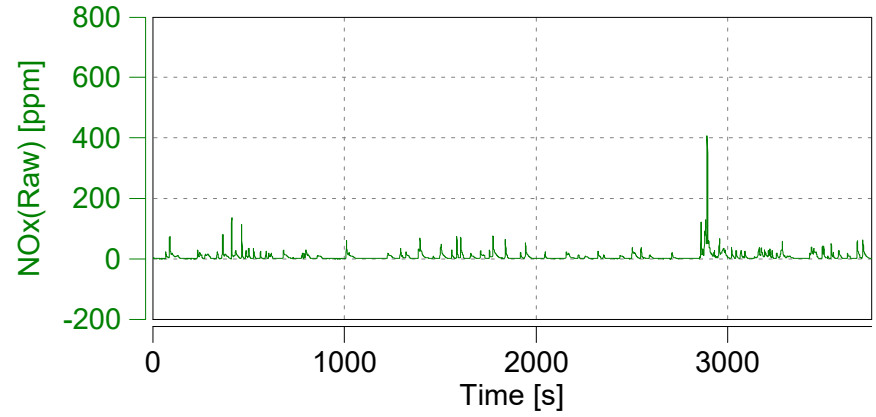
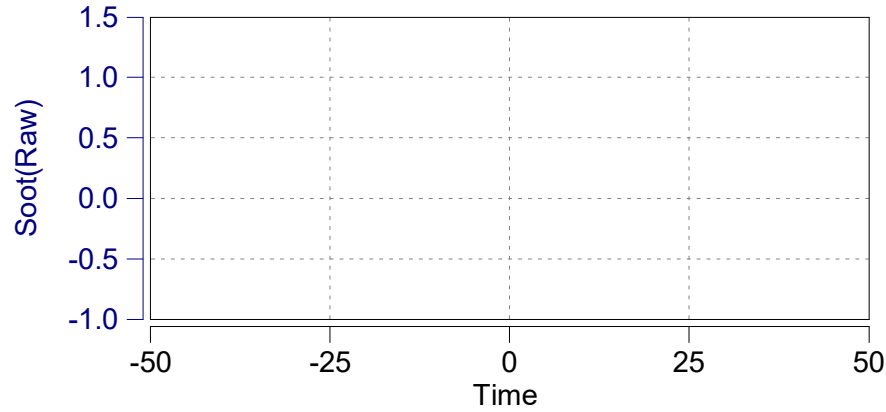
Vehicle: 2017 Audi Q5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Emissions Raw Data (2)

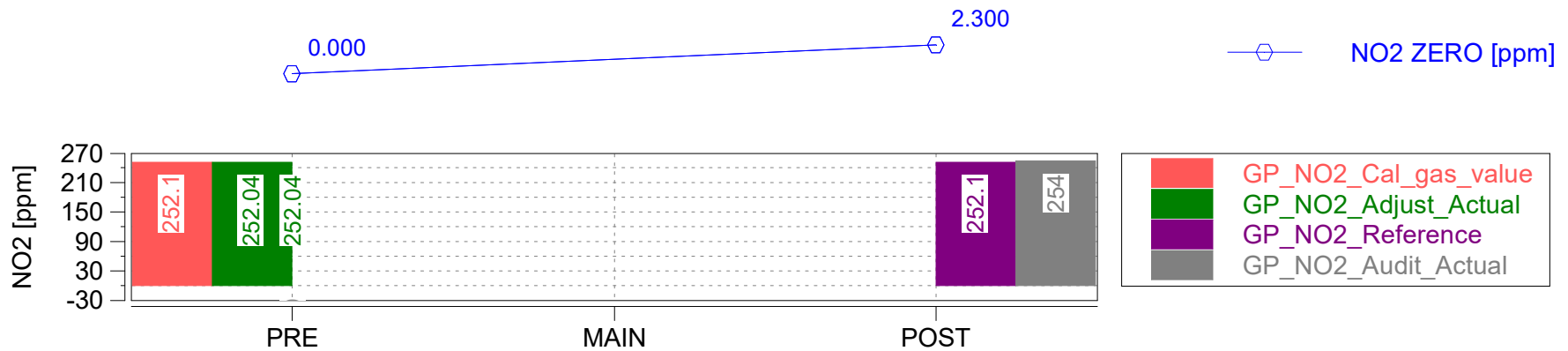
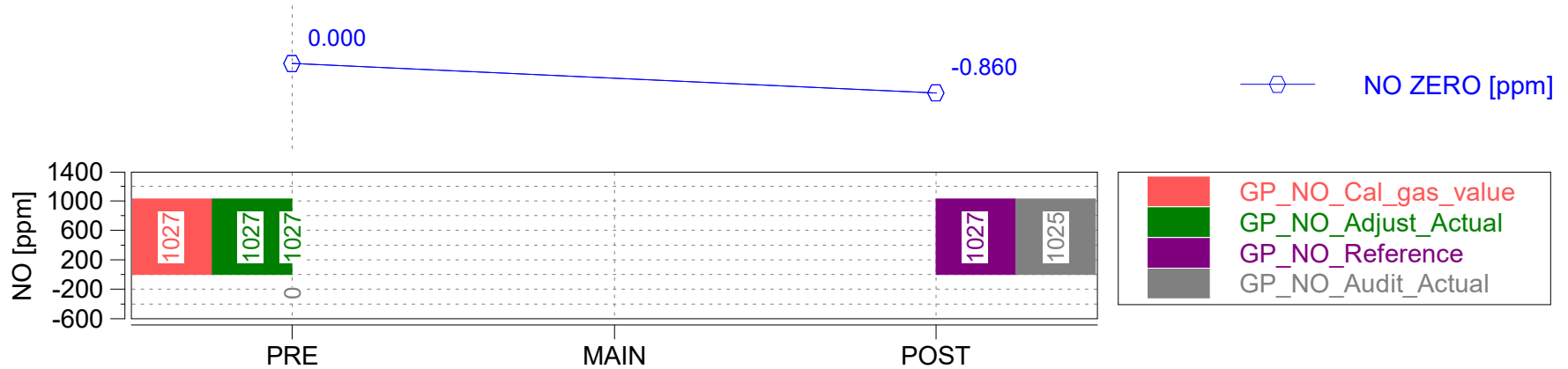
Start Date: 09/21/2017

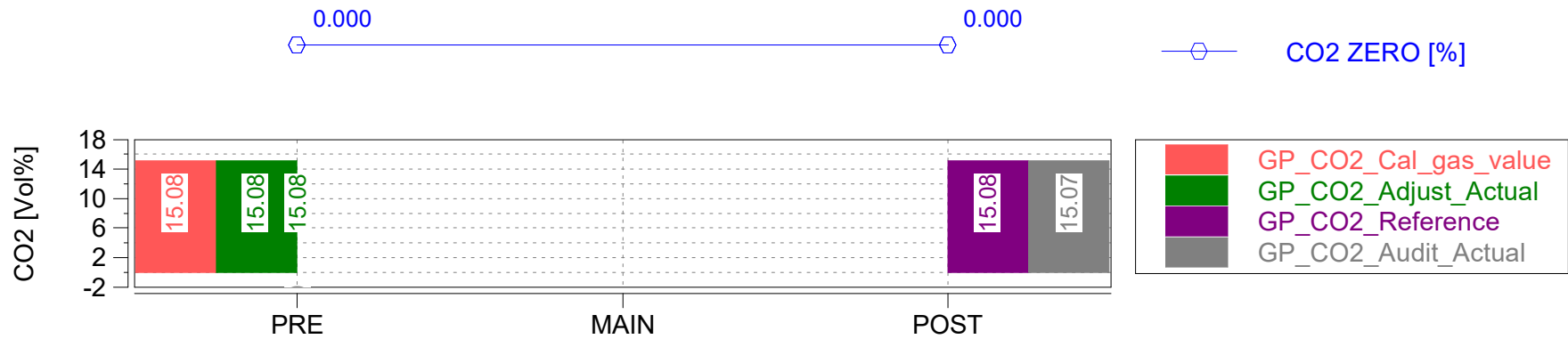
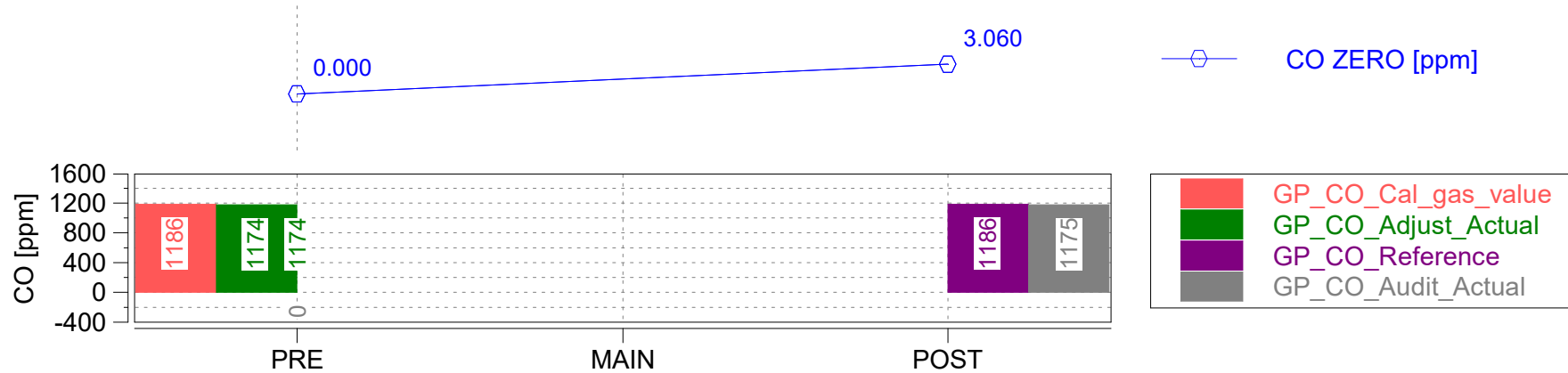
Start Time: 07:20:08.0

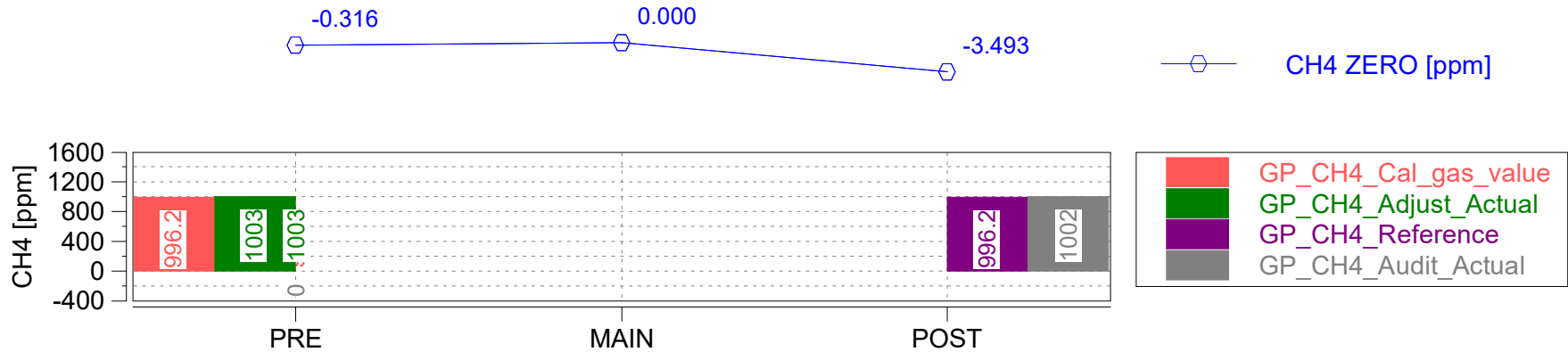
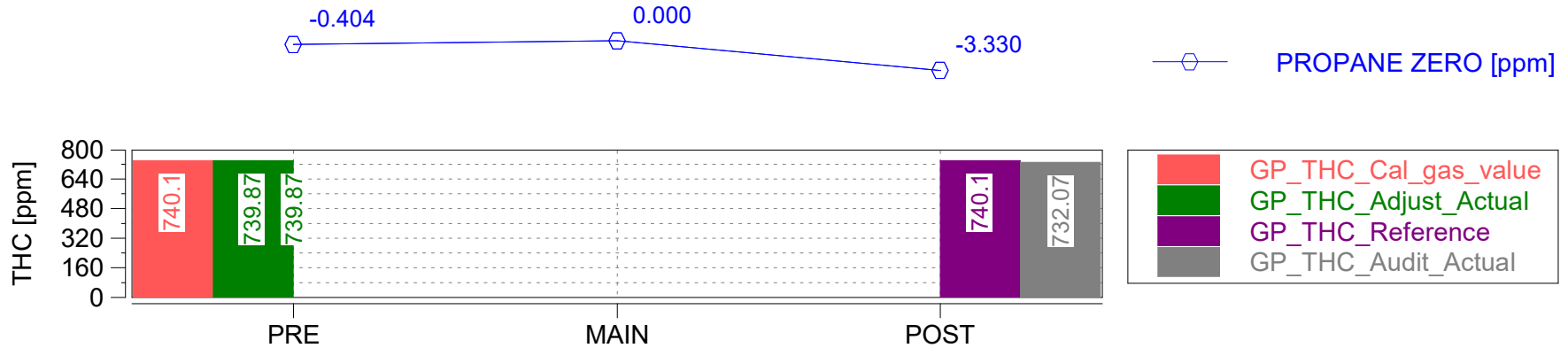


Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi Q5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90







#	Text	Value	Unit
-	----	----	----
1.0	Test Start: Date	-	-
2.0	Test Start: Time	-	-
3.0	Ambient Temperature	IFILE1:TM'Temperature	deg C
4.0	Ambient Temperature TS	0.00000	s
5.0	Ambient Pressure	IFILE1:TM'Pressure	kPa
6.0	Ambient Pressure TS	0.00000	s
7.0	Humidity Type	1.00000	-
8.0	Amb. Rel. Humidity	IFILE1:TM'Humidity	%
9.0	Amb. Rel. Humidity	0.00000	s
10.0	GPS Latitude		deg
11.0	GPS Latitude TS	0.00000	s
12.0	GPS Longitude		deg
13.0	GPS Longitude TS	0.00000	s
14.0	Altitude		m
15.0	Altitude TS	0.00000	s
16.0	GPS Quality		-
17.0	GPS Quality TS	0.00000	s
18.0	GroundSpeed		km/h
19.0	GroundSpeed TS	0.00000	s
20.0	Altitude from topographical map		m
21.0	Altitude TS of topographical map		s
22.0	TRIP_AMBIENT_GPS_AVL	YES	-
23.0	CALC_GPS_GROUNDSPEED	NO	-
24.0	EXHAUST_FLOW_AVL	NO	-
25.0	EXHAUST_FLOW_AVL_EFM	YES	-
26.0	Exhaust Flow Type	2.00000	-
27.0	Mass Flow	IFILE1:TM'PitotEFM_ExhaustG	various
28.0	Mass Flow TS	1.30000	s
29.0	Exhaust Pressure		kPa
30.0	Exhaust Pressure TS	1.30000	s

#	Text	Value	Unit
-	----	----	----
31.0	Exhaust Delta Pressure		kPa
32.0	Exhaust Pressure Delta TS	1.30000	s
33.0	Exhaust Temperature	IFILE1:TM'PitotEFM_ExhaustG	degC
34.0	Exhaust Temperature TS	1.30000	s
35.0	Lambda	N/A	-
36.0	Lambda TS		s
37.0	CO2_DIL		%
38.0	CO2_DIL TS		s
39.0	CVS Volume Flow		m3/min
40.0	TimeShift_CVS_VOL_FLOW		s
41.0	IN_CVS_PRESSURE		kPa
42.0	TimeShift_CVS_PRESSURE		s
43.0	IN_CVS_TEMP		degC
44.0	TimeShift_CVS_TEMP		s
45.0	Dry to Wet Conversion CO2	YES	-
46.0	Dry to Wet Conversion O2	YES	-
47.0	Dry to Wet Conversion NO	NO	-
48.0	Dry to Wet Conversion NO2	NO	-
49.0	Dry to Wet Conversion THC	NO	-
50.0	Dry to Wet Conversion CH4	NO	-
51.0	Dry to Wet Conversion O2	NO	-
52.0	CO2	IFILE1:TM'GPiS_CO2	%
53.0	CO2 TS	-10.30000	s
54.0	OS	IFILE1:TM'GPiS_O2	%
55.0	O2 TS	-10.80000	s
56.0	CO	IFILE1:TM'GPiS_CO	ppm
57.0	CO TS	-10.30000	s
58.0	NO	IFILE1:TM'GPiS_NO	ppm
59.0	NO TS	-8.50000	s
60.0	NO2	IFILE1:TM'GPiS_NO2	ppm

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Vehicle: 2017 Audi Q5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
61.0	NO2 TS	-8.50000	s
62.0	THC	IFILE1:TM'FIDiS_THC_C1	ppm
63.0	THC TS	0.00000	s
64.0	CH4	IFILE1:TM'FIDiS_CH4_C1	ppm
65.0	CH4 TS	0.00000	s
66.0	GAS_PEMS_Ethane_Efficiency	IFILE1:MOVE_AVL4925'GP_Et -	
67.0	GAS_PEMS_Methane_Efficiency	IFILE1:MOVE_AVL4925'GP_M -	
68.0	GAS_PEMS_Methane_Response	IFILE1:MOVE_AVL4925'GP_M -	
69.0	Zero Signal	IFILE1:TM'GPiS_STATE	0/1
70.0	Zero Signal TS	-8.50000	s
71.0	Zero Signal_FIDiS	IFILE1:TM'FIDiS_STATE	0/1
72.0	Zero Signal_FIDiS TS		s
73.0	Species Input Type	4.00000	-
74.0	GASPEMS=AVL493	NO	-
75.0	GASPEMS=AVL493_iX	NO	-
76.0	GASPEMS=AVL492	YES	-
77.0	GASPEMS=AVL4925	YES	-
78.0	PM: Type	4.00000	1=GFB+HC, 2=GFB, 3='PM=S
79.0	Filter ID from IFile	NO	-
80.0	Lab ID from IFile	NO	-
81.0	PM Filter: ID	N/A	ID
82.0	PM Filter: Lab	N/A	Name/ID
83.0	PM Filter: Weight before Test	N/A	mg
84.0	PM Filter: Weight after Test	N/A	mg
85.0	PM (HC Corr): Max. Exhaust Flow	N/A	scfm
86.0	Soot		mg/m3
87.0	Soot TS	-5.00000	s
88.0	Soot Sensor		mg/m3
89.0	Soot Sensor TS		s
90.0	PM Filter: Filter Flow Rate		l/min

#	Text	Value	Unit
-	----	----	----
91.0	PM Filter: Filter Flow Rate TS	-5.00000	s
92.0	PM Filter: Filter Dilution Ratio		-
93.0	PM Filter: Filter Dilution Ratio TS	-5.00000	s
94.0	PM Filter: Filter Trigger		-
95.0	PM Filter: Filter Trigger TS	-5.00000	s
96.0	PMPEMS=AVL494	YES	-
97.0	PMPEMS_AVL494_PROP_DIL	NO	-
98.0	PM dilution ratio min		-
99.0	PM_MaxExhaustFlowRate		-
100.0	PM_ExhaustFlow_Thresh		-
101.0	PM_total_flow_val		-
102.0	PM_total_flow_val_TS		-
103.0	PM_exh_mass_flow		-
104.0	PM_exh_mass_flow_TS		-
105.0	PN		#/cm3
106.0	TimeShift_PN		s
107.0	PN_STATE		-
108.0	PN TS STATE		s
109.0	PNPEMS_AVL496	NO	-
110.0	PN_CorrFactor	1.00000	
111.0	Time Alignment	1.00000	-
112.0	Time Alignment Dataset 1	N/A	0/1
113.0	Time Alignment Dataset 2	N/A	0/1
114.0	Time Alignment Thresh 1	N/A	-
115.0	Time Alignment Thresh 2	N/A	-
116.0			
117.0			
118.0			
119.0			
120.0			

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#	Text	Value	Unit
-	----	----	----
121.0			
122.0	Trigger		0/1
123.0	Trigger TS		s
124.0	FTIR_NAME_1		-
125.0	FTIR_MW_1		-
126.0	FTIR_CHANNEL_1		-
127.0	FTIR_CHANNEL_TS_1		-
128.0	FTIR_CHANNEL_DRY_1	NO	-
129.0	FTIR_NAME_2		-
130.0	FTIR_MW_2		-
131.0	FTIR_CHANNEL_2		-
132.0	FTIR_CHANNEL_TS_2		-
133.0	FTIR_CHANNEL_DRY_2	NO	-
134.0	FTIR_NAME_3		-
135.0	FTIR_MW_3		-
136.0	FTIR_CHANNEL_3		-
137.0	FTIR_CHANNEL_TS_3		-
138.0	FTIR_CHANNEL_DRY_3	NO	-
139.0	FTIR_NAME_4		-
140.0	FTIR_MW_4		-
141.0	FTIR_CHANNEL_4		-
142.0	FTIR_CHANNEL_TS_4		-
143.0	FTIR_CHANNEL_DRY_4	NO	-
144.0	FTIR_NAME_5		-
145.0	FTIR_MW_5		-
146.0	FTIR_CHANNEL_5		-
147.0	FTIR_CHANNEL_TS_5		-
148.0	FTIR_CHANNEL_DRY_5	NO	-
149.0	FTIR_NAME_6		-
150.0	FTIR_MW_6		-

#	Text	Value	Unit
-	----	----	----
151.0	FTIR_CHANNEL_6		-
152.0	FTIR_CHANNEL_TS_6		-
153.0	FTIR_CHANNEL_DRY_6	NO	-
154.0	FTIR_NAME_7		-
155.0	FTIR_MW_7		-
156.0	FTIR_CHANNEL_7		-
157.0	FTIR_CHANNEL_TS_7		-
158.0	FTIR_CHANNEL_DRY_7	NO	-
159.0	FTIR_NAME_8		-
160.0	FTIR_MW_8		-
161.0	FTIR_CHANNEL_8		-
162.0	FTIR_CHANNEL_TS_8		-
163.0	FTIR_CHANNEL_DRY_8	NO	-
164.0	FTIR_NAME_9		-
165.0	FTIR_MW_9		-
166.0	FTIR_CHANNEL_9		-
167.0	FTIR_CHANNEL_TS_9		-
168.0	FTIR_CHANNEL_DRY_9	NO	-
169.0	FTIR_NAME_10		-
170.0	FTIR_MW_10		-
171.0	FTIR_CHANNEL_10		-
172.0	FTIR_CHANNEL_TS_10		-
173.0	FTIR_CHANNEL_DRY_10	NO	-
174.0	FTIR_NAME_11		-
175.0	FTIR_MW_11		-
176.0	FTIR_CHANNEL_11		-
177.0	FTIR_CHANNEL_TS_11		-
178.0	FTIR_CHANNEL_DRY_11	NO	-
179.0	FTIR_NAME_12		-
180.0	FTIR_MW_12		-

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#	Text	Value	Unit
-	----	----	----
181.0	FTIR_CHANNEL_12		-
182.0	FTIR_CHANNEL_TS_12		-
183.0	FTIR_CHANNEL_DRY_12	NO	-
184.0	FTIR_NAME_13		-
185.0	FTIR_MW_13		-
186.0	FTIR_CHANNEL_13		-
187.0	FTIR_CHANNEL_TS_13		-
188.0	FTIR_CHANNEL_DRY_13	NO	-
189.0	FTIR_NAME_14		-
190.0	FTIR_MW_14		-
191.0	FTIR_CHANNEL_14		-
192.0	FTIR_CHANNEL_TS_14		-
193.0	FTIR_CHANNEL_DRY_14	NO	-
194.0	FTIR_NAME_15		-
195.0	FTIR_MW_15		-
196.0	FTIR_CHANNEL_15		-
197.0	FTIR_CHANNEL_TS_15		-
198.0	FTIR_CHANNEL_DRY_15	NO	-
199.0	FTIR_NAME_16		-
200.0	FTIR_MW_16		-
201.0	Vehicle Type	2017 Audi Q5	-
202.0	Vehicle Info		-
203.0	Engine Type	Gasoline	-
204.0	Engine Info	2.0L	-
205.0	Engine Torque		Nm
206.0	Curb Idle Load		%
207.0	Idle Speed		rpm
208.0	HYBRID_OVC_REF_CO2_gkm		g/km
209.0	Engine Concept	1.00000	-
210.0	Alpha	1.93000	-

#	Text	Value	Unit
-	----	----	----
211.0	Beta	1.00000	
212.0	Gamma	0.00000	
213.0	Delta	0.00000	
214.0	Epsilon	0.03200	
215.0	X_C	83.00000	
216.0	X_H	13.30000	
217.0	X_N	0.00000	
218.0	X_O	3.50000	
219.0	X_S	0.00000	
220.0	Fuel_Density	747.50000	
221.0	rho_exhaust	1.29310	
222.0	U_CO2	1.51800	
223.0	U_CO	0.96600	
224.0	U_NO	1.58700	
225.0	U_NO2	1.58700	
226.0	U_NOx	1.58700	
227.0	U_HC	0.49900	
228.0	U_NMHC	0.47100	
229.0	U_CH4	0.55300	
230.0	U_O2	1.10400	
231.0	Fuel Type	2.00000	-
232.0	exhaust mass flow type (YES/NO)	YES	-
233.0	Distance Calculation Type	1.00000	-
234.0	Velocity Statistics Calculation Type	2.00000	-
235.0	RDE vehicle class	1.00000	-
236.0	TM_CITY0		s
237.0	TM_CITY1		s
238.0	TM_RURAL0		s
239.0	TM_RURAL1		s
240.0	TM_RURAL2_0		s

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#	Text	Value	Unit
-	----	----	----
241.0	TM_RURAL2_1		s
242.0	Second Rural Part for Time Marks (NO		-
243.0	TM_MW0		s
244.0	TM_MW1		s
245.0	VELOCITY_LIMIT_STOP	2.00000	km/h
246.0	VELOCITY_LIMIT_URBAN	50.00000	km/h
247.0	VELOCITY_LIMIT_RURAL	75.00000	km/h
248.0	Intake Manifold Pressure Type	1.00000	-
249.0	Velocity	IFILE1:TM'OBD_Vehicle_Spee	km/h
250.0	Velocity TS	1.40000	s
251.0	Velocity FACTOR	1.00000	-
252.0	Coolant Temperature	IFILE1:TM'OBD_Engine_Coola	degC
253.0	Coolant Temperature TS	1.40000	s
254.0	Oil Temperature		degC
255.0	Oil Temperature TS	1.40000	s
256.0	Intake Manifold Temperature		degC
257.0	Intake Manifold Temp TS	1.40000	s
258.0	Intake Manifold Pressure	IFILE1:TM'OBD_Intake_manifo	kPa
259.0	Intake Manifold Pressure TS	1.40000	s
260.0	Throttle Position		%
261.0	Throttle TS	1.40000	s
262.0	TYP_IDLE_MASS_FLOW		kg/h
263.0	Torque Type	1.00000	-
264.0	Speed	IFILE1:TM'OBD_Engine_RPM	rpm
265.0	Speed TS	1.40000	s
266.0	Torque		Nm
267.0	Torque TS	1.40000	s
268.0	Friction Torque	N/A	Nm
269.0	Friction Torque TS	N/A	s
270.0	Reference Torque	N/A	Nm

#	Text	Value	Unit
-	----	----	----
271.0	Reference Torque TS	N/A	s
272.0	k_VELINE		-
273.0	D_VELINE		-
274.0	Fuel Flow Type	2.00000	-
275.0	Air Flow Type	1.00000	-
276.0	Fuel Rate		various
277.0	Air Rate		various
278.0	Fuel Rate TS	1.40000	s
279.0	No_Cylinders		-
280.0	Air Rate TS	1.40000	s
281.0	FTIR_CHANNEL_32		-
282.0	FTIR_CHANNEL_TS_32		-
283.0	FTIR_CHANNEL_DRY_32	NO	-
284.0	FTIR_NAME_33		-
285.0	FTIR_MW_33		-
286.0	FTIR_CHANNEL_33		-
287.0	FTIR_CHANNEL_TS_33		-
288.0	FTIR_CHANNEL_DRY_33	NO	-
289.0	FTIR_NAME_34		-
290.0	FTIR_MW_34		-
291.0	FTIR_CHANNEL_34		-
292.0	FTIR_CHANNEL_TS_34		-
293.0	FTIR_CHANNEL_DRY_34	NO	-
294.0	FTIR_NAME_35		-
295.0	FTIR_MW_35		-
296.0	FTIR_CHANNEL_35		-
297.0	FTIR_CHANNEL_TS_35		-
298.0	FTIR_CHANNEL_DRY_35	NO	-
299.0	FTIR_NAME_36		-
300.0	FTIR_MW_36		-

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#	Text	Value	Unit
-	----	----	----
301.0	FTIR_CHANNEL_36		-
302.0	FTIR_CHANNEL_TS_36		-
303.0	FTIR_CHANNEL_DRY_36	NO	-
304.0	FTIR_NAME_37		-
305.0	FTIR_MW_37		-
306.0	FTIR_CHANNEL_37		-
307.0	FTIR_CHANNEL_TS_37		-
308.0	FTIR_CHANNEL_DRY_37	NO	-
309.0	FTIR_NAME_38		-
310.0	FTIR_MW_38		-
311.0	FTIR_CHANNEL_38		-
312.0	FTIR_CHANNEL_TS_38		-
313.0	FTIR_CHANNEL_DRY_38	NO	-
314.0	FTIR_NAME_39		-
315.0	FTIR_MW_39		-
316.0	FTIR_CHANNEL_39		-
317.0	FTIR_CHANNEL_TS_39		-
318.0	FTIR_CHANNEL_DRY_39	NO	-
319.0	FTIR_NAME_40		-
320.0	FTIR_MW_40		-
321.0	FTIR_CHANNEL_40		-
322.0	FTIR_CHANNEL_TS_40		-
323.0	FTIR_CHANNEL_DRY_40	NO	-
324.0	Legislation Type (1=HDIUT 2=EU H	4.00000	-
325.0	WholeTest_NOx_corr	5.00000	-
326.0	WholeTest_Hum_corr	2.00000	-
327.0	CD_Distance	0.00000	km
328.0	CD_NOx	0.00000	mg/km
329.0	CD_CO	0.00000	mg/km
330.0	CD_CO2	0.00000	g/km

#	Text	Value	Unit
-	----	----	----
331.0	CD_NMHC	0.00000	mg/km
332.0	CD_CH4	0.00000	mg/km
333.0	CD_THC	0.00000	mg/km
334.0	CD_PN		#/km
335.0	WLTC_LOW_SPEED_gkm		g/km
336.0	WLTC_LOW_SPEED_FAC	1.20000	-
337.0	WLTC_MEDIUM_SPEED_gkm		g/km
338.0	WLTC_HIGH_SPEED_gkm		g/km
339.0	WLTC_HIGH_SPEED_FAC	1.10000	-
340.0	WLTC_EXTRA_HIGH_SPEED_gkm		g/km
341.0	WLTC_EXTRA_HIGH_SPEED_FA	1.05000	-
342.0	TOL_NORMAL_DRIVING	25.00000	%
343.0	TOL_SEVERE_DRIVING	50.00000	%
344.0	Increase Tolerance Nomral Driving	NO	-
345.0	Bin1_min		km/h
346.0	Bin2_min		km/h
347.0	Bin3_min		km/h
348.0	Bin1_max		km/h
349.0	Bin2_max		km/h
350.0	Bin3_max		km/h
351.0	Clear_R0	125.40000	N
352.0	Clear_R1	0.29300	Nh/km
353.0	Clear_R2	0.02795	N*(h/km) ²
354.0	Clear_SMK	1470.00000	kg
355.0	Clear_Rated_Power	140.00000	kW
356.0	Clear_Ref_Velocity	70.00000	km/h
357.0	Clear_Ref_Acc	0.45000	m/s ²
358.0	Clear_Smooth	3.00000	s
359.0	EXTC_From_High_Temp	30.00000	degC
360.0	EXTC_To_High_Temp	35.00000	degC

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#	Text	Value	Unit
-	----	----	----
361.0	EXTC_From_Low_Temp	-7.00000	degC
362.0	EXTC_To_Low_Temp	0.00000	degC
363.0	Euro 6d or Euro 6d temp	NO	-
364.0	EXTC_From_Altitude	700.00000	m
365.0	EXTC_To_Altitude	1300.00000	m
366.0	EXTC_CORR_FAC	1.60000	
367.0	weight cold start (YES/NO)	NO	-
368.0	precon and soak done (YES/NO)	NO	-
369.0	PATH_PRECON_FILE		
370.0	filter velocity (YES/NO)	NO	-
371.0	filter velocity auto(YES/NO)	NO	-
372.0	Ki_CO		
373.0	Ki_CO2		
374.0	Ki_NOx		
375.0	Ki_FACTOR_CO2 (YES/NO)	NO	-
376.0	Ki_OFFSET_CO2 (YES/NO)	NO	-
377.0	Ki_FACTOR_CO (YES/NO)	NO	-
378.0	Ki_OFFSET_CO (YES/NO)	NO	-
379.0	Ki_FACTOR_NOx (YES/NO)	NO	-
380.0	Ki_OFFSET_NOx (YES/NO)	NO	-
381.0	Ki_OFF (YES/NO)	NO	-
382.0	HD legislations	1.00000	-
383.0	RDE legislations	1.00000	-
384.0	Submission Documents (YES/NO)	NO	-
385.0	General Setup Parameters Text	City	-
386.0	Legislation Setup Parameters Text	City	-
387.0	Trip Info		-
388.0	IN_TIME_REF		-
389.0	Sub-Trip Start: Auto	YES	-
390.0	Sub-Trip Start: Seconds	N/A	s

#	Text	Value	Unit
-	----	----	----
391.0	Sub-Trip End: Auto	YES	-
392.0	Sub-Trip End: Seconds	N/A	s
393.0	Unit System	2.00000	-
394.0	Calculate: PM Emissions	NO	-
395.0	Calculate: PN Emissions	NO	-
396.0	Output: Summary	YES	-
397.0	Output: Emissions	YES	-
398.0	Output: Raw Data	YES	-
399.0	Output: Zero Span	YES	-
400.0	Output: Data Consistency	NO	-
401.0	Output: Window Plots	YES	-
402.0	Fuel Rate ECU vs. EU ISO16183	y = 10000000000.0000 x - 0.000 R ² =10000000000.000 SEE=	
403.0	PEMS post processing version	Rel_10_B192	
404.0	Concerto version	480.00000	
405.0	Concerto build	215.00000	
406.0	USERNAME	EFR	

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Vehicle: 2017 Audi Q5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
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Case: Highway
Page: Trip Summary

Start Date: 09/22/2017
Start Time: 12:49:39.0



Trip Duration	2994.00	s	ave THC	3.73680	ppm	BS CO2	n/a	g/hphr
Trip Duration (a)	2994.00	s	ave NMHC	2.18895	ppm	BS CO	n/a	g/hphr
Trip Distance	38.68	mi	ave CH4	1.40714	ppm	BS THC	n/a	g/hphr
Trip Distance (a)	38.68	mi	ave CO	434.55544	ppm	BS NMHC	n/a	g/hphr
Trip Fuel Cons. (b)	n/a	kg	ave CO2	12.33277	%	BS CH4	n/a	g/hphr
Trip Fuel Cons. (ab)	n/a	kg	ave NOx	3.01908	ppm	BS NO (d)	n/a	g/hphr
Trip Fuel Cons. EU (ac)	3.58	kg	ave PM	n/a	mg/m3	BS NO2	n/a	g/hphr
Trip Fuel Cons. US (ac)	3.55	kg	ave Soot meas	n/a	mg/m3	BS NOx	n/a	g/hphr
Trip Fuel Cons. Volume (b)	n/a	gall	ave Soot	n/a	mg/m3	BS Soot	n/a	g/hphr
Trip Fuel Cons. Volume (ab)	n/a	gall	ave PN	n/a	#/cm3	BS Soot meas	n/a	g/hphr
Trip Fuel Cons. Volume EU (ac)	1.26	gall	tot THC	0.11996	g	BS PM	n/a	g/hphr
Trip Fuel Cons. Volume US (ac)	1.25	gall	tot NMHC	0.07243	g	BS PN	n/a	#/hpr
Trip Fuel Economy (b)	n/a	mpg_US	tot CH4	0.04850	g	DS CO2	278.55732	g/mi
Trip Fuel Economy (ab)	n/a	mpg_US	tot CO	26.23747	g	DS CO	0.67826	g/mi
Trip Fuel Economy EU (ac)	30.59	mpg_US	tot CO2	10775.60681	g	DS THC	0.00310	g/mi
Trip Fuel Economy US (ac)	30.83	mpg_US	tot NO (d)	0.14290	g	DS NMHC	0.00187	g/mi
Trip Av. Eng. Speed	1710.70	rpm	tot NO2	0.02999	g	DS CH4	0.00125	g/mi
Trip Av. Torque	n/a	lbft	tot NOx	0.15023	g	DS NO (d)	0.00369	g/mi
Trip Av. Power	n/a	hp	tot Soot	n/a	g	DS NO2	0.00078	g/mi
Trip Work	n/a	hphr	tot Soot meas	n/a	g	DS NOx	0.00388	g/mi
Trip Exhaust Mass	55.98	kg	tot PM	n/a	g	DS Soot	n/a	g/mi
Trip Exhaust Mass EU (ac)	n/a	kg	tot PN	n/a	#	DS Soot meas	n/a	g/mi
Trip Exhaust Mass US (ac)	n/a	kg	PM measurement type	0.00000	-	DS PM	n/a	g/mi
Trip Av. Amb. Temperature	75.23	deg_F	PM correction type	1.00000	alpha(HC)	DS PN	n/a	#/mi
Trip Av. Humidity	45.19	%	tot Soot on PM filter (estim.)	n/a	mg	FS CO2	n/a	g/kg
Fuel Type	Petrol (E10)		Soot --> PM simple scaling factor	1.00000	-	FS CO	n/a	g/kg
			Soot --> PM alpha scaling factor	0.00000	-	FS THC	n/a	g/kg
			Trip Av. Veh. Speed	46.51338	mi/hr	FS NMHC	n/a	g/kg
			Trip Velocity Zero	2.53841	%	FS CH4	n/a	g/kg
			Trip Velocity Urban	32.16433	%	FS NO (d)	n/a	g/kg
			Trip Velocity Rural	6.17902	%	FS NO2	n/a	g/kg
			Trip Velocity Motorway	61.65665	%	FS NOx	n/a	g/kg
						FS Soot	n/a	g/kg
						FS Soot meas	n/a	g/kg
						FS PM	n/a	g/kg
						FS PN	n/a	#/kg

(a) GAS PEMS measurement state only, (b) based on fuel rate input (ECU, Fuel Meter), (c) calculated from carbon balance
(d) NO calculated using molecular weight of NO2

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi Q3 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

Page: Trip Summary Drift Corrected

Start Date: 09/22/2017

Start Time: 12:49:39.0

"



Concerto M.O.V.E, 2017

Trip Duration	2994.00	s	ave THC DC	4.97922	ppm	BS CO2 DC	n/a	g/hphr
Trip Duration (a)	2994.00	s	ave NMHC DC	3.55753	ppm	BS CO DC	n/a	g/hphr
Trip Distance	38.68	mi	ave CH4 DC	1.29245	ppm	BS THC DC	n/a	g/hphr
Trip Distance (a)	38.68	mi	ave CO DC	437.42675	ppm	BS NMHC DC	n/a	g/hphr
Trip Fuel Cons. (b)	n/a	kg	ave CO2 DC	12.32051	%	BS CH4 DC	n/a	g/hphr
Trip Fuel Cons. (ab)	n/a	kg	ave NOx DC	3.01808	ppm	BS NO DC (d)	n/a	g/hphr
Trip Fuel Cons. EU (ac)	3.58	kg	ave PM	n/a	mg/m3	BS NO2 DC	n/a	g/hphr
Trip Fuel Cons. US (ac)	3.55	kg	ave Soot meas	n/a	mg/m3	BS NOx DC	n/a	g/hphr
Trip Fuel Cons. Volume (b)	n/a	gall	ave Soot	n/a	mg/m3	BS Soot	n/a	g/hphr
Trip Fuel Cons. Volume (ab)	n/a	gall	ave PN DC	n/a	#/cm3	BS Soot meas	n/a	g/hphr
Trip Fuel Cons. Volume EU (ac)	1.26	gall	tot THC DC	0.15984	g	BS PM	n/a	g/hphr
Trip Fuel Cons. Volume US (ac)	1.25	gall	tot NMHC DC	0.11186	g	BS PN DC	n/a	#/hpr
Trip Fuel Economy (b)	n/a	mpg_US	tot CH4 DC	0.04540	g	DS CO2 DC	278.28052	g/mi
Trip Fuel Economy (ab)	n/a	mpg_US	tot CO DC	26.41084	g	DS CO DC	0.68274	g/mi
Trip Fuel Economy EU (ac)	30.59	mpg_US	tot CO2 DC	10764.89902	g	DS THC DC	0.00413	g/mi
Trip Fuel Economy US (ac)	30.83	mpg_US	tot NO DC (d)	0.14285	g	DS NMHC DC	0.00289	g/mi
Trip Av. Eng. Speed	1710.70	rpm	tot NO2 DC	0.03001	g	DS CH4 DC	0.00117	g/mi
Trip Av. Torque	n/a	lbft	tot NOx DC	0.15019	g	DS NO DC (d)	0.00369	g/mi
Trip Av. Power	n/a	hp	tot Soot	n/a	g	DS NO2 DC	0.00078	g/mi
Trip Work	n/a	hphr	tot Soot meas	n/a	g	DS NOx DC	0.00388	g/mi
Trip Exhaust Mass	55.98	kg	tot PM	n/a	g	DS Soot	n/a	g/mi
Trip Exhaust Mass EU (ac)	n/a	kg	tot PN DC	n/a	#	DS Soot meas	n/a	g/mi
Trip Exhaust Mass US (ac)	n/a	kg	PM measurement type	0.00000	-	DS PM	n/a	g/mi
Trip Av. Amb. Temperature	75.23	deg_F	PM correction type	1.00000	alpha(HC)	DS PN DC	n/a	#/mi
Trip Av. Humidity	45.19	%	tot Soot on PM filter (estim.)	n/a	mg	FS CO2 DC	n/a	g/kg
Fuel Type	Petrol (E10)		Soot --> PM simple scaling factor	1.00000	-	FS CO DC	n/a	g/kg
			Soot --> PM alpha scaling factor	0.00000	-	FS THC DC	n/a	g/kg
			Trip Av. Veh. Speed	46.51338	mi/hr	FS NMHC DC	n/a	g/kg
			Trip Velocity Zero	2.53841	%	FS CH4 DC	n/a	g/kg
			Trip Velocity Urban	32.16433	%	FS NO DC (d)	n/a	g/kg
			Trip Velocity Rural	6.17902	%	FS NO2 DC	n/a	g/kg
			Trip Velocity Motorway	61.65665	%	FS NOx DC	n/a	g/kg
						FS Soot	n/a	g/kg
						FS Soot meas	n/a	g/kg
						FS PM	n/a	g/kg
						FS PN DC	n/a	#/kg

(a) GAS PEMS measurement state only, (b) based on fuel rate input (ECU, Fuel Meter), (c) calculated from carbon balance
 (d) NO calculated using molecular weight of NO2

Concerto Version: 480 Build 215, Serial Number: 8468
 M.O.V.E Post-Processing: Rel_10_B192

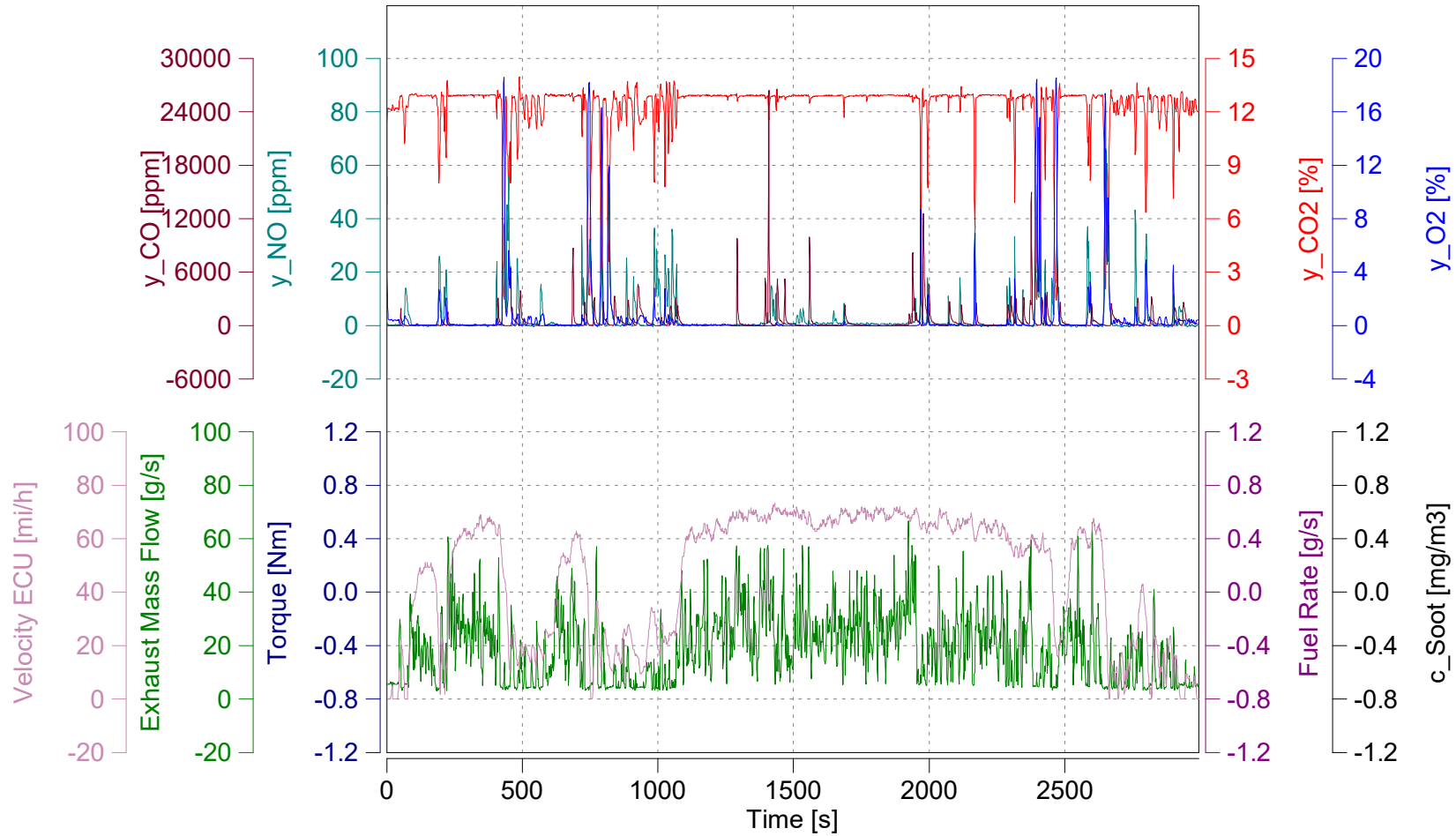
Vehicle: 2017 Audi Q3 /
 Engine: Gasoline / 2.0L
 NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
 Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

Page: Time Alignment Check

Start Date: 09/22/2017

Start Time: 12:49:39.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

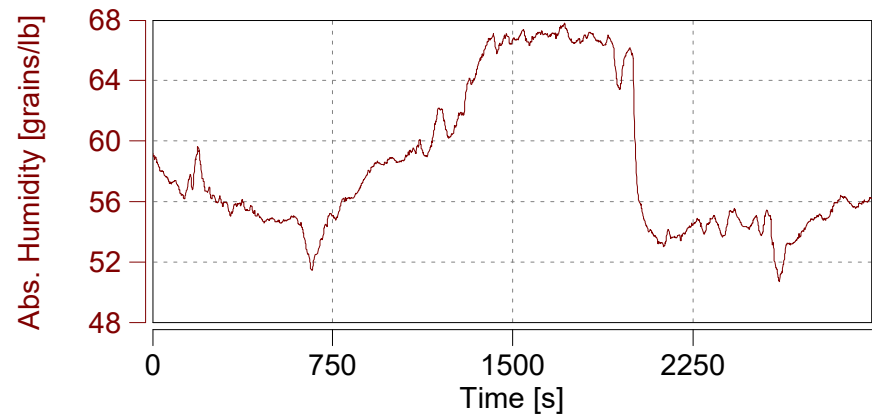
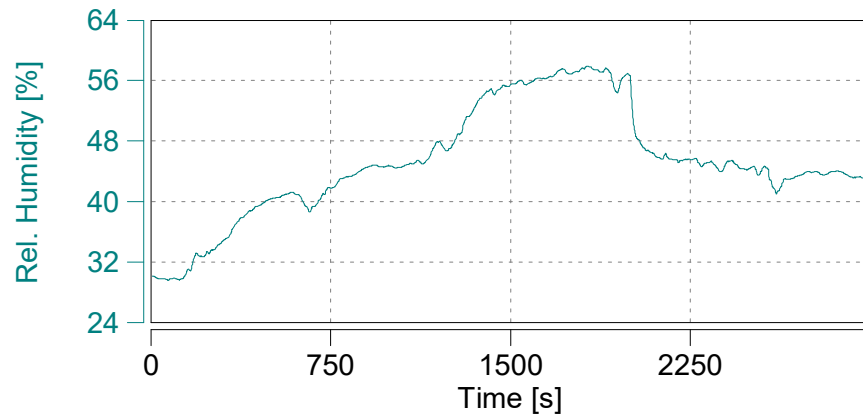
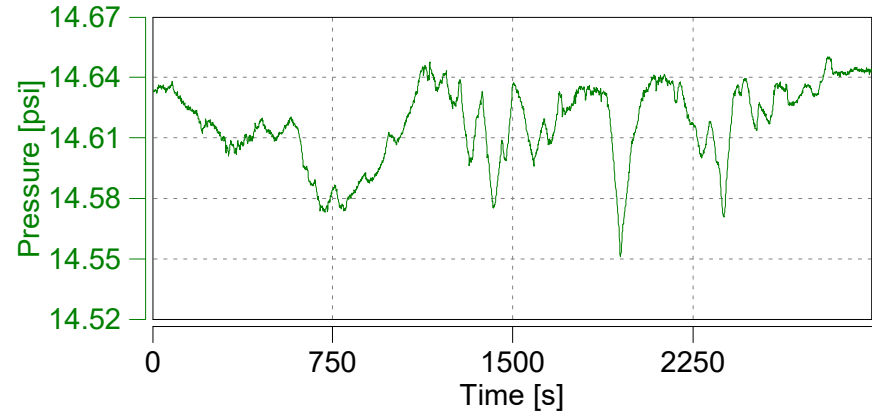
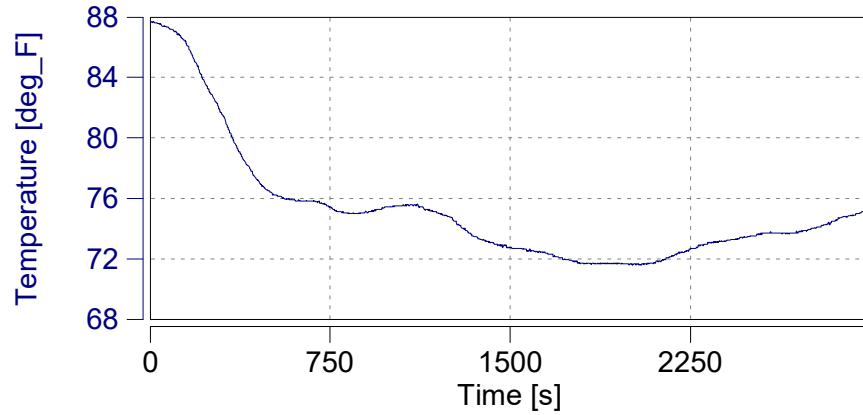
Vehicle: 2017 Audi Q3 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

Page: Ambient Conditions

Start Date: 09/22/2017

Start Time: 12:49:39.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

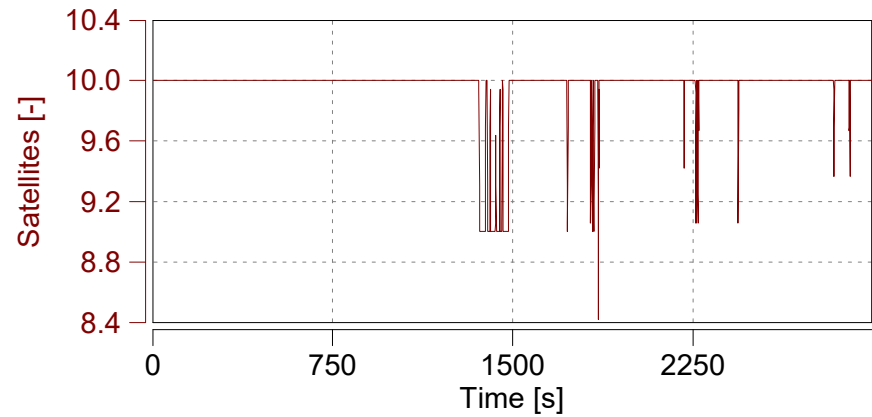
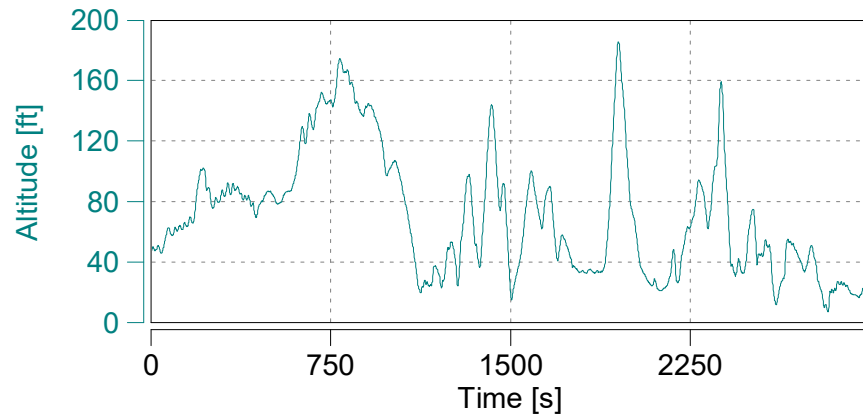
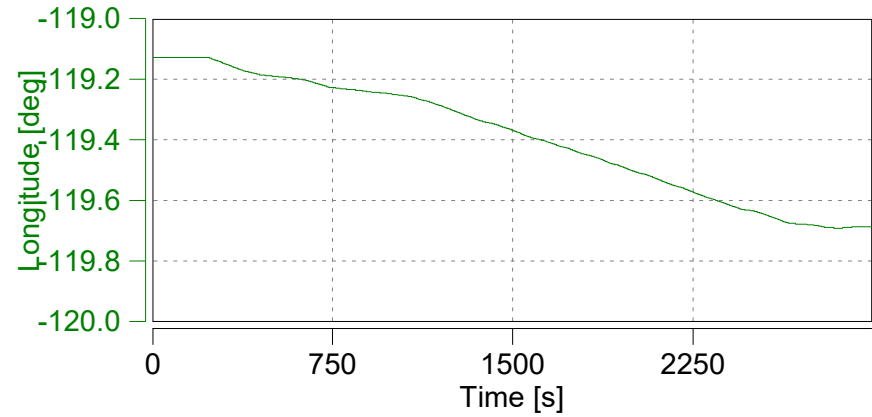
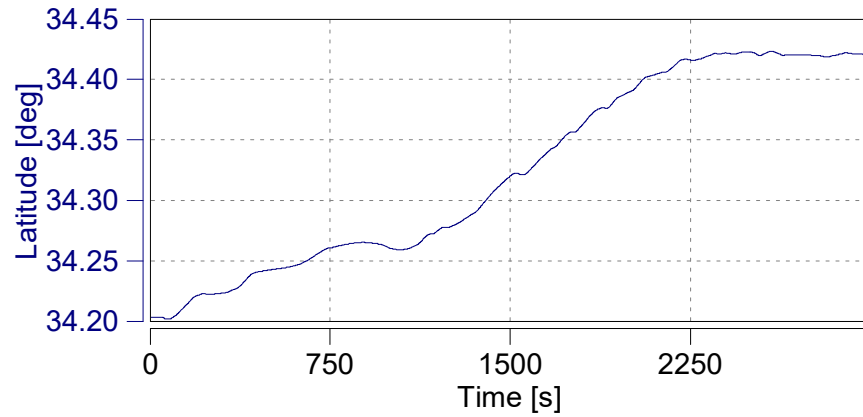
Vehicle: 2017 Audi Q3 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

Page: GPS

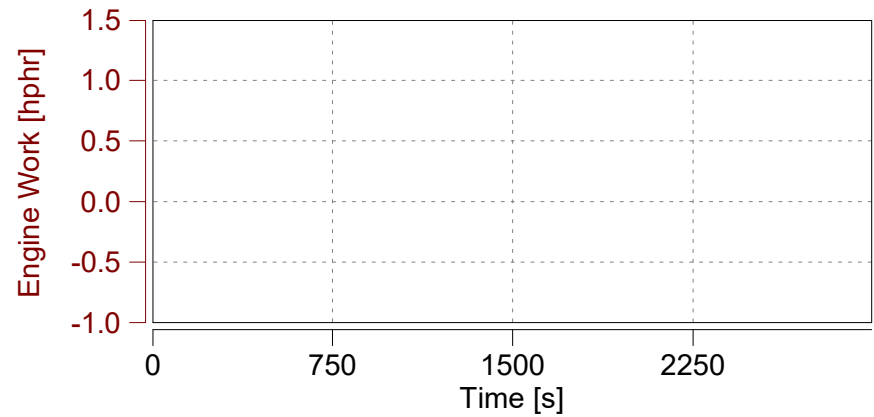
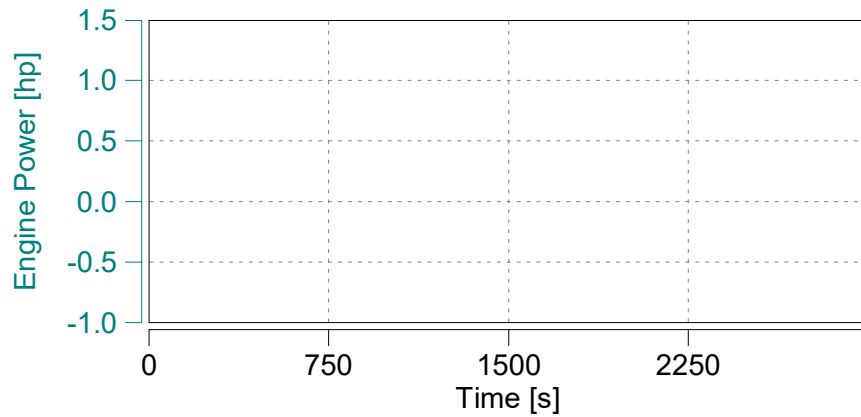
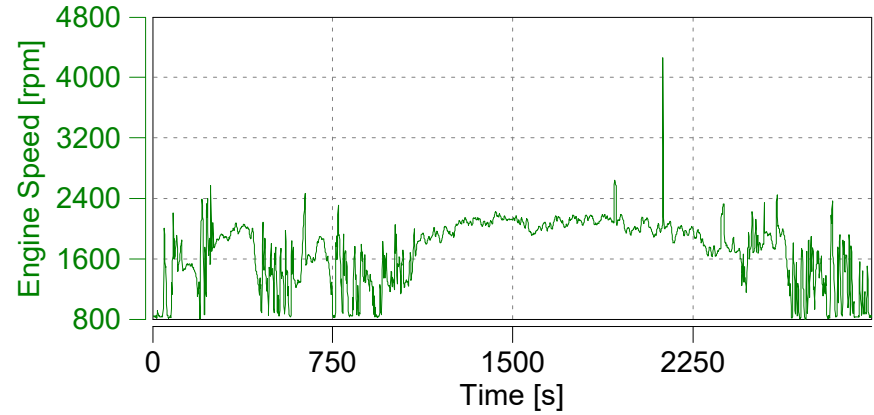
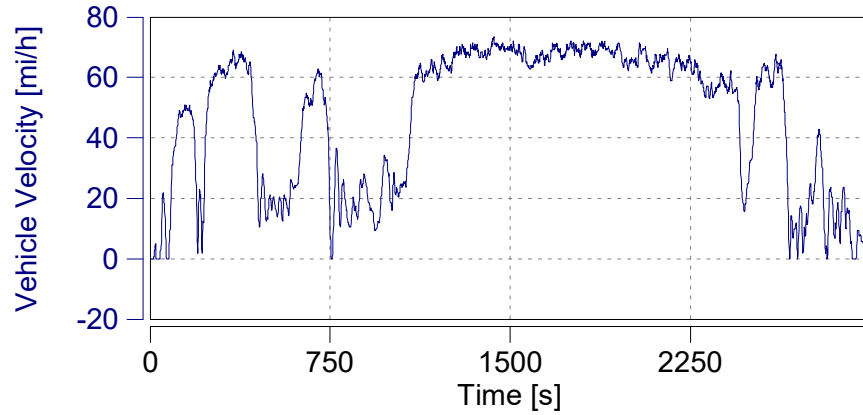
Start Date: 09/22/2017

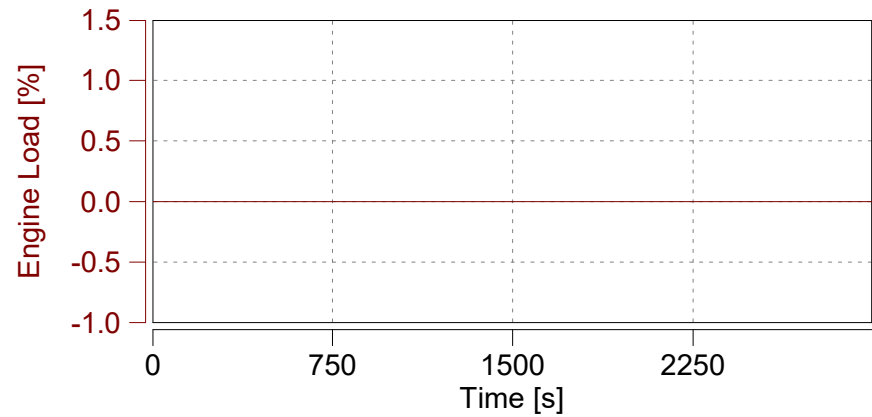
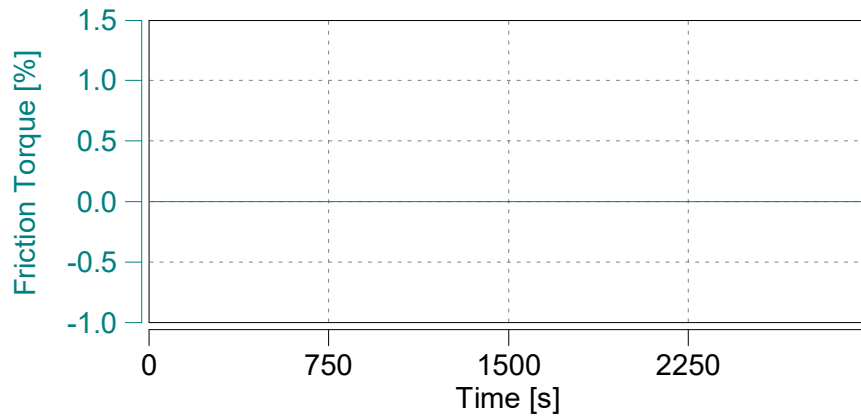
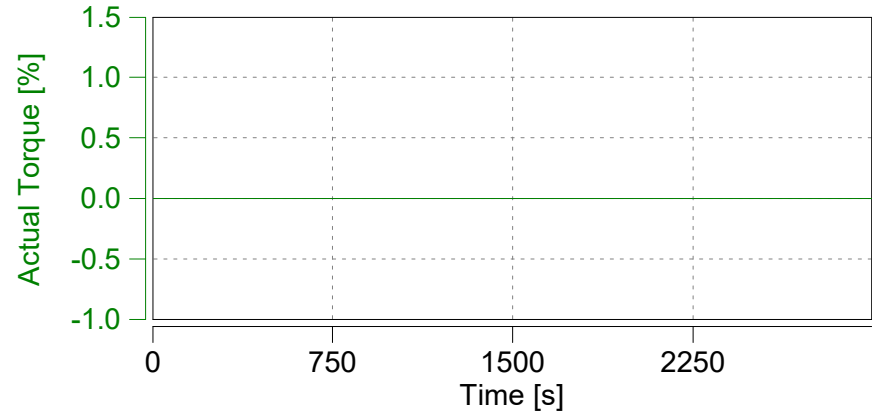
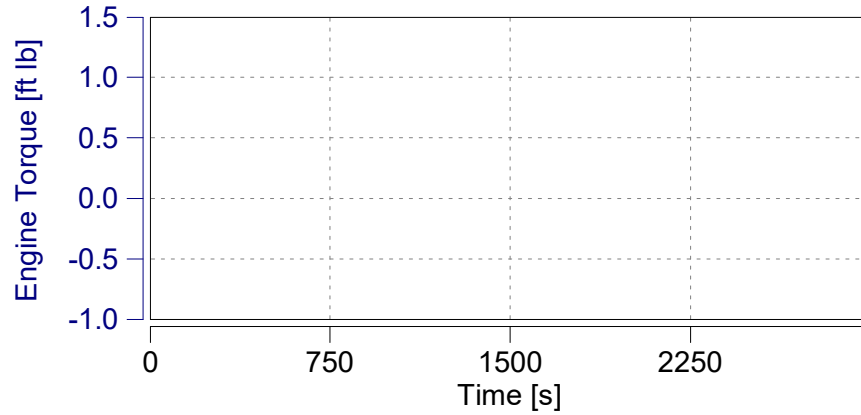
Start Time: 12:49:39.0

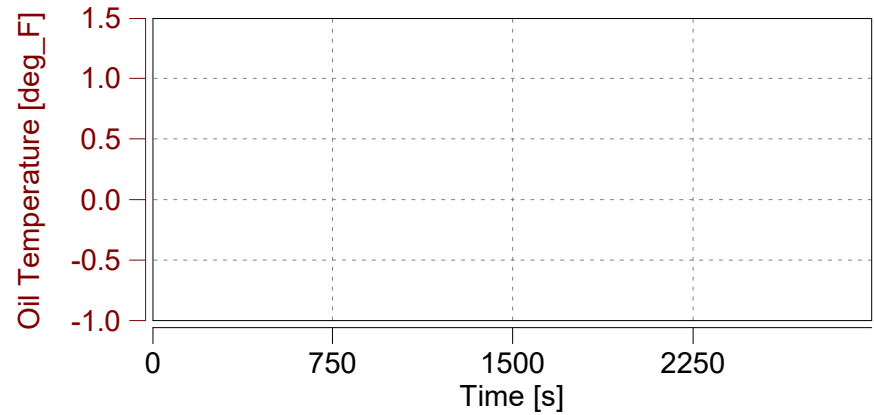
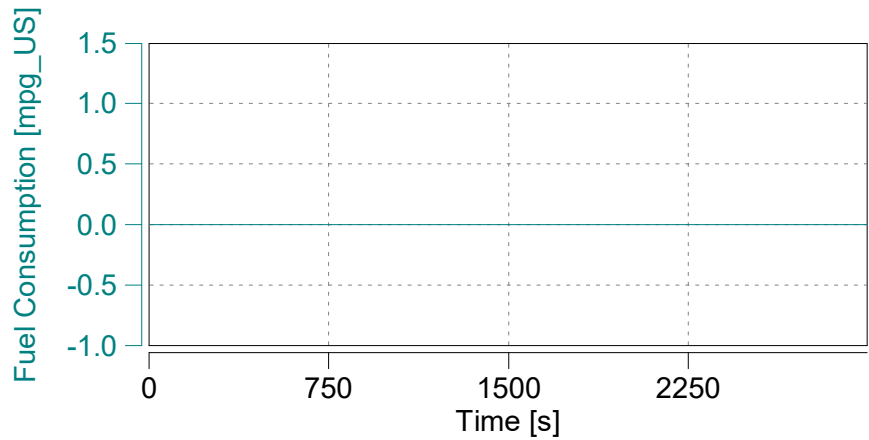
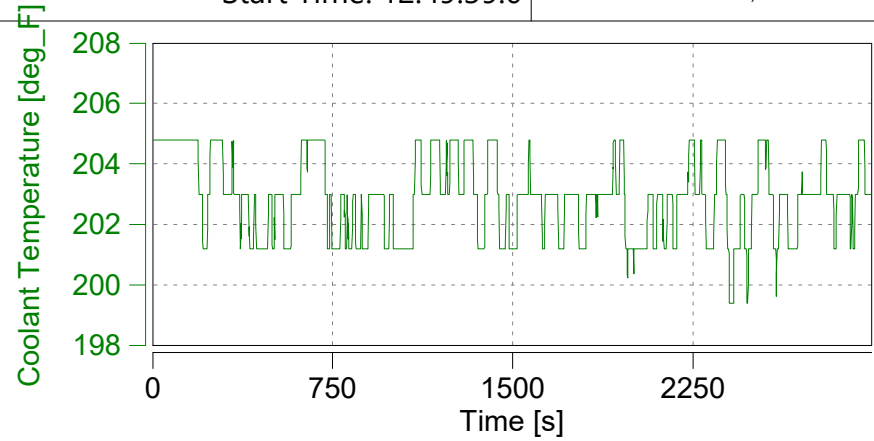
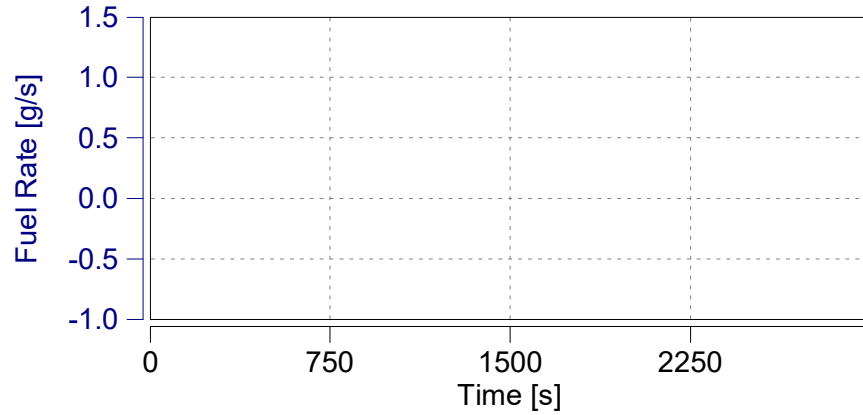


Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi Q3 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90





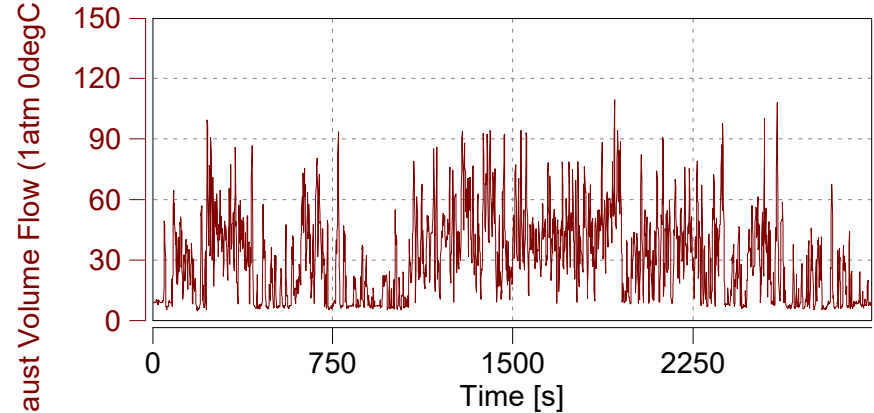
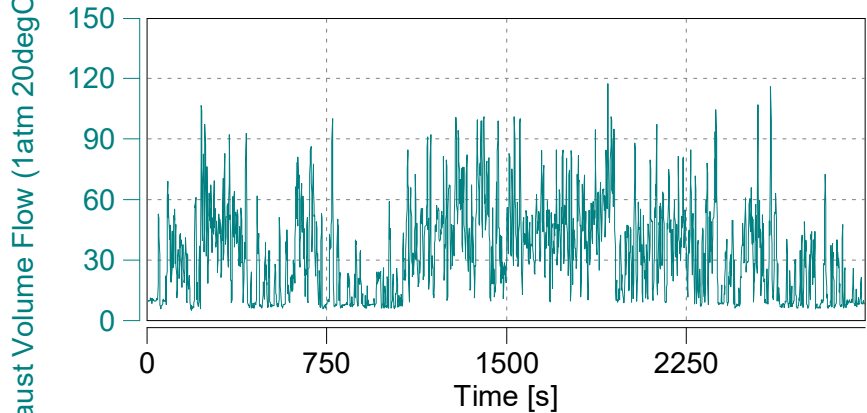
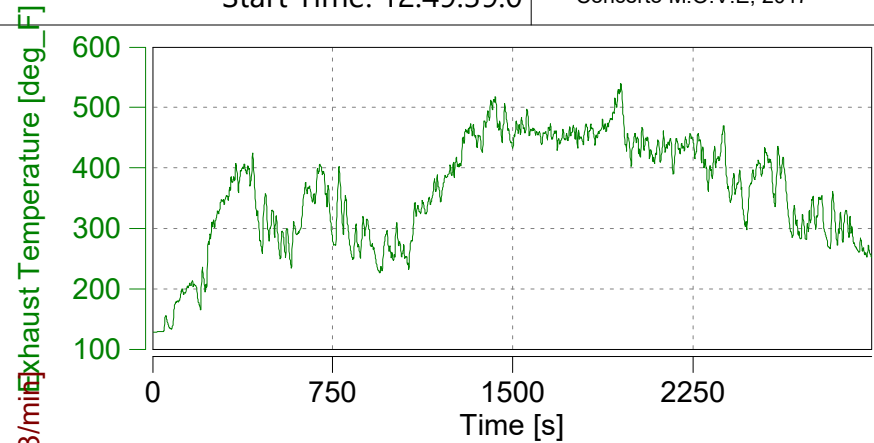
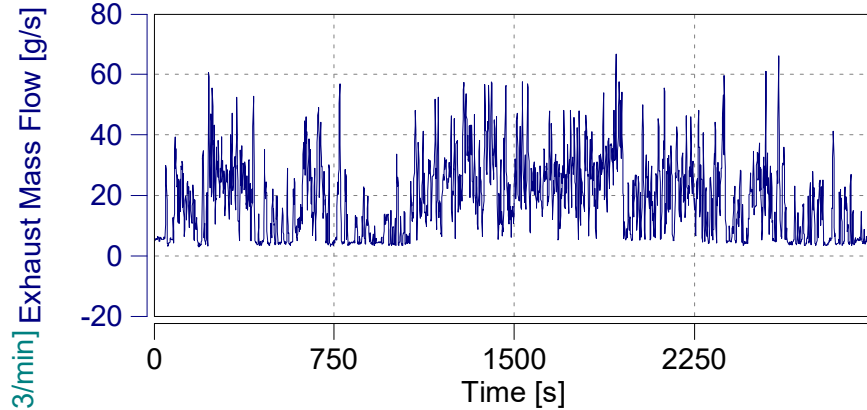


Case: Highway

Page: Exhaust Flow (1)

Start Date: 09/22/2017

Start Time: 12:49:39.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

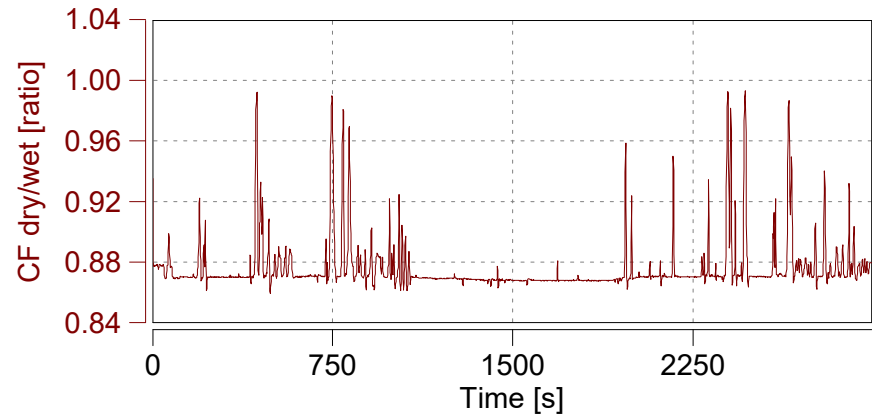
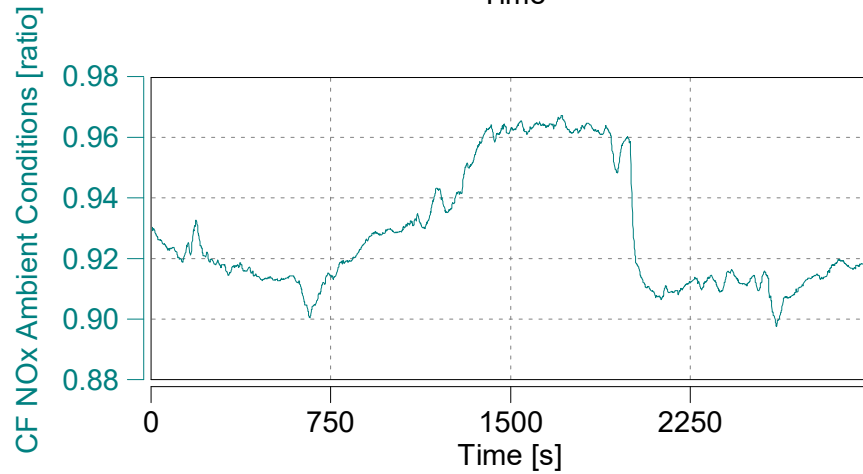
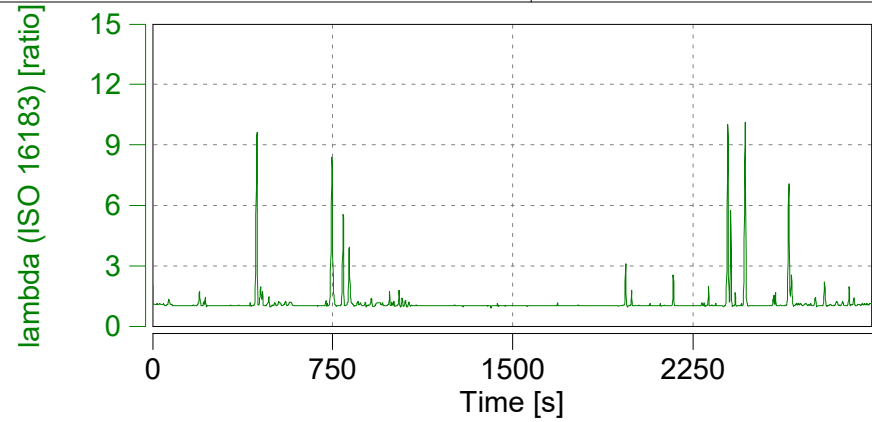
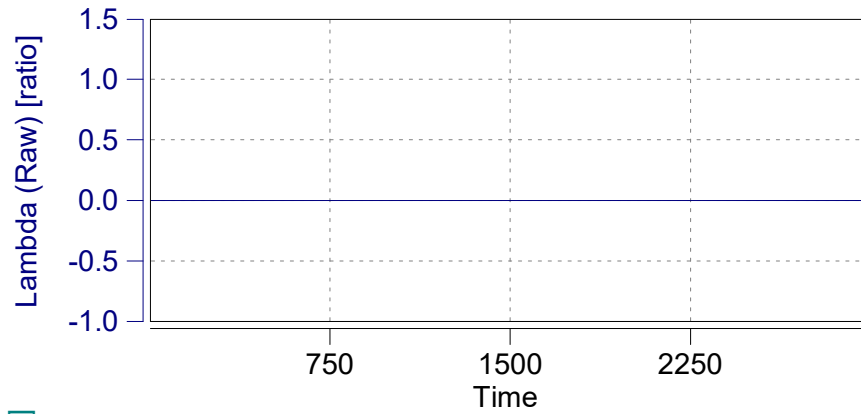
Vehicle: 2017 Audi Q3 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

Page: Exhaust Flow (2)

Start Date: 09/22/2017

Start Time: 12:49:39.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

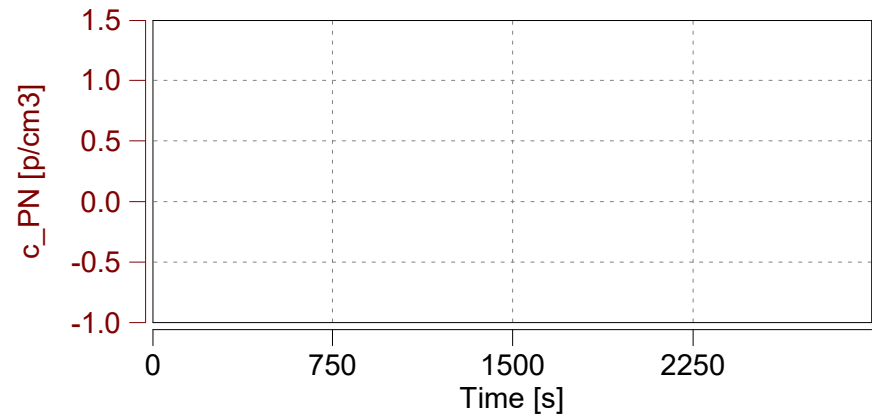
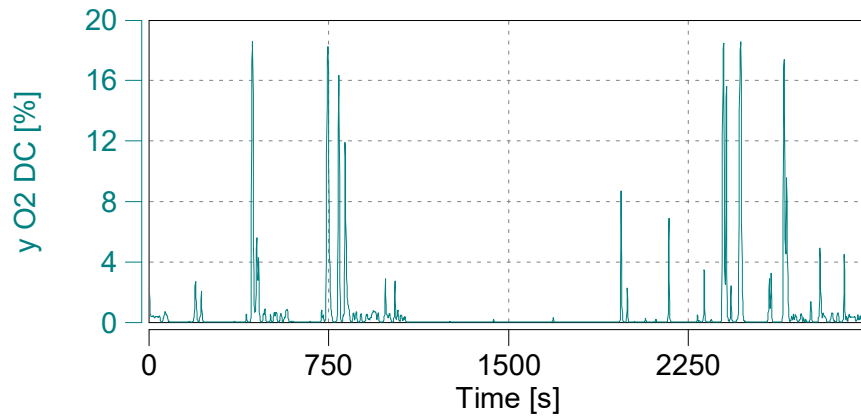
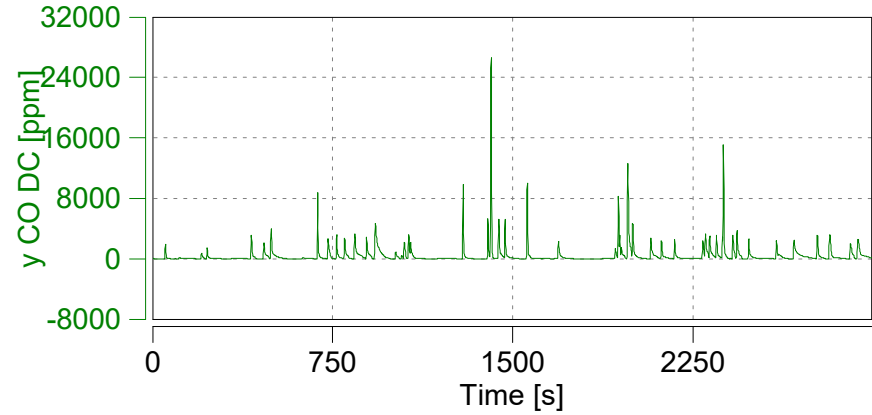
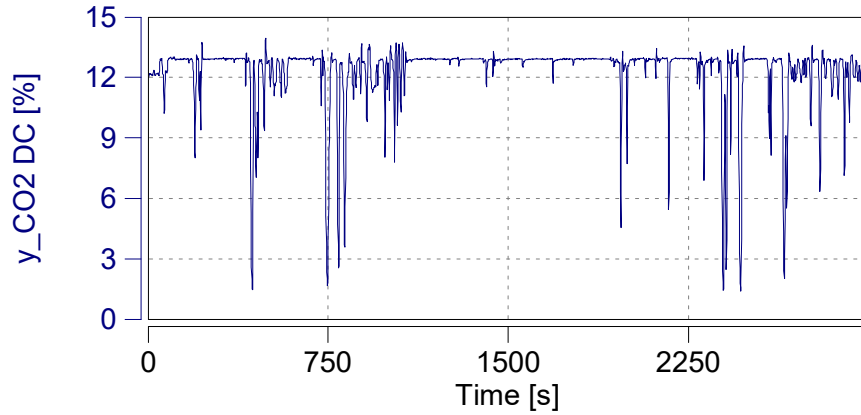
Vehicle: 2017 Audi Q3 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

Page: Corrected Emissions (1)

Start Date: 09/22/2017

Start Time: 12:49:39.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

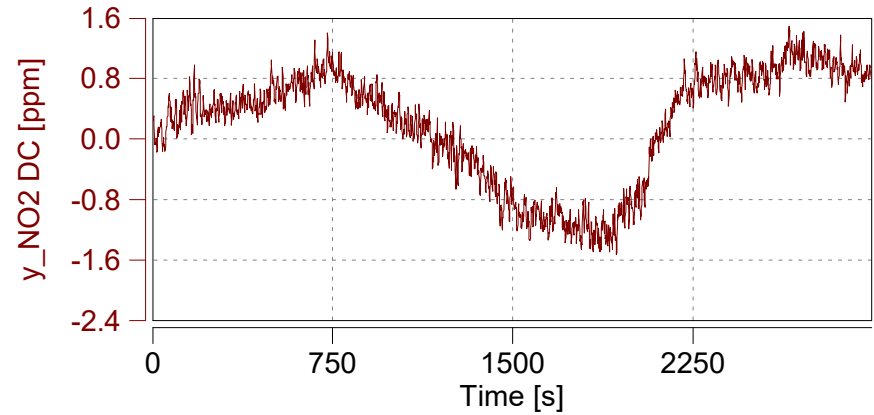
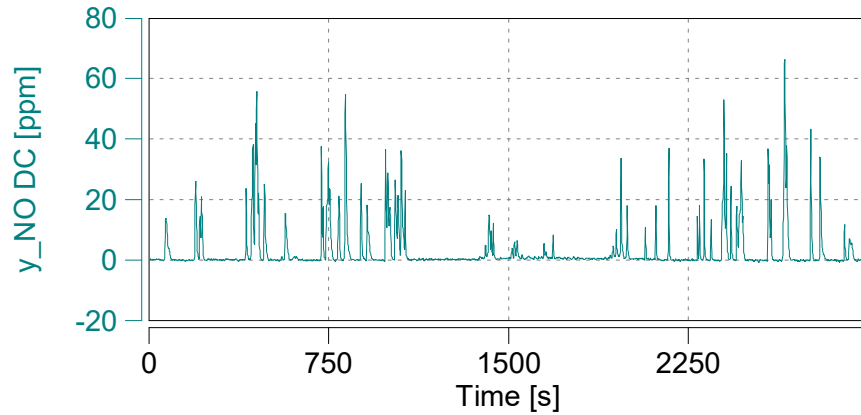
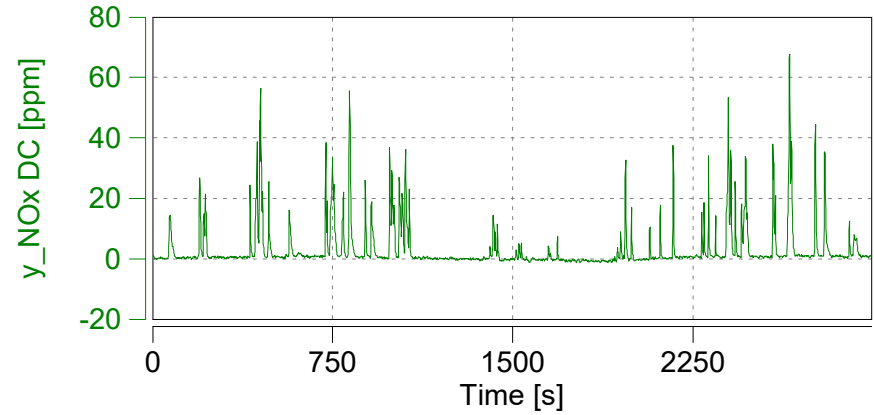
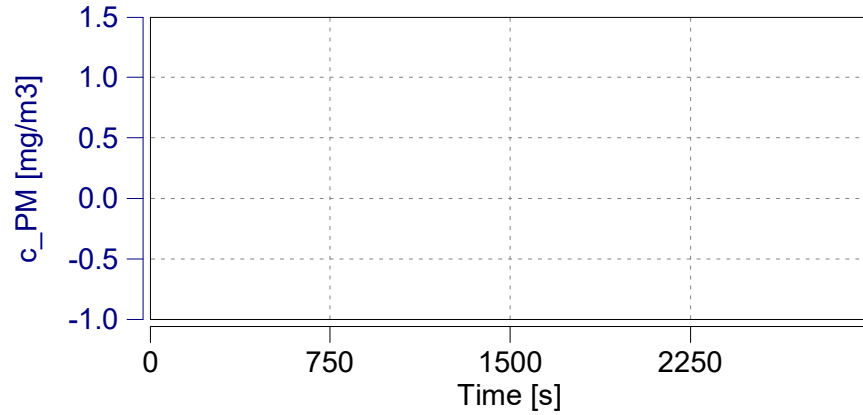
Vehicle: 2017 Audi Q3 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

Page: Corrected Emissions (2)

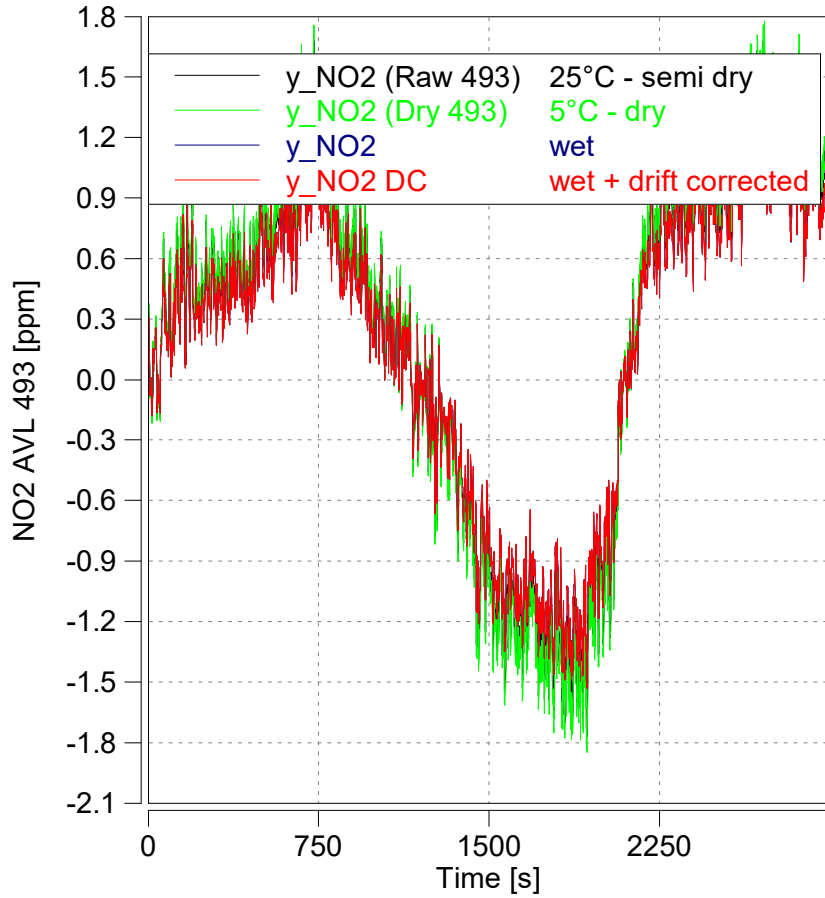
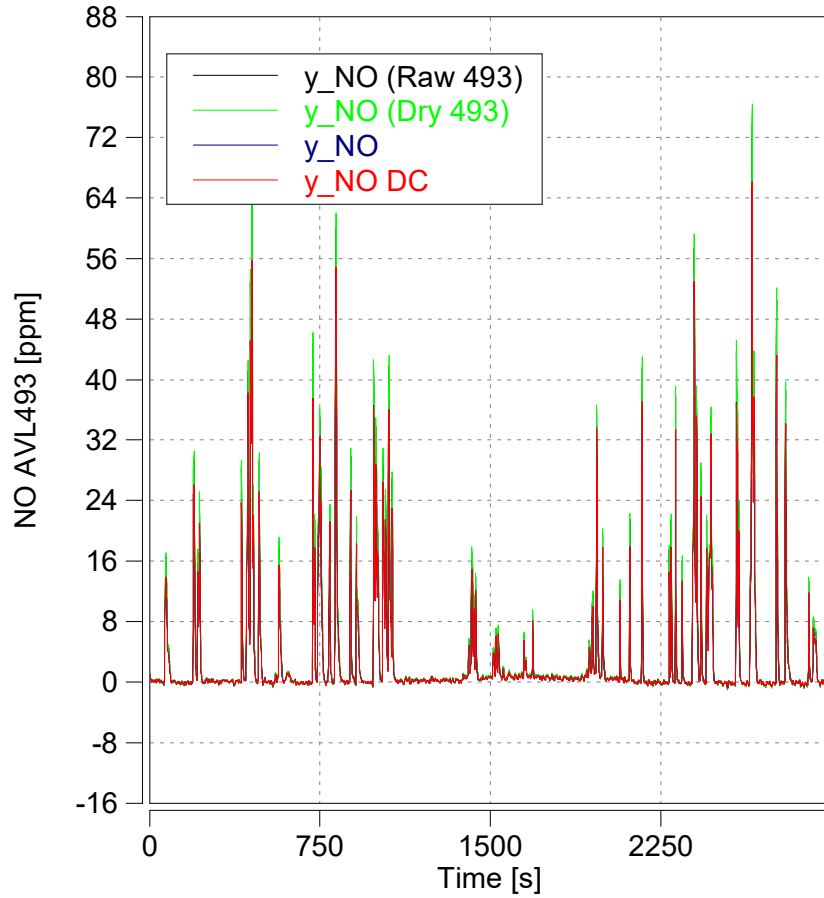
Start Date: 09/22/2017

Start Time: 12:49:39.0

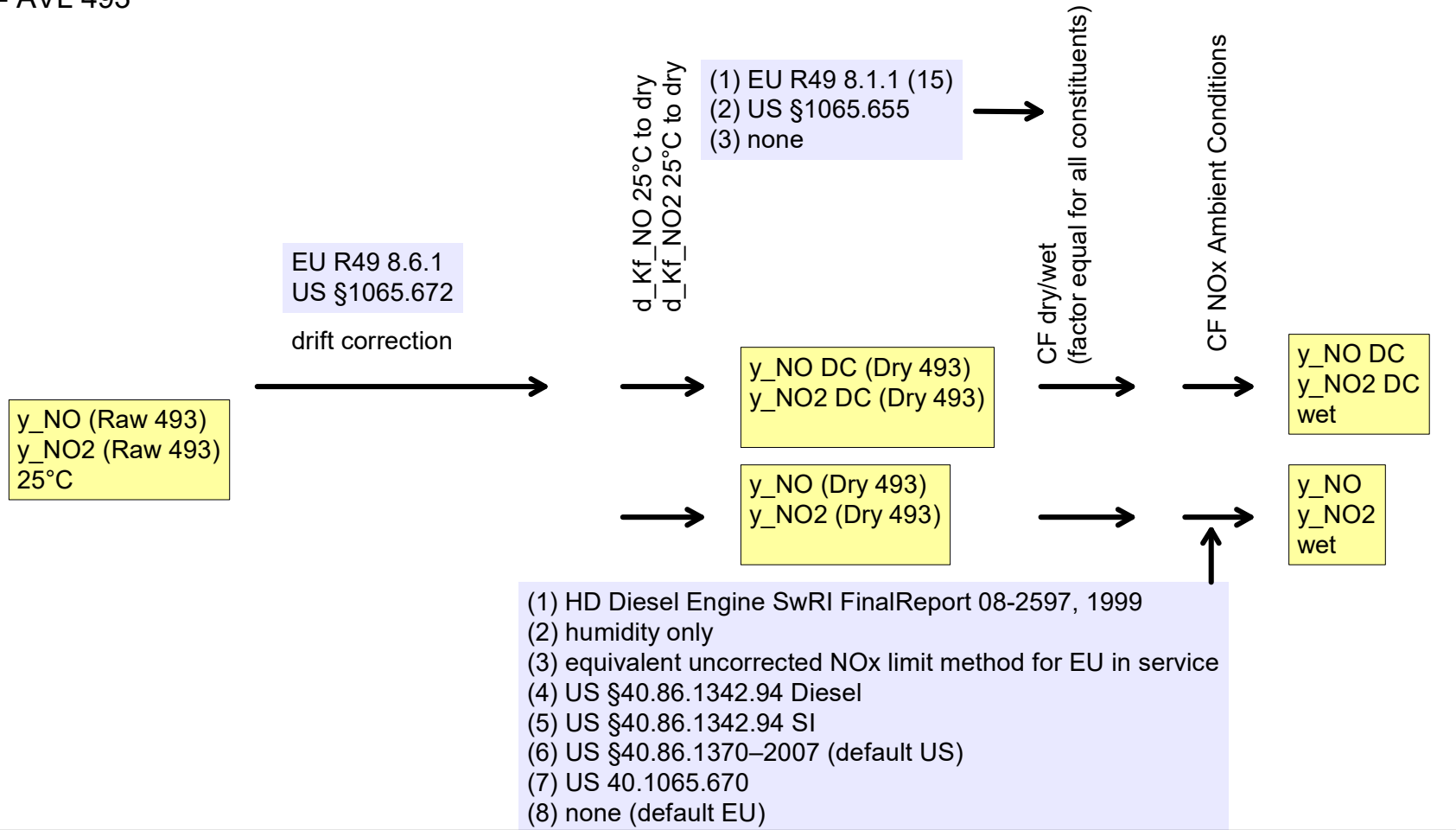


Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi Q3 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90



NOx - AVL 493

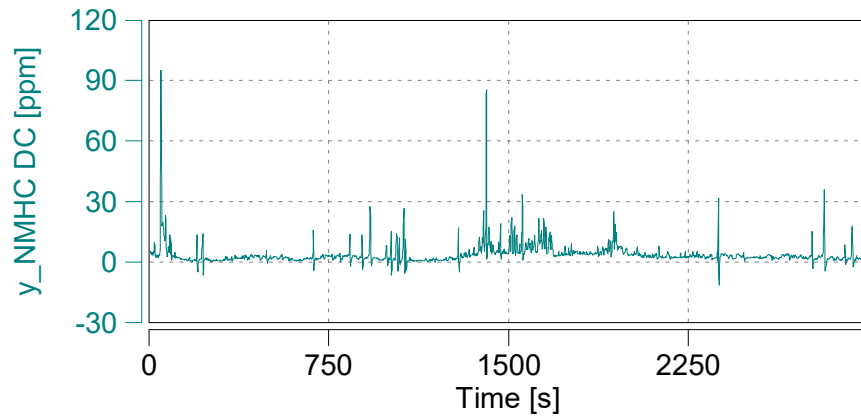
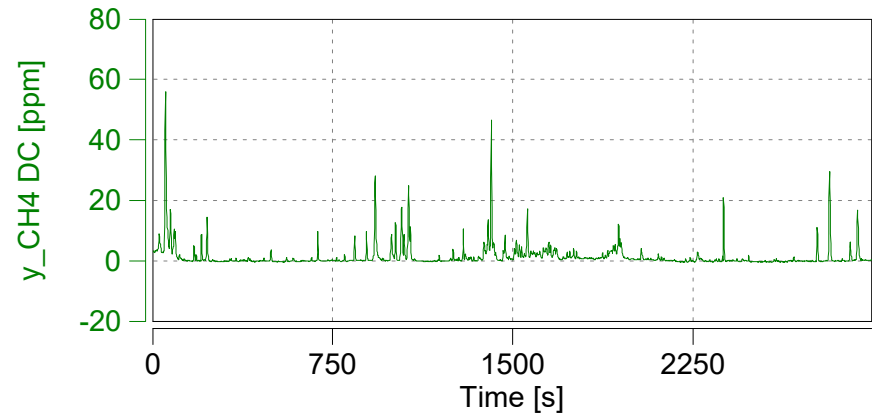
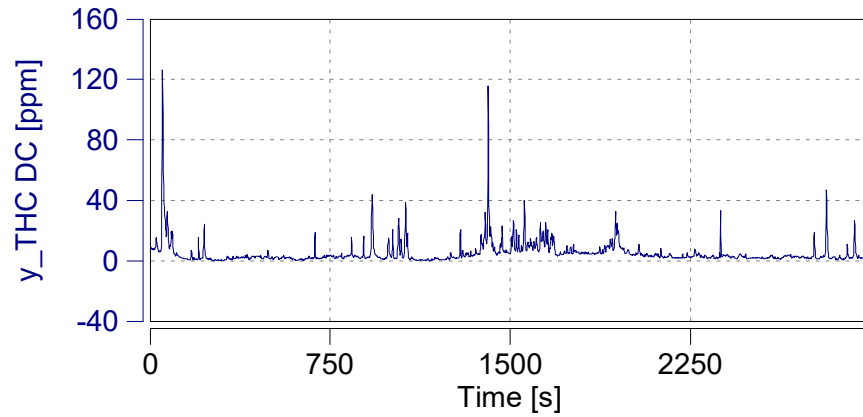


Case: Highway

Page: Corrected Emissions (5)

Start Date: 09/22/2017

Start Time: 12:49:39.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

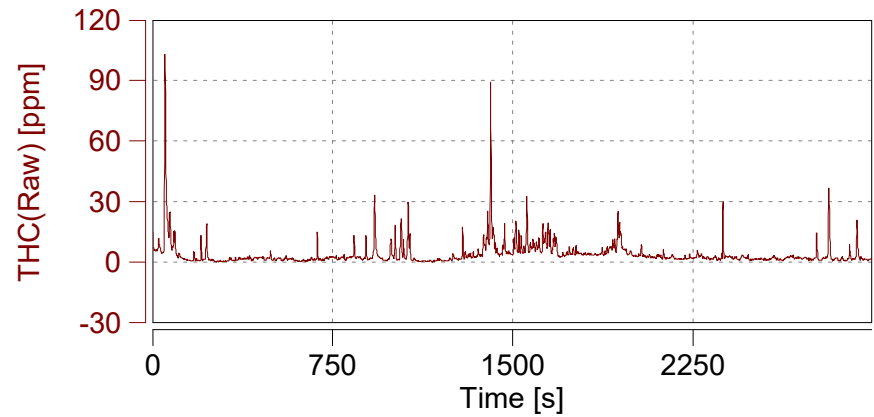
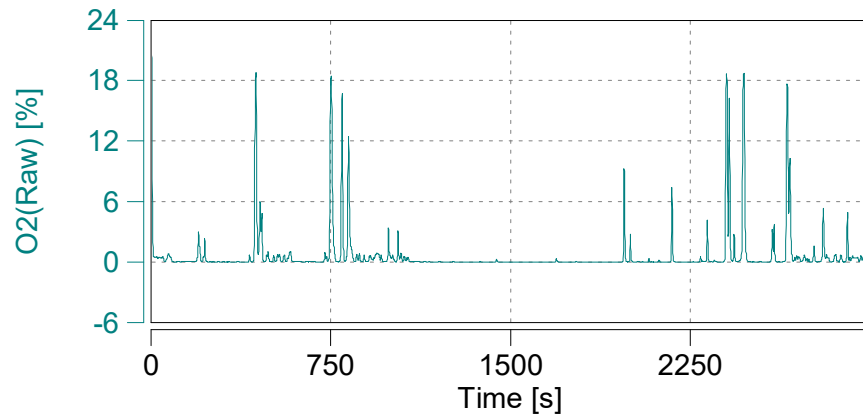
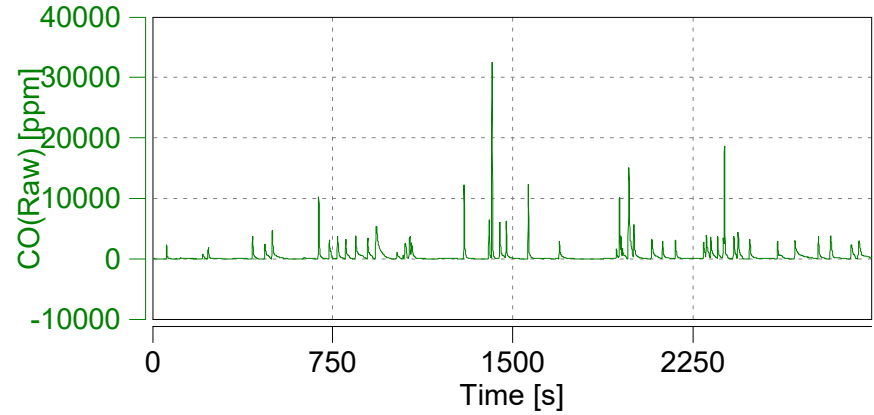
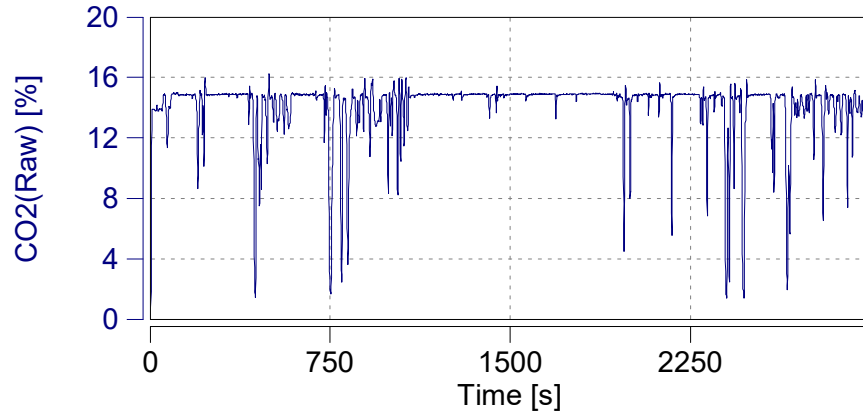
Vehicle: 2017 Audi Q3 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

Page: Emissions Raw Data (1)

Start Date: 09/22/2017

Start Time: 12:49:39.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

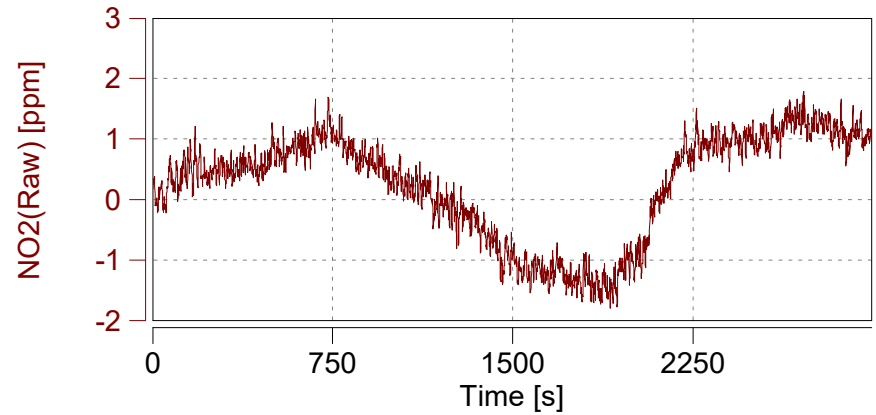
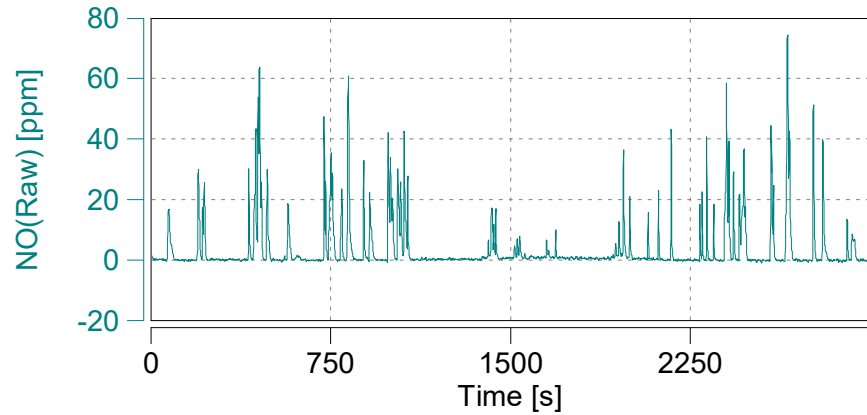
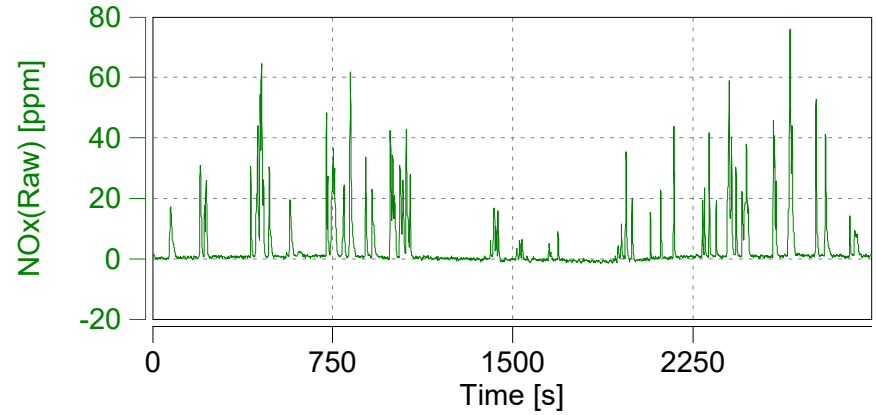
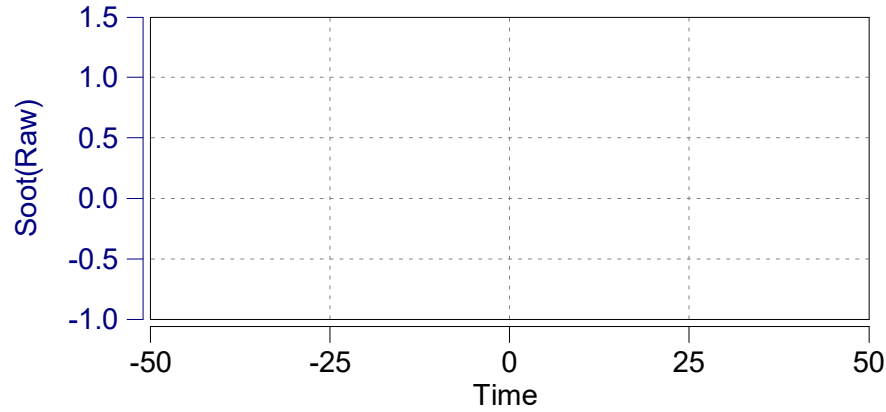
Vehicle: 2017 Audi Q3 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

Page: Emissions Raw Data (2)

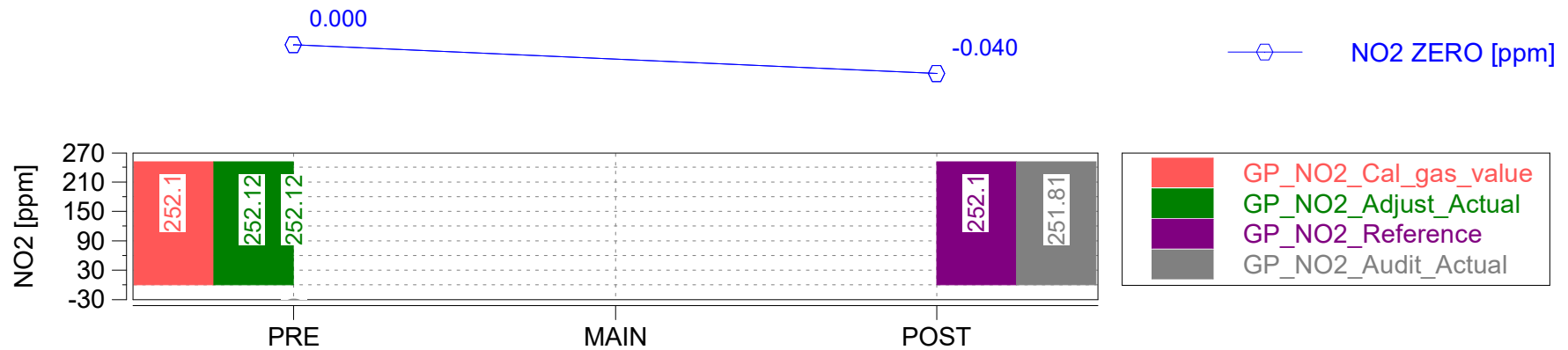
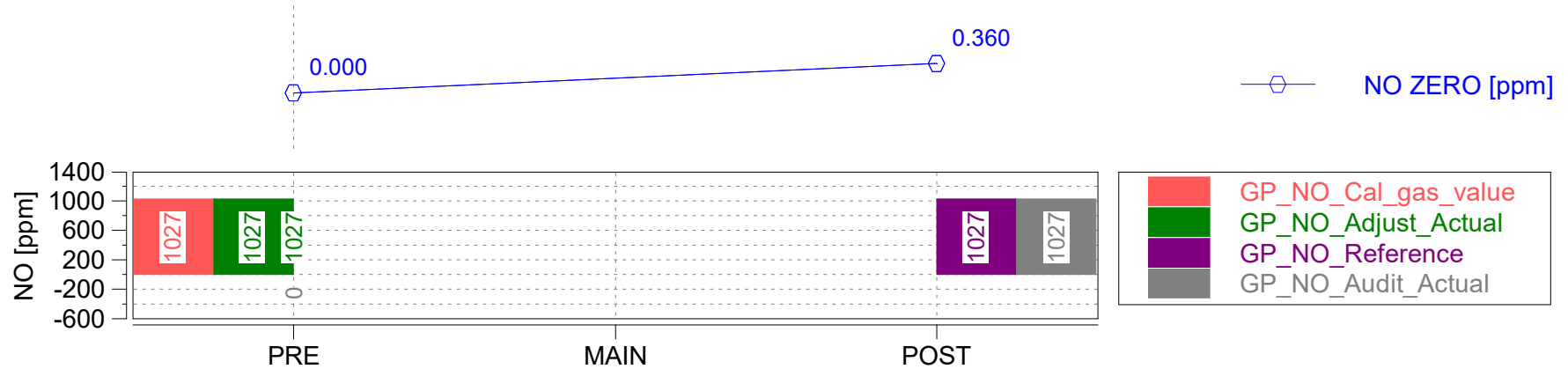
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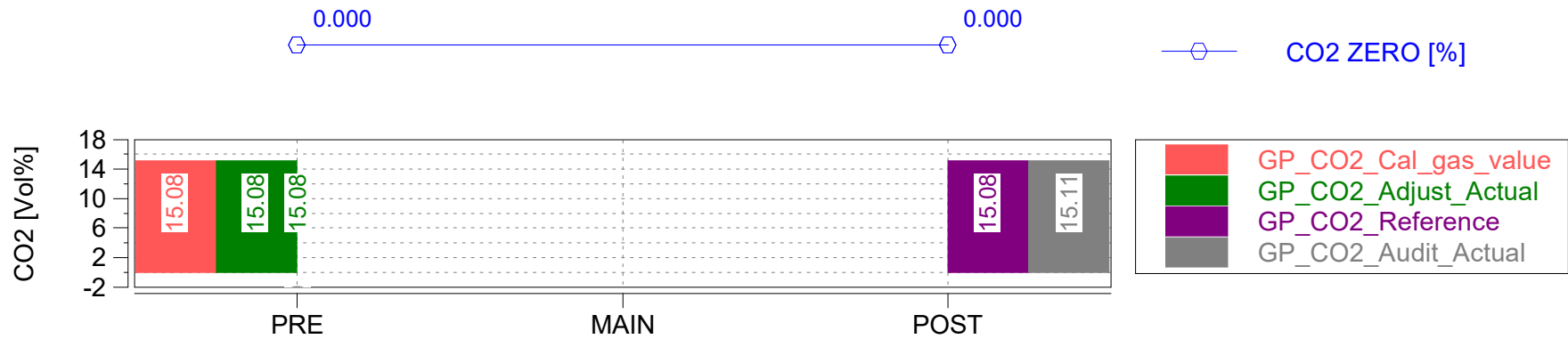
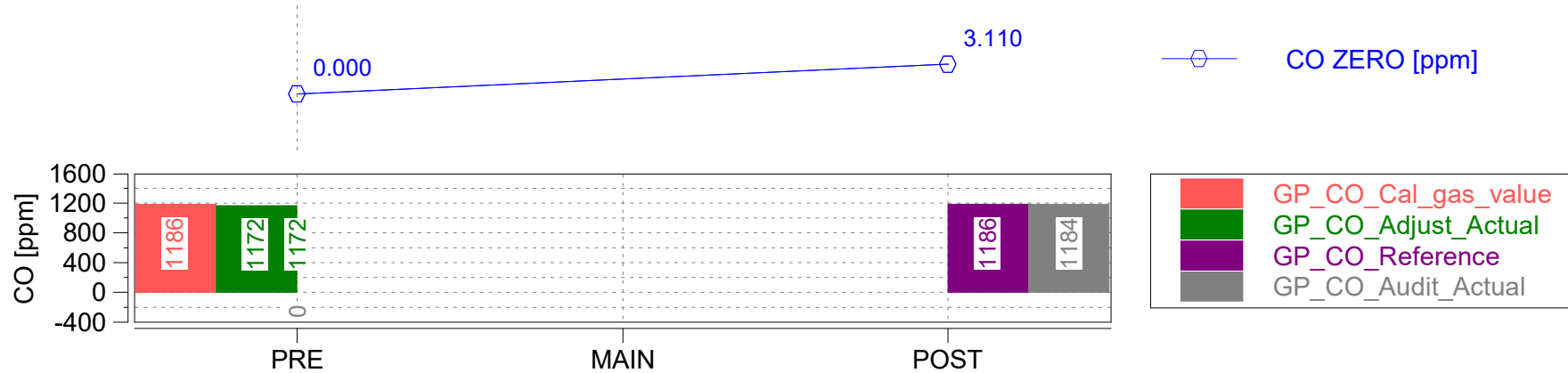
Start Time: 12:49:39.0

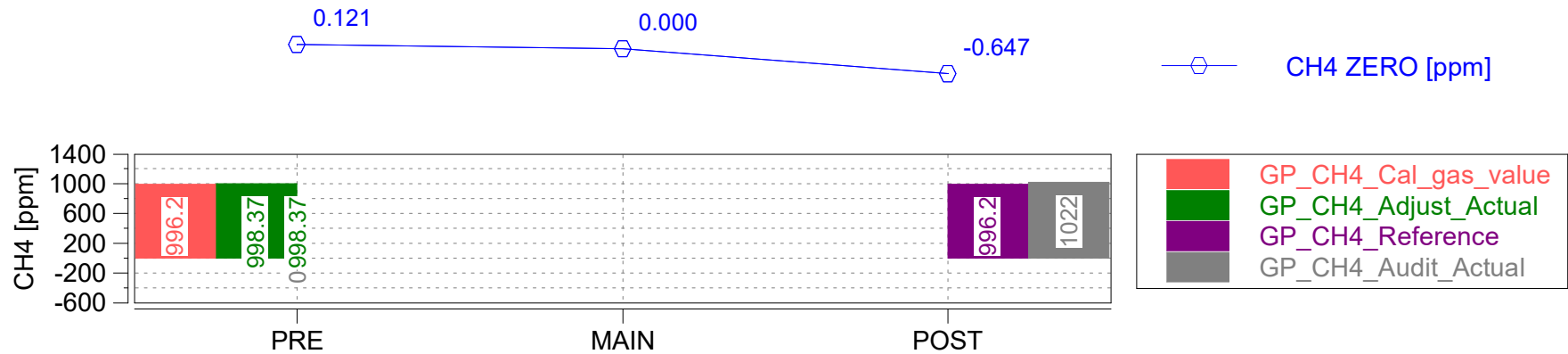
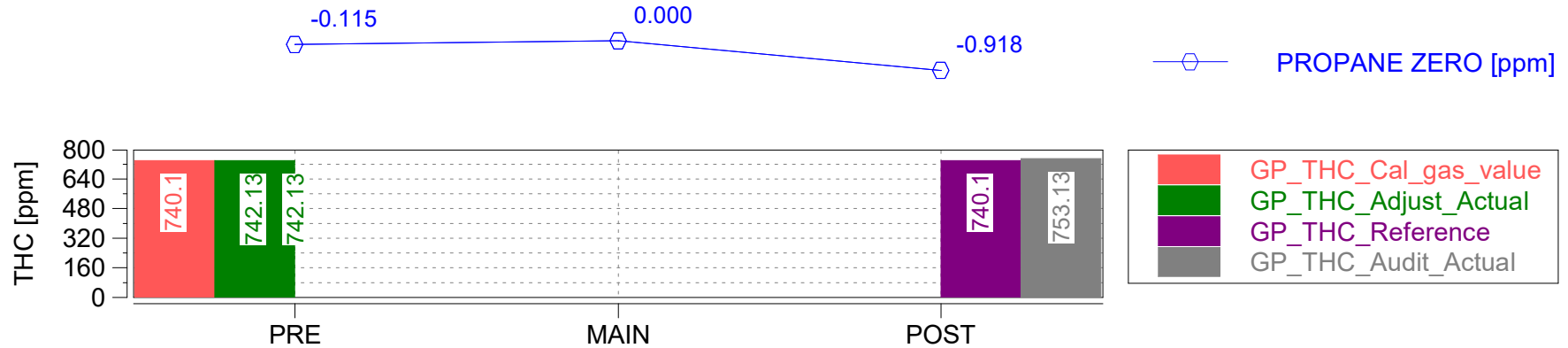


Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi Q3 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90







#	Text	Value	Unit
-	----	----	----
1.0	Test Start: Date	-	-
2.0	Test Start: Time	-	-
3.0	Ambient Temperature	IFILE1:TM'Temperature	deg C
4.0	Ambient Temperature TS	0.00000	s
5.0	Ambient Pressure	IFILE1:TM'Pressure	kPa
6.0	Ambient Pressure TS	0.00000	s
7.0	Humidity Type	1.00000	-
8.0	Amb. Rel. Humidity	IFILE1:TM'Humidity	%
9.0	Amb. Rel. Humidity	0.00000	s
10.0	GPS Latitude		deg
11.0	GPS Latitude TS	0.00000	s
12.0	GPS Longitude		deg
13.0	GPS Longitude TS	0.00000	s
14.0	Altitude		m
15.0	Altitude TS	0.00000	s
16.0	GPS Quality		-
17.0	GPS Quality TS	0.00000	s
18.0	GroundSpeed		km/h
19.0	GroundSpeed TS	0.00000	s
20.0	Altitude from topographical map		m
21.0	Altitude TS of topographical map		s
22.0	TRIP_AMBIENT_GPS_AVL	YES	-
23.0	CALC_GPS_GROUNDSPEED	NO	-
24.0	EXHAUST_FLOW_AVL	NO	-
25.0	EXHAUST_FLOW_AVL_EFM	YES	-
26.0	Exhaust Flow Type	2.00000	-
27.0	Mass Flow	IFILE1:TM'PitotEFM_ExhaustG	various
28.0	Mass Flow TS	1.20000	s
29.0	Exhaust Pressure		kPa
30.0	Exhaust Pressure TS	1.20000	s

#	Text	Value	Unit
-	----	----	----
31.0	Exhaust Delta Pressure		kPa
32.0	Exhaust Pressure Delta TS	1.20000	s
33.0	Exhaust Temperature	IFILE1:TM'PitotEFM_ExhaustG	degC
34.0	Exhaust Temperature TS	1.20000	s
35.0	Lambda	N/A	-
36.0	Lambda TS		s
37.0	CO2_DIL		%
38.0	CO2_DIL TS		s
39.0	CVS Volume Flow		m3/min
40.0	TimeShift_CVS_VOL_FLOW		s
41.0	IN_CVS_PRESSURE		kPa
42.0	TimeShift_CVS_PRESSURE		s
43.0	IN_CVS_TEMP		degC
44.0	TimeShift_CVS_TEMP		s
45.0	Dry to Wet Conversion CO2	YES	-
46.0	Dry to Wet Conversion O2	YES	-
47.0	Dry to Wet Conversion NO	NO	-
48.0	Dry to Wet Conversion NO2	NO	-
49.0	Dry to Wet Conversion THC	NO	-
50.0	Dry to Wet Conversion CH4	NO	-
51.0	Dry to Wet Conversion O2	NO	-
52.0	CO2	IFILE1:TM'GPiS_CO2	%
53.0	CO2 TS	-4.80000	s
54.0	OS	IFILE1:TM'GPiS_O2	%
55.0	O2 TS	-5.30000	s
56.0	CO	IFILE1:TM'GPiS_CO	ppm
57.0	CO TS	-4.80000	s
58.0	NO	IFILE1:TM'GPiS_NO	ppm
59.0	NO TS	-3.00000	s
60.0	NO2	IFILE1:TM'GPiS_NO2	ppm

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Vehicle: 2017 Audi Q3 /
Engine: Gasoline / 2.0L
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Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
61.0	NO2 TS	-3.00000	s
62.0	THC	IFILE1:TM'FIDiS_THC_C1	ppm
63.0	THC TS	0.00000	s
64.0	CH4	IFILE1:TM'FIDiS_CH4_C1	ppm
65.0	CH4 TS	0.00000	s
66.0	GAS_PEMS_Ethane_Efficiency	IFILE1:MOVE_AVL4925'GP_Et -	
67.0	GAS_PEMS_Methane_Efficiency	IFILE1:MOVE_AVL4925'GP_M -	
68.0	GAS_PEMS_Methane_Response	IFILE1:MOVE_AVL4925'GP_M -	
69.0	Zero Signal	IFILE1:TM'GPiS_STATE	0/1
70.0	Zero Signal TS	-3.00000	s
71.0	Zero Signal_FIDiS	IFILE1:TM'FIDiS_STATE	0/1
72.0	Zero Signal_FIDiS TS		s
73.0	Species Input Type	4.00000	-
74.0	GASPEMS=AVL493	NO	-
75.0	GASPEMS=AVL493_iX	NO	-
76.0	GASPEMS=AVL492	YES	-
77.0	GASPEMS=AVL4925	YES	-
78.0	PM: Type	4.00000	1=GFB+HC, 2=GFB, 3=PM=S
79.0	Filter ID from IFile	NO	-
80.0	Lab ID from IFile	NO	-
81.0	PM Filter: ID	N/A	ID
82.0	PM Filter: Lab	N/A	Name/ID
83.0	PM Filter: Weight before Test	N/A	mg
84.0	PM Filter: Weight after Test	N/A	mg
85.0	PM (HC Corr): Max. Exhaust Flow	N/A	scfm
86.0	Soot		mg/m3
87.0	Soot TS	-5.00000	s
88.0	Soot Sensor		mg/m3
89.0	Soot Sensor TS		s
90.0	PM Filter: Filter Flow Rate		l/min

#	Text	Value	Unit
-	----	----	----
91.0	PM Filter: Filter Flow Rate TS	-5.00000	s
92.0	PM Filter: Filter Dilution Ratio		-
93.0	PM Filter: Filter Dilution Ratio TS	-5.00000	s
94.0	PM Filter: Filter Trigger		-
95.0	PM Filter: Filter Trigger TS	-5.00000	s
96.0	PMPEMS=AVL494	YES	-
97.0	PMPEMS_AVL494_PROP_DIL	NO	-
98.0	PM dilution ratio min		-
99.0	PM_MaxExhaustFlowRate		-
100.0	PM_ExhaustFlow_Thresh		-
101.0	PM_total_flow_val		-
102.0	PM_total_flow_val_TS		-
103.0	PM_exh_mass_flow		-
104.0	PM_exh_mass_flow_TS		-
105.0	PN		#/cm3
106.0	TimeShift_PN		s
107.0	PN_STATE		-
108.0	PN TS STATE		s
109.0	PNPEMS_AVL496	NO	-
110.0	PN_CorrFactor	1.00000	
111.0	Time Alignment	1.00000	-
112.0	Time Alignment Dataset 1	N/A	0/1
113.0	Time Alignment Dataset 2	N/A	0/1
114.0	Time Alignment Thresh 1	N/A	-
115.0	Time Alignment Thresh 2	N/A	-
116.0			
117.0			
118.0			
119.0			
120.0			

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#	Text	Value	Unit
-	----	----	----
121.0			
122.0	Trigger		0/1
123.0	Trigger TS		s
124.0	FTIR_NAME_1		-
125.0	FTIR_MW_1		-
126.0	FTIR_CHANNEL_1		-
127.0	FTIR_CHANNEL_TS_1		-
128.0	FTIR_CHANNEL_DRY_1	NO	-
129.0	FTIR_NAME_2		-
130.0	FTIR_MW_2		-
131.0	FTIR_CHANNEL_2		-
132.0	FTIR_CHANNEL_TS_2		-
133.0	FTIR_CHANNEL_DRY_2	NO	-
134.0	FTIR_NAME_3		-
135.0	FTIR_MW_3		-
136.0	FTIR_CHANNEL_3		-
137.0	FTIR_CHANNEL_TS_3		-
138.0	FTIR_CHANNEL_DRY_3	NO	-
139.0	FTIR_NAME_4		-
140.0	FTIR_MW_4		-
141.0	FTIR_CHANNEL_4		-
142.0	FTIR_CHANNEL_TS_4		-
143.0	FTIR_CHANNEL_DRY_4	NO	-
144.0	FTIR_NAME_5		-
145.0	FTIR_MW_5		-
146.0	FTIR_CHANNEL_5		-
147.0	FTIR_CHANNEL_TS_5		-
148.0	FTIR_CHANNEL_DRY_5	NO	-
149.0	FTIR_NAME_6		-
150.0	FTIR_MW_6		-

#	Text	Value	Unit
-	----	----	----
151.0	FTIR_CHANNEL_6		-
152.0	FTIR_CHANNEL_TS_6		-
153.0	FTIR_CHANNEL_DRY_6	NO	-
154.0	FTIR_NAME_7		-
155.0	FTIR_MW_7		-
156.0	FTIR_CHANNEL_7		-
157.0	FTIR_CHANNEL_TS_7		-
158.0	FTIR_CHANNEL_DRY_7	NO	-
159.0	FTIR_NAME_8		-
160.0	FTIR_MW_8		-
161.0	FTIR_CHANNEL_8		-
162.0	FTIR_CHANNEL_TS_8		-
163.0	FTIR_CHANNEL_DRY_8	NO	-
164.0	FTIR_NAME_9		-
165.0	FTIR_MW_9		-
166.0	FTIR_CHANNEL_9		-
167.0	FTIR_CHANNEL_TS_9		-
168.0	FTIR_CHANNEL_DRY_9	NO	-
169.0	FTIR_NAME_10		-
170.0	FTIR_MW_10		-
171.0	FTIR_CHANNEL_10		-
172.0	FTIR_CHANNEL_TS_10		-
173.0	FTIR_CHANNEL_DRY_10	NO	-
174.0	FTIR_NAME_11		-
175.0	FTIR_MW_11		-
176.0	FTIR_CHANNEL_11		-
177.0	FTIR_CHANNEL_TS_11		-
178.0	FTIR_CHANNEL_DRY_11	NO	-
179.0	FTIR_NAME_12		-
180.0	FTIR_MW_12		-

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#	Text	Value	Unit
-	----	----	----
181.0	FTIR_CHANNEL_12		-
182.0	FTIR_CHANNEL_TS_12		-
183.0	FTIR_CHANNEL_DRY_12	NO	-
184.0	FTIR_NAME_13		-
185.0	FTIR_MW_13		-
186.0	FTIR_CHANNEL_13		-
187.0	FTIR_CHANNEL_TS_13		-
188.0	FTIR_CHANNEL_DRY_13	NO	-
189.0	FTIR_NAME_14		-
190.0	FTIR_MW_14		-
191.0	FTIR_CHANNEL_14		-
192.0	FTIR_CHANNEL_TS_14		-
193.0	FTIR_CHANNEL_DRY_14	NO	-
194.0	FTIR_NAME_15		-
195.0	FTIR_MW_15		-
196.0	FTIR_CHANNEL_15		-
197.0	FTIR_CHANNEL_TS_15		-
198.0	FTIR_CHANNEL_DRY_15	NO	-
199.0	FTIR_NAME_16		-
200.0	FTIR_MW_16		-
201.0	Vehicle Type	2017 Audi Q3	-
202.0	Vehicle Info		-
203.0	Engine Type	Gasoline	-
204.0	Engine Info	2.0L	-
205.0	Engine Torque		Nm
206.0	Curb Idle Load		%
207.0	Idle Speed		rpm
208.0	HYBRID_OVC_REF_CO2_gkm		g/km
209.0	Engine Concept	1.00000	-
210.0	Alpha	1.93000	-

#	Text	Value	Unit
-	----	----	----
211.0	Beta	1.00000	
212.0	Gamma	0.00000	
213.0	Delta	0.00000	
214.0	Epsilon	0.03200	
215.0	X_C	83.00000	
216.0	X_H	13.30000	
217.0	X_N	0.00000	
218.0	X_O	3.50000	
219.0	X_S	0.00000	
220.0	Fuel_Density	747.50000	
221.0	rho_exhaust	1.29310	
222.0	U_CO2	1.51800	
223.0	U_CO	0.96600	
224.0	U_NO	1.58700	
225.0	U_NO2	1.58700	
226.0	U_NOx	1.58700	
227.0	U_HC	0.49900	
228.0	U_NMHC	0.47100	
229.0	U_CH4	0.55300	
230.0	U_O2	1.10400	
231.0	Fuel Type	2.00000	-
232.0	exhaust mass flow type (YES/NO)	YES	-
233.0	Distance Calculation Type	1.00000	-
234.0	Velocity Statistics Calculation Type	2.00000	-
235.0	RDE vehicle class	1.00000	-
236.0	TM_CITY0		s
237.0	TM_CITY1		s
238.0	TM_RURAL0		s
239.0	TM_RURAL1		s
240.0	TM_RURAL2_0		s

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#	Text	Value	Unit
-	----	----	----
241.0	TM_RURAL2_1		s
242.0	Second Rural Part for Time Marks (NO		-
243.0	TM_MW0		s
244.0	TM_MW1		s
245.0	VELOCITY_LIMIT_STOP	2.00000	km/h
246.0	VELOCITY_LIMIT_URBAN	50.00000	km/h
247.0	VELOCITY_LIMIT_RURAL	75.00000	km/h
248.0	Intake Manifold Pressure Type	1.00000	-
249.0	Velocity	IFILE1:TM'OBD_Vehicle_Spee	km/h
250.0	Velocity TS	1.20000	s
251.0	Velocity FACTOR	1.00000	-
252.0	Coolant Temperature	IFILE1:TM'OBD_Engine_Coola	degC
253.0	Coolant Temperature TS	1.20000	s
254.0	Oil Temperature		degC
255.0	Oil Temperature TS	1.20000	s
256.0	Intake Manifold Temperature		degC
257.0	Intake Manifold Temp TS	1.20000	s
258.0	Intake Manifold Pressure	IFILE1:TM'OBD_Intake_manifo	kPa
259.0	Intake Manifold Pressure TS	1.20000	s
260.0	Throttle Position		%
261.0	Throttle TS	1.20000	s
262.0	TYP_IDLE_MASS_FLOW		kg/h
263.0	Torque Type	1.00000	-
264.0	Speed	IFILE1:TM'OBD_Engine_RPM	rpm
265.0	Speed TS	1.20000	s
266.0	Torque		Nm
267.0	Torque TS	1.20000	s
268.0	Friction Torque	N/A	Nm
269.0	Friction Torque TS	N/A	s
270.0	Reference Torque	N/A	Nm

#	Text	Value	Unit
-	----	----	----
271.0	Reference Torque TS	N/A	s
272.0	k_VELINE		-
273.0	D_VELINE		-
274.0	Fuel Flow Type	2.00000	-
275.0	Air Flow Type	1.00000	-
276.0	Fuel Rate		various
277.0	Air Rate		various
278.0	Fuel Rate TS	1.20000	s
279.0	No_Cylinders		-
280.0	Air Rate TS	1.20000	s
281.0	FTIR_CHANNEL_32		-
282.0	FTIR_CHANNEL_TS_32		-
283.0	FTIR_CHANNEL_DRY_32	NO	-
284.0	FTIR_NAME_33		-
285.0	FTIR_MW_33		-
286.0	FTIR_CHANNEL_33		-
287.0	FTIR_CHANNEL_TS_33		-
288.0	FTIR_CHANNEL_DRY_33	NO	-
289.0	FTIR_NAME_34		-
290.0	FTIR_MW_34		-
291.0	FTIR_CHANNEL_34		-
292.0	FTIR_CHANNEL_TS_34		-
293.0	FTIR_CHANNEL_DRY_34	NO	-
294.0	FTIR_NAME_35		-
295.0	FTIR_MW_35		-
296.0	FTIR_CHANNEL_35		-
297.0	FTIR_CHANNEL_TS_35		-
298.0	FTIR_CHANNEL_DRY_35	NO	-
299.0	FTIR_NAME_36		-
300.0	FTIR_MW_36		-

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#	Text	Value	Unit
-	----	----	----
301.0	FTIR_CHANNEL_36		-
302.0	FTIR_CHANNEL_TS_36		-
303.0	FTIR_CHANNEL_DRY_36	NO	-
304.0	FTIR_NAME_37		-
305.0	FTIR_MW_37		-
306.0	FTIR_CHANNEL_37		-
307.0	FTIR_CHANNEL_TS_37		-
308.0	FTIR_CHANNEL_DRY_37	NO	-
309.0	FTIR_NAME_38		-
310.0	FTIR_MW_38		-
311.0	FTIR_CHANNEL_38		-
312.0	FTIR_CHANNEL_TS_38		-
313.0	FTIR_CHANNEL_DRY_38	NO	-
314.0	FTIR_NAME_39		-
315.0	FTIR_MW_39		-
316.0	FTIR_CHANNEL_39		-
317.0	FTIR_CHANNEL_TS_39		-
318.0	FTIR_CHANNEL_DRY_39	NO	-
319.0	FTIR_NAME_40		-
320.0	FTIR_MW_40		-
321.0	FTIR_CHANNEL_40		-
322.0	FTIR_CHANNEL_TS_40		-
323.0	FTIR_CHANNEL_DRY_40	NO	-
324.0	Legislation Type (1=HDIUT 2=EU H	4.00000	-
325.0	WholeTest_NOx_corr	5.00000	-
326.0	WholeTest_Hum_corr	2.00000	-
327.0	CD_Distance	0.00000	km
328.0	CD_NOx	0.00000	mg/km
329.0	CD_CO	0.00000	mg/km
330.0	CD_CO2	0.00000	g/km

#	Text	Value	Unit
-	----	----	----
331.0	CD_NMHC	0.00000	mg/km
332.0	CD_CH4	0.00000	mg/km
333.0	CD_THC	0.00000	mg/km
334.0	CD_PN		#/km
335.0	WLTC_LOW_SPEED_gkm		g/km
336.0	WLTC_LOW_SPEED_FAC	1.20000	-
337.0	WLTC_MEDIUM_SPEED_gkm		g/km
338.0	WLTC_HIGH_SPEED_gkm		g/km
339.0	WLTC_HIGH_SPEED_FAC	1.10000	-
340.0	WLTC_EXTRA_HIGH_SPEED_gkm		g/km
341.0	WLTC_EXTRA_HIGH_SPEED_FA	1.05000	-
342.0	TOL_NORMAL_DRIVING	25.00000	%
343.0	TOL_SEVERE_DRIVING	50.00000	%
344.0	Increase Tolerance Nomral Driving	NO	-
345.0	Bin1_min		km/h
346.0	Bin2_min		km/h
347.0	Bin3_min		km/h
348.0	Bin1_max		km/h
349.0	Bin2_max		km/h
350.0	Bin3_max		km/h
351.0	Clear_R0	125.40000	N
352.0	Clear_R1	0.29300	Nh/km
353.0	Clear_R2	0.02795	N*(h/km) ²
354.0	Clear_SMK	1470.00000	kg
355.0	Clear_Rated_Power	140.00000	kW
356.0	Clear_Ref_Velocity	70.00000	km/h
357.0	Clear_Ref_Acc	0.45000	m/s ²
358.0	Clear_Smooth	3.00000	s
359.0	EXTC_From_High_Temp	30.00000	degC
360.0	EXTC_To_High_Temp	35.00000	degC

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#	Text	Value	Unit
-	----	----	----
361.0	EXTC_From_Low_Temp	-7.00000	degC
362.0	EXTC_To_Low_Temp	0.00000	degC
363.0	Euro 6d or Euro 6d temp	NO	-
364.0	EXTC_From_Altitude	700.00000	m
365.0	EXTC_To_Altitude	1300.00000	m
366.0	EXTC_CORR_FAC	1.60000	
367.0	weight cold start (YES/NO)	NO	-
368.0	precon and soak done (YES/NO)	NO	-
369.0	PATH_PRECON_FILE		
370.0	filter velocity (YES/NO)	NO	-
371.0	filter velocity auto(YES/NO)	NO	-
372.0	Ki_CO		
373.0	Ki_CO2		
374.0	Ki_NOx		
375.0	Ki_FACTOR_CO2 (YES/NO)	NO	-
376.0	Ki_OFFSET_CO2 (YES/NO)	NO	-
377.0	Ki_FACTOR_CO (YES/NO)	NO	-
378.0	Ki_OFFSET_CO (YES/NO)	NO	-
379.0	Ki_FACTOR_NOx (YES/NO)	NO	-
380.0	Ki_OFFSET_NOx (YES/NO)	NO	-
381.0	Ki_OFF (YES/NO)	NO	-
382.0	HD legislations	1.00000	-
383.0	RDE legislations	1.00000	-
384.0	Submission Documents (YES/NO)	NO	-
385.0	General Setup Parameters Text	Highway	-
386.0	Legislation Setup Parameters Text	Highway	-
387.0	Trip Info		-
388.0	IN_TIME_REF		-
389.0	Sub-Trip Start: Auto	YES	-
390.0	Sub-Trip Start: Seconds	N/A	s

#	Text	Value	Unit
-	----	----	----
391.0	Sub-Trip End: Auto	YES	-
392.0	Sub-Trip End: Seconds	N/A	s
393.0	Unit System	2.00000	-
394.0	Calculate: PM Emissions	NO	-
395.0	Calculate: PN Emissions	NO	-
396.0	Output: Summary	YES	-
397.0	Output: Emissions	YES	-
398.0	Output: Raw Data	YES	-
399.0	Output: Zero Span	YES	-
400.0	Output: Data Consistency	NO	-
401.0	Output: Window Plots	YES	-
402.0	Fuel Rate ECU vs. EU ISO16183	y = 10000000000.0000 x - 0.000 R ² =10000000000.000 SEE=	
403.0	PEMS post processing version	Rel_10_B192	
404.0	Concerto version	480.00000	
405.0	Concerto build	215.00000	
406.0	USERNAME	EFR	

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Case: Mountain
Page: Trip Summary

Start Date: 09/22/2017
Start Time: 12:49:39.0



Trip Duration	2978.00	s	ave THC	11.65025	ppm	BS CO2	n/a	g/hphr
Trip Duration (a)	2978.00	s	ave NMHC	6.24051	ppm	BS CO	n/a	g/hphr
Trip Distance	28.66	mi	ave CH4	4.91795	ppm	BS THC	n/a	g/hphr
Trip Distance (a)	28.66	mi	ave CO	1215.64559	ppm	BS NMHC	n/a	g/hphr
Trip Fuel Cons. (b)	n/a	kg	ave CO2	10.75321	%	BS CH4	n/a	g/hphr
Trip Fuel Cons. (ab)	n/a	kg	ave NOx	4.99114	ppm	BS NO (d)	n/a	g/hphr
Trip Fuel Cons. EU (ac)	2.96	kg	ave PM	n/a	mg/m3	BS NO2	n/a	g/hphr
Trip Fuel Cons. US (ac)	2.94	kg	ave Soot meas	n/a	mg/m3	BS NOx	n/a	g/hphr
Trip Fuel Cons. Volume (b)	n/a	gall	ave Soot	n/a	mg/m3	BS Soot	n/a	g/hphr
Trip Fuel Cons. Volume (ab)	n/a	gall	ave PN	n/a	#/cm3	BS Soot meas	n/a	g/hphr
Trip Fuel Cons. Volume EU (ac)	1.05	gall	tot THC	0.63403	g	BS PM	n/a	g/hphr
Trip Fuel Cons. Volume US (ac)	1.04	gall	tot NMHC	0.33545	g	BS PN	n/a	#/hpr
Trip Fuel Economy (b)	n/a	mpg_US	tot CH4	0.29381	g	DS CO2	303.91642	g/mi
Trip Fuel Economy (ab)	n/a	mpg_US	tot CO	153.84431	g	DS CO	5.36745	g/mi
Trip Fuel Economy EU (ac)	27.38	mpg_US	tot CO2	8710.99325	g	DS THC	0.02212	g/mi
Trip Fuel Economy US (ac)	27.58	mpg_US	tot NO (d)	0.15732	g	DS NMHC	0.01170	g/mi
Trip Av. Eng. Speed	1664.64	rpm	tot NO2	0.16611	g	DS CH4	0.01025	g/mi
Trip Av. Torque	n/a	lbft	tot NOx	0.30623	g	DS NO (d)	0.00549	g/mi
Trip Av. Power	n/a	hp	tot Soot	n/a	g	DS NO2	0.00580	g/mi
Trip Work	n/a	hphr	tot Soot meas	n/a	g	DS NOx	0.01068	g/mi
Trip Exhaust Mass	47.97	kg	tot PM	n/a	g	DS Soot	n/a	g/mi
Trip Exhaust Mass EU (ac)	n/a	kg	tot PN	n/a	#	DS Soot meas	n/a	g/mi
Trip Exhaust Mass US (ac)	n/a	kg	PM measurement type	0.00000	-	DS PM	n/a	g/mi
Trip Av. Amb. Temperature	74.68	deg_F	PM correction type	1.00000	alpha(HC)	DS PN	n/a	#/mi
Trip Av. Humidity	37.24	%	tot Soot on PM filter (estim.)	n/a	mg	FS CO2	n/a	g/kg
Fuel Type	Petrol (E10)		Soot --> PM simple scaling factor	1.00000	-	FS CO	n/a	g/kg
			Soot --> PM alpha scaling factor	0.00000	-	FS THC	n/a	g/kg
			Trip Av. Veh. Speed	34.64905	mi/hr	FS NMHC	n/a	g/kg
			Trip Velocity Zero	8.59637	%	FS CH4	n/a	g/kg
			Trip Velocity Urban	38.11283	%	FS NO (d)	n/a	g/kg
			Trip Velocity Rural	35.19140	%	FS NO2	n/a	g/kg
			Trip Velocity Motorway	26.69577	%	FS NOx	n/a	g/kg
						FS Soot	n/a	g/kg
						FS Soot meas	n/a	g/kg
						FS PM	n/a	g/kg
						FS PN	n/a	#/kg

(a) GAS PEMS measurement state only, (b) based on fuel rate input (ECU, Fuel Meter), (c) calculated from carbon balance
(d) NO calculated using molecular weight of NO2

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi Q3 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Mountain

Page: Trip Summary Drift Corrected

Start Date: 09/22/2017

Start Time: 12:49:39.0

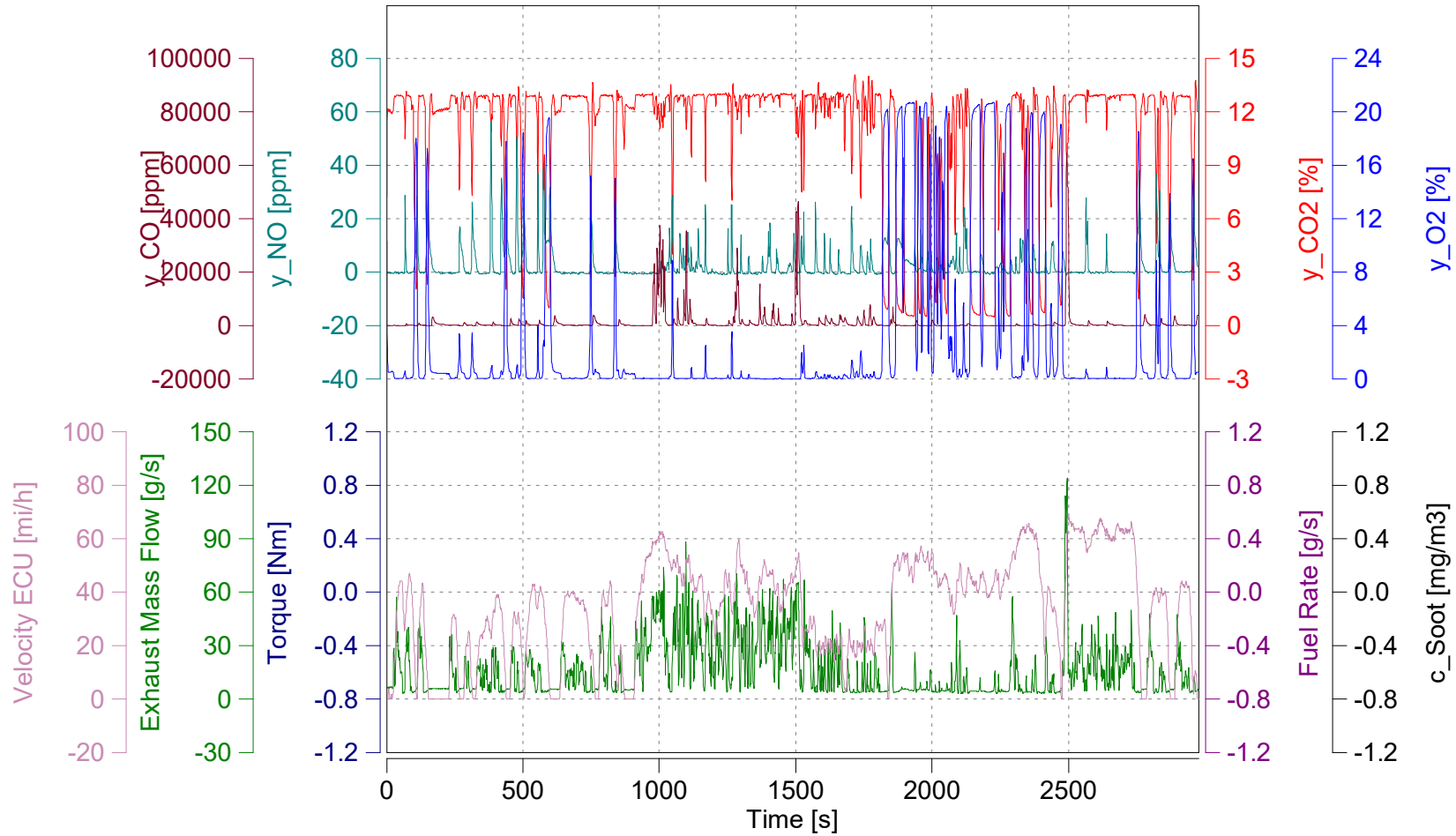


Trip Duration	2978.00	s	ave THC DC	15.52376	ppm	BS CO2 DC	n/a	g/hphr
Trip Duration (a)	2978.00	s	ave NMHC DC	10.36873	ppm	BS CO DC	n/a	g/hphr
Trip Distance	28.66	mi	ave CH4 DC	4.68639	ppm	BS THC DC	n/a	g/hphr
Trip Distance (a)	28.66	mi	ave CO DC	1223.67791	ppm	BS NMHC DC	n/a	g/hphr
Trip Fuel Cons. (b)	n/a	kg	ave CO2 DC	10.74253	%	BS CH4 DC	n/a	g/hphr
Trip Fuel Cons. (ab)	n/a	kg	ave NOx DC	4.99125	ppm	BS NO DC (d)	n/a	g/hphr
Trip Fuel Cons. EU (ac)	2.96	kg	ave PM	n/a	mg/m3	BS NO2 DC	n/a	g/hphr
Trip Fuel Cons. US (ac)	2.94	kg	ave Soot meas	n/a	mg/m3	BS NOx DC	n/a	g/hphr
Trip Fuel Cons. Volume (b)	n/a	gall	ave Soot	n/a	mg/m3	BS Soot	n/a	g/hphr
Trip Fuel Cons. Volume (ab)	n/a	gall	ave PN DC	n/a	#/cm3	BS Soot meas	n/a	g/hphr
Trip Fuel Cons. Volume EU (ac)	1.05	gall	tot THC DC	0.84483	g	BS PM	n/a	g/hphr
Trip Fuel Cons. Volume US (ac)	1.04	gall	tot NMHC DC	0.53802	g	BS PN DC	n/a	#/hpr
Trip Fuel Economy (b)	n/a	mpg_US	tot CH4 DC	0.28204	g	DS CO2 DC	303.61442	g/mi
Trip Fuel Economy (ab)	n/a	mpg_US	tot CO DC	154.86083	g	DS CO DC	5.40291	g/mi
Trip Fuel Economy EU (ac)	27.38	mpg_US	tot CO2 DC	8702.33708	g	DS THC DC	0.02948	g/mi
Trip Fuel Economy US (ac)	27.58	mpg_US	tot NO DC (d)	0.15725	g	DS NMHC DC	0.01877	g/mi
Trip Av. Eng. Speed	1664.64	rpm	tot NO2 DC	0.16620	g	DS CH4 DC	0.00984	g/mi
Trip Av. Torque	n/a	lbft	tot NOx DC	0.30626	g	DS NO DC (d)	0.00549	g/mi
Trip Av. Power	n/a	hp	tot Soot	n/a	g	DS NO2 DC	0.00580	g/mi
Trip Work	n/a	hphr	tot Soot meas	n/a	g	DS NOx DC	0.01069	g/mi
Trip Exhaust Mass	47.97	kg	tot PM	n/a	g	DS Soot	n/a	g/mi
Trip Exhaust Mass EU (ac)	n/a	kg	tot PN DC	n/a	#	DS Soot meas	n/a	g/mi
Trip Exhaust Mass US (ac)	n/a	kg	PM measurement type	0.00000	-	DS PM	n/a	g/mi
Trip Av. Amb. Temperature	74.68	deg_F	PM correction type	1.00000	alpha(HC)	DS PN DC	n/a	#/mi
Trip Av. Humidity	37.24	%	tot Soot on PM filter (estim.)	n/a	mg	FS CO2 DC	n/a	g/kg
Fuel Type	Petrol (E10)		Soot --> PM simple scaling factor	1.00000	-	FS CO DC	n/a	g/kg
			Soot --> PM alpha scaling factor	0.00000	-	FS THC DC	n/a	g/kg
			Trip Av. Veh. Speed	34.64905	mi/hr	FS NMHC DC	n/a	g/kg
			Trip Velocity Zero	8.59637	%	FS CH4 DC	n/a	g/kg
			Trip Velocity Urban	38.11283	%	FS NO DC (d)	n/a	g/kg
			Trip Velocity Rural	35.19140	%	FS NO2 DC	n/a	g/kg
			Trip Velocity Motorway	26.69577	%	FS NOx DC	n/a	g/kg
						FS Soot	n/a	g/kg
						FS Soot meas	n/a	g/kg
						FS PM	n/a	g/kg
						FS PN DC	n/a	#/kg

(a) GAS PEMS measurement state only, (b) based on fuel rate input (ECU, Fuel Meter), (c) calculated from carbon balance
 (d) NO calculated using molecular weight of NO2

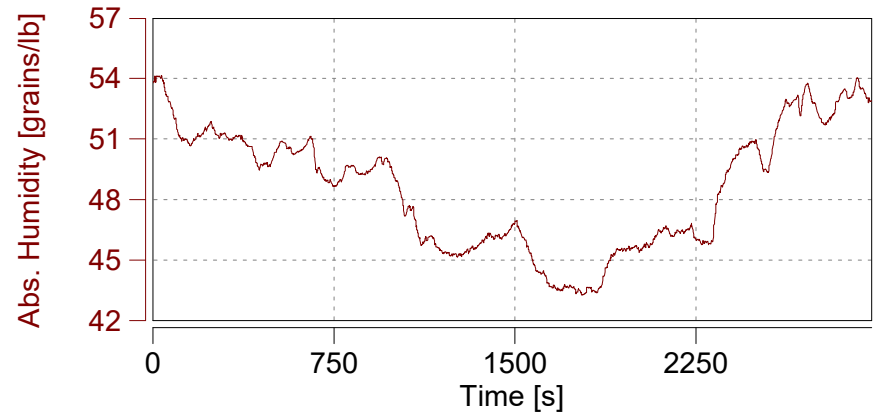
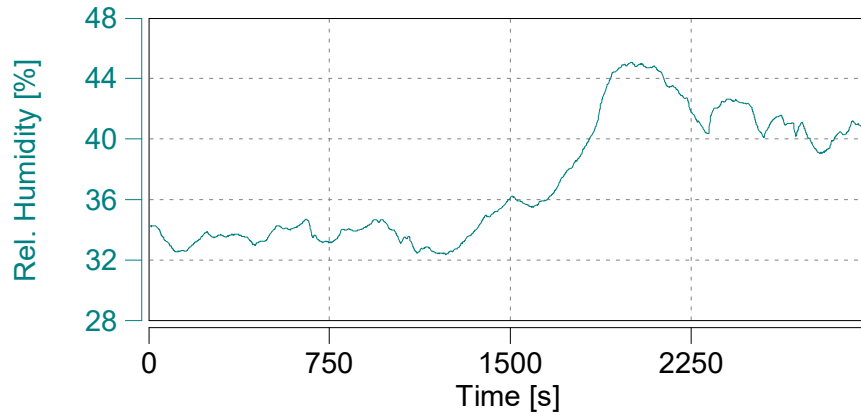
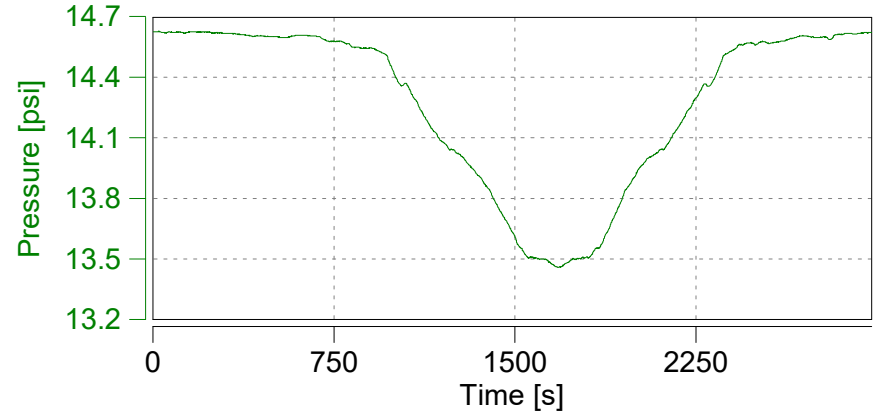
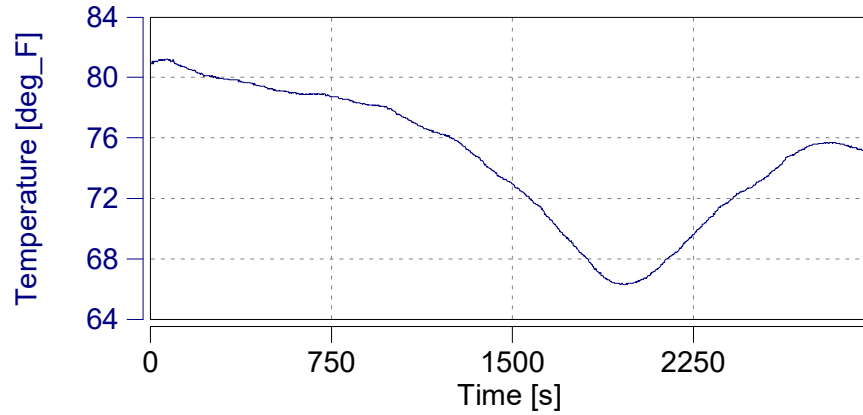
Concerto Version: 480 Build 215, Serial Number: 8468
 M.O.V.E Post-Processing: Rel_10_B192

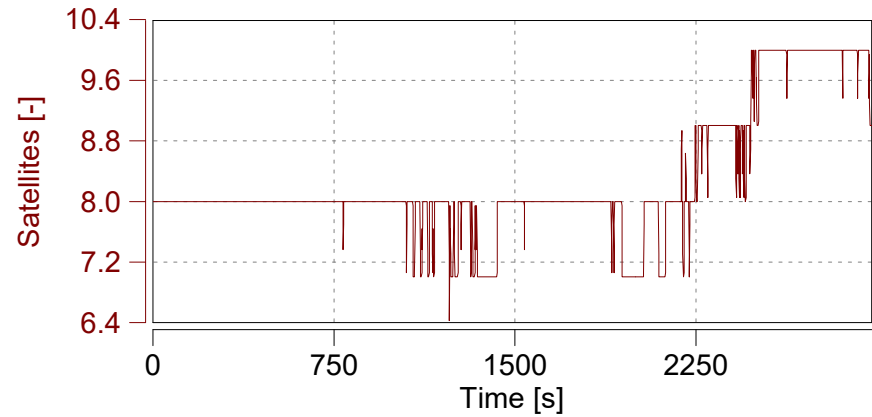
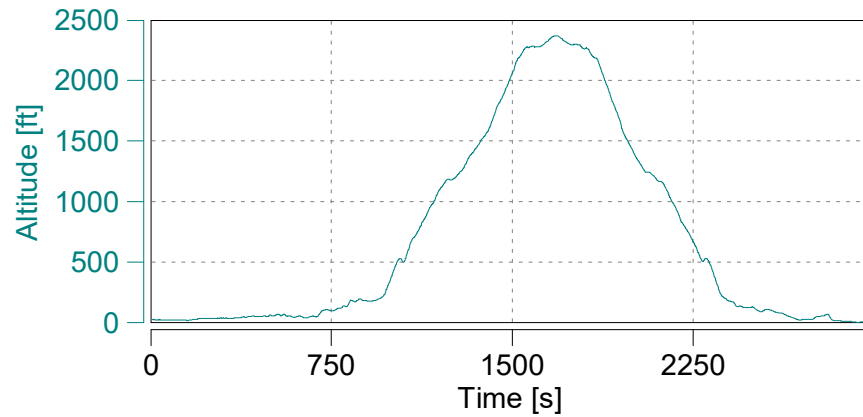
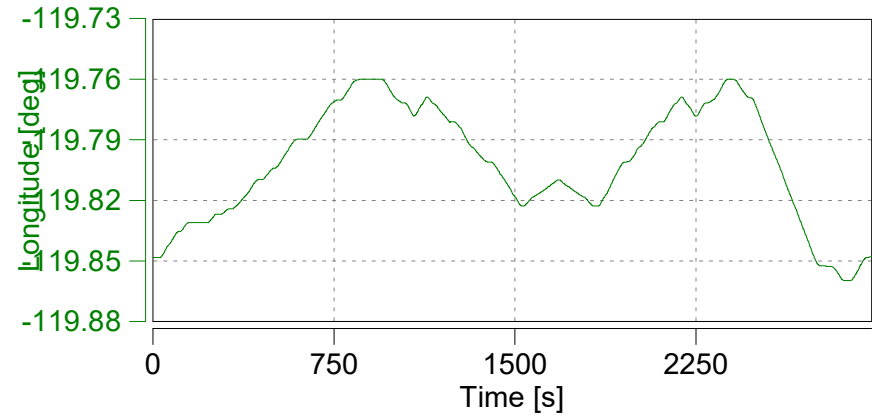
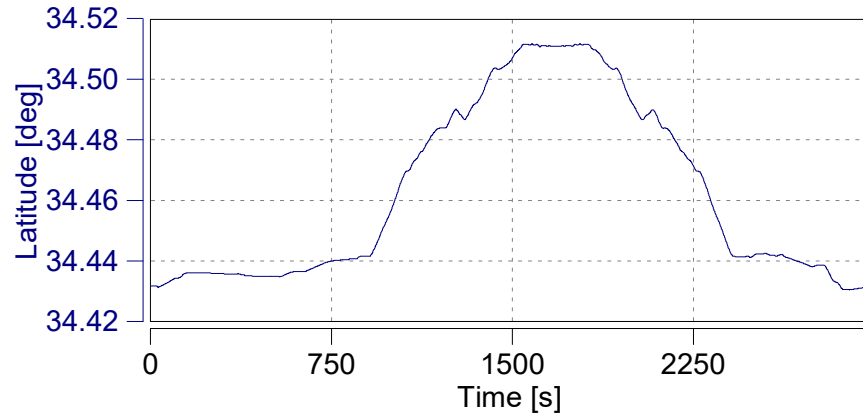
Vehicle: 2017 Audi Q3 /
 Engine: Gasoline / 2.0L
 NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
 Dry / Wet Corr.: 2 - CFR40 §86.1342-90

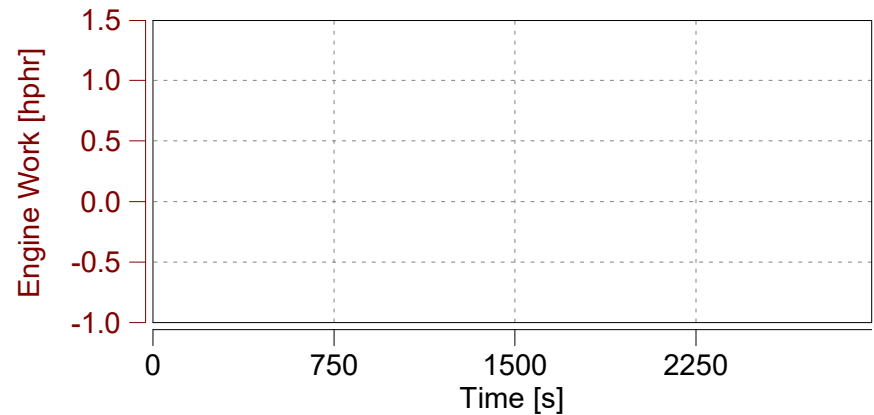
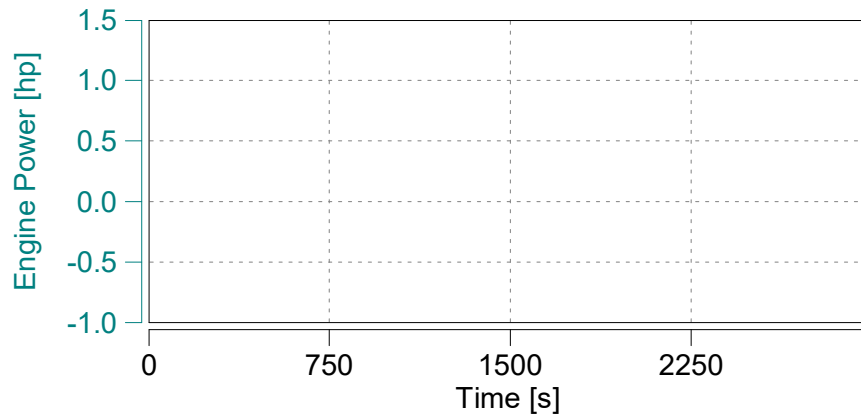
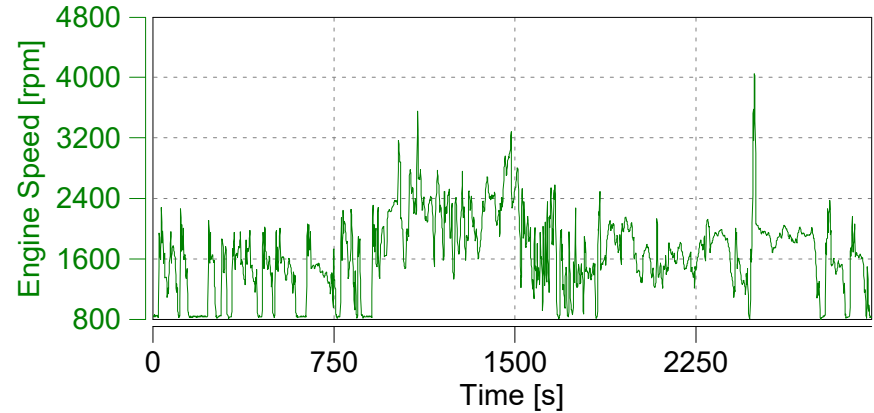
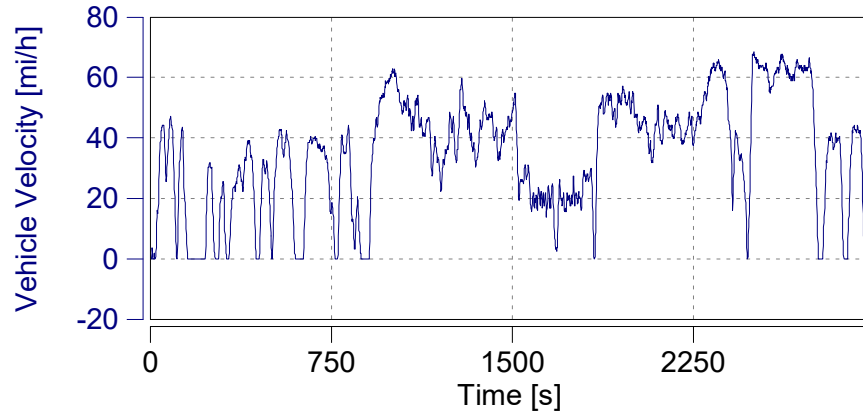


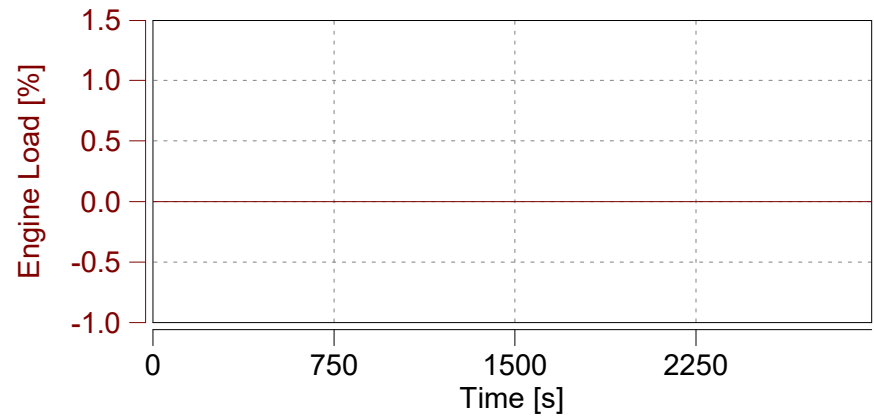
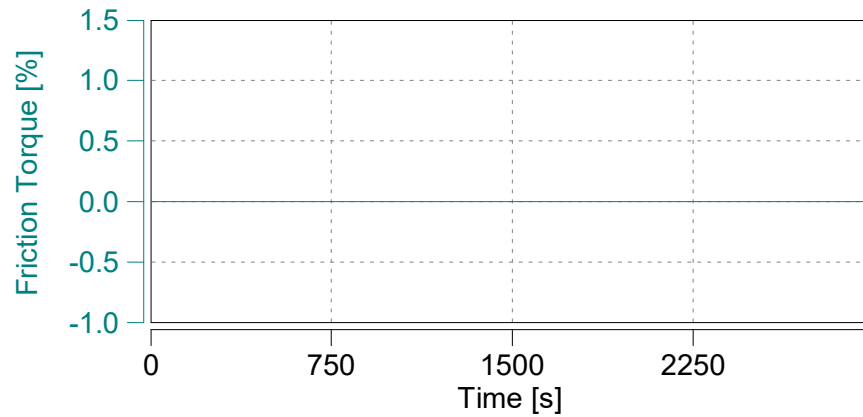
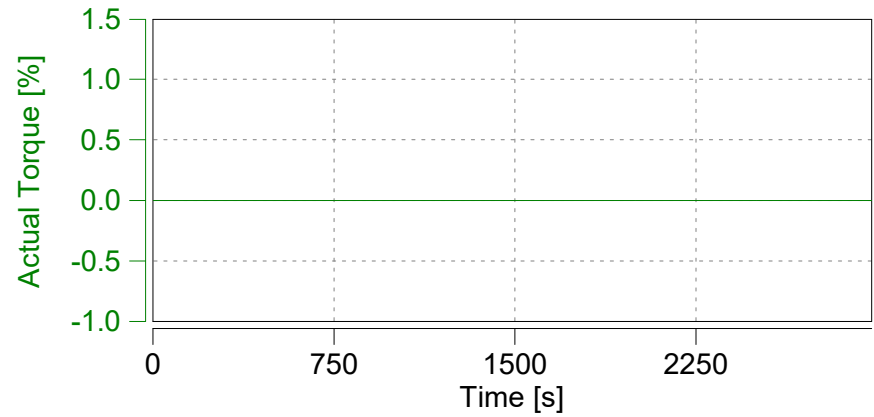
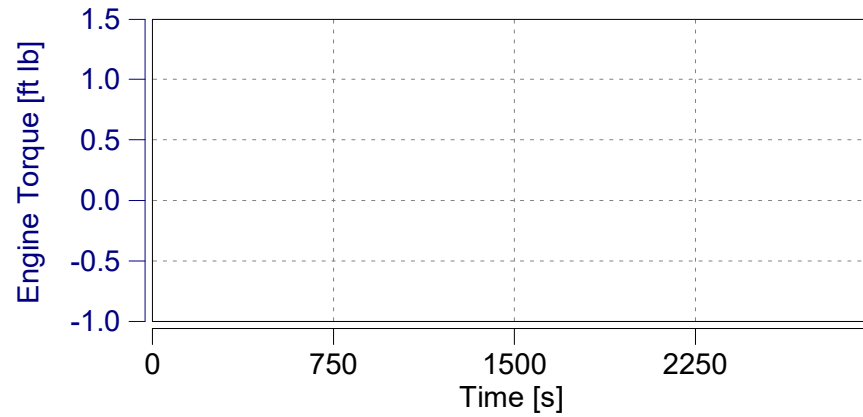
Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

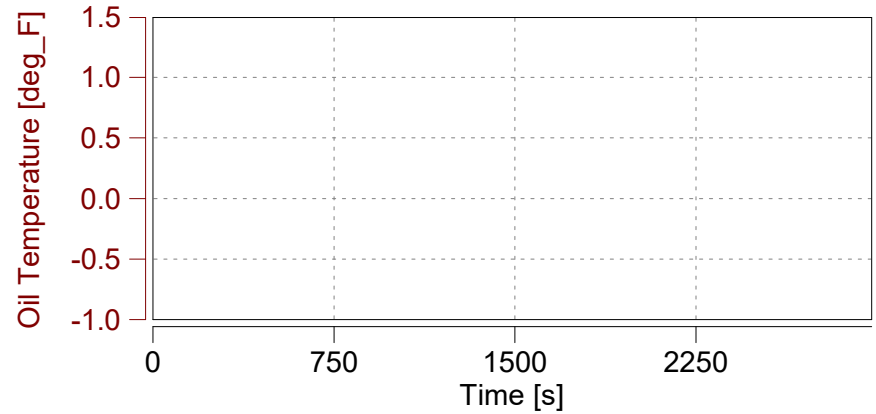
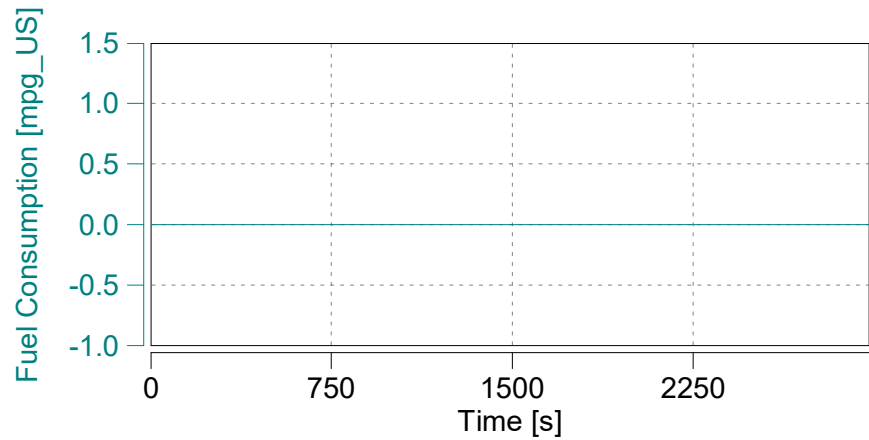
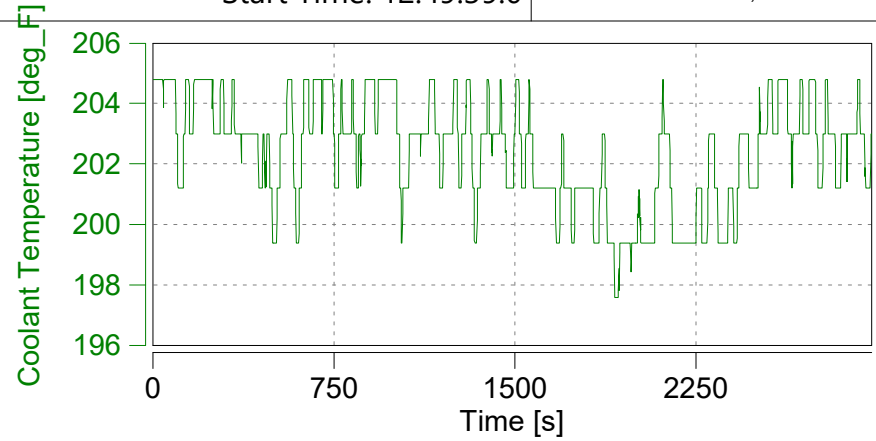
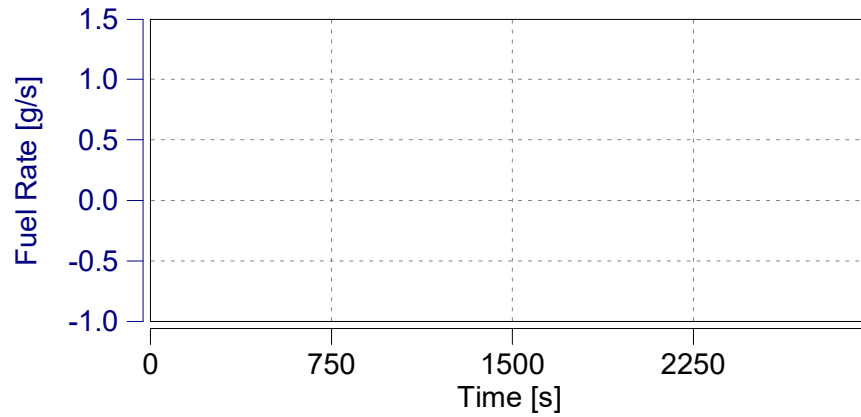
Vehicle: 2017 Audi Q3 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

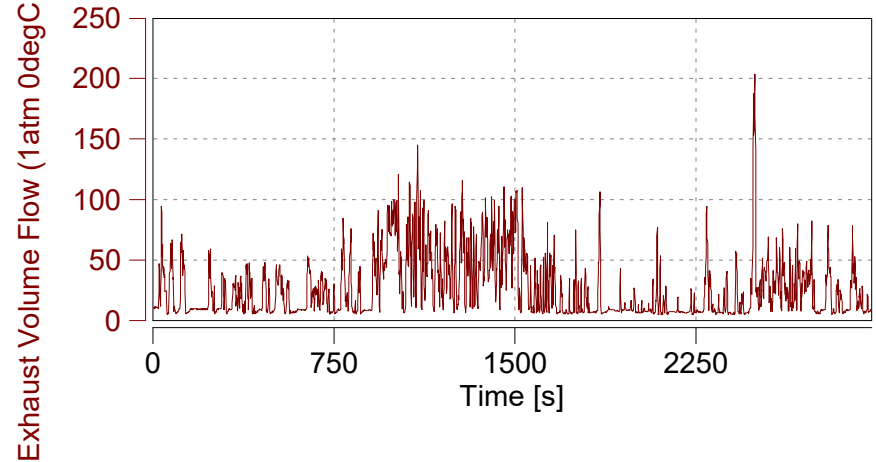
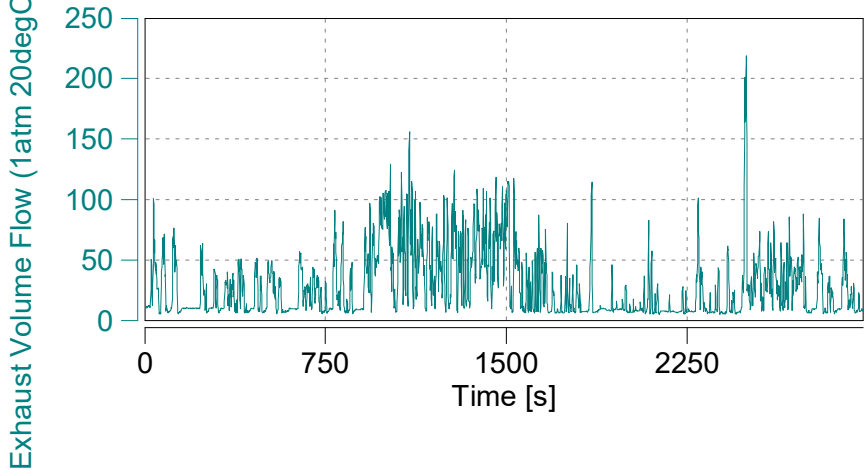
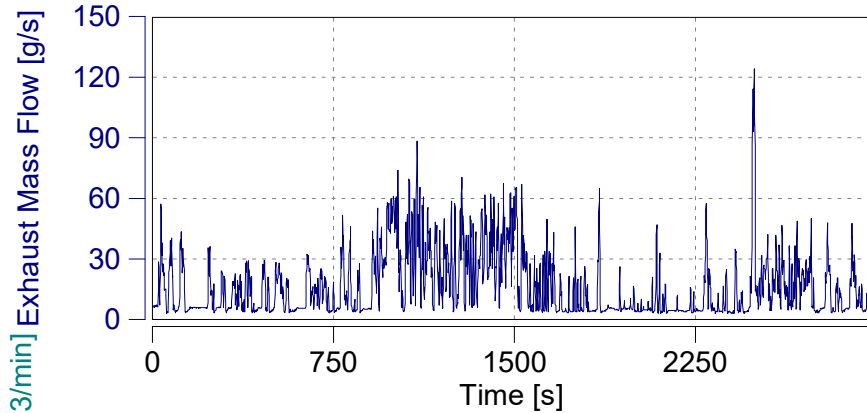


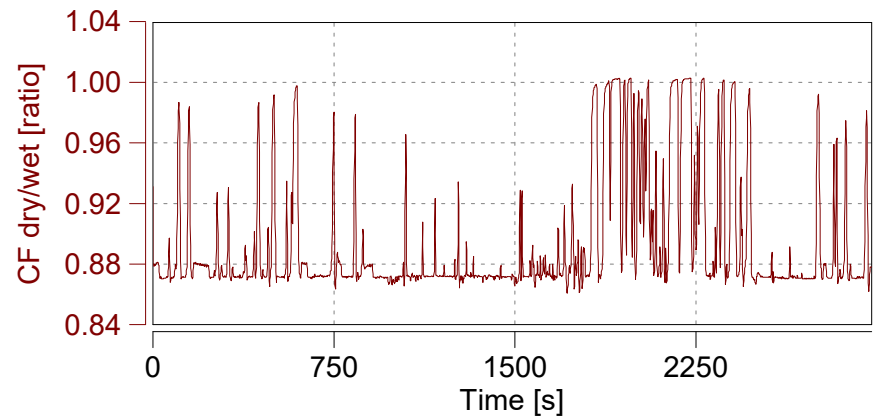
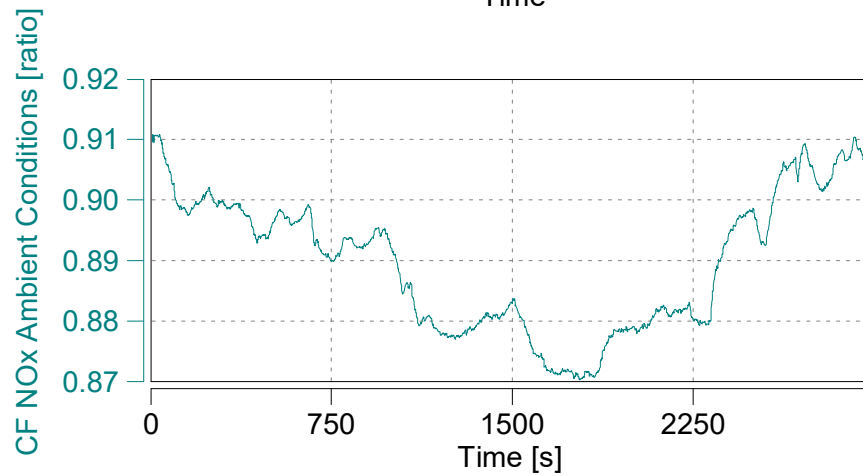
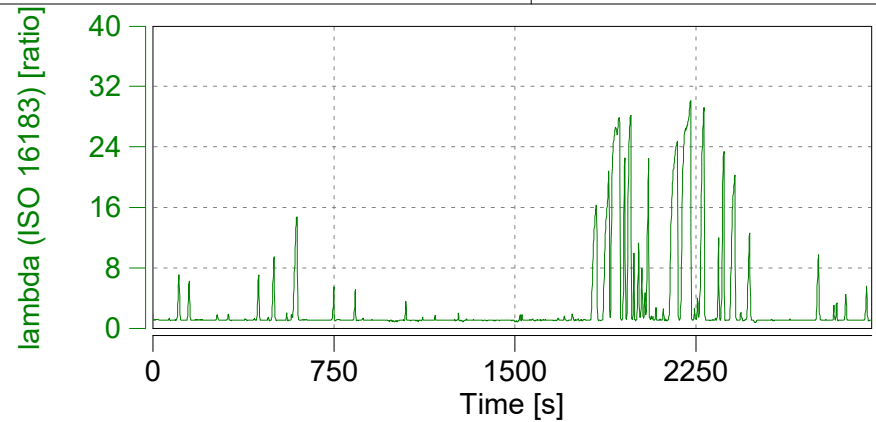
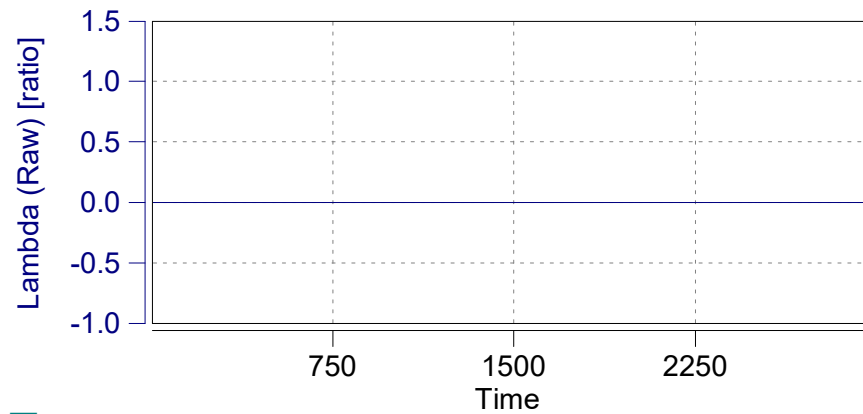










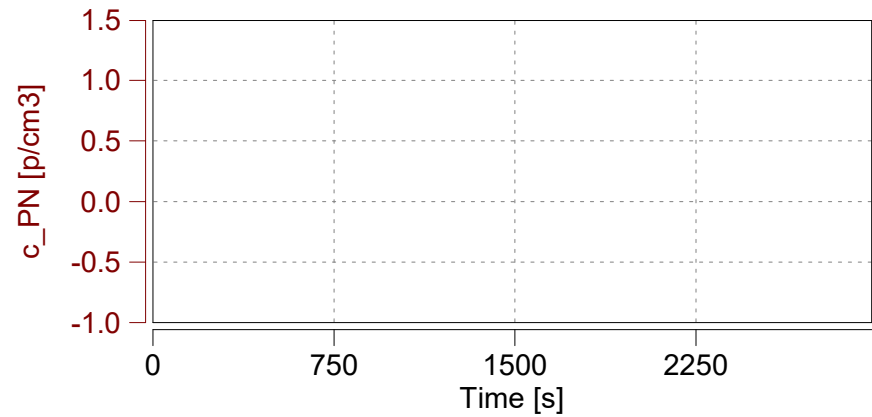
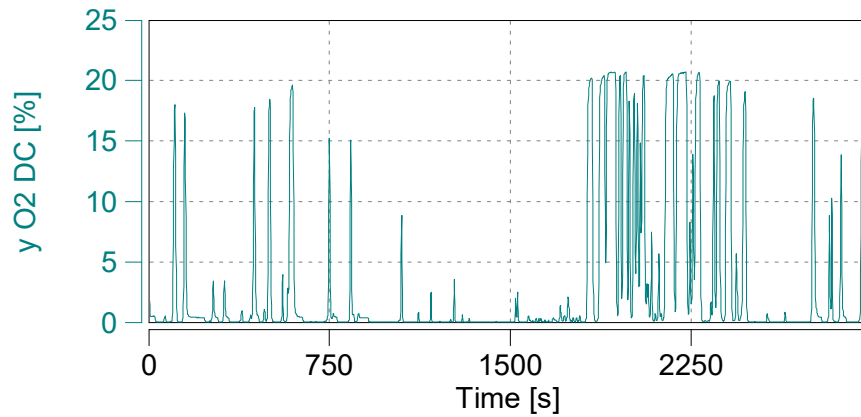
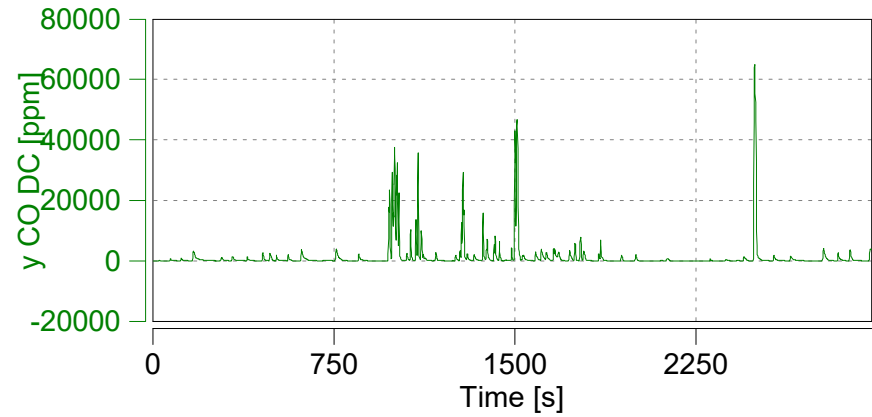
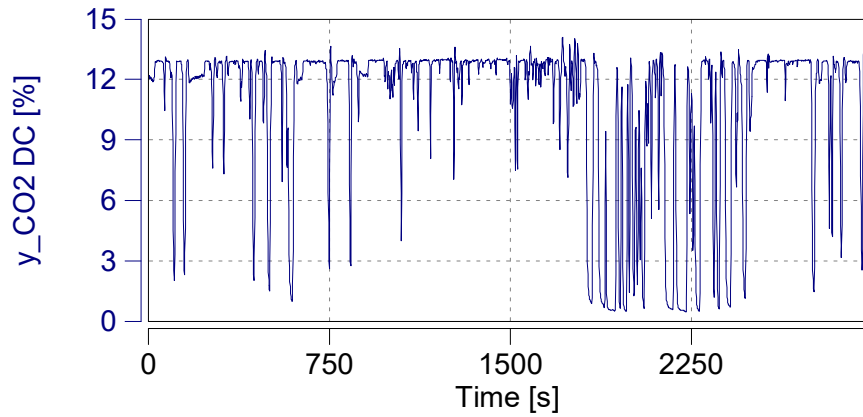


Case: Mountain

Page: Corrected Emissions (1)

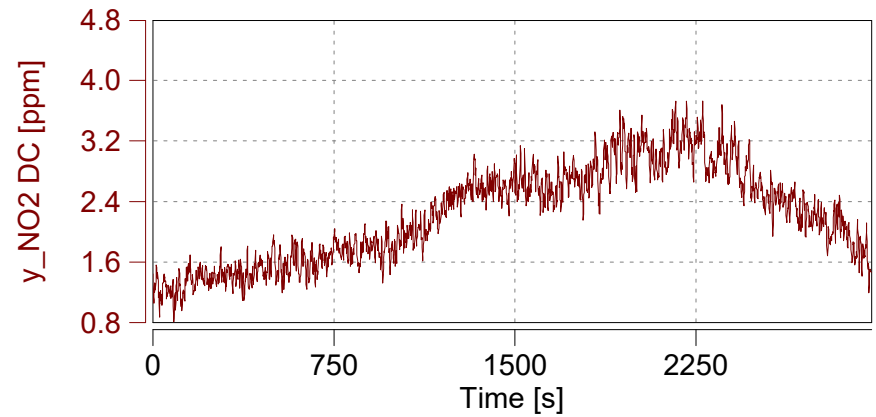
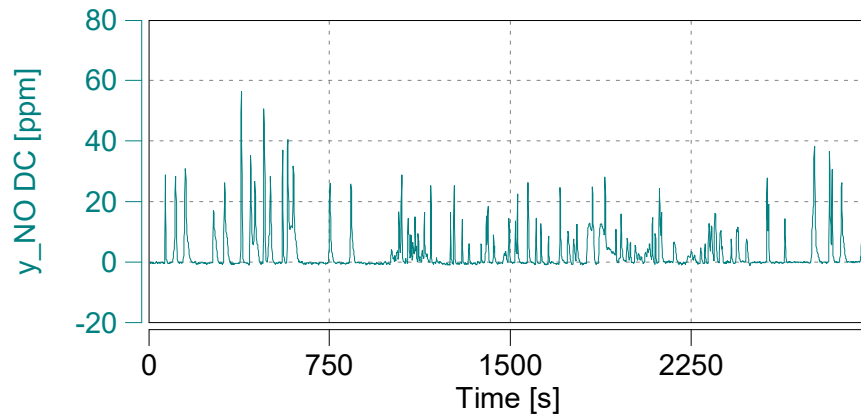
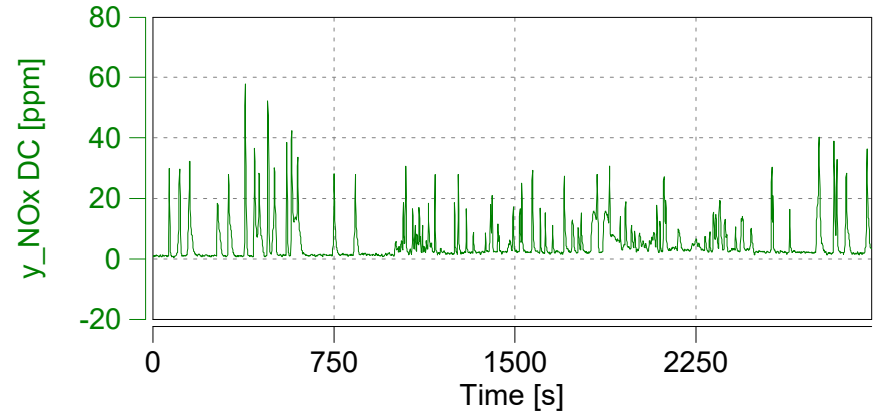
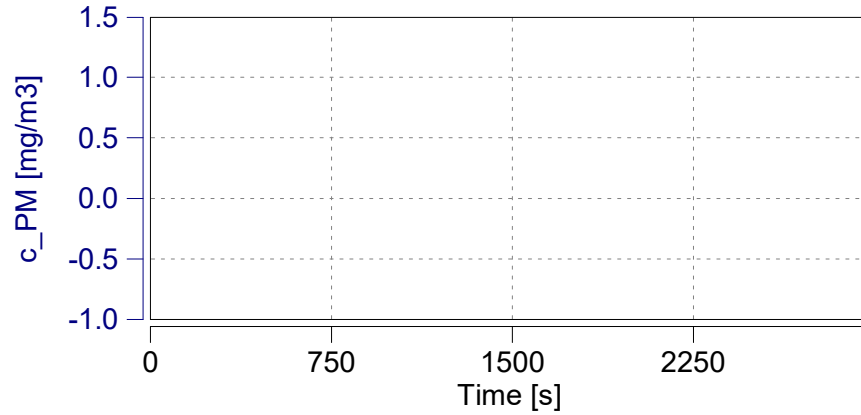
Start Date: 09/22/2017

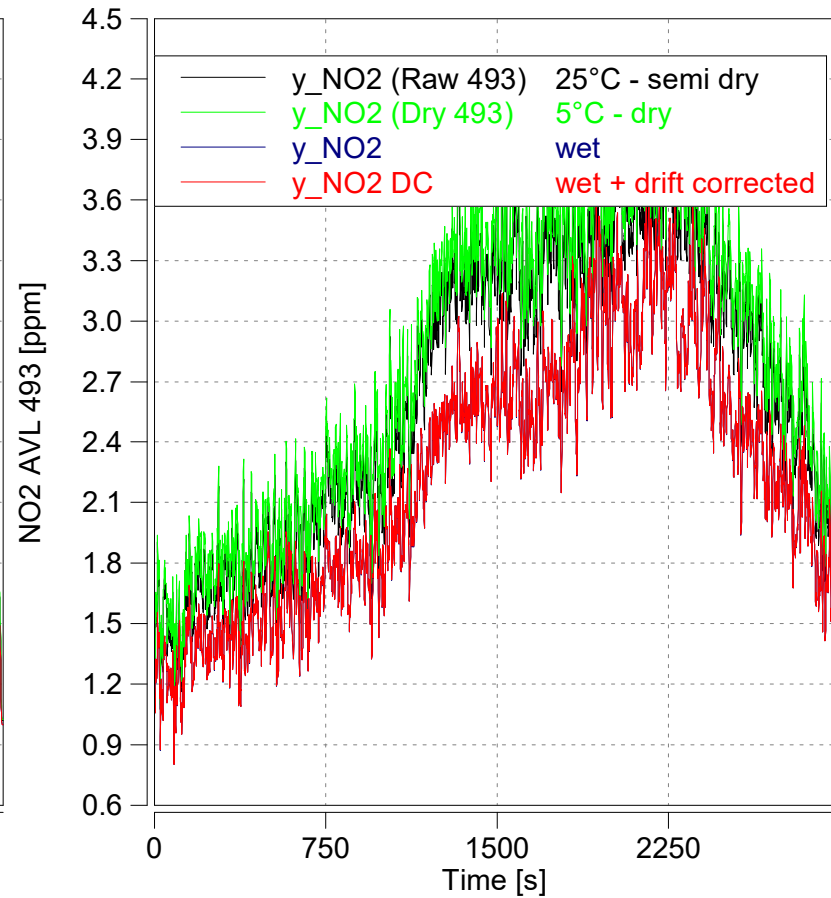
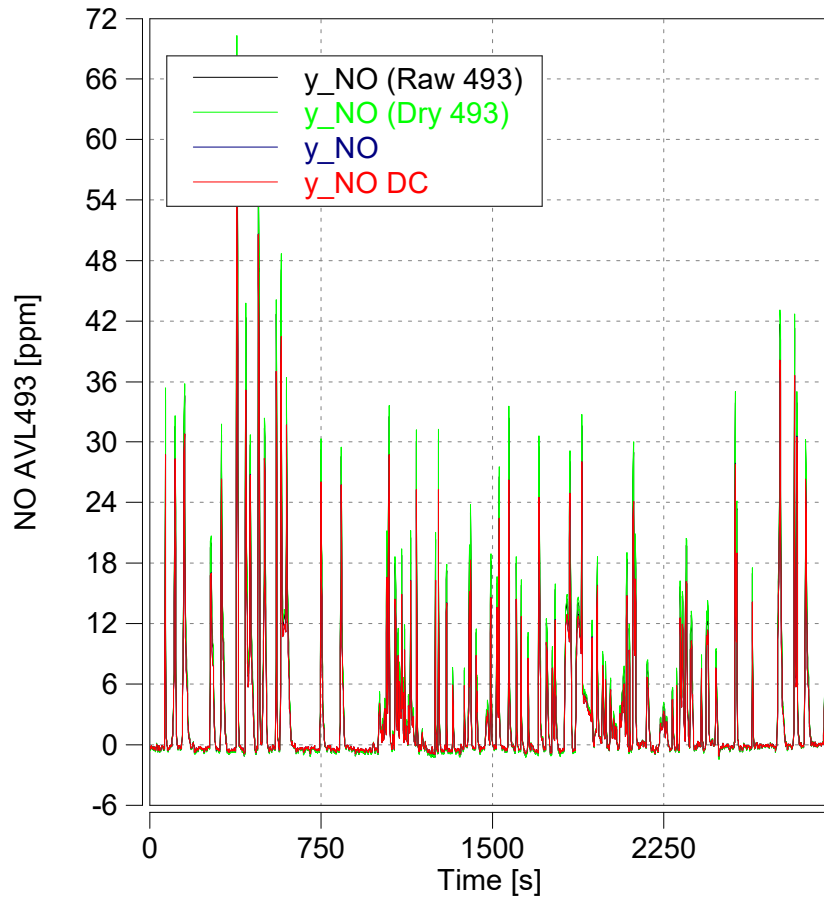
Start Time: 12:49:39.0



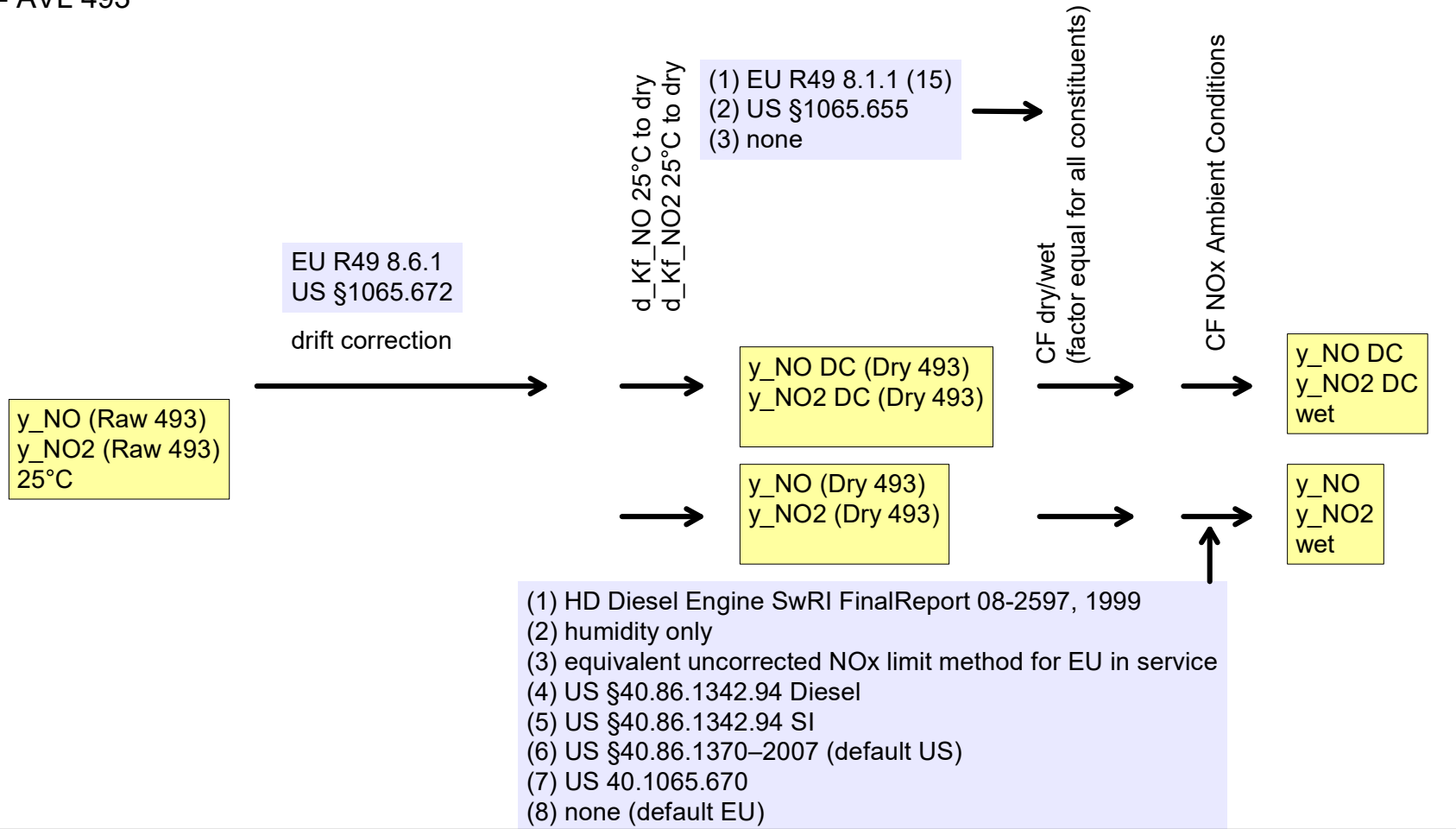
Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi Q3 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90





NOx - AVL 493

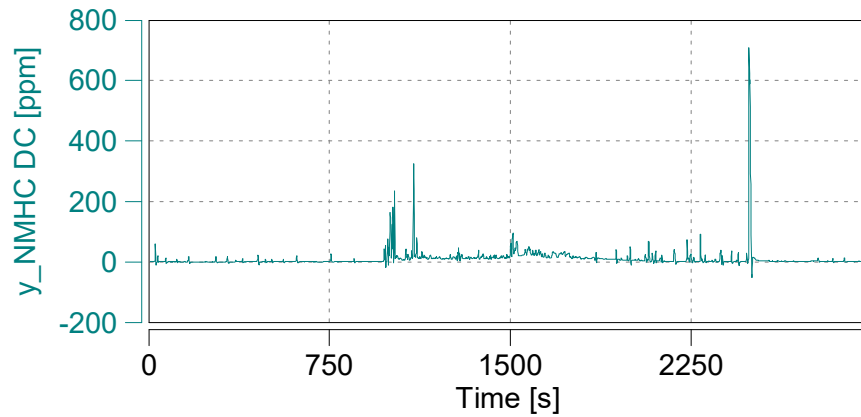
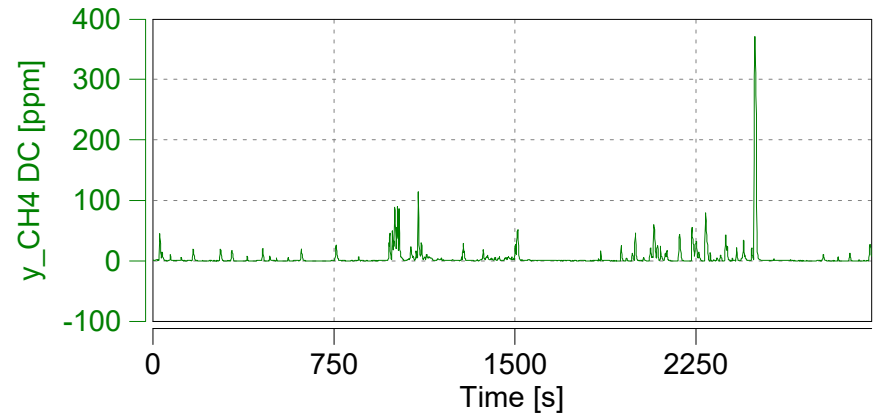
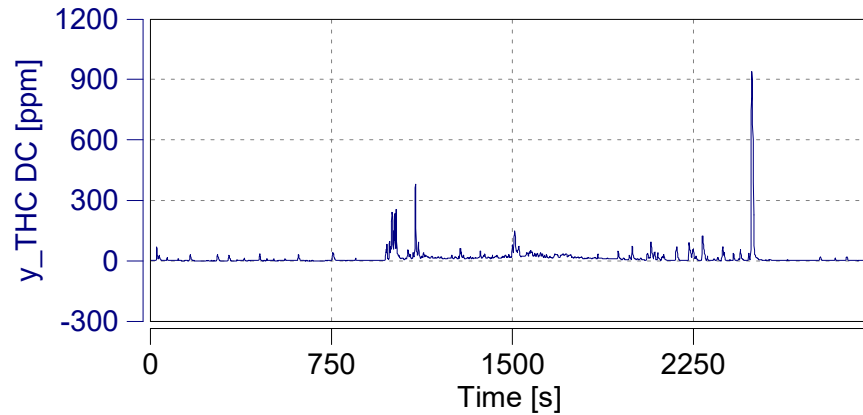


Case: Mountain

Page: Corrected Emissions (5)

Start Date: 09/22/2017

Start Time: 12:49:39.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

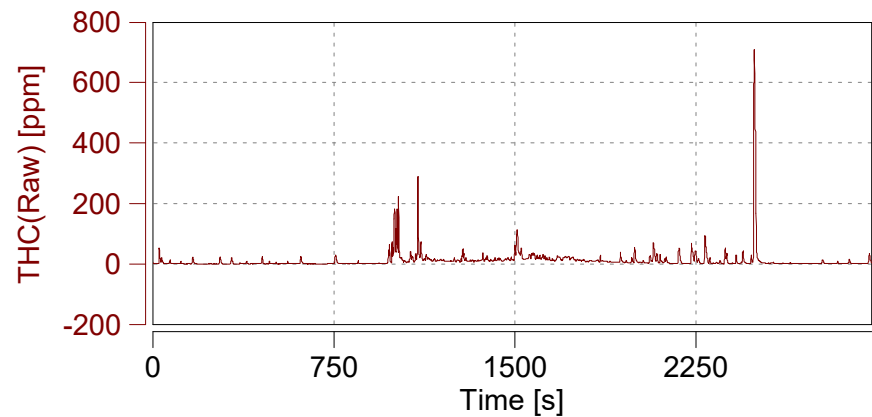
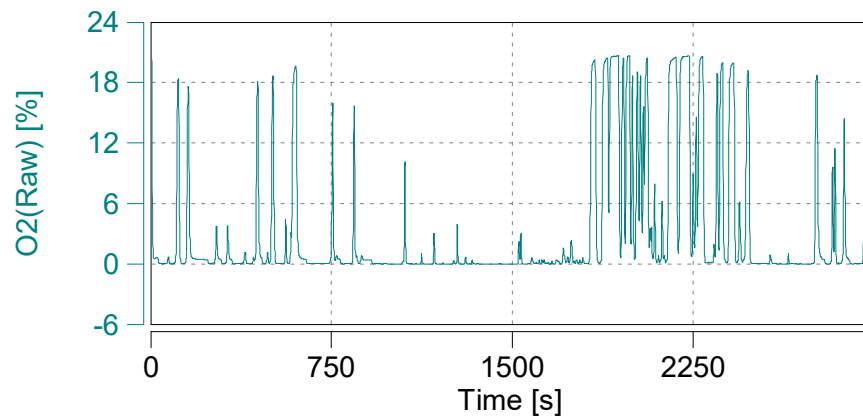
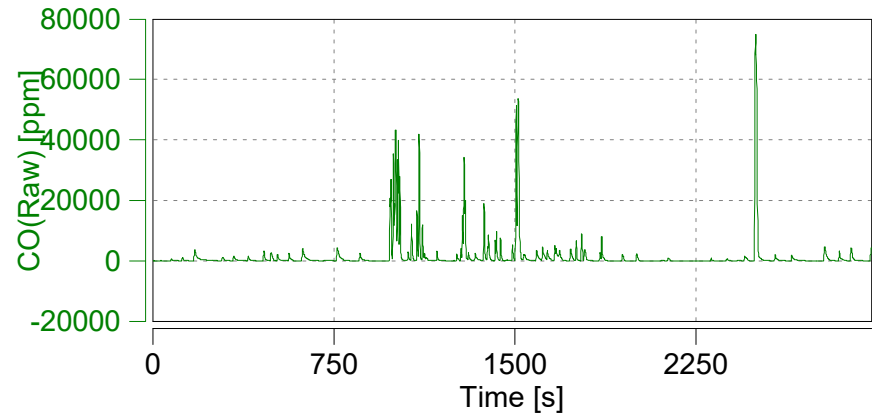
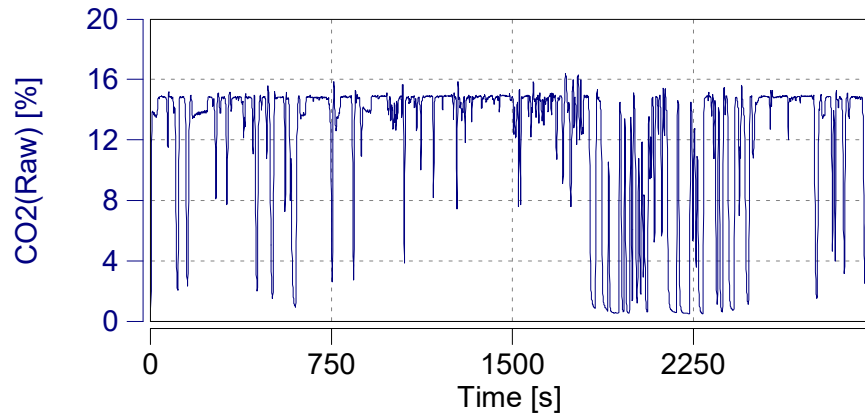
Vehicle: 2017 Audi Q3 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Mountain

Page: Emissions Raw Data (1)

Start Date: 09/22/2017

Start Time: 12:49:39.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

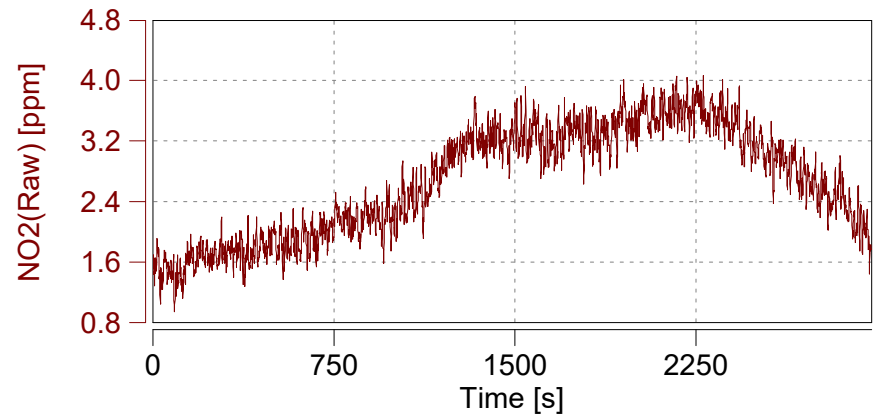
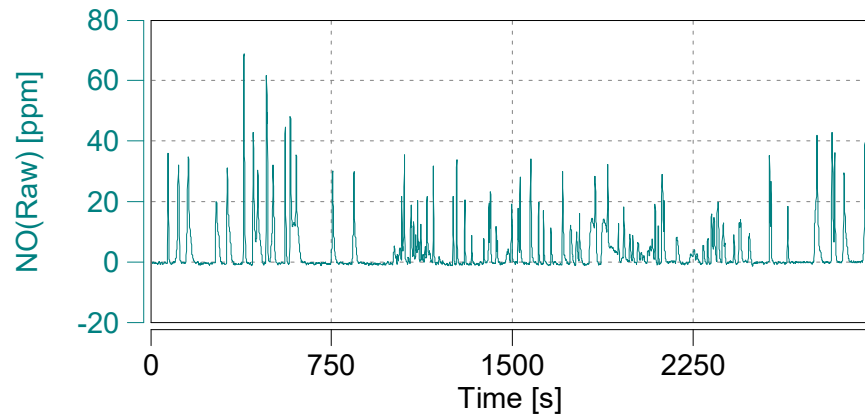
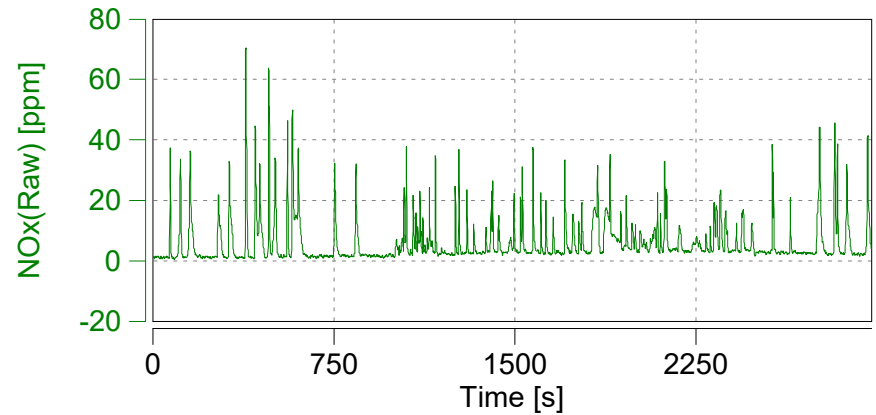
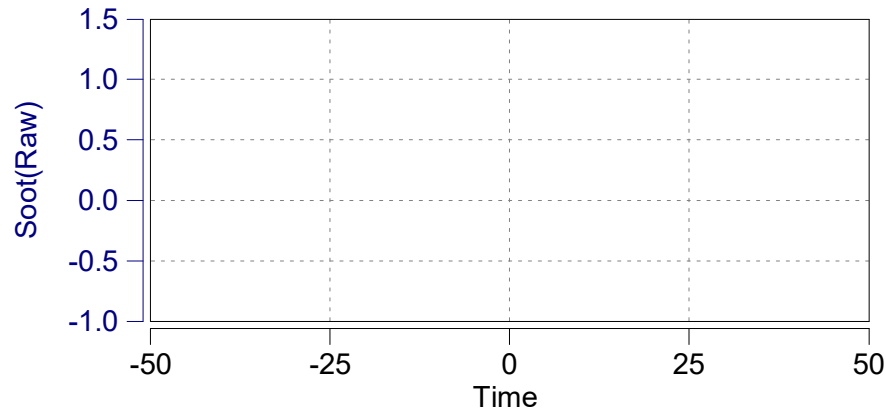
Vehicle: 2017 Audi Q3 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Mountain

Page: Emissions Raw Data (2)

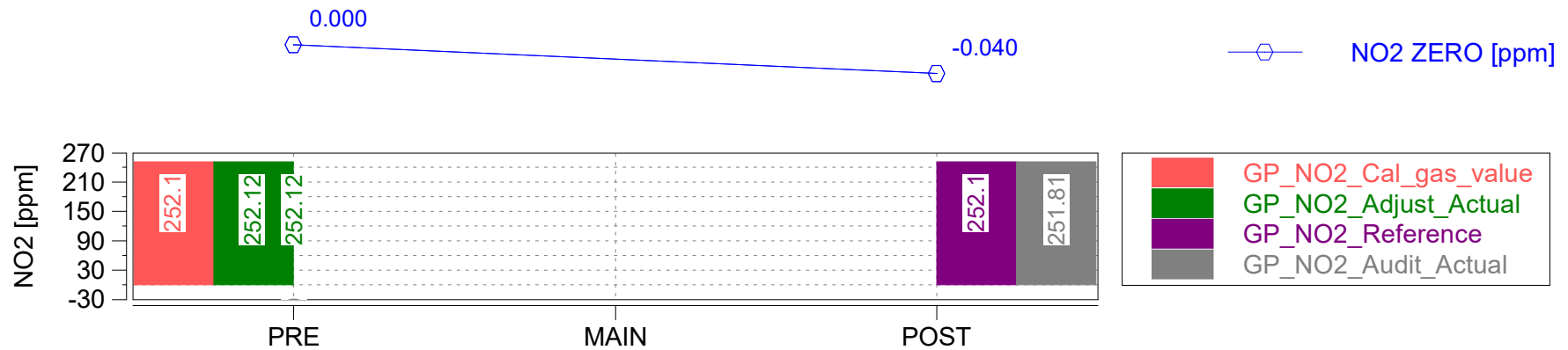
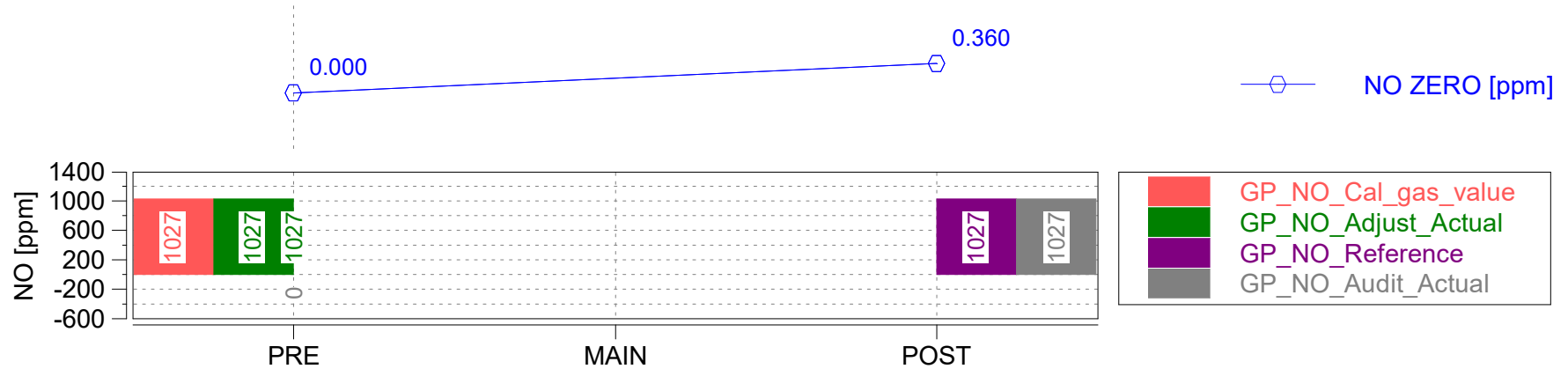
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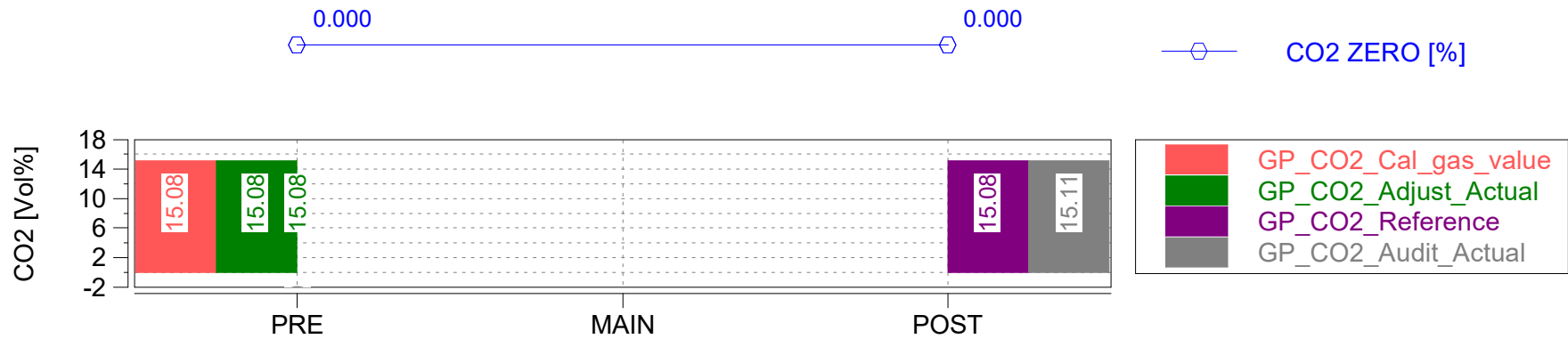
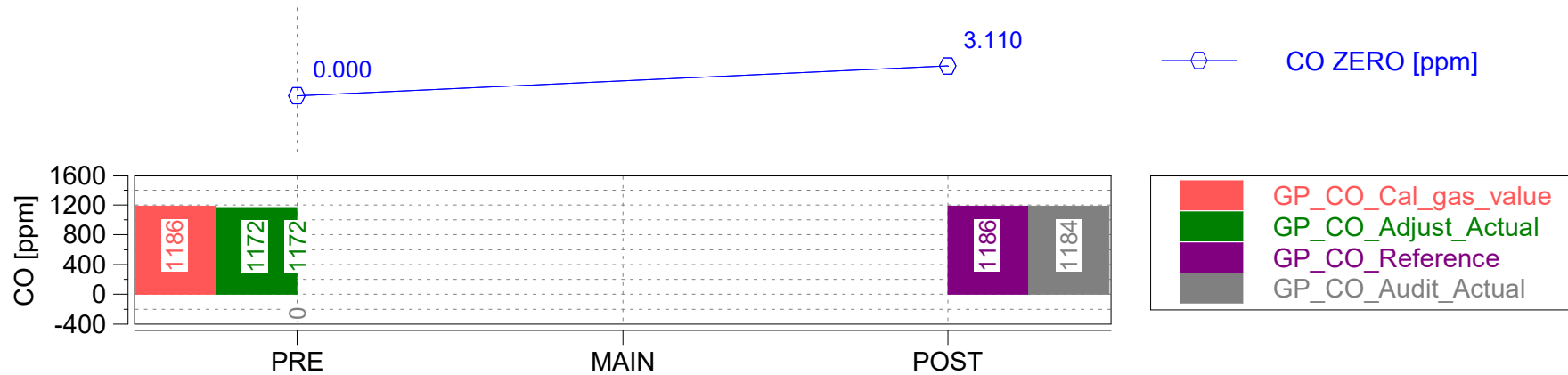
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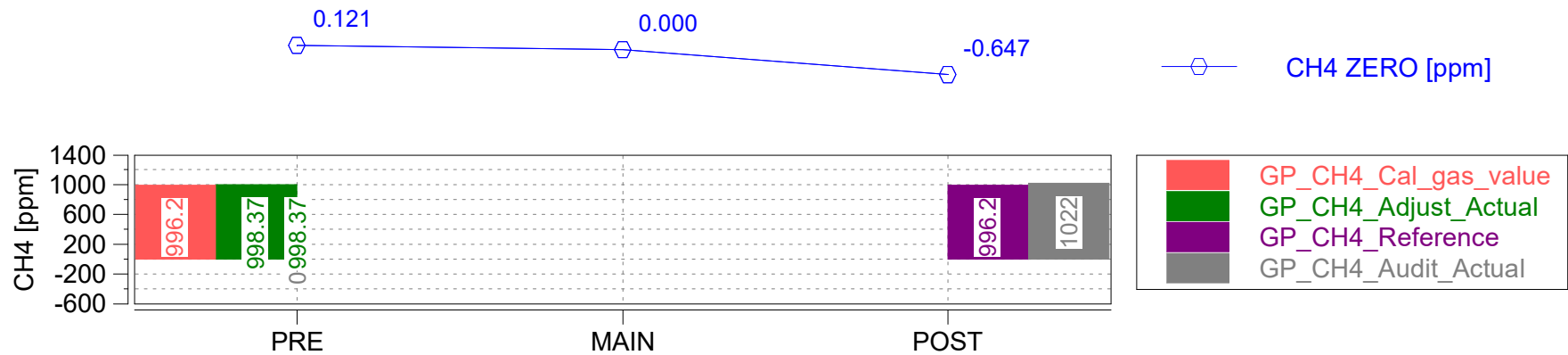
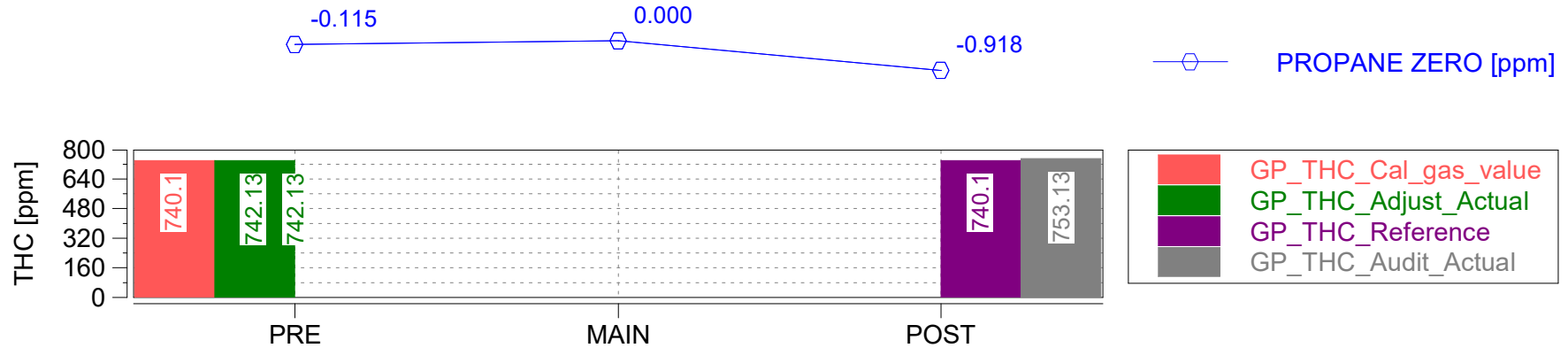


Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi Q3 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90







#	Text	Value	Unit
-	----	----	----
1.0	Test Start: Date	-	-
2.0	Test Start: Time	-	-
3.0	Ambient Temperature	IFILE1:TM'Temperature	deg C
4.0	Ambient Temperature TS	0.00000	s
5.0	Ambient Pressure	IFILE1:TM'Pressure	kPa
6.0	Ambient Pressure TS	0.00000	s
7.0	Humidity Type	1.00000	-
8.0	Amb. Rel. Humidity	IFILE1:TM'Humidity	%
9.0	Amb. Rel. Humidity	0.00000	s
10.0	GPS Latitude		deg
11.0	GPS Latitude TS	0.00000	s
12.0	GPS Longitude		deg
13.0	GPS Longitude TS	0.00000	s
14.0	Altitude		m
15.0	Altitude TS	0.00000	s
16.0	GPS Quality		-
17.0	GPS Quality TS	0.00000	s
18.0	GroundSpeed		km/h
19.0	GroundSpeed TS	0.00000	s
20.0	Altitude from topographical map		m
21.0	Altitude TS of topographical map		s
22.0	TRIP_AMBIENT_GPS_AVL	YES	-
23.0	CALC_GPS_GROUNDSPEED	NO	-
24.0	EXHAUST_FLOW_AVL	NO	-
25.0	EXHAUST_FLOW_AVL_EFM	YES	-
26.0	Exhaust Flow Type	2.00000	-
27.0	Mass Flow	IFILE1:TM'PitotEFM_ExhaustG	various
28.0	Mass Flow TS	1.20000	s
29.0	Exhaust Pressure		kPa
30.0	Exhaust Pressure TS	1.20000	s

#	Text	Value	Unit
-	----	----	----
31.0	Exhaust Delta Pressure		kPa
32.0	Exhaust Pressure Delta TS	1.20000	s
33.0	Exhaust Temperature	IFILE1:TM'PitotEFM_ExhaustG	degC
34.0	Exhaust Temperature TS	1.20000	s
35.0	Lambda	N/A	-
36.0	Lambda TS		s
37.0	CO2_DIL		%
38.0	CO2_DIL TS		s
39.0	CVS Volume Flow		m3/min
40.0	TimeShift_CVS_VOL_FLOW		s
41.0	IN_CVS_PRESSURE		kPa
42.0	TimeShift_CVS_PRESSURE		s
43.0	IN_CVS_TEMP		degC
44.0	TimeShift_CVS_TEMP		s
45.0	Dry to Wet Conversion CO2	YES	-
46.0	Dry to Wet Conversion O2	YES	-
47.0	Dry to Wet Conversion NO	NO	-
48.0	Dry to Wet Conversion NO2	NO	-
49.0	Dry to Wet Conversion THC	NO	-
50.0	Dry to Wet Conversion CH4	NO	-
51.0	Dry to Wet Conversion O2	NO	-
52.0	CO2	IFILE1:TM'GPiS_CO2	%
53.0	CO2 TS	-4.80000	s
54.0	OS	IFILE1:TM'GPiS_O2	%
55.0	O2 TS	-5.30000	s
56.0	CO	IFILE1:TM'GPiS_CO	ppm
57.0	CO TS	-4.80000	s
58.0	NO	IFILE1:TM'GPiS_NO	ppm
59.0	NO TS	-3.00000	s
60.0	NO2	IFILE1:TM'GPiS_NO2	ppm

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Vehicle: 2017 Audi Q3 /
Engine: Gasoline / 2.0L
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Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
61.0	NO2 TS	-3.00000	s
62.0	THC	IFILE1:TM'FIDiS_THC_C1	ppm
63.0	THC TS	0.00000	s
64.0	CH4	IFILE1:TM'FIDiS_CH4_C1	ppm
65.0	CH4 TS	0.00000	s
66.0	GAS_PEMS_Ethane_Efficiency	IFILE1:MOVE_AVL4925'GP_Et -	
67.0	GAS_PEMS_Methane_Efficiency	IFILE1:MOVE_AVL4925'GP_M -	
68.0	GAS_PEMS_Methane_Response	IFILE1:MOVE_AVL4925'GP_M -	
69.0	Zero Signal	IFILE1:TM'GPiS_STATE	0/1
70.0	Zero Signal TS	-3.00000	s
71.0	Zero Signal_FIDiS	IFILE1:TM'FIDiS_STATE	0/1
72.0	Zero Signal_FIDiS TS		s
73.0	Species Input Type	4.00000	-
74.0	GASPEMS=AVL493	NO	-
75.0	GASPEMS=AVL493_iX	NO	-
76.0	GASPEMS=AVL492	YES	-
77.0	GASPEMS=AVL4925	YES	-
78.0	PM: Type	4.00000	1=GFB+HC, 2=GFB, 3='PM=S
79.0	Filter ID from IFile	NO	-
80.0	Lab ID from IFile	NO	-
81.0	PM Filter: ID	N/A	ID
82.0	PM Filter: Lab	N/A	Name/ID
83.0	PM Filter: Weight before Test	N/A	mg
84.0	PM Filter: Weight after Test	N/A	mg
85.0	PM (HC Corr): Max. Exhaust Flow	N/A	scfm
86.0	Soot		mg/m3
87.0	Soot TS	-5.00000	s
88.0	Soot Sensor		mg/m3
89.0	Soot Sensor TS		s
90.0	PM Filter: Filter Flow Rate		l/min

#	Text	Value	Unit
-	----	----	----
91.0	PM Filter: Filter Flow Rate TS	-5.00000	s
92.0	PM Filter: Filter Dilution Ratio		-
93.0	PM Filter: Filter Dilution Ratio TS	-5.00000	s
94.0	PM Filter: Filter Trigger		-
95.0	PM Filter: Filter Trigger TS	-5.00000	s
96.0	PMPEMS=AVL494	YES	-
97.0	PMPEMS_AVL494_PROP_DIL	NO	-
98.0	PM dilution ratio min		-
99.0	PM_MaxExhaustFlowRate		-
100.0	PM_ExhaustFlow_Thresh		-
101.0	PM_total_flow_val		-
102.0	PM_total_flow_val_TS		-
103.0	PM_exh_mass_flow		-
104.0	PM_exh_mass_flow_TS		-
105.0	PN		#/cm3
106.0	TimeShift_PN		s
107.0	PN_STATE		-
108.0	PN TS STATE		s
109.0	PNPEMS_AVL496	NO	-
110.0	PN_CorrFactor	1.00000	
111.0	Time Alignment	1.00000	-
112.0	Time Alignment Dataset 1	N/A	0/1
113.0	Time Alignment Dataset 2	N/A	0/1
114.0	Time Alignment Thresh 1	N/A	-
115.0	Time Alignment Thresh 2	N/A	-
116.0			
117.0			
118.0			
119.0			
120.0			

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#	Text	Value	Unit
-	----	----	----
121.0			
122.0	Trigger		0/1
123.0	Trigger TS		s
124.0	FTIR_NAME_1		-
125.0	FTIR_MW_1		-
126.0	FTIR_CHANNEL_1		-
127.0	FTIR_CHANNEL_TS_1		-
128.0	FTIR_CHANNEL_DRY_1	NO	-
129.0	FTIR_NAME_2		-
130.0	FTIR_MW_2		-
131.0	FTIR_CHANNEL_2		-
132.0	FTIR_CHANNEL_TS_2		-
133.0	FTIR_CHANNEL_DRY_2	NO	-
134.0	FTIR_NAME_3		-
135.0	FTIR_MW_3		-
136.0	FTIR_CHANNEL_3		-
137.0	FTIR_CHANNEL_TS_3		-
138.0	FTIR_CHANNEL_DRY_3	NO	-
139.0	FTIR_NAME_4		-
140.0	FTIR_MW_4		-
141.0	FTIR_CHANNEL_4		-
142.0	FTIR_CHANNEL_TS_4		-
143.0	FTIR_CHANNEL_DRY_4	NO	-
144.0	FTIR_NAME_5		-
145.0	FTIR_MW_5		-
146.0	FTIR_CHANNEL_5		-
147.0	FTIR_CHANNEL_TS_5		-
148.0	FTIR_CHANNEL_DRY_5	NO	-
149.0	FTIR_NAME_6		-
150.0	FTIR_MW_6		-

#	Text	Value	Unit
-	----	----	----
151.0	FTIR_CHANNEL_6		-
152.0	FTIR_CHANNEL_TS_6		-
153.0	FTIR_CHANNEL_DRY_6	NO	-
154.0	FTIR_NAME_7		-
155.0	FTIR_MW_7		-
156.0	FTIR_CHANNEL_7		-
157.0	FTIR_CHANNEL_TS_7		-
158.0	FTIR_CHANNEL_DRY_7	NO	-
159.0	FTIR_NAME_8		-
160.0	FTIR_MW_8		-
161.0	FTIR_CHANNEL_8		-
162.0	FTIR_CHANNEL_TS_8		-
163.0	FTIR_CHANNEL_DRY_8	NO	-
164.0	FTIR_NAME_9		-
165.0	FTIR_MW_9		-
166.0	FTIR_CHANNEL_9		-
167.0	FTIR_CHANNEL_TS_9		-
168.0	FTIR_CHANNEL_DRY_9	NO	-
169.0	FTIR_NAME_10		-
170.0	FTIR_MW_10		-
171.0	FTIR_CHANNEL_10		-
172.0	FTIR_CHANNEL_TS_10		-
173.0	FTIR_CHANNEL_DRY_10	NO	-
174.0	FTIR_NAME_11		-
175.0	FTIR_MW_11		-
176.0	FTIR_CHANNEL_11		-
177.0	FTIR_CHANNEL_TS_11		-
178.0	FTIR_CHANNEL_DRY_11	NO	-
179.0	FTIR_NAME_12		-
180.0	FTIR_MW_12		-

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Vehicle: 2017 Audi Q3 /
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#	Text	Value	Unit
-	----	----	----
181.0	FTIR_CHANNEL_12	-	-
182.0	FTIR_CHANNEL_TS_12	-	-
183.0	FTIR_CHANNEL_DRY_12	NO	-
184.0	FTIR_NAME_13	-	-
185.0	FTIR_MW_13	-	-
186.0	FTIR_CHANNEL_13	-	-
187.0	FTIR_CHANNEL_TS_13	-	-
188.0	FTIR_CHANNEL_DRY_13	NO	-
189.0	FTIR_NAME_14	-	-
190.0	FTIR_MW_14	-	-
191.0	FTIR_CHANNEL_14	-	-
192.0	FTIR_CHANNEL_TS_14	-	-
193.0	FTIR_CHANNEL_DRY_14	NO	-
194.0	FTIR_NAME_15	-	-
195.0	FTIR_MW_15	-	-
196.0	FTIR_CHANNEL_15	-	-
197.0	FTIR_CHANNEL_TS_15	-	-
198.0	FTIR_CHANNEL_DRY_15	NO	-
199.0	FTIR_NAME_16	-	-
200.0	FTIR_MW_16	-	-
201.0	Vehicle Type	2017 Audi Q3	-
202.0	Vehicle Info	-	-
203.0	Engine Type	Gasoline	-
204.0	Engine Info	2.0L	-
205.0	Engine Torque	-	Nm
206.0	Curb Idle Load	-	%
207.0	Idle Speed	-	rpm
208.0	HYBRID_OVC_REF_CO2_gkm	-	g/km
209.0	Engine Concept	1.00000	-
210.0	Alpha	1.93000	-

#	Text	Value	Unit
-	----	----	----
211.0	Beta	1.00000	-
212.0	Gamma	0.00000	-
213.0	Delta	0.00000	-
214.0	Epsilon	0.03200	-
215.0	X_C	83.00000	-
216.0	X_H	13.30000	-
217.0	X_N	0.00000	-
218.0	X_O	3.50000	-
219.0	X_S	0.00000	-
220.0	Fuel_Density	747.50000	-
221.0	rho_exhaust	1.29310	-
222.0	U_CO2	1.51800	-
223.0	U_CO	0.96600	-
224.0	U_NO	1.58700	-
225.0	U_NO2	1.58700	-
226.0	U_NOx	1.58700	-
227.0	U_HC	0.49900	-
228.0	U_NMHC	0.47100	-
229.0	U_CH4	0.55300	-
230.0	U_O2	1.10400	-
231.0	Fuel Type	2.00000	-
232.0	exhaust mass flow type (YES/NO)	YES	-
233.0	Distance Calculation Type	1.00000	-
234.0	Velocity Statistics Calculation Type	2.00000	-
235.0	RDE vehicle class	1.00000	-
236.0	TM_CITY0	-	s
237.0	TM_CITY1	-	s
238.0	TM_RURAL0	-	s
239.0	TM_RURAL1	-	s
240.0	TM_RURAL2_0	-	s

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#	Text	Value	Unit
-	----	----	----
241.0	TM_RURAL2_1		s
242.0	Second Rural Part for Time Marks (NO		-
243.0	TM_MW0		s
244.0	TM_MW1		s
245.0	VELOCITY_LIMIT_STOP	2.00000	km/h
246.0	VELOCITY_LIMIT_URBAN	50.00000	km/h
247.0	VELOCITY_LIMIT_RURAL	75.00000	km/h
248.0	Intake Manifold Pressure Type	1.00000	-
249.0	Velocity	IFILE1:TM'OBD_Vehicle_Spee	km/h
250.0	Velocity TS	1.20000	s
251.0	Velocity FACTOR	1.00000	-
252.0	Coolant Temperature	IFILE1:TM'OBD_Engine_Coola	degC
253.0	Coolant Temperature TS	1.20000	s
254.0	Oil Temperature		degC
255.0	Oil Temperature TS	1.20000	s
256.0	Intake Manifold Temperature		degC
257.0	Intake Manifold Temp TS	1.20000	s
258.0	Intake Manifold Pressure	IFILE1:TM'OBD_Intake_manifo	kPa
259.0	Intake Manifold Pressure TS	1.20000	s
260.0	Throttle Position		%
261.0	Throttle TS	1.20000	s
262.0	TYP_IDLE_MASS_FLOW		kg/h
263.0	Torque Type	1.00000	-
264.0	Speed	IFILE1:TM'OBD_Engine_RPM	rpm
265.0	Speed TS	1.20000	s
266.0	Torque		Nm
267.0	Torque TS	1.20000	s
268.0	Friction Torque	N/A	Nm
269.0	Friction Torque TS	N/A	s
270.0	Reference Torque	N/A	Nm

#	Text	Value	Unit
-	----	----	----
271.0	Reference Torque TS	N/A	s
272.0	k_VELINE		-
273.0	D_VELINE		-
274.0	Fuel Flow Type	2.00000	-
275.0	Air Flow Type	1.00000	-
276.0	Fuel Rate		various
277.0	Air Rate		various
278.0	Fuel Rate TS	1.20000	s
279.0	No_Cylinders		-
280.0	Air Rate TS	1.20000	s
281.0	FTIR_CHANNEL_32		-
282.0	FTIR_CHANNEL_TS_32		-
283.0	FTIR_CHANNEL_DRY_32	NO	-
284.0	FTIR_NAME_33		-
285.0	FTIR_MW_33		-
286.0	FTIR_CHANNEL_33		-
287.0	FTIR_CHANNEL_TS_33		-
288.0	FTIR_CHANNEL_DRY_33	NO	-
289.0	FTIR_NAME_34		-
290.0	FTIR_MW_34		-
291.0	FTIR_CHANNEL_34		-
292.0	FTIR_CHANNEL_TS_34		-
293.0	FTIR_CHANNEL_DRY_34	NO	-
294.0	FTIR_NAME_35		-
295.0	FTIR_MW_35		-
296.0	FTIR_CHANNEL_35		-
297.0	FTIR_CHANNEL_TS_35		-
298.0	FTIR_CHANNEL_DRY_35	NO	-
299.0	FTIR_NAME_36		-
300.0	FTIR_MW_36		-

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#	Text	Value	Unit
-	----	----	----
301.0	FTIR_CHANNEL_36	-	-
302.0	FTIR_CHANNEL_TS_36	-	-
303.0	FTIR_CHANNEL_DRY_36	NO	-
304.0	FTIR_NAME_37	-	-
305.0	FTIR_MW_37	-	-
306.0	FTIR_CHANNEL_37	-	-
307.0	FTIR_CHANNEL_TS_37	-	-
308.0	FTIR_CHANNEL_DRY_37	NO	-
309.0	FTIR_NAME_38	-	-
310.0	FTIR_MW_38	-	-
311.0	FTIR_CHANNEL_38	-	-
312.0	FTIR_CHANNEL_TS_38	-	-
313.0	FTIR_CHANNEL_DRY_38	NO	-
314.0	FTIR_NAME_39	-	-
315.0	FTIR_MW_39	-	-
316.0	FTIR_CHANNEL_39	-	-
317.0	FTIR_CHANNEL_TS_39	-	-
318.0	FTIR_CHANNEL_DRY_39	NO	-
319.0	FTIR_NAME_40	-	-
320.0	FTIR_MW_40	-	-
321.0	FTIR_CHANNEL_40	-	-
322.0	FTIR_CHANNEL_TS_40	-	-
323.0	FTIR_CHANNEL_DRY_40	NO	-
324.0	Legislation Type (1=HDIUT 2=EU H	4.00000	-
325.0	WholeTest_NOx_corr	5.00000	-
326.0	WholeTest_Hum_corr	2.00000	-
327.0	CD_Distance	0.00000	km
328.0	CD_NOx	0.00000	mg/km
329.0	CD_CO	0.00000	mg/km
330.0	CD_CO2	0.00000	g/km

#	Text	Value	Unit
-	----	----	----
331.0	CD_NMHC	0.00000	mg/km
332.0	CD_CH4	0.00000	mg/km
333.0	CD_THC	0.00000	mg/km
334.0	CD_PN	-	#/km
335.0	WLTC_LOW_SPEED_gkm	-	g/km
336.0	WLTC_LOW_SPEED_FAC	1.20000	-
337.0	WLTC_MEDIUM_SPEED_gkm	-	g/km
338.0	WLTC_HIGH_SPEED_gkm	-	g/km
339.0	WLTC_HIGH_SPEED_FAC	1.10000	-
340.0	WLTC_EXTRA_HIGH_SPEED_gkm	-	g/km
341.0	WLTC_EXTRA_HIGH_SPEED_FA	1.05000	-
342.0	TOL_NORMAL_DRIVING	25.00000	%
343.0	TOL_SEVERE_DRIVING	50.00000	%
344.0	Increase Tolerance Nomral Driving	NO	-
345.0	Bin1_min	-	km/h
346.0	Bin2_min	-	km/h
347.0	Bin3_min	-	km/h
348.0	Bin1_max	-	km/h
349.0	Bin2_max	-	km/h
350.0	Bin3_max	-	km/h
351.0	Clear_R0	125.40000	N
352.0	Clear_R1	0.29300	Nh/km
353.0	Clear_R2	0.02795	N*(h/km) ²
354.0	Clear_SMK	1470.00000	kg
355.0	Clear_Rated_Power	140.00000	kW
356.0	Clear_Ref_Velocity	70.00000	km/h
357.0	Clear_Ref_Acc	0.45000	m/s ²
358.0	Clear_Smooth	3.00000	s
359.0	EXTC_From_High_Temp	30.00000	degC
360.0	EXTC_To_High_Temp	35.00000	degC

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#	Text	Value	Unit
-	----	----	----
361.0	EXTC_From_Low_Temp	-7.00000	degC
362.0	EXTC_To_Low_Temp	0.00000	degC
363.0	Euro 6d or Euro 6d temp	NO	-
364.0	EXTC_From_Altitude	700.00000	m
365.0	EXTC_To_Altitude	1300.00000	m
366.0	EXTC_CORR_FAC	1.60000	
367.0	weight cold start (YES/NO)	NO	-
368.0	precon and soak done (YES/NO)	NO	-
369.0	PATH_PRECON_FILE		
370.0	filter velocity (YES/NO)	NO	-
371.0	filter velocity auto(YES/NO)	NO	-
372.0	Ki_CO		
373.0	Ki_CO2		
374.0	Ki_NOx		
375.0	Ki_FACTOR_CO2 (YES/NO)	NO	-
376.0	Ki_OFFSET_CO2 (YES/NO)	NO	-
377.0	Ki_FACTOR_CO (YES/NO)	NO	-
378.0	Ki_OFFSET_CO (YES/NO)	NO	-
379.0	Ki_FACTOR_NOx (YES/NO)	NO	-
380.0	Ki_OFFSET_NOx (YES/NO)	NO	-
381.0	Ki_OFF (YES/NO)	NO	-
382.0	HD legislations	1.00000	-
383.0	RDE legislations	1.00000	-
384.0	Submission Documents (YES/NO)	NO	-
385.0	General Setup Parameters Text	Mountain	-
386.0	Legislation Setup Parameters Text	Mountain	-
387.0	Trip Info		-
388.0	IN_TIME_REF		-
389.0	Sub-Trip Start: Auto	YES	-
390.0	Sub-Trip Start: Seconds	N/A	s

#	Text	Value	Unit
-	----	----	----
391.0	Sub-Trip End: Auto	YES	-
392.0	Sub-Trip End: Seconds	N/A	s
393.0	Unit System	2.00000	-
394.0	Calculate: PM Emissions	NO	-
395.0	Calculate: PN Emissions	NO	-
396.0	Output: Summary	YES	-
397.0	Output: Emissions	YES	-
398.0	Output: Raw Data	YES	-
399.0	Output: Zero Span	YES	-
400.0	Output: Data Consistency	NO	-
401.0	Output: Window Plots	YES	-
402.0	Fuel Rate ECU vs. EU ISO16183	$y = 10000000000.0000 x - 0.000 R^2=10000000000.000 SEE=$	
403.0	PEMS post processing version	Rel_10_B192	
404.0	Concerto version	480.00000	
405.0	Concerto build	215.00000	
406.0	USERNAME	EFR	

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Vehicle: 2017 Audi Q3 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
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Case: City
Page: Trip Summary

Start Date: 09/22/2017
Start Time: 12:49:39.0



Trip Duration	3471.00	s	ave THC	4.72313	ppm	BS CO2	n/a	g/hphr
Trip Duration (a)	3471.00	s	ave NMHC	1.84450	ppm	BS CO	n/a	g/hphr
Trip Distance	16.03	mi	ave CH4	2.61694	ppm	BS THC	n/a	g/hphr
Trip Distance (a)	16.03	mi	ave CO	408.11643	ppm	BS NMHC	n/a	g/hphr
Trip Fuel Cons. (b)	n/a	kg	ave CO2	11.63328	%	BS CH4	n/a	g/hphr
Trip Fuel Cons. (ab)	n/a	kg	ave NOx	8.59230	ppm	BS NO (d)	n/a	g/hphr
Trip Fuel Cons. EU (ac)	2.26	kg	ave PM	n/a	mg/m3	BS NO2	n/a	g/hphr
Trip Fuel Cons. US (ac)	2.25	kg	ave Soot meas	n/a	mg/m3	BS NOx	n/a	g/hphr
Trip Fuel Cons. Volume (b)	n/a	gall	ave Soot	n/a	mg/m3	BS Soot	n/a	g/hphr
Trip Fuel Cons. Volume (ab)	n/a	gall	ave PN	n/a	#/cm3	BS Soot meas	n/a	g/hphr
Trip Fuel Cons. Volume EU (ac)	0.80	gall	tot THC	0.08575	g	BS PM	n/a	g/hphr
Trip Fuel Cons. Volume US (ac)	0.79	gall	tot NMHC	0.03597	g	BS PN	n/a	#/hpr
Trip Fuel Economy (b)	n/a	mpg_US	tot CH4	0.05522	g	DS CO2	425.52777	g/mi
Trip Fuel Economy (ab)	n/a	mpg_US	tot CO	16.15795	g	DS CO	1.00797	g/mi
Trip Fuel Economy EU (ac)	20.06	mpg_US	tot CO2	6821.27971	g	DS THC	0.00535	g/mi
Trip Fuel Economy US (ac)	20.18	mpg_US	tot NO (d)	0.35229	g	DS NMHC	0.00224	g/mi
Trip Av. Eng. Speed	1319.30	rpm	tot NO2	0.06247	g	DS CH4	0.00344	g/mi
Trip Av. Torque	n/a	lbft	tot NOx	0.41019	g	DS NO (d)	0.02198	g/mi
Trip Av. Power	n/a	hp	tot Soot	n/a	g	DS NO2	0.00390	g/mi
Trip Work	n/a	hphr	tot Soot meas	n/a	g	DS NOx	0.02559	g/mi
Trip Exhaust Mass	37.09	kg	tot PM	n/a	g	DS Soot	n/a	g/mi
Trip Exhaust Mass EU (ac)	n/a	kg	tot PN	n/a	#	DS Soot meas	n/a	g/mi
Trip Exhaust Mass US (ac)	n/a	kg	PM measurement type	0.00000	-	DS PM	n/a	g/mi
Trip Av. Amb. Temperature	78.26	deg_F	PM correction type	1.00000	alpha(HC)	DS PN	n/a	#/mi
Trip Av. Humidity	37.01	%	tot Soot on PM filter (estim.)	n/a	mg	FS CO2	n/a	g/kg
Fuel Type	Petrol (E10)		Soot --> PM simple scaling factor	1.00000	-	FS CO	n/a	g/kg
			Soot --> PM alpha scaling factor	0.00000	-	FS THC	n/a	g/kg
			Trip Av. Veh. Speed	16.62593	mi/hr	FS NMHC	n/a	g/kg
			Trip Velocity Zero	20.85854	%	FS CH4	n/a	g/kg
			Trip Velocity Urban	84.98992	%	FS NO (d)	n/a	g/kg
			Trip Velocity Rural	11.66811	%	FS NO2	n/a	g/kg
			Trip Velocity Motorway	3.34198	%	FS NOx	n/a	g/kg
						FS Soot	n/a	g/kg
						FS Soot meas	n/a	g/kg
						FS PM	n/a	g/kg
						FS PN	n/a	#/kg

(a) GAS PEMS measurement state only, (b) based on fuel rate input (ECU, Fuel Meter), (c) calculated from carbon balance
(d) NO calculated using molecular weight of NO2

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi Q3 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Trip Summary Drift Corrected

Start Date: 09/22/2017

Start Time: 12:49:39.0

"



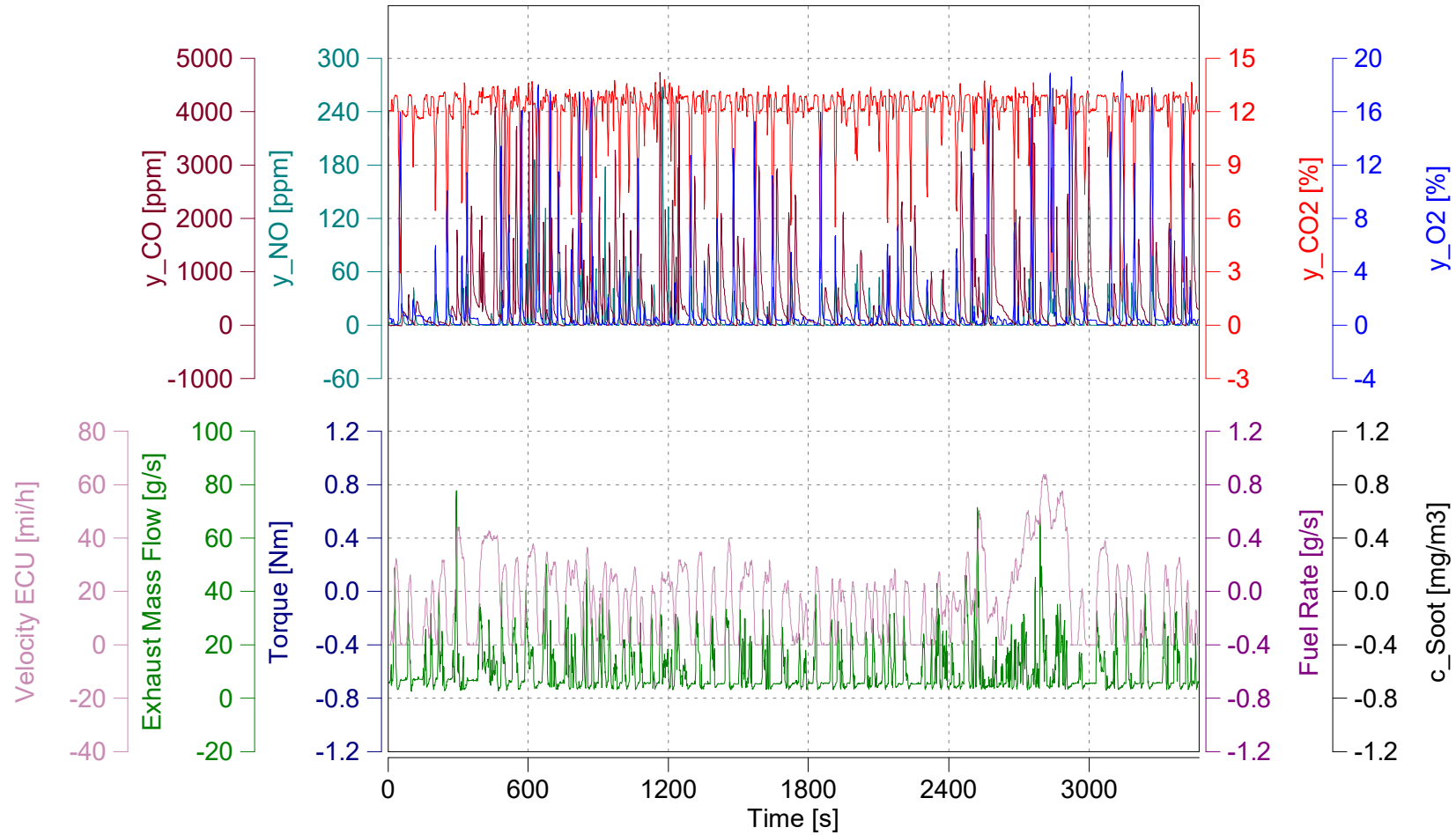
Concerto M.O.V.E, 2017

Trip Duration	3471.00	s	ave THC DC	6.29348	ppm	BS CO2 DC	n/a	g/hphr
Trip Duration (a)	3471.00	s	ave NMHC DC	3.42224	ppm	BS CO DC	n/a	g/hphr
Trip Distance	16.03	mi	ave CH4 DC	2.61022	ppm	BS THC DC	n/a	g/hphr
Trip Distance (a)	16.03	mi	ave CO DC	410.54403	ppm	BS NMHC DC	n/a	g/hphr
Trip Fuel Cons. (b)	n/a	kg	ave CO2 DC	11.62172	%	BS CH4 DC	n/a	g/hphr
Trip Fuel Cons. (ab)	n/a	kg	ave NOx DC	8.54830	ppm	BS NO DC (d)	n/a	g/hphr
Trip Fuel Cons. EU (ac)	2.26	kg	ave PM	n/a	mg/m3	BS NO2 DC	n/a	g/hphr
Trip Fuel Cons. US (ac)	2.25	kg	ave Soot meas	n/a	mg/m3	BS NOx DC	n/a	g/hphr
Trip Fuel Cons. Volume (b)	n/a	gall	ave Soot	n/a	mg/m3	BS Soot	n/a	g/hphr
Trip Fuel Cons. Volume (ab)	n/a	gall	ave PN DC	n/a	#/cm3	BS Soot meas	n/a	g/hphr
Trip Fuel Cons. Volume EU (ac)	0.80	gall	tot THC DC	0.11425	g	BS PM	n/a	g/hphr
Trip Fuel Cons. Volume US (ac)	0.79	gall	tot NMHC DC	0.05920	g	BS PN DC	n/a	#/hpr
Trip Fuel Economy (b)	n/a	mpg_US	tot CH4 DC	0.05521	g	DS CO2 DC	425.10492	g/mi
Trip Fuel Economy (ab)	n/a	mpg_US	tot CO DC	16.25584	g	DS CO DC	1.01408	g/mi
Trip Fuel Economy EU (ac)	20.06	mpg_US	tot CO2 DC	6814.50136	g	DS THC DC	0.00713	g/mi
Trip Fuel Economy US (ac)	20.18	mpg_US	tot NO DC (d)	0.35096	g	DS NMHC DC	0.00369	g/mi
Trip Av. Eng. Speed	1319.30	rpm	tot NO2 DC	0.06282	g	DS CH4 DC	0.00344	g/mi
Trip Av. Torque	n/a	lbft	tot NOx DC	0.40754	g	DS NO DC (d)	0.02189	g/mi
Trip Av. Power	n/a	hp	tot Soot	n/a	g	DS NO2 DC	0.00392	g/mi
Trip Work	n/a	hphr	tot Soot meas	n/a	g	DS NOx DC	0.02542	g/mi
Trip Exhaust Mass	37.09	kg	tot PM	n/a	g	DS Soot	n/a	g/mi
Trip Exhaust Mass EU (ac)	n/a	kg	tot PN DC	n/a	#	DS Soot meas	n/a	g/mi
Trip Exhaust Mass US (ac)	n/a	kg	PM measurement type	0.00000	-	DS PM	n/a	g/mi
Trip Av. Amb. Temperature	78.26	deg_F	PM correction type	1.00000	alpha(HC)	DS PN DC	n/a	#/mi
Trip Av. Humidity	37.01	%	tot Soot on PM filter (estim.)	n/a	mg	FS CO2 DC	n/a	g/kg
Fuel Type	Petrol (E10)		Soot --> PM simple scaling factor	1.00000	-	FS CO DC	n/a	g/kg
			Soot --> PM alpha scaling factor	0.00000	-	FS THC DC	n/a	g/kg
			Trip Av. Veh. Speed	16.62593	mi/hr	FS NMHC DC	n/a	g/kg
			Trip Velocity Zero	20.85854	%	FS CH4 DC	n/a	g/kg
			Trip Velocity Urban	84.98992	%	FS NO DC (d)	n/a	g/kg
			Trip Velocity Rural	11.66811	%	FS NO2 DC	n/a	g/kg
			Trip Velocity Motorway	3.34198	%	FS NOx DC	n/a	g/kg
						FS Soot	n/a	g/kg
						FS Soot meas	n/a	g/kg
						FS PM	n/a	g/kg
						FS PN DC	n/a	#/kg

(a) GAS PEMS measurement state only, (b) based on fuel rate input (ECU, Fuel Meter), (c) calculated from carbon balance
 (d) NO calculated using molecular weight of NO2

Concerto Version: 480 Build 215, Serial Number: 8468
 M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi Q3 /
 Engine: Gasoline / 2.0L
 NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
 Dry / Wet Corr.: 2 - CFR40 §86.1342-90



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

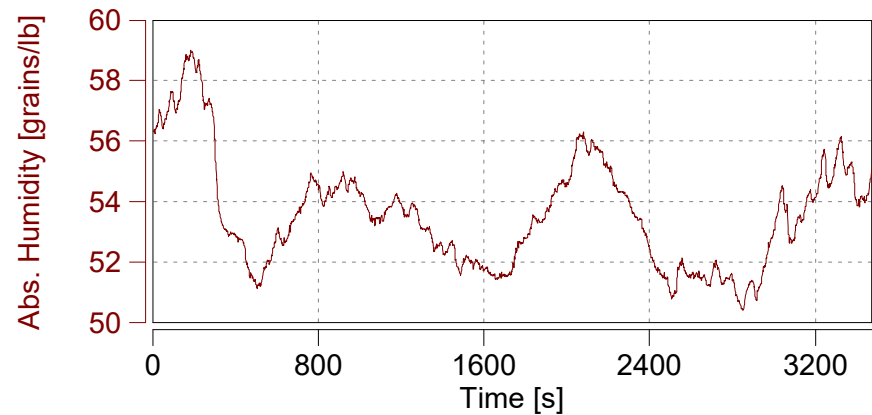
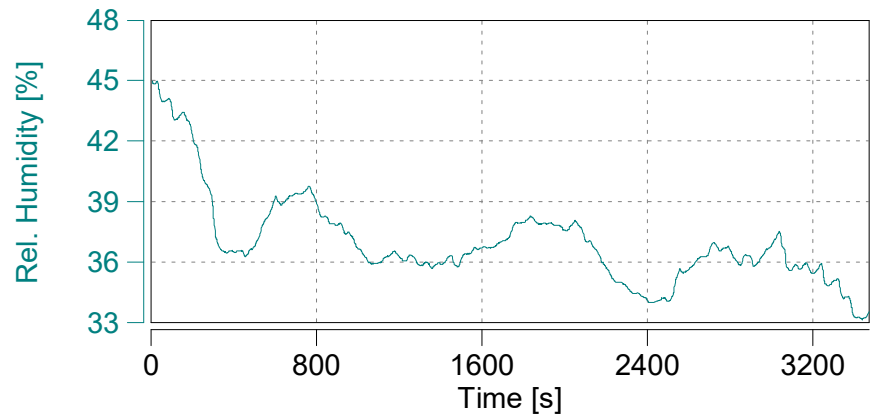
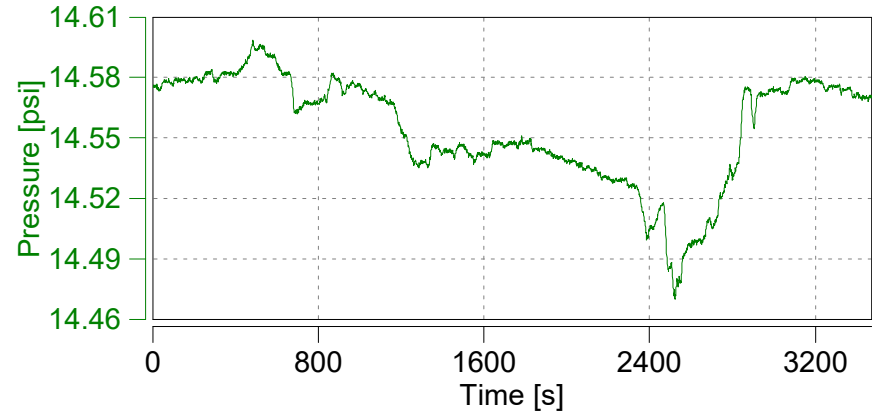
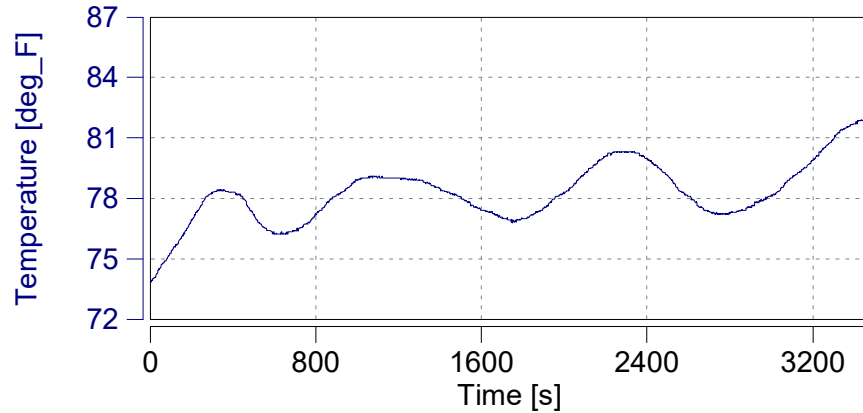
Vehicle: 2017 Audi Q3 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Ambient Conditions

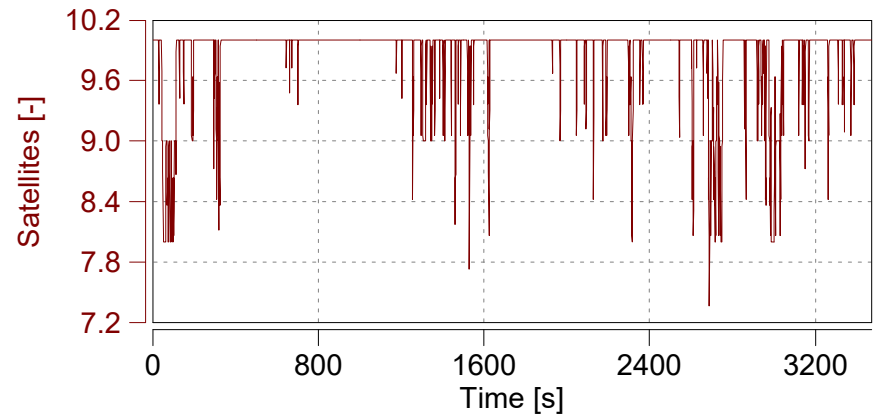
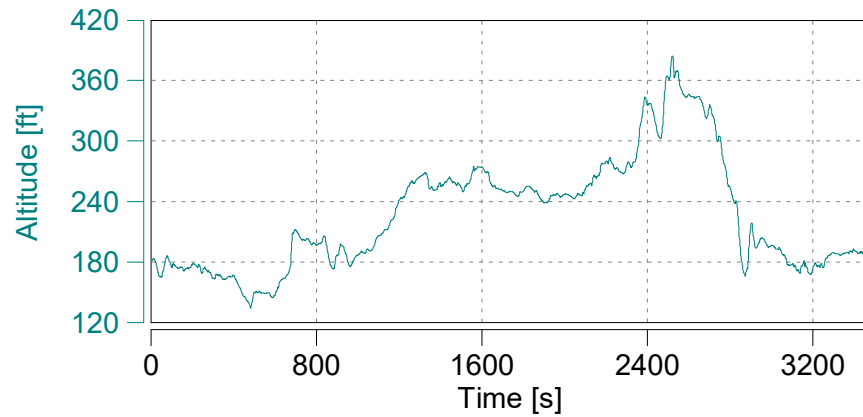
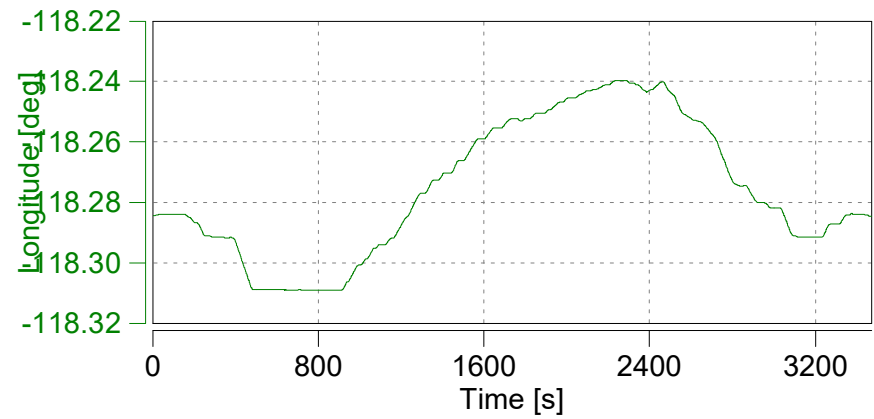
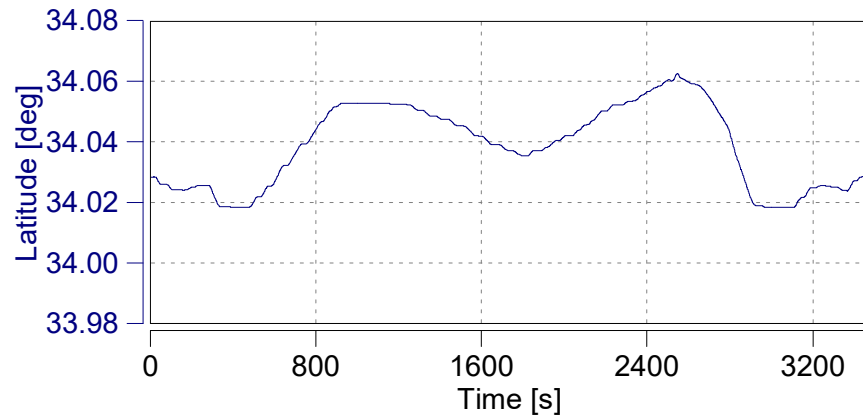
Start Date: 09/22/2017

Start Time: 12:49:39.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi Q3 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

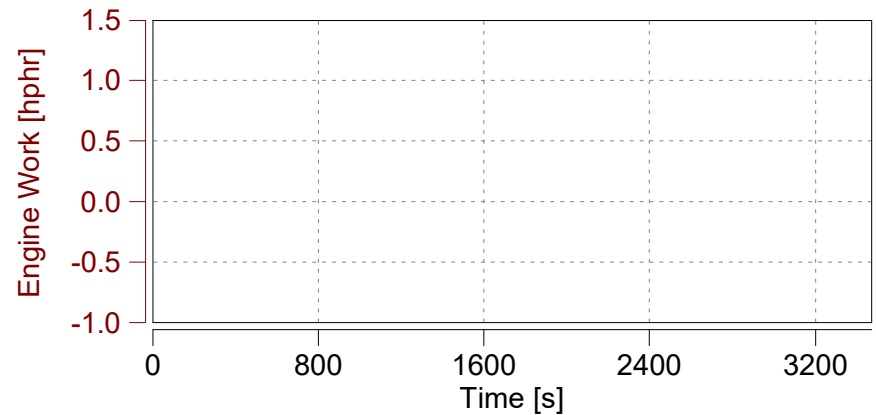
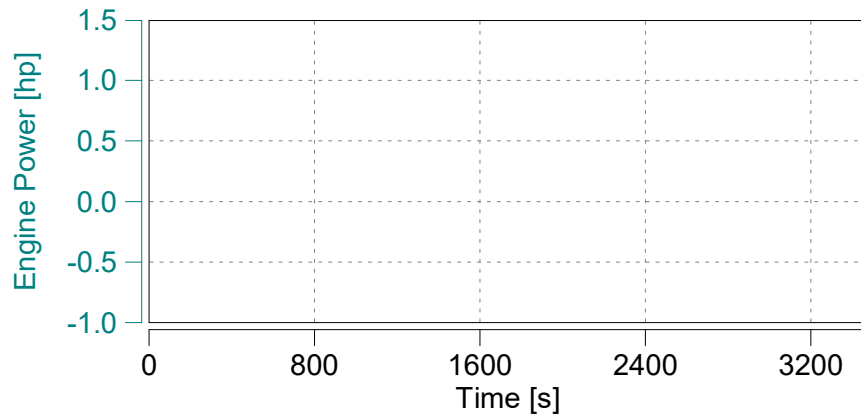
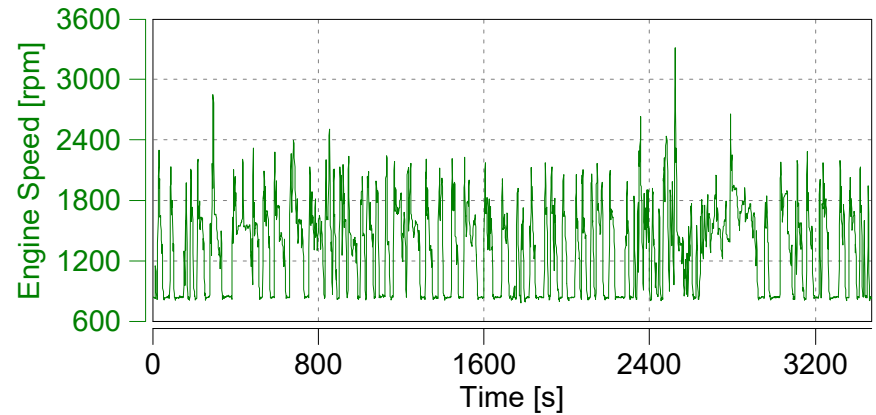
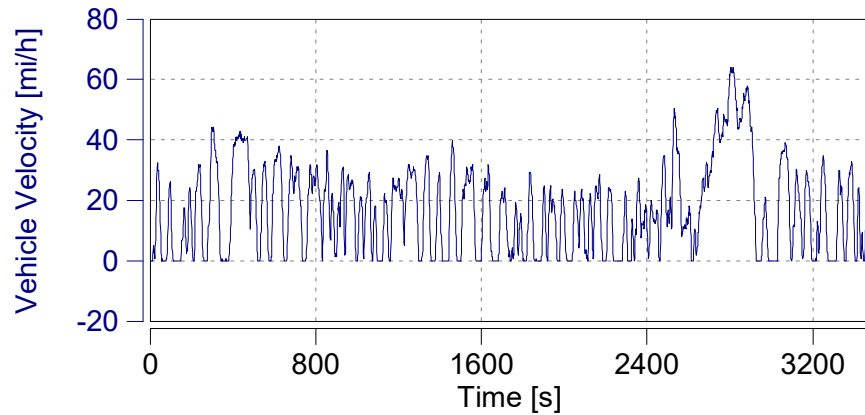


Case: City

Page: Engine (1)

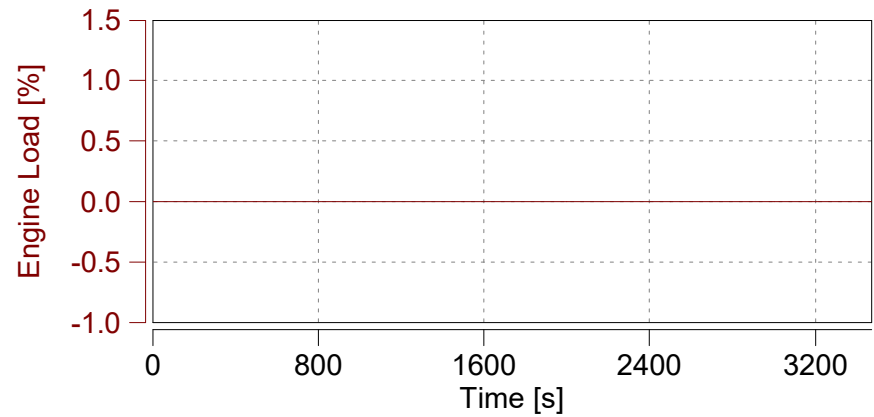
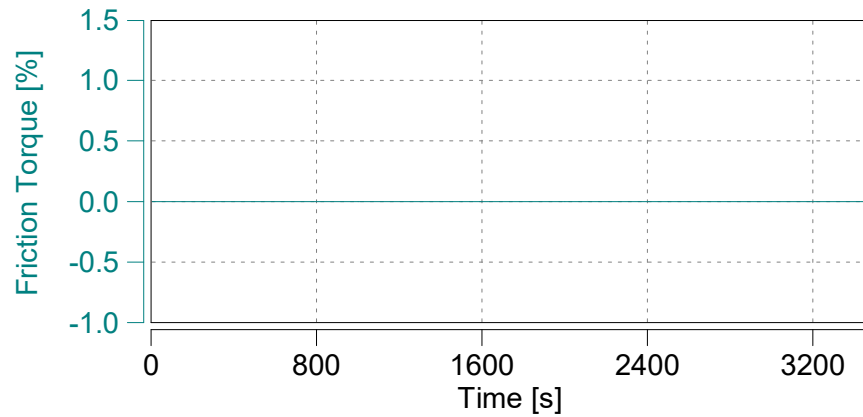
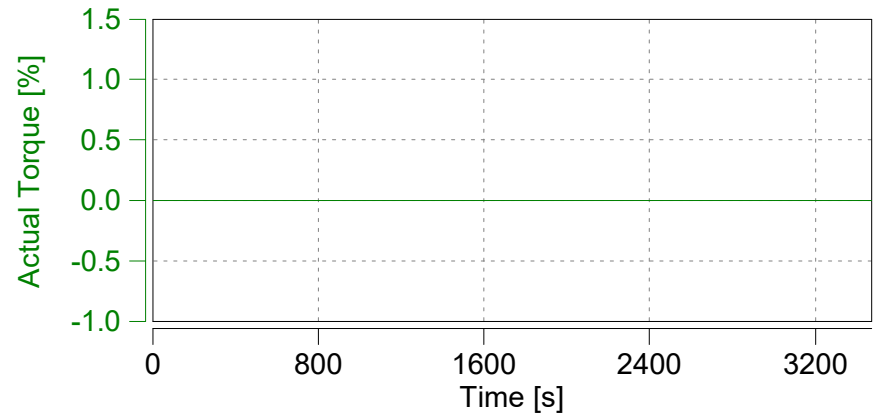
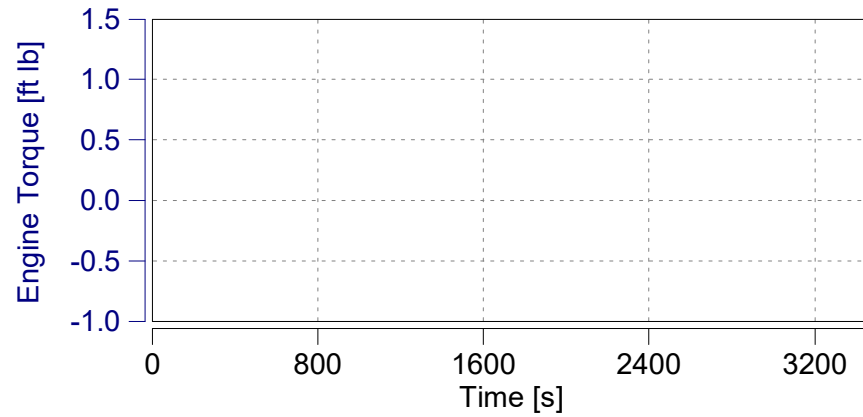
Start Date: 09/22/2017

Start Time: 12:49:39.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi Q3 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

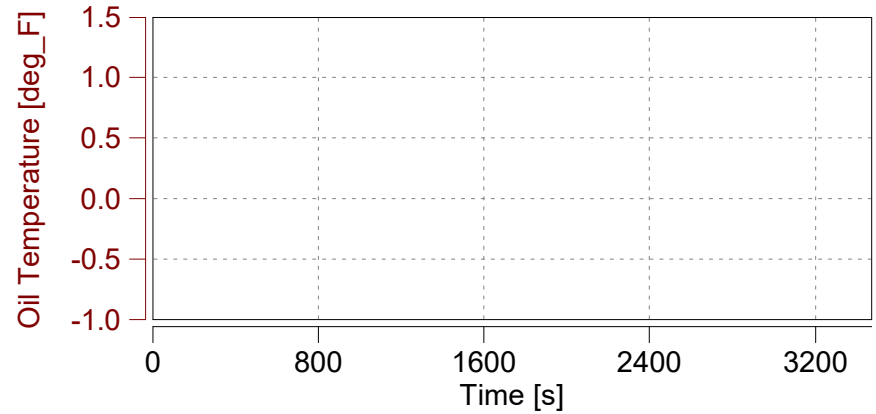
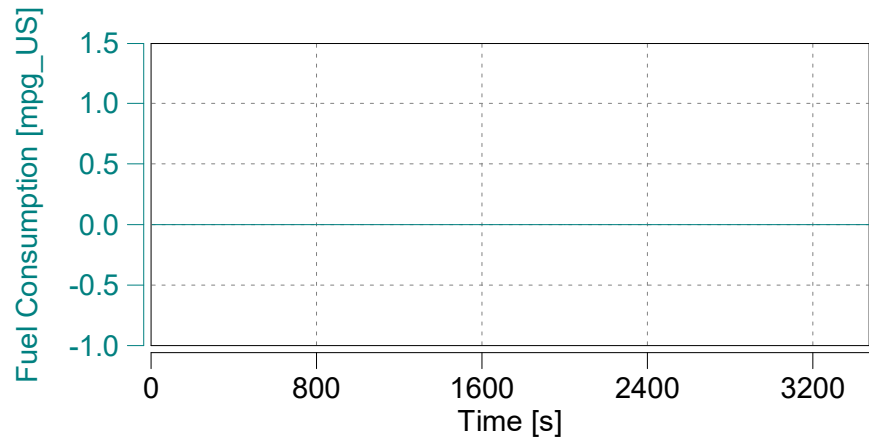
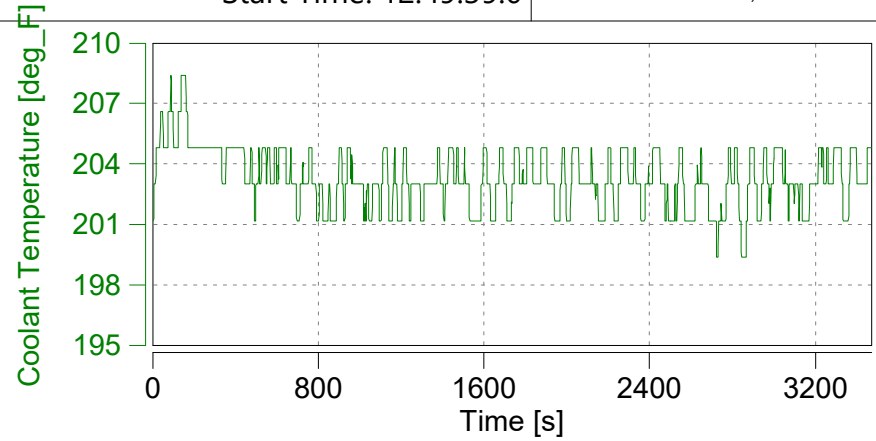
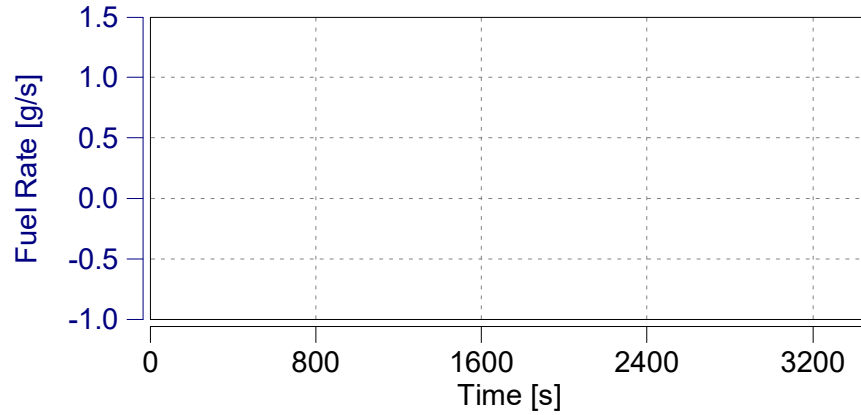


Case: City

Page: Engine (3)

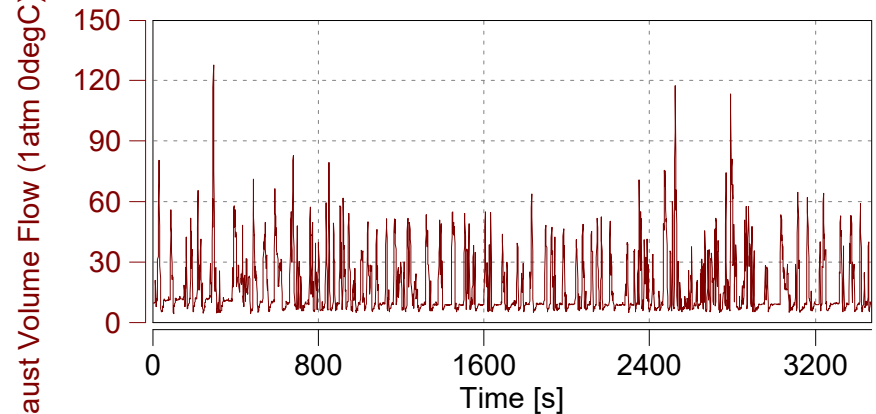
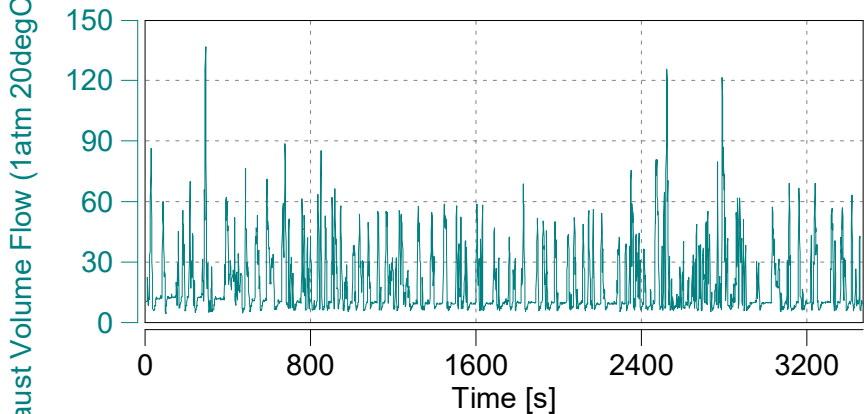
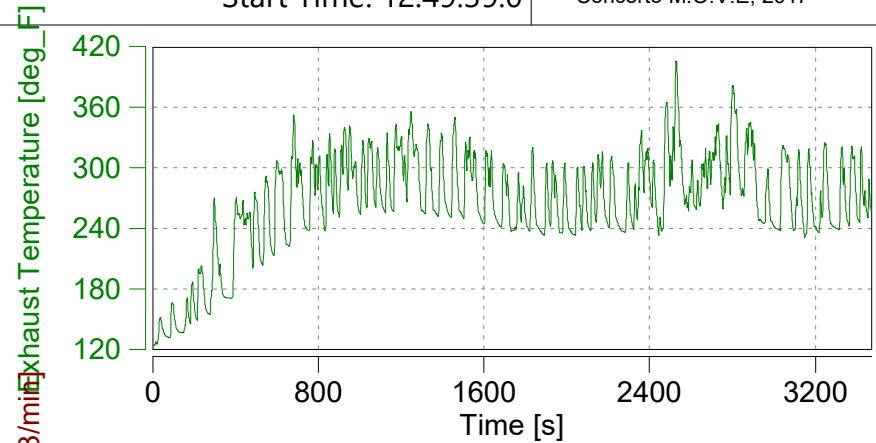
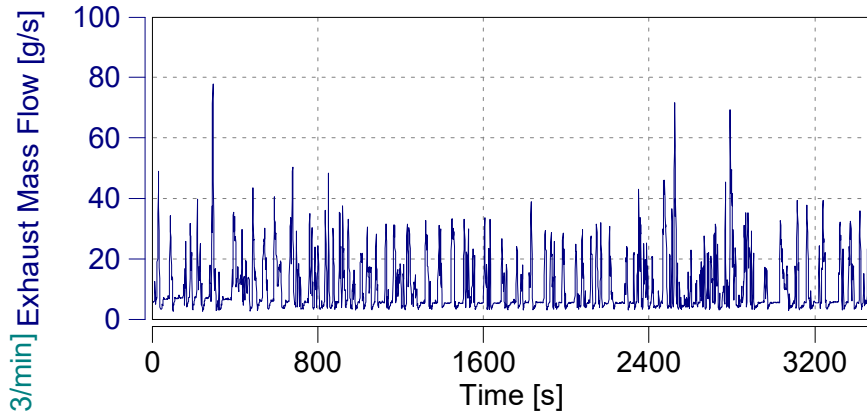
Start Date: 09/22/2017

Start Time: 12:49:39.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi Q3 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

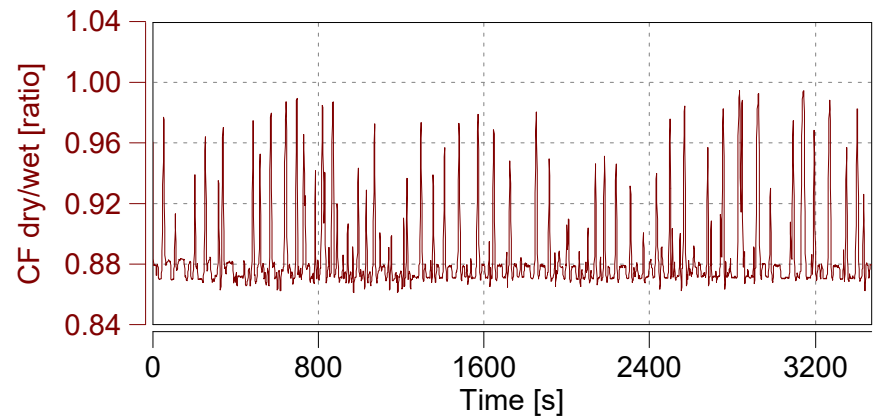
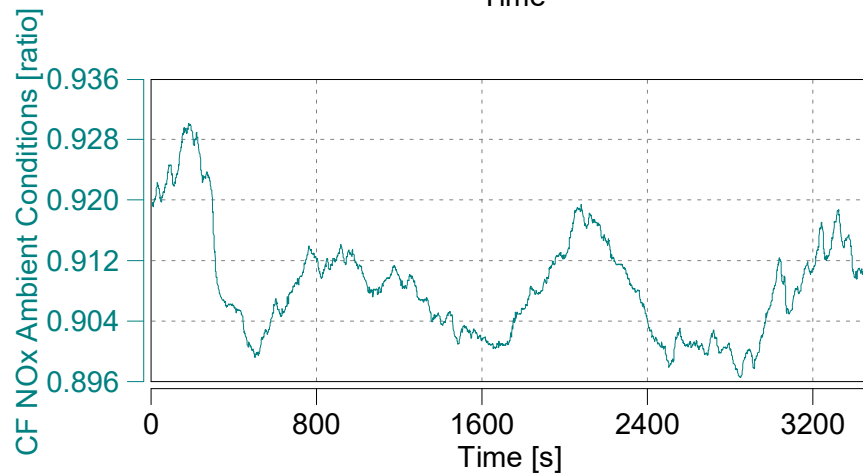
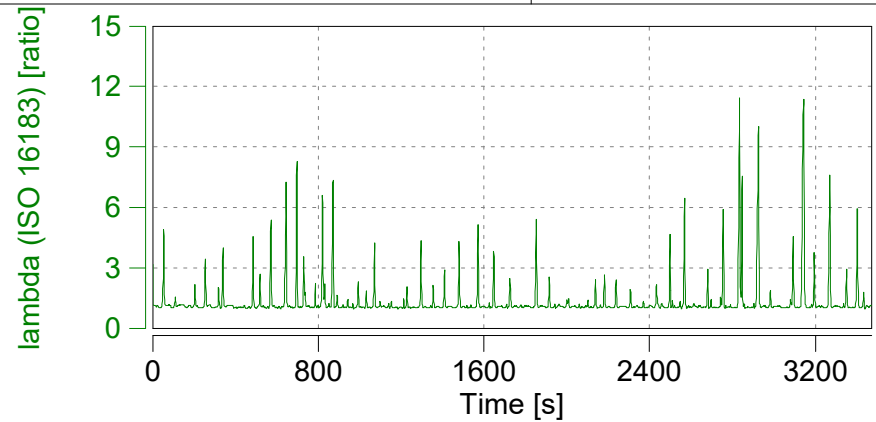
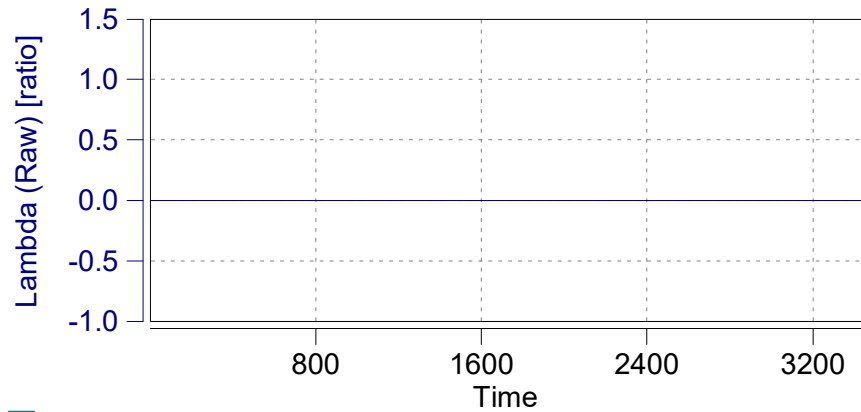


Case: City

Page: Exhaust Flow (2)

Start Date: 09/22/2017

Start Time: 12:49:39.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

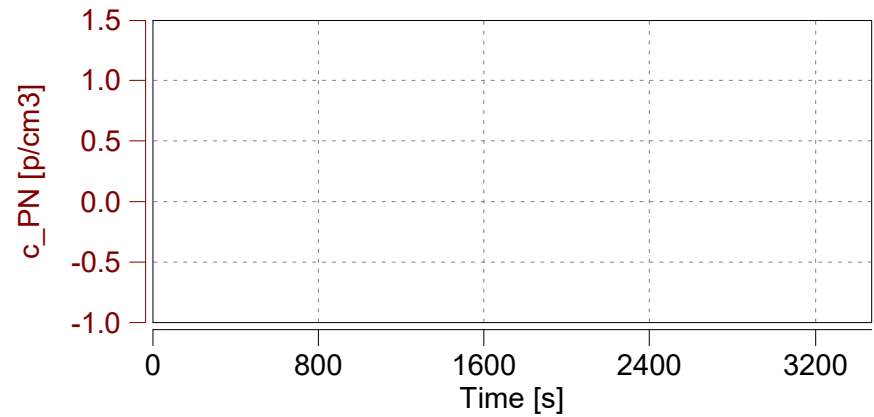
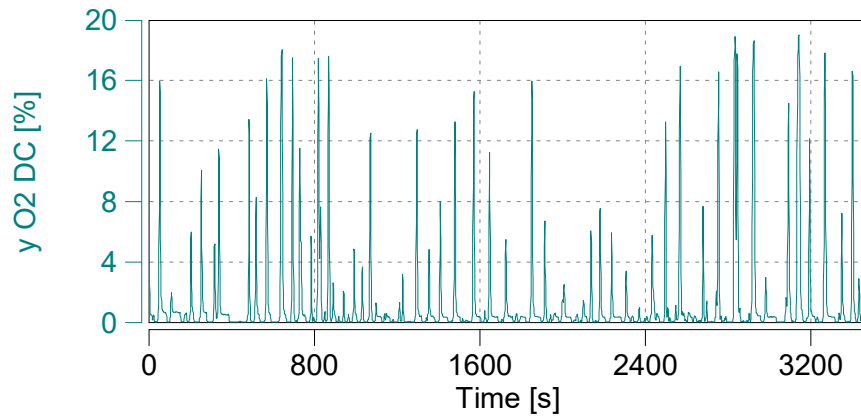
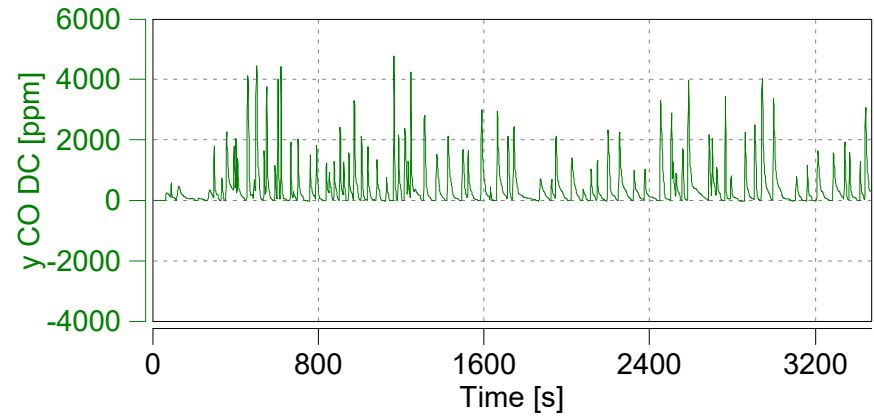
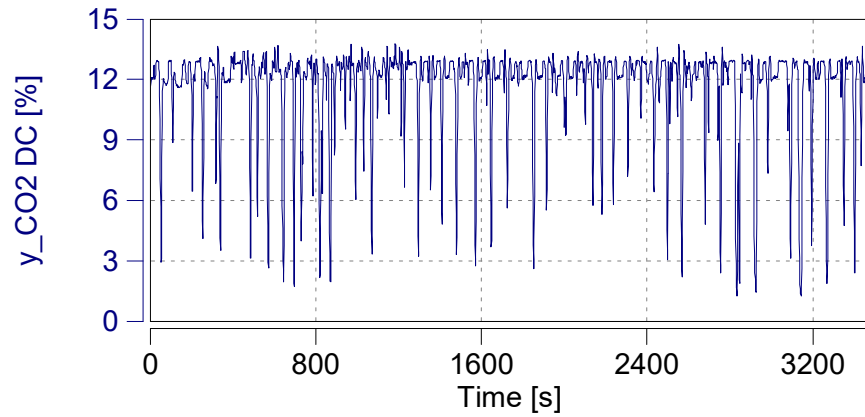
Vehicle: 2017 Audi Q3 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Corrected Emissions (1)

Start Date: 09/22/2017

Start Time: 12:49:39.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

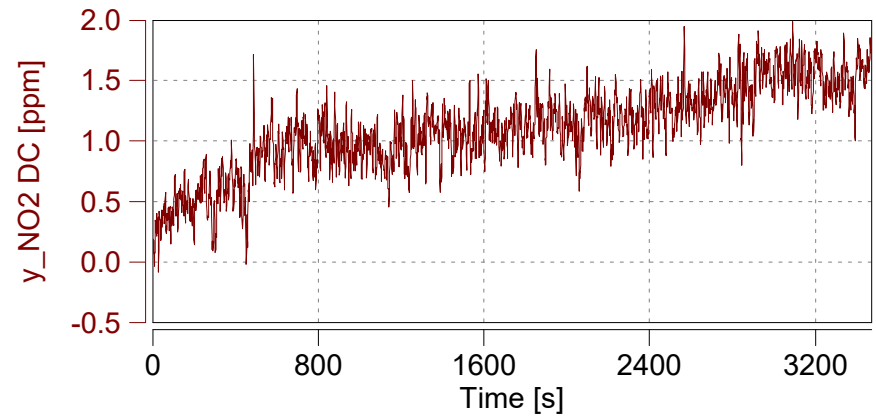
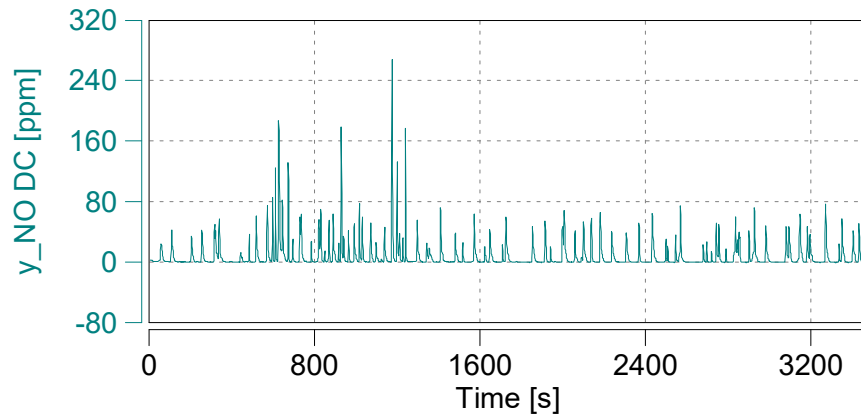
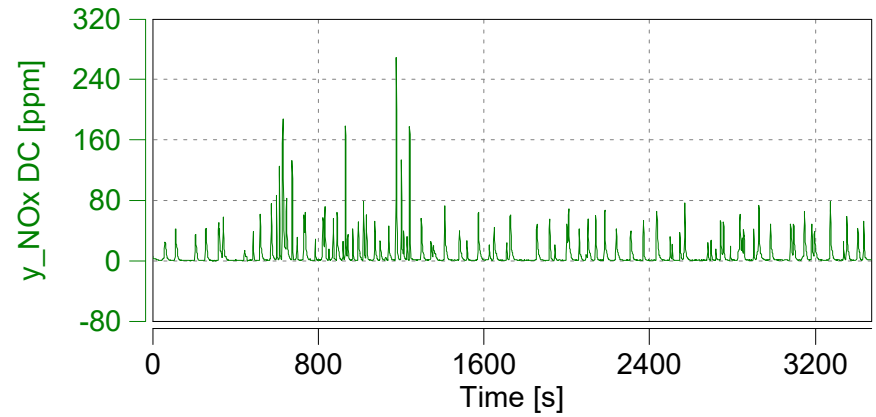
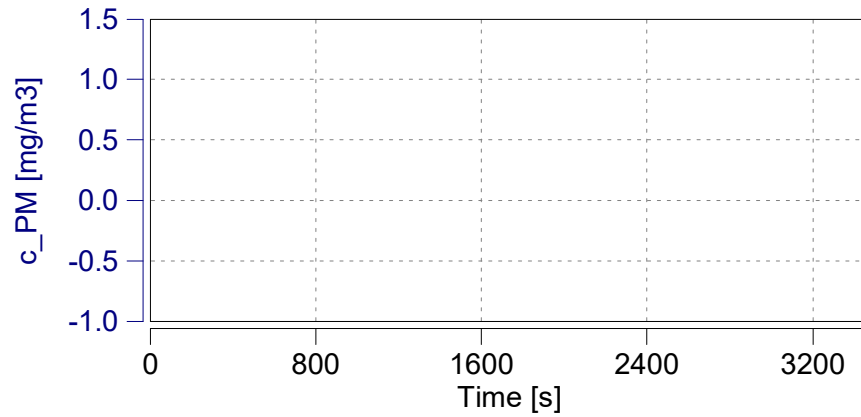
Vehicle: 2017 Audi Q3 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Corrected Emissions (2)

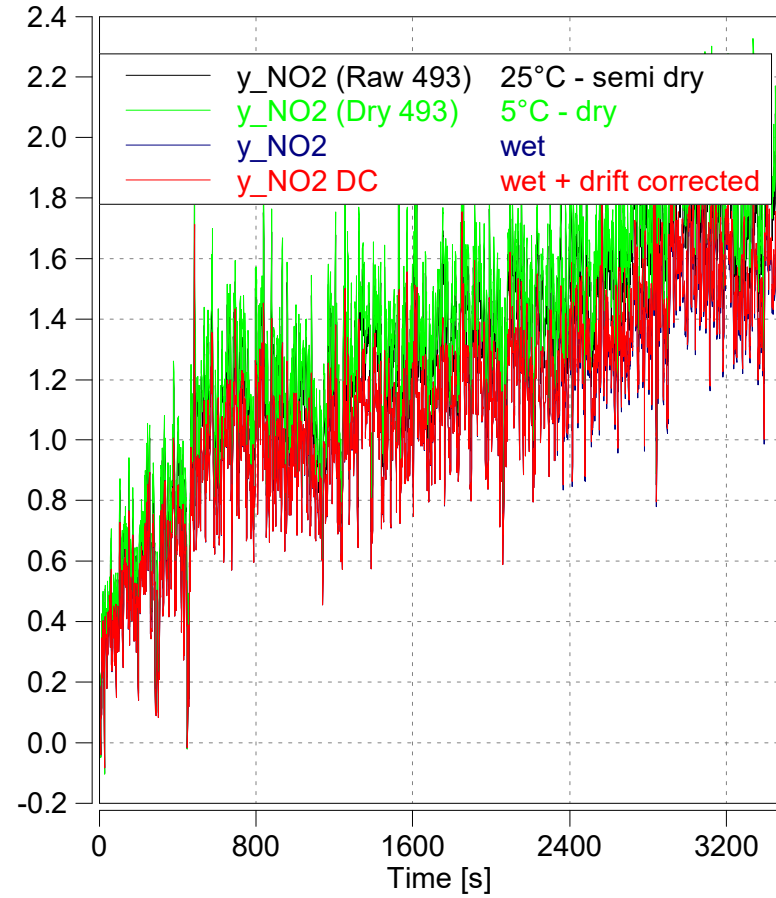
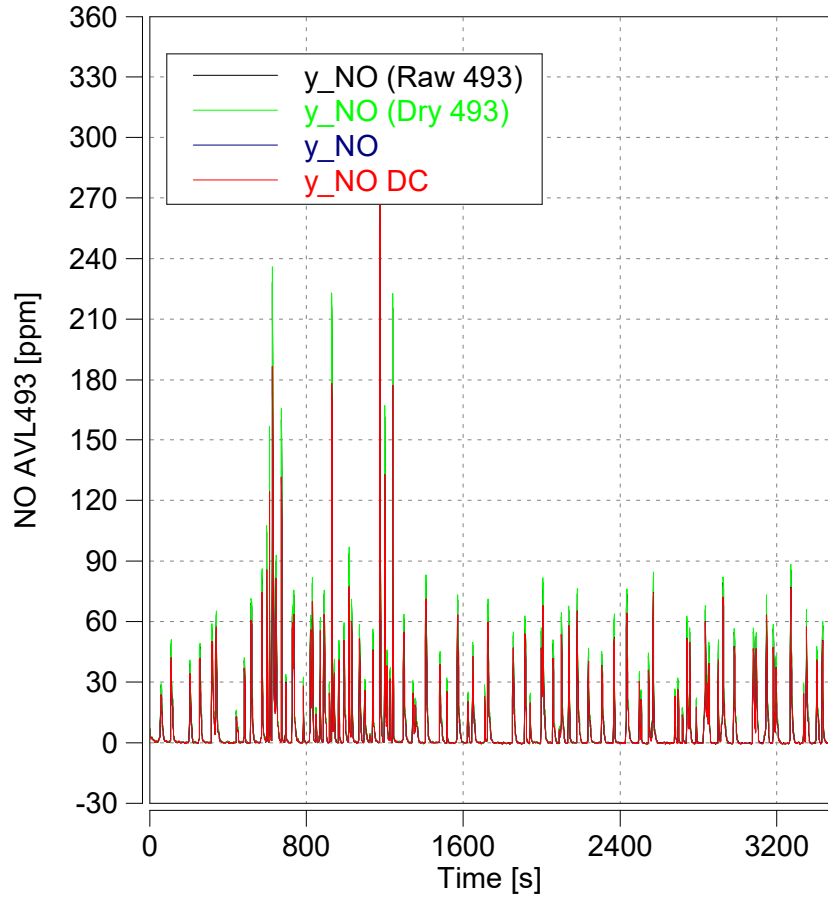
Start Date: 09/22/2017

Start Time: 12:49:39.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

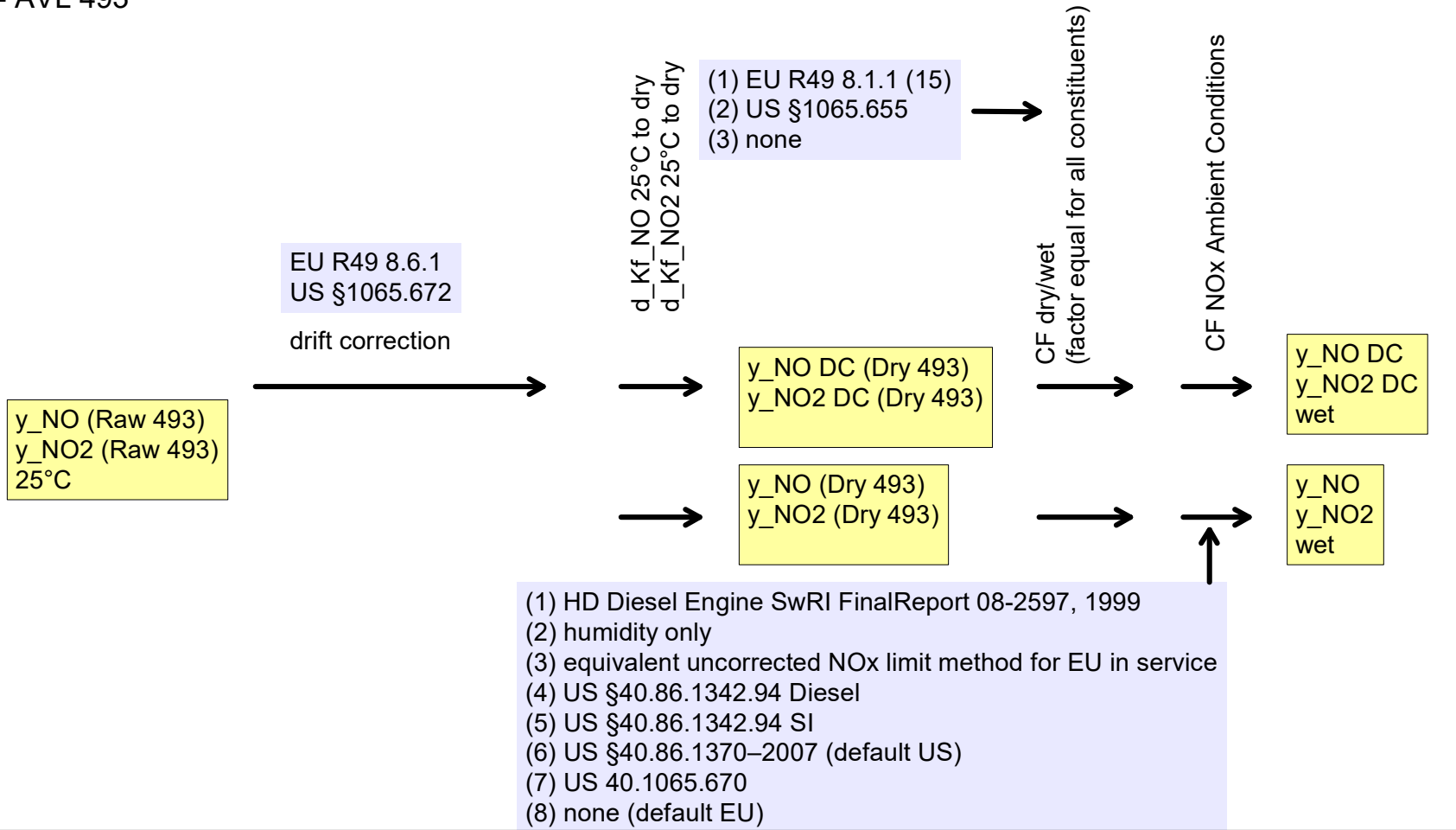
Vehicle: 2017 Audi Q3 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi Q3 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

NOx - AVL 493

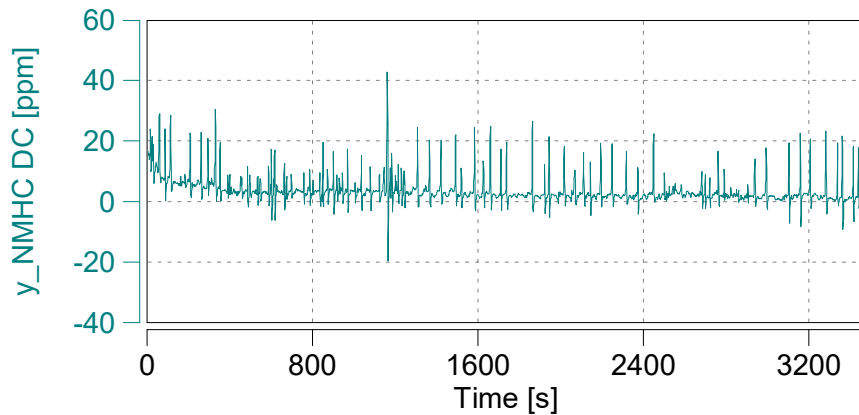
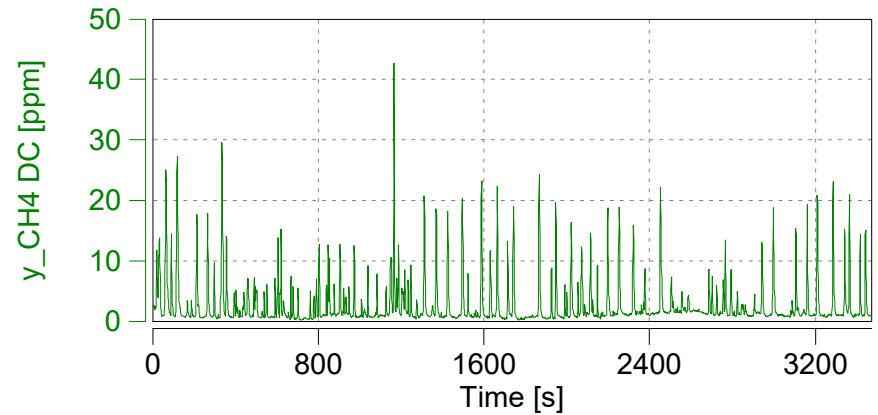
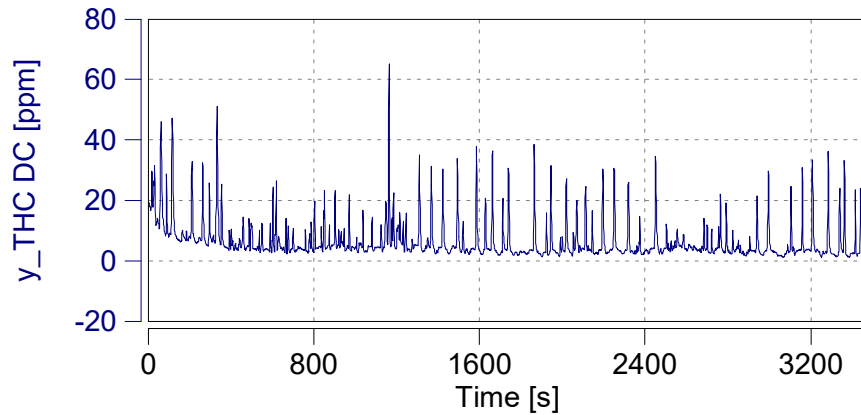


Case: City

Page: Corrected Emissions (5)

Start Date: 09/22/2017

Start Time: 12:49:39.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

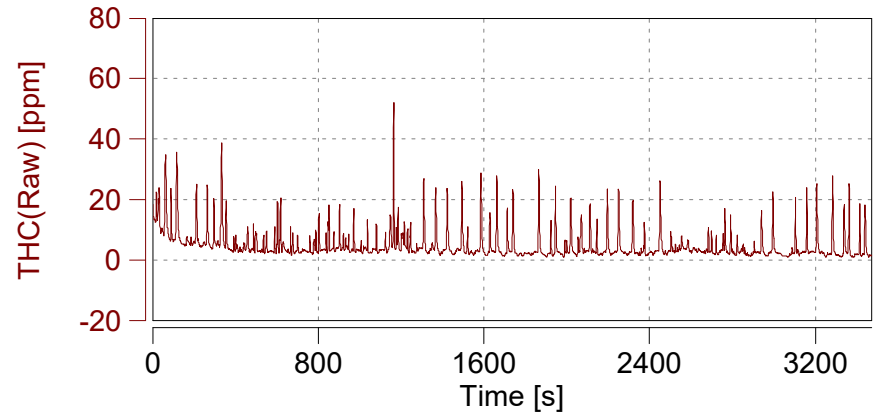
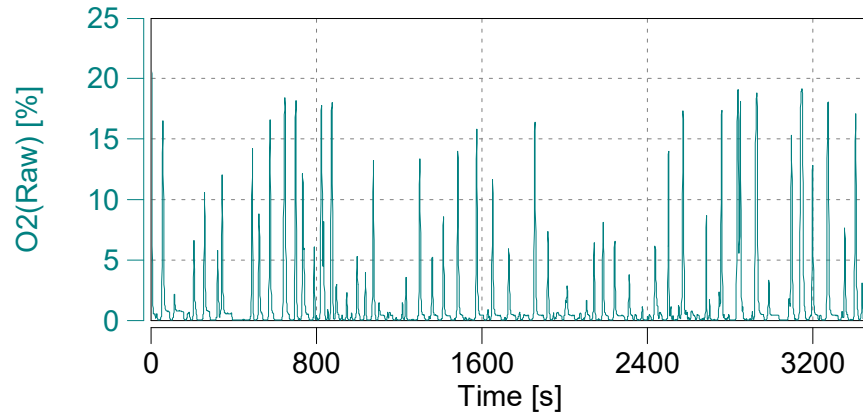
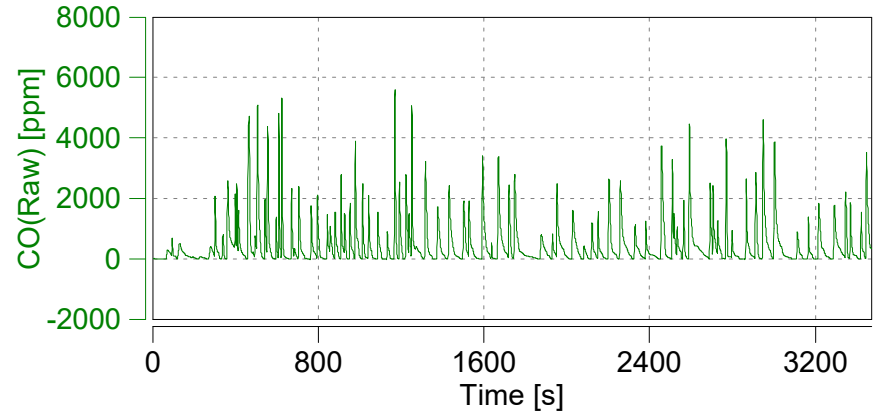
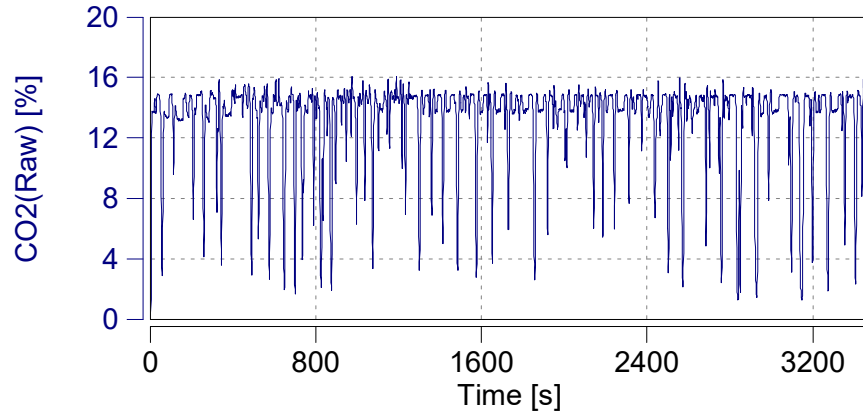
Vehicle: 2017 Audi Q3 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Emissions Raw Data (1)

Start Date: 09/22/2017

Start Time: 12:49:39.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

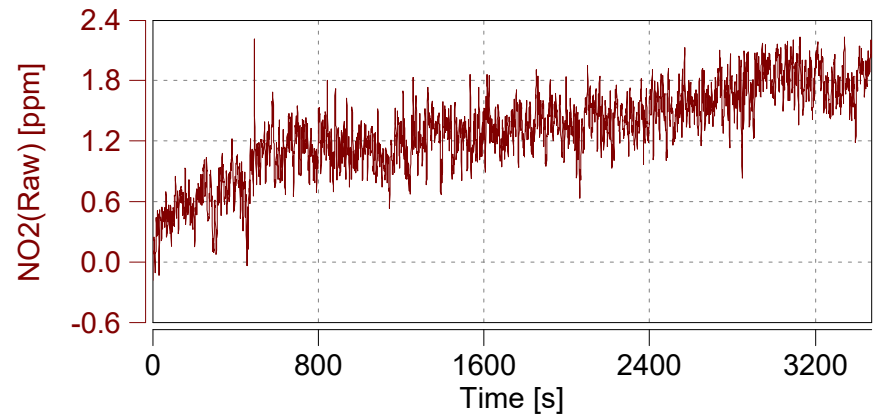
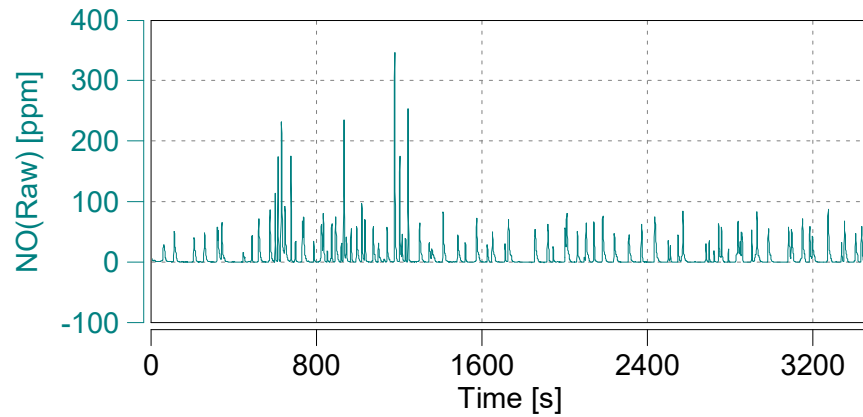
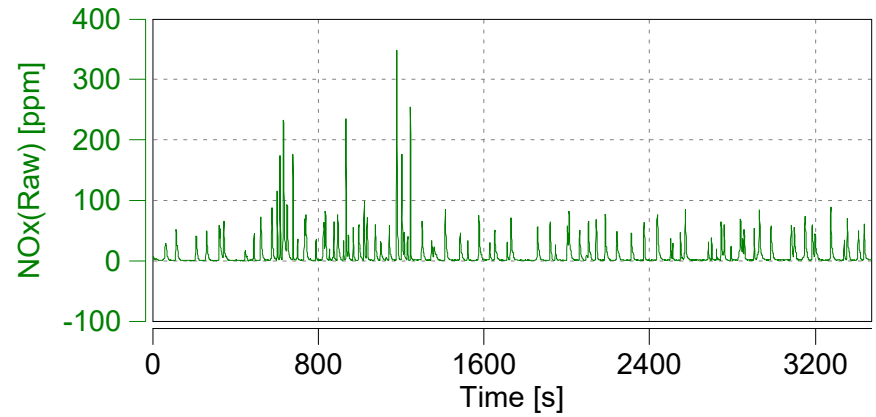
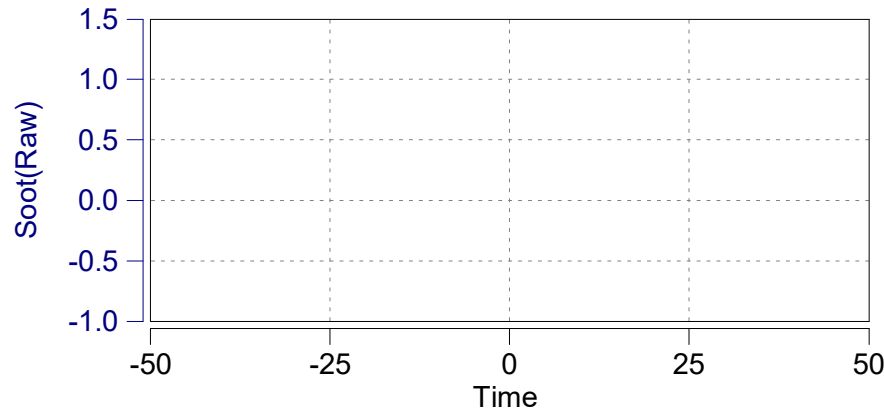
Vehicle: 2017 Audi Q3 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Emissions Raw Data (2)

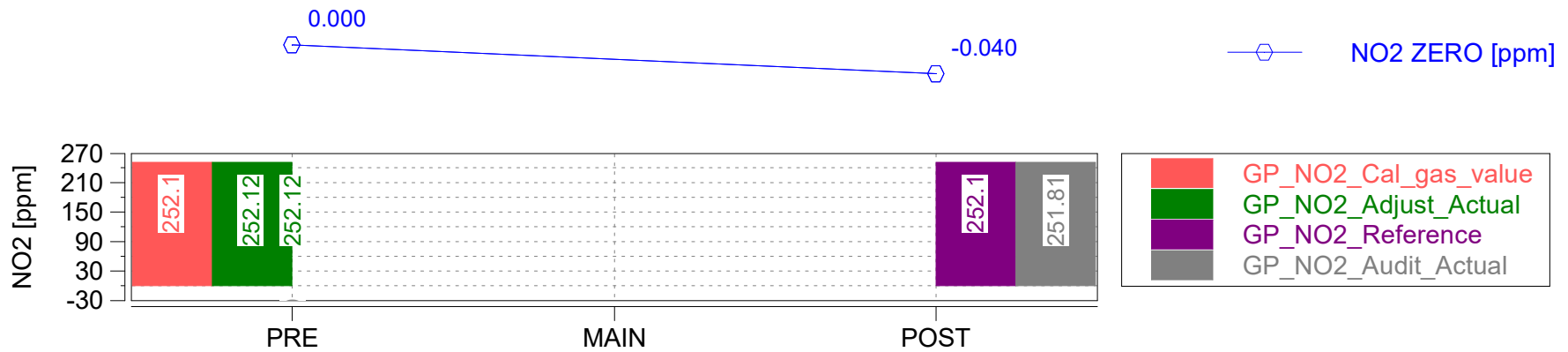
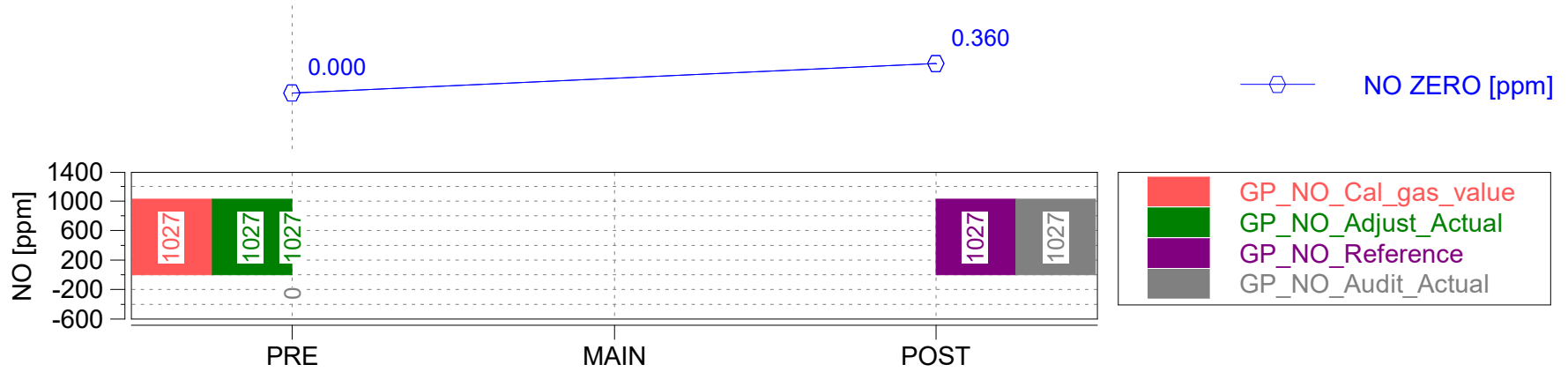
Start Date: 09/22/2017

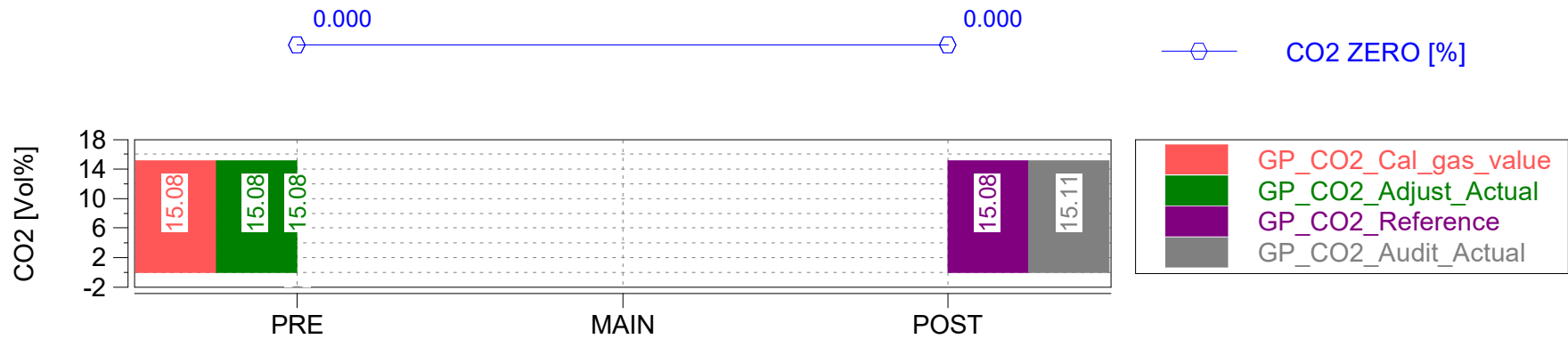
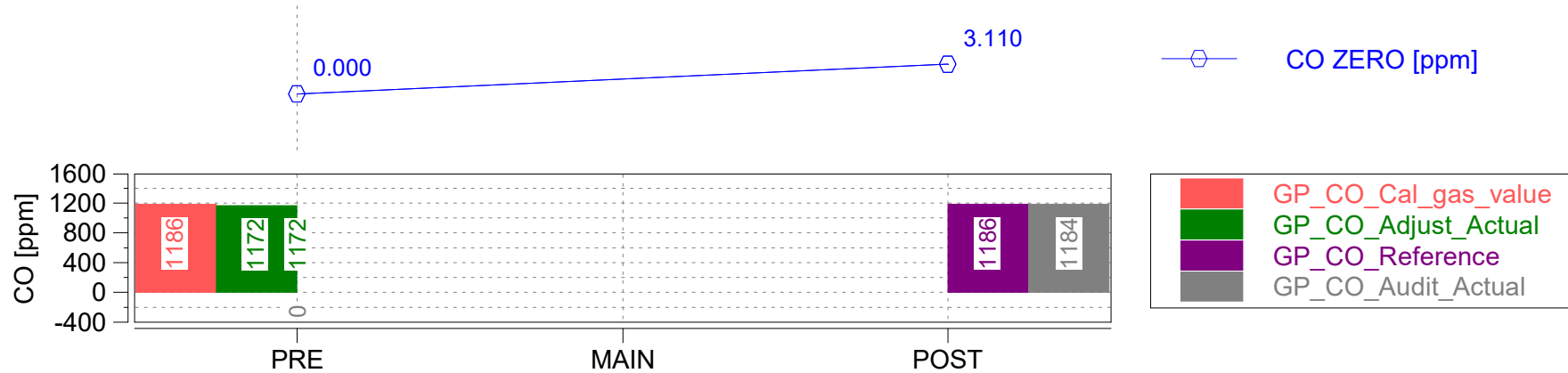
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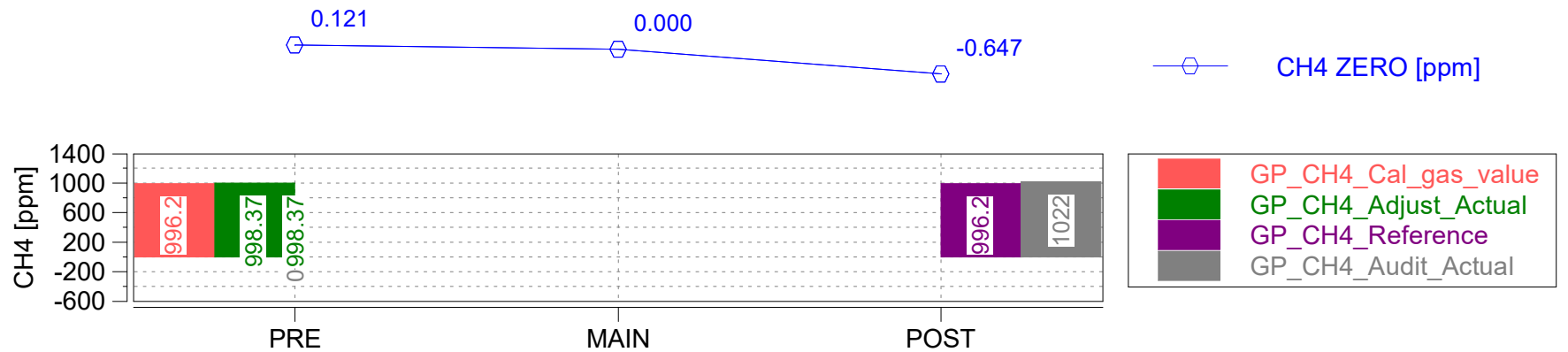
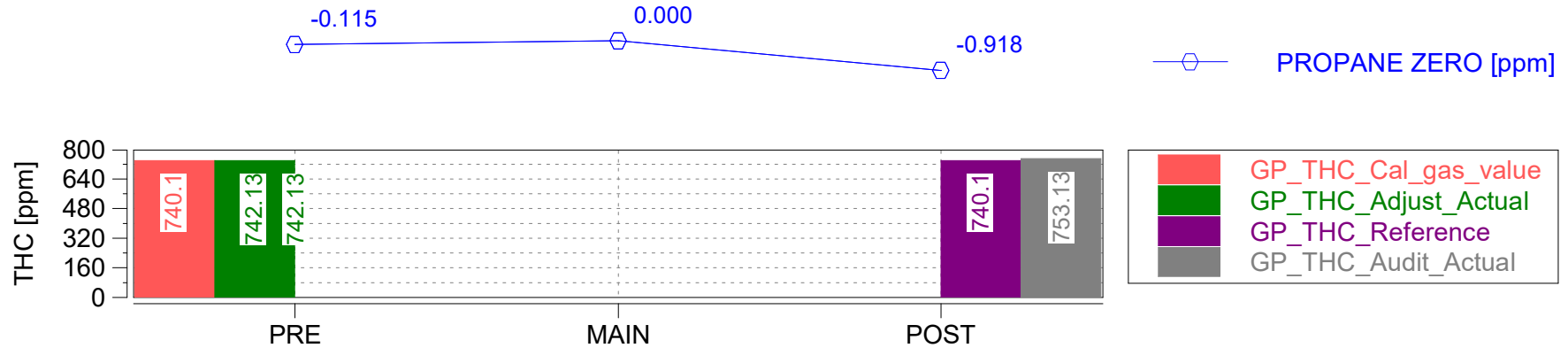


Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi Q3 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
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#	Text	Value	Unit
-	----	----	----
1.0	Test Start: Date		-
2.0	Test Start: Time		-
3.0	Ambient Temperature	IFILE1:TM'Temperature	deg C
4.0	Ambient Temperature TS	0.00000	s
5.0	Ambient Pressure	IFILE1:TM'Pressure	kPa
6.0	Ambient Pressure TS	0.00000	s
7.0	Humidity Type	1.00000	-
8.0	Amb. Rel. Humidity	IFILE1:TM'Humidity	%
9.0	Amb. Rel. Humidity	0.00000	s
10.0	GPS Latitude		deg
11.0	GPS Latitude TS	0.00000	s
12.0	GPS Longitude		deg
13.0	GPS Longitude TS	0.00000	s
14.0	Altitude		m
15.0	Altitude TS	0.00000	s
16.0	GPS Quality		-
17.0	GPS Quality TS	0.00000	s
18.0	GroundSpeed		km/h
19.0	GroundSpeed TS	0.00000	s
20.0	Altitude from topographical map		m
21.0	Altitude TS of topographical map		s
22.0	TRIP_AMBIENT_GPS_AVL	YES	-
23.0	CALC_GPS_GROUNDSPEED	NO	-
24.0	EXHAUST_FLOW_AVL	NO	-
25.0	EXHAUST_FLOW_AVL_EFM	YES	-
26.0	Exhaust Flow Type	2.00000	-
27.0	Mass Flow	IFILE1:TM'PitotEFM_ExhaustG	various
28.0	Mass Flow TS	1.20000	s
29.0	Exhaust Pressure		kPa
30.0	Exhaust Pressure TS	1.20000	s

#	Text	Value	Unit
-	----	----	----
31.0	Exhaust Delta Pressure		kPa
32.0	Exhaust Pressure Delta TS	1.20000	s
33.0	Exhaust Temperature	IFILE1:TM'PitotEFM_ExhaustG	degC
34.0	Exhaust Temperature TS	1.20000	s
35.0	Lambda	N/A	-
36.0	Lambda TS		s
37.0	CO2_DIL		%
38.0	CO2_DIL TS		s
39.0	CVS Volume Flow		m3/min
40.0	TimeShift_CVS_VOL_FLOW		s
41.0	IN_CVS_PRESSURE		kPa
42.0	TimeShift_CVS_PRESSURE		s
43.0	IN_CVS_TEMP		degC
44.0	TimeShift_CVS_TEMP		s
45.0	Dry to Wet Conversion CO2	YES	-
46.0	Dry to Wet Conversion O2	YES	-
47.0	Dry to Wet Conversion NO	NO	-
48.0	Dry to Wet Conversion NO2	NO	-
49.0	Dry to Wet Conversion THC	NO	-
50.0	Dry to Wet Conversion CH4	NO	-
51.0	Dry to Wet Conversion O2	NO	-
52.0	CO2	IFILE1:TM'GPiS_CO2	%
53.0	CO2 TS	-4.80000	s
54.0	OS	IFILE1:TM'GPiS_O2	%
55.0	O2 TS	-5.30000	s
56.0	CO	IFILE1:TM'GPiS_CO	ppm
57.0	CO TS	-4.80000	s
58.0	NO	IFILE1:TM'GPiS_NO	ppm
59.0	NO TS	-3.00000	s
60.0	NO2	IFILE1:TM'GPiS_NO2	ppm

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#	Text	Value	Unit
-	----	----	----
61.0	NO2 TS	-3.00000	s
62.0	THC	IFILE1:TM'FIDiS_THC_C1	ppm
63.0	THC TS	0.00000	s
64.0	CH4	IFILE1:TM'FIDiS_CH4_C1	ppm
65.0	CH4 TS	0.00000	s
66.0	GAS_PEMS_Ethane_Efficiency	IFILE1:MOVE_AVL4925'GP_Et -	
67.0	GAS_PEMS_Methane_Efficiency	IFILE1:MOVE_AVL4925'GP_M -	
68.0	GAS_PEMS_Methane_Response	IFILE1:MOVE_AVL4925'GP_M -	
69.0	Zero Signal	IFILE1:TM'GPiS_STATE	0/1
70.0	Zero Signal TS	-3.00000	s
71.0	Zero Signal_FIDiS	IFILE1:TM'FIDiS_STATE	0/1
72.0	Zero Signal_FIDiS TS		s
73.0	Species Input Type	4.00000	-
74.0	GASPEMS=AVL493	NO	-
75.0	GASPEMS=AVL493_iX	NO	-
76.0	GASPEMS=AVL492	YES	-
77.0	GASPEMS=AVL4925	YES	-
78.0	PM: Type	4.00000	1=GFB+HC, 2=GFB, 3='PM=S
79.0	Filter ID from IFile	NO	-
80.0	Lab ID from IFile	NO	-
81.0	PM Filter: ID	N/A	ID
82.0	PM Filter: Lab	N/A	Name/ID
83.0	PM Filter: Weight before Test	N/A	mg
84.0	PM Filter: Weight after Test	N/A	mg
85.0	PM (HC Corr): Max. Exhaust Flow	N/A	scfm
86.0	Soot		mg/m3
87.0	Soot TS	-5.00000	s
88.0	Soot Sensor		mg/m3
89.0	Soot Sensor TS		s
90.0	PM Filter: Filter Flow Rate		l/min

#	Text	Value	Unit
-	----	----	----
91.0	PM Filter: Filter Flow Rate TS	-5.00000	s
92.0	PM Filter: Filter Dilution Ratio		-
93.0	PM Filter: Filter Dilution Ratio TS	-5.00000	s
94.0	PM Filter: Filter Trigger		-
95.0	PM Filter: Filter Trigger TS	-5.00000	s
96.0	PMPEMS=AVL494	YES	-
97.0	PMPEMS_AVL494_PROP_DIL	NO	-
98.0	PM dilution ratio min		-
99.0	PM_MaxExhaustFlowRate		-
100.0	PM_ExhaustFlow_Thresh		-
101.0	PM_total_flow_val		-
102.0	PM_total_flow_val_TS		-
103.0	PM_exh_mass_flow		-
104.0	PM_exh_mass_flow_TS		-
105.0	PN		#/cm3
106.0	TimeShift_PN		s
107.0	PN_STATE		-
108.0	PN TS STATE		s
109.0	PNPEMS_AVL496	NO	-
110.0	PN_CorrFactor	1.00000	
111.0	Time Alignment	1.00000	-
112.0	Time Alignment Dataset 1	N/A	0/1
113.0	Time Alignment Dataset 2	N/A	0/1
114.0	Time Alignment Thresh 1	N/A	-
115.0	Time Alignment Thresh 2	N/A	-
116.0			
117.0			
118.0			
119.0			
120.0			

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#	Text	Value	Unit
-	----	----	----
121.0			
122.0	Trigger		0/1
123.0	Trigger TS		s
124.0	FTIR_NAME_1		-
125.0	FTIR_MW_1		-
126.0	FTIR_CHANNEL_1		-
127.0	FTIR_CHANNEL_TS_1		-
128.0	FTIR_CHANNEL_DRY_1	NO	-
129.0	FTIR_NAME_2		-
130.0	FTIR_MW_2		-
131.0	FTIR_CHANNEL_2		-
132.0	FTIR_CHANNEL_TS_2		-
133.0	FTIR_CHANNEL_DRY_2	NO	-
134.0	FTIR_NAME_3		-
135.0	FTIR_MW_3		-
136.0	FTIR_CHANNEL_3		-
137.0	FTIR_CHANNEL_TS_3		-
138.0	FTIR_CHANNEL_DRY_3	NO	-
139.0	FTIR_NAME_4		-
140.0	FTIR_MW_4		-
141.0	FTIR_CHANNEL_4		-
142.0	FTIR_CHANNEL_TS_4		-
143.0	FTIR_CHANNEL_DRY_4	NO	-
144.0	FTIR_NAME_5		-
145.0	FTIR_MW_5		-
146.0	FTIR_CHANNEL_5		-
147.0	FTIR_CHANNEL_TS_5		-
148.0	FTIR_CHANNEL_DRY_5	NO	-
149.0	FTIR_NAME_6		-
150.0	FTIR_MW_6		-

#	Text	Value	Unit
-	----	----	----
151.0	FTIR_CHANNEL_6		-
152.0	FTIR_CHANNEL_TS_6		-
153.0	FTIR_CHANNEL_DRY_6	NO	-
154.0	FTIR_NAME_7		-
155.0	FTIR_MW_7		-
156.0	FTIR_CHANNEL_7		-
157.0	FTIR_CHANNEL_TS_7		-
158.0	FTIR_CHANNEL_DRY_7	NO	-
159.0	FTIR_NAME_8		-
160.0	FTIR_MW_8		-
161.0	FTIR_CHANNEL_8		-
162.0	FTIR_CHANNEL_TS_8		-
163.0	FTIR_CHANNEL_DRY_8	NO	-
164.0	FTIR_NAME_9		-
165.0	FTIR_MW_9		-
166.0	FTIR_CHANNEL_9		-
167.0	FTIR_CHANNEL_TS_9		-
168.0	FTIR_CHANNEL_DRY_9	NO	-
169.0	FTIR_NAME_10		-
170.0	FTIR_MW_10		-
171.0	FTIR_CHANNEL_10		-
172.0	FTIR_CHANNEL_TS_10		-
173.0	FTIR_CHANNEL_DRY_10	NO	-
174.0	FTIR_NAME_11		-
175.0	FTIR_MW_11		-
176.0	FTIR_CHANNEL_11		-
177.0	FTIR_CHANNEL_TS_11		-
178.0	FTIR_CHANNEL_DRY_11	NO	-
179.0	FTIR_NAME_12		-
180.0	FTIR_MW_12		-

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#	Text	Value	Unit
-	----	----	----
181.0	FTIR_CHANNEL_12		-
182.0	FTIR_CHANNEL_TS_12		-
183.0	FTIR_CHANNEL_DRY_12	NO	-
184.0	FTIR_NAME_13		-
185.0	FTIR_MW_13		-
186.0	FTIR_CHANNEL_13		-
187.0	FTIR_CHANNEL_TS_13		-
188.0	FTIR_CHANNEL_DRY_13	NO	-
189.0	FTIR_NAME_14		-
190.0	FTIR_MW_14		-
191.0	FTIR_CHANNEL_14		-
192.0	FTIR_CHANNEL_TS_14		-
193.0	FTIR_CHANNEL_DRY_14	NO	-
194.0	FTIR_NAME_15		-
195.0	FTIR_MW_15		-
196.0	FTIR_CHANNEL_15		-
197.0	FTIR_CHANNEL_TS_15		-
198.0	FTIR_CHANNEL_DRY_15	NO	-
199.0	FTIR_NAME_16		-
200.0	FTIR_MW_16		-
201.0	Vehicle Type	2017 Audi Q3	-
202.0	Vehicle Info		-
203.0	Engine Type	Gasoline	-
204.0	Engine Info	2.0L	-
205.0	Engine Torque		Nm
206.0	Curb Idle Load		%
207.0	Idle Speed		rpm
208.0	HYBRID_OVC_REF_CO2_gkm		g/km
209.0	Engine Concept	1.00000	-
210.0	Alpha	1.93000	-

#	Text	Value	Unit
-	----	----	----
211.0	Beta	1.00000	
212.0	Gamma	0.00000	
213.0	Delta	0.00000	
214.0	Epsilon	0.03200	
215.0	X_C	83.00000	
216.0	X_H	13.30000	
217.0	X_N	0.00000	
218.0	X_O	3.50000	
219.0	X_S	0.00000	
220.0	Fuel_Density	747.50000	
221.0	rho_exhaust	1.29310	
222.0	U_CO2	1.51800	
223.0	U_CO	0.96600	
224.0	U_NO	1.58700	
225.0	U_NO2	1.58700	
226.0	U_NOx	1.58700	
227.0	U_HC	0.49900	
228.0	U_NMHC	0.47100	
229.0	U_CH4	0.55300	
230.0	U_O2	1.10400	
231.0	Fuel Type	2.00000	-
232.0	exhaust mass flow type (YES/NO)	YES	-
233.0	Distance Calculation Type	1.00000	-
234.0	Velocity Statistics Calculation Type	2.00000	-
235.0	RDE vehicle class	1.00000	-
236.0	TM_CITY0		s
237.0	TM_CITY1		s
238.0	TM_RURAL0		s
239.0	TM_RURAL1		s
240.0	TM_RURAL2_0		s

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#	Text	Value	Unit
-	----	----	----
241.0	TM_RURAL2_1		s
242.0	Second Rural Part for Time Marks (NO		-
243.0	TM_MW0		s
244.0	TM_MW1		s
245.0	VELOCITY_LIMIT_STOP	2.00000	km/h
246.0	VELOCITY_LIMIT_URBAN	50.00000	km/h
247.0	VELOCITY_LIMIT_RURAL	75.00000	km/h
248.0	Intake Manifold Pressure Type	1.00000	-
249.0	Velocity	IFILE1:TM'OBD_Vehicle_Spee	km/h
250.0	Velocity TS	1.20000	s
251.0	Velocity FACTOR	1.00000	-
252.0	Coolant Temperature	IFILE1:TM'OBD_Engine_Coola	degC
253.0	Coolant Temperature TS	1.20000	s
254.0	Oil Temperature		degC
255.0	Oil Temperature TS	1.20000	s
256.0	Intake Manifold Temperature		degC
257.0	Intake Manifold Temp TS	1.20000	s
258.0	Intake Manifold Pressure	IFILE1:TM'OBD_Intake_manifo	kPa
259.0	Intake Manifold Pressure TS	1.20000	s
260.0	Throttle Position		%
261.0	Throttle TS	1.20000	s
262.0	TYP_IDLE_MASS_FLOW		kg/h
263.0	Torque Type	1.00000	-
264.0	Speed	IFILE1:TM'OBD_Engine_RPM	rpm
265.0	Speed TS	1.20000	s
266.0	Torque		Nm
267.0	Torque TS	1.20000	s
268.0	Friction Torque	N/A	Nm
269.0	Friction Torque TS	N/A	s
270.0	Reference Torque	N/A	Nm

#	Text	Value	Unit
-	----	----	----
271.0	Reference Torque TS	N/A	s
272.0	k_VELINE		-
273.0	D_VELINE		-
274.0	Fuel Flow Type	2.00000	-
275.0	Air Flow Type	1.00000	-
276.0	Fuel Rate		various
277.0	Air Rate		various
278.0	Fuel Rate TS	1.20000	s
279.0	No_Cylinders		-
280.0	Air Rate TS	1.20000	s
281.0	FTIR_CHANNEL_32		-
282.0	FTIR_CHANNEL_TS_32		-
283.0	FTIR_CHANNEL_DRY_32	NO	-
284.0	FTIR_NAME_33		-
285.0	FTIR_MW_33		-
286.0	FTIR_CHANNEL_33		-
287.0	FTIR_CHANNEL_TS_33		-
288.0	FTIR_CHANNEL_DRY_33	NO	-
289.0	FTIR_NAME_34		-
290.0	FTIR_MW_34		-
291.0	FTIR_CHANNEL_34		-
292.0	FTIR_CHANNEL_TS_34		-
293.0	FTIR_CHANNEL_DRY_34	NO	-
294.0	FTIR_NAME_35		-
295.0	FTIR_MW_35		-
296.0	FTIR_CHANNEL_35		-
297.0	FTIR_CHANNEL_TS_35		-
298.0	FTIR_CHANNEL_DRY_35	NO	-
299.0	FTIR_NAME_36		-
300.0	FTIR_MW_36		-

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#	Text	Value	Unit
-	----	----	----
301.0	FTIR_CHANNEL_36		-
302.0	FTIR_CHANNEL_TS_36		-
303.0	FTIR_CHANNEL_DRY_36	NO	-
304.0	FTIR_NAME_37		-
305.0	FTIR_MW_37		-
306.0	FTIR_CHANNEL_37		-
307.0	FTIR_CHANNEL_TS_37		-
308.0	FTIR_CHANNEL_DRY_37	NO	-
309.0	FTIR_NAME_38		-
310.0	FTIR_MW_38		-
311.0	FTIR_CHANNEL_38		-
312.0	FTIR_CHANNEL_TS_38		-
313.0	FTIR_CHANNEL_DRY_38	NO	-
314.0	FTIR_NAME_39		-
315.0	FTIR_MW_39		-
316.0	FTIR_CHANNEL_39		-
317.0	FTIR_CHANNEL_TS_39		-
318.0	FTIR_CHANNEL_DRY_39	NO	-
319.0	FTIR_NAME_40		-
320.0	FTIR_MW_40		-
321.0	FTIR_CHANNEL_40		-
322.0	FTIR_CHANNEL_TS_40		-
323.0	FTIR_CHANNEL_DRY_40	NO	-
324.0	Legislation Type (1=HDIUT 2=EU H	4.00000	-
325.0	WholeTest_NOx_corr	5.00000	-
326.0	WholeTest_Hum_corr	2.00000	-
327.0	CD_Distance	0.00000	km
328.0	CD_NOx	0.00000	mg/km
329.0	CD_CO	0.00000	mg/km
330.0	CD_CO2	0.00000	g/km

#	Text	Value	Unit
-	----	----	----
331.0	CD_NMHC	0.00000	mg/km
332.0	CD_CH4	0.00000	mg/km
333.0	CD_THC	0.00000	mg/km
334.0	CD_PN		#/km
335.0	WLTC_LOW_SPEED_gkm		g/km
336.0	WLTC_LOW_SPEED_FAC	1.20000	-
337.0	WLTC_MEDIUM_SPEED_gkm		g/km
338.0	WLTC_HIGH_SPEED_gkm		g/km
339.0	WLTC_HIGH_SPEED_FAC	1.10000	-
340.0	WLTC_EXTRA_HIGH_SPEED_gkm		g/km
341.0	WLTC_EXTRA_HIGH_SPEED_FA	1.05000	-
342.0	TOL_NORMAL_DRIVING	25.00000	%
343.0	TOL_SEVERE_DRIVING	50.00000	%
344.0	Increase Tolerance Nomral Driving	NO	-
345.0	Bin1_min		km/h
346.0	Bin2_min		km/h
347.0	Bin3_min		km/h
348.0	Bin1_max		km/h
349.0	Bin2_max		km/h
350.0	Bin3_max		km/h
351.0	Clear_R0	125.40000	N
352.0	Clear_R1	0.29300	Nh/km
353.0	Clear_R2	0.02795	N*(h/km) ²
354.0	Clear_SMK	1470.00000	kg
355.0	Clear_Rated_Power	140.00000	kW
356.0	Clear_Ref_Velocity	70.00000	km/h
357.0	Clear_Ref_Acc	0.45000	m/s ²
358.0	Clear_Smooth	3.00000	s
359.0	EXTC_From_High_Temp	30.00000	degC
360.0	EXTC_To_High_Temp	35.00000	degC

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#	Text	Value	Unit
-	----	----	----
361.0	EXTC_From_Low_Temp	-7.00000	degC
362.0	EXTC_To_Low_Temp	0.00000	degC
363.0	Euro 6d or Euro 6d temp	NO	-
364.0	EXTC_From_Altitude	700.00000	m
365.0	EXTC_To_Altitude	1300.00000	m
366.0	EXTC_CORR_FAC	1.60000	
367.0	weight cold start (YES/NO)	NO	-
368.0	precon and soak done (YES/NO)	NO	-
369.0	PATH_PRECON_FILE		
370.0	filter velocity (YES/NO)	NO	-
371.0	filter velocity auto(YES/NO)	NO	-
372.0	Ki_CO		
373.0	Ki_CO2		
374.0	Ki_NOx		
375.0	Ki_FACTOR_CO2 (YES/NO)	NO	-
376.0	Ki_OFFSET_CO2 (YES/NO)	NO	-
377.0	Ki_FACTOR_CO (YES/NO)	NO	-
378.0	Ki_OFFSET_CO (YES/NO)	NO	-
379.0	Ki_FACTOR_NOx (YES/NO)	NO	-
380.0	Ki_OFFSET_NOx (YES/NO)	NO	-
381.0	Ki_OFF (YES/NO)	NO	-
382.0	HD legislations	1.00000	-
383.0	RDE legislations	1.00000	-
384.0	Submission Documents (YES/NO)	NO	-
385.0	General Setup Parameters Text	City	-
386.0	Legislation Setup Parameters Text	City	-
387.0	Trip Info		-
388.0	IN_TIME_REF		-
389.0	Sub-Trip Start: Auto	YES	-
390.0	Sub-Trip Start: Seconds	N/A	s

#	Text	Value	Unit
-	----	----	----
391.0	Sub-Trip End: Auto	YES	-
392.0	Sub-Trip End: Seconds	N/A	s
393.0	Unit System	2.00000	-
394.0	Calculate: PM Emissions	NO	-
395.0	Calculate: PN Emissions	NO	-
396.0	Output: Summary	YES	-
397.0	Output: Emissions	YES	-
398.0	Output: Raw Data	YES	-
399.0	Output: Zero Span	YES	-
400.0	Output: Data Consistency	NO	-
401.0	Output: Window Plots	YES	-
402.0	Fuel Rate ECU vs. EU ISO16183	$y = 10000000000.0000 x - 0.000$ $R^2=10000000000.000$ SEE=	
403.0	PEMS post processing version	Rel_10_B192	
404.0	Concerto version	480.00000	
405.0	Concerto build	215.00000	
406.0	USERNAME	EFR	

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi Q3 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway
Page: Trip Summary

Start Date: 09/28/2017
Start Time: 08:21:36.0



Trip Duration	3848.00	s	ave THC	-36.45157	ppm	BS CO2	n/a	g/hphr
Trip Duration (a)	3848.00	s	ave NMHC	3.47108	ppm	BS CO	n/a	g/hphr
Trip Distance	39.51	mi	ave CH4	-36.29331	ppm	BS THC	n/a	g/hphr
Trip Distance (a)	39.51	mi	ave CO	85.81556	ppm	BS NMHC	n/a	g/hphr
Trip Fuel Cons. (b)	n/a	kg	ave CO2	12.70404	%	BS CH4	n/a	g/hphr
Trip Fuel Cons. (ab)	n/a	kg	ave NOx	2.00544	ppm	BS NO (d)	n/a	g/hphr
Trip Fuel Cons. EU (ac)	3.94	kg	ave PM	n/a	mg/m3	BS NO2	n/a	g/hphr
Trip Fuel Cons. US (ac)	3.91	kg	ave Soot meas	n/a	mg/m3	BS NOx	n/a	g/hphr
Trip Fuel Cons. Volume (b)	n/a	gall	ave Soot	n/a	mg/m3	BS Soot	n/a	g/hphr
Trip Fuel Cons. Volume (ab)	n/a	gall	ave PN	n/a	#/cm3	BS Soot meas	n/a	g/hphr
Trip Fuel Cons. Volume EU (ac)	1.39	gall	tot THC	0.00014	g	BS PM	n/a	g/hphr
Trip Fuel Cons. Volume US (ac)	1.38	gall	tot NMHC	0.09318	g	BS PN	n/a	#/hpr
Trip Fuel Economy (b)	n/a	mpg_US	tot CH4	0.00013	g	DS CO2	301.23544	g/mi
Trip Fuel Economy (ab)	n/a	mpg_US	tot CO	3.85065	g	DS CO	0.09747	g/mi
Trip Fuel Economy EU (ac)	28.36	mpg_US	tot CO2	11900.37064	g	DS THC	0.00000	g/mi
Trip Fuel Economy US (ac)	28.56	mpg_US	tot NO (d)	0.05145	g	DS NMHC	0.00236	g/mi
Trip Av. Eng. Speed	1652.23	rpm	tot NO2	0.13252	g	DS CH4	0.00000	g/mi
Trip Av. Torque	n/a	lbft	tot NOx	0.14868	g	DS NO (d)	0.00130	g/mi
Trip Av. Power	n/a	hp	tot Soot	n/a	g	DS NO2	0.00335	g/mi
Trip Work	n/a	hphr	tot Soot meas	n/a	g	DS NOx	0.00376	g/mi
Trip Exhaust Mass	60.73	kg	tot PM	n/a	g	DS Soot	n/a	g/mi
Trip Exhaust Mass EU (ac)	n/a	kg	tot PN	n/a	#	DS Soot meas	n/a	g/mi
Trip Exhaust Mass US (ac)	n/a	kg	PM measurement type	0.00000	-	DS PM	n/a	g/mi
Trip Av. Amb. Temperature	64.90	deg_F	PM correction type	1.00000	alpha(HC)	DS PN	n/a	#/mi
Trip Av. Humidity	65.54	%	tot Soot on PM filter (estim.)	n/a	mg	FS CO2	n/a	g/kg
Fuel Type	Petrol (E10)		Soot --> PM simple scaling factor	1.00000	-	FS CO	n/a	g/kg
			Soot --> PM alpha scaling factor	0.00000	-	FS THC	n/a	g/kg
			Trip Av. Veh. Speed	36.95914	mi/hr	FS NMHC	n/a	g/kg
			Trip Velocity Zero	8.23805	%	FS CH4	n/a	g/kg
			Trip Velocity Urban	51.92308	%	FS NO (d)	n/a	g/kg
			Trip Velocity Rural	8.75780	%	FS NO2	n/a	g/kg
			Trip Velocity Motorway	39.31913	%	FS NOx	n/a	g/kg
						FS Soot	n/a	g/kg
						FS Soot meas	n/a	g/kg
						FS PM	n/a	g/kg
						FS PN	n/a	#/kg

(a) GAS PEMS measurement state only, (b) based on fuel rate input (ECU, Fuel Meter), (c) calculated from carbon balance
(d) NO calculated using molecular weight of NO2

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW CC /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

Page: Trip Summary Drift Corrected

Start Date: 09/28/2017

Start Time: 08:21:36.0

"



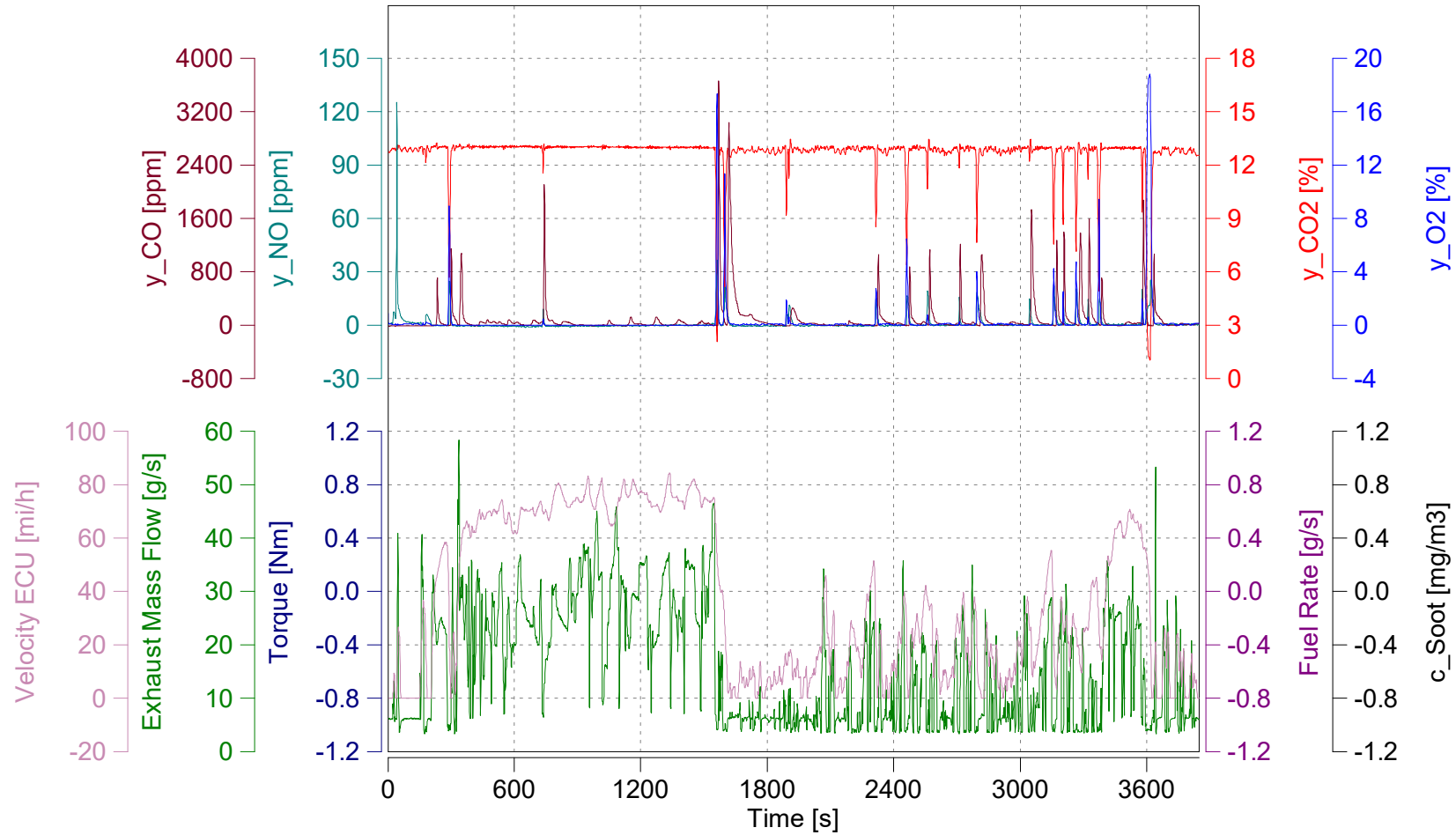
Concerto M.O.V.E, 2017

Trip Duration	3848.00	s	ave THC DC	-49.47757	ppm	BS CO2 DC	n/a	g/hphr
Trip Duration (a)	3848.00	s	ave NMHC DC	-7.77794	ppm	BS CO DC	n/a	g/hphr
Trip Distance	39.51	mi	ave CH4 DC	-37.90876	ppm	BS THC DC	n/a	g/hphr
Trip Distance (a)	39.51	mi	ave CO DC	86.77476	ppm	BS NMHC DC	n/a	g/hphr
Trip Fuel Cons. (b)	n/a	kg	ave CO2 DC	12.71247	%	BS CH4 DC	n/a	g/hphr
Trip Fuel Cons. (ab)	n/a	kg	ave NOx DC	1.99938	ppm	BS NO DC (d)	n/a	g/hphr
Trip Fuel Cons. EU (ac)	3.94	kg	ave PM	n/a	mg/m3	BS NO2 DC	n/a	g/hphr
Trip Fuel Cons. US (ac)	3.91	kg	ave Soot meas	n/a	mg/m3	BS NOx DC	n/a	g/hphr
Trip Fuel Cons. Volume (b)	n/a	gall	ave Soot	n/a	mg/m3	BS Soot	n/a	g/hphr
Trip Fuel Cons. Volume (ab)	n/a	gall	ave PN DC	n/a	#/cm3	BS Soot meas	n/a	g/hphr
Trip Fuel Cons. Volume EU (ac)	1.39	gall	tot THC DC	0.00019	g	BS PM	n/a	g/hphr
Trip Fuel Cons. Volume US (ac)	1.38	gall	tot NMHC DC	0.00085	g	BS PN DC	n/a	#/hpr
Trip Fuel Economy (b)	n/a	mpg_US	tot CH4 DC	0.00013	g	DS CO2 DC	301.43533	g/mi
Trip Fuel Economy (ab)	n/a	mpg_US	tot CO DC	3.89369	g	DS CO DC	0.09856	g/mi
Trip Fuel Economy EU (ac)	28.36	mpg_US	tot CO2 DC	11908.26737	g	DS THC DC	0.00000	g/mi
Trip Fuel Economy US (ac)	28.56	mpg_US	tot NO DC (d)	0.05140	g	DS NMHC DC	0.00002	g/mi
Trip Av. Eng. Speed	1652.23	rpm	tot NO2 DC	0.13190	g	DS CH4 DC	0.00000	g/mi
Trip Av. Torque	n/a	lbft	tot NOx DC	0.14805	g	DS NO DC (d)	0.00130	g/mi
Trip Av. Power	n/a	hp	tot Soot	n/a	g	DS NO2 DC	0.00334	g/mi
Trip Work	n/a	hphr	tot Soot meas	n/a	g	DS NOx DC	0.00375	g/mi
Trip Exhaust Mass	60.73	kg	tot PM	n/a	g	DS Soot	n/a	g/mi
Trip Exhaust Mass EU (ac)	n/a	kg	tot PN DC	n/a	#	DS Soot meas	n/a	g/mi
Trip Exhaust Mass US (ac)	n/a	kg	PM measurement type	0.00000	-	DS PM	n/a	g/mi
Trip Av. Amb. Temperature	64.90	deg_F	PM correction type	1.00000	alpha(HC)	DS PN DC	n/a	#/mi
Trip Av. Humidity	65.54	%	tot Soot on PM filter (estim.)	n/a	mg	FS CO2 DC	n/a	g/kg
Fuel Type	Petrol (E10)		Soot --> PM simple scaling factor	1.00000	-	FS CO DC	n/a	g/kg
			Soot --> PM alpha scaling factor	0.00000	-	FS THC DC	n/a	g/kg
			Trip Av. Veh. Speed	36.95914	mi/hr	FS NMHC DC	n/a	g/kg
			Trip Velocity Zero	8.23805	%	FS CH4 DC	n/a	g/kg
			Trip Velocity Urban	51.92308	%	FS NO DC (d)	n/a	g/kg
			Trip Velocity Rural	8.75780	%	FS NO2 DC	n/a	g/kg
			Trip Velocity Motorway	39.31913	%	FS NOx DC	n/a	g/kg
						FS Soot	n/a	g/kg
						FS Soot meas	n/a	g/kg
						FS PM	n/a	g/kg
						FS PN DC	n/a	#/kg

(a) GAS PEMS measurement state only, (b) based on fuel rate input (ECU, Fuel Meter), (c) calculated from carbon balance
 (d) NO calculated using molecular weight of NO2

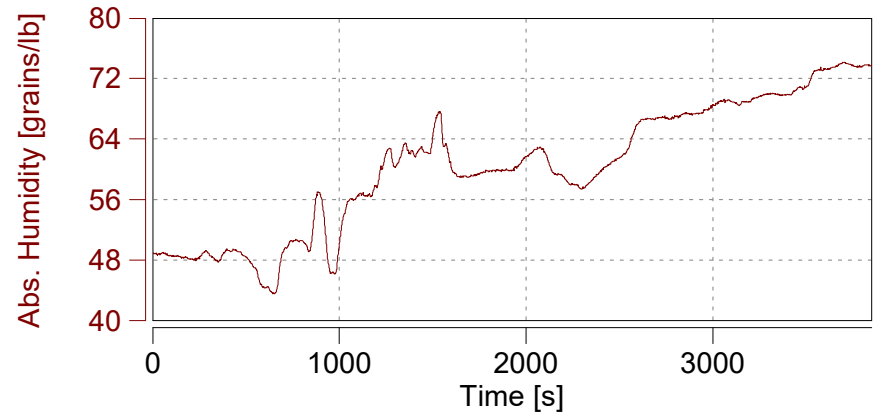
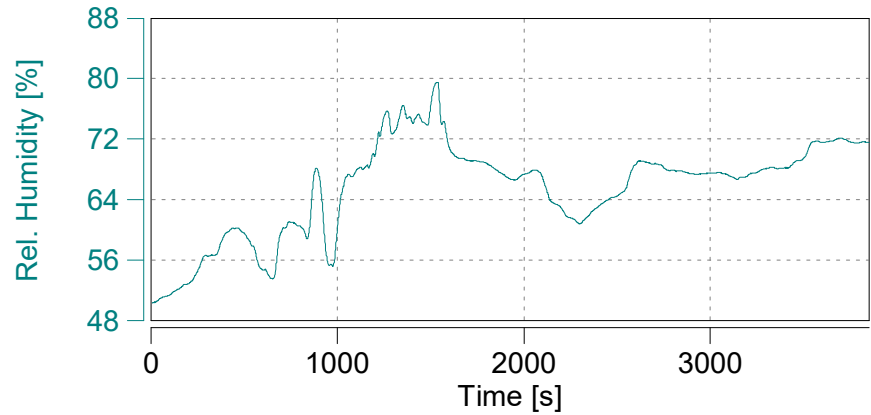
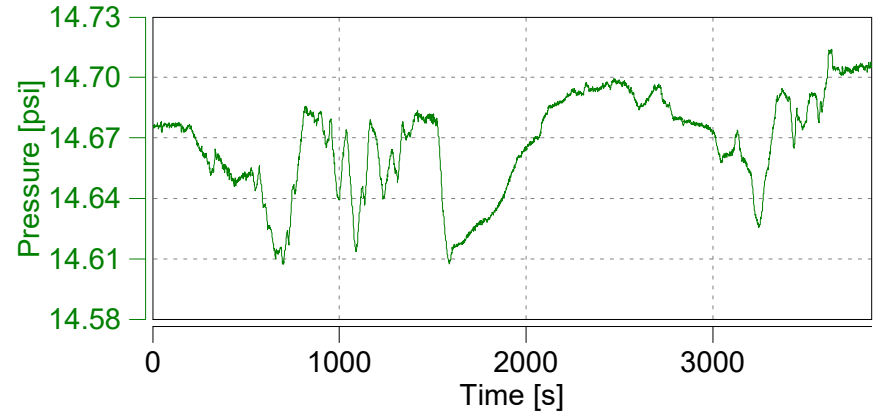
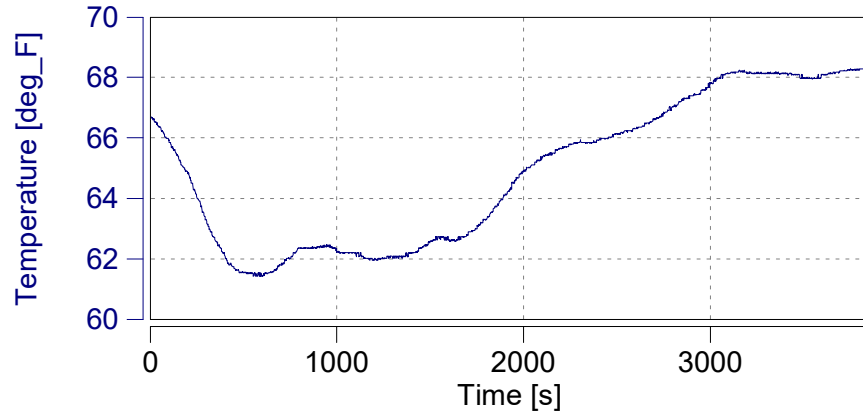
Concerto Version: 480 Build 215, Serial Number: 8468
 M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW CC /
 Engine: Gasoline / 2.0L
 NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
 Dry / Wet Corr.: 2 - CFR40 §86.1342-90



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW CC /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

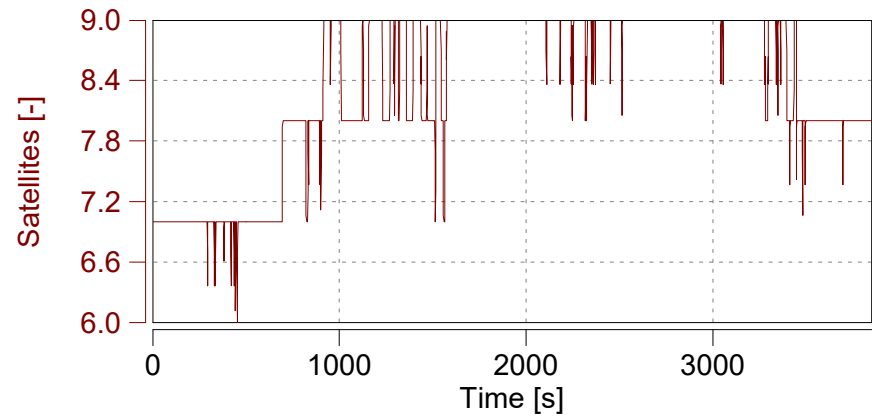
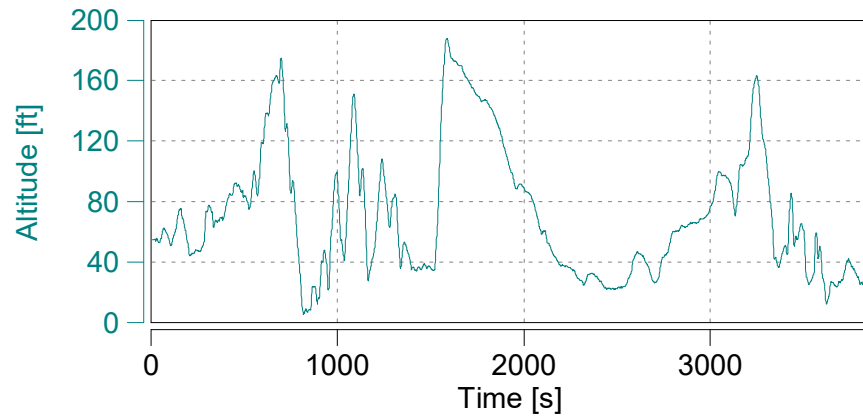
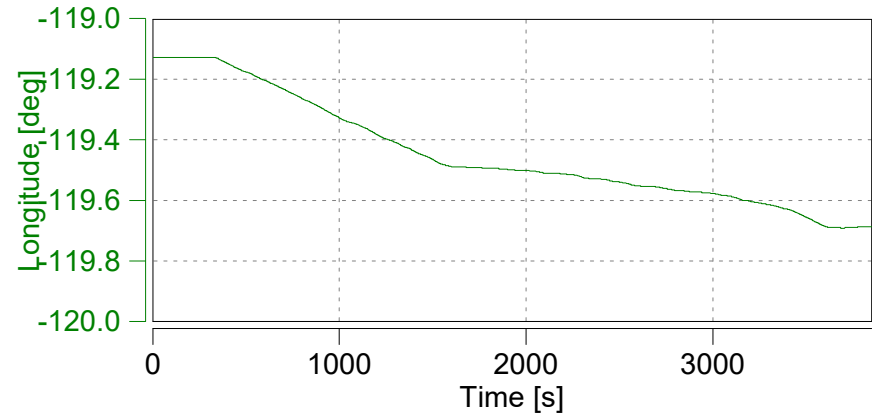
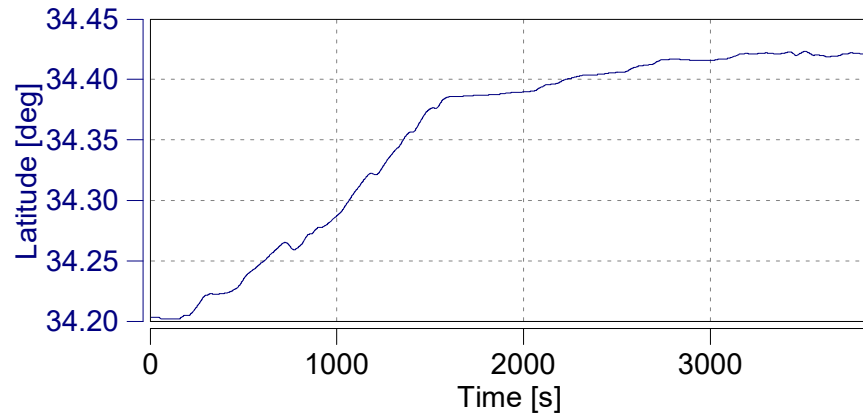


Case: Highway

Page: GPS

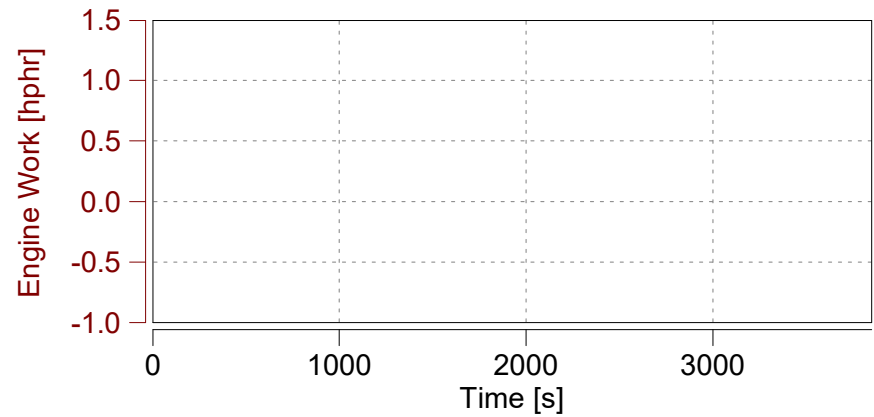
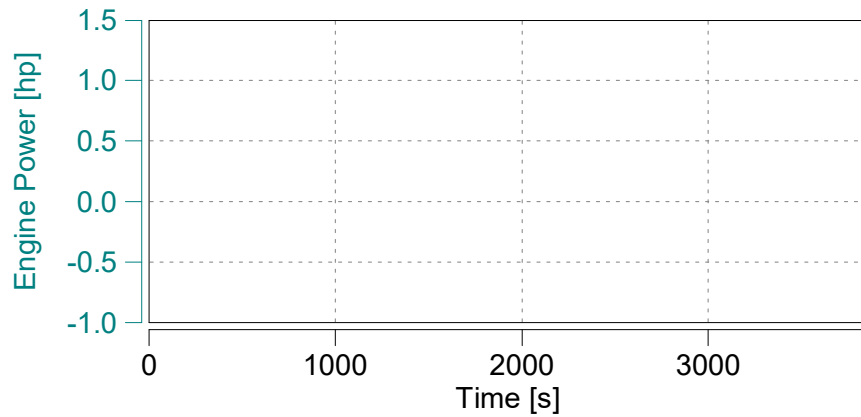
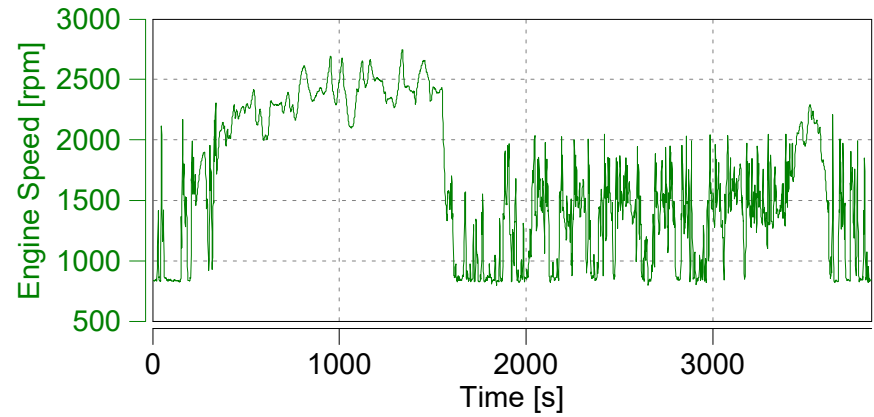
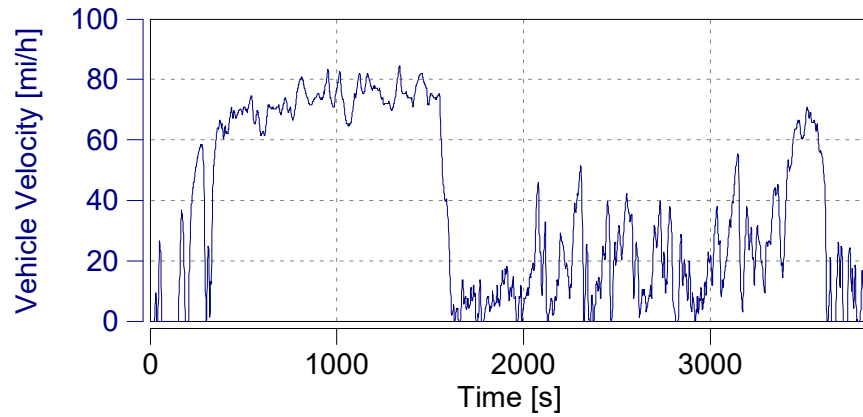
Start Date: 09/28/2017

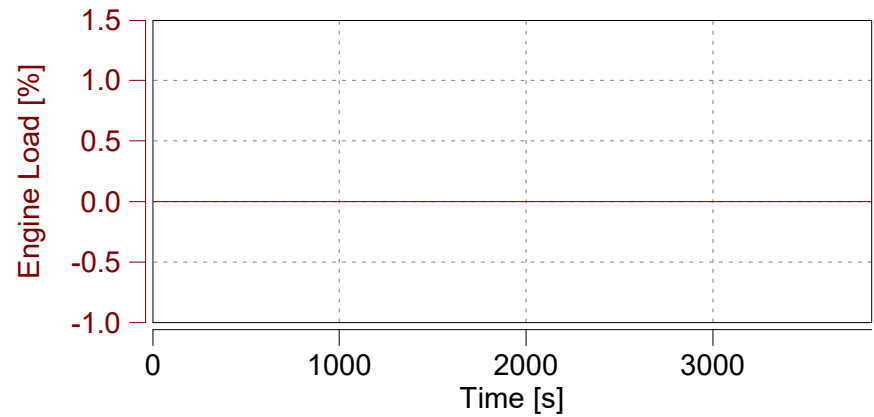
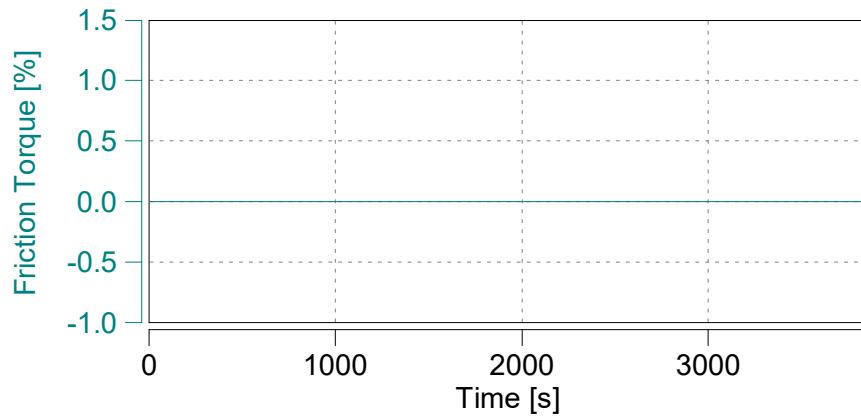
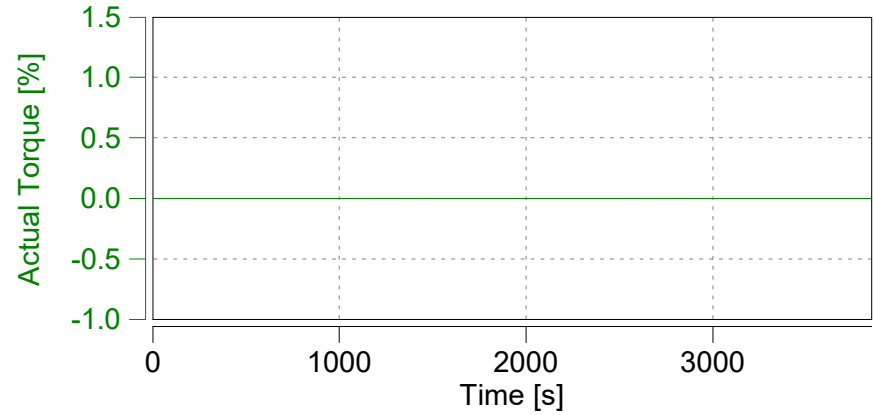
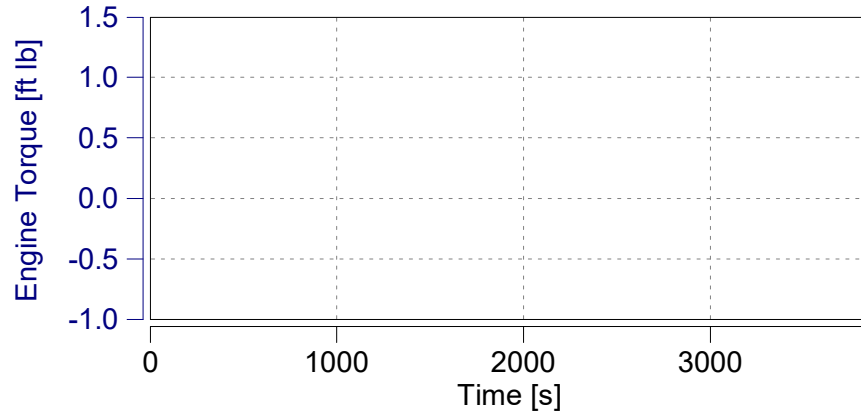
Start Time: 08:21:36.0

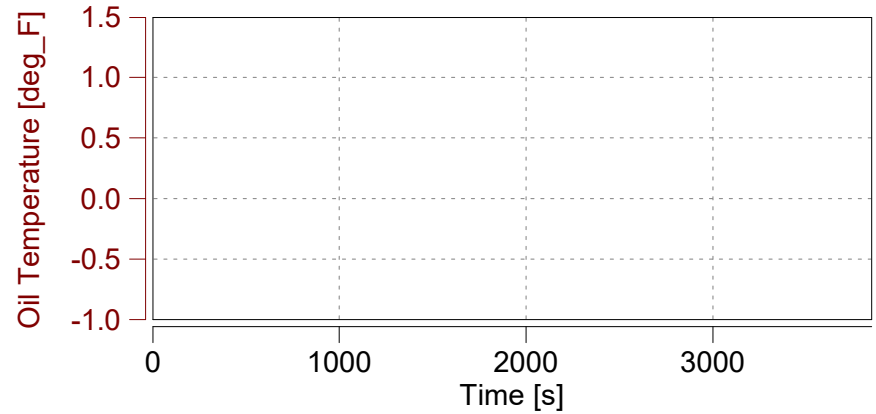
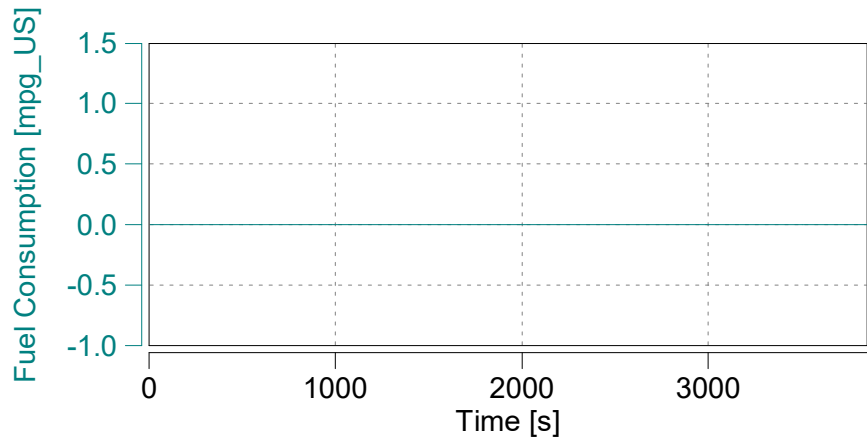
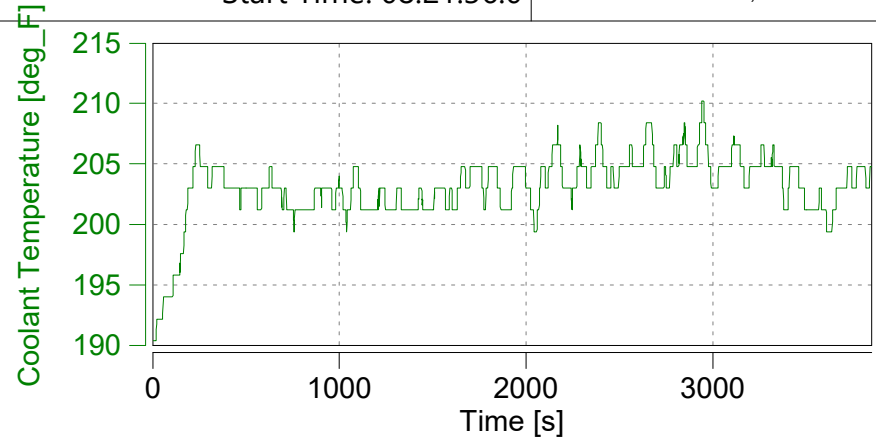
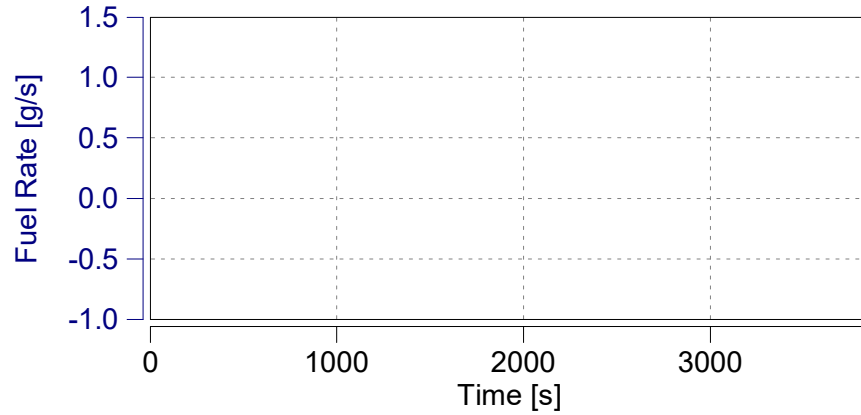


Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW CC /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90





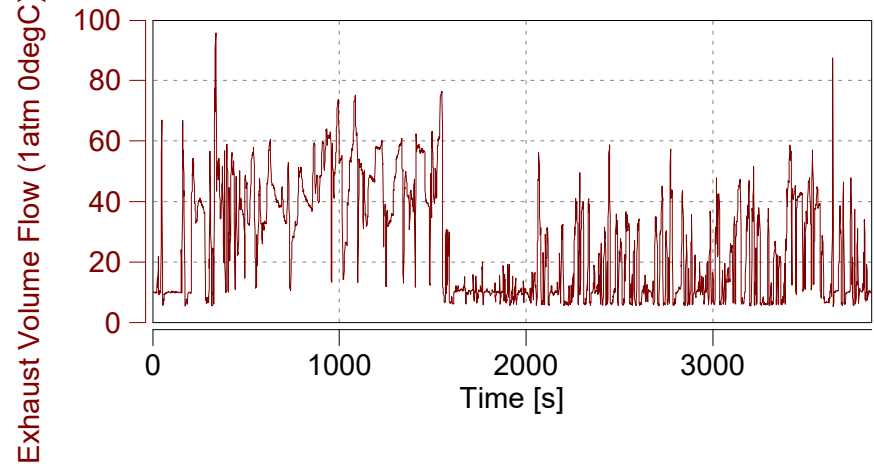
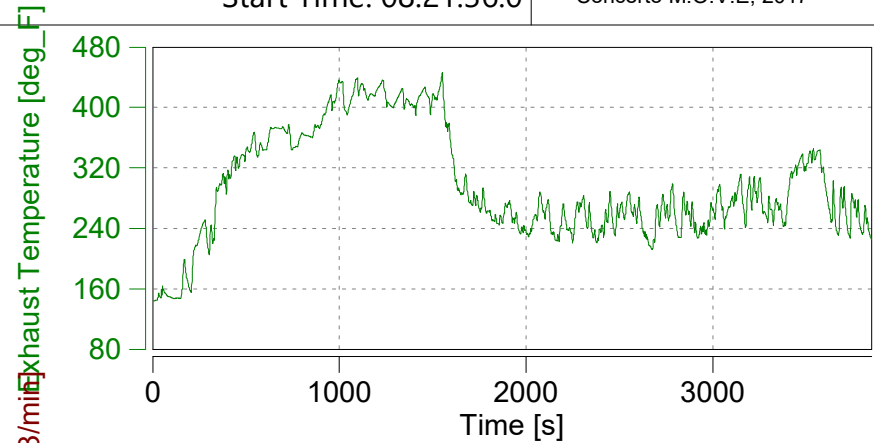
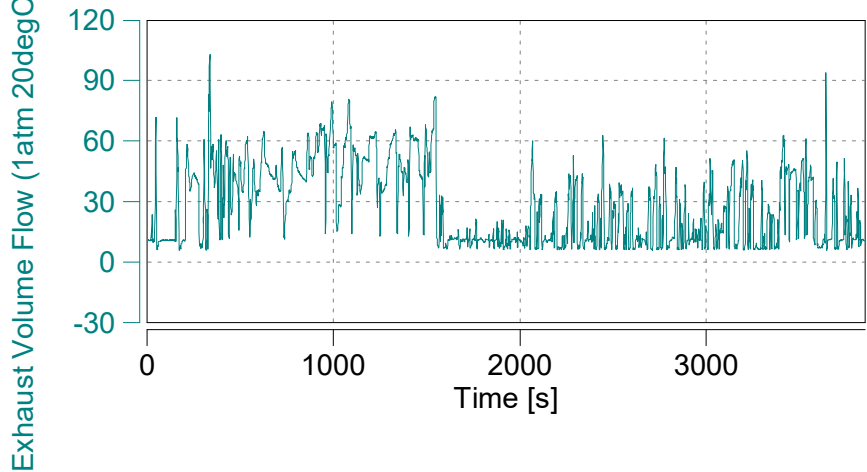
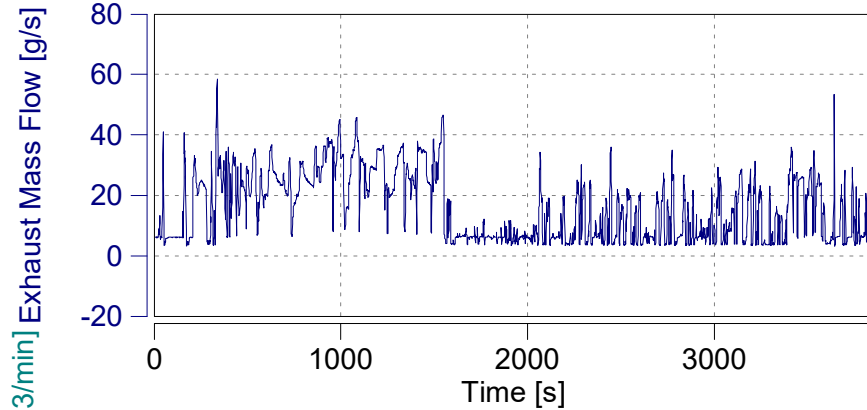


Case: Highway

Page: Exhaust Flow (1)

Start Date: 09/28/2017

Start Time: 08:21:36.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

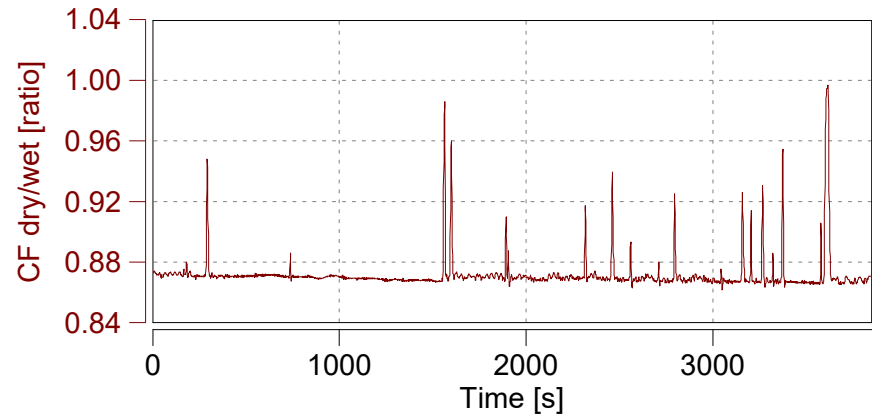
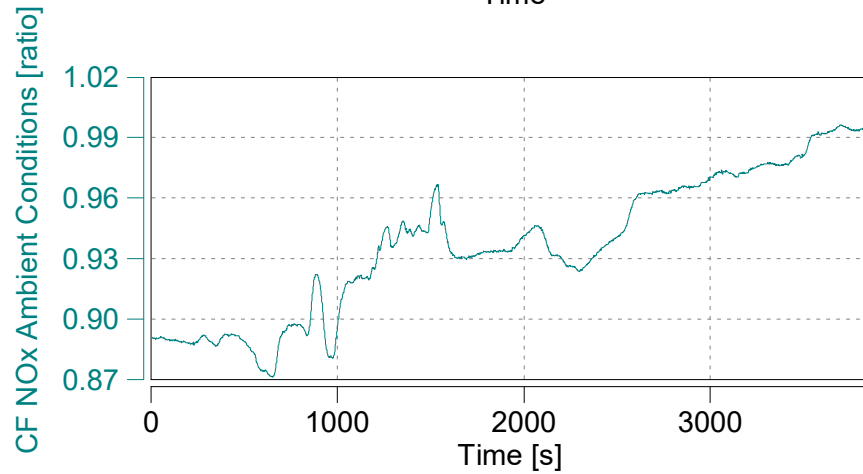
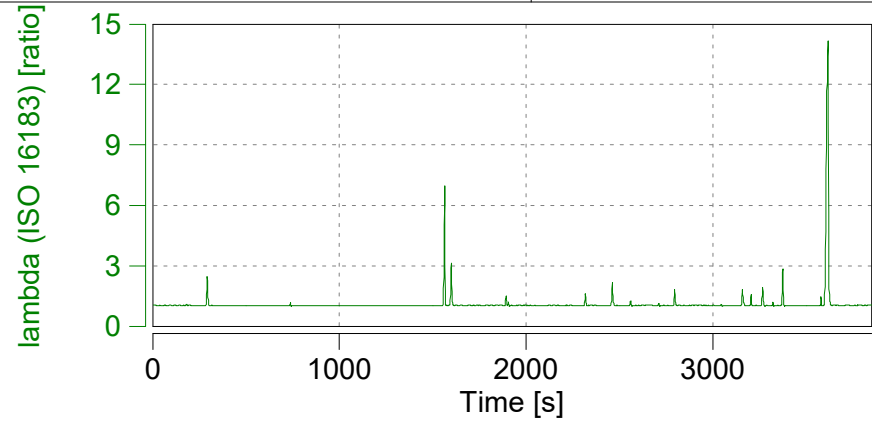
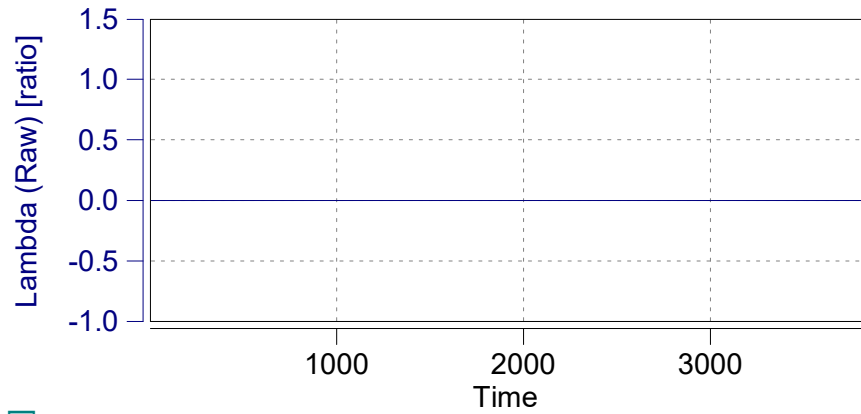
Vehicle: 2017 VW CC /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

Page: Exhaust Flow (2)

Start Date: 09/28/2017

Start Time: 08:21:36.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

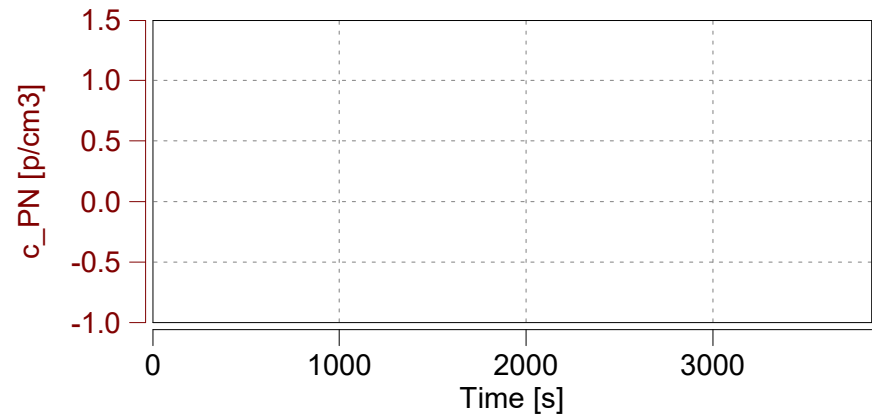
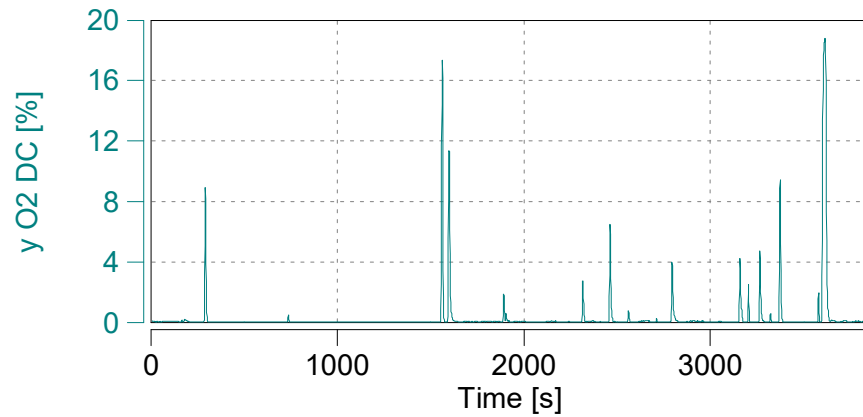
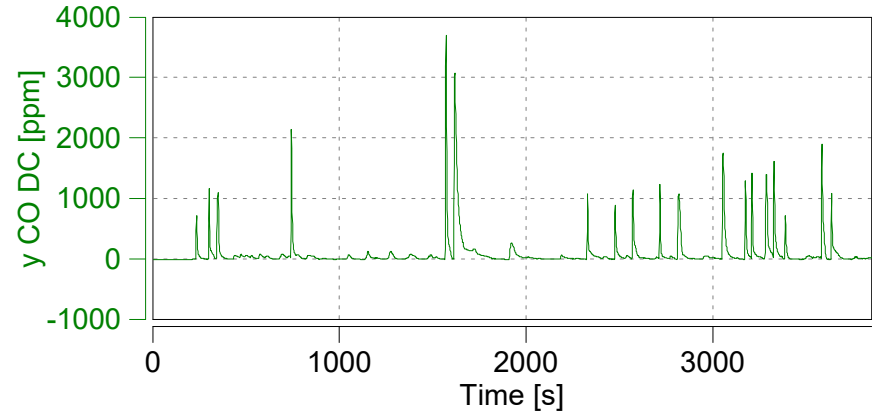
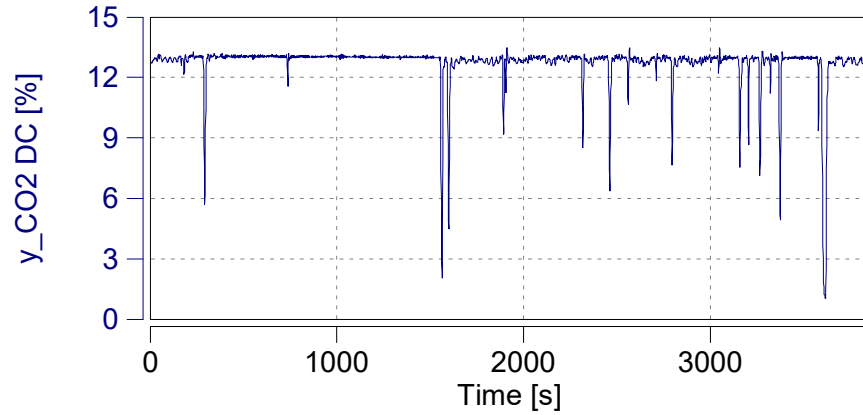
Vehicle: 2017 VW CC /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

Page: Corrected Emissions (1)

Start Date: 09/28/2017

Start Time: 08:21:36.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

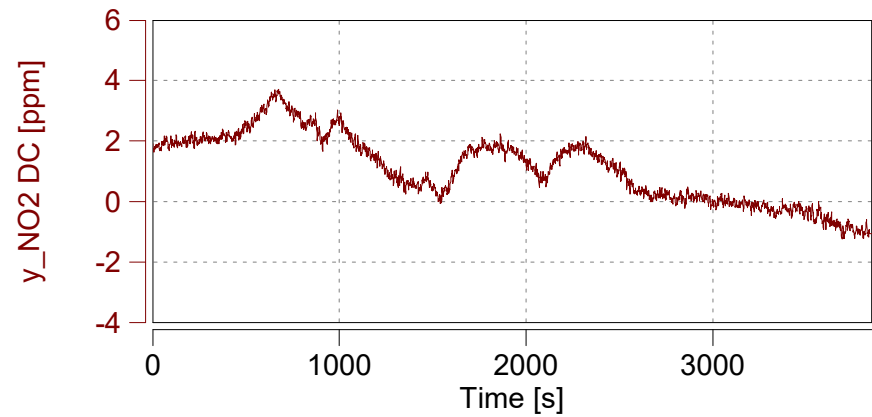
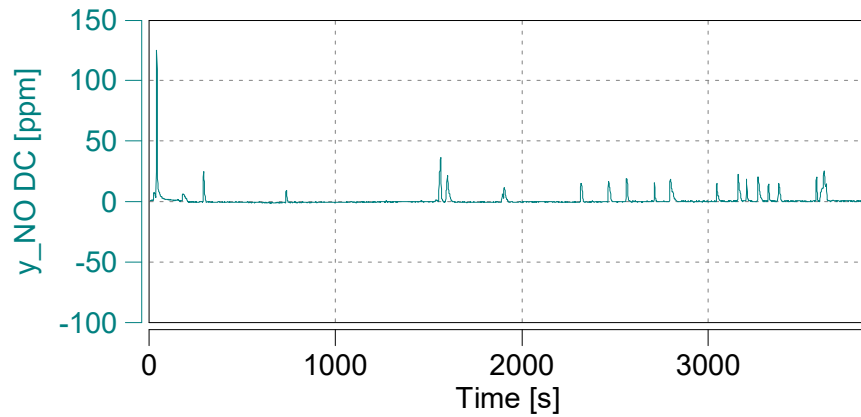
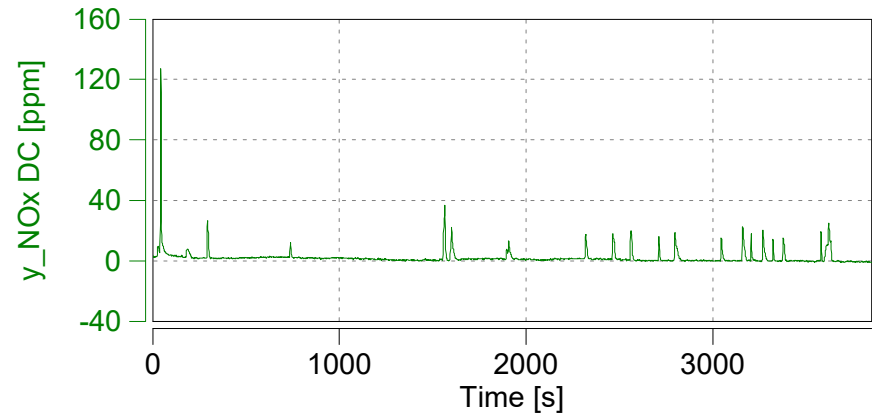
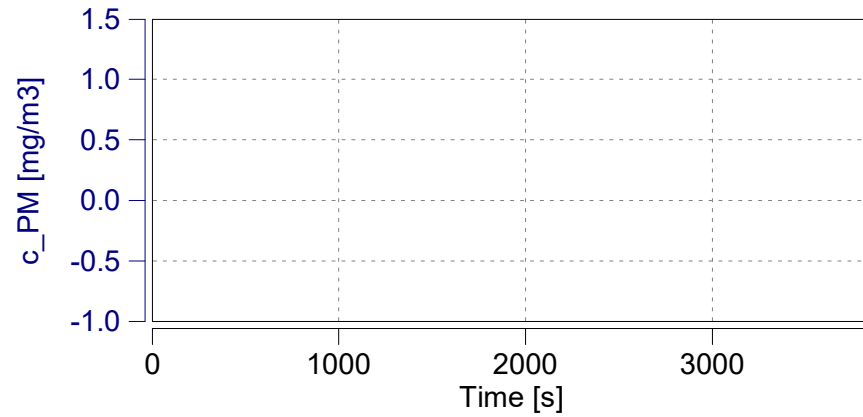
Vehicle: 2017 VW CC /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

Page: Corrected Emissions (2)

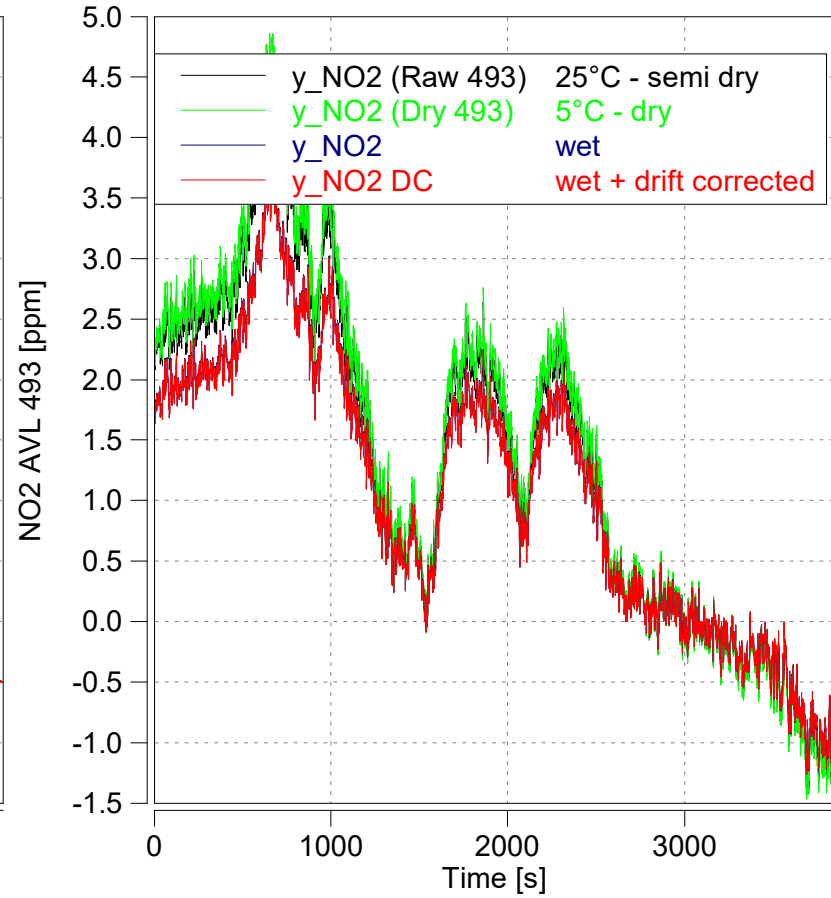
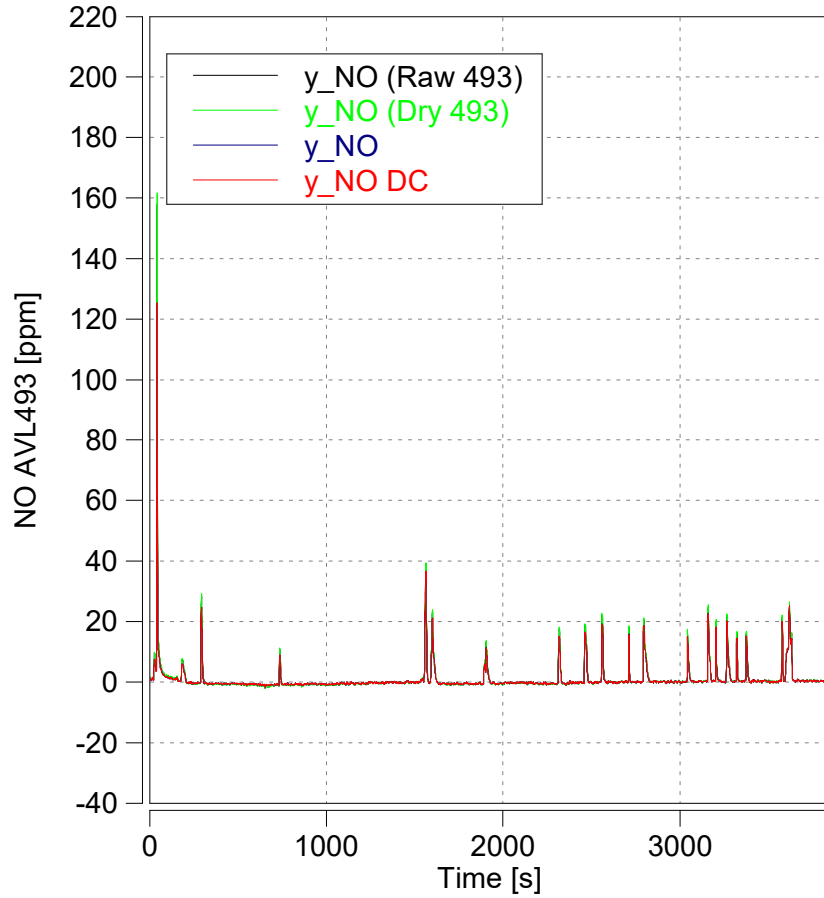
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Start Time: 08:21:36.0

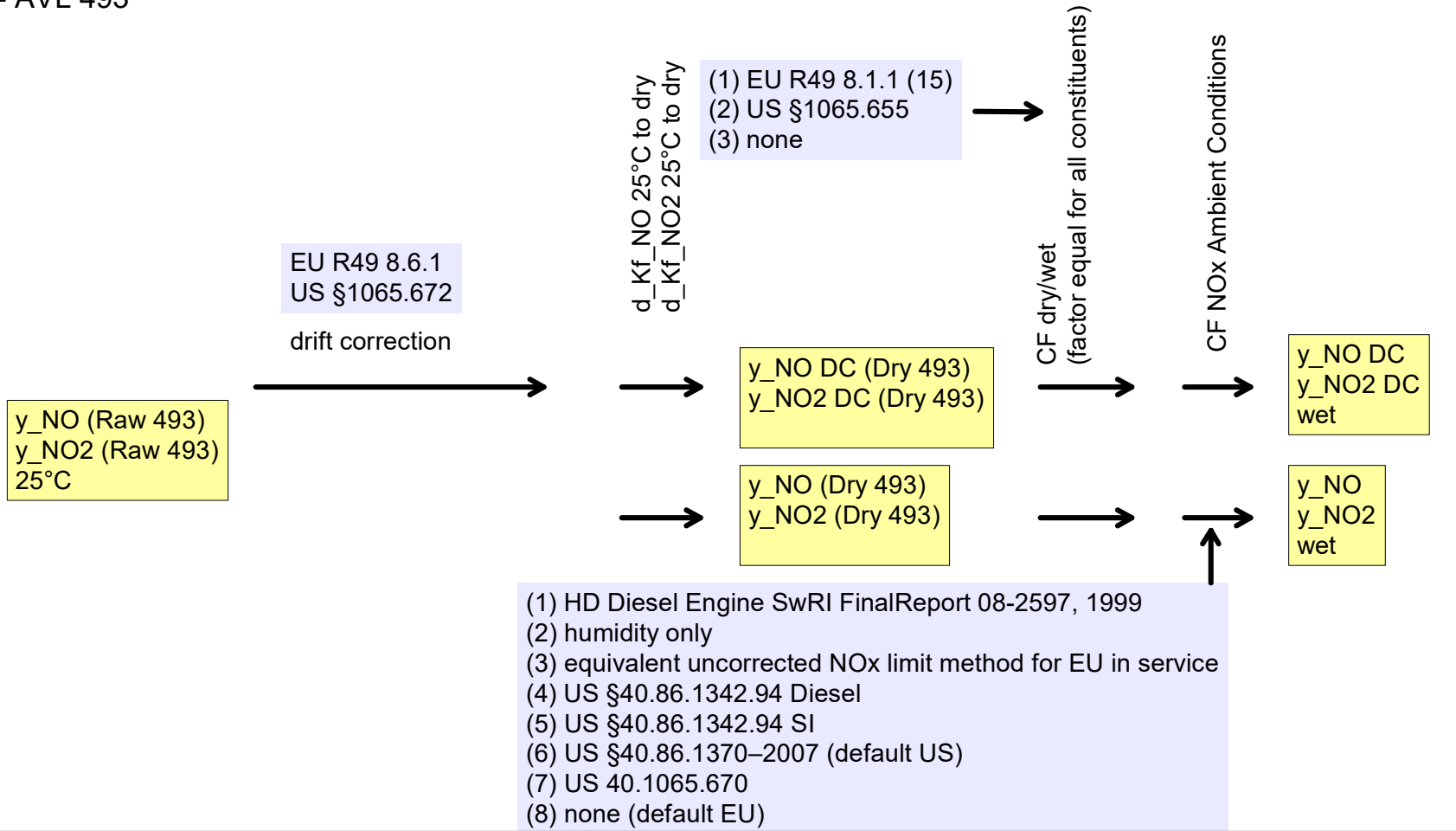


Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW CC /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90



NOx - AVL 493

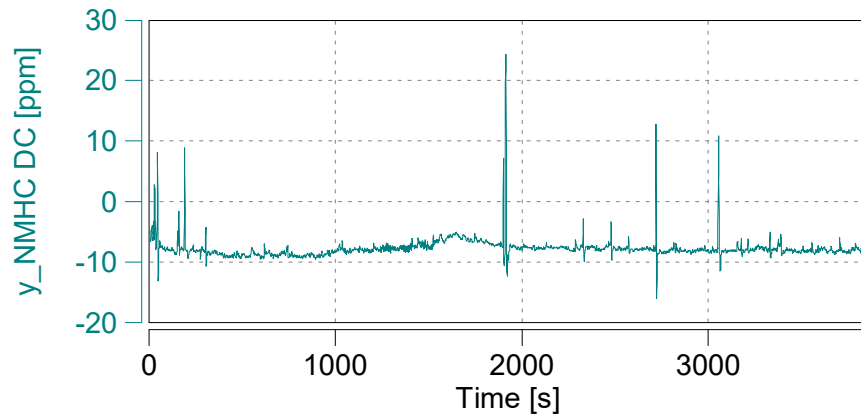
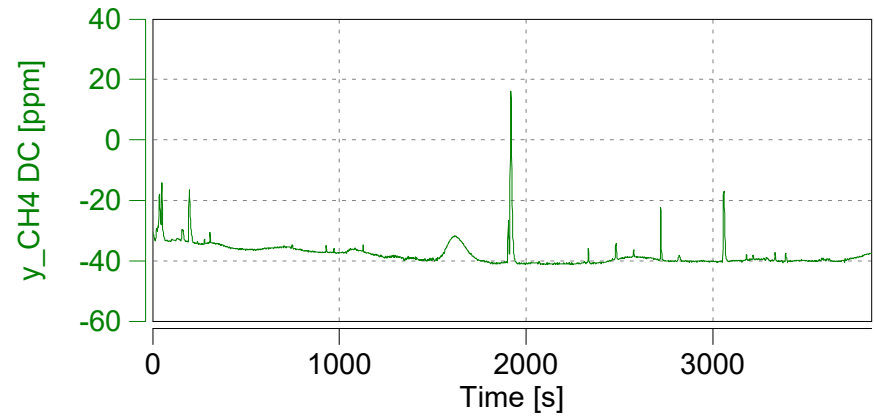
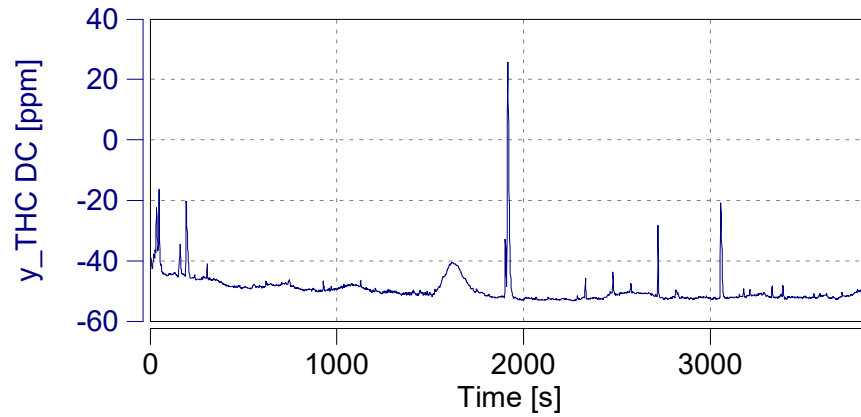


Case: Highway

Page: Corrected Emissions (5)

Start Date: 09/28/2017

Start Time: 08:21:36.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

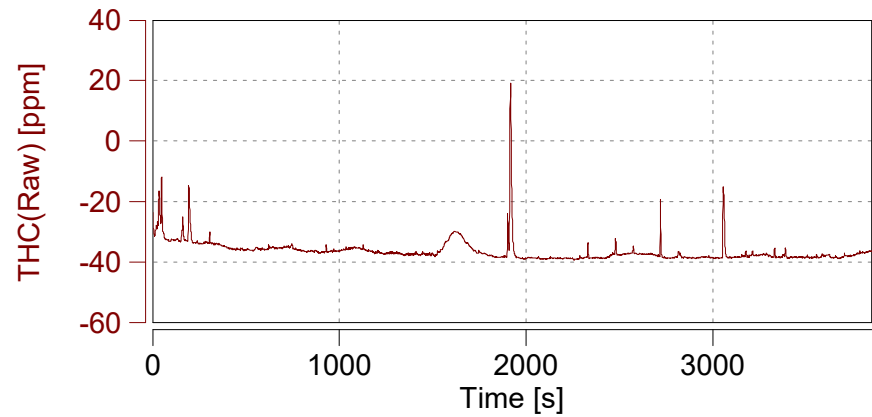
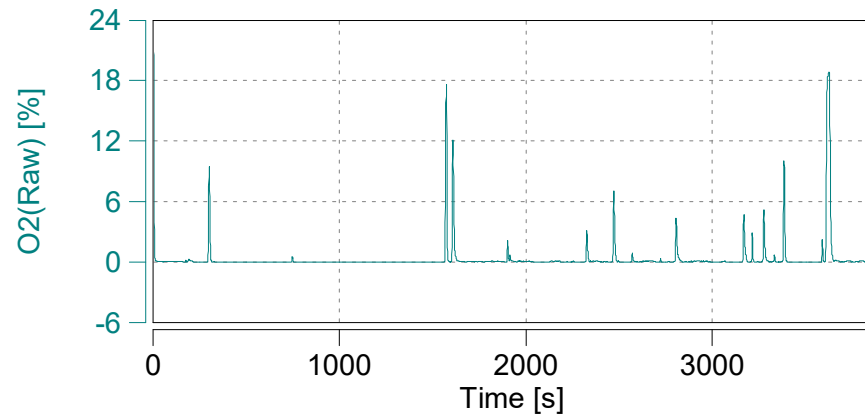
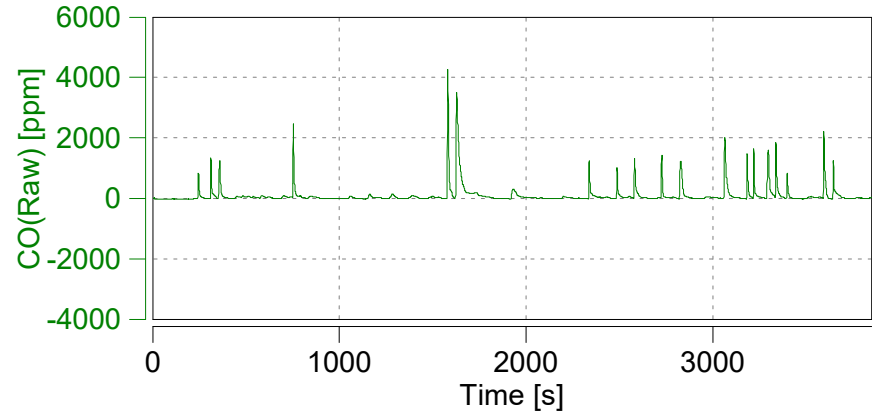
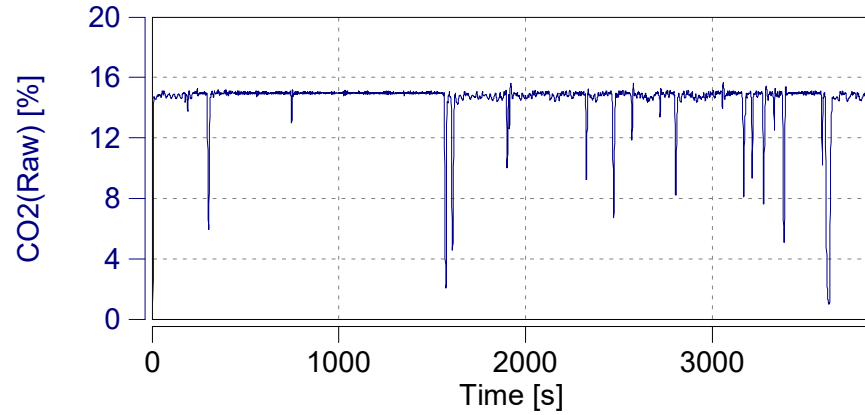
Vehicle: 2017 VW CC /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

Page: Emissions Raw Data (1)

Start Date: 09/28/2017

Start Time: 08:21:36.0



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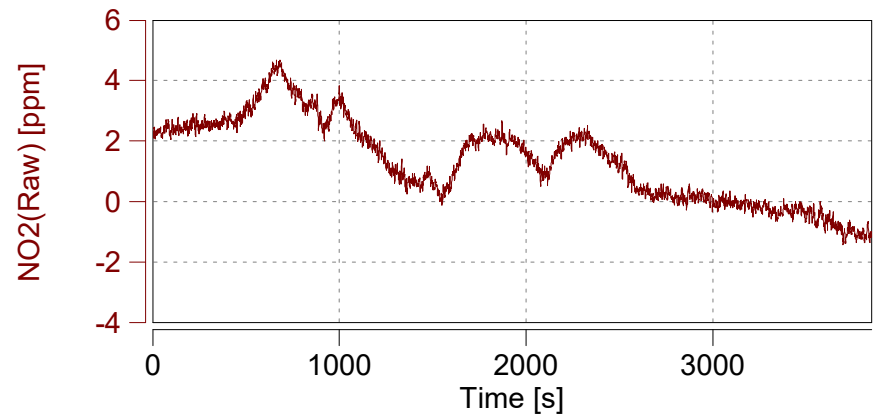
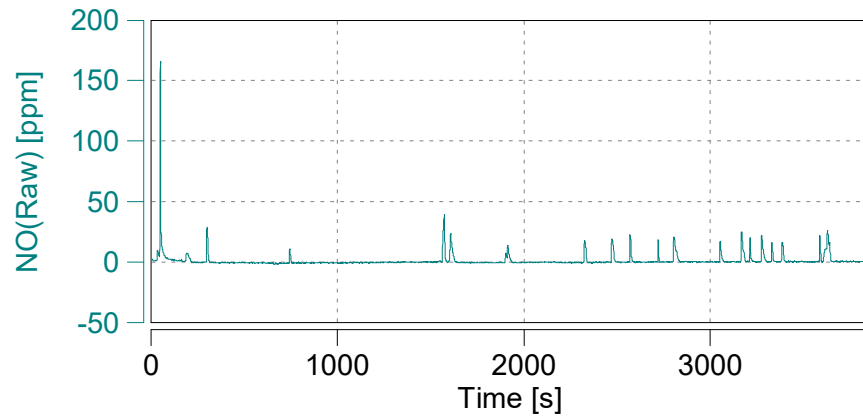
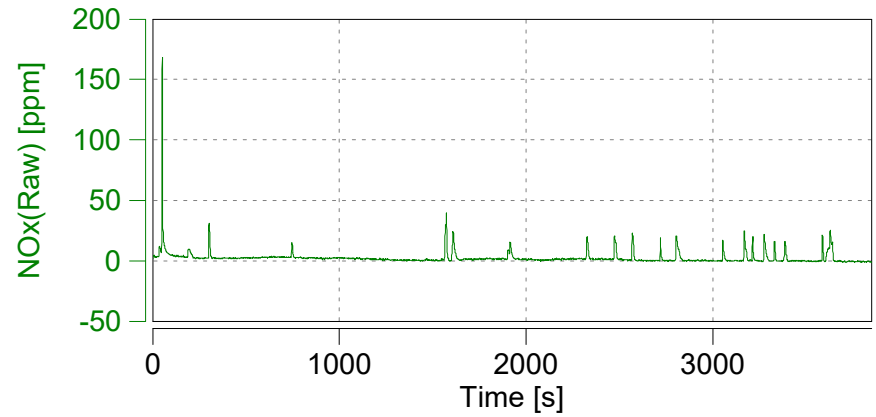
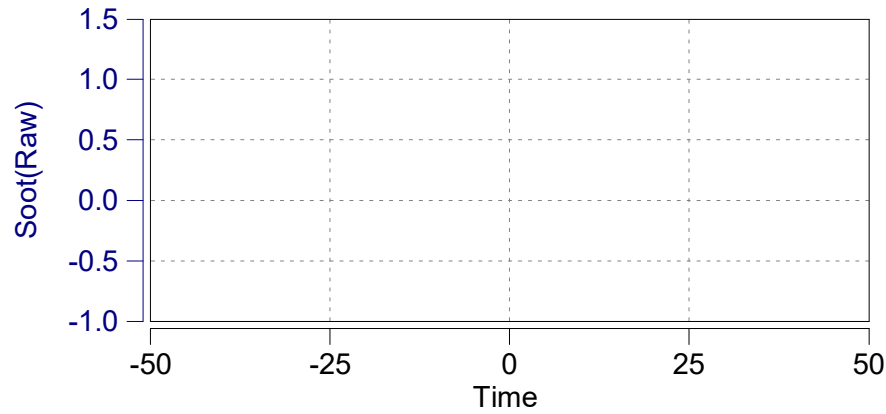
Vehicle: 2017 VW CC /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
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Case: Highway

Page: Emissions Raw Data (2)

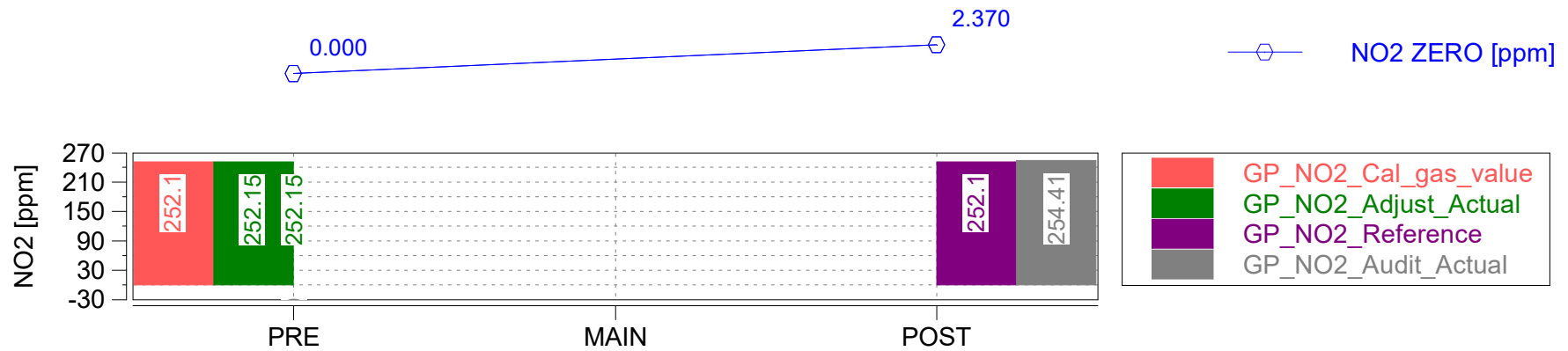
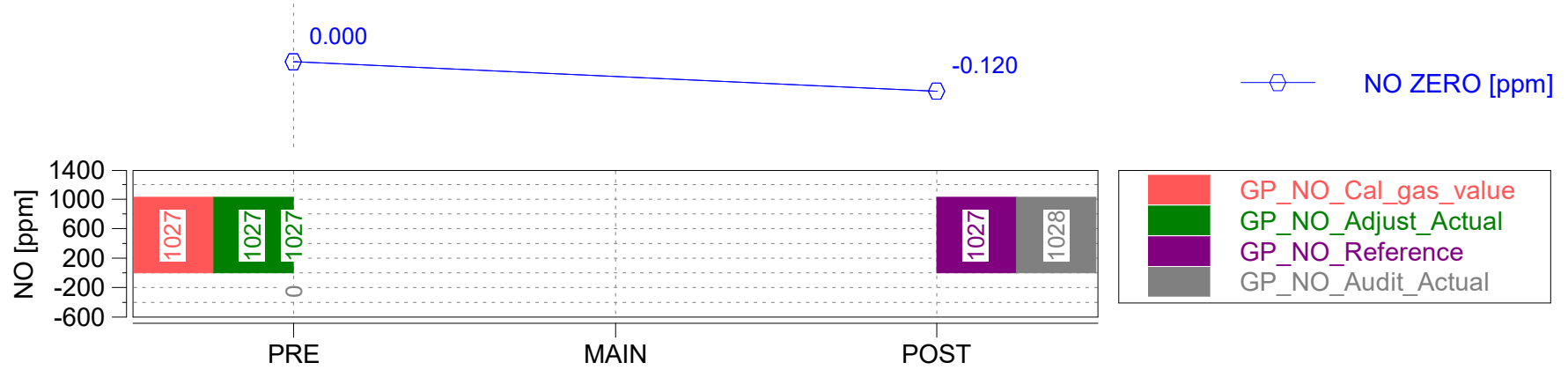
Start Date: 09/28/2017

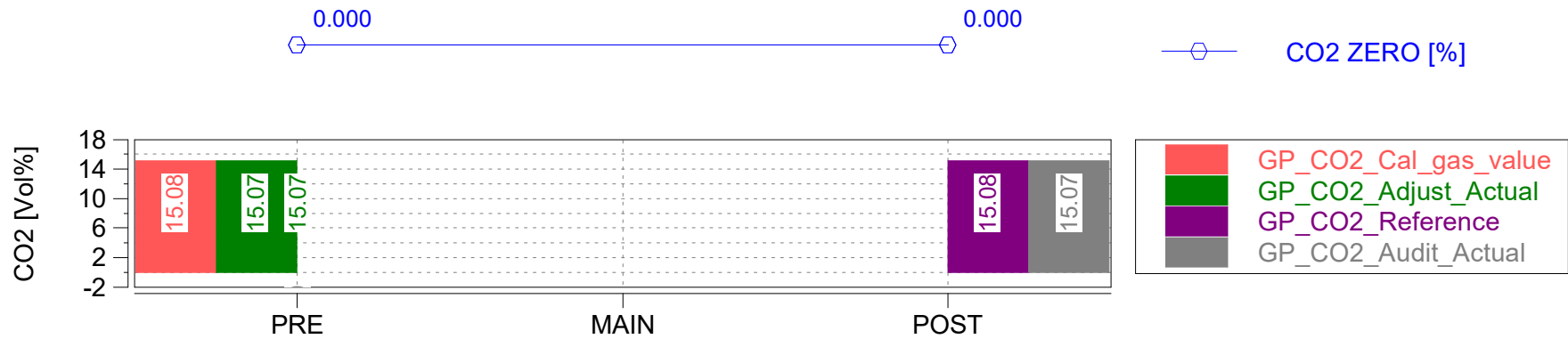
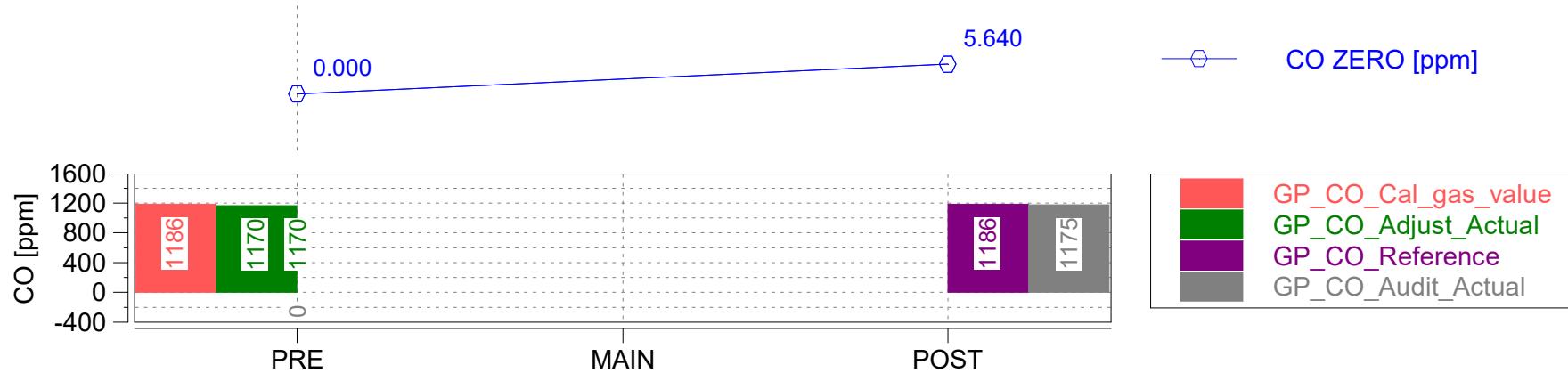
Start Time: 08:21:36.0

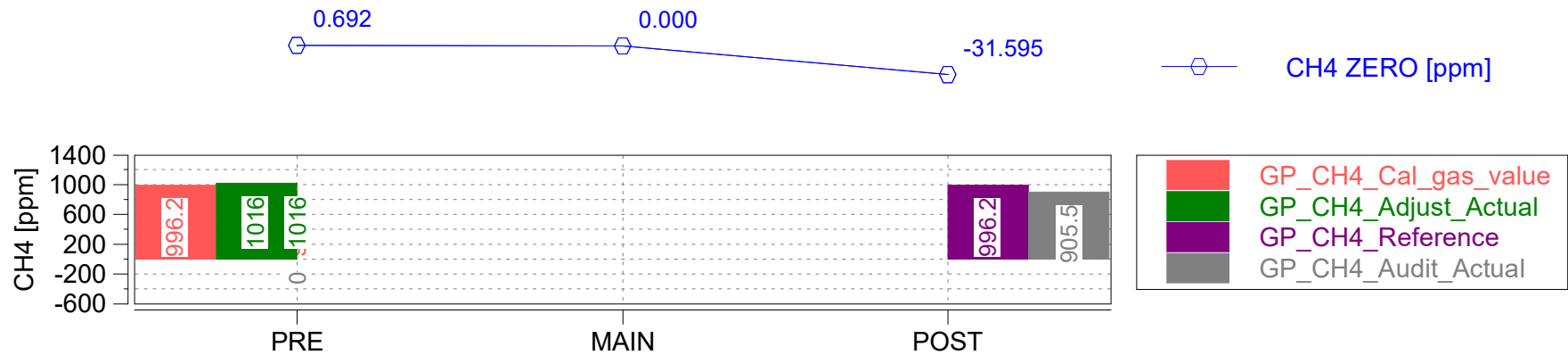
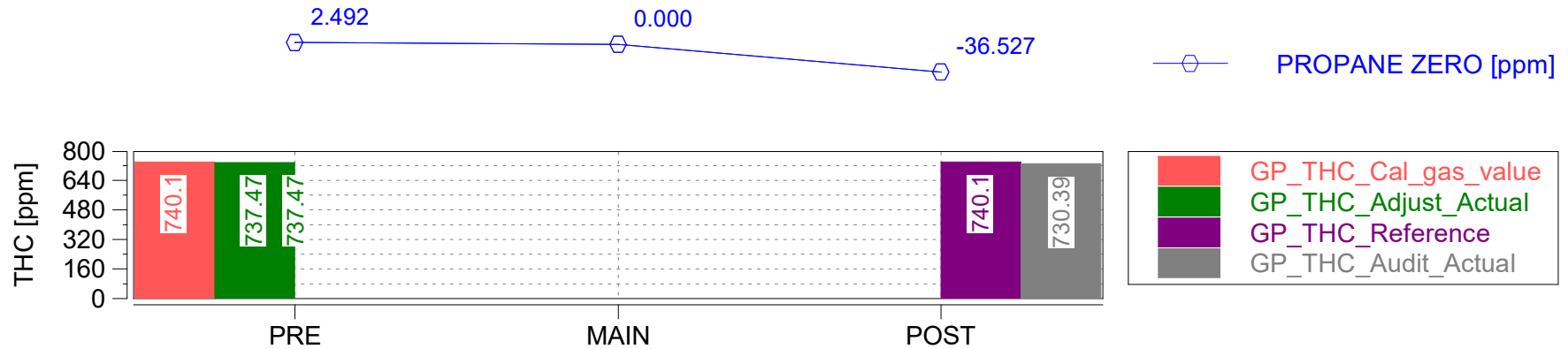


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Vehicle: 2017 VW CC /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
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#	Text	Value	Unit
-	----	----	----
1.0	Test Start: Date	-	-
2.0	Test Start: Time	-	-
3.0	Ambient Temperature	IFILE1:TM'Temperature	deg C
4.0	Ambient Temperature TS	0.00000	s
5.0	Ambient Pressure	IFILE1:TM'Pressure	kPa
6.0	Ambient Pressure TS	0.00000	s
7.0	Humidity Type	1.00000	-
8.0	Amb. Rel. Humidity	IFILE1:TM'Humidity	%
9.0	Amb. Rel. Humidity	0.00000	s
10.0	GPS Latitude		deg
11.0	GPS Latitude TS	0.00000	s
12.0	GPS Longitude		deg
13.0	GPS Longitude TS	0.00000	s
14.0	Altitude		m
15.0	Altitude TS	0.00000	s
16.0	GPS Quality		-
17.0	GPS Quality TS	0.00000	s
18.0	GroundSpeed		km/h
19.0	GroundSpeed TS	0.00000	s
20.0	Altitude from topographical map		m
21.0	Altitude TS of topographical map		s
22.0	TRIP_AMBIENT_GPS_AVL	YES	-
23.0	CALC_GPS_GROUNDSPEED	NO	-
24.0	EXHAUST_FLOW_AVL	NO	-
25.0	EXHAUST_FLOW_AVL_EFM	YES	-
26.0	Exhaust Flow Type	2.00000	-
27.0	Mass Flow	IFILE1:TM'PitotEFM_ExhaustG	various
28.0	Mass Flow TS	1.80000	s
29.0	Exhaust Pressure		kPa
30.0	Exhaust Pressure TS	1.80000	s

#	Text	Value	Unit
-	----	----	----
31.0	Exhaust Delta Pressure		kPa
32.0	Exhaust Pressure Delta TS	1.80000	s
33.0	Exhaust Temperature	IFILE1:TM'PitotEFM_ExhaustG	degC
34.0	Exhaust Temperature TS	1.80000	s
35.0	Lambda	N/A	-
36.0	Lambda TS		s
37.0	CO2_DIL		%
38.0	CO2_DIL TS		s
39.0	CVS Volume Flow		m3/min
40.0	TimeShift_CVS_VOL_FLOW		s
41.0	IN_CVS_PRESSURE		kPa
42.0	TimeShift_CVS_PRESSURE		s
43.0	IN_CVS_TEMP		degC
44.0	TimeShift_CVS_TEMP		s
45.0	Dry to Wet Conversion CO2	YES	-
46.0	Dry to Wet Conversion O2	YES	-
47.0	Dry to Wet Conversion NO	NO	-
48.0	Dry to Wet Conversion NO2	NO	-
49.0	Dry to Wet Conversion THC	NO	-
50.0	Dry to Wet Conversion CH4	NO	-
51.0	Dry to Wet Conversion O2	NO	-
52.0	CO2	IFILE1:TM'GPiS_CO2	%
53.0	CO2 TS	-10.00000	s
54.0	OS	IFILE1:TM'GPiS_O2	%
55.0	O2 TS	-10.50000	s
56.0	CO	IFILE1:TM'GPiS_CO	ppm
57.0	CO TS	-10.00000	s
58.0	NO	IFILE1:TM'GPiS_NO	ppm
59.0	NO TS	-8.20000	s
60.0	NO2	IFILE1:TM'GPiS_NO2	ppm

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#	Text	Value	Unit
-	----	----	----
61.0	NO2 TS	-8.20000	s
62.0	THC	IFILE1:TM'FIDiS_THC_C1	ppm
63.0	THC TS	0.00000	s
64.0	CH4	IFILE1:TM'FIDiS_CH4_C1	ppm
65.0	CH4 TS	0.00000	s
66.0	GAS_PEMS_Ethane_Efficiency	IFILE1:MOVE_AVL4925'GP_Et -	
67.0	GAS_PEMS_Methane_Efficiency	IFILE1:MOVE_AVL4925'GP_M -	
68.0	GAS_PEMS_Methane_Response	IFILE1:MOVE_AVL4925'GP_M -	
69.0	Zero Signal	IFILE1:TM'GPiS_STATE	0/1
70.0	Zero Signal TS	-8.20000	s
71.0	Zero Signal_FIDiS	IFILE1:TM'FIDiS_STATE	0/1
72.0	Zero Signal_FIDiS TS		s
73.0	Species Input Type	4.00000	-
74.0	GASPEMS=AVL493	NO	-
75.0	GASPEMS=AVL493_iX	NO	-
76.0	GASPEMS=AVL492	YES	-
77.0	GASPEMS=AVL4925	YES	-
78.0	PM: Type	4.00000	1=GFB+HC, 2=GFB, 3='PM=S
79.0	Filter ID from IFile	NO	-
80.0	Lab ID from IFile	NO	-
81.0	PM Filter: ID	N/A	ID
82.0	PM Filter: Lab	N/A	Name/ID
83.0	PM Filter: Weight before Test	N/A	mg
84.0	PM Filter: Weight after Test	N/A	mg
85.0	PM (HC Corr): Max. Exhaust Flow	N/A	scfm
86.0	Soot		mg/m3
87.0	Soot TS	-5.00000	s
88.0	Soot Sensor		mg/m3
89.0	Soot Sensor TS		s
90.0	PM Filter: Filter Flow Rate		l/min

#	Text	Value	Unit
-	----	----	----
91.0	PM Filter: Filter Flow Rate TS	-5.00000	s
92.0	PM Filter: Filter Dilution Ratio		-
93.0	PM Filter: Filter Dilution Ratio TS	-5.00000	s
94.0	PM Filter: Filter Trigger		-
95.0	PM Filter: Filter Trigger TS	-5.00000	s
96.0	PMPEMS=AVL494	YES	-
97.0	PMPEMS_AVL494_PROP_DIL	NO	-
98.0	PM dilution ratio min		-
99.0	PM_MaxExhaustFlowRate		-
100.0	PM_ExhaustFlow_Thresh		-
101.0	PM_total_flow_val		-
102.0	PM_total_flow_val_TS		-
103.0	PM_exh_mass_flow		-
104.0	PM_exh_mass_flow_TS		-
105.0	PN		#/cm3
106.0	TimeShift_PN		s
107.0	PN_STATE		-
108.0	PN TS STATE		s
109.0	PNPEMS_AVL496	NO	-
110.0	PN_CorrFactor	1.00000	
111.0	Time Alignment	1.00000	-
112.0	Time Alignment Dataset 1	N/A	0/1
113.0	Time Alignment Dataset 2	N/A	0/1
114.0	Time Alignment Thresh 1	N/A	-
115.0	Time Alignment Thresh 2	N/A	-
116.0			
117.0			
118.0			
119.0			
120.0			

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#	Text	Value	Unit
-	----	----	----
121.0			
122.0	Trigger		0/1
123.0	Trigger TS		s
124.0	FTIR_NAME_1		-
125.0	FTIR_MW_1		-
126.0	FTIR_CHANNEL_1		-
127.0	FTIR_CHANNEL_TS_1		-
128.0	FTIR_CHANNEL_DRY_1	NO	-
129.0	FTIR_NAME_2		-
130.0	FTIR_MW_2		-
131.0	FTIR_CHANNEL_2		-
132.0	FTIR_CHANNEL_TS_2		-
133.0	FTIR_CHANNEL_DRY_2	NO	-
134.0	FTIR_NAME_3		-
135.0	FTIR_MW_3		-
136.0	FTIR_CHANNEL_3		-
137.0	FTIR_CHANNEL_TS_3		-
138.0	FTIR_CHANNEL_DRY_3	NO	-
139.0	FTIR_NAME_4		-
140.0	FTIR_MW_4		-
141.0	FTIR_CHANNEL_4		-
142.0	FTIR_CHANNEL_TS_4		-
143.0	FTIR_CHANNEL_DRY_4	NO	-
144.0	FTIR_NAME_5		-
145.0	FTIR_MW_5		-
146.0	FTIR_CHANNEL_5		-
147.0	FTIR_CHANNEL_TS_5		-
148.0	FTIR_CHANNEL_DRY_5	NO	-
149.0	FTIR_NAME_6		-
150.0	FTIR_MW_6		-

#	Text	Value	Unit
-	----	----	----
151.0	FTIR_CHANNEL_6		-
152.0	FTIR_CHANNEL_TS_6		-
153.0	FTIR_CHANNEL_DRY_6	NO	-
154.0	FTIR_NAME_7		-
155.0	FTIR_MW_7		-
156.0	FTIR_CHANNEL_7		-
157.0	FTIR_CHANNEL_TS_7		-
158.0	FTIR_CHANNEL_DRY_7	NO	-
159.0	FTIR_NAME_8		-
160.0	FTIR_MW_8		-
161.0	FTIR_CHANNEL_8		-
162.0	FTIR_CHANNEL_TS_8		-
163.0	FTIR_CHANNEL_DRY_8	NO	-
164.0	FTIR_NAME_9		-
165.0	FTIR_MW_9		-
166.0	FTIR_CHANNEL_9		-
167.0	FTIR_CHANNEL_TS_9		-
168.0	FTIR_CHANNEL_DRY_9	NO	-
169.0	FTIR_NAME_10		-
170.0	FTIR_MW_10		-
171.0	FTIR_CHANNEL_10		-
172.0	FTIR_CHANNEL_TS_10		-
173.0	FTIR_CHANNEL_DRY_10	NO	-
174.0	FTIR_NAME_11		-
175.0	FTIR_MW_11		-
176.0	FTIR_CHANNEL_11		-
177.0	FTIR_CHANNEL_TS_11		-
178.0	FTIR_CHANNEL_DRY_11	NO	-
179.0	FTIR_NAME_12		-
180.0	FTIR_MW_12		-

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#	Text	Value	Unit
-	----	----	----
181.0	FTIR_CHANNEL_12		-
182.0	FTIR_CHANNEL_TS_12		-
183.0	FTIR_CHANNEL_DRY_12	NO	-
184.0	FTIR_NAME_13		-
185.0	FTIR_MW_13		-
186.0	FTIR_CHANNEL_13		-
187.0	FTIR_CHANNEL_TS_13		-
188.0	FTIR_CHANNEL_DRY_13	NO	-
189.0	FTIR_NAME_14		-
190.0	FTIR_MW_14		-
191.0	FTIR_CHANNEL_14		-
192.0	FTIR_CHANNEL_TS_14		-
193.0	FTIR_CHANNEL_DRY_14	NO	-
194.0	FTIR_NAME_15		-
195.0	FTIR_MW_15		-
196.0	FTIR_CHANNEL_15		-
197.0	FTIR_CHANNEL_TS_15		-
198.0	FTIR_CHANNEL_DRY_15	NO	-
199.0	FTIR_NAME_16		-
200.0	FTIR_MW_16		-
201.0	Vehicle Type	2017 VW CC	-
202.0	Vehicle Info		-
203.0	Engine Type	Gasoline	-
204.0	Engine Info	2.0L	-
205.0	Engine Torque		Nm
206.0	Curb Idle Load		%
207.0	Idle Speed		rpm
208.0	HYBRID_OVC_REF_CO2_gkm		g/km
209.0	Engine Concept	1.00000	-
210.0	Alpha	1.93000	-

#	Text	Value	Unit
-	----	----	----
211.0	Beta	1.00000	
212.0	Gamma	0.00000	
213.0	Delta	0.00000	
214.0	Epsilon	0.03200	
215.0	X_C	83.00000	
216.0	X_H	13.30000	
217.0	X_N	0.00000	
218.0	X_O	3.50000	
219.0	X_S	0.00000	
220.0	Fuel_Density	747.50000	
221.0	rho_exhaust	1.29310	
222.0	U_CO2	1.51800	
223.0	U_CO	0.96600	
224.0	U_NO	1.58700	
225.0	U_NO2	1.58700	
226.0	U_NOx	1.58700	
227.0	U_HC	0.49900	
228.0	U_NMHC	0.47100	
229.0	U_CH4	0.55300	
230.0	U_O2	1.10400	
231.0	Fuel Type	2.00000	-
232.0	exhaust mass flow type (YES/NO)	YES	-
233.0	Distance Calculation Type	1.00000	-
234.0	Velocity Statistics Calculation Type	2.00000	-
235.0	RDE vehicle class	1.00000	-
236.0	TM_CITY0		s
237.0	TM_CITY1		s
238.0	TM_RURAL0		s
239.0	TM_RURAL1		s
240.0	TM_RURAL2_0		s

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#	Text	Value	Unit
-	----	----	----
241.0	TM_RURAL2_1		s
242.0	Second Rural Part for Time Marks (NO		-
243.0	TM_MW0		s
244.0	TM_MW1		s
245.0	VELOCITY_LIMIT_STOP	2.00000	km/h
246.0	VELOCITY_LIMIT_URBAN	50.00000	km/h
247.0	VELOCITY_LIMIT_RURAL	75.00000	km/h
248.0	Intake Manifold Pressure Type	1.00000	-
249.0	Velocity	IFILE1:TM'OBD_Vehicle_Spee	km/h
250.0	Velocity TS	1.60000	s
251.0	Velocity FACTOR	1.00000	-
252.0	Coolant Temperature	IFILE1:TM'OBD_Engine_Coola	degC
253.0	Coolant Temperature TS	1.60000	s
254.0	Oil Temperature		degC
255.0	Oil Temperature TS	1.60000	s
256.0	Intake Manifold Temperature		degC
257.0	Intake Manifold Temp TS	1.60000	s
258.0	Intake Manifold Pressure	IFILE1:TM'OBD_Intake_manifo	kPa
259.0	Intake Manifold Pressure TS	1.60000	s
260.0	Throttle Position		%
261.0	Throttle TS	1.60000	s
262.0	TYP_IDLE_MASS_FLOW		kg/h
263.0	Torque Type	1.00000	-
264.0	Speed	IFILE1:TM'OBD_Engine_RPM	rpm
265.0	Speed TS	1.60000	s
266.0	Torque		Nm
267.0	Torque TS	1.60000	s
268.0	Friction Torque	N/A	Nm
269.0	Friction Torque TS	N/A	s
270.0	Reference Torque	N/A	Nm

#	Text	Value	Unit
-	----	----	----
271.0	Reference Torque TS	N/A	s
272.0	k_VELINE		-
273.0	D_VELINE		-
274.0	Fuel Flow Type	2.00000	-
275.0	Air Flow Type	1.00000	-
276.0	Fuel Rate		various
277.0	Air Rate		various
278.0	Fuel Rate TS	1.60000	s
279.0	No_Cylinders		-
280.0	Air Rate TS	1.60000	s
281.0	FTIR_CHANNEL_32		-
282.0	FTIR_CHANNEL_TS_32		-
283.0	FTIR_CHANNEL_DRY_32	NO	-
284.0	FTIR_NAME_33		-
285.0	FTIR_MW_33		-
286.0	FTIR_CHANNEL_33		-
287.0	FTIR_CHANNEL_TS_33		-
288.0	FTIR_CHANNEL_DRY_33	NO	-
289.0	FTIR_NAME_34		-
290.0	FTIR_MW_34		-
291.0	FTIR_CHANNEL_34		-
292.0	FTIR_CHANNEL_TS_34		-
293.0	FTIR_CHANNEL_DRY_34	NO	-
294.0	FTIR_NAME_35		-
295.0	FTIR_MW_35		-
296.0	FTIR_CHANNEL_35		-
297.0	FTIR_CHANNEL_TS_35		-
298.0	FTIR_CHANNEL_DRY_35	NO	-
299.0	FTIR_NAME_36		-
300.0	FTIR_MW_36		-

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#	Text	Value	Unit
-	----	----	----
301.0	FTIR_CHANNEL_36		-
302.0	FTIR_CHANNEL_TS_36		-
303.0	FTIR_CHANNEL_DRY_36	NO	-
304.0	FTIR_NAME_37		-
305.0	FTIR_MW_37		-
306.0	FTIR_CHANNEL_37		-
307.0	FTIR_CHANNEL_TS_37		-
308.0	FTIR_CHANNEL_DRY_37	NO	-
309.0	FTIR_NAME_38		-
310.0	FTIR_MW_38		-
311.0	FTIR_CHANNEL_38		-
312.0	FTIR_CHANNEL_TS_38		-
313.0	FTIR_CHANNEL_DRY_38	NO	-
314.0	FTIR_NAME_39		-
315.0	FTIR_MW_39		-
316.0	FTIR_CHANNEL_39		-
317.0	FTIR_CHANNEL_TS_39		-
318.0	FTIR_CHANNEL_DRY_39	NO	-
319.0	FTIR_NAME_40		-
320.0	FTIR_MW_40		-
321.0	FTIR_CHANNEL_40		-
322.0	FTIR_CHANNEL_TS_40		-
323.0	FTIR_CHANNEL_DRY_40	NO	-
324.0	Legislation Type (1=HDIUT 2=EU H	4.00000	-
325.0	WholeTest_NOx_corr	5.00000	-
326.0	WholeTest_Hum_corr	2.00000	-
327.0	CD_Distance	0.00000	km
328.0	CD_NOx	0.00000	mg/km
329.0	CD_CO	0.00000	mg/km
330.0	CD_CO2	0.00000	g/km

#	Text	Value	Unit
-	----	----	----
331.0	CD_NMHC	0.00000	mg/km
332.0	CD_CH4	0.00000	mg/km
333.0	CD_THC	0.00000	mg/km
334.0	CD_PN		#/km
335.0	WLTC_LOW_SPEED_gkm		g/km
336.0	WLTC_LOW_SPEED_FAC	1.20000	-
337.0	WLTC_MEDIUM_SPEED_gkm		g/km
338.0	WLTC_HIGH_SPEED_gkm		g/km
339.0	WLTC_HIGH_SPEED_FAC	1.10000	-
340.0	WLTC_EXTRA_HIGH_SPEED_gkm		g/km
341.0	WLTC_EXTRA_HIGH_SPEED_FA	1.05000	-
342.0	TOL_NORMAL_DRIVING	25.00000	%
343.0	TOL_SEVERE_DRIVING	50.00000	%
344.0	Increase Tolerance Nomral Driving	NO	-
345.0	Bin1_min		km/h
346.0	Bin2_min		km/h
347.0	Bin3_min		km/h
348.0	Bin1_max		km/h
349.0	Bin2_max		km/h
350.0	Bin3_max		km/h
351.0	Clear_R0	125.40000	N
352.0	Clear_R1	0.29300	Nh/km
353.0	Clear_R2	0.02795	N*(h/km) ²
354.0	Clear_SMK	1470.00000	kg
355.0	Clear_Rated_Power	140.00000	kW
356.0	Clear_Ref_Velocity	70.00000	km/h
357.0	Clear_Ref_Acc	0.45000	m/s ²
358.0	Clear_Smooth	3.00000	s
359.0	EXTC_From_High_Temp	30.00000	degC
360.0	EXTC_To_High_Temp	35.00000	degC

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW CC /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
361.0	EXTC_From_Low_Temp	-7.00000	degC
362.0	EXTC_To_Low_Temp	0.00000	degC
363.0	Euro 6d or Euro 6d temp	NO	-
364.0	EXTC_From_Altitude	700.00000	m
365.0	EXTC_To_Altitude	1300.00000	m
366.0	EXTC_CORR_FAC	1.60000	
367.0	weight cold start (YES/NO)	NO	-
368.0	precon and soak done (YES/NO)	NO	-
369.0	PATH_PRECON_FILE		
370.0	filter velocity (YES/NO)	NO	-
371.0	filter velocity auto(YES/NO)	NO	-
372.0	Ki_CO		
373.0	Ki_CO2		
374.0	Ki_NOx		
375.0	Ki_FACTOR_CO2 (YES/NO)	NO	-
376.0	Ki_OFFSET_CO2 (YES/NO)	NO	-
377.0	Ki_FACTOR_CO (YES/NO)	NO	-
378.0	Ki_OFFSET_CO (YES/NO)	NO	-
379.0	Ki_FACTOR_NOx (YES/NO)	NO	-
380.0	Ki_OFFSET_NOx (YES/NO)	NO	-
381.0	Ki_OFF (YES/NO)	NO	-
382.0	HD legislations	1.00000	-
383.0	RDE legislations	1.00000	-
384.0	Submission Documents (YES/NO)	NO	-
385.0	General Setup Parameters Text	Highway	-
386.0	Legislation Setup Parameters Text	Highway	-
387.0	Trip Info		-
388.0	IN_TIME_REF		-
389.0	Sub-Trip Start: Auto	YES	-
390.0	Sub-Trip Start: Seconds	N/A	s

#	Text	Value	Unit
-	----	----	----
391.0	Sub-Trip End: Auto	YES	-
392.0	Sub-Trip End: Seconds	N/A	s
393.0	Unit System	2.00000	-
394.0	Calculate: PM Emissions	NO	-
395.0	Calculate: PN Emissions	NO	-
396.0	Output: Summary	YES	-
397.0	Output: Emissions	YES	-
398.0	Output: Raw Data	YES	-
399.0	Output: Zero Span	YES	-
400.0	Output: Data Consistency	NO	-
401.0	Output: Window Plots	YES	-
402.0	Fuel Rate ECU vs. EU ISO16183	y = 10000000000.0000 x - 0.000 R ² =10000000000.000 SEE=	
403.0	PEMS post processing version	Rel_10_B192	
404.0	Concerto version	480.00000	
405.0	Concerto build	215.00000	
406.0	USERNAME	EFR	

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW CC /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Mountain
Page: Trip Summary

Start Date: 09/28/2017
Start Time: 08:21:36.0



Trip Duration	3263.00	s	ave THC	-33.68077	ppm	BS CO2	n/a	g/hphr
Trip Duration (a)	3263.00	s	ave NMHC	4.84694	ppm	BS CO	n/a	g/hphr
Trip Distance	29.29	mi	ave CH4	-35.02519	ppm	BS THC	n/a	g/hphr
Trip Distance (a)	29.29	mi	ave CO	271.69154	ppm	BS NMHC	n/a	g/hphr
Trip Fuel Cons. (b)	n/a	kg	ave CO2	11.56372	%	BS CH4	n/a	g/hphr
Trip Fuel Cons. (ab)	n/a	kg	ave NOx	2.56028	ppm	BS NO (d)	n/a	g/hphr
Trip Fuel Cons. EU (ac)	3.25	kg	ave PM	n/a	mg/m3	BS NO2	n/a	g/hphr
Trip Fuel Cons. US (ac)	3.22	kg	ave Soot meas	n/a	mg/m3	BS NOx	n/a	g/hphr
Trip Fuel Cons. Volume (b)	n/a	gall	ave Soot	n/a	mg/m3	BS Soot	n/a	g/hphr
Trip Fuel Cons. Volume (ab)	n/a	gall	ave PN	n/a	#/cm3	BS Soot meas	n/a	g/hphr
Trip Fuel Cons. Volume EU (ac)	1.15	gall	tot THC	0.00844	g	BS PM	n/a	g/hphr
Trip Fuel Cons. Volume US (ac)	1.14	gall	tot NMHC	0.13213	g	BS PN	n/a	#/hpr
Trip Fuel Economy (b)	n/a	mpg_US	tot CH4	0.00582	g	DS CO2	332.96927	g/mi
Trip Fuel Economy (ab)	n/a	mpg_US	tot CO	30.33849	g	DS CO	1.03578	g/mi
Trip Fuel Economy EU (ac)	25.48	mpg_US	tot CO2	9752.80076	g	DS THC	0.00029	g/mi
Trip Fuel Economy US (ac)	25.73	mpg_US	tot NO (d)	0.13351	g	DS NMHC	0.00451	g/mi
Trip Av. Eng. Speed	1587.02	rpm	tot NO2	0.09343	g	DS CH4	0.00020	g/mi
Trip Av. Torque	n/a	lbft	tot NOx	0.19149	g	DS NO (d)	0.00456	g/mi
Trip Av. Power	n/a	hp	tot Soot	n/a	g	DS NO2	0.00319	g/mi
Trip Work	n/a	hphr	tot Soot meas	n/a	g	DS NOx	0.00654	g/mi
Trip Exhaust Mass	51.31	kg	tot PM	n/a	g	DS Soot	n/a	g/mi
Trip Exhaust Mass EU (ac)	n/a	kg	tot PN	n/a	#	DS Soot meas	n/a	g/mi
Trip Exhaust Mass US (ac)	n/a	kg	PM measurement type	0.00000	-	DS PM	n/a	g/mi
Trip Av. Amb. Temperature	75.24	deg_F	PM correction type	1.00000	alpha(HC)	DS PN	n/a	#/mi
Trip Av. Humidity	52.76	%	tot Soot on PM filter (estim.)	n/a	mg	FS CO2	n/a	g/kg
Fuel Type	Petrol (E10)		Soot --> PM simple scaling factor	1.00000	-	FS CO	n/a	g/kg
			Soot --> PM alpha scaling factor	0.00000	-	FS THC	n/a	g/kg
			Trip Av. Veh. Speed	32.31548	mi/hr	FS NMHC	n/a	g/kg
			Trip Velocity Zero	17.31535	%	FS CH4	n/a	g/kg
			Trip Velocity Urban	41.89396	%	FS NO (d)	n/a	g/kg
			Trip Velocity Rural	33.98713	%	FS NO2	n/a	g/kg
			Trip Velocity Motorway	24.11891	%	FS NOx	n/a	g/kg
						FS Soot	n/a	g/kg
						FS Soot meas	n/a	g/kg
						FS PM	n/a	g/kg
						FS PN	n/a	#/kg

(a) GAS PEMS measurement state only, (b) based on fuel rate input (ECU, Fuel Meter), (c) calculated from carbon balance
(d) NO calculated using molecular weight of NO2

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW CC /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Mountain

Page: Trip Summary Drift Corrected

Start Date: 09/28/2017

Start Time: 08:21:36.0

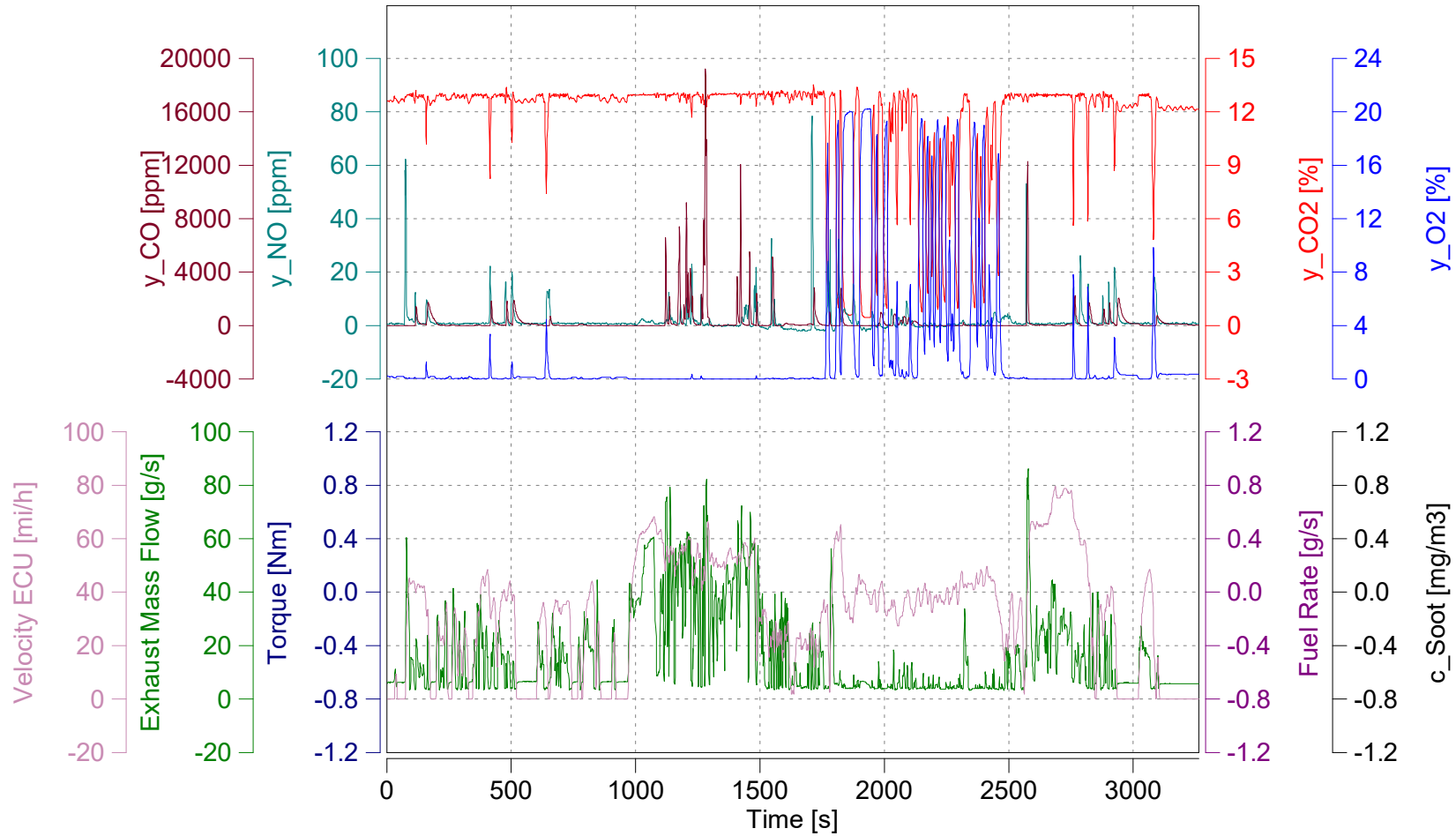


Trip Duration	3263.00	s	ave THC DC	-45.71663	ppm	BS CO2 DC	n/a	g/hphr
Trip Duration (a)	3263.00	s	ave NMHC DC	-5.43747	ppm	BS CO DC	n/a	g/hphr
Trip Distance	29.29	mi	ave CH4 DC	-36.61742	ppm	BS THC DC	n/a	g/hphr
Trip Distance (a)	29.29	mi	ave CO DC	274.72837	ppm	BS NMHC DC	n/a	g/hphr
Trip Fuel Cons. (b)	n/a	kg	ave CO2 DC	11.57140	%	BS CH4 DC	n/a	g/hphr
Trip Fuel Cons. (ab)	n/a	kg	ave NOx DC	2.55434	ppm	BS NO DC (d)	n/a	g/hphr
Trip Fuel Cons. EU (ac)	3.25	kg	ave PM	n/a	mg/m3	BS NO2 DC	n/a	g/hphr
Trip Fuel Cons. US (ac)	3.22	kg	ave Soot meas	n/a	mg/m3	BS NOx DC	n/a	g/hphr
Trip Fuel Cons. Volume (b)	n/a	gall	ave Soot	n/a	mg/m3	BS Soot	n/a	g/hphr
Trip Fuel Cons. Volume (ab)	n/a	gall	ave PN DC	n/a	#/cm3	BS Soot meas	n/a	g/hphr
Trip Fuel Cons. Volume EU (ac)	1.15	gall	tot THC DC	0.01146	g	BS PM	n/a	g/hphr
Trip Fuel Cons. Volume US (ac)	1.14	gall	tot NMHC DC	0.02308	g	BS PN DC	n/a	#/hpr
Trip Fuel Economy (b)	n/a	mpg_US	tot CH4 DC	0.00591	g	DS CO2 DC	333.19021	g/mi
Trip Fuel Economy (ab)	n/a	mpg_US	tot CO DC	30.67760	g	DS CO DC	1.04736	g/mi
Trip Fuel Economy EU (ac)	25.48	mpg_US	tot CO2 DC	9759.27243	g	DS THC DC	0.00039	g/mi
Trip Fuel Economy US (ac)	25.73	mpg_US	tot NO DC (d)	0.13337	g	DS NMHC DC	0.00079	g/mi
Trip Av. Eng. Speed	1587.02	rpm	tot NO2 DC	0.09299	g	DS CH4 DC	0.00020	g/mi
Trip Av. Torque	n/a	lbft	tot NOx DC	0.19100	g	DS NO DC (d)	0.00455	g/mi
Trip Av. Power	n/a	hp	tot Soot	n/a	g	DS NO2 DC	0.00317	g/mi
Trip Work	n/a	hphr	tot Soot meas	n/a	g	DS NOx DC	0.00652	g/mi
Trip Exhaust Mass	51.31	kg	tot PM	n/a	g	DS Soot	n/a	g/mi
Trip Exhaust Mass EU (ac)	n/a	kg	tot PN DC	n/a	#	DS Soot meas	n/a	g/mi
Trip Exhaust Mass US (ac)	n/a	kg	PM measurement type	0.00000	-	DS PM	n/a	g/mi
Trip Av. Amb. Temperature	75.24	deg_F	PM correction type	1.00000	alpha(HC)	DS PN DC	n/a	#/mi
Trip Av. Humidity	52.76	%	tot Soot on PM filter (estim.)	n/a	mg	FS CO2 DC	n/a	g/kg
Fuel Type	Petrol (E10)		Soot --> PM simple scaling factor	1.00000	-	FS CO DC	n/a	g/kg
			Soot --> PM alpha scaling factor	0.00000	-	FS THC DC	n/a	g/kg
			Trip Av. Veh. Speed	32.31548	mi/hr	FS NMHC DC	n/a	g/kg
			Trip Velocity Zero	17.31535	%	FS CH4 DC	n/a	g/kg
			Trip Velocity Urban	41.89396	%	FS NO DC (d)	n/a	g/kg
			Trip Velocity Rural	33.98713	%	FS NO2 DC	n/a	g/kg
			Trip Velocity Motorway	24.11891	%	FS NOx DC	n/a	g/kg
						FS Soot	n/a	g/kg
						FS Soot meas	n/a	g/kg
						FS PM	n/a	g/kg
						FS PN DC	n/a	#/kg

(a) GAS PEMS measurement state only, (b) based on fuel rate input (ECU, Fuel Meter), (c) calculated from carbon balance
 (d) NO calculated using molecular weight of NO2

Concerto Version: 480 Build 215, Serial Number: 8468
 M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW CC /
 Engine: Gasoline / 2.0L
 NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
 Dry / Wet Corr.: 2 - CFR40 §86.1342-90



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

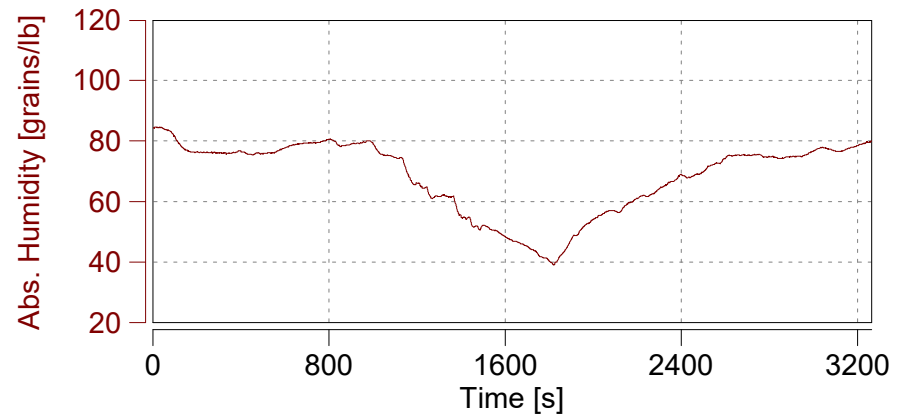
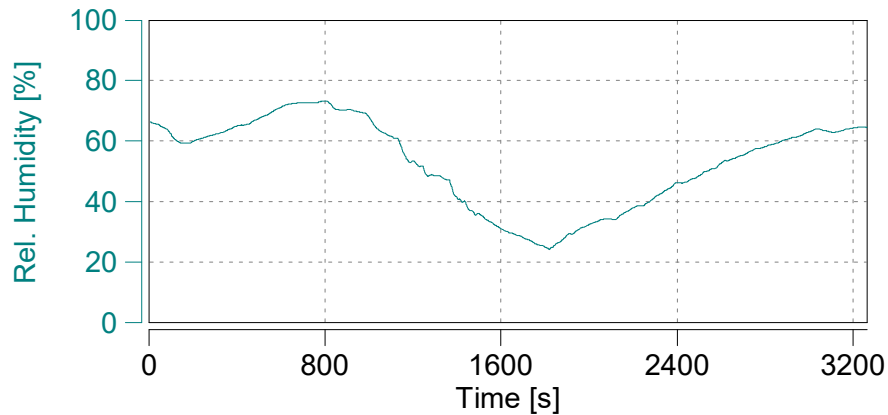
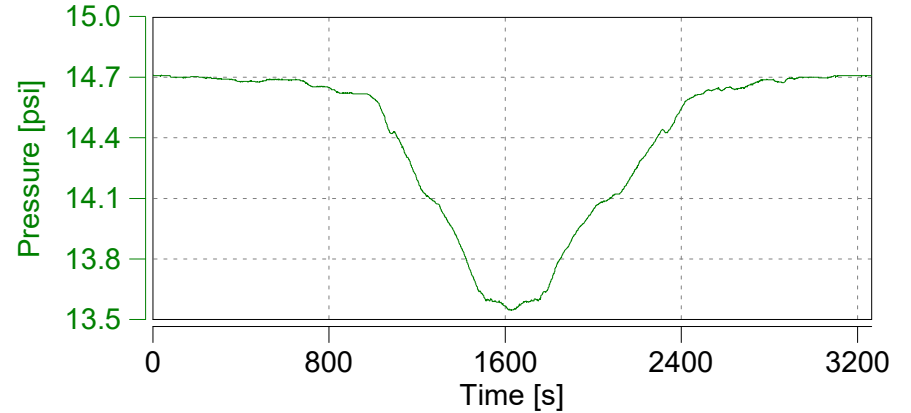
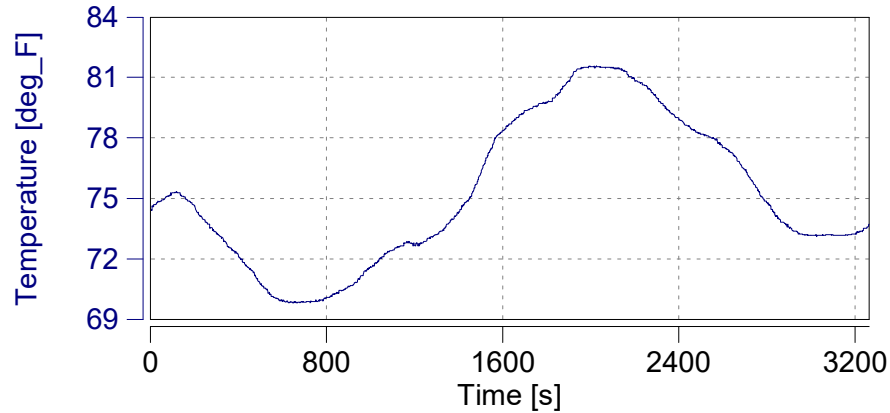
Vehicle: 2017 VW CC /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Mountain

Page: Ambient Conditions

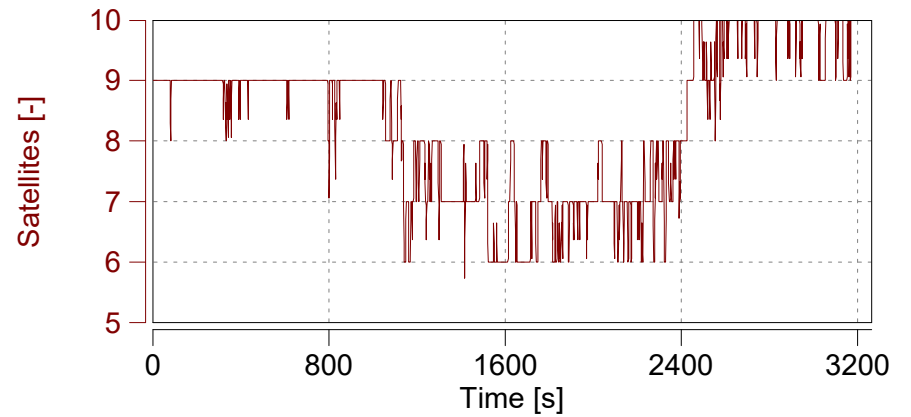
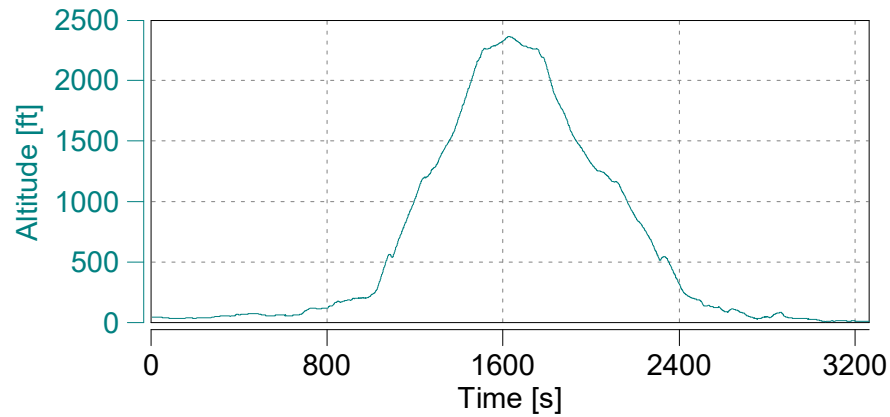
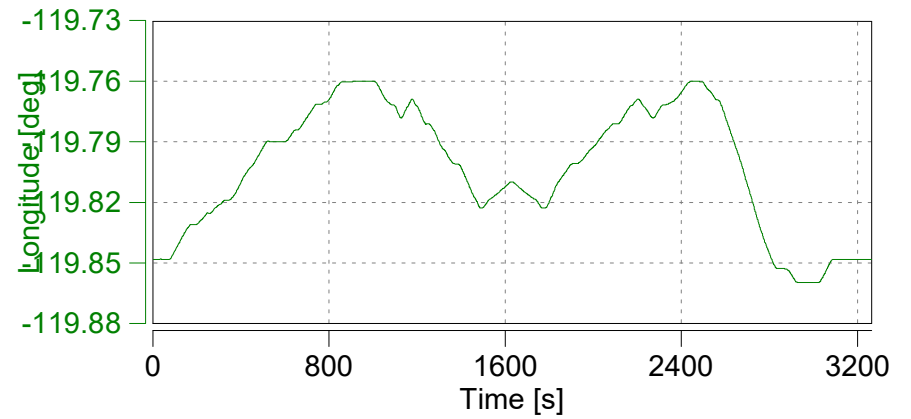
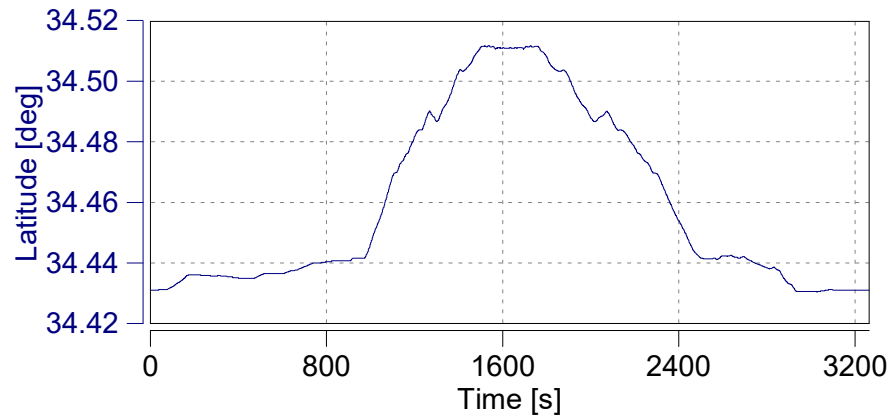
Start Date: 09/28/2017

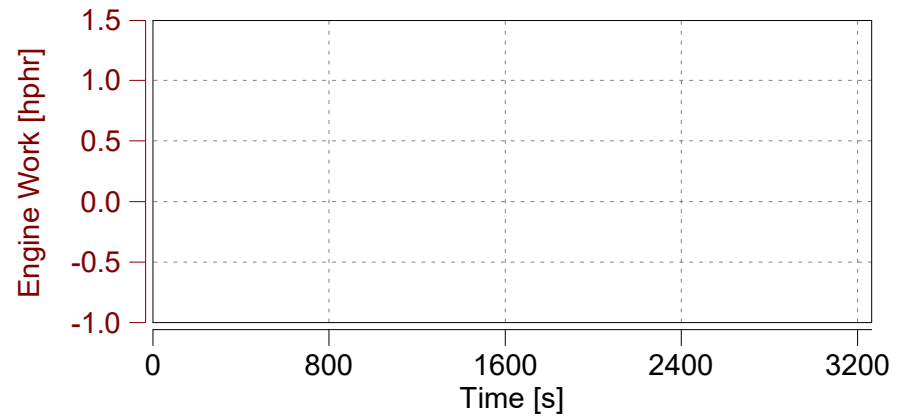
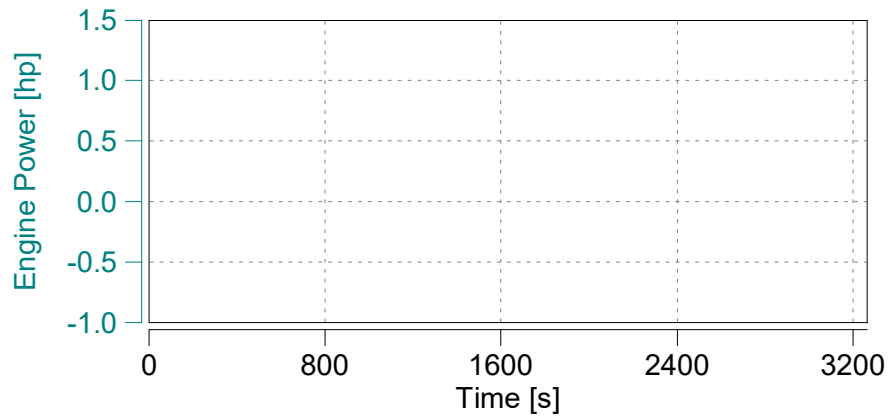
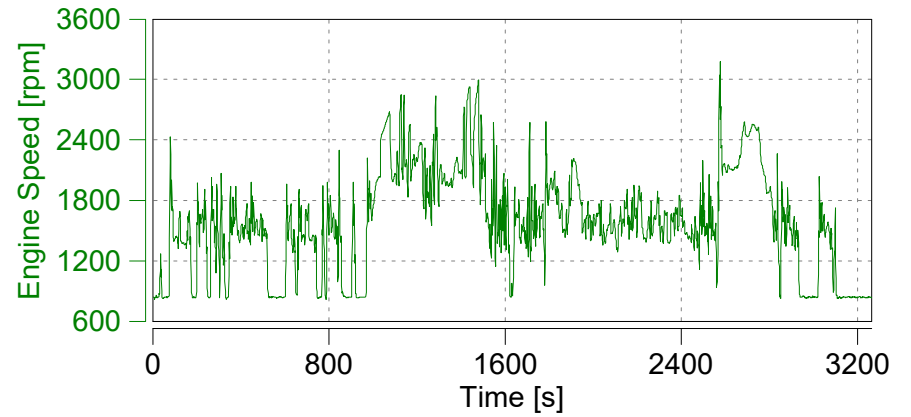
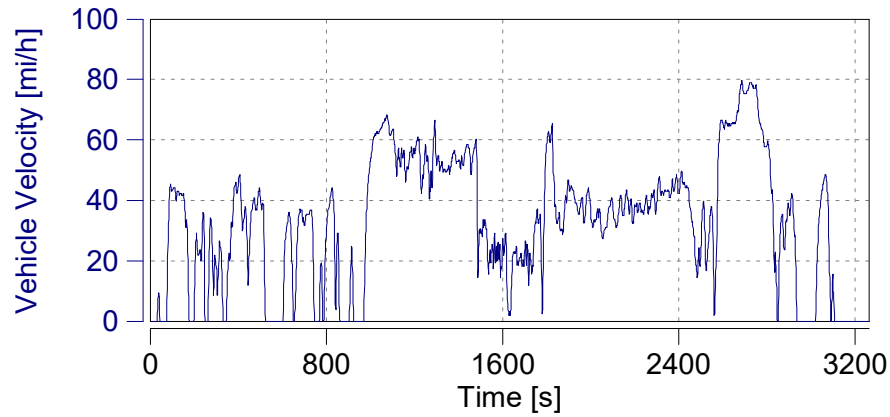
Start Time: 08:21:36.0

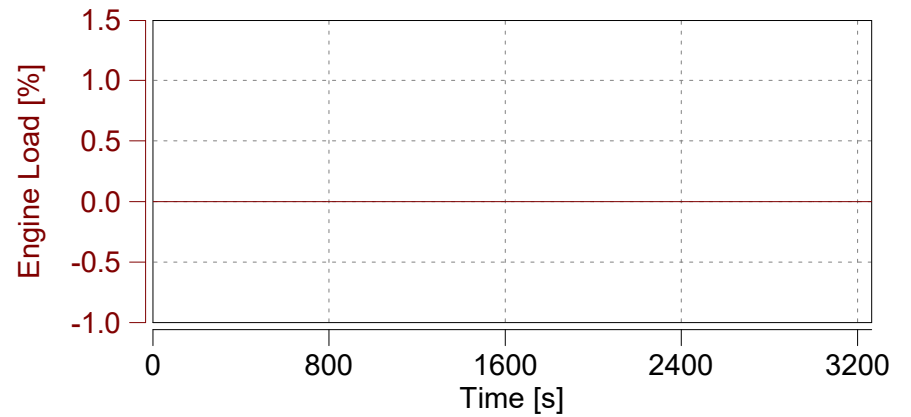
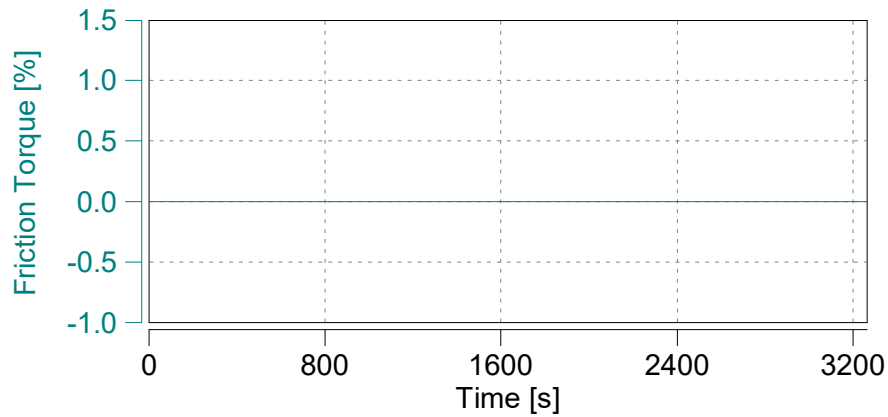
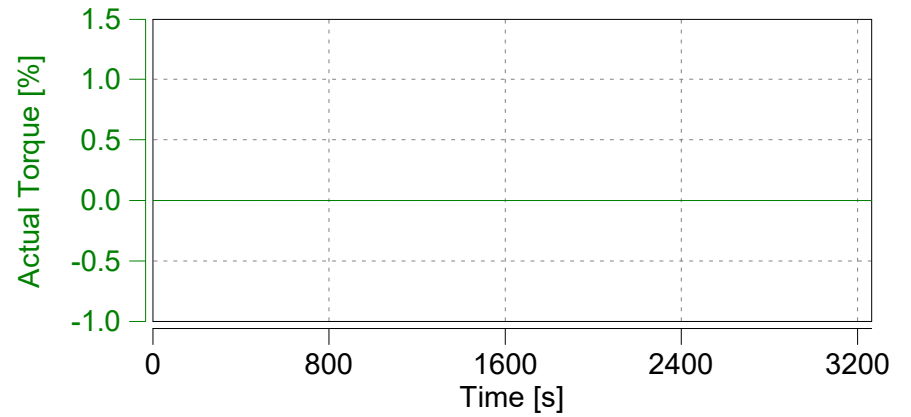
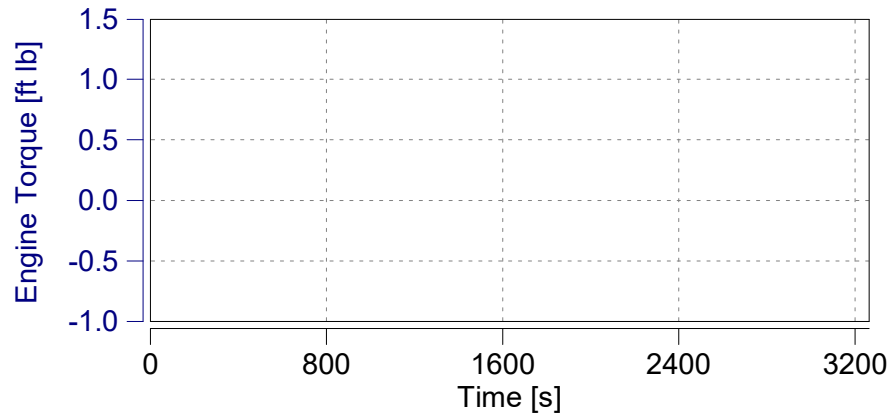


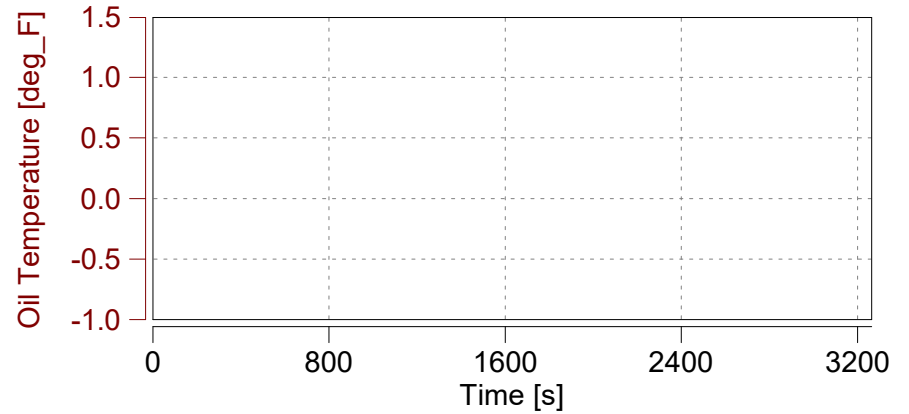
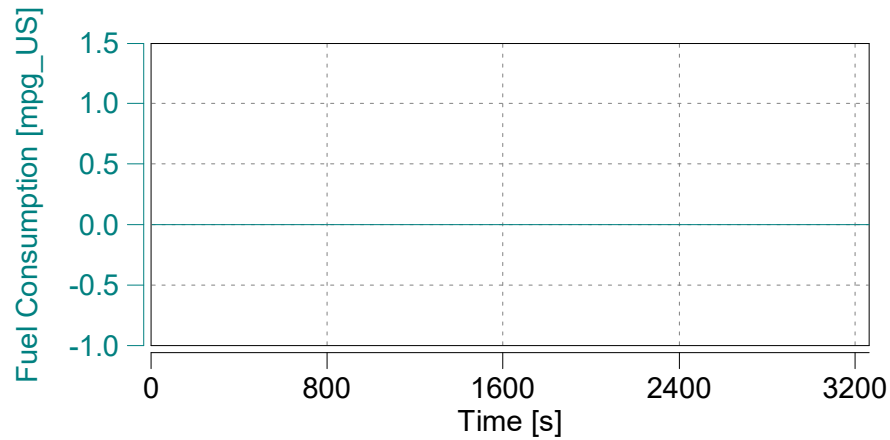
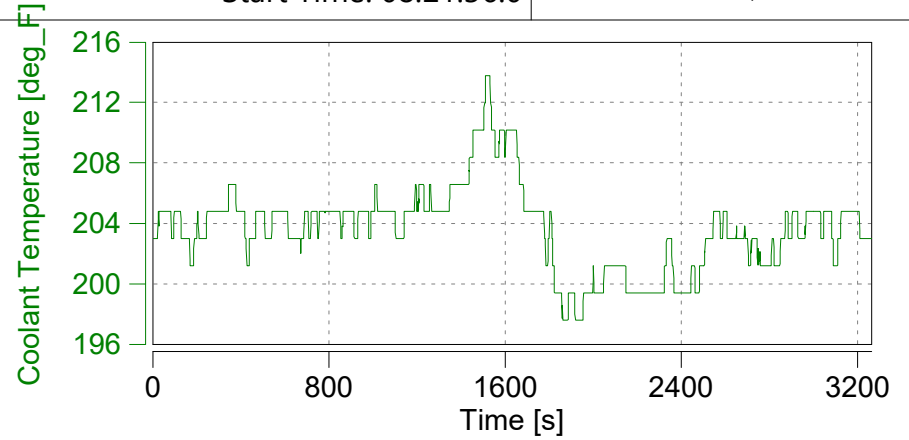
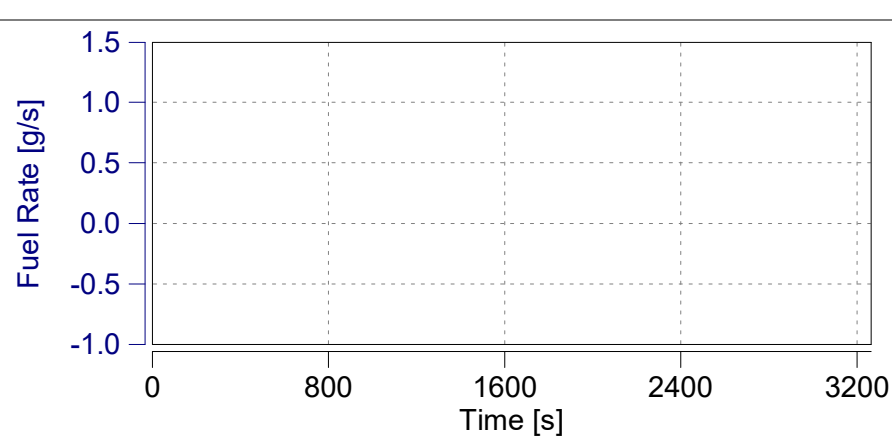
Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

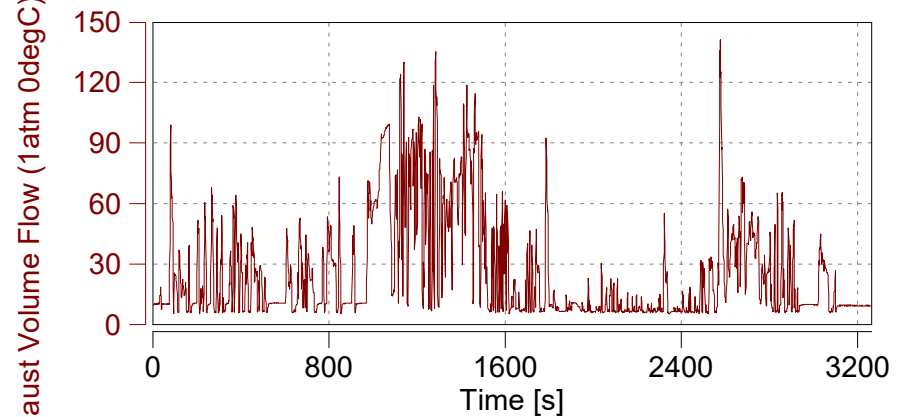
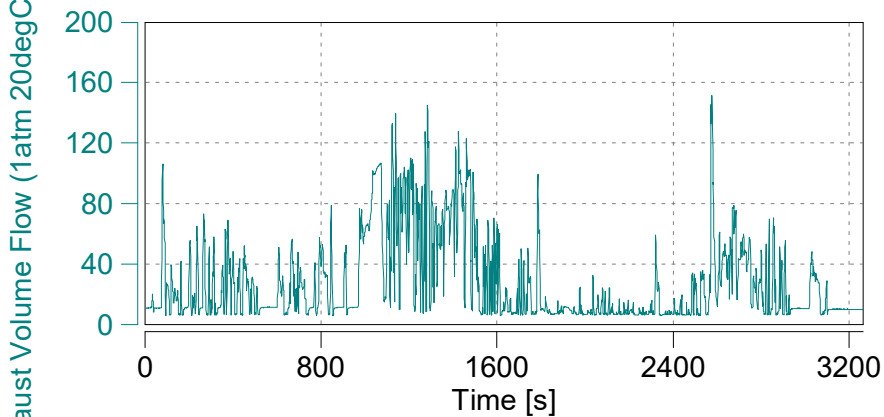
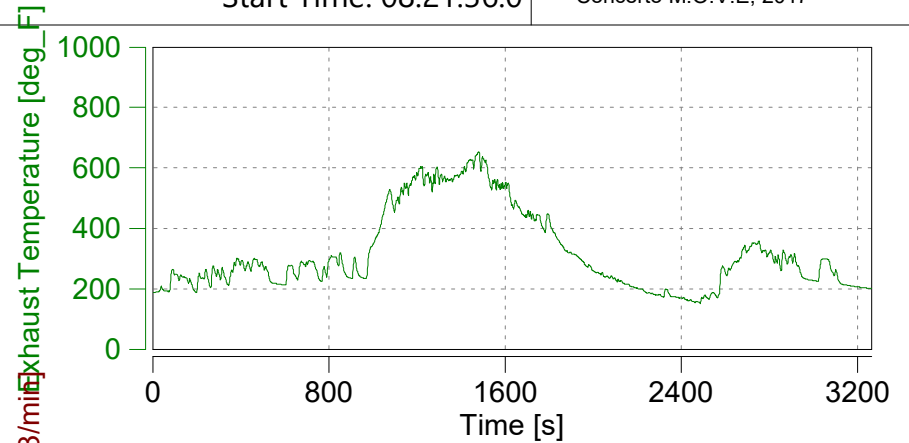
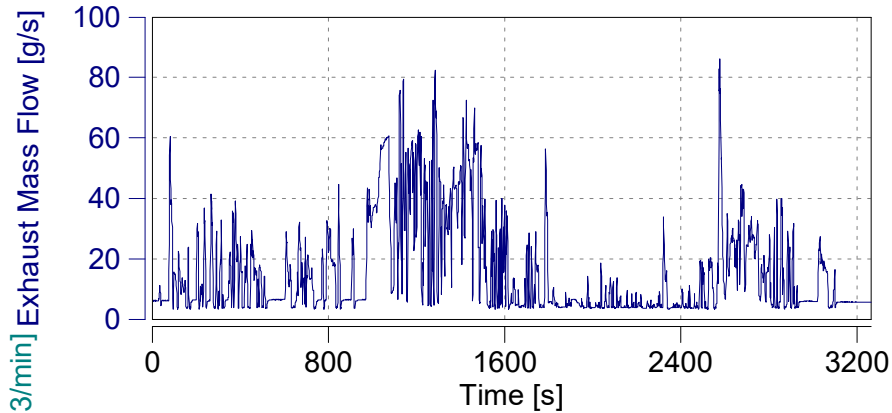
Vehicle: 2017 VW CC /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

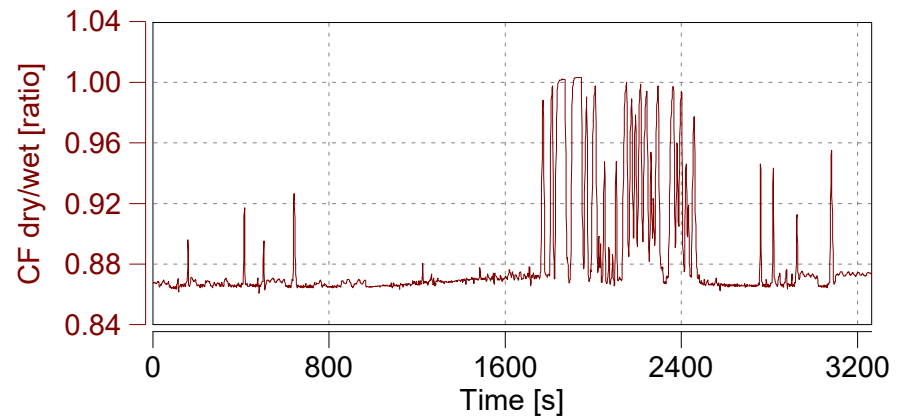
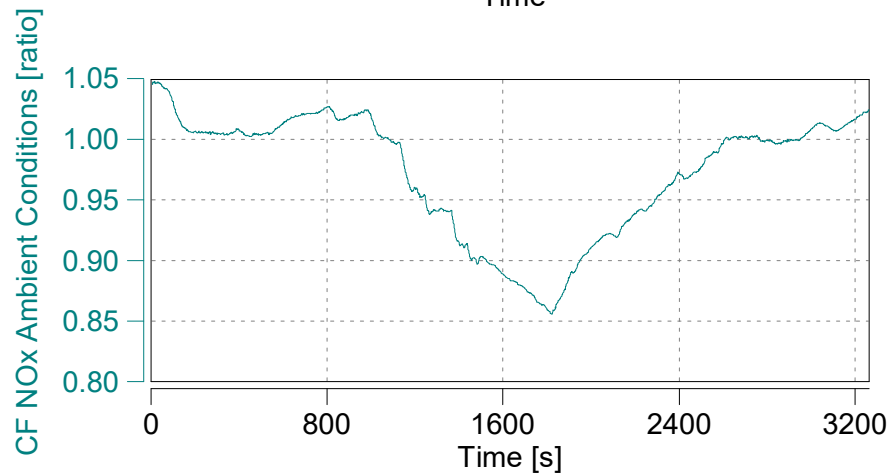
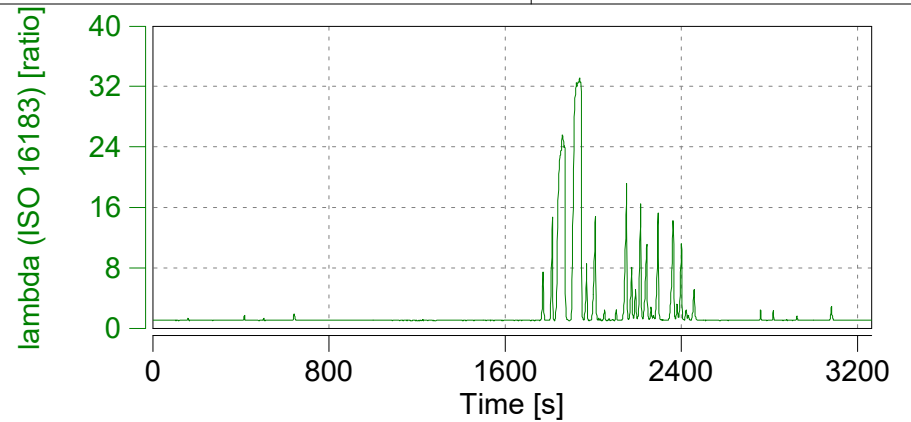
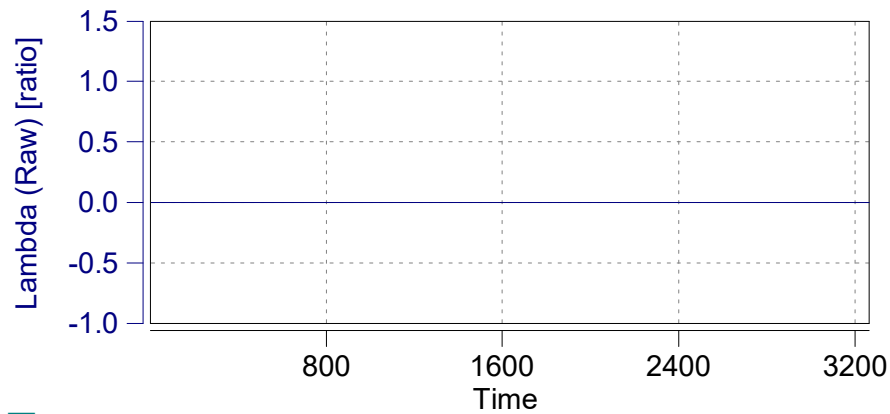










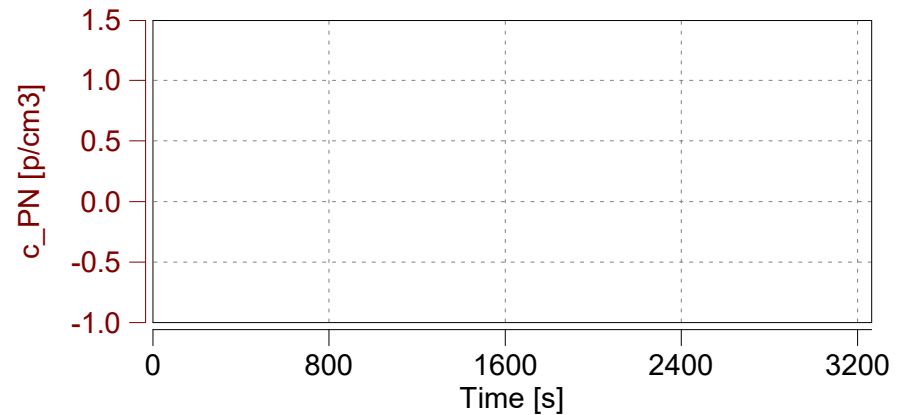
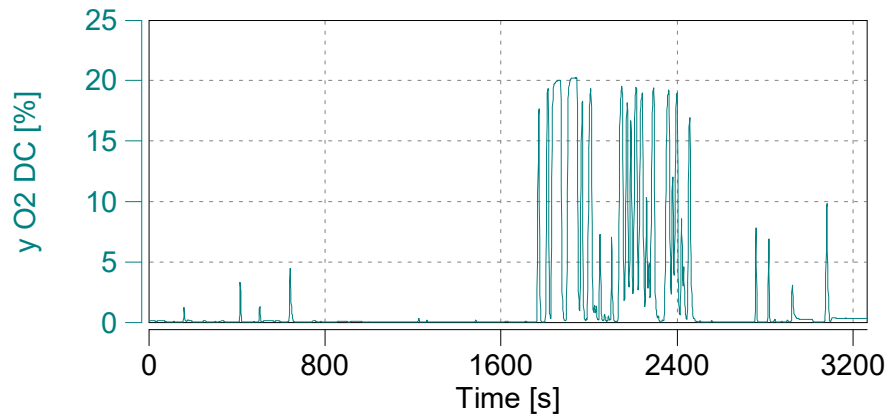
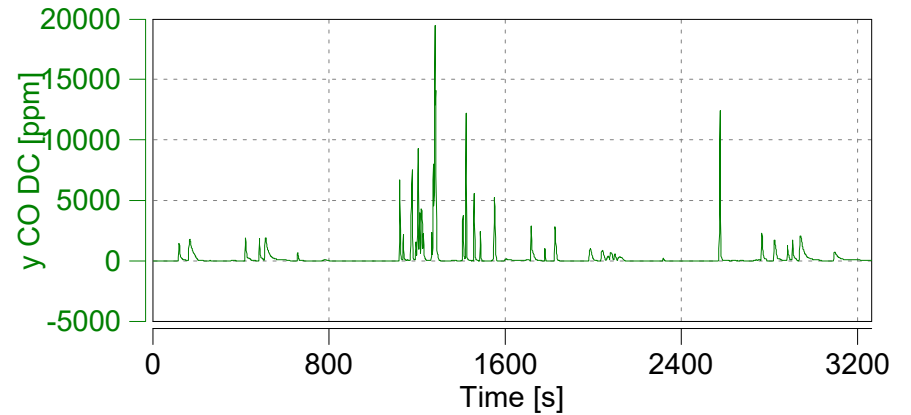
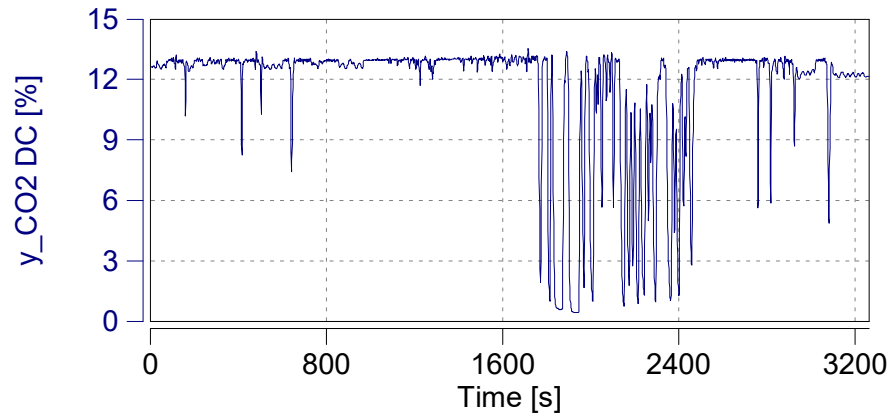


Case: Mountain

Page: Corrected Emissions (1)

Start Date: 09/28/2017

Start Time: 08:21:36.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

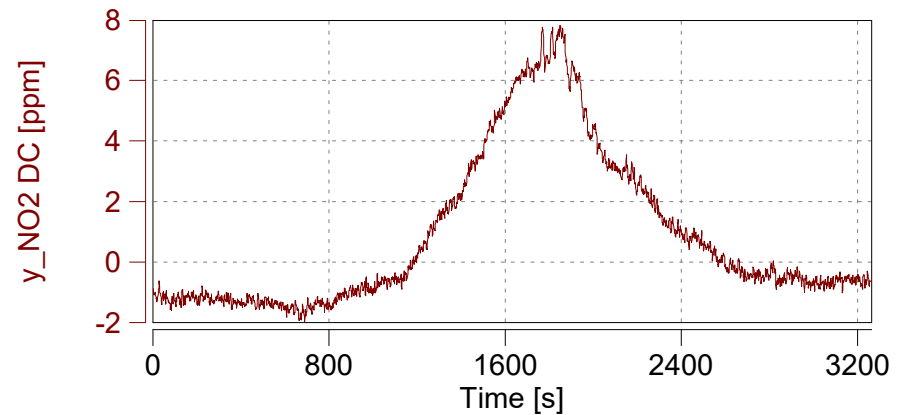
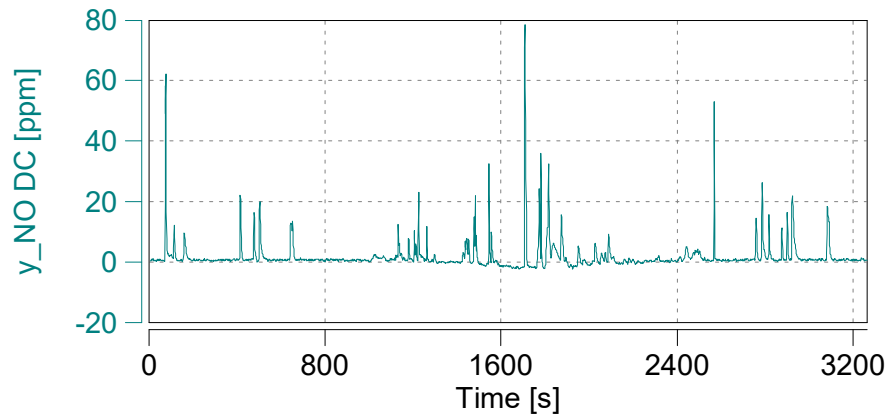
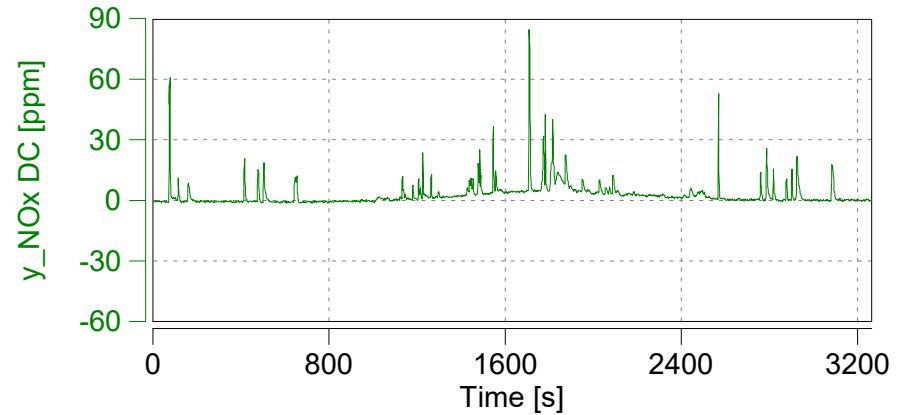
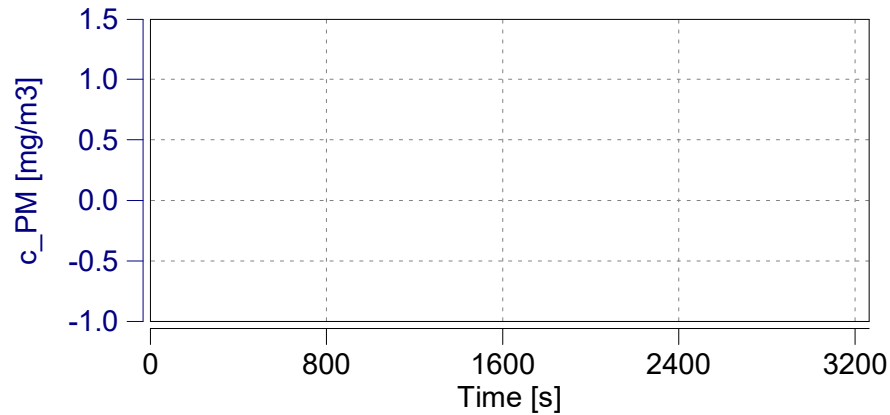
Vehicle: 2017 VW CC /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Mountain

Page: Corrected Emissions (2)

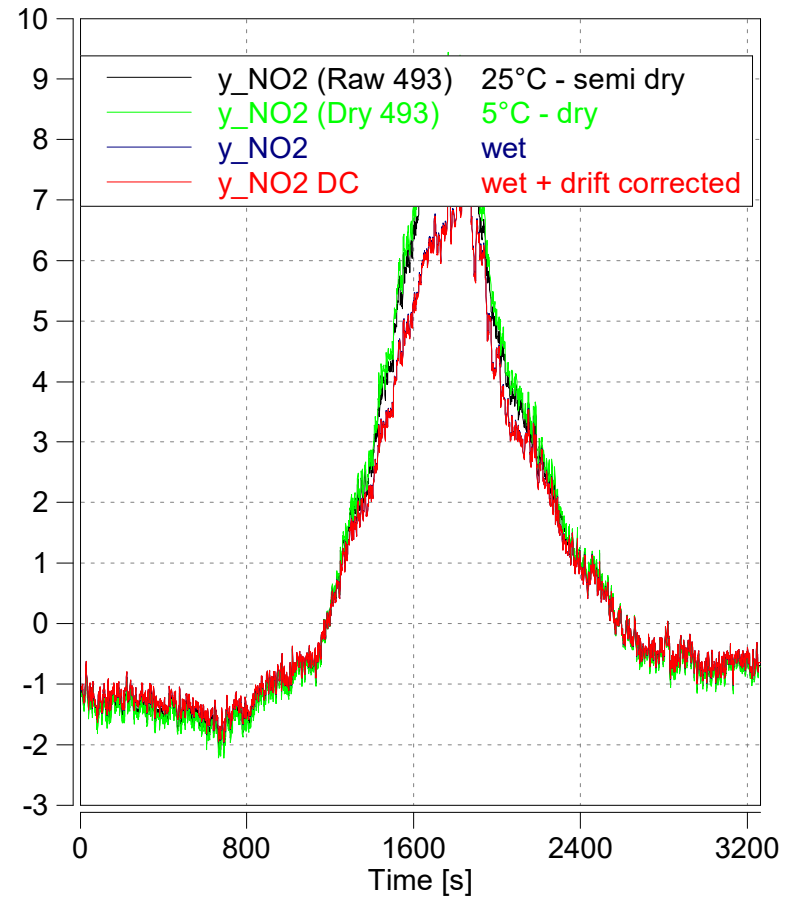
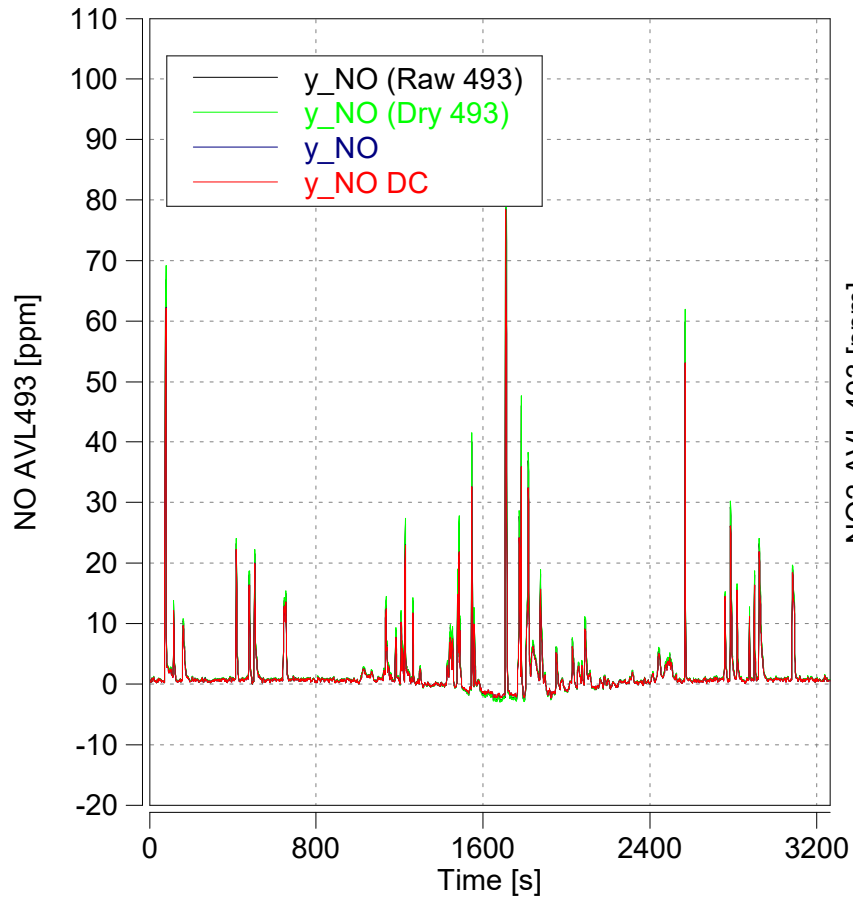
Start Date: 09/28/2017

Start Time: 08:21:36.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

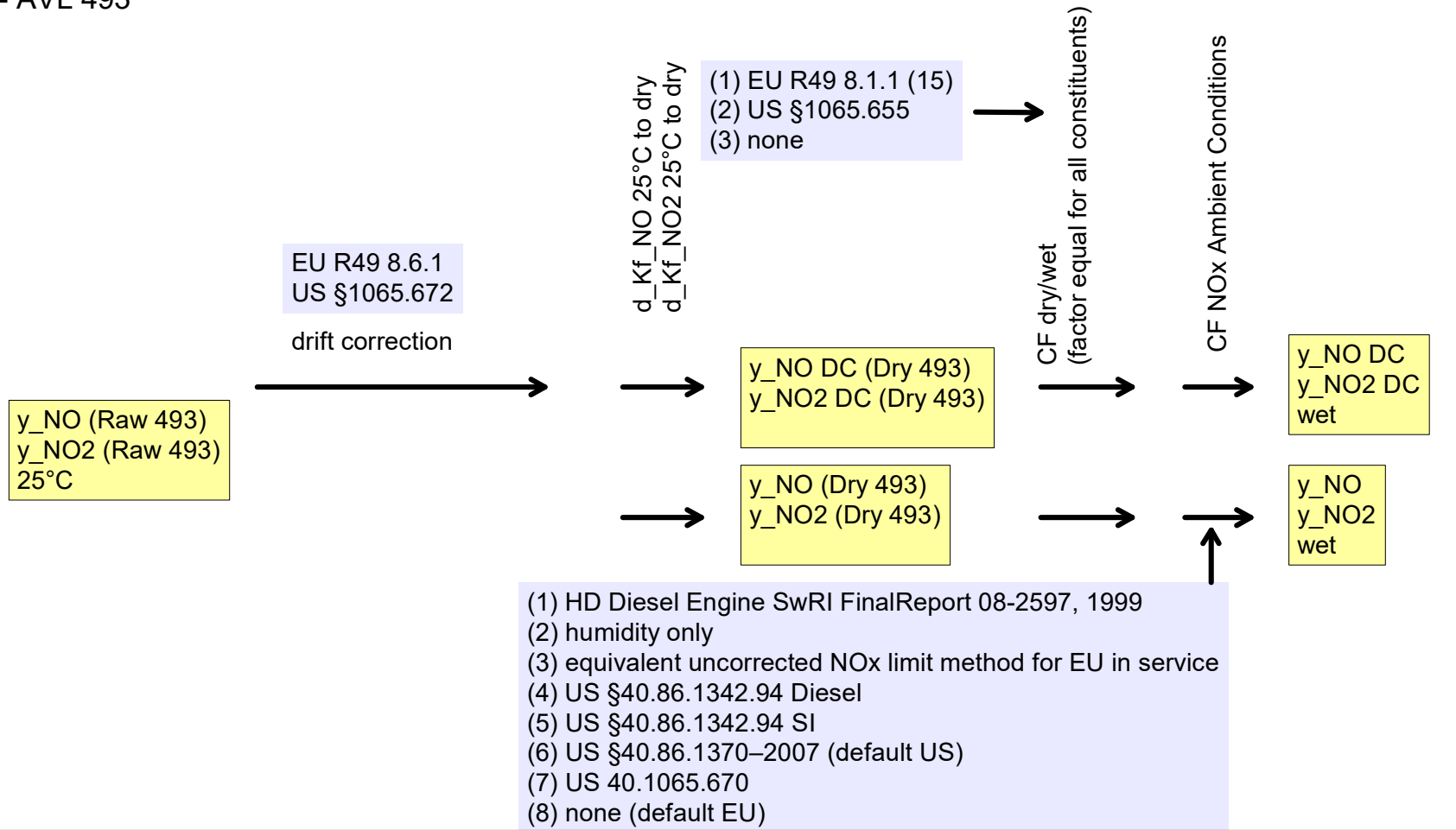
Vehicle: 2017 VW CC /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW CC /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

NOx - AVL 493

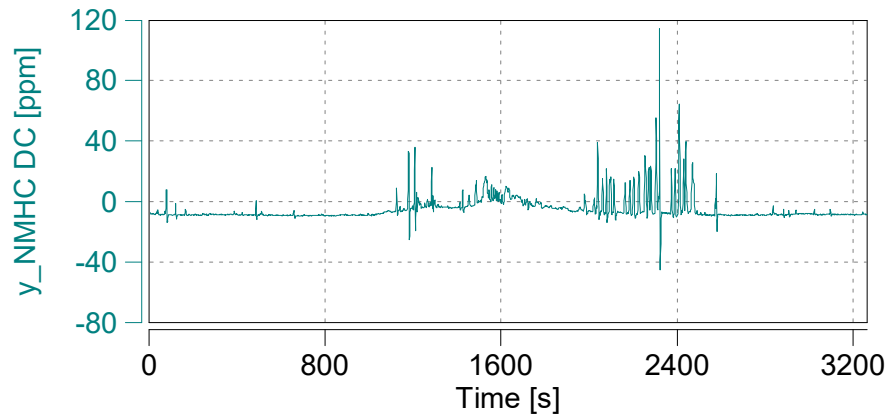
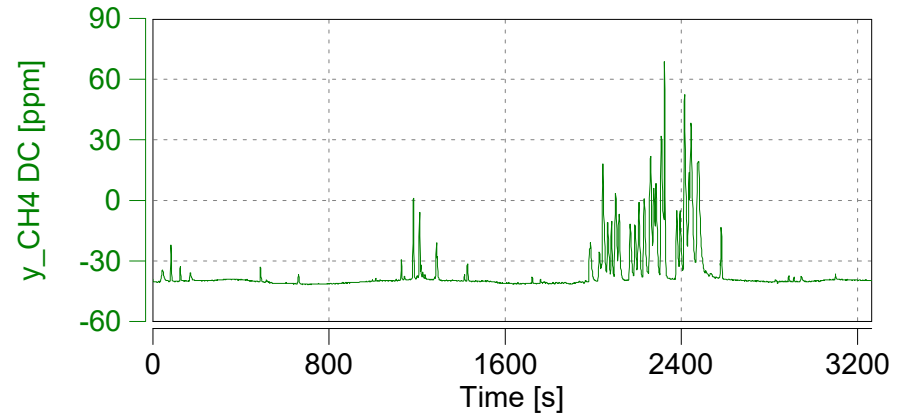
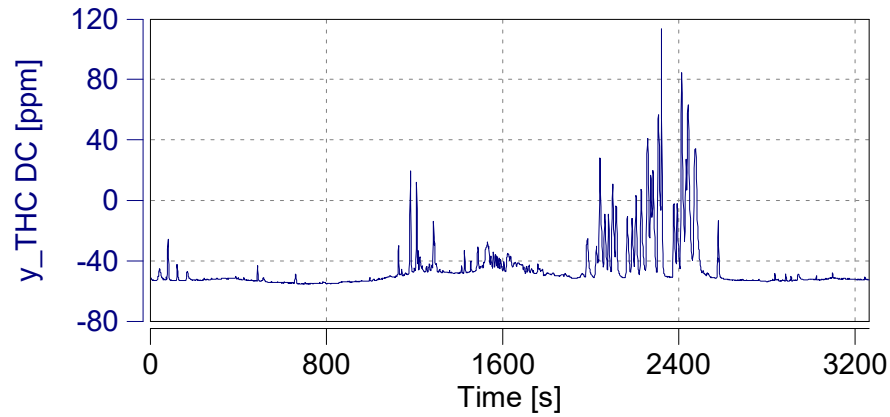


Case: Mountain

Page: Corrected Emissions (5)

Start Date: 09/28/2017

Start Time: 08:21:36.0



Concerto Version: 480 Build 215, Serial Number: 8468
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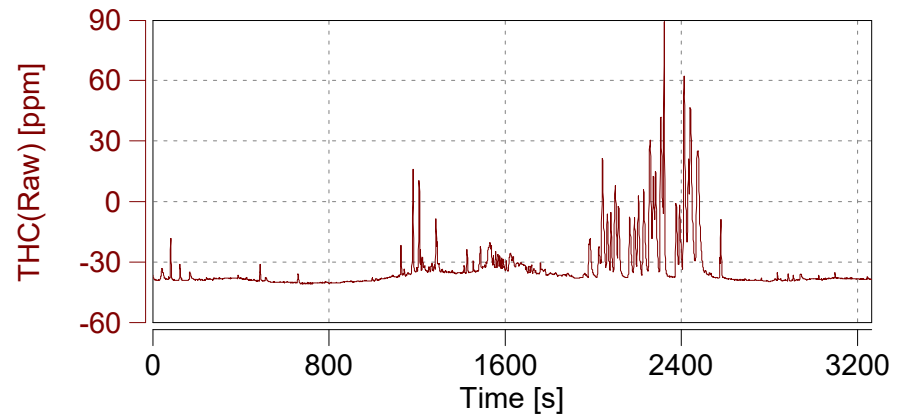
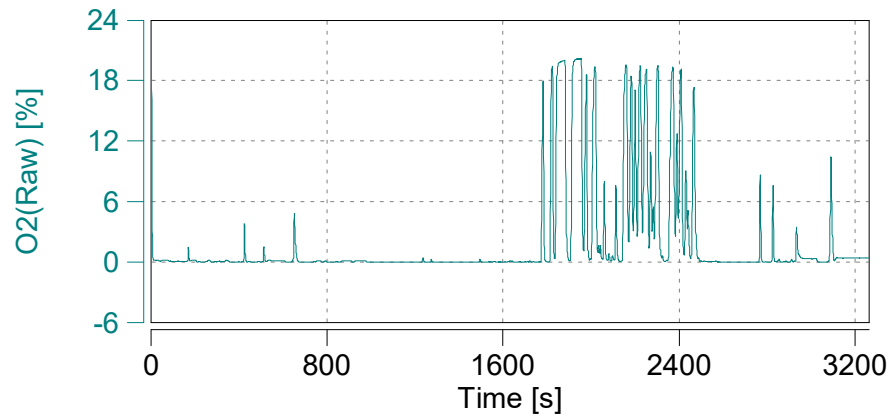
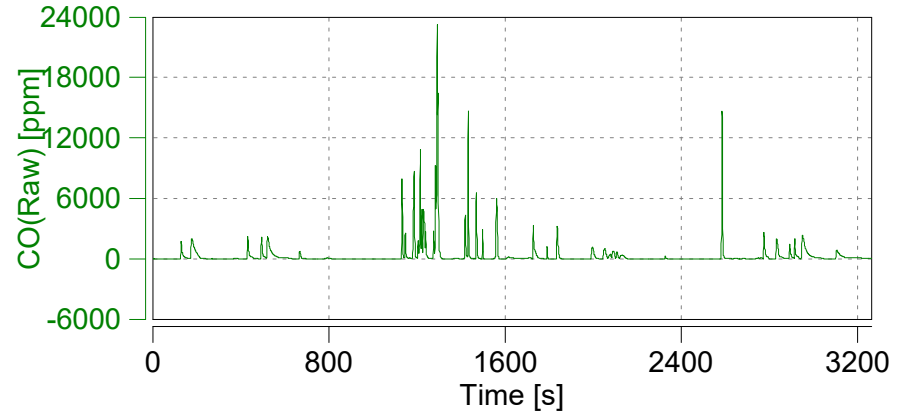
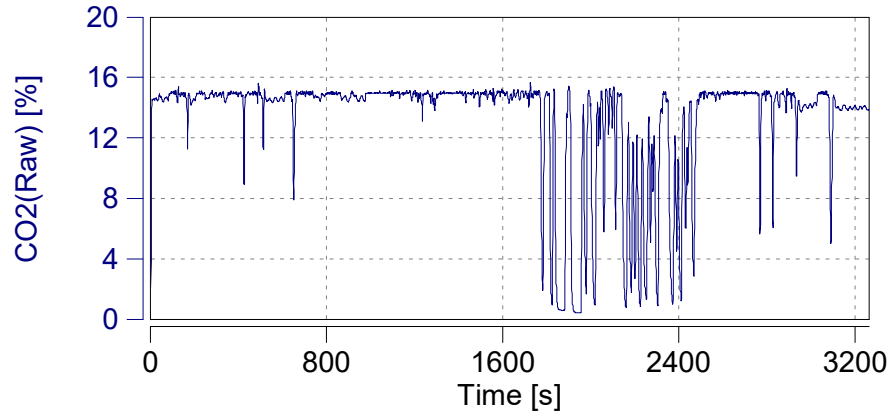
Vehicle: 2017 VW CC /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Mountain

Page: Emissions Raw Data (1)

Start Date: 09/28/2017

Start Time: 08:21:36.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

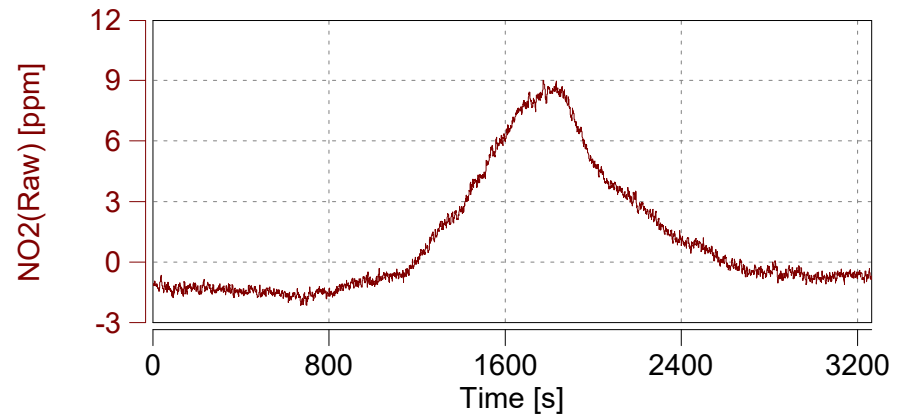
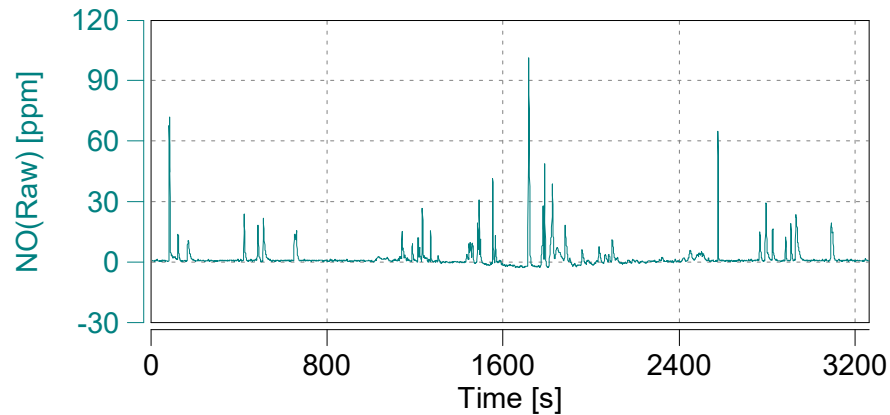
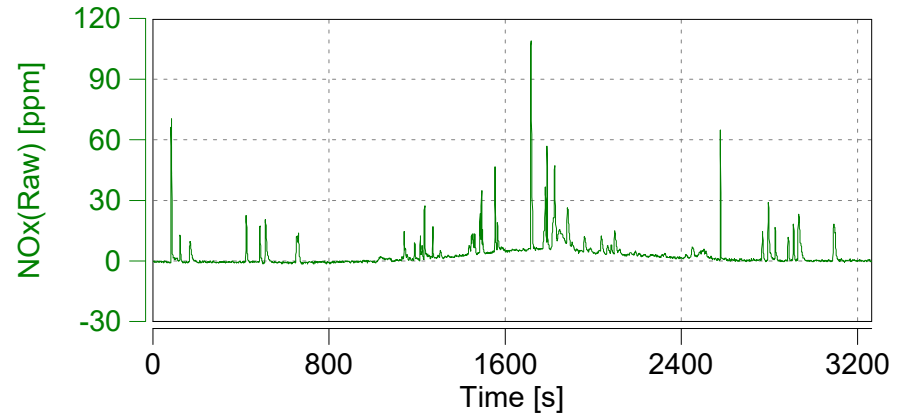
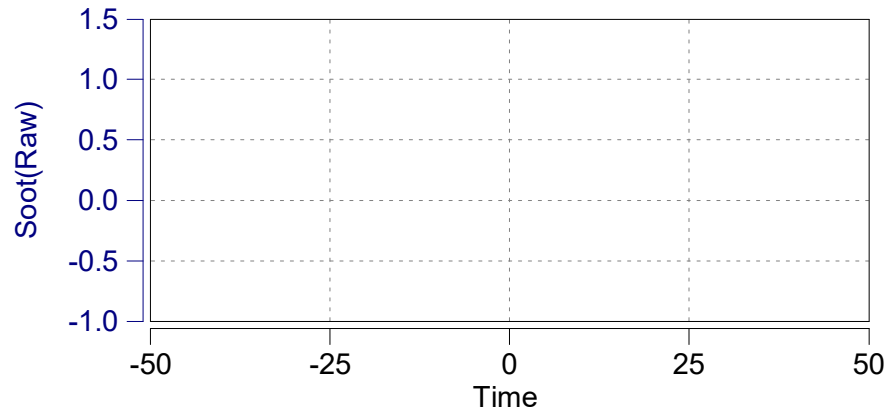
Vehicle: 2017 VW CC /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Mountain

Page: Emissions Raw Data (2)

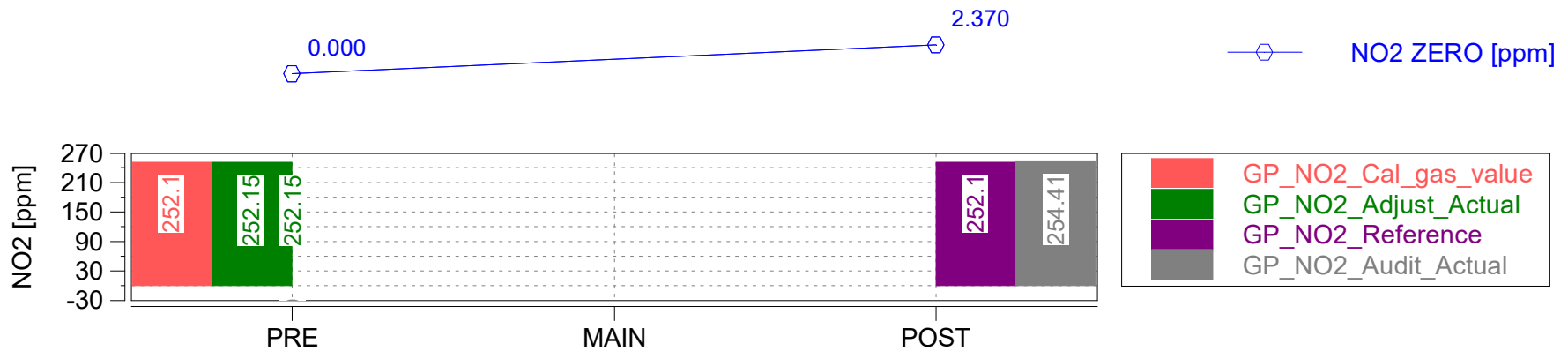
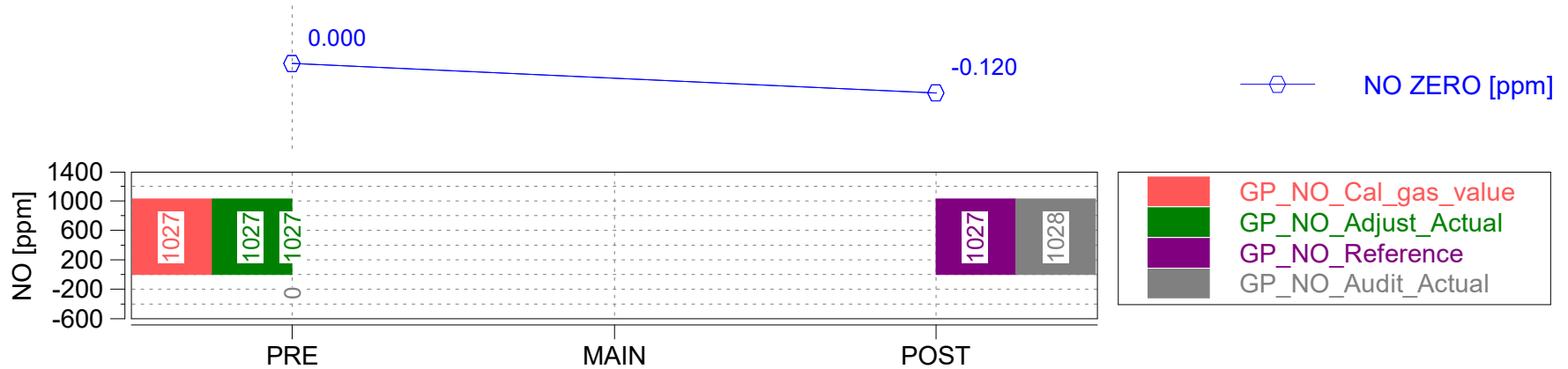
Start Date: 09/28/2017

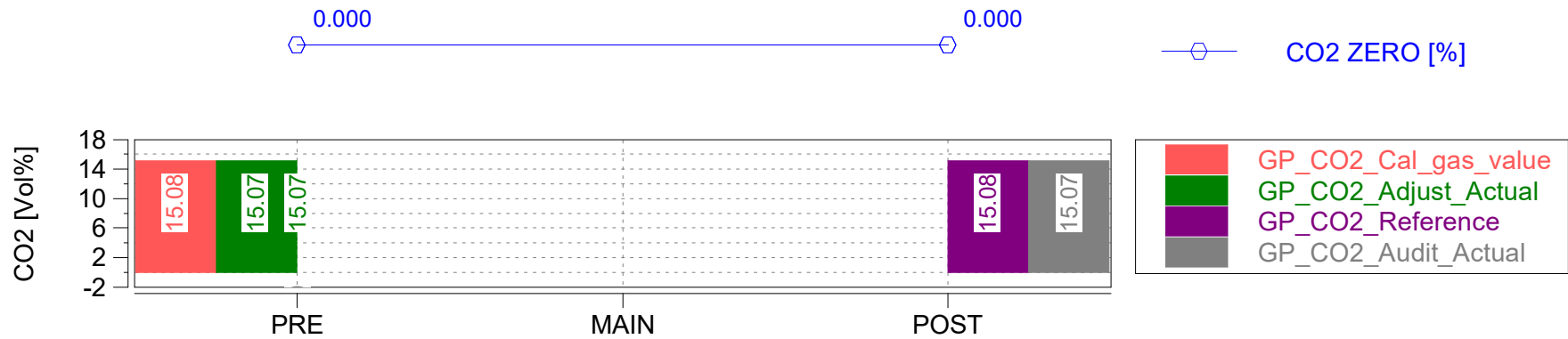
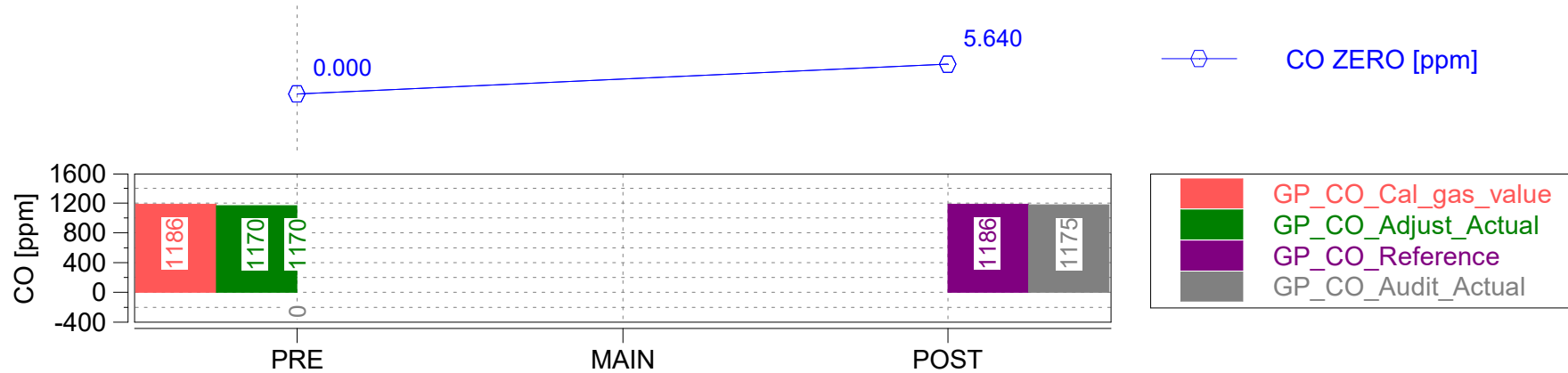
Start Time: 08:21:36.0

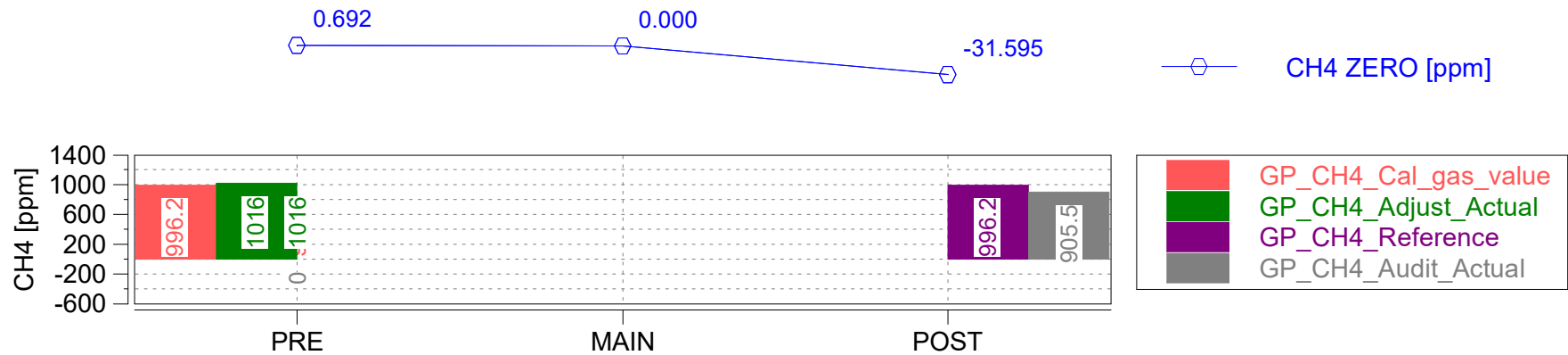
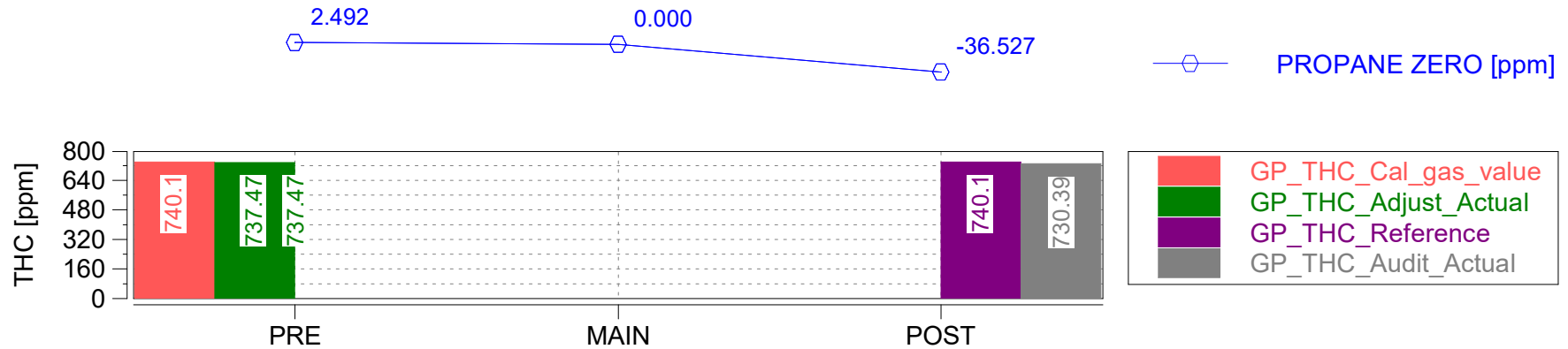


Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW CC /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90







#	Text	Value	Unit
-	----	----	----
1.0	Test Start: Date	-	-
2.0	Test Start: Time	-	-
3.0	Ambient Temperature	IFILE1:TM'Temperature	deg C
4.0	Ambient Temperature TS	0.00000	s
5.0	Ambient Pressure	IFILE1:TM'Pressure	kPa
6.0	Ambient Pressure TS	0.00000	s
7.0	Humidity Type	1.00000	-
8.0	Amb. Rel. Humidity	IFILE1:TM'Humidity	%
9.0	Amb. Rel. Humidity	0.00000	s
10.0	GPS Latitude		deg
11.0	GPS Latitude TS	0.00000	s
12.0	GPS Longitude		deg
13.0	GPS Longitude TS	0.00000	s
14.0	Altitude		m
15.0	Altitude TS	0.00000	s
16.0	GPS Quality		-
17.0	GPS Quality TS	0.00000	s
18.0	GroundSpeed		km/h
19.0	GroundSpeed TS	0.00000	s
20.0	Altitude from topographical map		m
21.0	Altitude TS of topographical map		s
22.0	TRIP_AMBIENT_GPS_AVL	YES	-
23.0	CALC_GPS_GROUNDSPEED	NO	-
24.0	EXHAUST_FLOW_AVL	NO	-
25.0	EXHAUST_FLOW_AVL_EFM	YES	-
26.0	Exhaust Flow Type	2.00000	-
27.0	Mass Flow	IFILE1:TM'PitotEFM_ExhaustG	various
28.0	Mass Flow TS	1.80000	s
29.0	Exhaust Pressure		kPa
30.0	Exhaust Pressure TS	1.80000	s

#	Text	Value	Unit
-	----	----	----
31.0	Exhaust Delta Pressure		kPa
32.0	Exhaust Pressure Delta TS	1.80000	s
33.0	Exhaust Temperature	IFILE1:TM'PitotEFM_ExhaustG	degC
34.0	Exhaust Temperature TS	1.80000	s
35.0	Lambda	N/A	-
36.0	Lambda TS		s
37.0	CO2_DIL		%
38.0	CO2_DIL TS		s
39.0	CVS Volume Flow		m3/min
40.0	TimeShift_CVS_VOL_FLOW		s
41.0	IN_CVS_PRESSURE		kPa
42.0	TimeShift_CVS_PRESSURE		s
43.0	IN_CVS_TEMP		degC
44.0	TimeShift_CVS_TEMP		s
45.0	Dry to Wet Conversion CO2	YES	-
46.0	Dry to Wet Conversion O2	YES	-
47.0	Dry to Wet Conversion NO	NO	-
48.0	Dry to Wet Conversion NO2	NO	-
49.0	Dry to Wet Conversion THC	NO	-
50.0	Dry to Wet Conversion CH4	NO	-
51.0	Dry to Wet Conversion O2	NO	-
52.0	CO2	IFILE1:TM'GPiS_CO2	%
53.0	CO2 TS	-10.00000	s
54.0	OS	IFILE1:TM'GPiS_O2	%
55.0	O2 TS	-10.50000	s
56.0	CO	IFILE1:TM'GPiS_CO	ppm
57.0	CO TS	-10.00000	s
58.0	NO	IFILE1:TM'GPiS_NO	ppm
59.0	NO TS	-8.20000	s
60.0	NO2	IFILE1:TM'GPiS_NO2	ppm

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW CC /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
61.0	NO2 TS	-8.20000	s
62.0	THC	IFILE1:TM'FIDiS_THC_C1	ppm
63.0	THC TS	0.00000	s
64.0	CH4	IFILE1:TM'FIDiS_CH4_C1	ppm
65.0	CH4 TS	0.00000	s
66.0	GAS_PEMS_Ethane_Efficiency	IFILE1:MOVE_AVL4925'GP_Et -	
67.0	GAS_PEMS_Methane_Efficiency	IFILE1:MOVE_AVL4925'GP_M -	
68.0	GAS_PEMS_Methane_Response	IFILE1:MOVE_AVL4925'GP_M -	
69.0	Zero Signal	IFILE1:TM'GPiS_STATE	0/1
70.0	Zero Signal TS	-8.20000	s
71.0	Zero Signal_FIDiS	IFILE1:TM'FIDiS_STATE	0/1
72.0	Zero Signal_FIDiS TS		s
73.0	Species Input Type	4.00000	-
74.0	GASPEMS=AVL493	NO	-
75.0	GASPEMS=AVL493_iX	NO	-
76.0	GASPEMS=AVL492	YES	-
77.0	GASPEMS=AVL4925	YES	-
78.0	PM: Type	4.00000	1=GFB+HC, 2=GFB, 3='PM=S
79.0	Filter ID from IFile	NO	-
80.0	Lab ID from IFile	NO	-
81.0	PM Filter: ID	N/A	ID
82.0	PM Filter: Lab	N/A	Name/ID
83.0	PM Filter: Weight before Test	N/A	mg
84.0	PM Filter: Weight after Test	N/A	mg
85.0	PM (HC Corr): Max. Exhaust Flow	N/A	scfm
86.0	Soot		mg/m3
87.0	Soot TS	-5.00000	s
88.0	Soot Sensor		mg/m3
89.0	Soot Sensor TS		s
90.0	PM Filter: Filter Flow Rate		l/min

#	Text	Value	Unit
-	----	----	----
91.0	PM Filter: Filter Flow Rate TS	-5.00000	s
92.0	PM Filter: Filter Dilution Ratio		-
93.0	PM Filter: Filter Dilution Ratio TS	-5.00000	s
94.0	PM Filter: Filter Trigger		-
95.0	PM Filter: Filter Trigger TS	-5.00000	s
96.0	PMPEMS=AVL494	YES	-
97.0	PMPEMS_AVL494_PROP_DIL	NO	-
98.0	PM dilution ratio min		-
99.0	PM_MaxExhaustFlowRate		-
100.0	PM_ExhaustFlow_Thresh		-
101.0	PM_total_flow_val		-
102.0	PM_total_flow_val_TS		-
103.0	PM_exh_mass_flow		-
104.0	PM_exh_mass_flow_TS		-
105.0	PN		#/cm3
106.0	TimeShift_PN		s
107.0	PN_STATE		-
108.0	PN TS STATE		s
109.0	PNPEMS_AVL496	NO	-
110.0	PN_CorrFactor	1.00000	
111.0	Time Alignment	1.00000	-
112.0	Time Alignment Dataset 1	N/A	0/1
113.0	Time Alignment Dataset 2	N/A	0/1
114.0	Time Alignment Thresh 1	N/A	-
115.0	Time Alignment Thresh 2	N/A	-
116.0			
117.0			
118.0			
119.0			
120.0			

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Vehicle: 2017 VW CC /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
121.0			
122.0	Trigger		0/1
123.0	Trigger TS		s
124.0	FTIR_NAME_1		-
125.0	FTIR_MW_1		-
126.0	FTIR_CHANNEL_1		-
127.0	FTIR_CHANNEL_TS_1		-
128.0	FTIR_CHANNEL_DRY_1	NO	-
129.0	FTIR_NAME_2		-
130.0	FTIR_MW_2		-
131.0	FTIR_CHANNEL_2		-
132.0	FTIR_CHANNEL_TS_2		-
133.0	FTIR_CHANNEL_DRY_2	NO	-
134.0	FTIR_NAME_3		-
135.0	FTIR_MW_3		-
136.0	FTIR_CHANNEL_3		-
137.0	FTIR_CHANNEL_TS_3		-
138.0	FTIR_CHANNEL_DRY_3	NO	-
139.0	FTIR_NAME_4		-
140.0	FTIR_MW_4		-
141.0	FTIR_CHANNEL_4		-
142.0	FTIR_CHANNEL_TS_4		-
143.0	FTIR_CHANNEL_DRY_4	NO	-
144.0	FTIR_NAME_5		-
145.0	FTIR_MW_5		-
146.0	FTIR_CHANNEL_5		-
147.0	FTIR_CHANNEL_TS_5		-
148.0	FTIR_CHANNEL_DRY_5	NO	-
149.0	FTIR_NAME_6		-
150.0	FTIR_MW_6		-

#	Text	Value	Unit
-	----	----	----
151.0	FTIR_CHANNEL_6		-
152.0	FTIR_CHANNEL_TS_6		-
153.0	FTIR_CHANNEL_DRY_6	NO	-
154.0	FTIR_NAME_7		-
155.0	FTIR_MW_7		-
156.0	FTIR_CHANNEL_7		-
157.0	FTIR_CHANNEL_TS_7		-
158.0	FTIR_CHANNEL_DRY_7	NO	-
159.0	FTIR_NAME_8		-
160.0	FTIR_MW_8		-
161.0	FTIR_CHANNEL_8		-
162.0	FTIR_CHANNEL_TS_8		-
163.0	FTIR_CHANNEL_DRY_8	NO	-
164.0	FTIR_NAME_9		-
165.0	FTIR_MW_9		-
166.0	FTIR_CHANNEL_9		-
167.0	FTIR_CHANNEL_TS_9		-
168.0	FTIR_CHANNEL_DRY_9	NO	-
169.0	FTIR_NAME_10		-
170.0	FTIR_MW_10		-
171.0	FTIR_CHANNEL_10		-
172.0	FTIR_CHANNEL_TS_10		-
173.0	FTIR_CHANNEL_DRY_10	NO	-
174.0	FTIR_NAME_11		-
175.0	FTIR_MW_11		-
176.0	FTIR_CHANNEL_11		-
177.0	FTIR_CHANNEL_TS_11		-
178.0	FTIR_CHANNEL_DRY_11	NO	-
179.0	FTIR_NAME_12		-
180.0	FTIR_MW_12		-

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Vehicle: 2017 VW CC /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
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#	Text	Value	Unit
-	----	----	----
181.0	FTIR_CHANNEL_12		-
182.0	FTIR_CHANNEL_TS_12		-
183.0	FTIR_CHANNEL_DRY_12	NO	-
184.0	FTIR_NAME_13		-
185.0	FTIR_MW_13		-
186.0	FTIR_CHANNEL_13		-
187.0	FTIR_CHANNEL_TS_13		-
188.0	FTIR_CHANNEL_DRY_13	NO	-
189.0	FTIR_NAME_14		-
190.0	FTIR_MW_14		-
191.0	FTIR_CHANNEL_14		-
192.0	FTIR_CHANNEL_TS_14		-
193.0	FTIR_CHANNEL_DRY_14	NO	-
194.0	FTIR_NAME_15		-
195.0	FTIR_MW_15		-
196.0	FTIR_CHANNEL_15		-
197.0	FTIR_CHANNEL_TS_15		-
198.0	FTIR_CHANNEL_DRY_15	NO	-
199.0	FTIR_NAME_16		-
200.0	FTIR_MW_16		-
201.0	Vehicle Type	2017 VW CC	-
202.0	Vehicle Info		-
203.0	Engine Type	Gasoline	-
204.0	Engine Info	2.0L	-
205.0	Engine Torque		Nm
206.0	Curb Idle Load		%
207.0	Idle Speed		rpm
208.0	HYBRID_OVC_REF_CO2_gkm		g/km
209.0	Engine Concept	1.00000	-
210.0	Alpha	1.93000	-

#	Text	Value	Unit
-	----	----	----
211.0	Beta	1.00000	
212.0	Gamma	0.00000	
213.0	Delta	0.00000	
214.0	Epsilon	0.03200	
215.0	X_C	83.00000	
216.0	X_H	13.30000	
217.0	X_N	0.00000	
218.0	X_O	3.50000	
219.0	X_S	0.00000	
220.0	Fuel_Density	747.50000	
221.0	rho_exhaust	1.29310	
222.0	U_CO2	1.51800	
223.0	U_CO	0.96600	
224.0	U_NO	1.58700	
225.0	U_NO2	1.58700	
226.0	U_NOx	1.58700	
227.0	U_HC	0.49900	
228.0	U_NMHC	0.47100	
229.0	U_CH4	0.55300	
230.0	U_O2	1.10400	
231.0	Fuel Type	2.00000	-
232.0	exhaust mass flow type (YES/NO)	YES	-
233.0	Distance Calculation Type	1.00000	-
234.0	Velocity Statistics Calculation Type	2.00000	-
235.0	RDE vehicle class	1.00000	-
236.0	TM_CITY0		s
237.0	TM_CITY1		s
238.0	TM_RURAL0		s
239.0	TM_RURAL1		s
240.0	TM_RURAL2_0		s

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M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW CC /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
241.0	TM_RURAL2_1		s
242.0	Second Rural Part for Time Marks (NO		-
243.0	TM_MW0		s
244.0	TM_MW1		s
245.0	VELOCITY_LIMIT_STOP	2.00000	km/h
246.0	VELOCITY_LIMIT_URBAN	50.00000	km/h
247.0	VELOCITY_LIMIT_RURAL	75.00000	km/h
248.0	Intake Manifold Pressure Type	1.00000	-
249.0	Velocity	IFILE1:TM'OBD_Vehicle_Spee	km/h
250.0	Velocity TS	1.60000	s
251.0	Velocity FACTOR	1.00000	-
252.0	Coolant Temperature	IFILE1:TM'OBD_Engine_Coola	degC
253.0	Coolant Temperature TS	1.60000	s
254.0	Oil Temperature		degC
255.0	Oil Temperature TS	1.60000	s
256.0	Intake Manifold Temperature		degC
257.0	Intake Manifold Temp TS	1.60000	s
258.0	Intake Manifold Pressure	IFILE1:TM'OBD_Intake_manifo	kPa
259.0	Intake Manifold Pressure TS	1.60000	s
260.0	Throttle Position		%
261.0	Throttle TS	1.60000	s
262.0	TYP_IDLE_MASS_FLOW		kg/h
263.0	Torque Type	1.00000	-
264.0	Speed	IFILE1:TM'OBD_Engine_RPM	rpm
265.0	Speed TS	1.60000	s
266.0	Torque		Nm
267.0	Torque TS	1.60000	s
268.0	Friction Torque	N/A	Nm
269.0	Friction Torque TS	N/A	s
270.0	Reference Torque	N/A	Nm

#	Text	Value	Unit
-	----	----	----
271.0	Reference Torque TS	N/A	s
272.0	k_VELINE		-
273.0	D_VELINE		-
274.0	Fuel Flow Type	2.00000	-
275.0	Air Flow Type	1.00000	-
276.0	Fuel Rate		various
277.0	Air Rate		various
278.0	Fuel Rate TS	1.60000	s
279.0	No_Cylinders		-
280.0	Air Rate TS	1.60000	s
281.0	FTIR_CHANNEL_32		-
282.0	FTIR_CHANNEL_TS_32		-
283.0	FTIR_CHANNEL_DRY_32	NO	-
284.0	FTIR_NAME_33		-
285.0	FTIR_MW_33		-
286.0	FTIR_CHANNEL_33		-
287.0	FTIR_CHANNEL_TS_33		-
288.0	FTIR_CHANNEL_DRY_33	NO	-
289.0	FTIR_NAME_34		-
290.0	FTIR_MW_34		-
291.0	FTIR_CHANNEL_34		-
292.0	FTIR_CHANNEL_TS_34		-
293.0	FTIR_CHANNEL_DRY_34	NO	-
294.0	FTIR_NAME_35		-
295.0	FTIR_MW_35		-
296.0	FTIR_CHANNEL_35		-
297.0	FTIR_CHANNEL_TS_35		-
298.0	FTIR_CHANNEL_DRY_35	NO	-
299.0	FTIR_NAME_36		-
300.0	FTIR_MW_36		-

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M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW CC /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
301.0	FTIR_CHANNEL_36	-	-
302.0	FTIR_CHANNEL_TS_36	-	-
303.0	FTIR_CHANNEL_DRY_36	NO	-
304.0	FTIR_NAME_37	-	-
305.0	FTIR_MW_37	-	-
306.0	FTIR_CHANNEL_37	-	-
307.0	FTIR_CHANNEL_TS_37	-	-
308.0	FTIR_CHANNEL_DRY_37	NO	-
309.0	FTIR_NAME_38	-	-
310.0	FTIR_MW_38	-	-
311.0	FTIR_CHANNEL_38	-	-
312.0	FTIR_CHANNEL_TS_38	-	-
313.0	FTIR_CHANNEL_DRY_38	NO	-
314.0	FTIR_NAME_39	-	-
315.0	FTIR_MW_39	-	-
316.0	FTIR_CHANNEL_39	-	-
317.0	FTIR_CHANNEL_TS_39	-	-
318.0	FTIR_CHANNEL_DRY_39	NO	-
319.0	FTIR_NAME_40	-	-
320.0	FTIR_MW_40	-	-
321.0	FTIR_CHANNEL_40	-	-
322.0	FTIR_CHANNEL_TS_40	-	-
323.0	FTIR_CHANNEL_DRY_40	NO	-
324.0	Legislation Type (1=HDIUT 2=EU H	4.00000	-
325.0	WholeTest_NOx_corr	5.00000	-
326.0	WholeTest_Hum_corr	2.00000	-
327.0	CD_Distance	0.00000	km
328.0	CD_NOx	0.00000	mg/km
329.0	CD_CO	0.00000	mg/km
330.0	CD_CO2	0.00000	g/km

#	Text	Value	Unit
-	----	----	----
331.0	CD_NMHC	0.00000	mg/km
332.0	CD_CH4	0.00000	mg/km
333.0	CD_THC	0.00000	mg/km
334.0	CD_PN	-	#/km
335.0	WLTC_LOW_SPEED_gkm	-	g/km
336.0	WLTC_LOW_SPEED_FAC	1.20000	-
337.0	WLTC_MEDIUM_SPEED_gkm	-	g/km
338.0	WLTC_HIGH_SPEED_gkm	-	g/km
339.0	WLTC_HIGH_SPEED_FAC	1.10000	-
340.0	WLTC_EXTRA_HIGH_SPEED_gkm	-	g/km
341.0	WLTC_EXTRA_HIGH_SPEED_FA	1.05000	-
342.0	TOL_NORMAL_DRIVING	25.00000	%
343.0	TOL_SEVERE_DRIVING	50.00000	%
344.0	Increase Tolerance Nomral Driving	NO	-
345.0	Bin1_min	-	km/h
346.0	Bin2_min	-	km/h
347.0	Bin3_min	-	km/h
348.0	Bin1_max	-	km/h
349.0	Bin2_max	-	km/h
350.0	Bin3_max	-	km/h
351.0	Clear_R0	125.40000	N
352.0	Clear_R1	0.29300	Nh/km
353.0	Clear_R2	0.02795	N*(h/km) ²
354.0	Clear_SMK	1470.00000	kg
355.0	Clear_Rated_Power	140.00000	kW
356.0	Clear_Ref_Velocity	70.00000	km/h
357.0	Clear_Ref_Acc	0.45000	m/s ²
358.0	Clear_Smooth	3.00000	s
359.0	EXTC_From_High_Temp	30.00000	degC
360.0	EXTC_To_High_Temp	35.00000	degC

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW CC /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
361.0	EXTC_From_Low_Temp	-7.00000	degC
362.0	EXTC_To_Low_Temp	0.00000	degC
363.0	Euro 6d or Euro 6d temp	NO	-
364.0	EXTC_From_Altitude	700.00000	m
365.0	EXTC_To_Altitude	1300.00000	m
366.0	EXTC_CORR_FAC	1.60000	
367.0	weight cold start (YES/NO)	NO	-
368.0	precon and soak done (YES/NO)	NO	-
369.0	PATH_PRECON_FILE		
370.0	filter velocity (YES/NO)	NO	-
371.0	filter velocity auto(YES/NO)	NO	-
372.0	Ki_CO		
373.0	Ki_CO2		
374.0	Ki_NOx		
375.0	Ki_FACTOR_CO2 (YES/NO)	NO	-
376.0	Ki_OFFSET_CO2 (YES/NO)	NO	-
377.0	Ki_FACTOR_CO (YES/NO)	NO	-
378.0	Ki_OFFSET_CO (YES/NO)	NO	-
379.0	Ki_FACTOR_NOx (YES/NO)	NO	-
380.0	Ki_OFFSET_NOx (YES/NO)	NO	-
381.0	Ki_OFF (YES/NO)	NO	-
382.0	HD legislations	1.00000	-
383.0	RDE legislations	1.00000	-
384.0	Submission Documents (YES/NO)	NO	-
385.0	General Setup Parameters Text	Mountain	-
386.0	Legislation Setup Parameters Text	Mountain	-
387.0	Trip Info		-
388.0	IN_TIME_REF		-
389.0	Sub-Trip Start: Auto	YES	-
390.0	Sub-Trip Start: Seconds	N/A	s

#	Text	Value	Unit
-	----	----	----
391.0	Sub-Trip End: Auto	YES	-
392.0	Sub-Trip End: Seconds	N/A	s
393.0	Unit System	2.00000	-
394.0	Calculate: PM Emissions	NO	-
395.0	Calculate: PN Emissions	NO	-
396.0	Output: Summary	YES	-
397.0	Output: Emissions	YES	-
398.0	Output: Raw Data	YES	-
399.0	Output: Zero Span	YES	-
400.0	Output: Data Consistency	NO	-
401.0	Output: Window Plots	YES	-
402.0	Fuel Rate ECU vs. EU ISO16183	$y = 10000000000.0000 x - 0.000 R^2=10000000000.000 SEE=$	
403.0	PEMS post processing version	Rel_10_B192	
404.0	Concerto version	480.00000	
405.0	Concerto build	215.00000	
406.0	USERNAME	EFR	

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW CC /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City
Page: Trip Summary

Start Date: 09/28/2017
Start Time: 08:21:36.0



Trip Duration	3772.00	s	ave THC	-34.59318	ppm	BS CO2	n/a	g/hphr
Trip Duration (a)	3772.00	s	ave NMHC	0.71422	ppm	BS CO	n/a	g/hphr
Trip Distance	16.38	mi	ave CH4	-32.09764	ppm	BS THC	n/a	g/hphr
Trip Distance (a)	16.38	mi	ave CO	82.62684	ppm	BS NMHC	n/a	g/hphr
Trip Fuel Cons. (b)	n/a	kg	ave CO2	12.71261	%	BS CH4	n/a	g/hphr
Trip Fuel Cons. (ab)	n/a	kg	ave NOx	3.40962	ppm	BS NO (d)	n/a	g/hphr
Trip Fuel Cons. EU (ac)	2.81	kg	ave PM	n/a	mg/m3	BS NO2	n/a	g/hphr
Trip Fuel Cons. US (ac)	2.78	kg	ave Soot meas	n/a	mg/m3	BS NOx	n/a	g/hphr
Trip Fuel Cons. Volume (b)	n/a	gall	ave Soot	n/a	mg/m3	BS Soot	n/a	g/hphr
Trip Fuel Cons. Volume (ab)	n/a	gall	ave PN	n/a	#/cm3	BS Soot meas	n/a	g/hphr
Trip Fuel Cons. Volume EU (ac)	0.99	gall	tot THC	0.00000	g	BS PM	n/a	g/hphr
Trip Fuel Cons. Volume US (ac)	0.98	gall	tot NMHC	0.01904	g	BS PN	n/a	#/hpr
Trip Fuel Economy (b)	n/a	mpg_US	tot CH4	0.00000	g	DS CO2	516.01986	g/mi
Trip Fuel Economy (ab)	n/a	mpg_US	tot CO	7.11493	g	DS CO	0.43448	g/mi
Trip Fuel Economy EU (ac)	16.51	mpg_US	tot CO2	8450.28319	g	DS THC	0.00000	g/mi
Trip Fuel Economy US (ac)	16.66	mpg_US	tot NO (d)	0.12582	g	DS NMHC	0.00116	g/mi
Trip Av. Eng. Speed	1283.00	rpm	tot NO2	0.13001	g	DS CH4	0.00000	g/mi
Trip Av. Torque	n/a	lbft	tot NOx	0.25343	g	DS NO (d)	0.00768	g/mi
Trip Av. Power	n/a	hp	tot Soot	n/a	g	DS NO2	0.00794	g/mi
Trip Work	n/a	hphr	tot Soot meas	n/a	g	DS NOx	0.01548	g/mi
Trip Exhaust Mass	43.37	kg	tot PM	n/a	g	DS Soot	n/a	g/mi
Trip Exhaust Mass EU (ac)	n/a	kg	tot PN	n/a	#	DS Soot meas	n/a	g/mi
Trip Exhaust Mass US (ac)	n/a	kg	PM measurement type	0.00000	-	DS PM	n/a	g/mi
Trip Av. Amb. Temperature	94.01	deg_F	PM correction type	1.00000	alpha(HC)	DS PN	n/a	#/mi
Trip Av. Humidity	28.42	%	tot Soot on PM filter (estim.)	n/a	mg	FS CO2	n/a	g/kg
Fuel Type	Petrol (E10)		Soot --> PM simple scaling factor	1.00000	-	FS CO	n/a	g/kg
			Soot --> PM alpha scaling factor	0.00000	-	FS THC	n/a	g/kg
			Trip Av. Veh. Speed	15.62916	mi/hr	FS NMHC	n/a	g/kg
			Trip Velocity Zero	24.07211	%	FS CH4	n/a	g/kg
			Trip Velocity Urban	87.24814	%	FS NO (d)	n/a	g/kg
			Trip Velocity Rural	10.55143	%	FS NO2	n/a	g/kg
			Trip Velocity Motorway	2.20042	%	FS NOx	n/a	g/kg
						FS Soot	n/a	g/kg
						FS Soot meas	n/a	g/kg
						FS PM	n/a	g/kg
						FS PN	n/a	#/kg

(a) GAS PEMS measurement state only, (b) based on fuel rate input (ECU, Fuel Meter), (c) calculated from carbon balance
(d) NO calculated using molecular weight of NO2

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW CC /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Trip Summary Drift Corrected

Start Date: 09/28/2017

Start Time: 08:21:36.0

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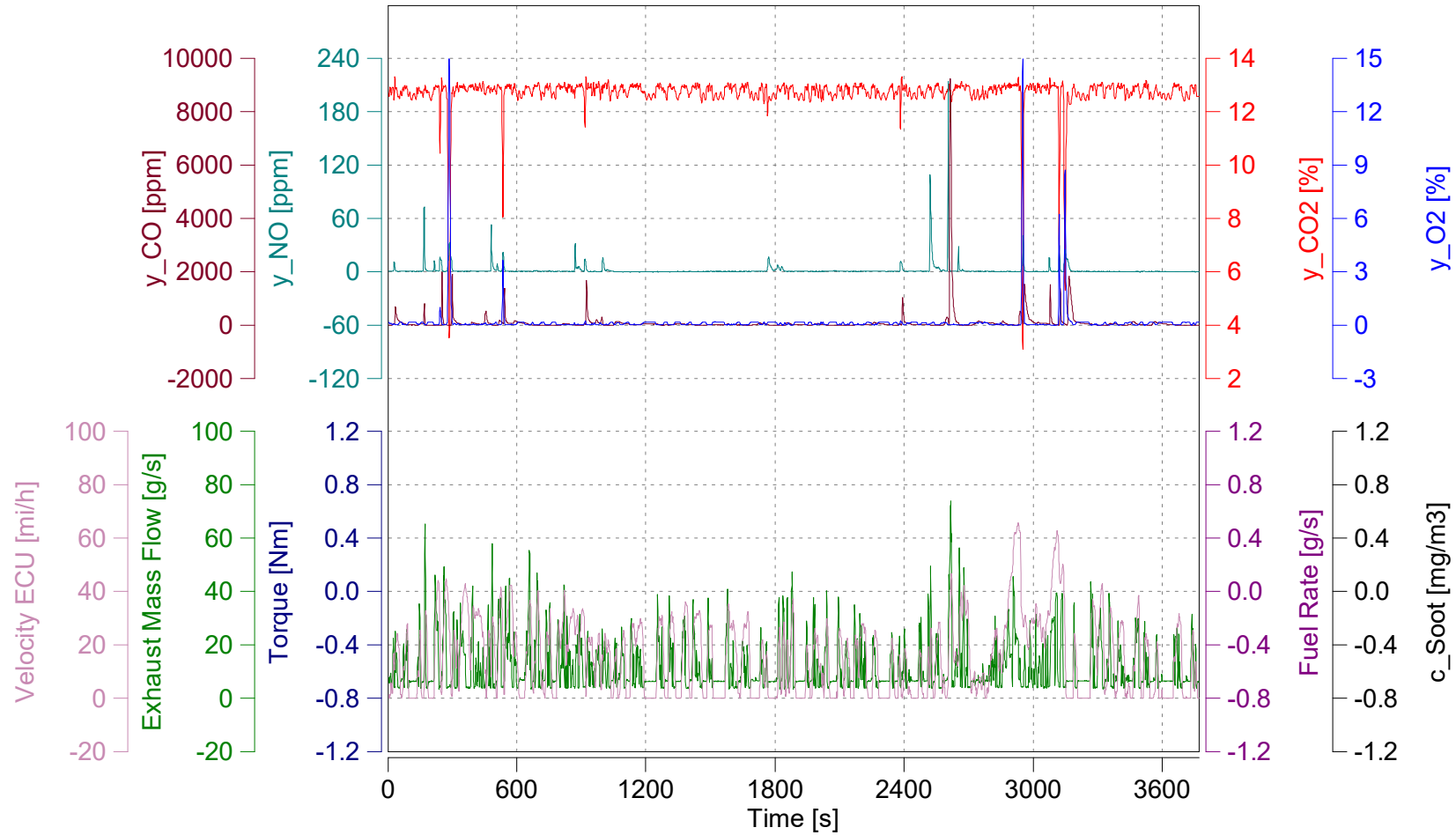
Concerto M.O.V.E, 2017

Trip Duration	3772.00	s	ave THC DC	-46.95509	ppm	BS CO2 DC	n/a	g/hphr
Trip Duration (a)	3772.00	s	ave NMHC DC	-10.06556	ppm	BS CO DC	n/a	g/hphr
Trip Distance	16.38	mi	ave CH4 DC	-33.53594	ppm	BS THC DC	n/a	g/hphr
Trip Distance (a)	16.38	mi	ave CO DC	83.55041	ppm	BS NMHC DC	n/a	g/hphr
			ave CO2 DC	12.72105	%	BS CH4 DC	n/a	g/hphr
Trip Fuel Cons. (b)	n/a	kg	ave NOx DC	3.39913	ppm	BS NO DC (d)	n/a	g/hphr
Trip Fuel Cons. (ab)	n/a	kg	ave PM	n/a	mg/m3	BS NO2 DC	n/a	g/hphr
Trip Fuel Cons. EU (ac)	2.81	kg	ave Soot meas	n/a	mg/m3	BS NOx DC	n/a	g/hphr
Trip Fuel Cons. US (ac)	2.78	kg	ave Soot	n/a	mg/m3	BS Soot	n/a	g/hphr
			ave PN DC	n/a	#/cm3	BS Soot meas	n/a	g/hphr
Trip Fuel Cons. Volume (b)	n/a	gall				BS PM	n/a	g/hphr
Trip Fuel Cons. Volume (ab)	n/a	gall	tot THC DC	0.00000	g	BS PN DC	n/a	#/hpr
Trip Fuel Cons. Volume EU (ac)	0.99	gall	tot NMHC DC	0.00133	g			
Trip Fuel Cons. Volume US (ac)	0.98	gall	tot CH4 DC	0.00000	g	DS CO2 DC	516.36228	g/mi
			tot CO DC	7.19446	g	DS CO DC	0.43933	g/mi
Trip Fuel Economy (b)	n/a	mpg_US	tot CO2 DC	8455.89054	g	DS THC DC	0.00000	g/mi
Trip Fuel Economy (ab)	n/a	mpg_US	tot NO DC (d)	0.12569	g	DS NMHC DC	0.00008	g/mi
Trip Fuel Economy EU (ac)	16.51	mpg_US	tot NO2 DC	0.12941	g	DS CH4 DC	0.00000	g/mi
Trip Fuel Economy US (ac)	16.66	mpg_US	tot NOx DC	0.25269	g	DS NO DC (d)	0.00768	g/mi
			tot Soot	n/a	g	DS NO2 DC	0.00790	g/mi
Trip Av. Eng. Speed	1283.00	rpm	tot Soot meas	n/a	g	DS NOx DC	0.01543	g/mi
Trip Av. Torque	n/a	lbft	tot PM	n/a	g	DS Soot	n/a	g/mi
Trip Av. Power	n/a	hp	tot PN DC	n/a	#	DS Soot meas	n/a	g/mi
Trip Work	n/a	hphr				DS PM	n/a	g/mi
			PM measurement type	0.00000	-	DS PN DC	n/a	#/mi
Trip Exhaust Mass	43.37	kg	PM correction type	1.00000	alpha(HC)			
Trip Exhaust Mass EU (ac)	n/a	kg	tot Soot on PM filter (estim.)	n/a	mg	FS CO2 DC	n/a	g/kg
Trip Exhaust Mass US (ac)	n/a	kg	Soot --> PM simple scaling factor	1.00000	-	FS CO DC	n/a	g/kg
			Soot --> PM alpha scaling factor	0.00000	-	FS THC DC	n/a	g/kg
Trip Av. Amb. Temperature	94.01	deg_F				FS NMHC DC	n/a	g/kg
Trip Av. Humidity	28.42	%	Trip Av. Veh. Speed	15.62916	mi/hr	FS CH4 DC	n/a	g/kg
			Trip Velocity Zero	24.07211	%	FS NO DC (d)	n/a	g/kg
Fuel Type	Petrol (E10)		Trip Velocity Urban	87.24814	%	FS NO2 DC	n/a	g/kg
			Trip Velocity Rural	10.55143	%	FS NOx DC	n/a	g/kg
			Trip Velocity Motorway	2.20042	%	FS Soot	n/a	g/kg
						FS Soot meas	n/a	g/kg
						FS PM	n/a	g/kg
						FS PN DC	n/a	#/kg

(a) GAS PEMS measurement state only, (b) based on fuel rate input (ECU, Fuel Meter), (c) calculated from carbon balance
 (d) NO calculated using molecular weight of NO2

Concerto Version: 480 Build 215, Serial Number: 8468
 M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW CC /
 Engine: Gasoline / 2.0L
 NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
 Dry / Wet Corr.: 2 - CFR40 §86.1342-90



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

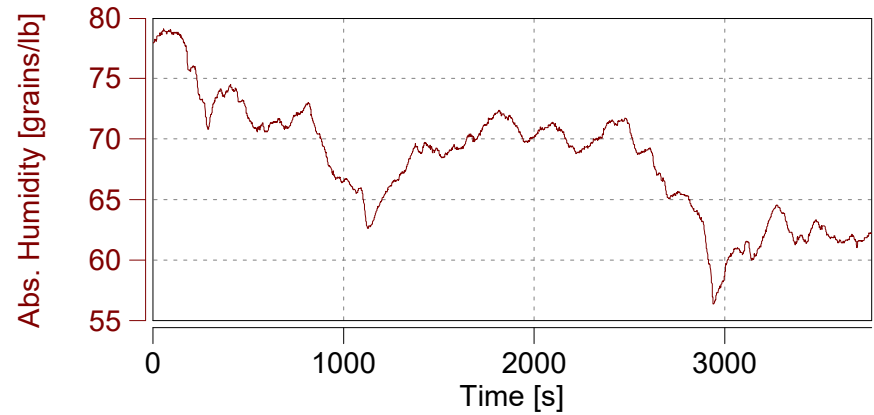
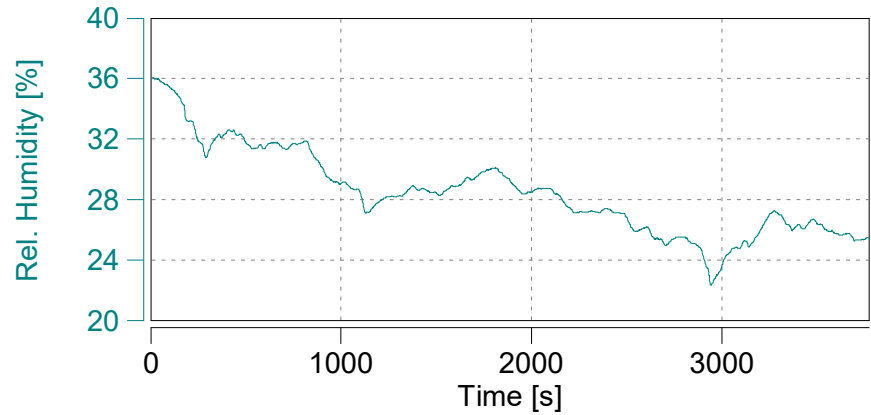
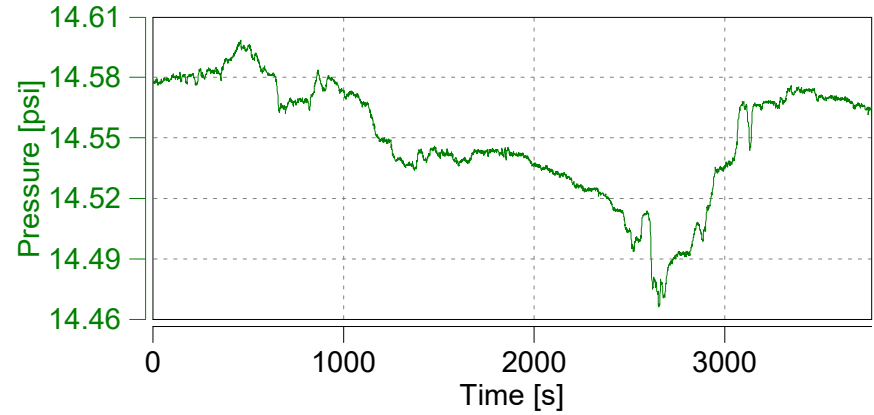
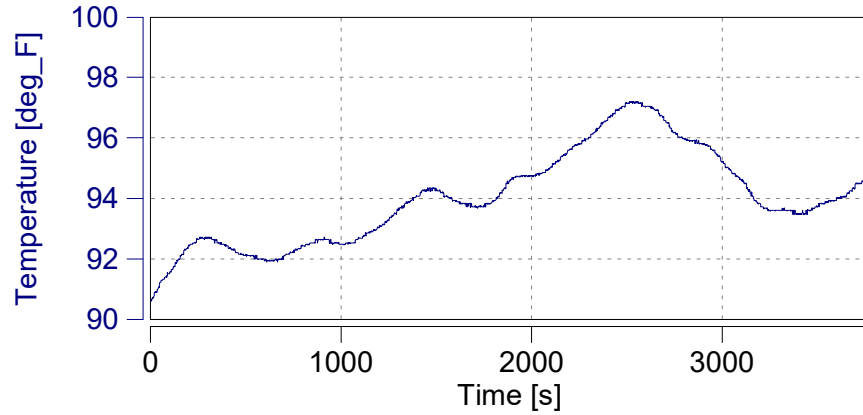
Vehicle: 2017 VW CC /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Ambient Conditions

Start Date: 09/28/2017

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Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

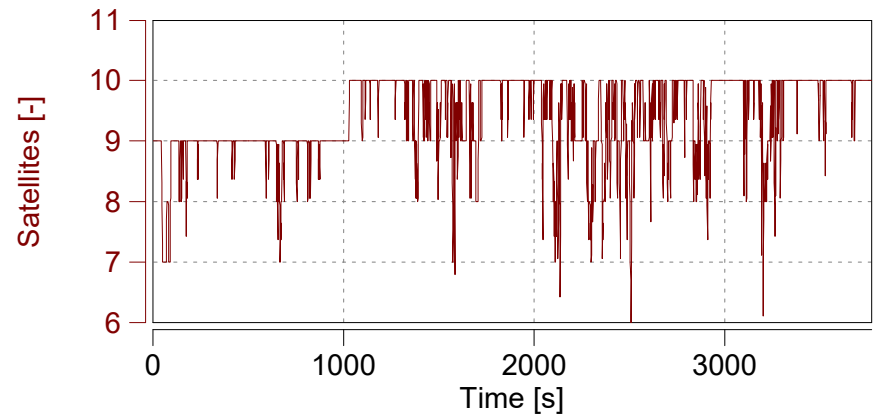
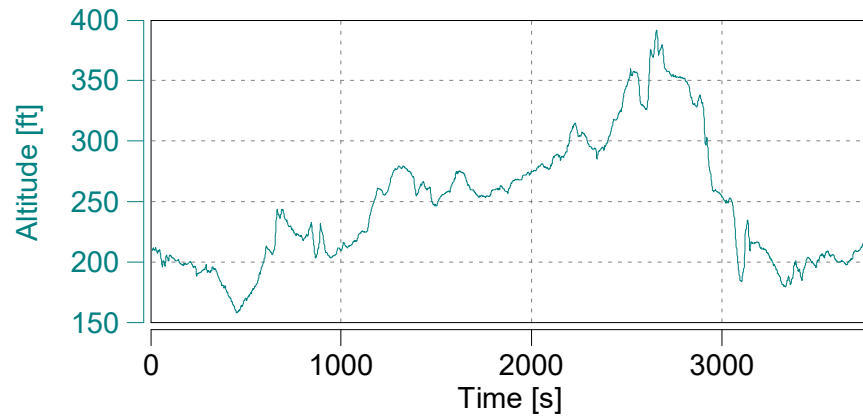
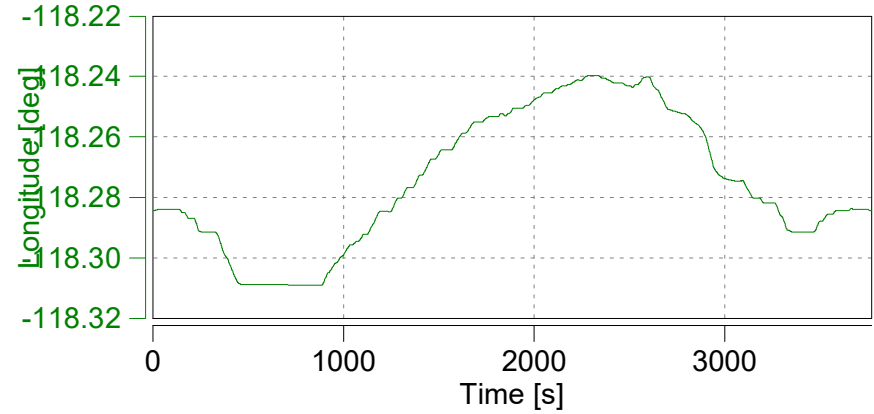
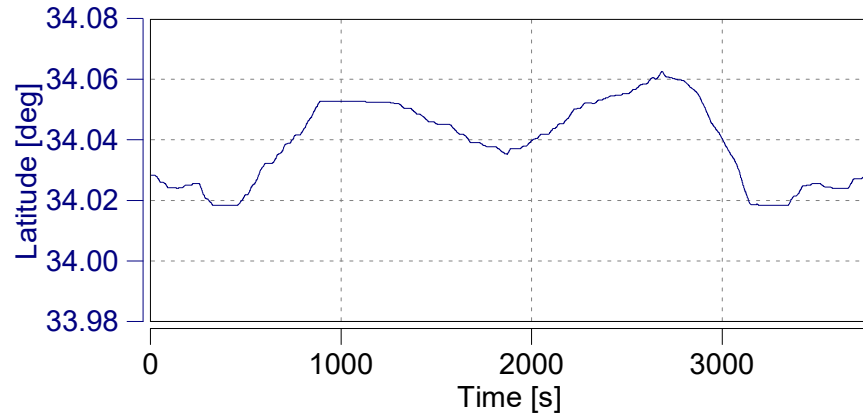
Vehicle: 2017 VW CC /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: GPS

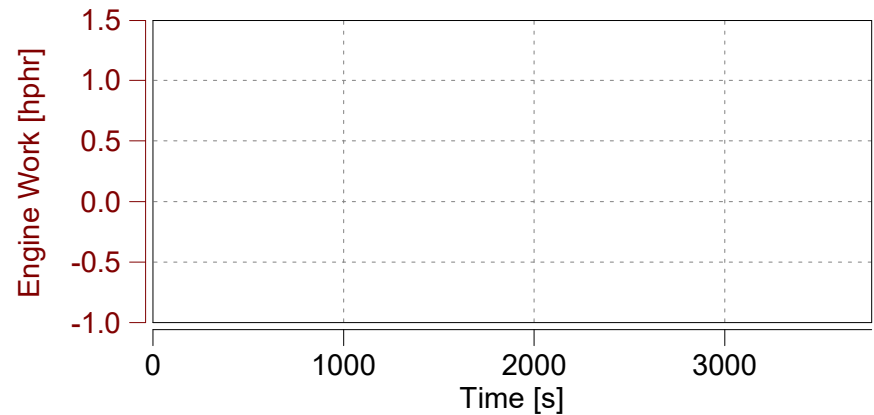
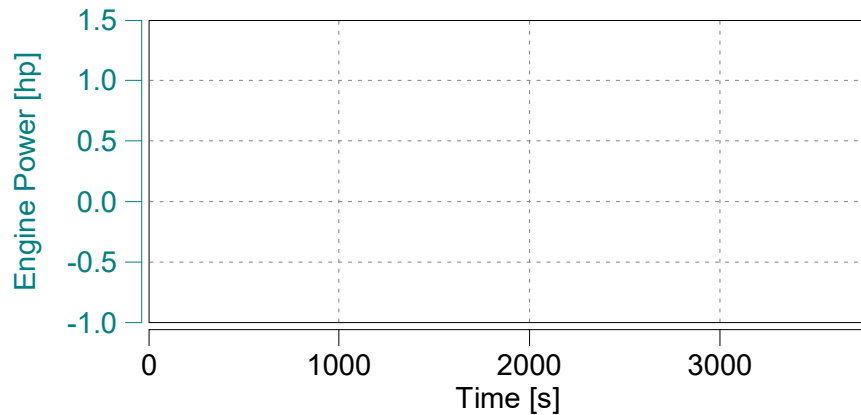
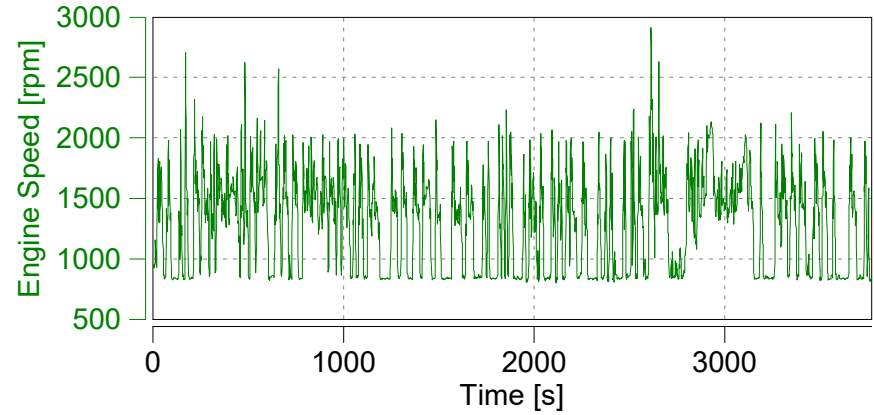
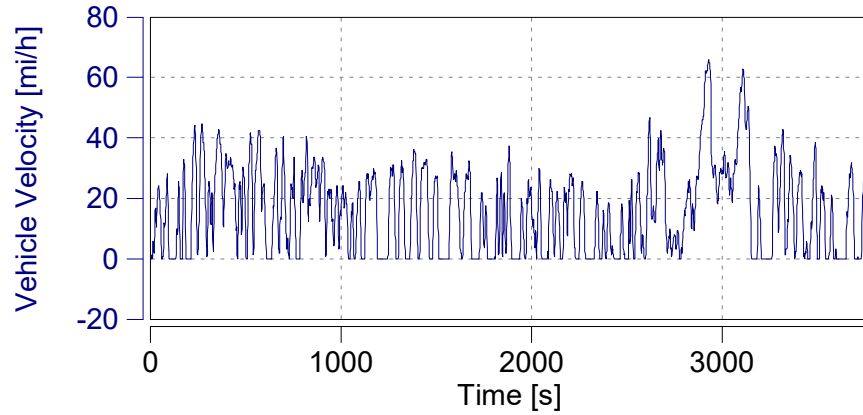
Start Date: 09/28/2017

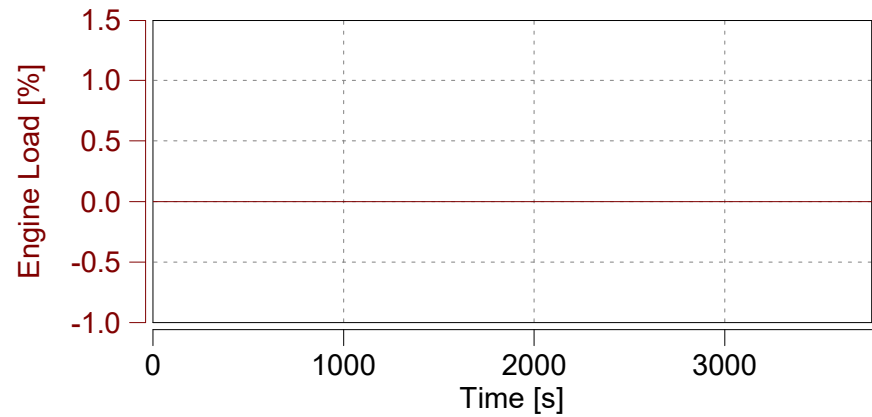
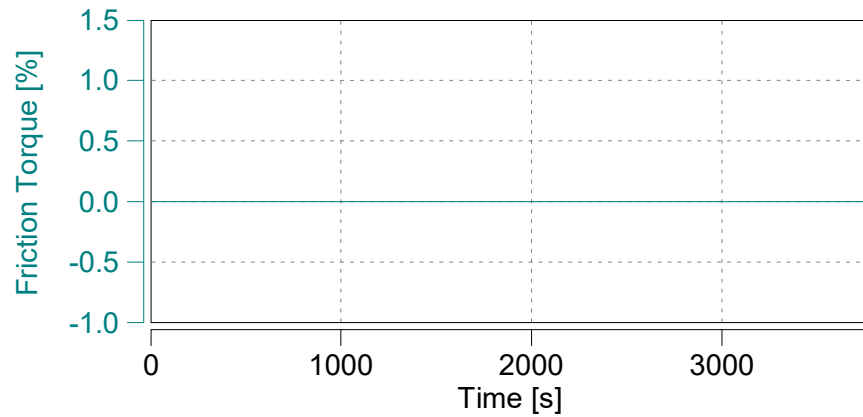
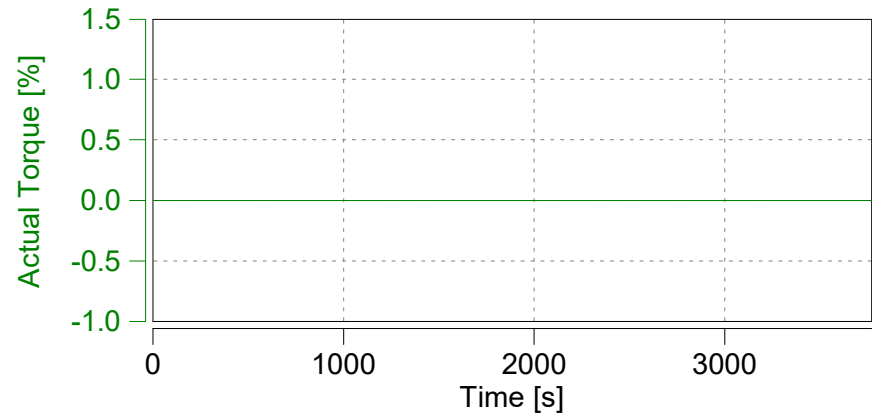
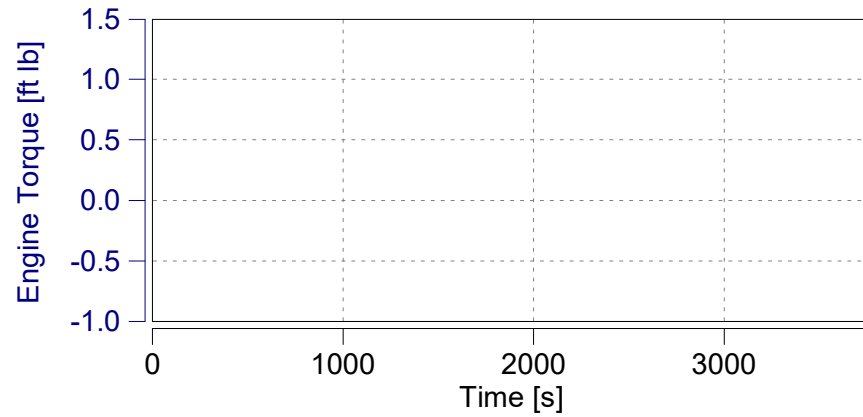
Start Time: 08:21:36.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW CC /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90



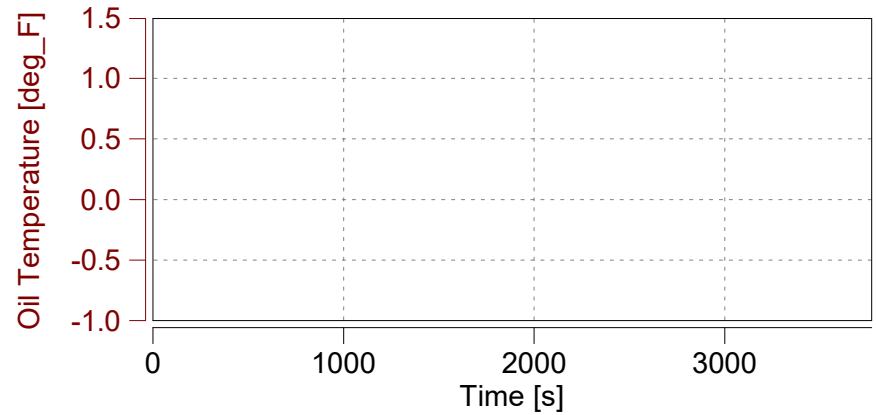
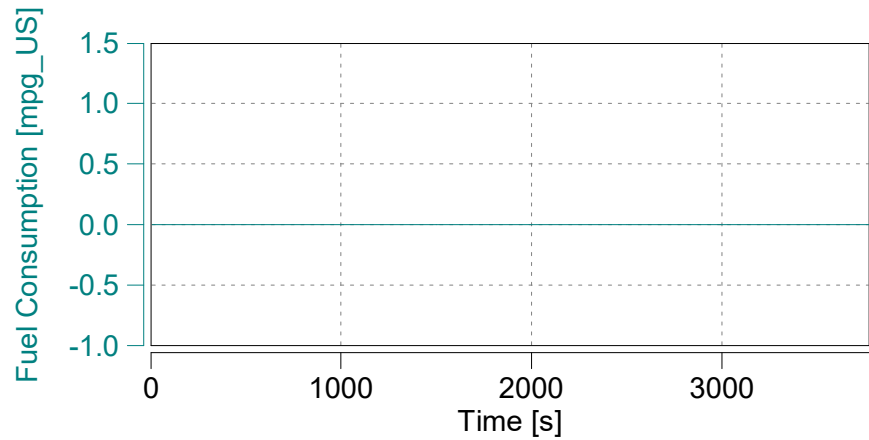
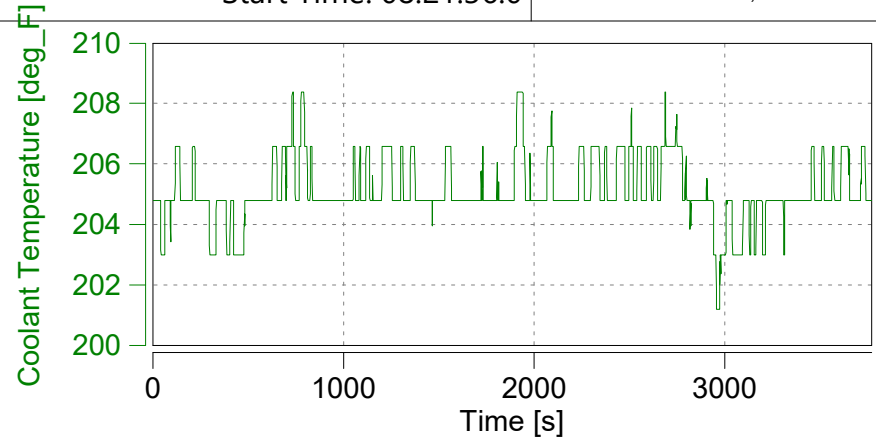
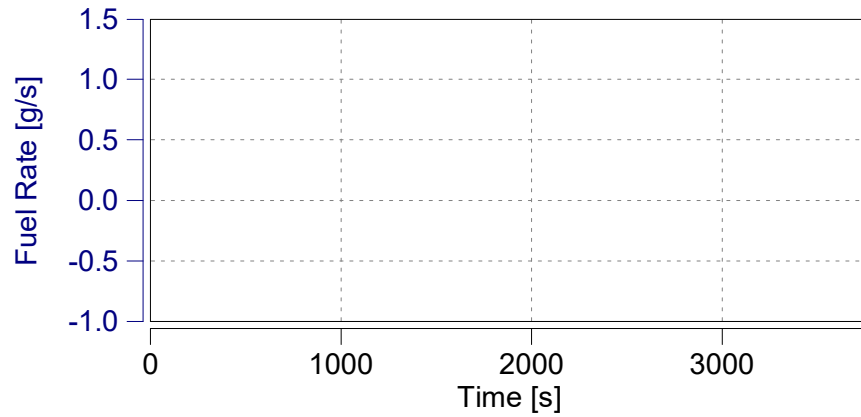


Case: City

Page: Engine (3)

Start Date: 09/28/2017

Start Time: 08:21:36.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

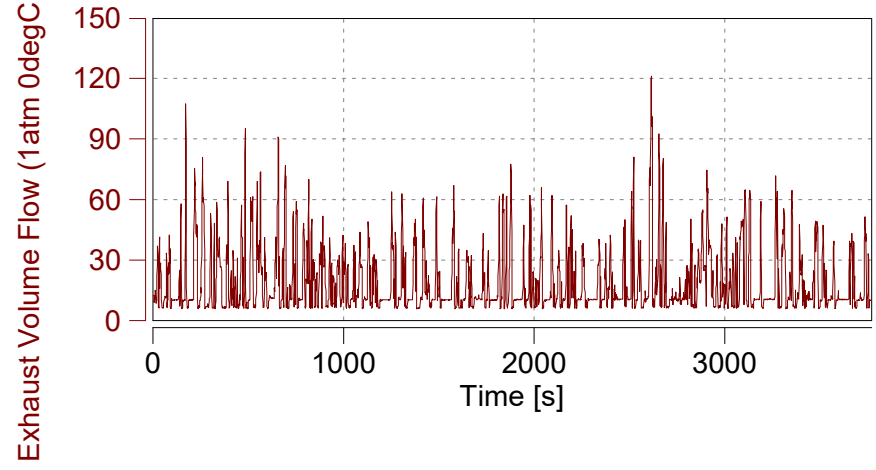
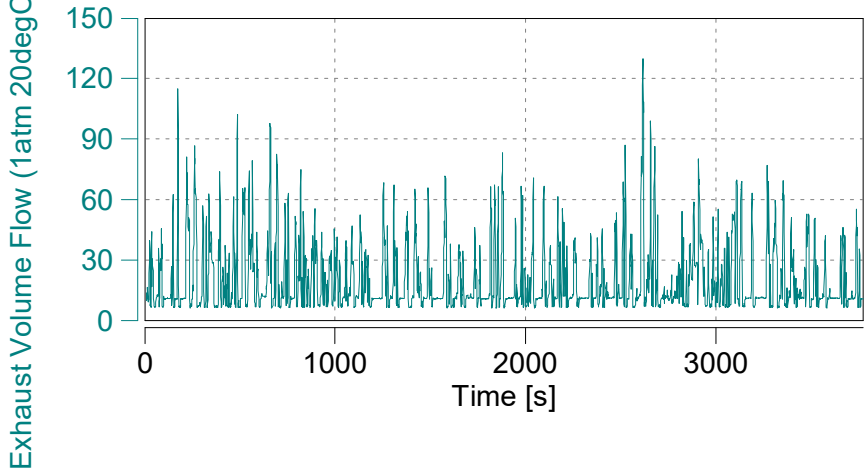
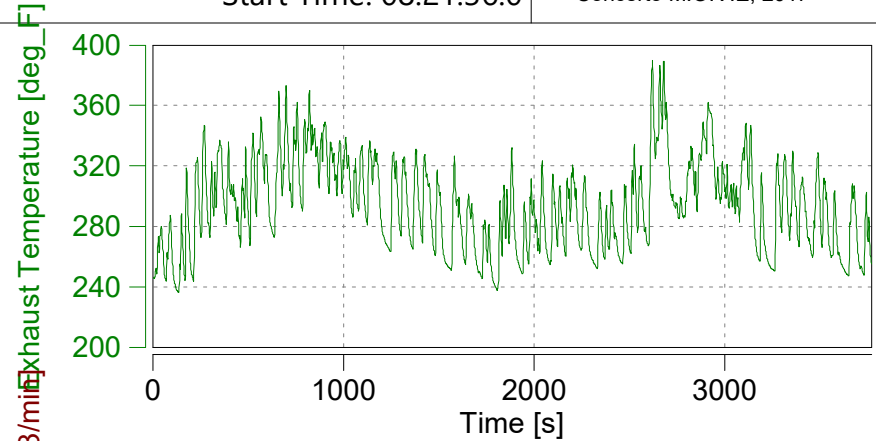
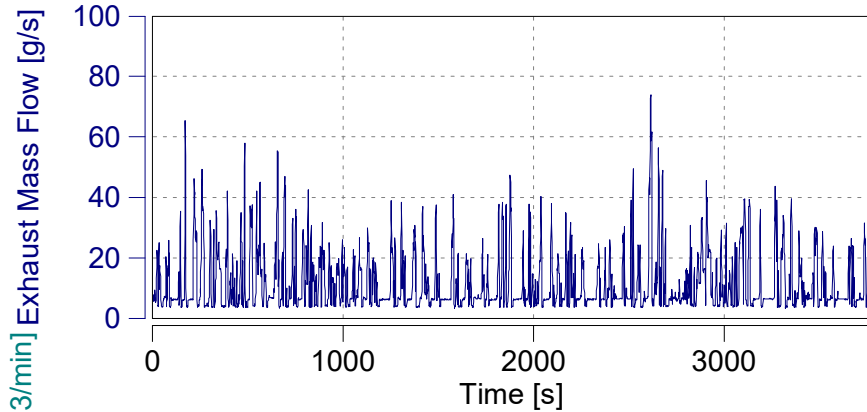
Vehicle: 2017 VW CC /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Exhaust Flow (1)

Start Date: 09/28/2017

Start Time: 08:21:36.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

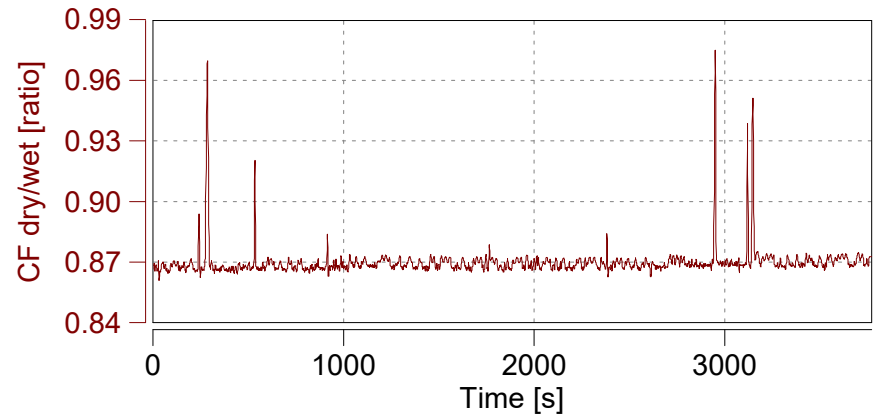
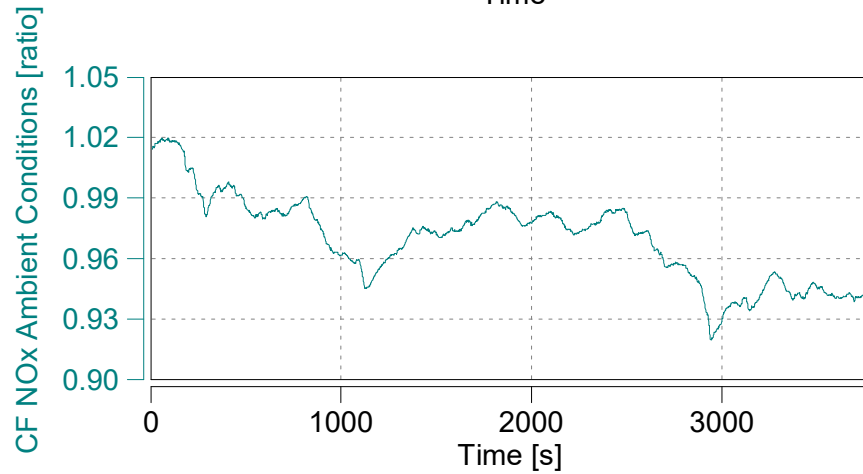
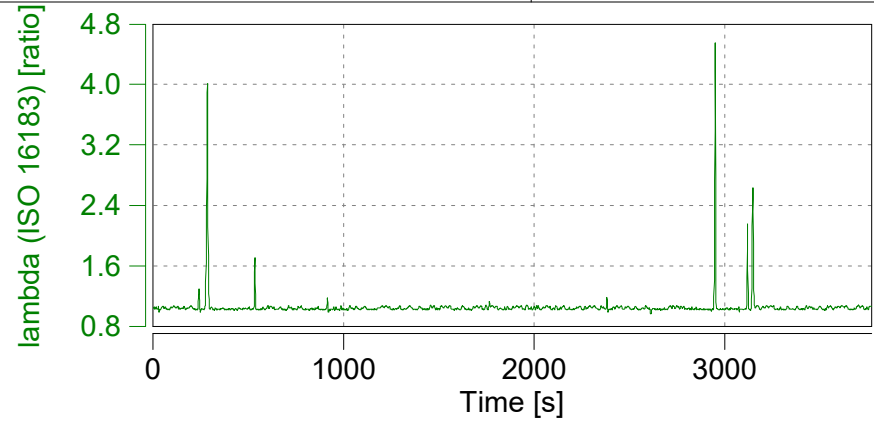
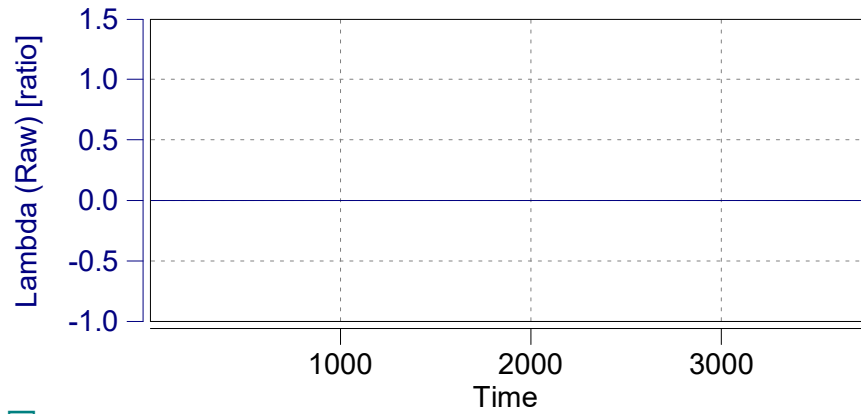
Vehicle: 2017 VW CC /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Exhaust Flow (2)

Start Date: 09/28/2017

Start Time: 08:21:36.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

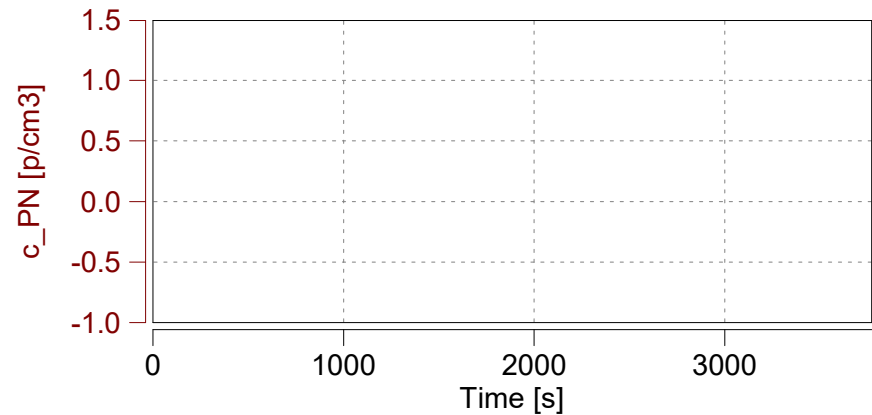
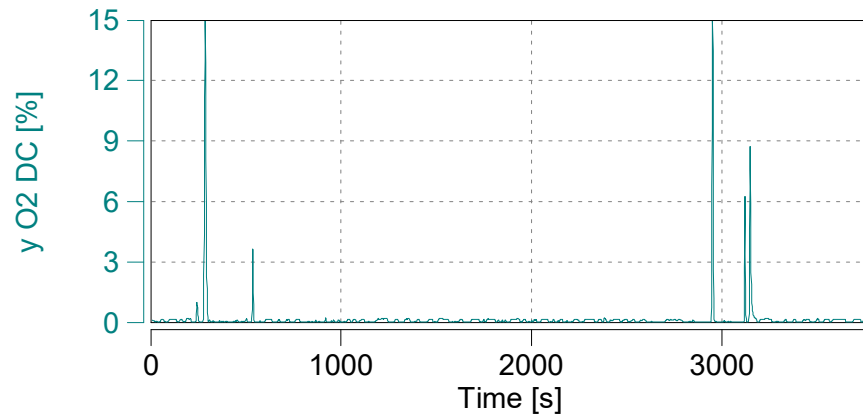
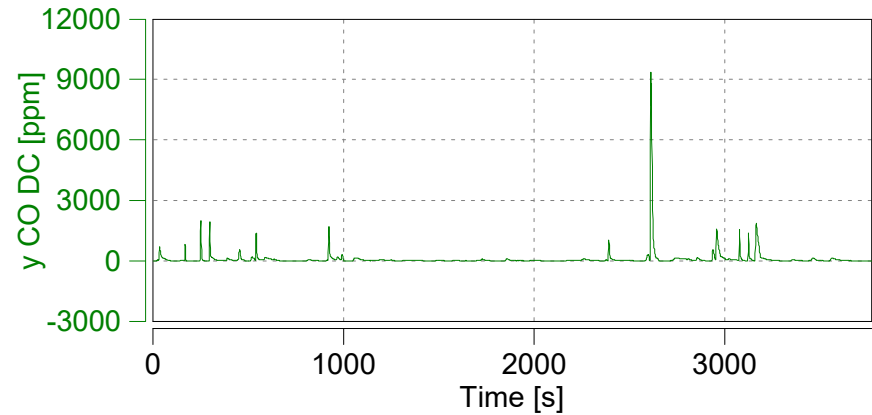
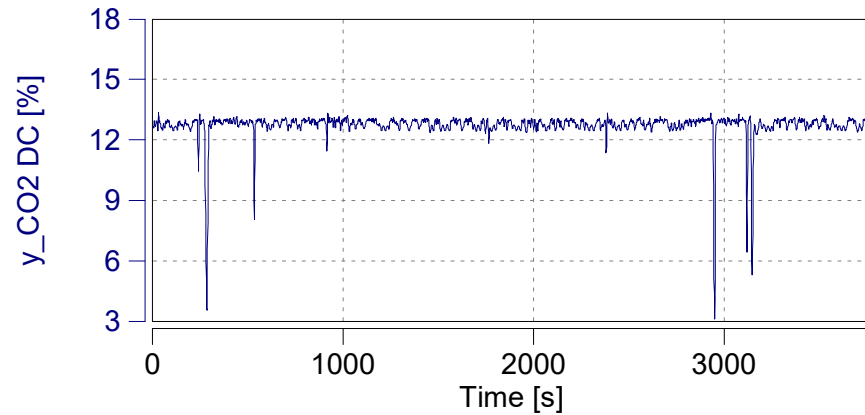
Vehicle: 2017 VW CC /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Corrected Emissions (1)

Start Date: 09/28/2017

Start Time: 08:21:36.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

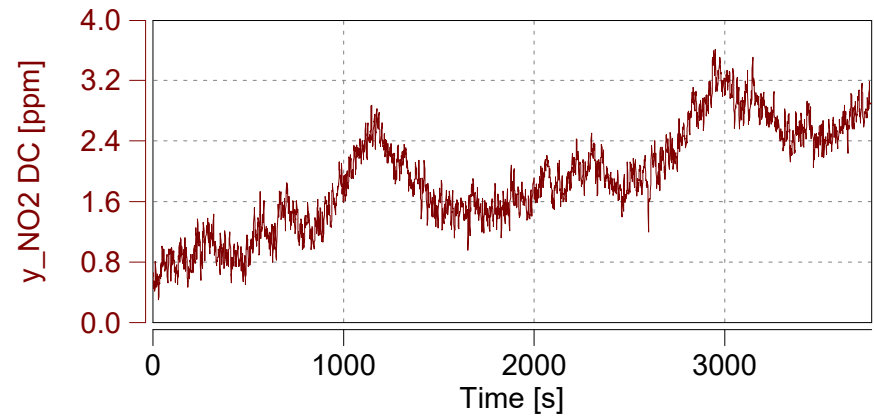
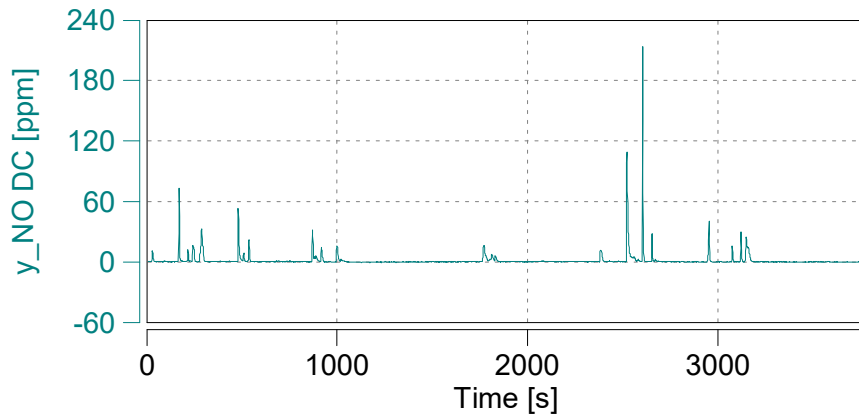
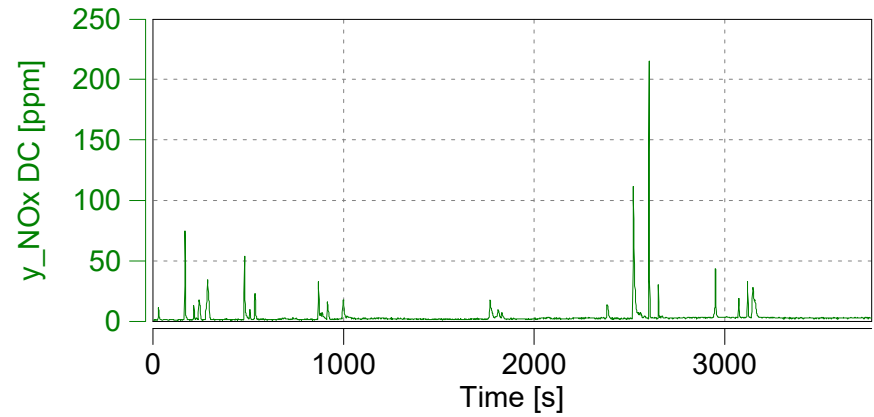
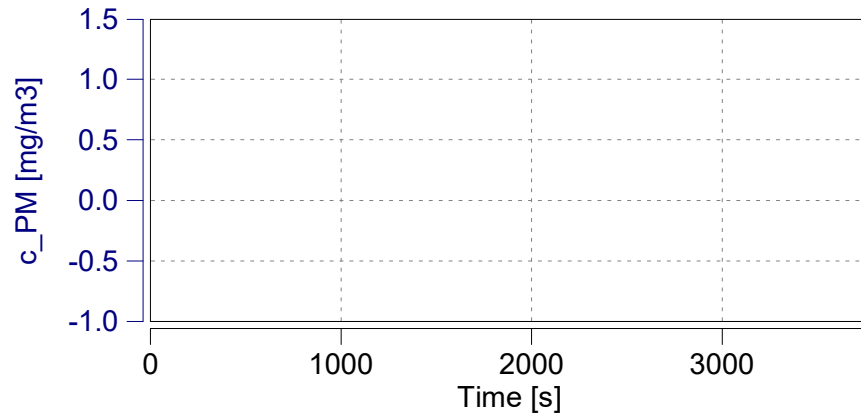
Vehicle: 2017 VW CC /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Corrected Emissions (2)

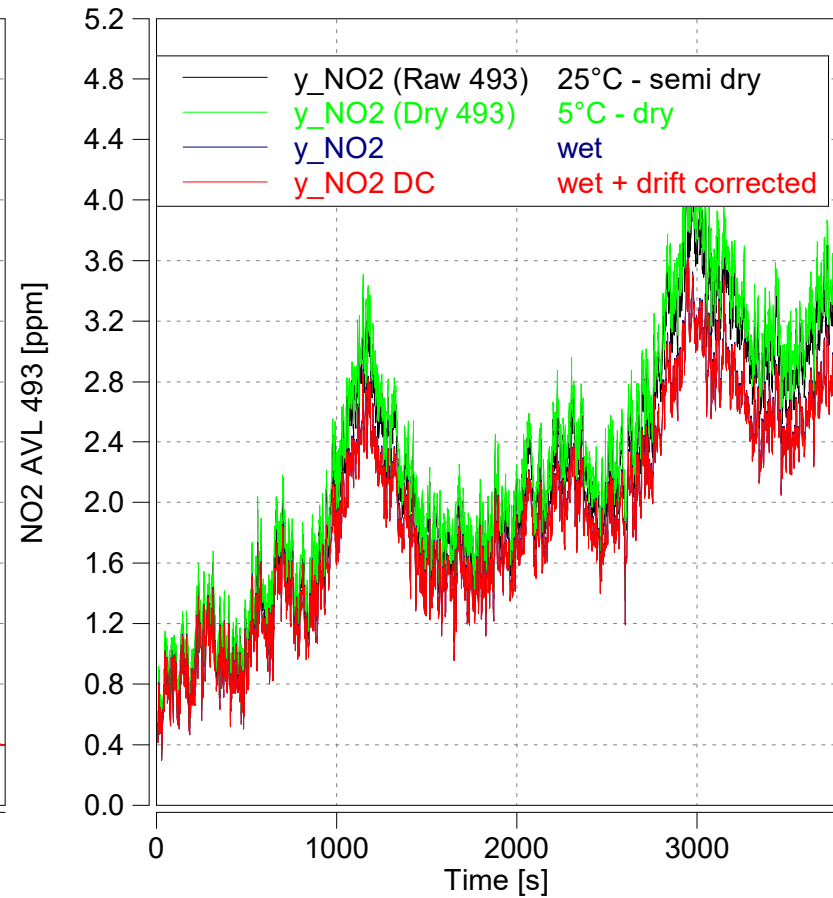
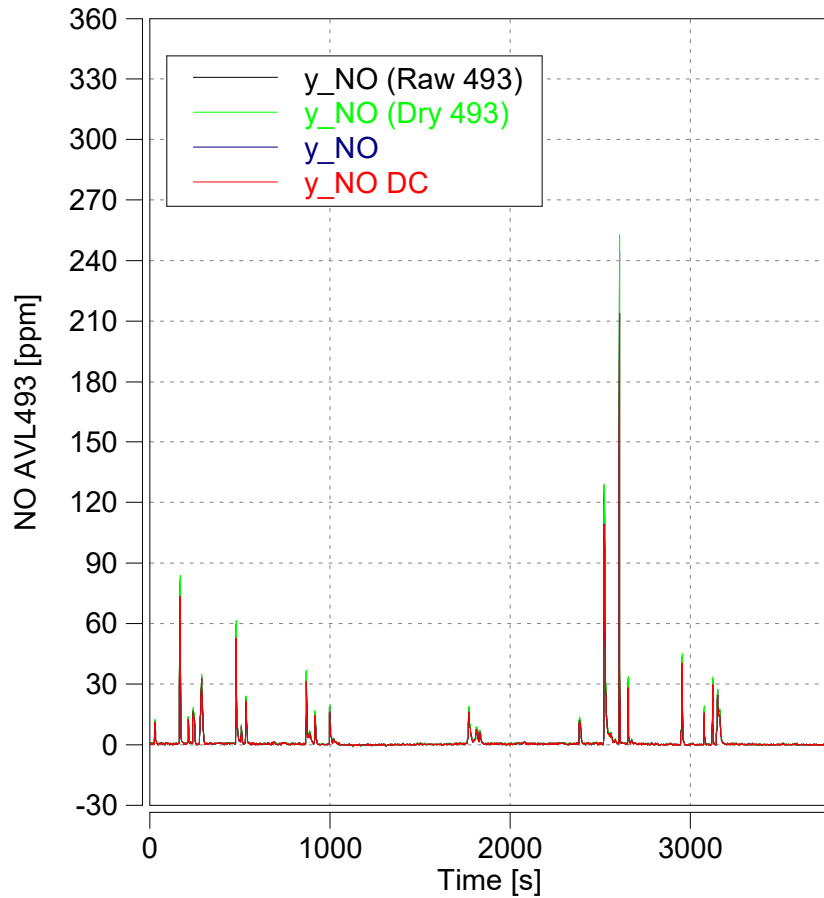
Start Date: 09/28/2017

Start Time: 08:21:36.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW CC /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90



NOx - AVL 493

y_NO (Raw 493)
y_NO2 (Raw 493)
25°C

EU R49 8.6.1
US §1065.672
drift correction

d_Kf_NO 25°C to dry
d_Kf_NO2 25°C to dry

- (1) EU R49 8.1.1 (15)
- (2) US §1065.655
- (3) none

y_NO DC (Dry 493)
y_NO2 DC (Dry 493)

y_NO (Dry 493)
y_NO2 (Dry 493)

CF dry/wet
(factor equal for all constituents)

CF NOx Ambient Conditions

y_NO DC
y_NO2 DC
wet

y_NO
y_NO2
wet

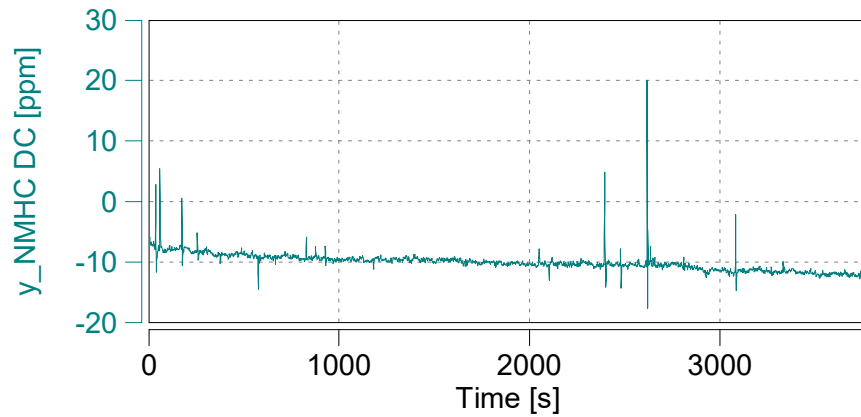
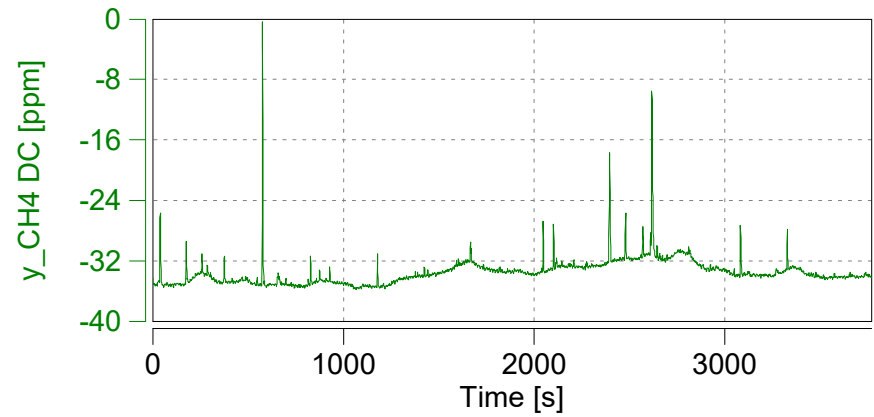
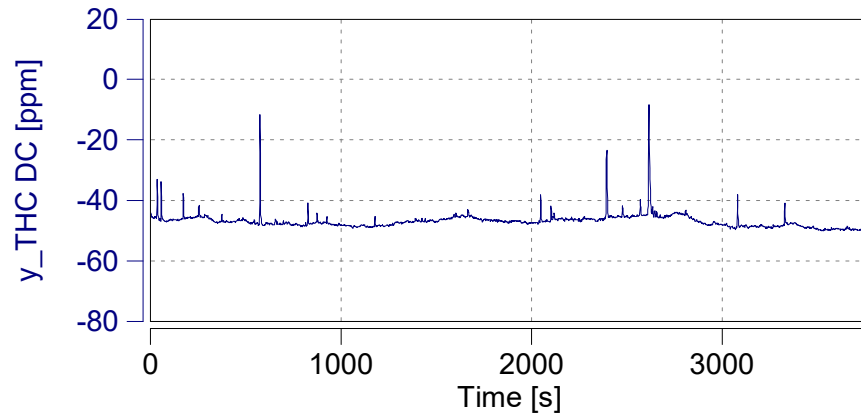
- (1) HD Diesel Engine SwRI FinalReport 08-2597, 1999
- (2) humidity only
- (3) equivalent uncorrected NOx limit method for EU in service
- (4) US §40.86.1342.94 Diesel
- (5) US §40.86.1342.94 SI
- (6) US §40.86.1370-2007 (default US)
- (7) US 40.1065.670
- (8) none (default EU)

Case: City

Page: Corrected Emissions (5)

Start Date: 09/28/2017

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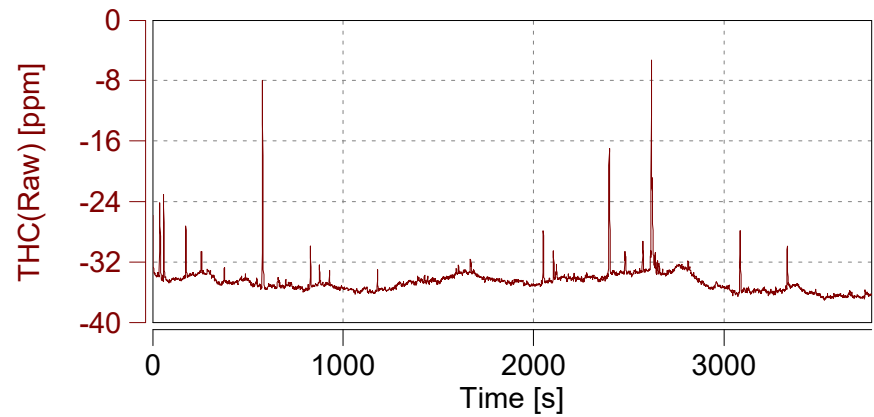
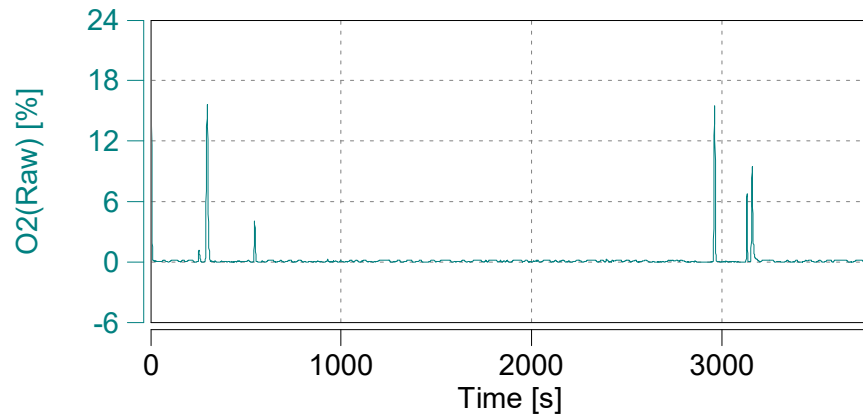
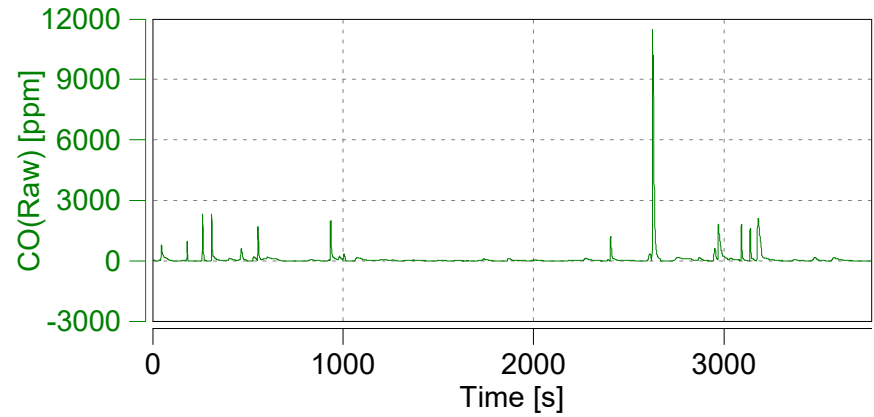
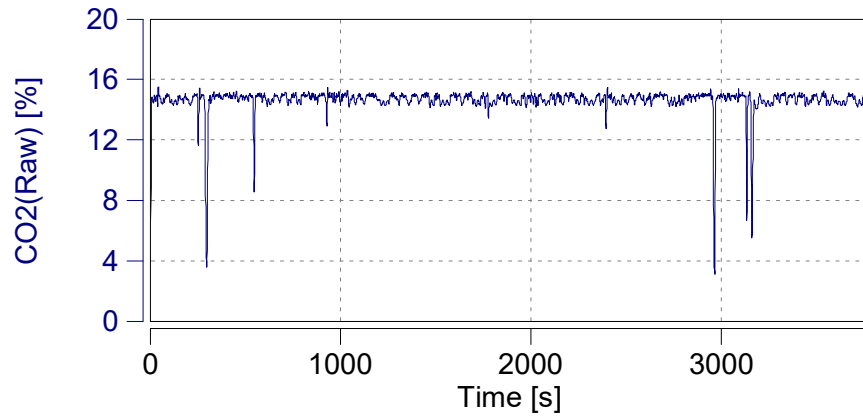
Vehicle: 2017 VW CC /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Emissions Raw Data (1)

Start Date: 09/28/2017

Start Time: 08:21:36.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

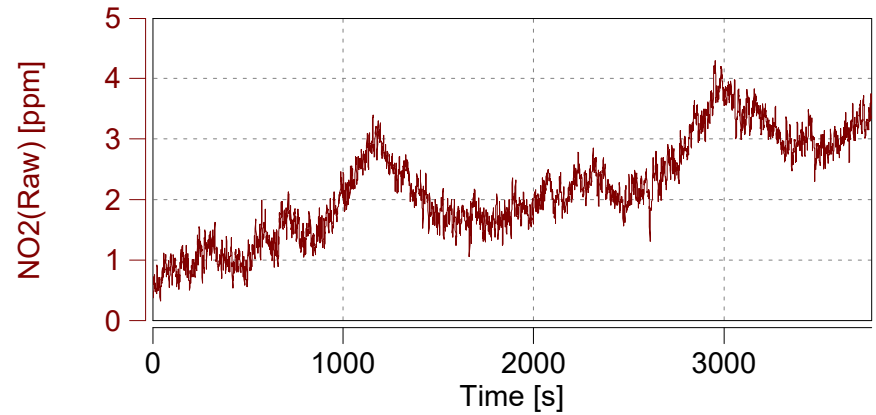
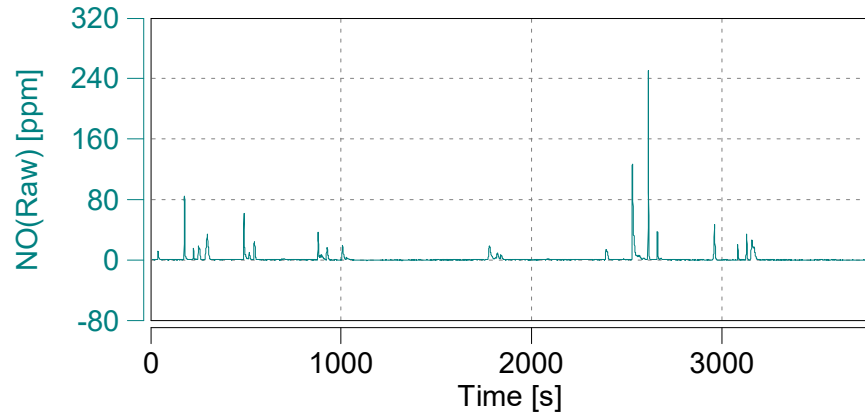
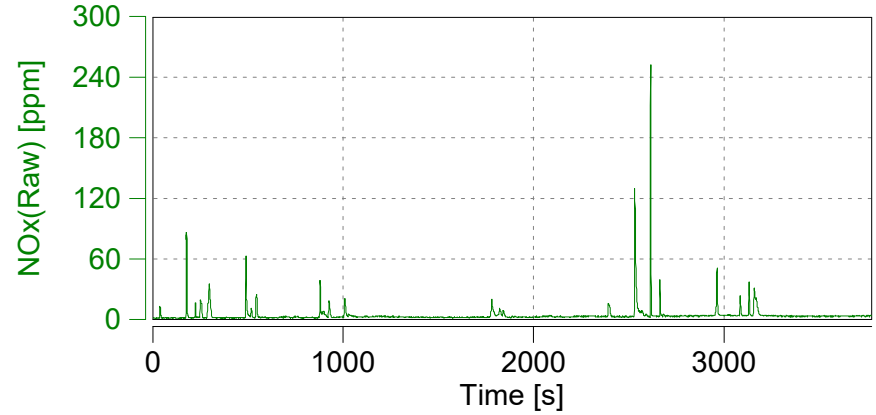
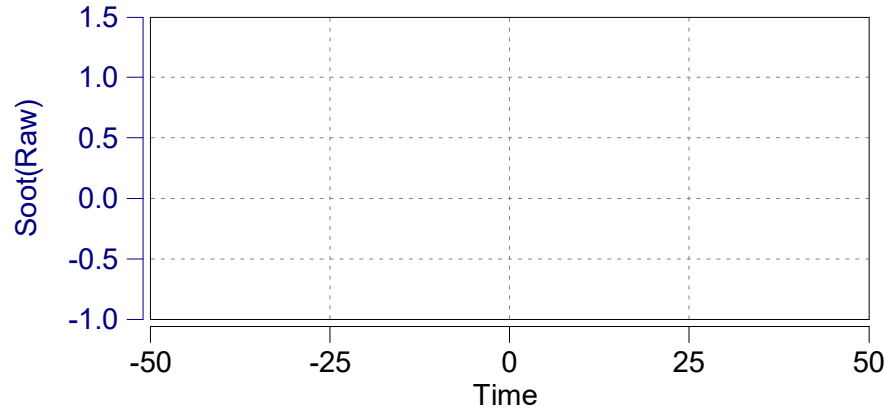
Vehicle: 2017 VW CC /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Emissions Raw Data (2)

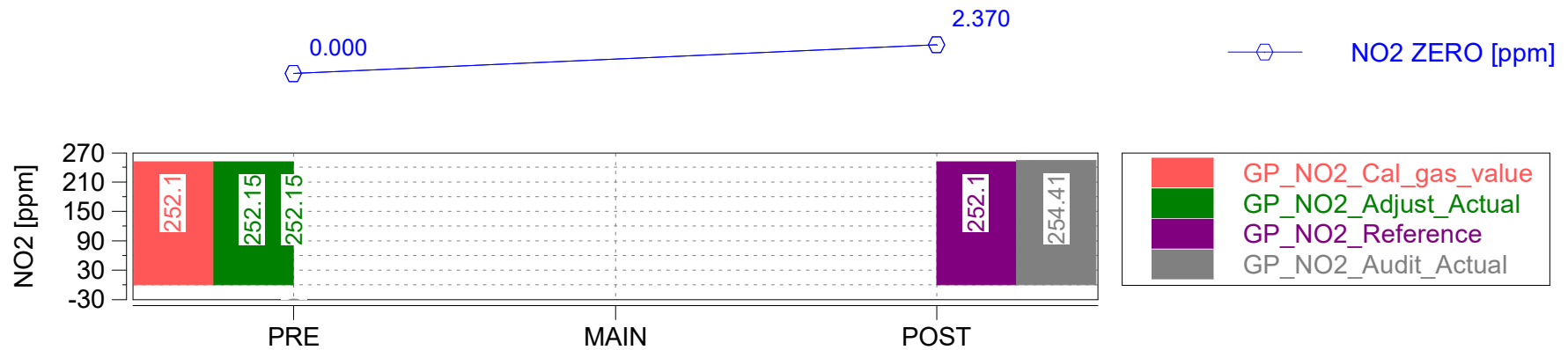
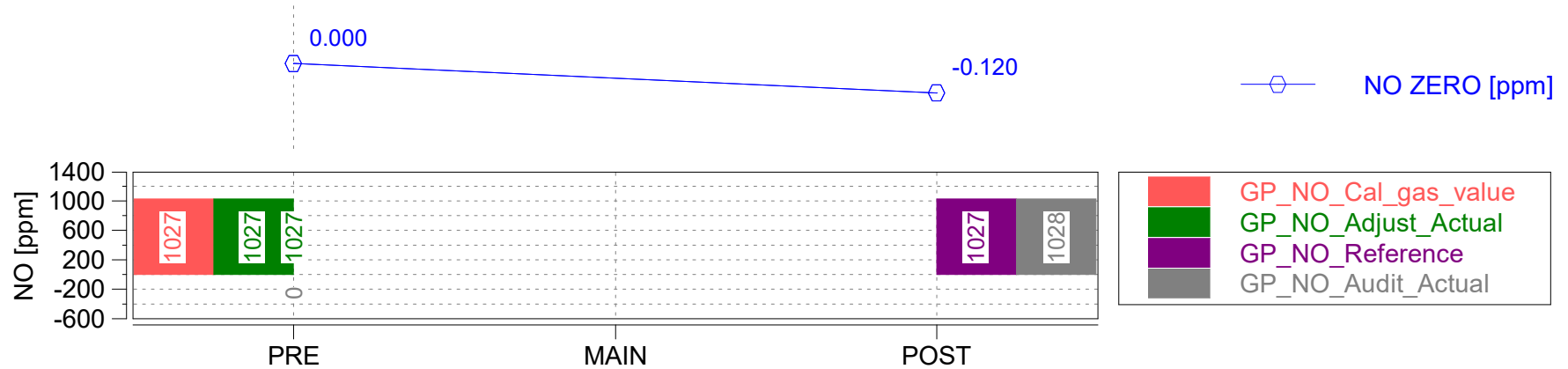
Start Date: 09/28/2017

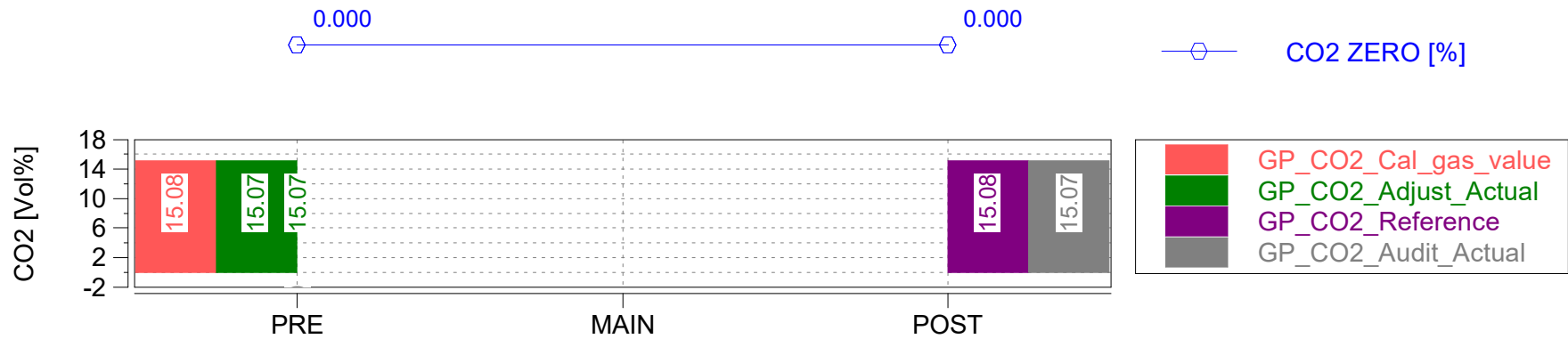
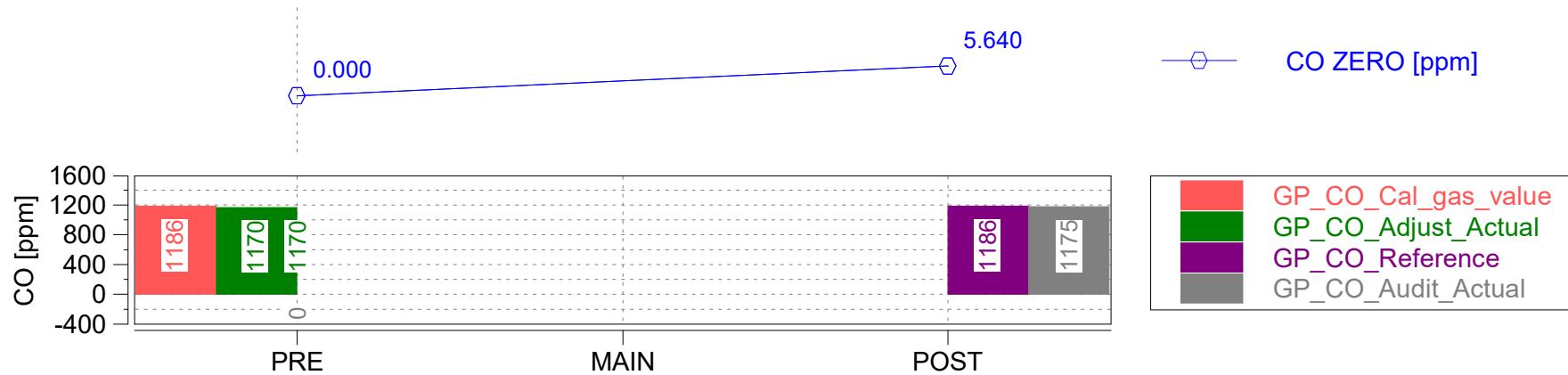
Start Time: 08:21:36.0

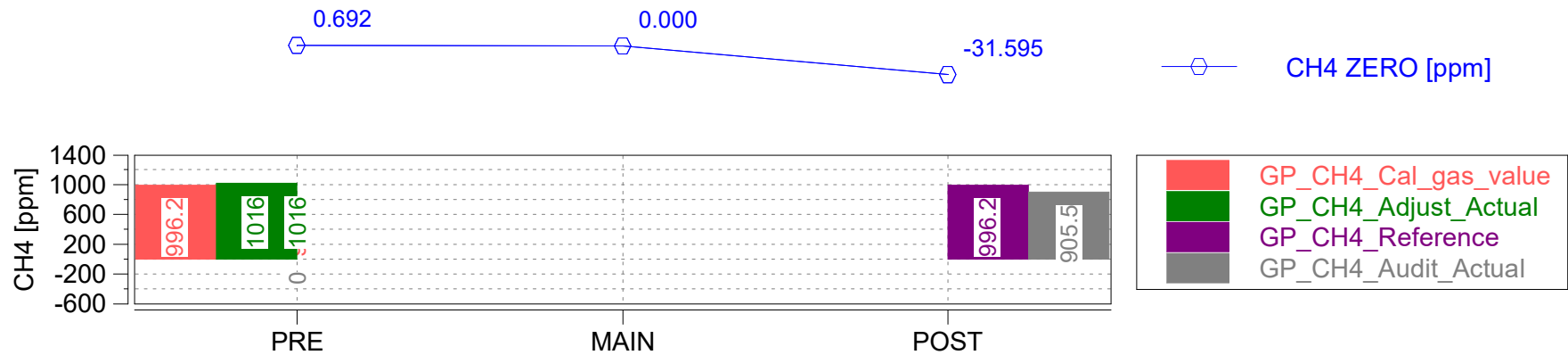
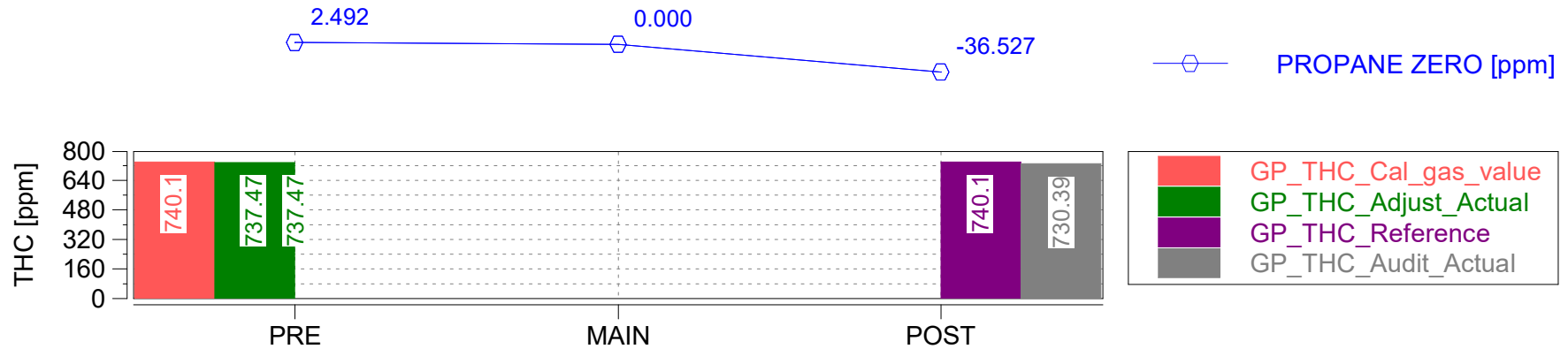


Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW CC /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90







#	Text	Value	Unit
-	----	----	----
1.0	Test Start: Date	-	-
2.0	Test Start: Time	-	-
3.0	Ambient Temperature	IFILE1:TM'Temperature	deg C
4.0	Ambient Temperature TS	0.00000	s
5.0	Ambient Pressure	IFILE1:TM'Pressure	kPa
6.0	Ambient Pressure TS	0.00000	s
7.0	Humidity Type	1.00000	-
8.0	Amb. Rel. Humidity	IFILE1:TM'Humidity	%
9.0	Amb. Rel. Humidity	0.00000	s
10.0	GPS Latitude		deg
11.0	GPS Latitude TS	0.00000	s
12.0	GPS Longitude		deg
13.0	GPS Longitude TS	0.00000	s
14.0	Altitude		m
15.0	Altitude TS	0.00000	s
16.0	GPS Quality		-
17.0	GPS Quality TS	0.00000	s
18.0	GroundSpeed		km/h
19.0	GroundSpeed TS	0.00000	s
20.0	Altitude from topographical map		m
21.0	Altitude TS of topographical map		s
22.0	TRIP_AMBIENT_GPS_AVL	YES	-
23.0	CALC_GPS_GROUNDSPEED	NO	-
24.0	EXHAUST_FLOW_AVL	NO	-
25.0	EXHAUST_FLOW_AVL_EFM	YES	-
26.0	Exhaust Flow Type	2.00000	-
27.0	Mass Flow	IFILE1:TM'PitotEFM_ExhaustG	various
28.0	Mass Flow TS	1.80000	s
29.0	Exhaust Pressure		kPa
30.0	Exhaust Pressure TS	1.80000	s

#	Text	Value	Unit
-	----	----	----
31.0	Exhaust Delta Pressure		kPa
32.0	Exhaust Pressure Delta TS	1.80000	s
33.0	Exhaust Temperature	IFILE1:TM'PitotEFM_ExhaustG	degC
34.0	Exhaust Temperature TS	1.80000	s
35.0	Lambda	N/A	-
36.0	Lambda TS		s
37.0	CO2_DIL		%
38.0	CO2_DIL TS		s
39.0	CVS Volume Flow		m3/min
40.0	TimeShift_CVS_VOL_FLOW		s
41.0	IN_CVS_PRESSURE		kPa
42.0	TimeShift_CVS_PRESSURE		s
43.0	IN_CVS_TEMP		degC
44.0	TimeShift_CVS_TEMP		s
45.0	Dry to Wet Conversion CO2	YES	-
46.0	Dry to Wet Conversion O2	YES	-
47.0	Dry to Wet Conversion NO	NO	-
48.0	Dry to Wet Conversion NO2	NO	-
49.0	Dry to Wet Conversion THC	NO	-
50.0	Dry to Wet Conversion CH4	NO	-
51.0	Dry to Wet Conversion O2	NO	-
52.0	CO2	IFILE1:TM'GPiS_CO2	%
53.0	CO2 TS	-10.00000	s
54.0	OS	IFILE1:TM'GPiS_O2	%
55.0	O2 TS	-10.50000	s
56.0	CO	IFILE1:TM'GPiS_CO	ppm
57.0	CO TS	-10.00000	s
58.0	NO	IFILE1:TM'GPiS_NO	ppm
59.0	NO TS	-8.20000	s
60.0	NO2	IFILE1:TM'GPiS_NO2	ppm

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Vehicle: 2017 VW CC /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
61.0	NO2 TS	-8.20000	s
62.0	THC	IFILE1:TM'FIDiS_THC_C1	ppm
63.0	THC TS	0.00000	s
64.0	CH4	IFILE1:TM'FIDiS_CH4_C1	ppm
65.0	CH4 TS	0.00000	s
66.0	GAS_PEMS_Ethane_Efficiency	IFILE1:MOVE_AVL4925'GP_Et -	
67.0	GAS_PEMS_Methane_Efficiency	IFILE1:MOVE_AVL4925'GP_M -	
68.0	GAS_PEMS_Methane_Response	IFILE1:MOVE_AVL4925'GP_M -	
69.0	Zero Signal	IFILE1:TM'GPiS_STATE	0/1
70.0	Zero Signal TS	-8.20000	s
71.0	Zero Signal_FIDiS	IFILE1:TM'FIDiS_STATE	0/1
72.0	Zero Signal_FIDiS TS		s
73.0	Species Input Type	4.00000	-
74.0	GASPEMS=AVL493	NO	-
75.0	GASPEMS=AVL493_iX	NO	-
76.0	GASPEMS=AVL492	YES	-
77.0	GASPEMS=AVL4925	YES	-
78.0	PM: Type	4.00000	1=GFB+HC, 2=GFB, 3=PM=S
79.0	Filter ID from IFile	NO	-
80.0	Lab ID from IFile	NO	-
81.0	PM Filter: ID	N/A	ID
82.0	PM Filter: Lab	N/A	Name/ID
83.0	PM Filter: Weight before Test	N/A	mg
84.0	PM Filter: Weight after Test	N/A	mg
85.0	PM (HC Corr): Max. Exhaust Flow	N/A	scfm
86.0	Soot		mg/m3
87.0	Soot TS	-5.00000	s
88.0	Soot Sensor		mg/m3
89.0	Soot Sensor TS		s
90.0	PM Filter: Filter Flow Rate		l/min

#	Text	Value	Unit
-	----	----	----
91.0	PM Filter: Filter Flow Rate TS	-5.00000	s
92.0	PM Filter: Filter Dilution Ratio		-
93.0	PM Filter: Filter Dilution Ratio TS	-5.00000	s
94.0	PM Filter: Filter Trigger		-
95.0	PM Filter: Filter Trigger TS	-5.00000	s
96.0	PMPEMS=AVL494	YES	-
97.0	PMPEMS_AVL494_PROP_DIL	NO	-
98.0	PM dilution ratio min		-
99.0	PM_MaxExhaustFlowRate		-
100.0	PM_ExhaustFlow_Thresh		-
101.0	PM_total_flow_val		-
102.0	PM_total_flow_val_TS		-
103.0	PM_exh_mass_flow		-
104.0	PM_exh_mass_flow_TS		-
105.0	PN		#/cm3
106.0	TimeShift_PN		s
107.0	PN_STATE		-
108.0	PN TS STATE		s
109.0	PNPEMS_AVL496	NO	-
110.0	PN_CorrFactor	1.00000	
111.0	Time Alignment	1.00000	-
112.0	Time Alignment Dataset 1	N/A	0/1
113.0	Time Alignment Dataset 2	N/A	0/1
114.0	Time Alignment Thresh 1	N/A	-
115.0	Time Alignment Thresh 2	N/A	-
116.0			
117.0			
118.0			
119.0			
120.0			

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Vehicle: 2017 VW CC /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
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#	Text	Value	Unit
-	----	----	----
121.0			
122.0	Trigger		0/1
123.0	Trigger TS		s
124.0	FTIR_NAME_1		-
125.0	FTIR_MW_1		-
126.0	FTIR_CHANNEL_1		-
127.0	FTIR_CHANNEL_TS_1		-
128.0	FTIR_CHANNEL_DRY_1	NO	-
129.0	FTIR_NAME_2		-
130.0	FTIR_MW_2		-
131.0	FTIR_CHANNEL_2		-
132.0	FTIR_CHANNEL_TS_2		-
133.0	FTIR_CHANNEL_DRY_2	NO	-
134.0	FTIR_NAME_3		-
135.0	FTIR_MW_3		-
136.0	FTIR_CHANNEL_3		-
137.0	FTIR_CHANNEL_TS_3		-
138.0	FTIR_CHANNEL_DRY_3	NO	-
139.0	FTIR_NAME_4		-
140.0	FTIR_MW_4		-
141.0	FTIR_CHANNEL_4		-
142.0	FTIR_CHANNEL_TS_4		-
143.0	FTIR_CHANNEL_DRY_4	NO	-
144.0	FTIR_NAME_5		-
145.0	FTIR_MW_5		-
146.0	FTIR_CHANNEL_5		-
147.0	FTIR_CHANNEL_TS_5		-
148.0	FTIR_CHANNEL_DRY_5	NO	-
149.0	FTIR_NAME_6		-
150.0	FTIR_MW_6		-

#	Text	Value	Unit
-	----	----	----
151.0	FTIR_CHANNEL_6		-
152.0	FTIR_CHANNEL_TS_6		-
153.0	FTIR_CHANNEL_DRY_6	NO	-
154.0	FTIR_NAME_7		-
155.0	FTIR_MW_7		-
156.0	FTIR_CHANNEL_7		-
157.0	FTIR_CHANNEL_TS_7		-
158.0	FTIR_CHANNEL_DRY_7	NO	-
159.0	FTIR_NAME_8		-
160.0	FTIR_MW_8		-
161.0	FTIR_CHANNEL_8		-
162.0	FTIR_CHANNEL_TS_8		-
163.0	FTIR_CHANNEL_DRY_8	NO	-
164.0	FTIR_NAME_9		-
165.0	FTIR_MW_9		-
166.0	FTIR_CHANNEL_9		-
167.0	FTIR_CHANNEL_TS_9		-
168.0	FTIR_CHANNEL_DRY_9	NO	-
169.0	FTIR_NAME_10		-
170.0	FTIR_MW_10		-
171.0	FTIR_CHANNEL_10		-
172.0	FTIR_CHANNEL_TS_10		-
173.0	FTIR_CHANNEL_DRY_10	NO	-
174.0	FTIR_NAME_11		-
175.0	FTIR_MW_11		-
176.0	FTIR_CHANNEL_11		-
177.0	FTIR_CHANNEL_TS_11		-
178.0	FTIR_CHANNEL_DRY_11	NO	-
179.0	FTIR_NAME_12		-
180.0	FTIR_MW_12		-

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Vehicle: 2017 VW CC /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
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#	Text	Value	Unit
-	----	----	----
181.0	FTIR_CHANNEL_12		-
182.0	FTIR_CHANNEL_TS_12		-
183.0	FTIR_CHANNEL_DRY_12	NO	-
184.0	FTIR_NAME_13		-
185.0	FTIR_MW_13		-
186.0	FTIR_CHANNEL_13		-
187.0	FTIR_CHANNEL_TS_13		-
188.0	FTIR_CHANNEL_DRY_13	NO	-
189.0	FTIR_NAME_14		-
190.0	FTIR_MW_14		-
191.0	FTIR_CHANNEL_14		-
192.0	FTIR_CHANNEL_TS_14		-
193.0	FTIR_CHANNEL_DRY_14	NO	-
194.0	FTIR_NAME_15		-
195.0	FTIR_MW_15		-
196.0	FTIR_CHANNEL_15		-
197.0	FTIR_CHANNEL_TS_15		-
198.0	FTIR_CHANNEL_DRY_15	NO	-
199.0	FTIR_NAME_16		-
200.0	FTIR_MW_16		-
201.0	Vehicle Type	2017 VW CC	-
202.0	Vehicle Info		-
203.0	Engine Type	Gasoline	-
204.0	Engine Info	2.0L	-
205.0	Engine Torque		Nm
206.0	Curb Idle Load		%
207.0	Idle Speed		rpm
208.0	HYBRID_OVC_REF_CO2_gkm		g/km
209.0	Engine Concept	1.00000	-
210.0	Alpha	1.93000	-

#	Text	Value	Unit
-	----	----	----
211.0	Beta	1.00000	
212.0	Gamma	0.00000	
213.0	Delta	0.00000	
214.0	Epsilon	0.03200	
215.0	X_C	83.00000	
216.0	X_H	13.30000	
217.0	X_N	0.00000	
218.0	X_O	3.50000	
219.0	X_S	0.00000	
220.0	Fuel_Density	747.50000	
221.0	rho_exhaust	1.29310	
222.0	U_CO2	1.51800	
223.0	U_CO	0.96600	
224.0	U_NO	1.58700	
225.0	U_NO2	1.58700	
226.0	U_NOx	1.58700	
227.0	U_HC	0.49900	
228.0	U_NMHC	0.47100	
229.0	U_CH4	0.55300	
230.0	U_O2	1.10400	
231.0	Fuel Type	2.00000	-
232.0	exhaust mass flow type (YES/NO)	YES	-
233.0	Distance Calculation Type	1.00000	-
234.0	Velocity Statistics Calculation Type	2.00000	-
235.0	RDE vehicle class	1.00000	-
236.0	TM_CITY0		s
237.0	TM_CITY1		s
238.0	TM_RURAL0		s
239.0	TM_RURAL1		s
240.0	TM_RURAL2_0		s

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Vehicle: 2017 VW CC /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
241.0	TM_RURAL2_1		s
242.0	Second Rural Part for Time Marks (NO		-
243.0	TM_MW0		s
244.0	TM_MW1		s
245.0	VELOCITY_LIMIT_STOP	2.00000	km/h
246.0	VELOCITY_LIMIT_URBAN	50.00000	km/h
247.0	VELOCITY_LIMIT_RURAL	75.00000	km/h
248.0	Intake Manifold Pressure Type	1.00000	-
249.0	Velocity	IFILE1:TM'OBD_Vehicle_Spee	km/h
250.0	Velocity TS	1.60000	s
251.0	Velocity FACTOR	1.00000	-
252.0	Coolant Temperature	IFILE1:TM'OBD_Engine_Coola	degC
253.0	Coolant Temperature TS	1.60000	s
254.0	Oil Temperature		degC
255.0	Oil Temperature TS	1.60000	s
256.0	Intake Manifold Temperature		degC
257.0	Intake Manifold Temp TS	1.60000	s
258.0	Intake Manifold Pressure	IFILE1:TM'OBD_Intake_manifo	kPa
259.0	Intake Manifold Pressure TS	1.60000	s
260.0	Throttle Position		%
261.0	Throttle TS	1.60000	s
262.0	TYP_IDLE_MASS_FLOW		kg/h
263.0	Torque Type	1.00000	-
264.0	Speed	IFILE1:TM'OBD_Engine_RPM	rpm
265.0	Speed TS	1.60000	s
266.0	Torque		Nm
267.0	Torque TS	1.60000	s
268.0	Friction Torque	N/A	Nm
269.0	Friction Torque TS	N/A	s
270.0	Reference Torque	N/A	Nm

#	Text	Value	Unit
-	----	----	----
271.0	Reference Torque TS	N/A	s
272.0	k_VELINE		-
273.0	D_VELINE		-
274.0	Fuel Flow Type	2.00000	-
275.0	Air Flow Type	1.00000	-
276.0	Fuel Rate		various
277.0	Air Rate		various
278.0	Fuel Rate TS	1.60000	s
279.0	No_Cylinders		-
280.0	Air Rate TS	1.60000	s
281.0	FTIR_CHANNEL_32		-
282.0	FTIR_CHANNEL_TS_32		-
283.0	FTIR_CHANNEL_DRY_32	NO	-
284.0	FTIR_NAME_33		-
285.0	FTIR_MW_33		-
286.0	FTIR_CHANNEL_33		-
287.0	FTIR_CHANNEL_TS_33		-
288.0	FTIR_CHANNEL_DRY_33	NO	-
289.0	FTIR_NAME_34		-
290.0	FTIR_MW_34		-
291.0	FTIR_CHANNEL_34		-
292.0	FTIR_CHANNEL_TS_34		-
293.0	FTIR_CHANNEL_DRY_34	NO	-
294.0	FTIR_NAME_35		-
295.0	FTIR_MW_35		-
296.0	FTIR_CHANNEL_35		-
297.0	FTIR_CHANNEL_TS_35		-
298.0	FTIR_CHANNEL_DRY_35	NO	-
299.0	FTIR_NAME_36		-
300.0	FTIR_MW_36		-

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW CC /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
301.0	FTIR_CHANNEL_36		-
302.0	FTIR_CHANNEL_TS_36		-
303.0	FTIR_CHANNEL_DRY_36	NO	-
304.0	FTIR_NAME_37		-
305.0	FTIR_MW_37		-
306.0	FTIR_CHANNEL_37		-
307.0	FTIR_CHANNEL_TS_37		-
308.0	FTIR_CHANNEL_DRY_37	NO	-
309.0	FTIR_NAME_38		-
310.0	FTIR_MW_38		-
311.0	FTIR_CHANNEL_38		-
312.0	FTIR_CHANNEL_TS_38		-
313.0	FTIR_CHANNEL_DRY_38	NO	-
314.0	FTIR_NAME_39		-
315.0	FTIR_MW_39		-
316.0	FTIR_CHANNEL_39		-
317.0	FTIR_CHANNEL_TS_39		-
318.0	FTIR_CHANNEL_DRY_39	NO	-
319.0	FTIR_NAME_40		-
320.0	FTIR_MW_40		-
321.0	FTIR_CHANNEL_40		-
322.0	FTIR_CHANNEL_TS_40		-
323.0	FTIR_CHANNEL_DRY_40	NO	-
324.0	Legislation Type (1=HDIUT 2=EU H	4.00000	-
325.0	WholeTest_NOx_corr	5.00000	-
326.0	WholeTest_Hum_corr	2.00000	-
327.0	CD_Distance	0.00000	km
328.0	CD_NOx	0.00000	mg/km
329.0	CD_CO	0.00000	mg/km
330.0	CD_CO2	0.00000	g/km

#	Text	Value	Unit
-	----	----	----
331.0	CD_NMHC	0.00000	mg/km
332.0	CD_CH4	0.00000	mg/km
333.0	CD_THC	0.00000	mg/km
334.0	CD_PN		#/km
335.0	WLTC_LOW_SPEED_gkm		g/km
336.0	WLTC_LOW_SPEED_FAC	1.20000	-
337.0	WLTC_MEDIUM_SPEED_gkm		g/km
338.0	WLTC_HIGH_SPEED_gkm		g/km
339.0	WLTC_HIGH_SPEED_FAC	1.10000	-
340.0	WLTC_EXTRA_HIGH_SPEED_gkm		g/km
341.0	WLTC_EXTRA_HIGH_SPEED_FA	1.05000	-
342.0	TOL_NORMAL_DRIVING	25.00000	%
343.0	TOL_SEVERE_DRIVING	50.00000	%
344.0	Increase Tolerance Nomral Driving	NO	-
345.0	Bin1_min		km/h
346.0	Bin2_min		km/h
347.0	Bin3_min		km/h
348.0	Bin1_max		km/h
349.0	Bin2_max		km/h
350.0	Bin3_max		km/h
351.0	Clear_R0	125.40000	N
352.0	Clear_R1	0.29300	Nh/km
353.0	Clear_R2	0.02795	N*(h/km) ²
354.0	Clear_SMK	1470.00000	kg
355.0	Clear_Rated_Power	140.00000	kW
356.0	Clear_Ref_Velocity	70.00000	km/h
357.0	Clear_Ref_Acc	0.45000	m/s ²
358.0	Clear_Smooth	3.00000	s
359.0	EXTC_From_High_Temp	30.00000	degC
360.0	EXTC_To_High_Temp	35.00000	degC

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW CC /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
361.0	EXTC_From_Low_Temp	-7.00000	degC
362.0	EXTC_To_Low_Temp	0.00000	degC
363.0	Euro 6d or Euro 6d temp	NO	-
364.0	EXTC_From_Altitude	700.00000	m
365.0	EXTC_To_Altitude	1300.00000	m
366.0	EXTC_CORR_FAC	1.60000	
367.0	weight cold start (YES/NO)	NO	-
368.0	precon and soak done (YES/NO)	NO	-
369.0	PATH_PRECON_FILE		
370.0	filter velocity (YES/NO)	NO	-
371.0	filter velocity auto(YES/NO)	NO	-
372.0	Ki_CO		
373.0	Ki_CO2		
374.0	Ki_NOx		
375.0	Ki_FACTOR_CO2 (YES/NO)	NO	-
376.0	Ki_OFFSET_CO2 (YES/NO)	NO	-
377.0	Ki_FACTOR_CO (YES/NO)	NO	-
378.0	Ki_OFFSET_CO (YES/NO)	NO	-
379.0	Ki_FACTOR_NOx (YES/NO)	NO	-
380.0	Ki_OFFSET_NOx (YES/NO)	NO	-
381.0	Ki_OFF (YES/NO)	NO	-
382.0	HD legislations	1.00000	-
383.0	RDE legislations	1.00000	-
384.0	Submission Documents (YES/NO)	NO	-
385.0	General Setup Parameters Text	City	-
386.0	Legislation Setup Parameters Text	City	-
387.0	Trip Info		-
388.0	IN_TIME_REF		-
389.0	Sub-Trip Start: Auto	YES	-
390.0	Sub-Trip Start: Seconds	N/A	s

#	Text	Value	Unit
-	----	----	----
391.0	Sub-Trip End: Auto	YES	-
392.0	Sub-Trip End: Seconds	N/A	s
393.0	Unit System	2.00000	-
394.0	Calculate: PM Emissions	NO	-
395.0	Calculate: PN Emissions	NO	-
396.0	Output: Summary	YES	-
397.0	Output: Emissions	YES	-
398.0	Output: Raw Data	YES	-
399.0	Output: Zero Span	YES	-
400.0	Output: Data Consistency	NO	-
401.0	Output: Window Plots	YES	-
402.0	Fuel Rate ECU vs. EU ISO16183	y = 10000000000.0000 x - 0.000 R ² =10000000000.000 SEE=	
403.0	PEMS post processing version	Rel_10_B192	
404.0	Concerto version	480.00000	
405.0	Concerto build	215.00000	
406.0	USERNAME	EFR	

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW CC /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway
Page: Trip Summary

Start Date: 09/29/2017
Start Time: 10:38:34.0



Trip Duration	2546.00	s	ave THC	-0.49171	ppm	BS CO2	n/a	g/hphr
Trip Duration (a)	2546.00	s	ave NMHC	1.88426	ppm	BS CO	n/a	g/hphr
Trip Distance	38.95	mi	ave CH4	-2.15997	ppm	BS THC	n/a	g/hphr
Trip Distance (a)	38.95	mi	ave CO	387.81206	ppm	BS NMHC	n/a	g/hphr
Trip Fuel Cons. (b)	n/a	kg	ave CO2	12.61624	%	BS CH4	n/a	g/hphr
Trip Fuel Cons. (ab)	n/a	kg	ave NOx	2.10216	ppm	BS NO (d)	n/a	g/hphr
Trip Fuel Cons. EU (ac)	3.31	kg	ave PM	n/a	mg/m3	BS NO2	n/a	g/hphr
Trip Fuel Cons. US (ac)	3.28	kg	ave Soot meas	n/a	mg/m3	BS NOx	n/a	g/hphr
Trip Fuel Cons. Volume (b)	n/a	gall	ave Soot	n/a	mg/m3	BS Soot	n/a	g/hphr
Trip Fuel Cons. Volume (ab)	n/a	gall	ave PN	n/a	#/cm3	BS Soot meas	n/a	g/hphr
Trip Fuel Cons. Volume EU (ac)	1.17	gall	tot THC	0.03716	g	BS PM	n/a	g/hphr
Trip Fuel Cons. Volume US (ac)	1.16	gall	tot NMHC	0.05872	g	BS PN	n/a	#/hpr
Trip Fuel Economy (b)	n/a	mpg_US	tot CH4	0.00336	g	DS CO2	255.64687	g/mi
Trip Fuel Economy (ab)	n/a	mpg_US	tot CO	17.97776	g	DS CO	0.46155	g/mi
Trip Fuel Economy EU (ac)	33.27	mpg_US	tot CO2	9957.56521	g	DS THC	0.00095	g/mi
Trip Fuel Economy US (ac)	33.60	mpg_US	tot NO (d)	0.18406	g	DS NMHC	0.00151	g/mi
Trip Av. Eng. Speed	1858.82	rpm	tot NO2	0.01010	g	DS CH4	0.00009	g/mi
Trip Av. Torque	n/a	lbft	tot NOx	0.16623	g	DS NO (d)	0.00473	g/mi
Trip Av. Power	n/a	hp	tot Soot	n/a	g	DS NO2	0.00026	g/mi
Trip Work	n/a	hphr	tot Soot meas	n/a	g	DS NOx	0.00427	g/mi
Trip Exhaust Mass	51.56	kg	tot PM	n/a	g	DS Soot	n/a	g/mi
Trip Exhaust Mass EU (ac)	n/a	kg	tot PN	n/a	#	DS Soot meas	n/a	g/mi
Trip Exhaust Mass US (ac)	n/a	kg	PM measurement type	0.00000	-	DS PM	n/a	g/mi
Trip Av. Amb. Temperature	73.85	deg_F	PM correction type	1.00000	alpha(HC)	DS PN	n/a	#/mi
Trip Av. Humidity	58.30	%	tot Soot on PM filter (estim.)	n/a	mg	FS CO2	n/a	g/kg
Fuel Type	Petrol (E10)		Soot --> PM simple scaling factor	1.00000	-	FS CO	n/a	g/kg
			Soot --> PM alpha scaling factor	0.00000	-	FS THC	n/a	g/kg
			Trip Av. Veh. Speed	55.07529	mi/hr	FS NMHC	n/a	g/kg
			Trip Velocity Zero	7.18775	%	FS CH4	n/a	g/kg
			Trip Velocity Urban	18.73527	%	FS NO (d)	n/a	g/kg
			Trip Velocity Rural	2.59230	%	FS NO2	n/a	g/kg
			Trip Velocity Motorway	78.67243	%	FS NOx	n/a	g/kg
						FS Soot	n/a	g/kg
						FS Soot meas	n/a	g/kg
						FS PM	n/a	g/kg
						FS PN	n/a	#/kg

(a) GAS PEMS measurement state only, (b) based on fuel rate input (ECU, Fuel Meter), (c) calculated from carbon balance
(d) NO calculated using molecular weight of NO2

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Jetta / Independent Vehicle
Engine: Gasoline / 1.8L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

Page: Trip Summary Drift Corrected

Start Date: 09/29/2017

Start Time: 10:38:34.0



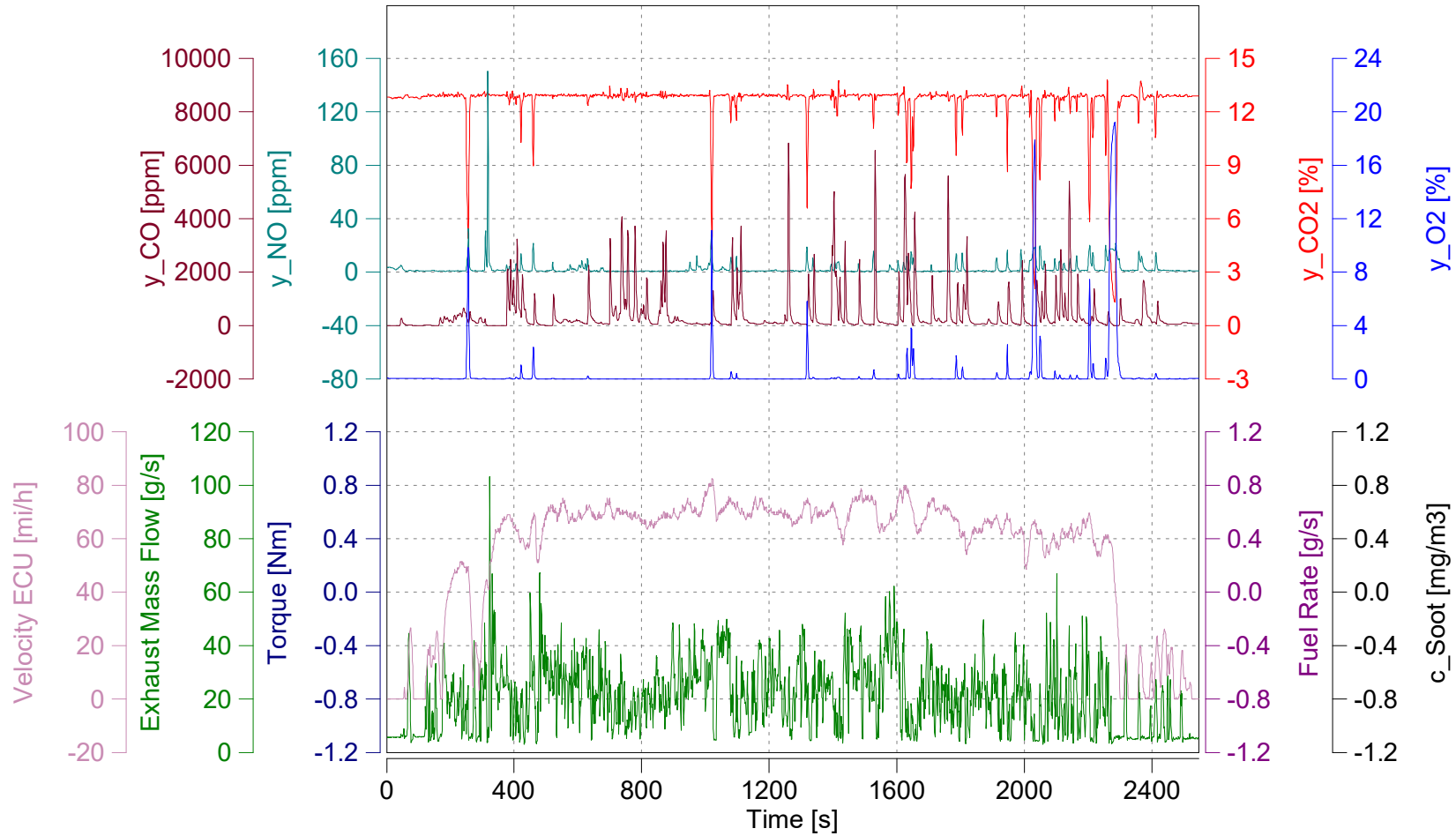
Concerto M.O.V.E, 2017

Trip Duration	2546.00	s	ave THC DC	-0.66752	ppm	BS CO2 DC	n/a	g/hphr
Trip Duration (a)	2546.00	s	ave NMHC DC	1.54479	ppm	BS CO DC	n/a	g/hphr
Trip Distance	38.95	mi	ave CH4 DC	-2.01120	ppm	BS THC DC	n/a	g/hphr
Trip Distance (a)	38.95	mi	ave CO DC	390.93217	ppm	BS NMHC DC	n/a	g/hphr
Trip Fuel Cons. (b)	n/a	kg	ave CO2 DC	12.61206	%	BS CH4 DC	n/a	g/hphr
Trip Fuel Cons. (ab)	n/a	kg	ave NOx DC	2.09760	ppm	BS NO DC (d)	n/a	g/hphr
Trip Fuel Cons. EU (ac)	3.31	kg	ave PM	n/a	mg/m3	BS NO2 DC	n/a	g/hphr
Trip Fuel Cons. US (ac)	3.28	kg	ave Soot meas	n/a	mg/m3	BS NOx DC	n/a	g/hphr
Trip Fuel Cons. Volume (b)	n/a	gall	ave Soot	n/a	mg/m3	BS Soot	n/a	g/hphr
Trip Fuel Cons. Volume (ab)	n/a	gall	ave PN DC	n/a	#/cm3	BS Soot meas	n/a	g/hphr
Trip Fuel Cons. Volume EU (ac)	1.17	gall	tot THC DC	0.05044	g	BS PM	n/a	g/hphr
Trip Fuel Cons. Volume US (ac)	1.16	gall	tot NMHC DC	0.05904	g	BS PN DC	n/a	#/hpr
Trip Fuel Economy (b)	n/a	mpg_US	tot CH4 DC	0.00372	g	DS CO2 DC	255.56213	g/mi
Trip Fuel Economy (ab)	n/a	mpg_US	tot CO DC	18.12340	g	DS CO DC	0.46529	g/mi
Trip Fuel Economy EU (ac)	33.27	mpg_US	tot CO2 DC	9954.26472	g	DS THC DC	0.00130	g/mi
Trip Fuel Economy US (ac)	33.60	mpg_US	tot NO DC (d)	0.18409	g	DS NMHC DC	0.00152	g/mi
Trip Av. Eng. Speed	1858.82	rpm	tot NO2 DC	0.01006	g	DS CH4 DC	0.00010	g/mi
Trip Av. Torque	n/a	lbft	tot NOx DC	0.16622	g	DS NO DC (d)	0.00473	g/mi
Trip Av. Power	n/a	hp	tot Soot	n/a	g	DS NO2 DC	0.00026	g/mi
Trip Work	n/a	hphr	tot Soot meas	n/a	g	DS NOx DC	0.00427	g/mi
Trip Exhaust Mass	51.56	kg	tot PM	n/a	g	DS Soot	n/a	g/mi
Trip Exhaust Mass EU (ac)	n/a	kg	tot PN DC	n/a	#	DS Soot meas	n/a	g/mi
Trip Exhaust Mass US (ac)	n/a	kg	PM measurement type	0.00000	-	DS PM	n/a	g/mi
Trip Av. Amb. Temperature	73.85	deg_F	PM correction type	1.00000	alpha(HC)	DS PN DC	n/a	#/mi
Trip Av. Humidity	58.30	%	tot Soot on PM filter (estim.)	n/a	mg	FS CO2 DC	n/a	g/kg
Fuel Type	Petrol (E10)		Soot --> PM simple scaling factor	1.00000	-	FS CO DC	n/a	g/kg
			Soot --> PM alpha scaling factor	0.00000	-	FS THC DC	n/a	g/kg
			Trip Av. Veh. Speed	55.07529	mi/hr	FS NMHC DC	n/a	g/kg
			Trip Velocity Zero	7.18775	%	FS CH4 DC	n/a	g/kg
			Trip Velocity Urban	18.73527	%	FS NO DC (d)	n/a	g/kg
			Trip Velocity Rural	2.59230	%	FS NO2 DC	n/a	g/kg
			Trip Velocity Motorway	78.67243	%	FS NOx DC	n/a	g/kg
						FS Soot	n/a	g/kg
						FS Soot meas	n/a	g/kg
						FS PM	n/a	g/kg
						FS PN DC	n/a	#/kg

(a) GAS PEMS measurement state only, (b) based on fuel rate input (ECU, Fuel Meter), (c) calculated from carbon balance
 (d) NO calculated using molecular weight of NO2

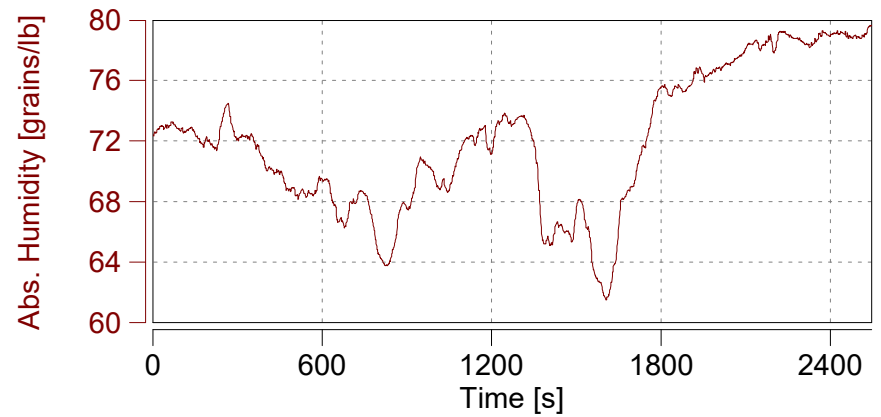
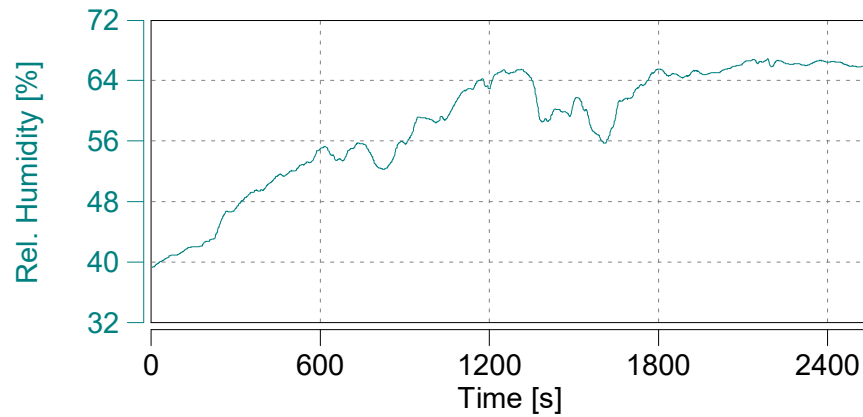
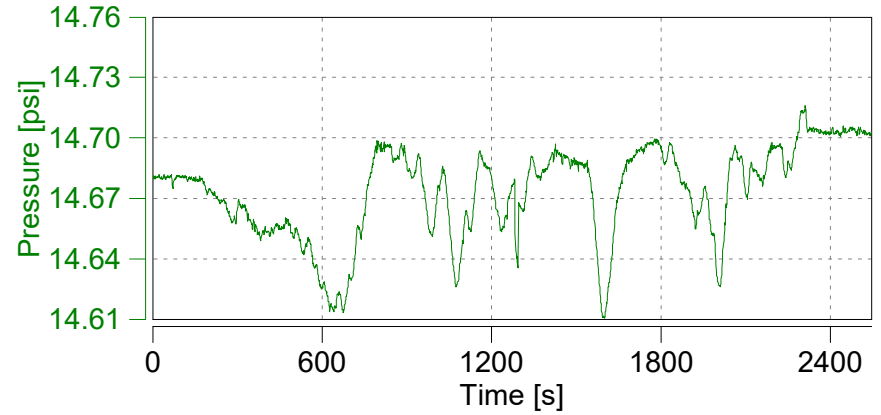
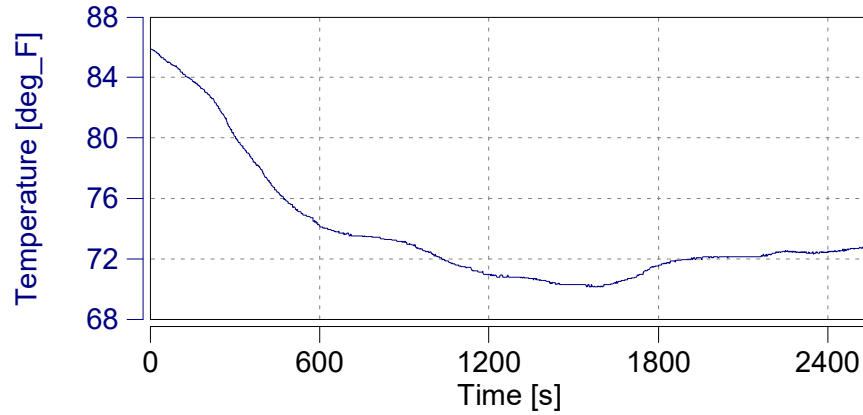
Concerto Version: 480 Build 215, Serial Number: 8468
 M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Jetta / Independent Vehicle
 Engine: Gasoline / 1.8L
 NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
 Dry / Wet Corr.: 2 - CFR40 §86.1342-90



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Jetta / Independent Vehicle
Engine: Gasoline / 1.8L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

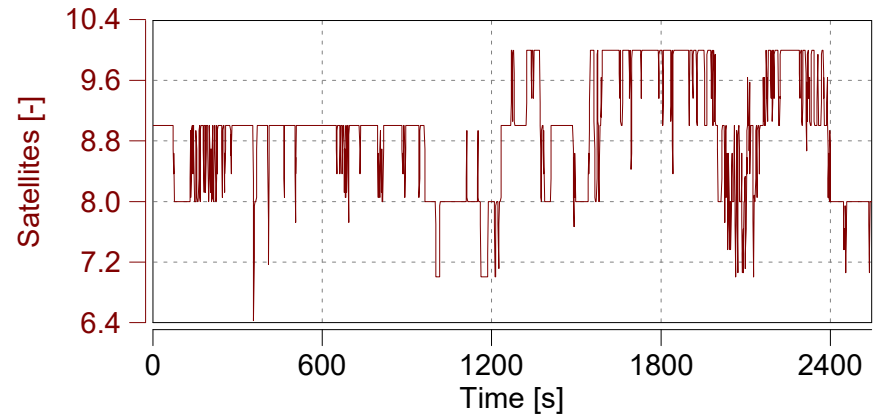
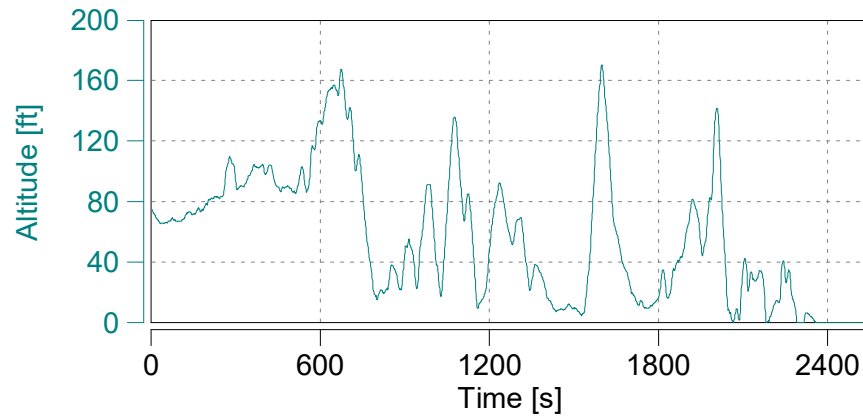
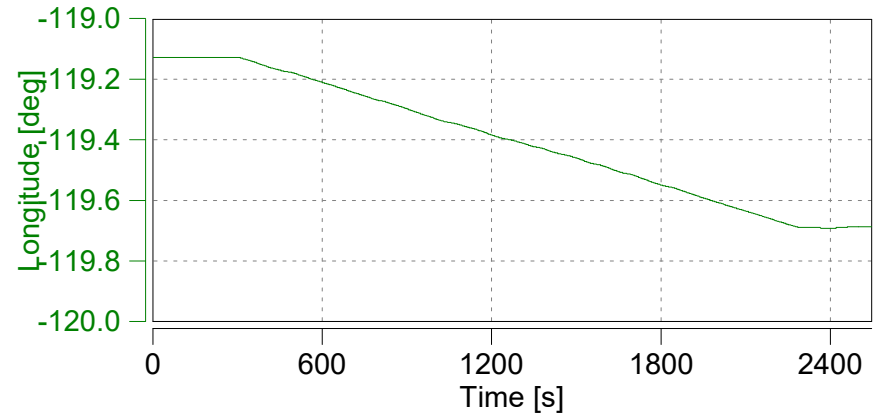
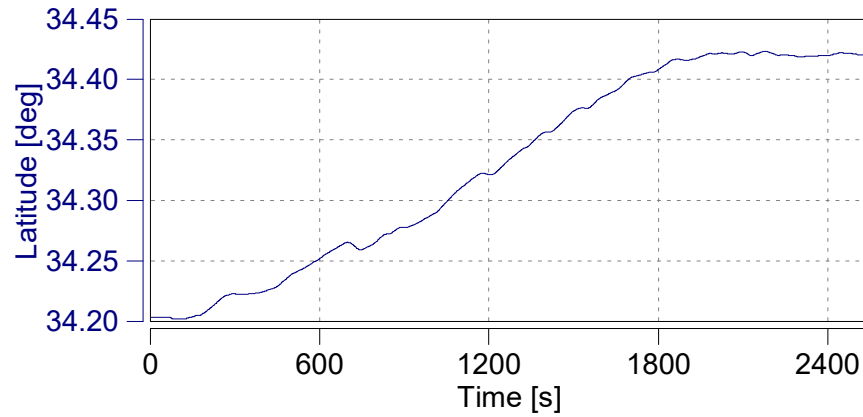


Case: Highway

Page: GPS

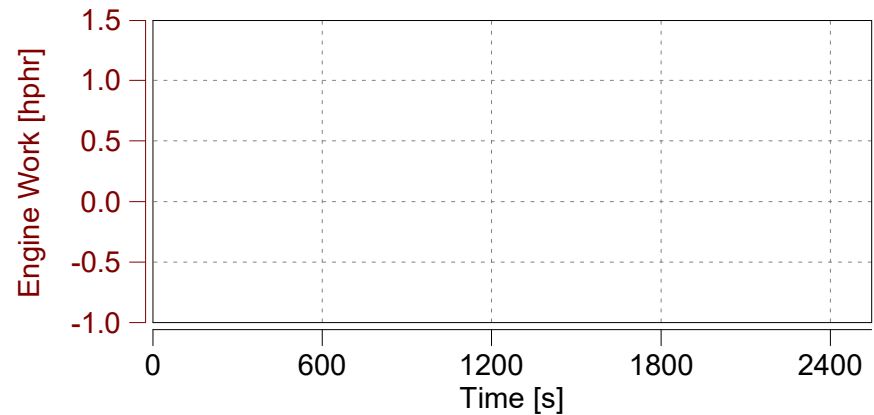
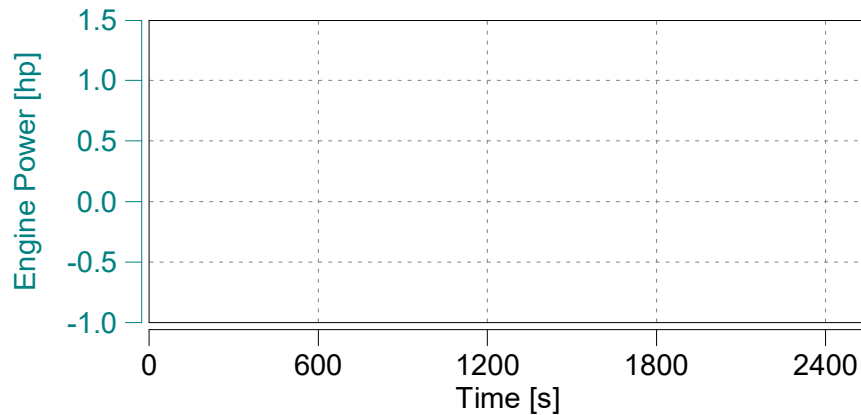
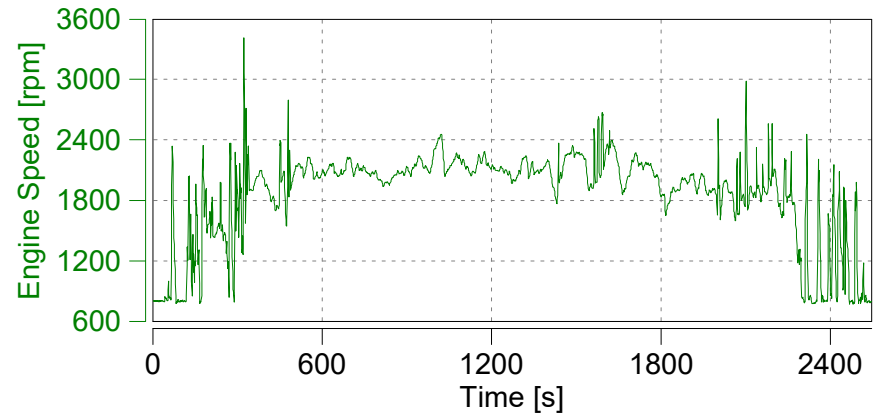
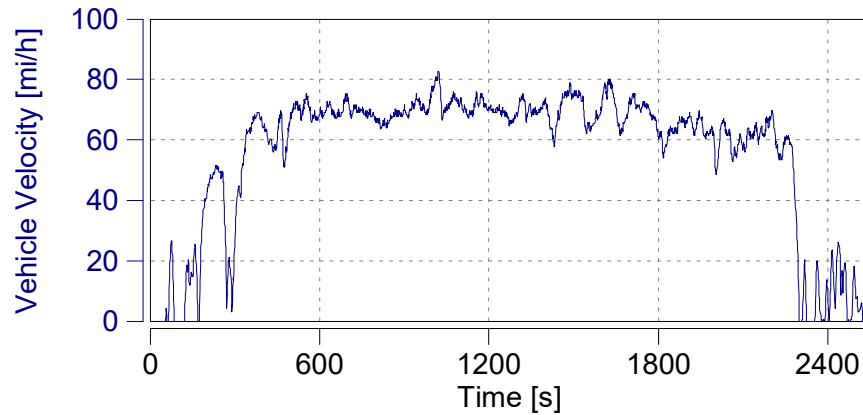
Start Date: 09/29/2017

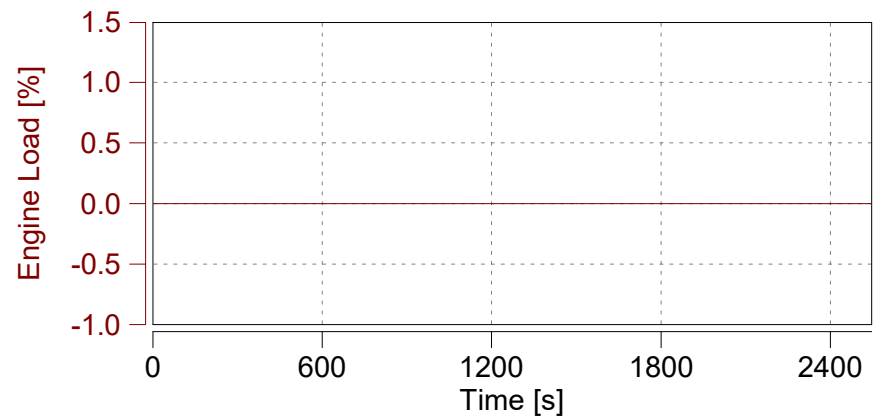
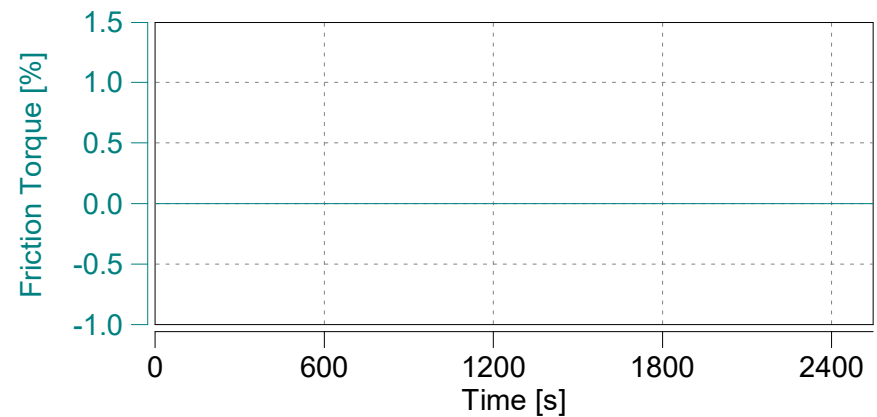
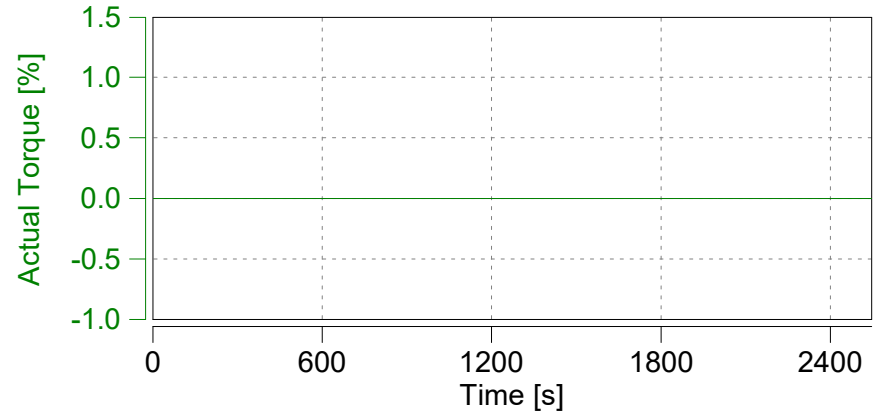
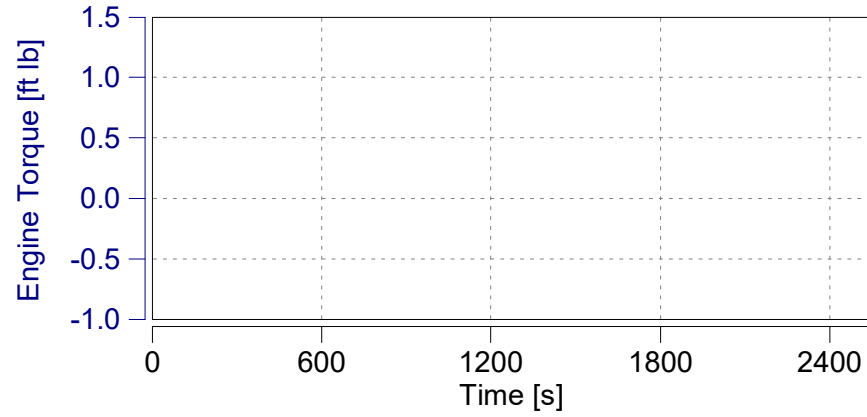
Start Time: 10:38:34.0

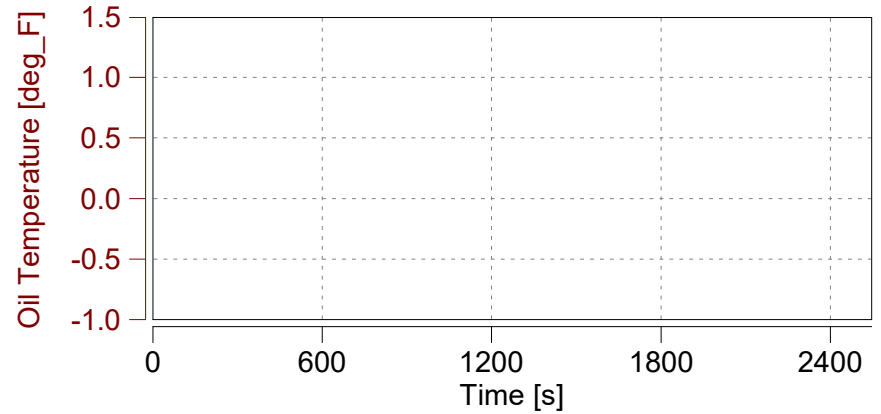
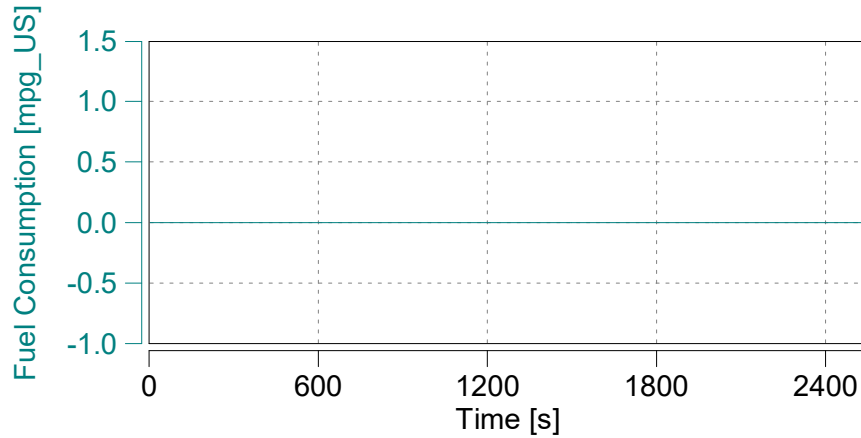
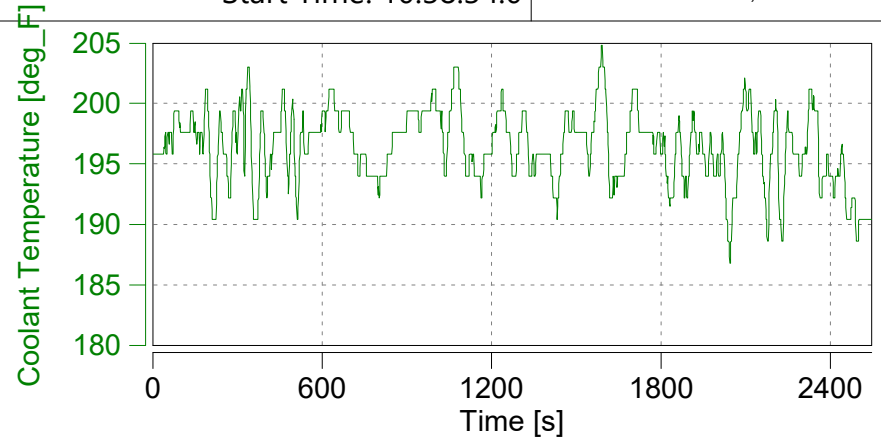
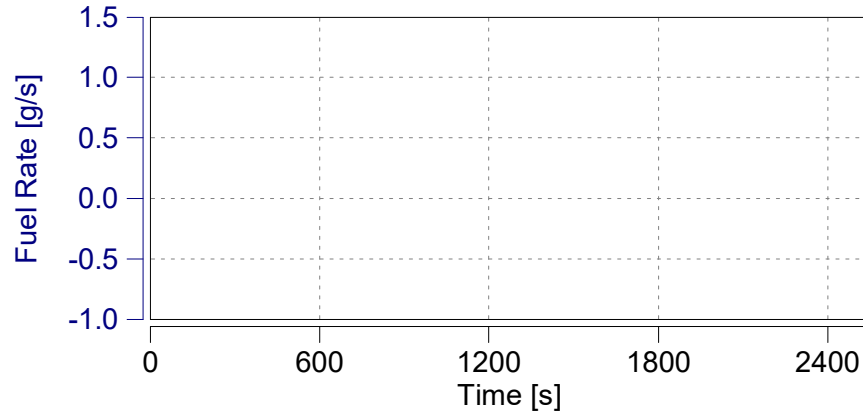


Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Jetta / Independent Vehicle
Engine: Gasoline / 1.8L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90





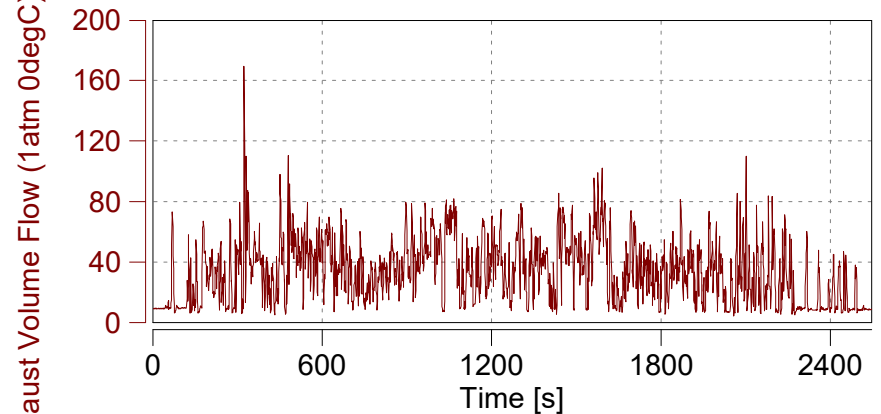
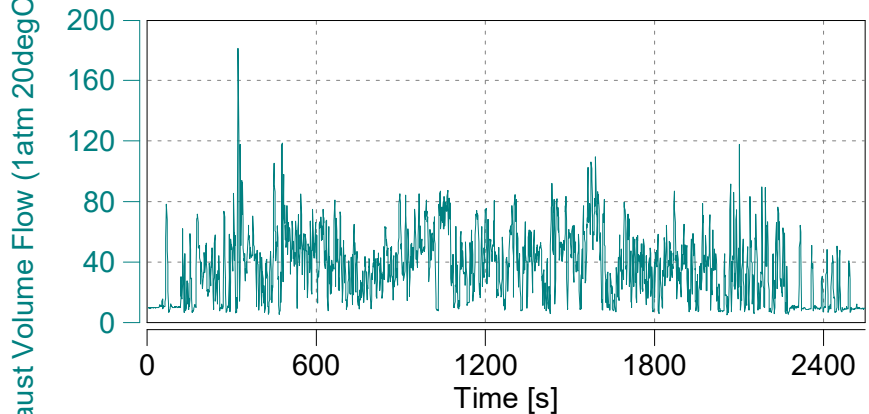
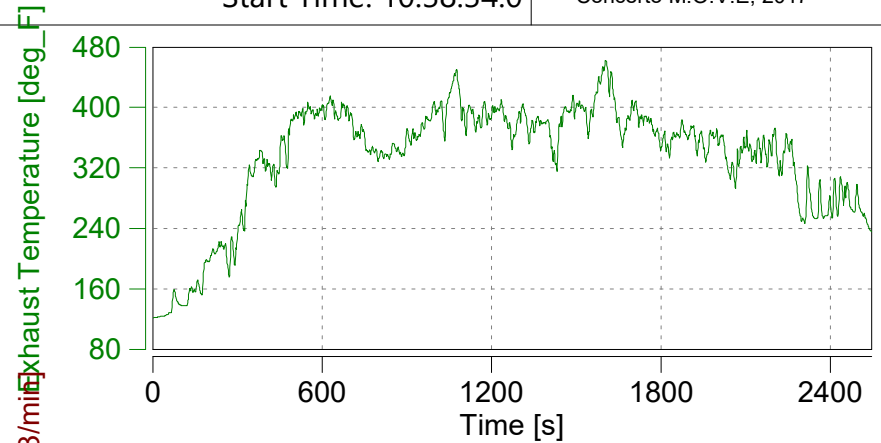
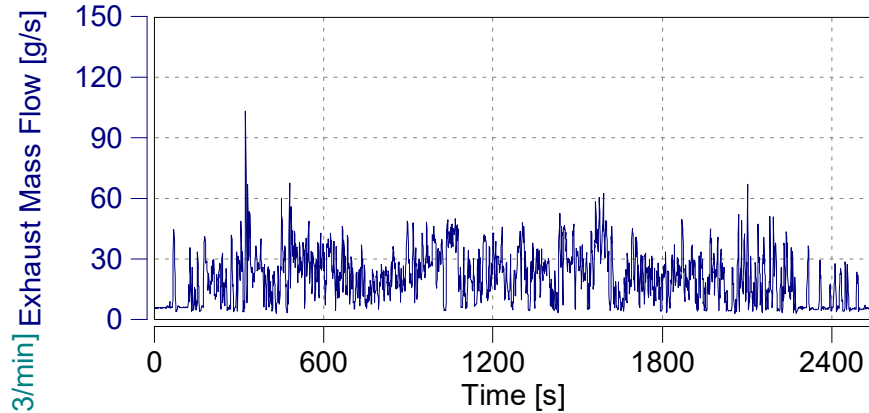


Case: Highway

Page: Exhaust Flow (1)

Start Date: 09/29/2017

Start Time: 10:38:34.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

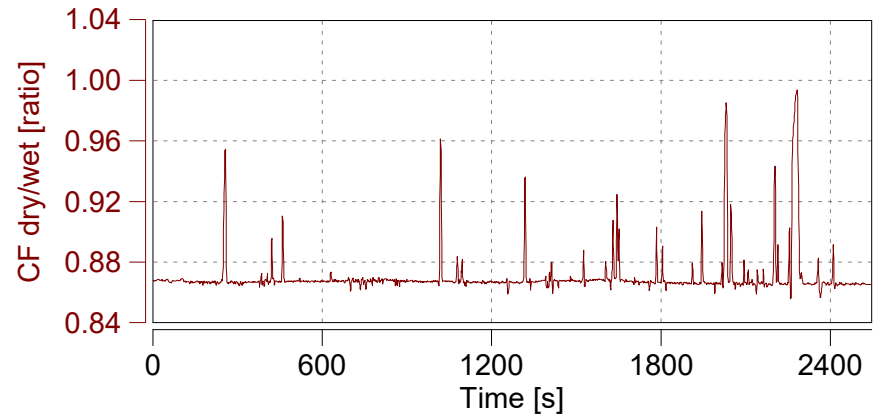
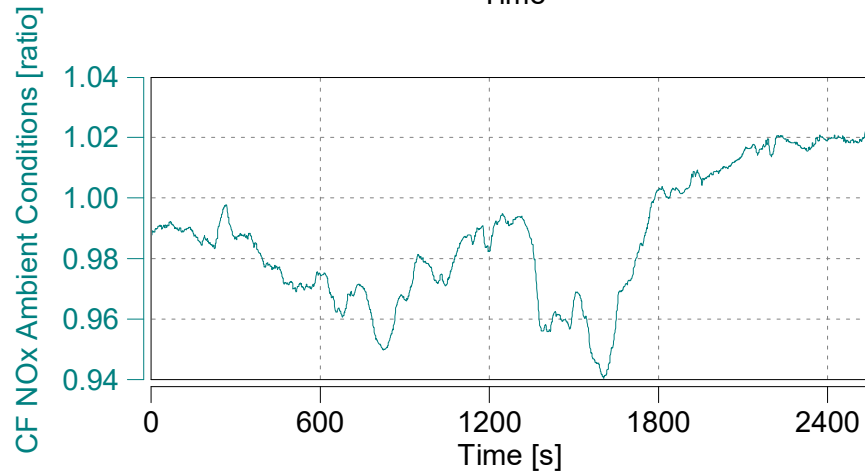
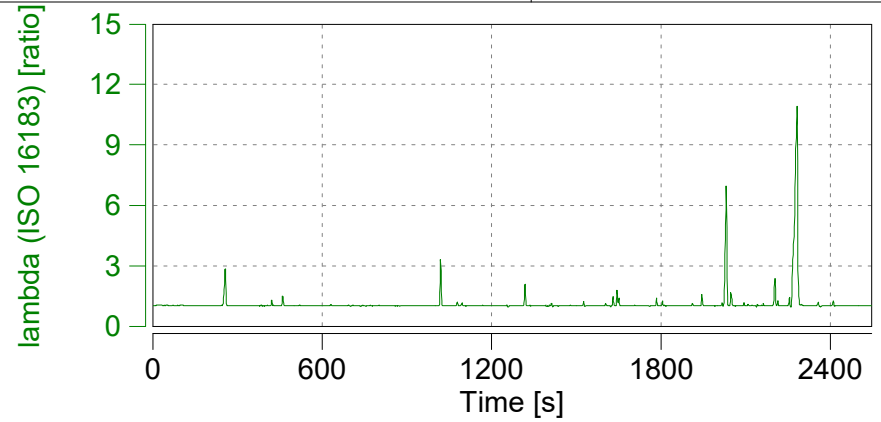
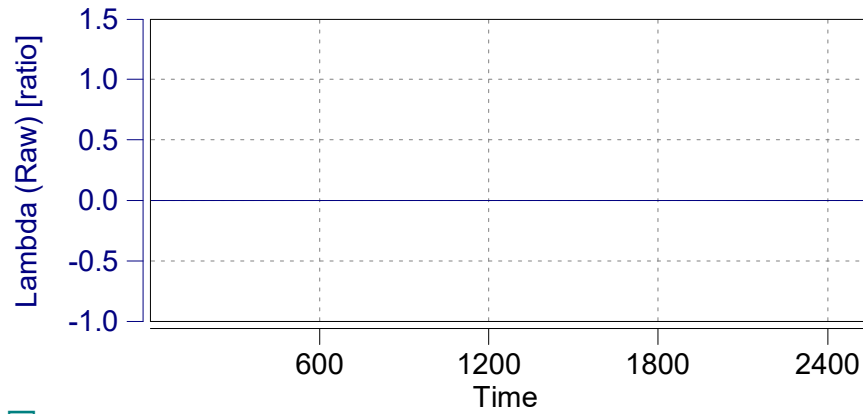
Vehicle: 2017 VW Jetta / Independent Vehicle
Engine: Gasoline / 1.8L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

Page: Exhaust Flow (2)

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Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

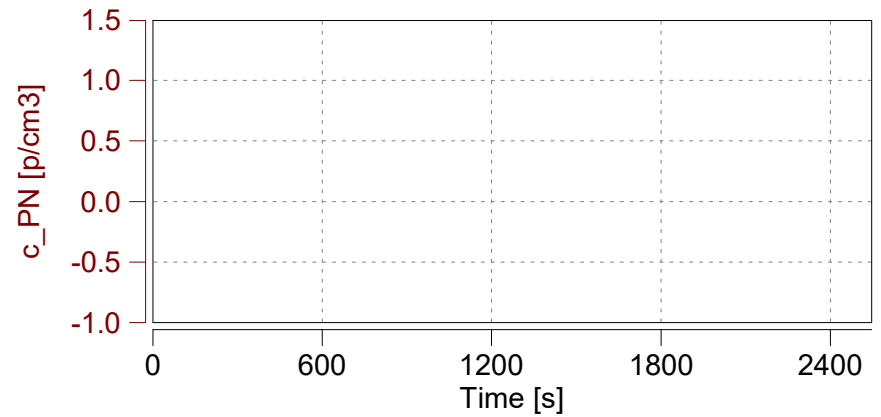
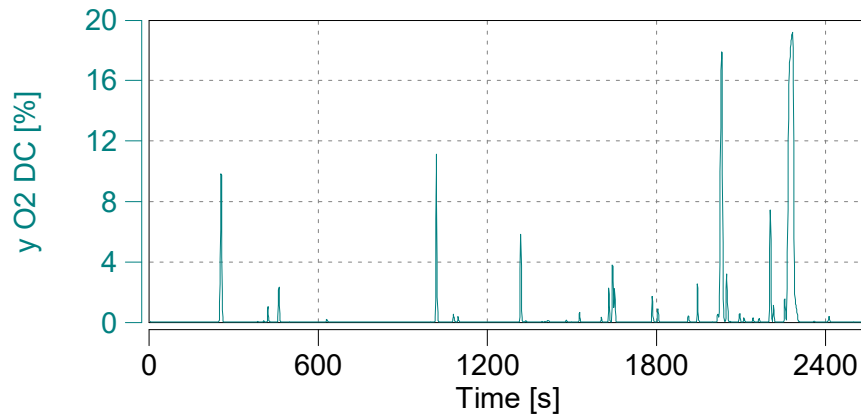
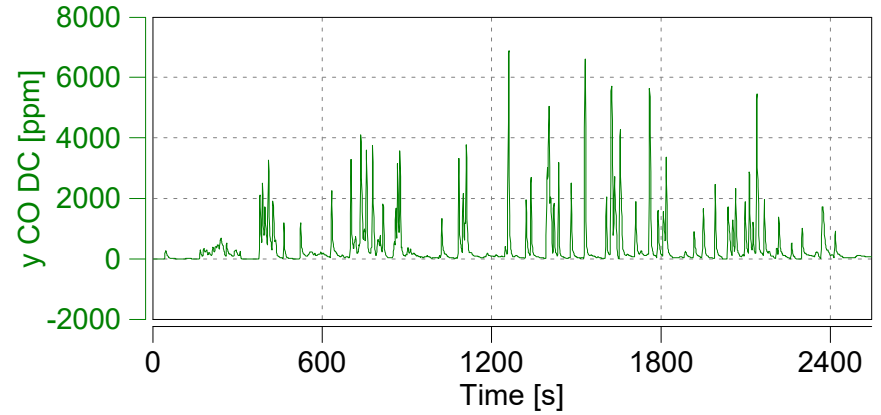
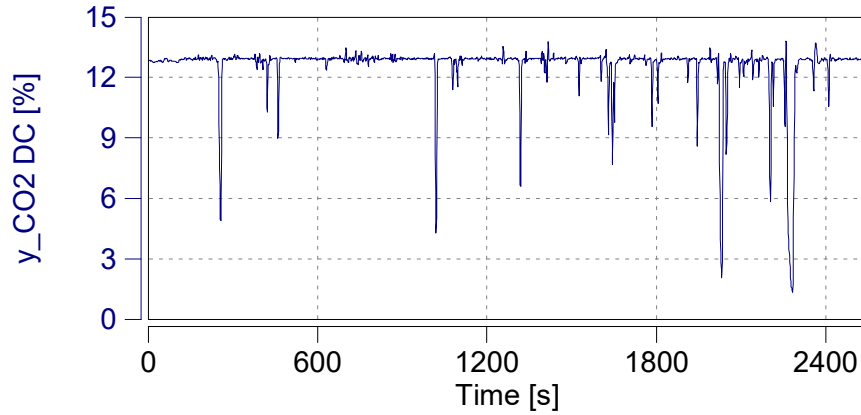
Vehicle: 2017 VW Jetta / Independent Vehicle
Engine: Gasoline / 1.8L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

Page: Corrected Emissions (1)

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Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

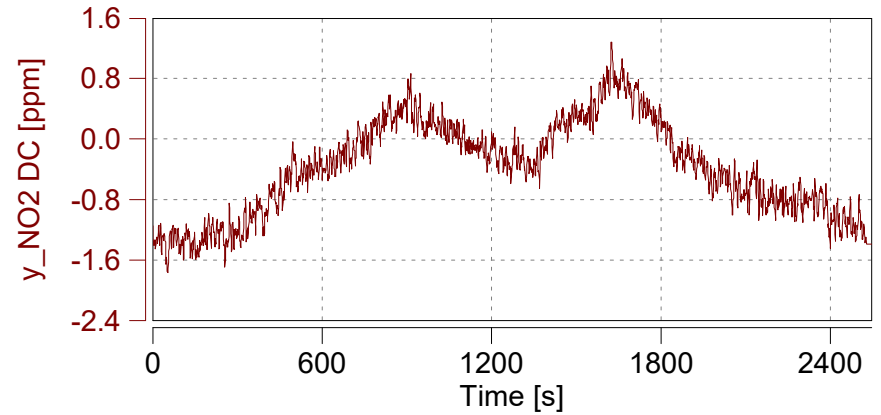
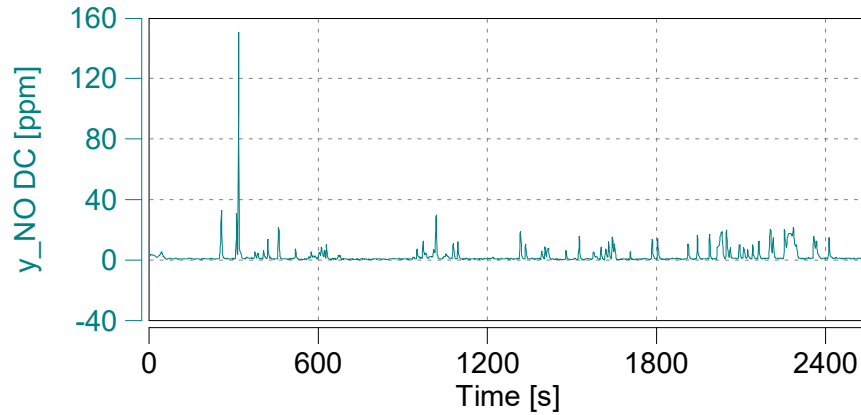
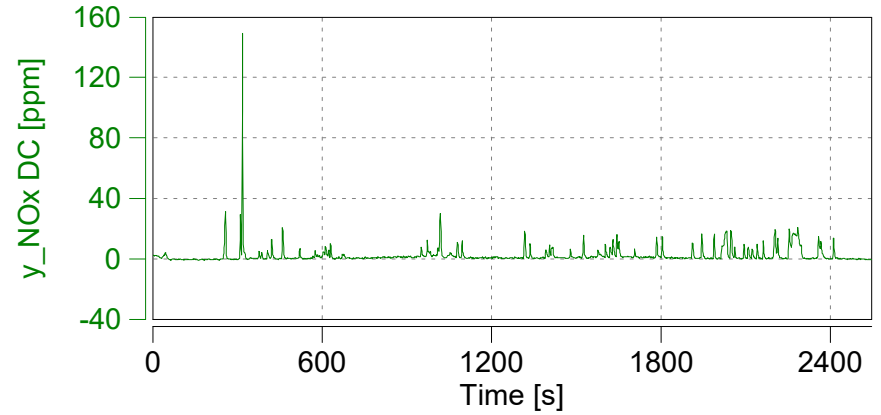
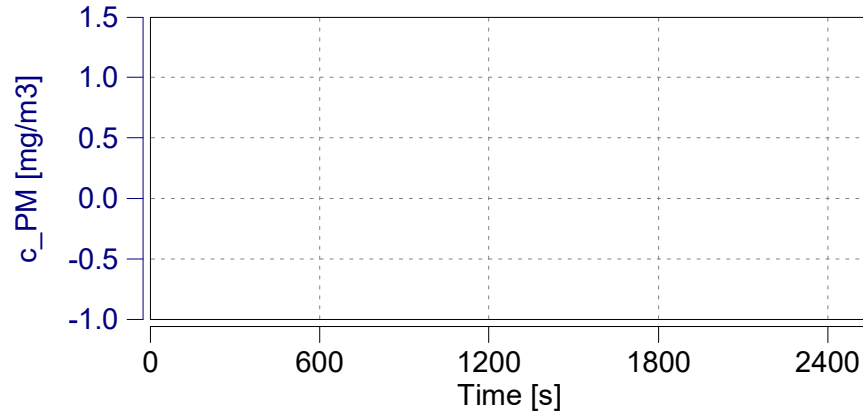
Vehicle: 2017 VW Jetta / Independent Vehicle
Engine: Gasoline / 1.8L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

Page: Corrected Emissions (2)

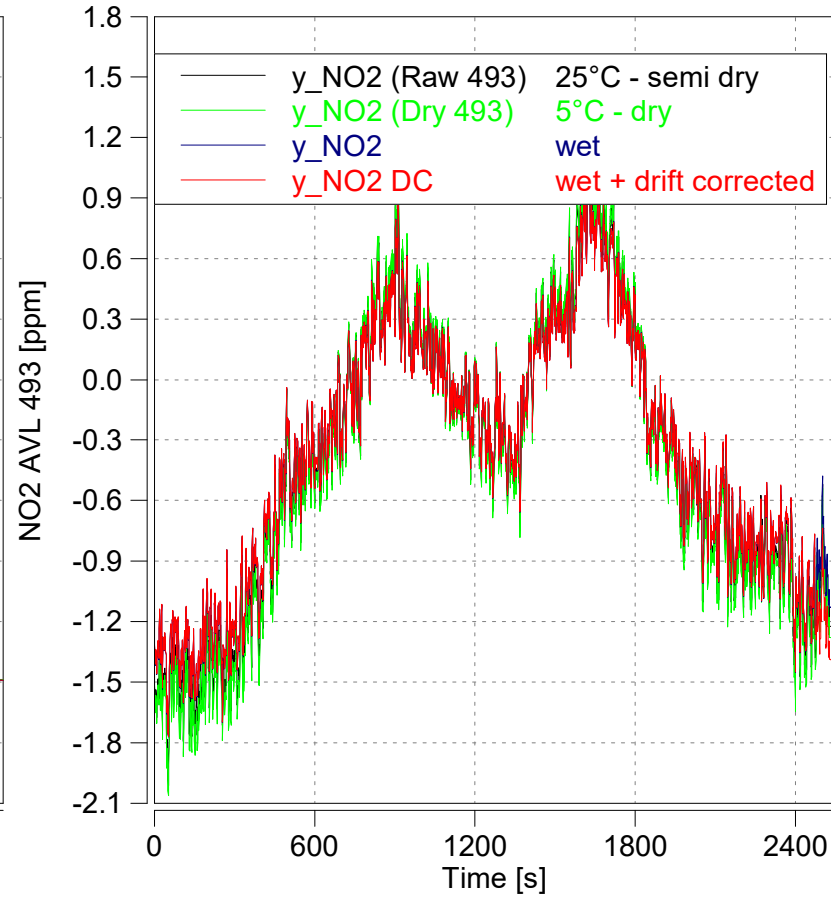
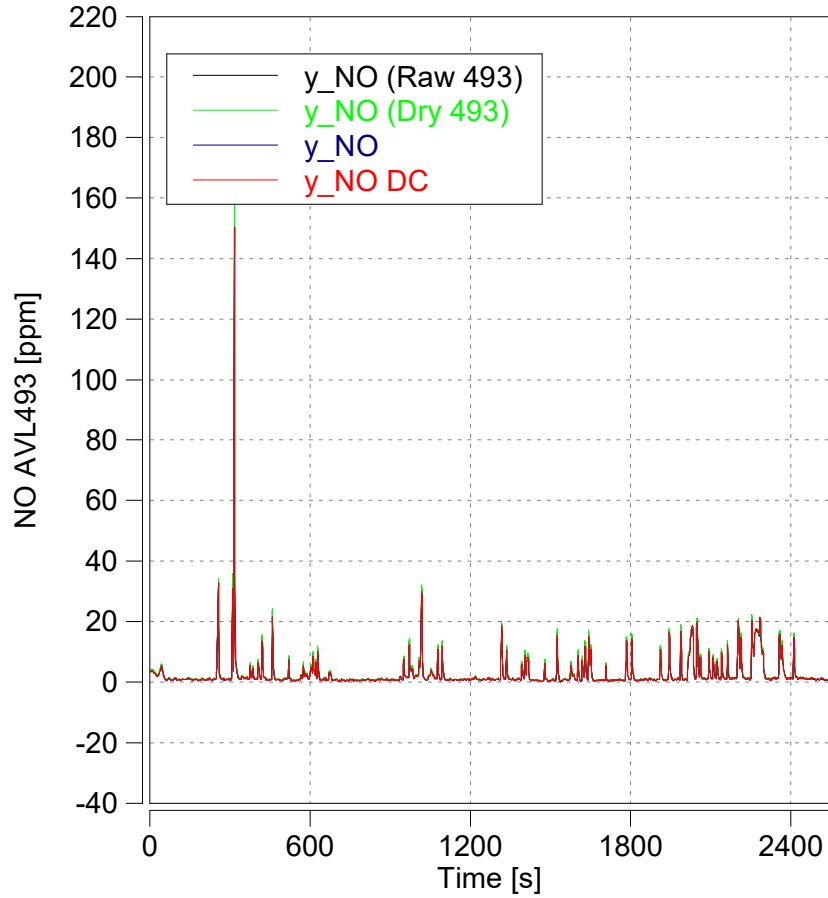
Start Date: 09/29/2017

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M.O.V.E Post-Processing: Rel_10_B192

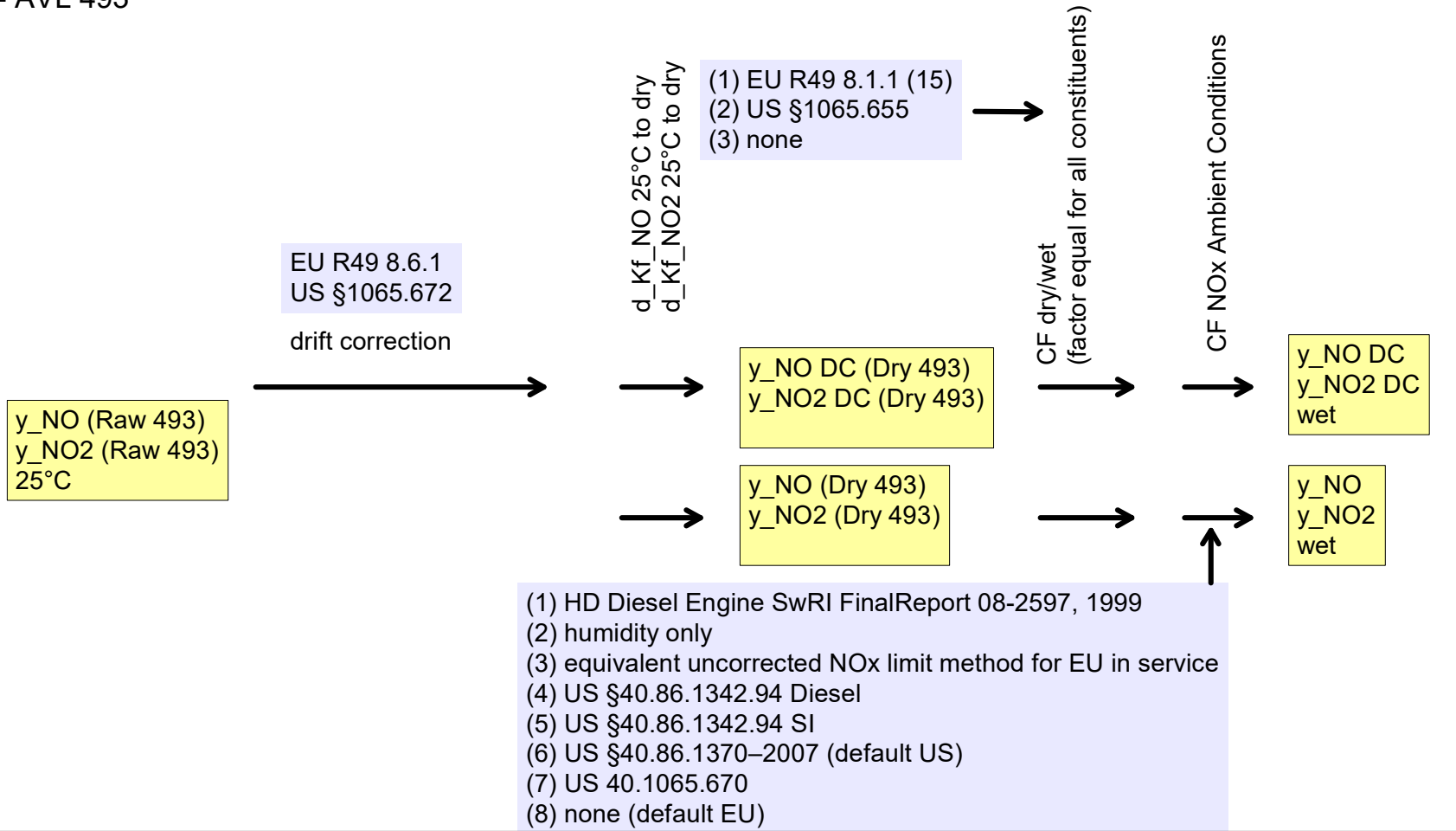
Vehicle: 2017 VW Jetta / Independent Vehicle
Engine: Gasoline / 1.8L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Jetta / Independent Vehicle
Engine: Gasoline / 1.8L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

NOx - AVL 493

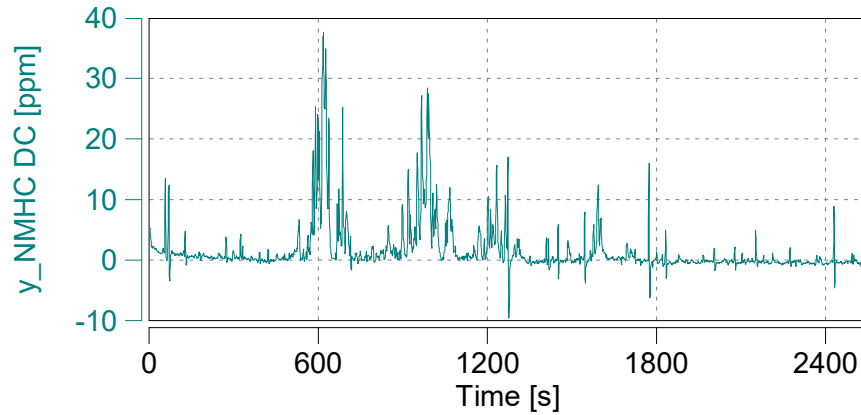
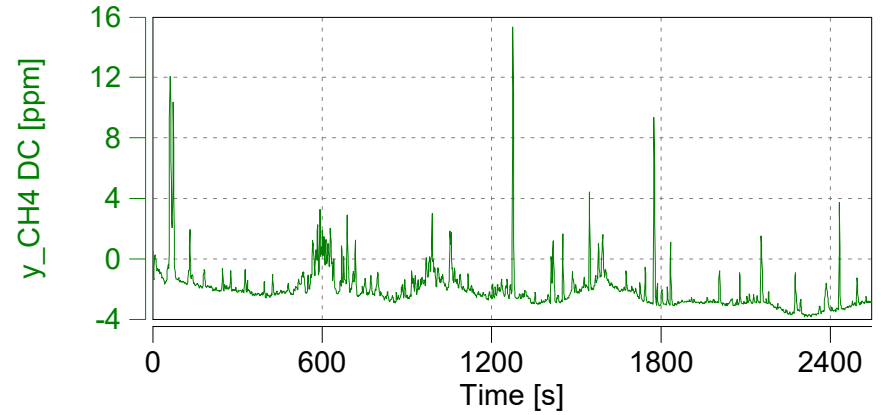
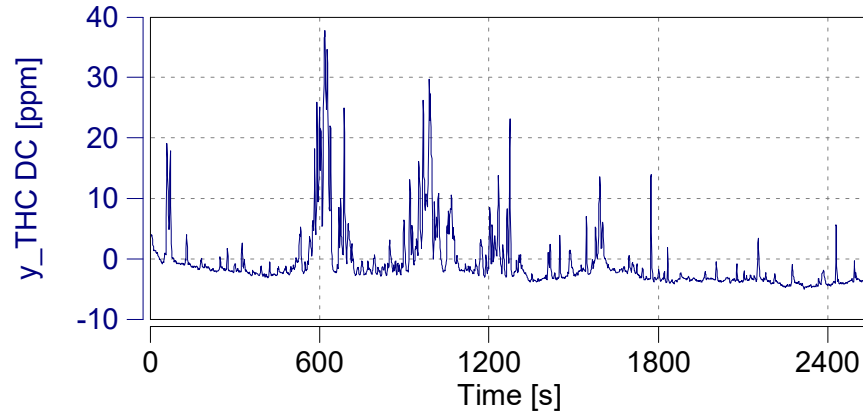


Case: Highway

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Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

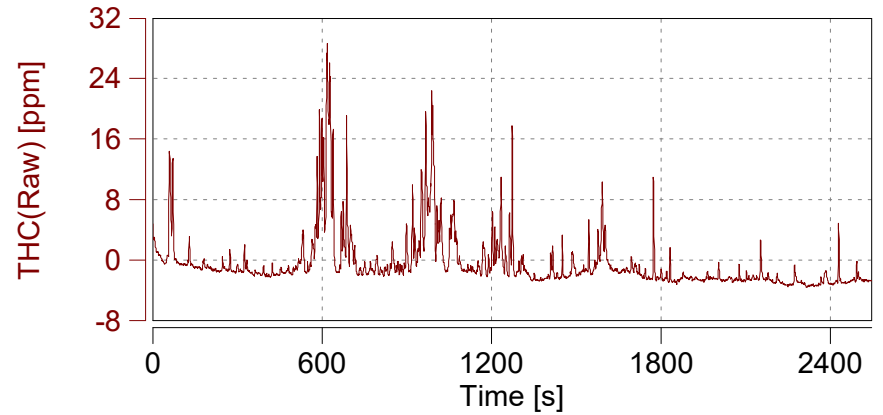
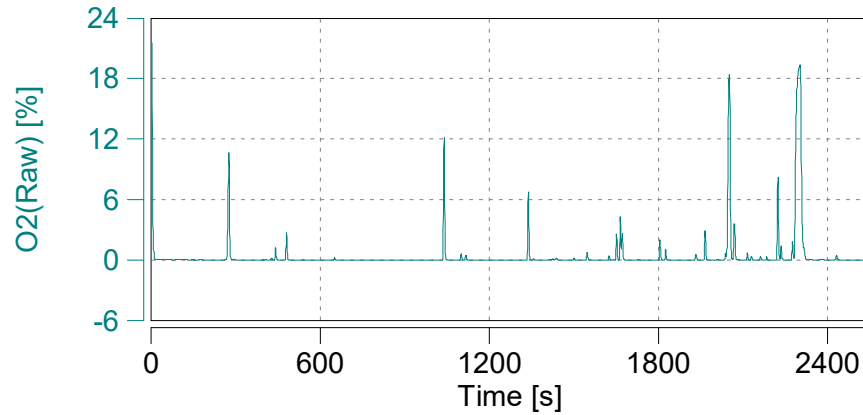
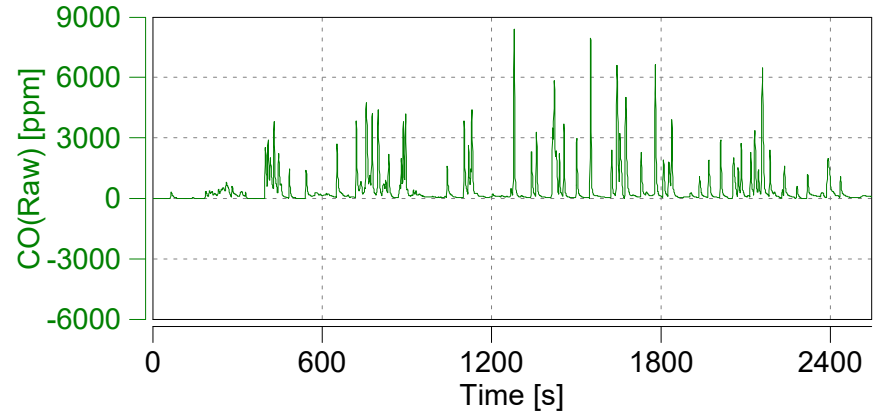
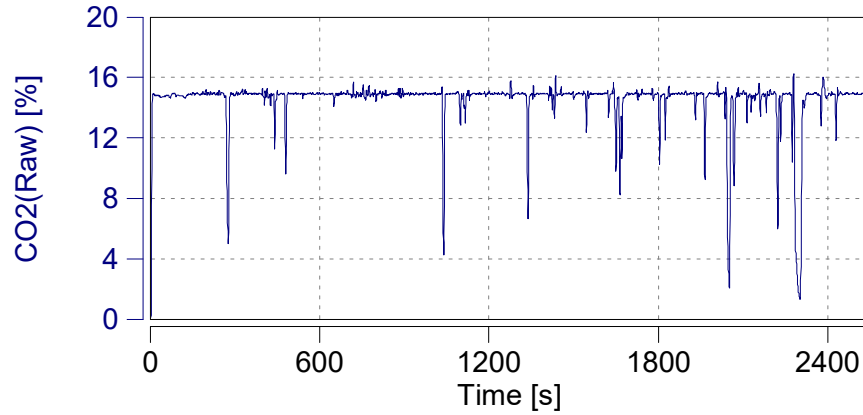
Vehicle: 2017 VW Jetta / Independent Vehicle
Engine: Gasoline / 1.8L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

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Start Date: 09/29/2017

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Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

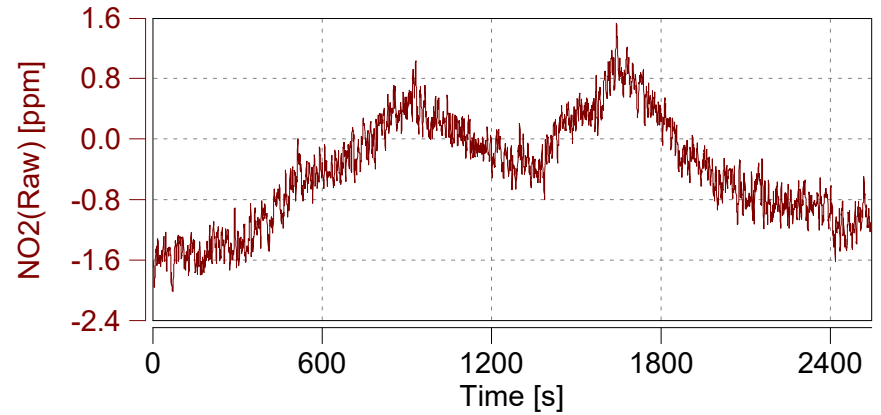
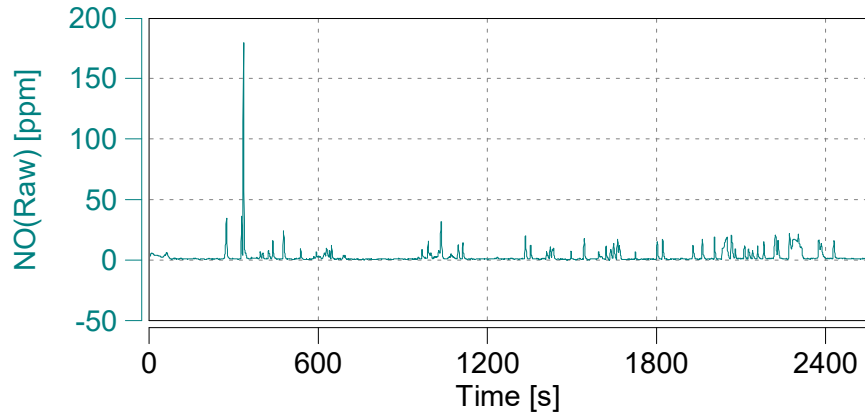
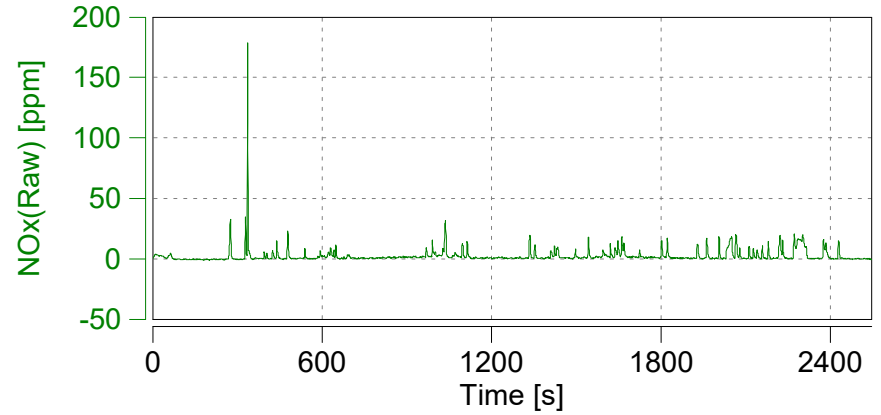
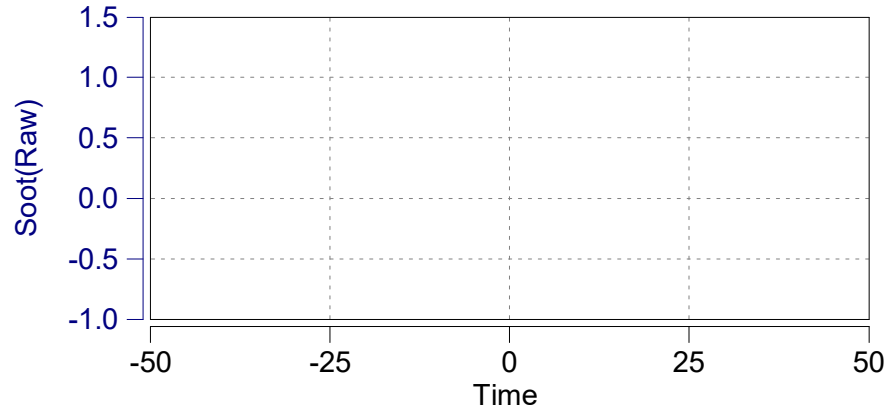
Vehicle: 2017 VW Jetta / Independent Vehicle
Engine: Gasoline / 1.8L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

Page: Emissions Raw Data (2)

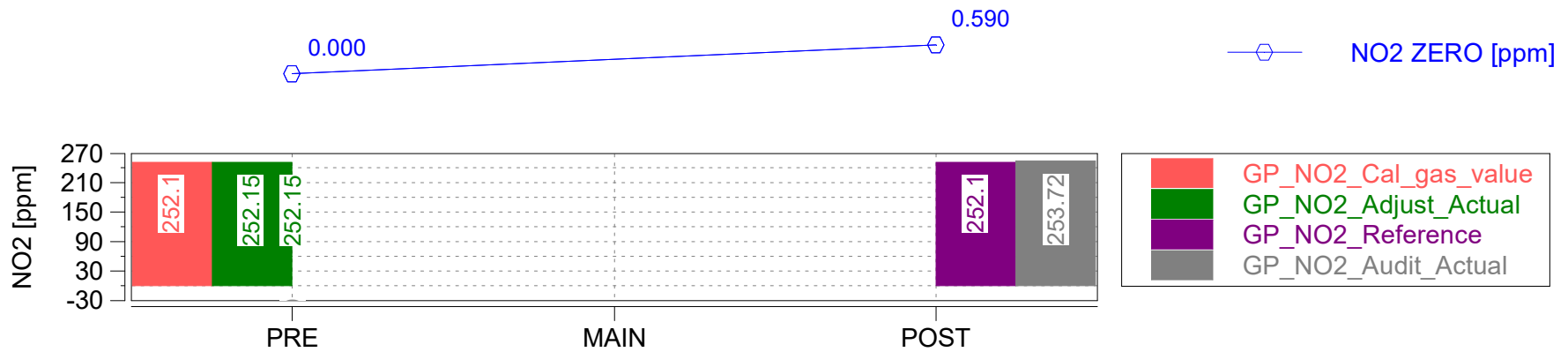
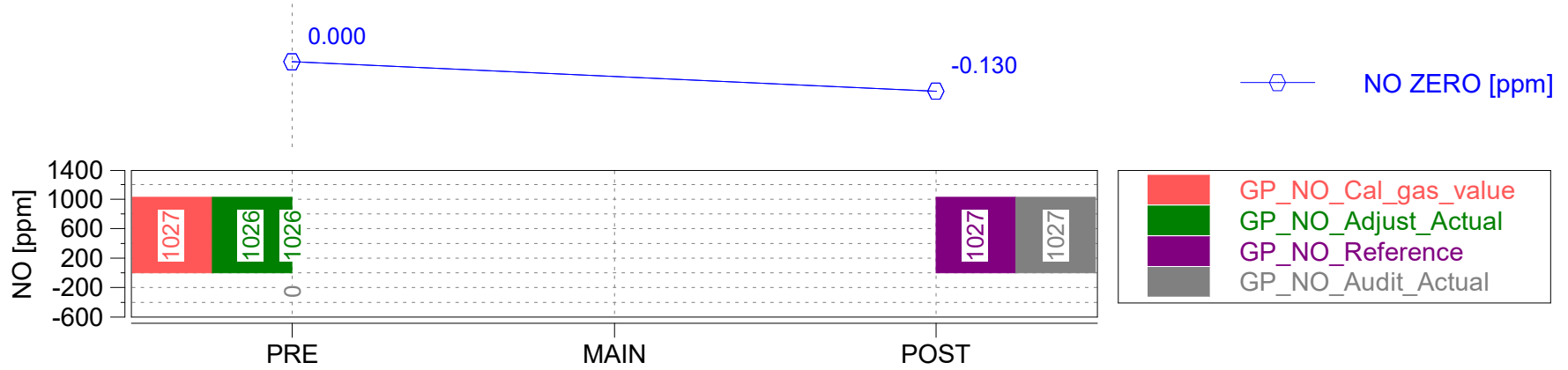
Start Date: 09/29/2017

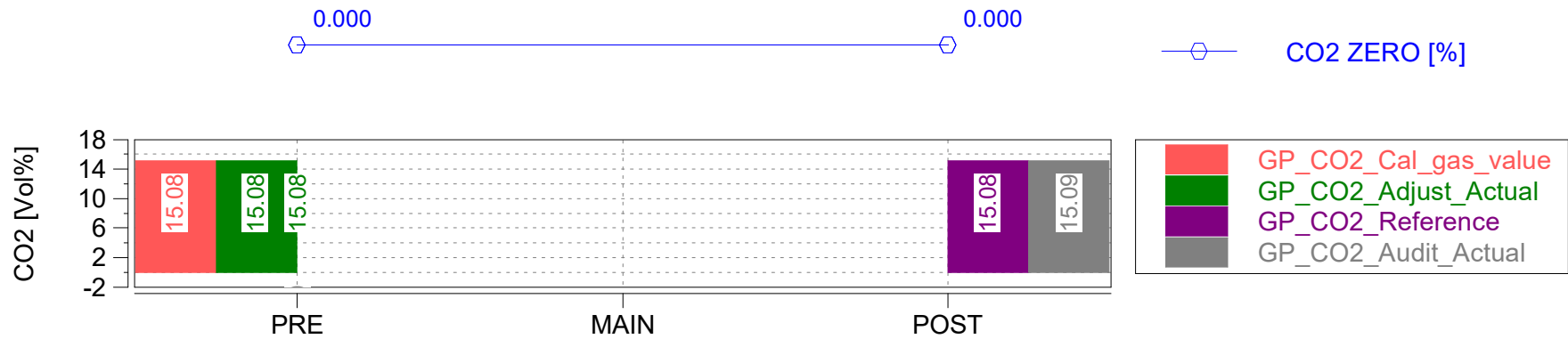
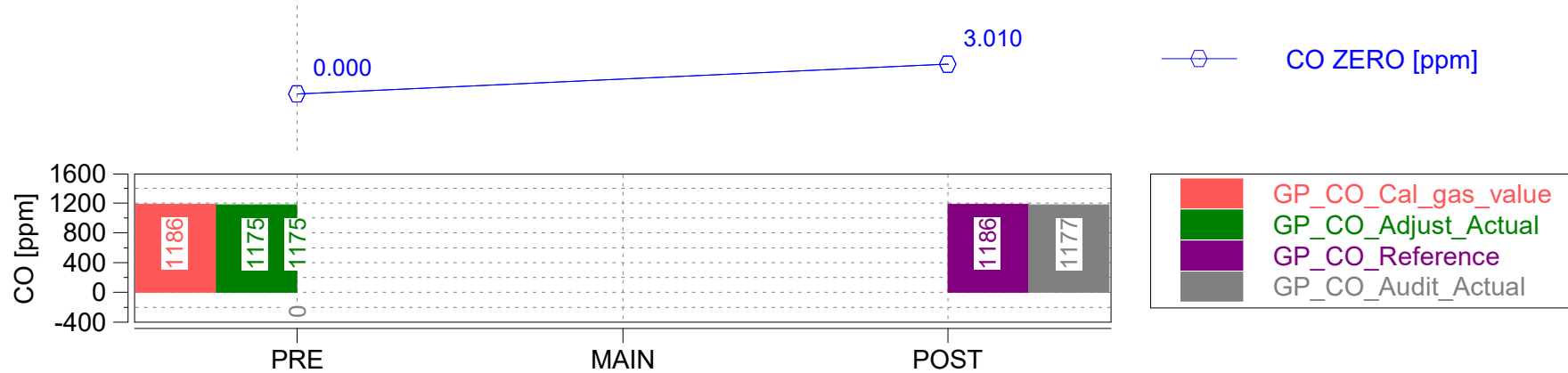
Start Time: 10:38:34.0

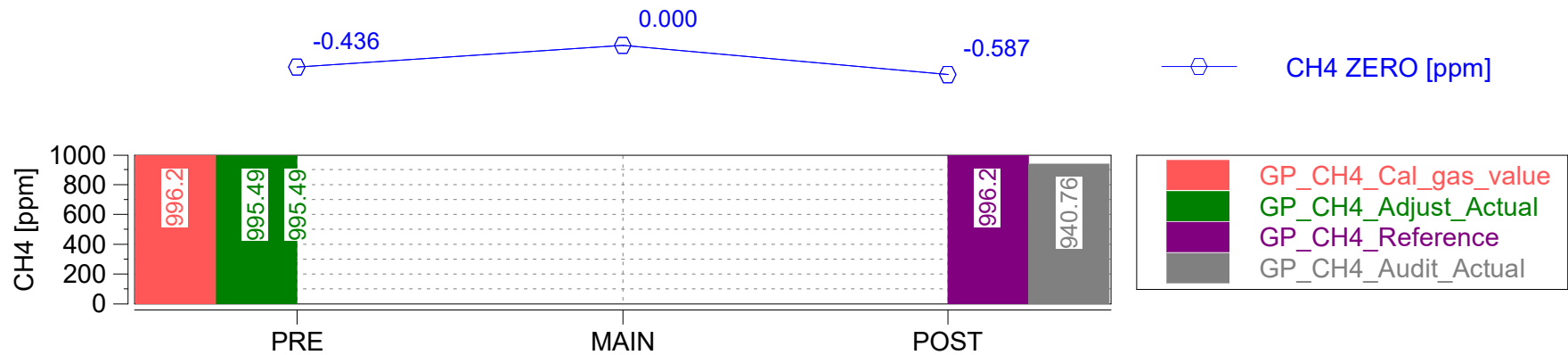
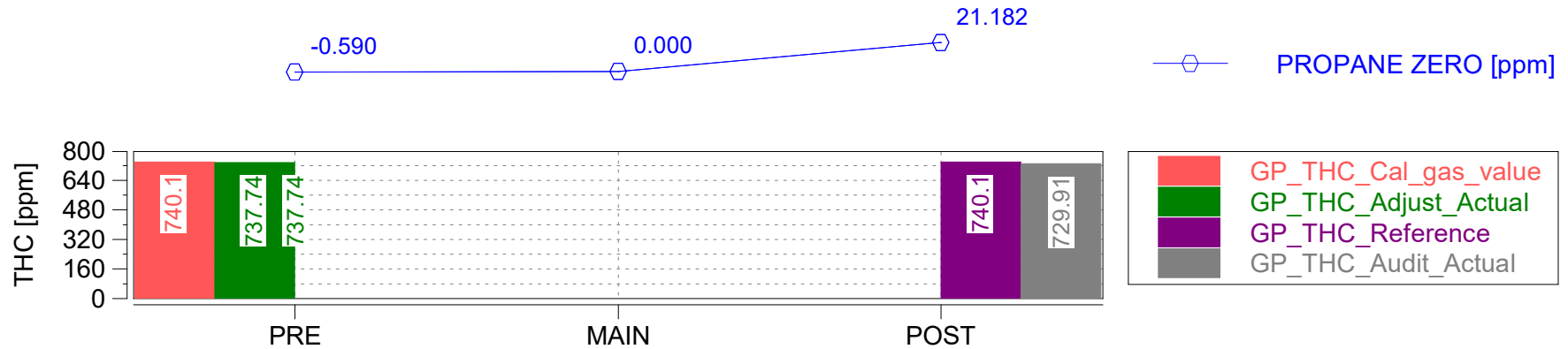


Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Jetta / Independent Vehicle
Engine: Gasoline / 1.8L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90







#	Text	Value	Unit
-	----	----	----
1.0	Test Start: Date	-	-
2.0	Test Start: Time	-	-
3.0	Ambient Temperature	IFILE1:TM'Temperature	deg C
4.0	Ambient Temperature TS	0.00000	s
5.0	Ambient Pressure	IFILE1:TM'Pressure	kPa
6.0	Ambient Pressure TS	0.00000	s
7.0	Humidity Type	1.00000	-
8.0	Amb. Rel. Humidity	IFILE1:TM'Humidity	%
9.0	Amb. Rel. Humidity	0.00000	s
10.0	GPS Latitude		deg
11.0	GPS Latitude TS	0.00000	s
12.0	GPS Longitude		deg
13.0	GPS Longitude TS	0.00000	s
14.0	Altitude		m
15.0	Altitude TS	0.00000	s
16.0	GPS Quality		-
17.0	GPS Quality TS	0.00000	s
18.0	GroundSpeed		km/h
19.0	GroundSpeed TS	0.00000	s
20.0	Altitude from topographical map		m
21.0	Altitude TS of topographical map		s
22.0	TRIP_AMBIENT_GPS_AVL	YES	-
23.0	CALC_GPS_GROUNDSPEED	NO	-
24.0	EXHAUST_FLOW_AVL	NO	-
25.0	EXHAUST_FLOW_AVL_EFM	YES	-
26.0	Exhaust Flow Type	2.00000	-
27.0	Mass Flow	IFILE1:TM'PitotEFM_ExhaustG	various
28.0	Mass Flow TS	1.30000	s
29.0	Exhaust Pressure		kPa
30.0	Exhaust Pressure TS	1.30000	s

#	Text	Value	Unit
-	----	----	----
31.0	Exhaust Delta Pressure		kPa
32.0	Exhaust Pressure Delta TS	1.30000	s
33.0	Exhaust Temperature	IFILE1:TM'PitotEFM_ExhaustG	degC
34.0	Exhaust Temperature TS	1.30000	s
35.0	Lambda	N/A	-
36.0	Lambda TS		s
37.0	CO2_DIL		%
38.0	CO2_DIL TS		s
39.0	CVS Volume Flow		m3/min
40.0	TimeShift_CVS_VOL_FLOW		s
41.0	IN_CVS_PRESSURE		kPa
42.0	TimeShift_CVS_PRESSURE		s
43.0	IN_CVS_TEMP		degC
44.0	TimeShift_CVS_TEMP		s
45.0	Dry to Wet Conversion CO2	YES	-
46.0	Dry to Wet Conversion O2	YES	-
47.0	Dry to Wet Conversion NO	NO	-
48.0	Dry to Wet Conversion NO2	NO	-
49.0	Dry to Wet Conversion THC	NO	-
50.0	Dry to Wet Conversion CH4	NO	-
51.0	Dry to Wet Conversion O2	NO	-
52.0	CO2	IFILE1:TM'GPiS_CO2	%
53.0	CO2 TS	-19.80000	s
54.0	OS	IFILE1:TM'GPiS_O2	%
55.0	O2 TS	-20.30000	s
56.0	CO	IFILE1:TM'GPiS_CO	ppm
57.0	CO TS	-19.80000	s
58.0	NO	IFILE1:TM'GPiS_NO	ppm
59.0	NO TS	-18.00000	s
60.0	NO2	IFILE1:TM'GPiS_NO2	ppm

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Jetta / Independent Vehicle
Engine: Gasoline / 1.8L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
61.0	NO2 TS	-18.00000	s
62.0	THC	IFILE1:TM'FIDiS_THC_C1	ppm
63.0	THC TS	0.00000	s
64.0	CH4	IFILE1:TM'FIDiS_CH4_C1	ppm
65.0	CH4 TS	0.00000	s
66.0	GAS_PEMS_Ethane_Efficiency	IFILE1:MOVE_AVL4925'GP_Et -	
67.0	GAS_PEMS_Methane_Efficiency	IFILE1:MOVE_AVL4925'GP_M -	
68.0	GAS_PEMS_Methane_Response	IFILE1:MOVE_AVL4925'GP_M -	
69.0	Zero Signal	IFILE1:TM'GPiS_STATE	0/1
70.0	Zero Signal TS	-18.00000	s
71.0	Zero Signal_FIDiS	IFILE1:TM'FIDiS_STATE	0/1
72.0	Zero Signal_FIDiS TS		s
73.0	Species Input Type	4.00000	-
74.0	GASPEMS=AVL493	NO	-
75.0	GASPEMS=AVL493_iX	NO	-
76.0	GASPEMS=AVL492	YES	-
77.0	GASPEMS=AVL4925	YES	-
78.0	PM: Type	4.00000	1=GFB+HC, 2=GFB, 3=PM=S
79.0	Filter ID from IFile	NO	-
80.0	Lab ID from IFile	NO	-
81.0	PM Filter: ID	N/A	ID
82.0	PM Filter: Lab	N/A	Name/ID
83.0	PM Filter: Weight before Test	N/A	mg
84.0	PM Filter: Weight after Test	N/A	mg
85.0	PM (HC Corr): Max. Exhaust Flow	N/A	scfm
86.0	Soot		mg/m3
87.0	Soot TS	-5.00000	s
88.0	Soot Sensor		mg/m3
89.0	Soot Sensor TS		s
90.0	PM Filter: Filter Flow Rate		l/min

#	Text	Value	Unit
-	----	----	----
91.0	PM Filter: Filter Flow Rate TS	-5.00000	s
92.0	PM Filter: Filter Dilution Ratio		-
93.0	PM Filter: Filter Dilution Ratio TS	-5.00000	s
94.0	PM Filter: Filter Trigger		-
95.0	PM Filter: Filter Trigger TS	-5.00000	s
96.0	PMPEMS=AVL494	YES	-
97.0	PMPEMS_AVL494_PROP_DIL	NO	-
98.0	PM dilution ratio min		-
99.0	PM_MaxExhaustFlowRate		-
100.0	PM_ExhaustFlow_Thresh		-
101.0	PM_total_flow_val		-
102.0	PM_total_flow_val_TS		-
103.0	PM_exh_mass_flow		-
104.0	PM_exh_mass_flow_TS		-
105.0	PN		#/cm3
106.0	TimeShift_PN		s
107.0	PN_STATE		-
108.0	PN TS STATE		s
109.0	PNPEMS_AVL496	NO	-
110.0	PN_CorrFactor	1.00000	
111.0	Time Alignment	1.00000	-
112.0	Time Alignment Dataset 1	N/A	0/1
113.0	Time Alignment Dataset 2	N/A	0/1
114.0	Time Alignment Thresh 1	N/A	-
115.0	Time Alignment Thresh 2	N/A	-
116.0			
117.0			
118.0			
119.0			
120.0			

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Jetta / Independent Vehicle
Engine: Gasoline / 1.8L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
121.0			
122.0	Trigger		0/1
123.0	Trigger TS		s
124.0	FTIR_NAME_1		-
125.0	FTIR_MW_1		-
126.0	FTIR_CHANNEL_1		-
127.0	FTIR_CHANNEL_TS_1		-
128.0	FTIR_CHANNEL_DRY_1	NO	-
129.0	FTIR_NAME_2		-
130.0	FTIR_MW_2		-
131.0	FTIR_CHANNEL_2		-
132.0	FTIR_CHANNEL_TS_2		-
133.0	FTIR_CHANNEL_DRY_2	NO	-
134.0	FTIR_NAME_3		-
135.0	FTIR_MW_3		-
136.0	FTIR_CHANNEL_3		-
137.0	FTIR_CHANNEL_TS_3		-
138.0	FTIR_CHANNEL_DRY_3	NO	-
139.0	FTIR_NAME_4		-
140.0	FTIR_MW_4		-
141.0	FTIR_CHANNEL_4		-
142.0	FTIR_CHANNEL_TS_4		-
143.0	FTIR_CHANNEL_DRY_4	NO	-
144.0	FTIR_NAME_5		-
145.0	FTIR_MW_5		-
146.0	FTIR_CHANNEL_5		-
147.0	FTIR_CHANNEL_TS_5		-
148.0	FTIR_CHANNEL_DRY_5	NO	-
149.0	FTIR_NAME_6		-
150.0	FTIR_MW_6		-

#	Text	Value	Unit
-	----	----	----
151.0	FTIR_CHANNEL_6		-
152.0	FTIR_CHANNEL_TS_6		-
153.0	FTIR_CHANNEL_DRY_6	NO	-
154.0	FTIR_NAME_7		-
155.0	FTIR_MW_7		-
156.0	FTIR_CHANNEL_7		-
157.0	FTIR_CHANNEL_TS_7		-
158.0	FTIR_CHANNEL_DRY_7	NO	-
159.0	FTIR_NAME_8		-
160.0	FTIR_MW_8		-
161.0	FTIR_CHANNEL_8		-
162.0	FTIR_CHANNEL_TS_8		-
163.0	FTIR_CHANNEL_DRY_8	NO	-
164.0	FTIR_NAME_9		-
165.0	FTIR_MW_9		-
166.0	FTIR_CHANNEL_9		-
167.0	FTIR_CHANNEL_TS_9		-
168.0	FTIR_CHANNEL_DRY_9	NO	-
169.0	FTIR_NAME_10		-
170.0	FTIR_MW_10		-
171.0	FTIR_CHANNEL_10		-
172.0	FTIR_CHANNEL_TS_10		-
173.0	FTIR_CHANNEL_DRY_10	NO	-
174.0	FTIR_NAME_11		-
175.0	FTIR_MW_11		-
176.0	FTIR_CHANNEL_11		-
177.0	FTIR_CHANNEL_TS_11		-
178.0	FTIR_CHANNEL_DRY_11	NO	-
179.0	FTIR_NAME_12		-
180.0	FTIR_MW_12		-

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Jetta / Independent Vehicle
Engine: Gasoline / 1.8L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
181.0	FTIR_CHANNEL_12		-
182.0	FTIR_CHANNEL_TS_12		-
183.0	FTIR_CHANNEL_DRY_12	NO	-
184.0	FTIR_NAME_13		-
185.0	FTIR_MW_13		-
186.0	FTIR_CHANNEL_13		-
187.0	FTIR_CHANNEL_TS_13		-
188.0	FTIR_CHANNEL_DRY_13	NO	-
189.0	FTIR_NAME_14		-
190.0	FTIR_MW_14		-
191.0	FTIR_CHANNEL_14		-
192.0	FTIR_CHANNEL_TS_14		-
193.0	FTIR_CHANNEL_DRY_14	NO	-
194.0	FTIR_NAME_15		-
195.0	FTIR_MW_15		-
196.0	FTIR_CHANNEL_15		-
197.0	FTIR_CHANNEL_TS_15		-
198.0	FTIR_CHANNEL_DRY_15	NO	-
199.0	FTIR_NAME_16		-
200.0	FTIR_MW_16		-
201.0	Vehicle Type	2017 VW Jetta	-
202.0	Vehicle Info	Independent Vehicle	-
203.0	Engine Type	Gasoline	-
204.0	Engine Info	1.8L	-
205.0	Engine Torque		Nm
206.0	Curb Idle Load		%
207.0	Idle Speed		rpm
208.0	HYBRID_OVC_REF_CO2_gkm		g/km
209.0	Engine Concept	1.00000	-
210.0	Alpha	1.93000	-

#	Text	Value	Unit
-	----	----	----
211.0	Beta	1.00000	
212.0	Gamma	0.00000	
213.0	Delta	0.00000	
214.0	Epsilon	0.03200	
215.0	X_C	83.00000	
216.0	X_H	13.30000	
217.0	X_N	0.00000	
218.0	X_O	3.50000	
219.0	X_S	0.00000	
220.0	Fuel_Density	747.50000	
221.0	rho_exhaust	1.29310	
222.0	U_CO2	1.51800	
223.0	U_CO	0.96600	
224.0	U_NO	1.58700	
225.0	U_NO2	1.58700	
226.0	U_NOx	1.58700	
227.0	U_HC	0.49900	
228.0	U_NMHC	0.47100	
229.0	U_CH4	0.55300	
230.0	U_O2	1.10400	
231.0	Fuel Type	2.00000	-
232.0	exhaust mass flow type (YES/NO)	YES	-
233.0	Distance Calculation Type	1.00000	-
234.0	Velocity Statistics Calculation Type	2.00000	-
235.0	RDE vehicle class	1.00000	-
236.0	TM_CITY0		s
237.0	TM_CITY1		s
238.0	TM_RURAL0		s
239.0	TM_RURAL1		s
240.0	TM_RURAL2_0		s

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Jetta / Independent Vehicle
Engine: Gasoline / 1.8L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
241.0	TM_RURAL2_1		s
242.0	Second Rural Part for Time Marks (NO		-
243.0	TM_MW0		s
244.0	TM_MW1		s
245.0	VELOCITY_LIMIT_STOP	2.00000	km/h
246.0	VELOCITY_LIMIT_URBAN	50.00000	km/h
247.0	VELOCITY_LIMIT_RURAL	75.00000	km/h
248.0	Intake Manifold Pressure Type	1.00000	-
249.0	Velocity	IFILE1:TM'OBD_Vehicle_Spee	km/h
250.0	Velocity TS	1.70000	s
251.0	Velocity FACTOR	1.00000	-
252.0	Coolant Temperature	IFILE1:TM'OBD_Engine_Coola	degC
253.0	Coolant Temperature TS	1.70000	s
254.0	Oil Temperature		degC
255.0	Oil Temperature TS	1.70000	s
256.0	Intake Manifold Temperature		degC
257.0	Intake Manifold Temp TS	1.70000	s
258.0	Intake Manifold Pressure	IFILE1:TM'OBD_Intake_manifo	kPa
259.0	Intake Manifold Pressure TS	1.70000	s
260.0	Throttle Position		%
261.0	Throttle TS	1.70000	s
262.0	TYP_IDLE_MASS_FLOW		kg/h
263.0	Torque Type	1.00000	-
264.0	Speed	IFILE1:TM'OBD_Engine_RPM	rpm
265.0	Speed TS	1.70000	s
266.0	Torque		Nm
267.0	Torque TS	1.70000	s
268.0	Friction Torque	N/A	Nm
269.0	Friction Torque TS	N/A	s
270.0	Reference Torque	N/A	Nm

#	Text	Value	Unit
-	----	----	----
271.0	Reference Torque TS	N/A	s
272.0	k_VELINE		-
273.0	D_VELINE		-
274.0	Fuel Flow Type	2.00000	-
275.0	Air Flow Type	1.00000	-
276.0	Fuel Rate		various
277.0	Air Rate		various
278.0	Fuel Rate TS	1.70000	s
279.0	No_Cylinders		-
280.0	Air Rate TS	1.70000	s
281.0	FTIR_CHANNEL_32		-
282.0	FTIR_CHANNEL_TS_32		-
283.0	FTIR_CHANNEL_DRY_32	NO	-
284.0	FTIR_NAME_33		-
285.0	FTIR_MW_33		-
286.0	FTIR_CHANNEL_33		-
287.0	FTIR_CHANNEL_TS_33		-
288.0	FTIR_CHANNEL_DRY_33	NO	-
289.0	FTIR_NAME_34		-
290.0	FTIR_MW_34		-
291.0	FTIR_CHANNEL_34		-
292.0	FTIR_CHANNEL_TS_34		-
293.0	FTIR_CHANNEL_DRY_34	NO	-
294.0	FTIR_NAME_35		-
295.0	FTIR_MW_35		-
296.0	FTIR_CHANNEL_35		-
297.0	FTIR_CHANNEL_TS_35		-
298.0	FTIR_CHANNEL_DRY_35	NO	-
299.0	FTIR_NAME_36		-
300.0	FTIR_MW_36		-

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Jetta / Independent Vehicle
Engine: Gasoline / 1.8L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
301.0	FTIR_CHANNEL_36		-
302.0	FTIR_CHANNEL_TS_36		-
303.0	FTIR_CHANNEL_DRY_36	NO	-
304.0	FTIR_NAME_37		-
305.0	FTIR_MW_37		-
306.0	FTIR_CHANNEL_37		-
307.0	FTIR_CHANNEL_TS_37		-
308.0	FTIR_CHANNEL_DRY_37	NO	-
309.0	FTIR_NAME_38		-
310.0	FTIR_MW_38		-
311.0	FTIR_CHANNEL_38		-
312.0	FTIR_CHANNEL_TS_38		-
313.0	FTIR_CHANNEL_DRY_38	NO	-
314.0	FTIR_NAME_39		-
315.0	FTIR_MW_39		-
316.0	FTIR_CHANNEL_39		-
317.0	FTIR_CHANNEL_TS_39		-
318.0	FTIR_CHANNEL_DRY_39	NO	-
319.0	FTIR_NAME_40		-
320.0	FTIR_MW_40		-
321.0	FTIR_CHANNEL_40		-
322.0	FTIR_CHANNEL_TS_40		-
323.0	FTIR_CHANNEL_DRY_40	NO	-
324.0	Legislation Type (1=HDIUT 2=EU H	4.00000	-
325.0	WholeTest_NOx_corr	5.00000	-
326.0	WholeTest_Hum_corr	2.00000	-
327.0	CD_Distance	0.00000	km
328.0	CD_NOx	0.00000	mg/km
329.0	CD_CO	0.00000	mg/km
330.0	CD_CO2	0.00000	g/km

#	Text	Value	Unit
-	----	----	----
331.0	CD_NMHC	0.00000	mg/km
332.0	CD_CH4	0.00000	mg/km
333.0	CD_THC	0.00000	mg/km
334.0	CD_PN		#/km
335.0	WLTC_LOW_SPEED_gkm		g/km
336.0	WLTC_LOW_SPEED_FAC	1.20000	-
337.0	WLTC_MEDIUM_SPEED_gkm		g/km
338.0	WLTC_HIGH_SPEED_gkm		g/km
339.0	WLTC_HIGH_SPEED_FAC	1.10000	-
340.0	WLTC_EXTRA_HIGH_SPEED_gkm		g/km
341.0	WLTC_EXTRA_HIGH_SPEED_FA	1.05000	-
342.0	TOL_NORMAL_DRIVING	25.00000	%
343.0	TOL_SEVERE_DRIVING	50.00000	%
344.0	Increase Tolerance Nomral Driving	NO	-
345.0	Bin1_min		km/h
346.0	Bin2_min		km/h
347.0	Bin3_min		km/h
348.0	Bin1_max		km/h
349.0	Bin2_max		km/h
350.0	Bin3_max		km/h
351.0	Clear_R0	125.40000	N
352.0	Clear_R1	0.29300	Nh/km
353.0	Clear_R2	0.02795	N*(h/km) ²
354.0	Clear_SMK	1470.00000	kg
355.0	Clear_Rated_Power	140.00000	kW
356.0	Clear_Ref_Velocity	70.00000	km/h
357.0	Clear_Ref_Acc	0.45000	m/s ²
358.0	Clear_Smooth	3.00000	s
359.0	EXTC_From_High_Temp	30.00000	degC
360.0	EXTC_To_High_Temp	35.00000	degC

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Jetta / Independent Vehicle
Engine: Gasoline / 1.8L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
361.0	EXTC_From_Low_Temp	-7.00000	degC
362.0	EXTC_To_Low_Temp	0.00000	degC
363.0	Euro 6d or Euro 6d temp	NO	-
364.0	EXTC_From_Altitude	700.00000	m
365.0	EXTC_To_Altitude	1300.00000	m
366.0	EXTC_CORR_FAC	1.60000	
367.0	weight cold start (YES/NO)	NO	-
368.0	precon and soak done (YES/NO)	NO	-
369.0	PATH_PRECON_FILE		
370.0	filter velocity (YES/NO)	NO	-
371.0	filter velocity auto(YES/NO)	NO	-
372.0	Ki_CO		
373.0	Ki_CO2		
374.0	Ki_NOx		
375.0	Ki_FACTOR_CO2 (YES/NO)	NO	-
376.0	Ki_OFFSET_CO2 (YES/NO)	NO	-
377.0	Ki_FACTOR_CO (YES/NO)	NO	-
378.0	Ki_OFFSET_CO (YES/NO)	NO	-
379.0	Ki_FACTOR_NOx (YES/NO)	NO	-
380.0	Ki_OFFSET_NOx (YES/NO)	NO	-
381.0	Ki_OFF (YES/NO)	NO	-
382.0	HD legislations	1.00000	-
383.0	RDE legislations	1.00000	-
384.0	Submission Documents (YES/NO)	NO	-
385.0	General Setup Parameters Text	Highway	-
386.0	Legislation Setup Parameters Text	Highway	-
387.0	Trip Info		-
388.0	IN_TIME_REF		-
389.0	Sub-Trip Start: Auto	YES	-
390.0	Sub-Trip Start: Seconds	N/A	s

#	Text	Value	Unit
-	----	----	----
391.0	Sub-Trip End: Auto	YES	-
392.0	Sub-Trip End: Seconds	N/A	s
393.0	Unit System	2.00000	-
394.0	Calculate: PM Emissions	NO	-
395.0	Calculate: PN Emissions	NO	-
396.0	Output: Summary	YES	-
397.0	Output: Emissions	YES	-
398.0	Output: Raw Data	YES	-
399.0	Output: Zero Span	YES	-
400.0	Output: Data Consistency	NO	-
401.0	Output: Window Plots	YES	-
402.0	Fuel Rate ECU vs. EU ISO16183	$y = 10000000000.0000 x - 0.000 R^2=10000000000.000 SEE=$	
403.0	PEMS post processing version	Rel_10_B192	
404.0	Concerto version	480.00000	
405.0	Concerto build	215.00000	
406.0	USERNAME	EFR	

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Jetta / Independent Vehicle
Engine: Gasoline / 1.8L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Mountain
Page: Trip Summary

Start Date: 09/29/2017
Start Time: 10:38:34.0



Trip Duration	3023.00	s	ave THC	-1.09755	ppm	BS CO2	n/a	g/hphr
Trip Duration (a)	3023.00	s	ave NMHC	1.87550	ppm	BS CO	n/a	g/hphr
Trip Distance	28.85	mi	ave CH4	-2.70277	ppm	BS THC	n/a	g/hphr
Trip Distance (a)	28.85	mi	ave CO	434.63499	ppm	BS NMHC	n/a	g/hphr
Trip Fuel Cons. (b)	n/a	kg	ave CO2	11.71000	%	BS CH4	n/a	g/hphr
Trip Fuel Cons. (ab)	n/a	kg	ave NOx	3.82934	ppm	BS NO (d)	n/a	g/hphr
Trip Fuel Cons. EU (ac)	2.94	kg	ave PM	n/a	mg/m3	BS NO2	n/a	g/hphr
Trip Fuel Cons. US (ac)	2.91	kg	ave Soot meas	n/a	mg/m3	BS NOx	n/a	g/hphr
Trip Fuel Cons. Volume (b)	n/a	gall	ave Soot	n/a	mg/m3	BS Soot	n/a	g/hphr
Trip Fuel Cons. Volume (ab)	n/a	gall	ave PN	n/a	#/cm3	BS Soot meas	n/a	g/hphr
Trip Fuel Cons. Volume EU (ac)	1.04	gall	tot THC	0.02385	g	BS PM	n/a	g/hphr
Trip Fuel Cons. Volume US (ac)	1.03	gall	tot NMHC	0.05444	g	BS PN	n/a	#/hpr
Trip Fuel Economy (b)	n/a	mpg_US	tot CH4	0.00879	g	DS CO2	305.84820	g/mi
Trip Fuel Economy (ab)	n/a	mpg_US	tot CO	18.05710	g	DS CO	0.62597	g/mi
Trip Fuel Economy EU (ac)	27.80	mpg_US	tot CO2	8822.74282	g	DS THC	0.00083	g/mi
Trip Fuel Economy US (ac)	28.07	mpg_US	tot NO (d)	0.21585	g	DS NMHC	0.00189	g/mi
Trip Av. Eng. Speed	1672.60	rpm	tot NO2	0.07215	g	DS CH4	0.00030	g/mi
Trip Av. Torque	n/a	lbft	tot NOx	0.26111	g	DS NO (d)	0.00748	g/mi
Trip Av. Power	n/a	hp	tot Soot	n/a	g	DS NO2	0.00250	g/mi
Trip Work	n/a	hphr	tot Soot meas	n/a	g	DS NOx	0.00905	g/mi
Trip Exhaust Mass	47.69	kg	tot PM	n/a	g	DS Soot	n/a	g/mi
Trip Exhaust Mass EU (ac)	n/a	kg	tot PN	n/a	#	DS Soot meas	n/a	g/mi
Trip Exhaust Mass US (ac)	n/a	kg	PM measurement type	0.00000	-	DS PM	n/a	g/mi
Trip Av. Amb. Temperature	81.21	deg_F	PM correction type	1.00000	alpha(HC)	DS PN	n/a	#/mi
Trip Av. Humidity	45.50	%	tot Soot on PM filter (estim.)	n/a	mg	FS CO2	n/a	g/kg
Fuel Type	Petrol (E10)		Soot --> PM simple scaling factor	1.00000	-	FS CO	n/a	g/kg
			Soot --> PM alpha scaling factor	0.00000	-	FS THC	n/a	g/kg
			Trip Av. Veh. Speed	34.35279	mi/hr	FS NMHC	n/a	g/kg
			Trip Velocity Zero	11.31326	%	FS CH4	n/a	g/kg
			Trip Velocity Urban	40.75422	%	FS NO (d)	n/a	g/kg
			Trip Velocity Rural	28.74628	%	FS NO2	n/a	g/kg
			Trip Velocity Motorway	30.49950	%	FS NOx	n/a	g/kg
						FS Soot	n/a	g/kg
						FS Soot meas	n/a	g/kg
						FS PM	n/a	g/kg
						FS PN	n/a	#/kg

(a) GAS PEMS measurement state only, (b) based on fuel rate input (ECU, Fuel Meter), (c) calculated from carbon balance
(d) NO calculated using molecular weight of NO2

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Jetta / Independent Vehicle
Engine: Gasoline / 1.8L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Mountain

Page: Trip Summary Drift Corrected

Start Date: 09/29/2017

Start Time: 10:38:34.0

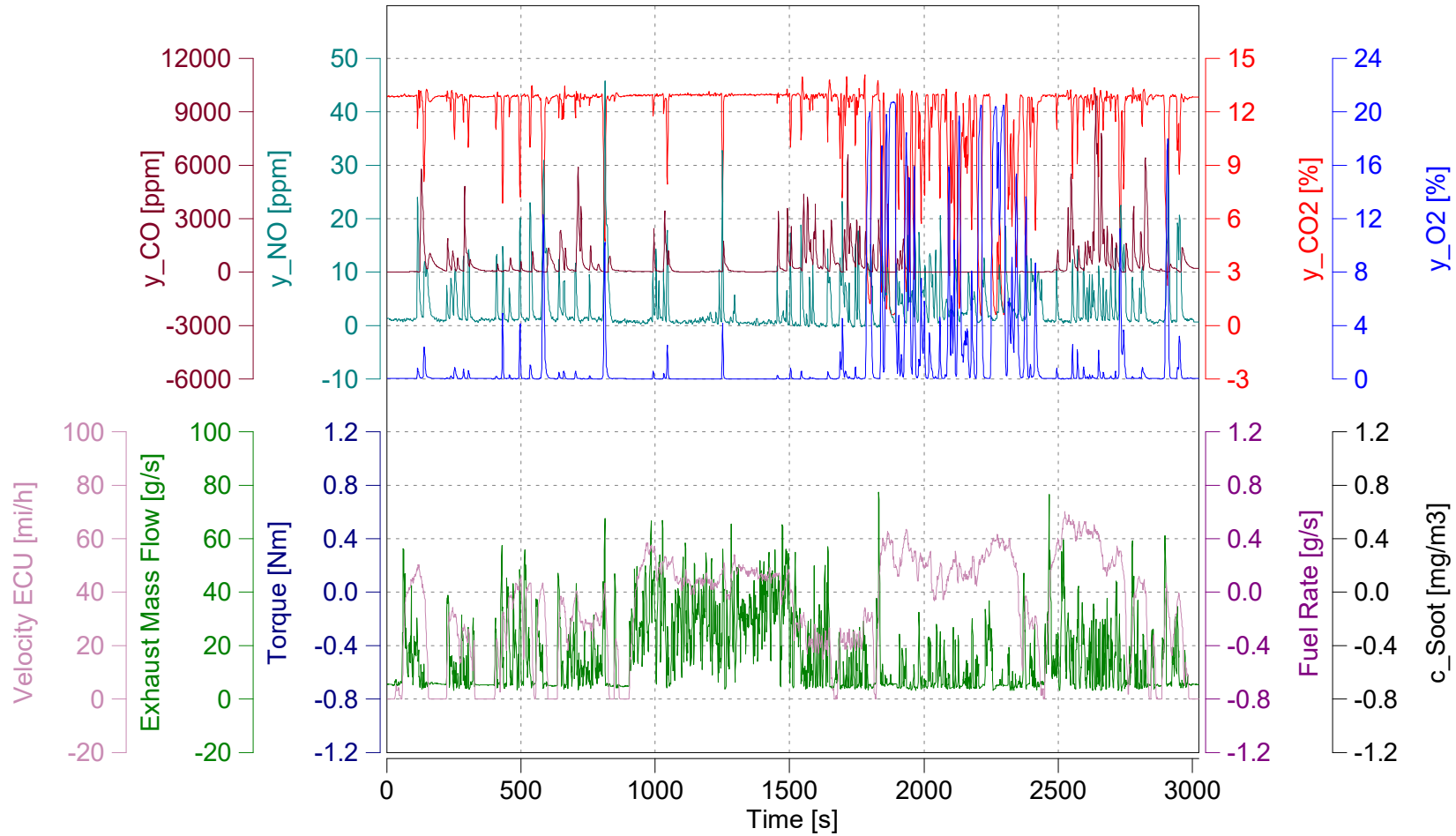


Trip Duration	3023.00	s	ave THC DC	-1.48998	ppm	BS CO2 DC	n/a	g/hphr
Trip Duration (a)	3023.00	s	ave NMHC DC	1.33672	ppm	BS CO DC	n/a	g/hphr
Trip Distance	28.85	mi	ave CH4 DC	-2.56973	ppm	BS THC DC	n/a	g/hphr
Trip Distance (a)	28.85	mi	ave CO DC	438.16879	ppm	BS NMHC DC	n/a	g/hphr
Trip Fuel Cons. (b)	n/a	kg	ave CO2 DC	11.70611	%	BS CH4 DC	n/a	g/hphr
Trip Fuel Cons. (ab)	n/a	kg	ave NOx DC	3.82740	ppm	BS NO DC (d)	n/a	g/hphr
Trip Fuel Cons. EU (ac)	2.94	kg	ave PM	n/a	mg/m3	BS NO2 DC	n/a	g/hphr
Trip Fuel Cons. US (ac)	2.91	kg	ave Soot meas	n/a	mg/m3	BS NOx DC	n/a	g/hphr
Trip Fuel Cons. Volume (b)	n/a	gall	ave Soot	n/a	mg/m3	BS Soot	n/a	g/hphr
Trip Fuel Cons. Volume (ab)	n/a	gall	ave PN DC	n/a	#/cm3	BS Soot meas	n/a	g/hphr
Trip Fuel Cons. Volume EU (ac)	1.04	gall	tot THC DC	0.03238	g	BS PM	n/a	g/hphr
Trip Fuel Cons. Volume US (ac)	1.03	gall	tot NMHC DC	0.04901	g	BS PN DC	n/a	#/hpr
Trip Fuel Economy (b)	n/a	mpg_US	tot CH4 DC	0.00936	g	DS CO2 DC	305.74682	g/mi
Trip Fuel Economy (ab)	n/a	mpg_US	tot CO DC	18.20391	g	DS CO DC	0.63105	g/mi
Trip Fuel Economy EU (ac)	27.80	mpg_US	tot CO2 DC	8819.81848	g	DS THC DC	0.00112	g/mi
Trip Fuel Economy US (ac)	28.07	mpg_US	tot NO DC (d)	0.21583	g	DS NMHC DC	0.00170	g/mi
Trip Av. Eng. Speed	1672.60	rpm	tot NO2 DC	0.07192	g	DS CH4 DC	0.00032	g/mi
Trip Av. Torque	n/a	lbft	tot NOx DC	0.26091	g	DS NO DC (d)	0.00748	g/mi
Trip Av. Power	n/a	hp	tot Soot	n/a	g	DS NO2 DC	0.00249	g/mi
Trip Work	n/a	hphr	tot Soot meas	n/a	g	DS NOx DC	0.00904	g/mi
Trip Exhaust Mass	47.69	kg	tot PM	n/a	g	DS Soot	n/a	g/mi
Trip Exhaust Mass EU (ac)	n/a	kg	tot PN DC	n/a	#	DS Soot meas	n/a	g/mi
Trip Exhaust Mass US (ac)	n/a	kg	PM measurement type	0.00000	-	DS PM	n/a	g/mi
Trip Av. Amb. Temperature	81.21	deg_F	PM correction type	1.00000	alpha(HC)	DS PN DC	n/a	#/mi
Trip Av. Humidity	45.50	%	tot Soot on PM filter (estim.)	n/a	mg	FS CO2 DC	n/a	g/kg
Fuel Type	Petrol (E10)		Soot --> PM simple scaling factor	1.00000	-	FS CO DC	n/a	g/kg
			Soot --> PM alpha scaling factor	0.00000	-	FS THC DC	n/a	g/kg
			Trip Av. Veh. Speed	34.35279	mi/hr	FS NMHC DC	n/a	g/kg
			Trip Velocity Zero	11.31326	%	FS CH4 DC	n/a	g/kg
			Trip Velocity Urban	40.75422	%	FS NO DC (d)	n/a	g/kg
			Trip Velocity Rural	28.74628	%	FS NO2 DC	n/a	g/kg
			Trip Velocity Motorway	30.49950	%	FS NOx DC	n/a	g/kg
						FS Soot	n/a	g/kg
						FS Soot meas	n/a	g/kg
						FS PM	n/a	g/kg
						FS PN DC	n/a	#/kg

(a) GAS PEMS measurement state only, (b) based on fuel rate input (ECU, Fuel Meter), (c) calculated from carbon balance
 (d) NO calculated using molecular weight of NO2

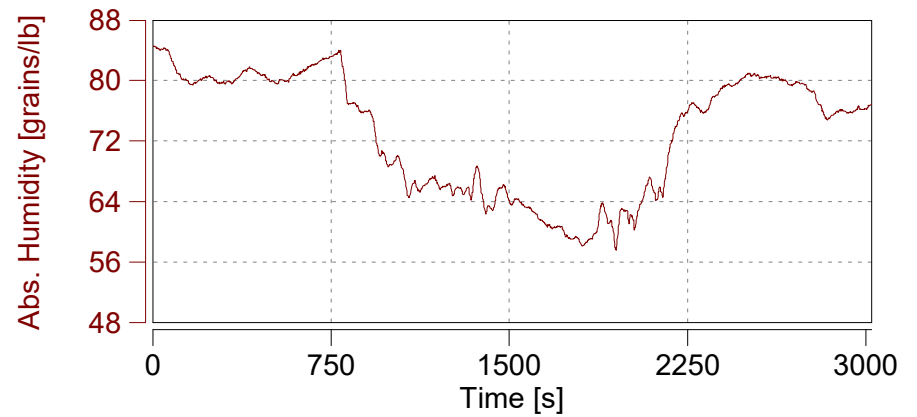
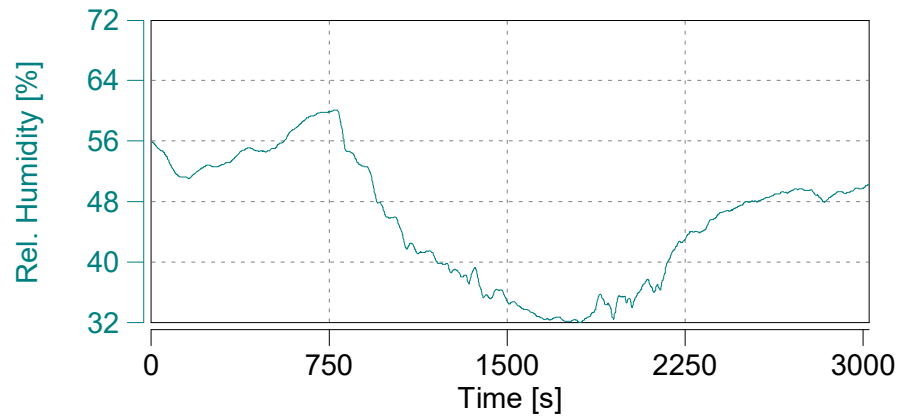
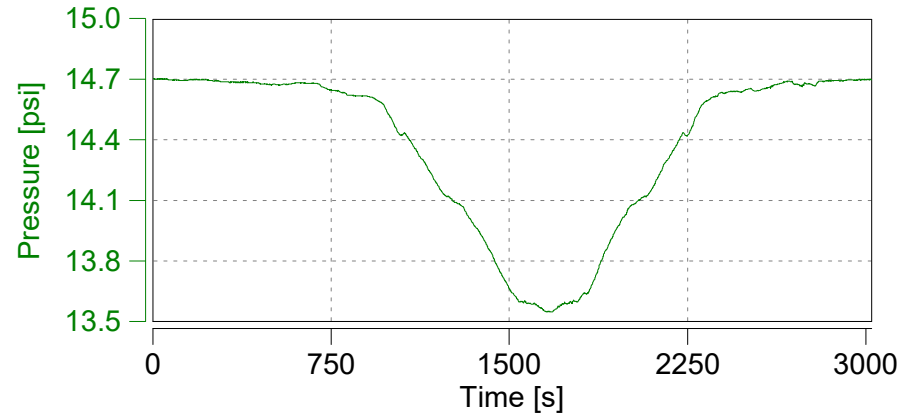
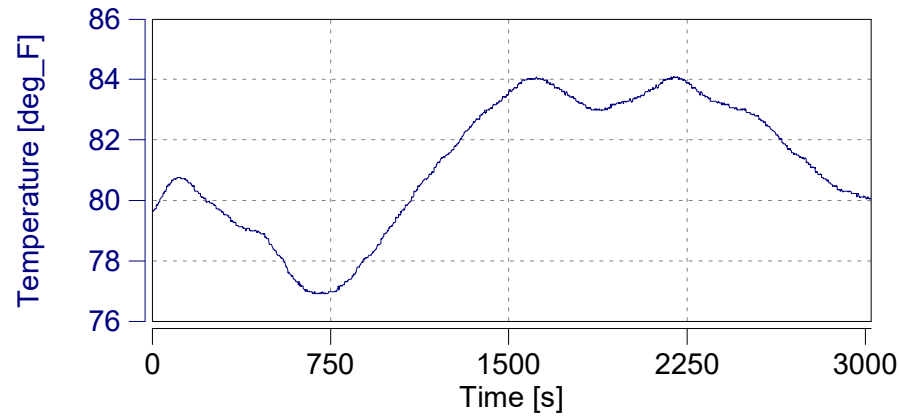
Concerto Version: 480 Build 215, Serial Number: 8468
 M.O.V.E Post-Processing: Rel_10_B192

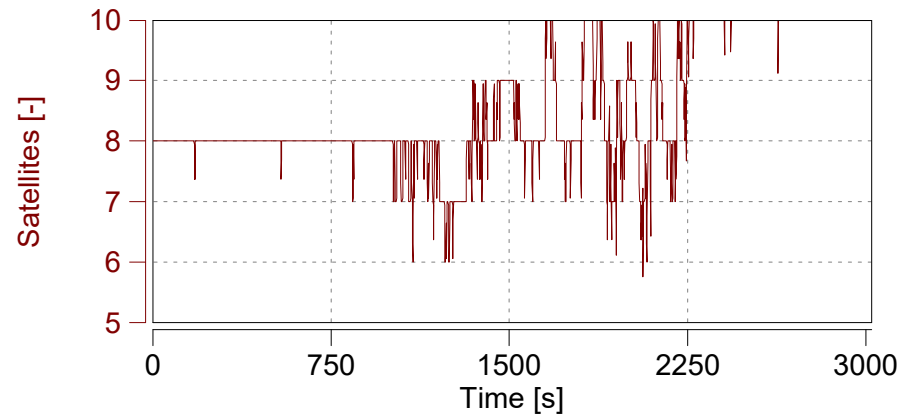
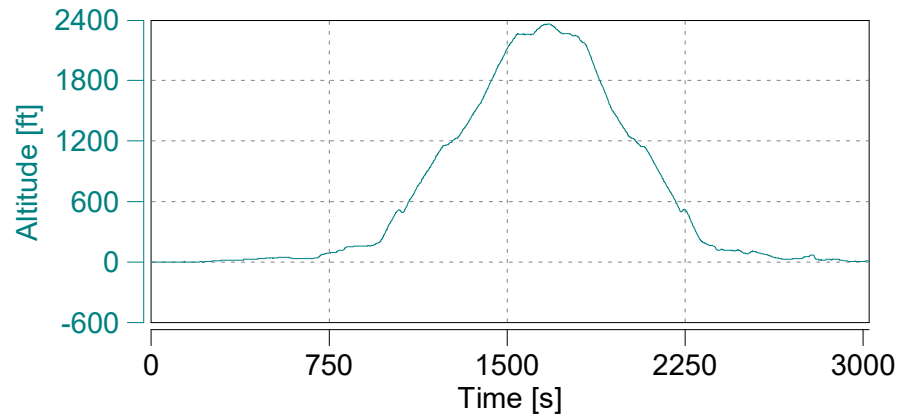
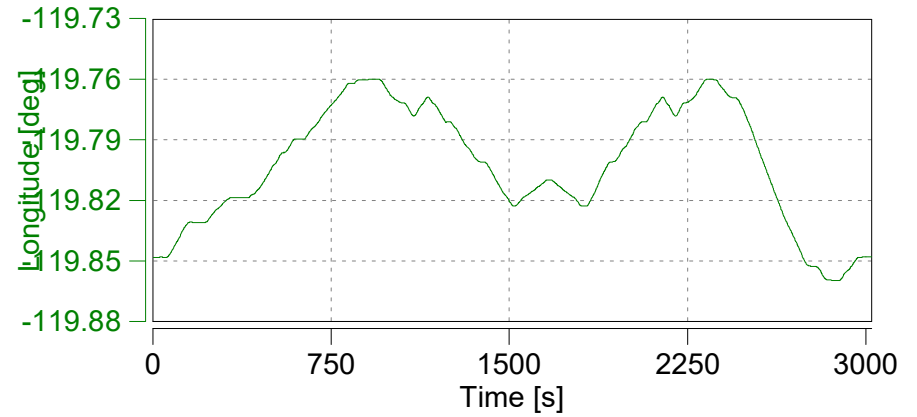
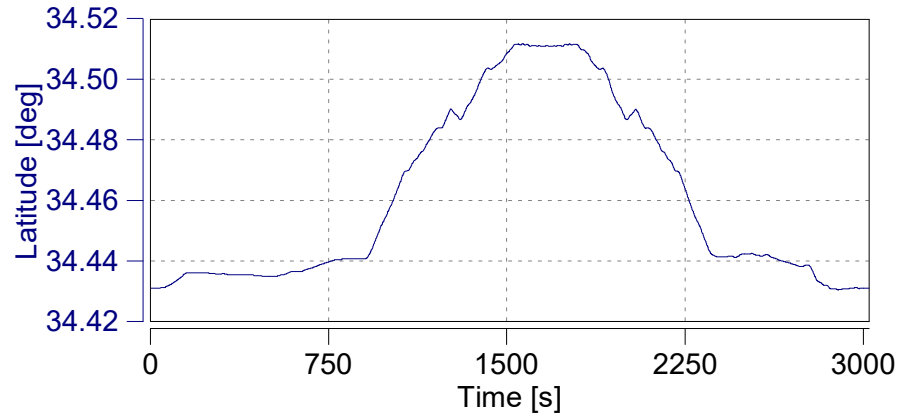
Vehicle: 2017 VW Jetta / Independent Vehicle
 Engine: Gasoline / 1.8L
 NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
 Dry / Wet Corr.: 2 - CFR40 §86.1342-90

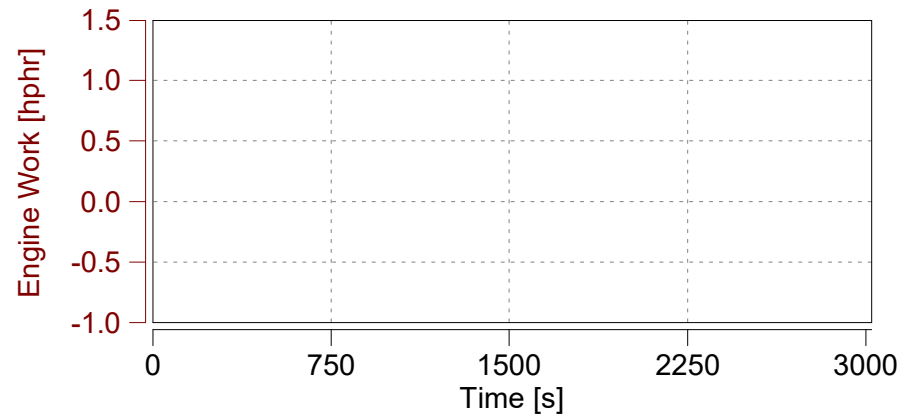
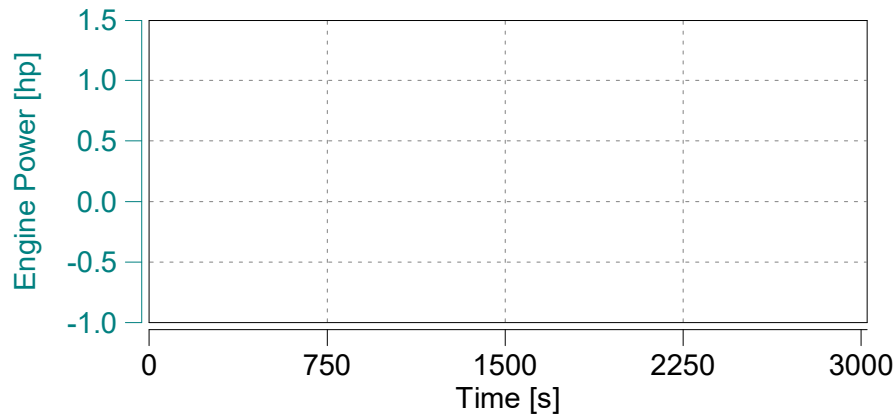
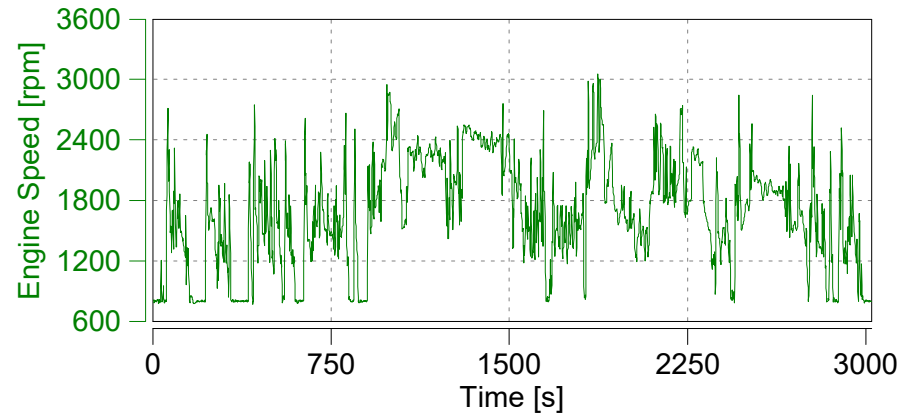
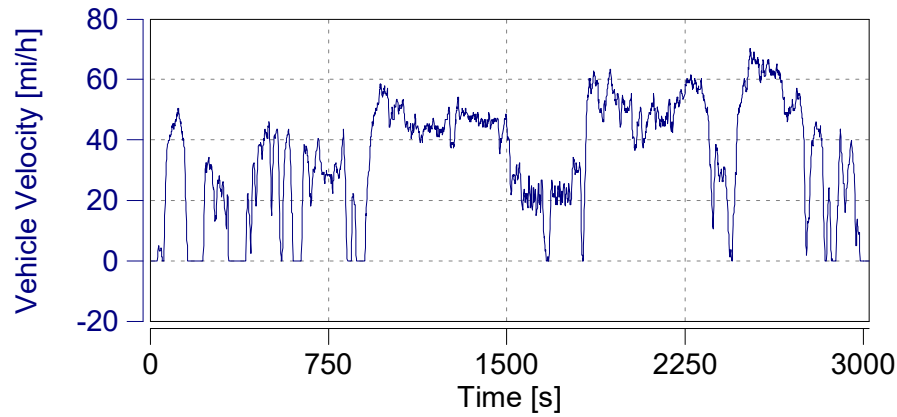


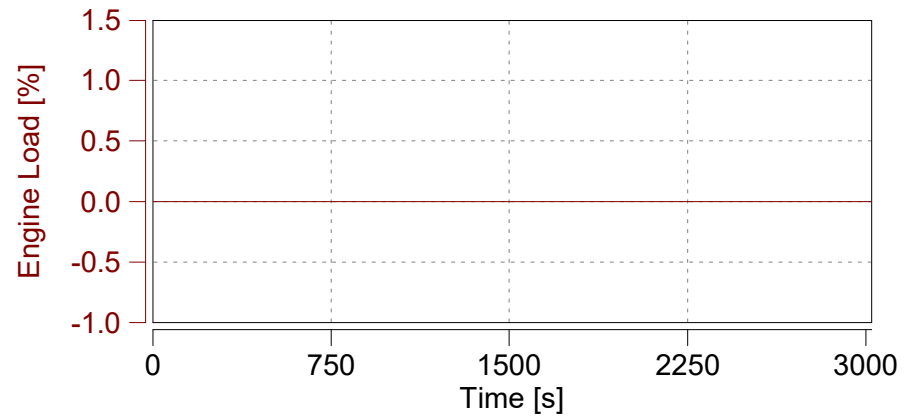
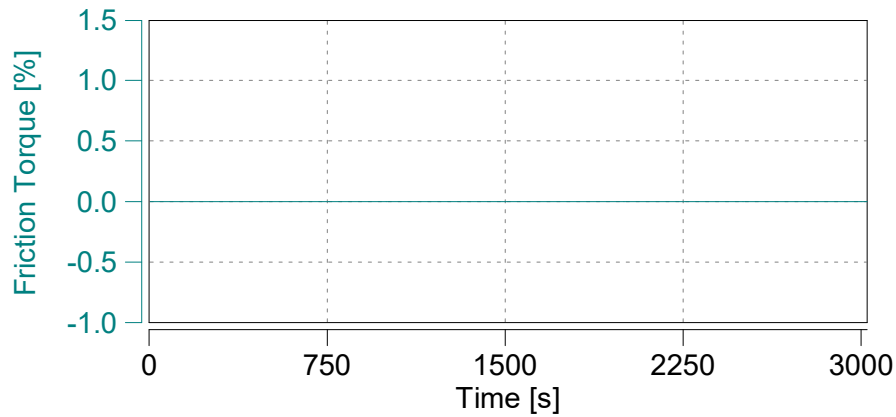
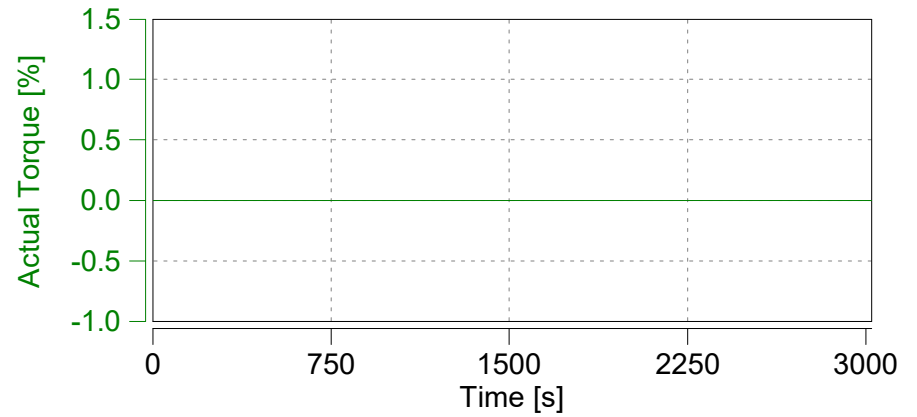
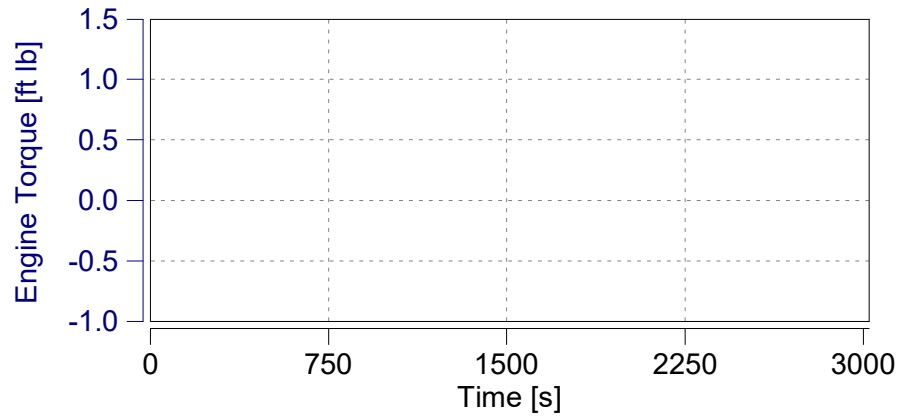
Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

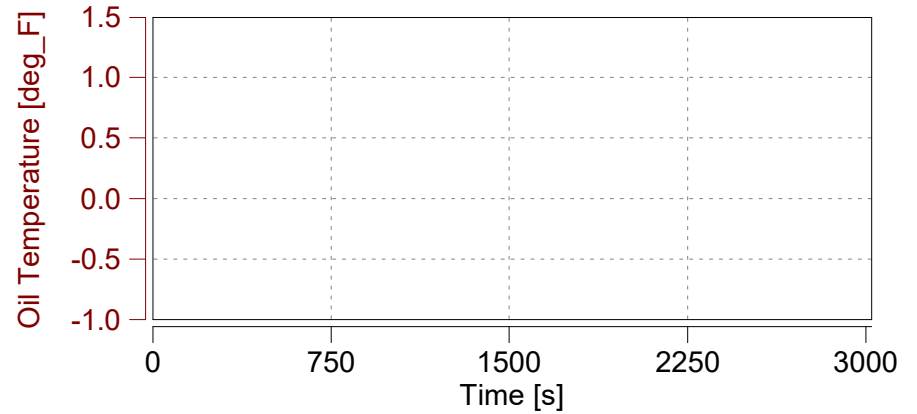
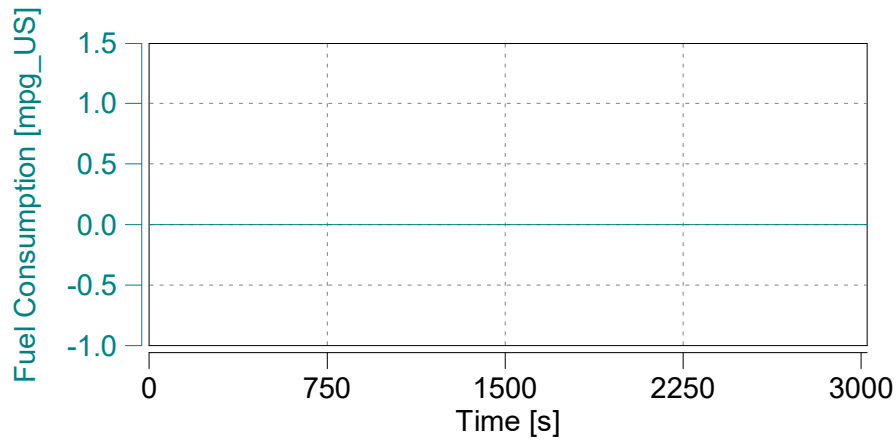
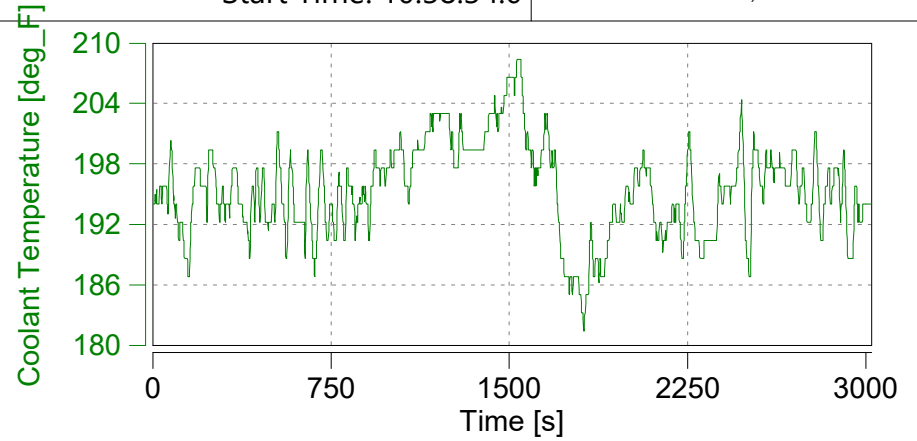
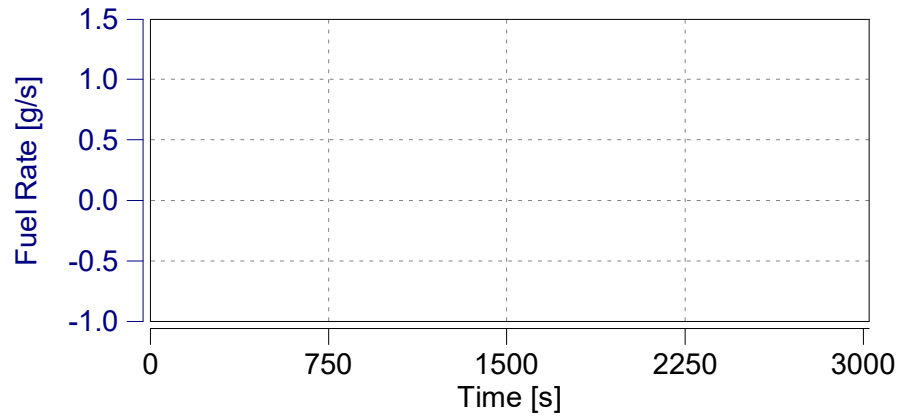
Vehicle: 2017 VW Jetta / Independent Vehicle
Engine: Gasoline / 1.8L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

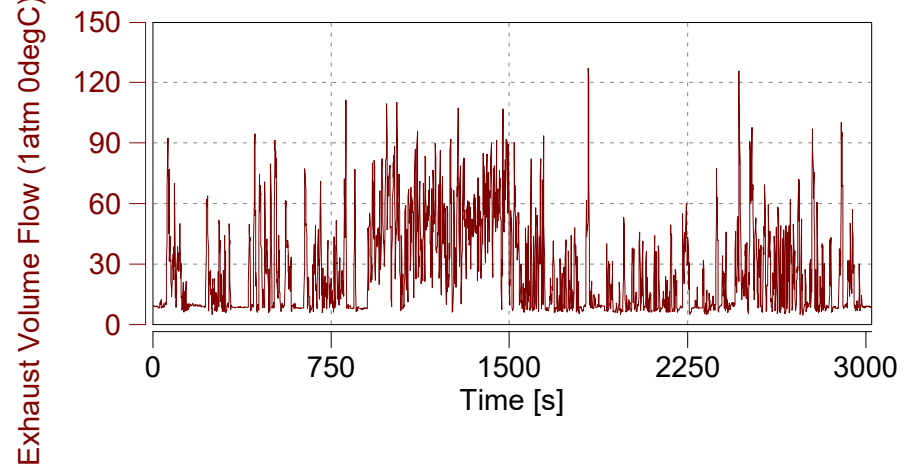
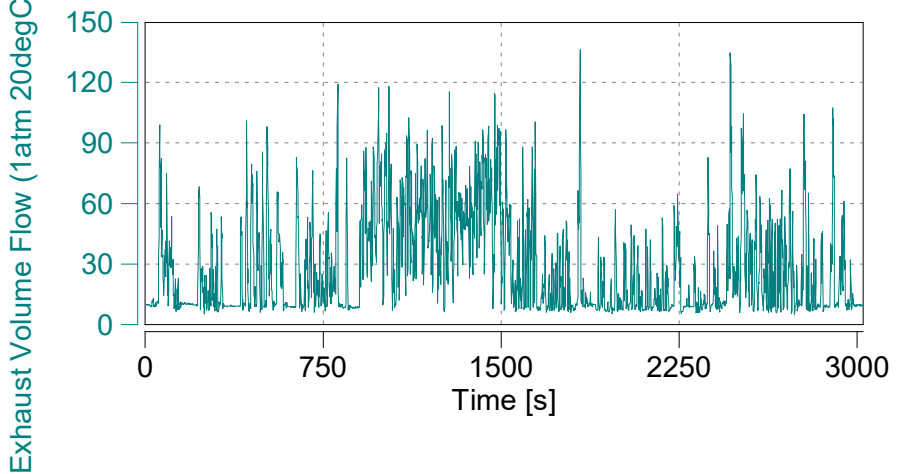
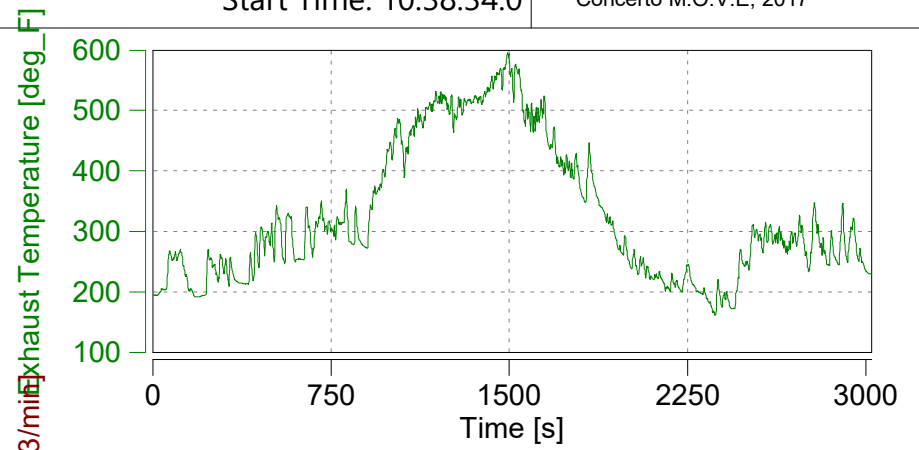
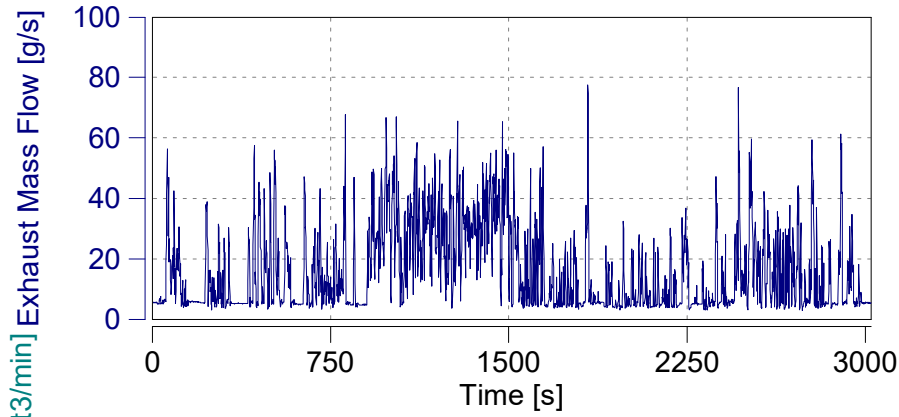






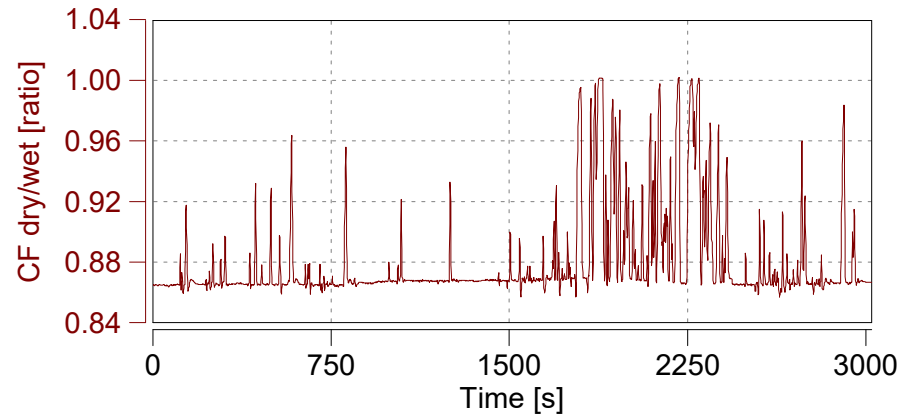
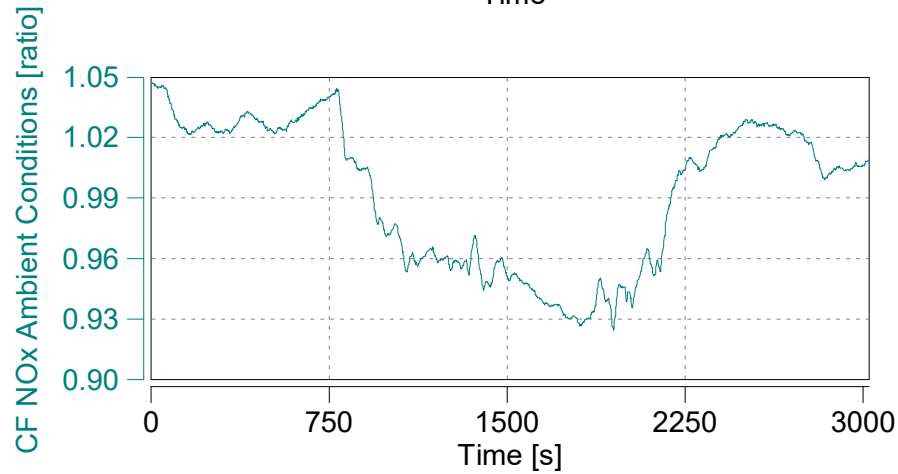
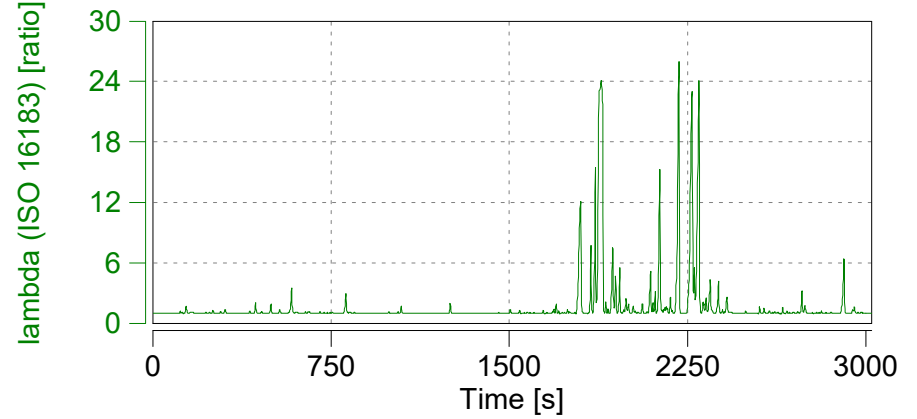
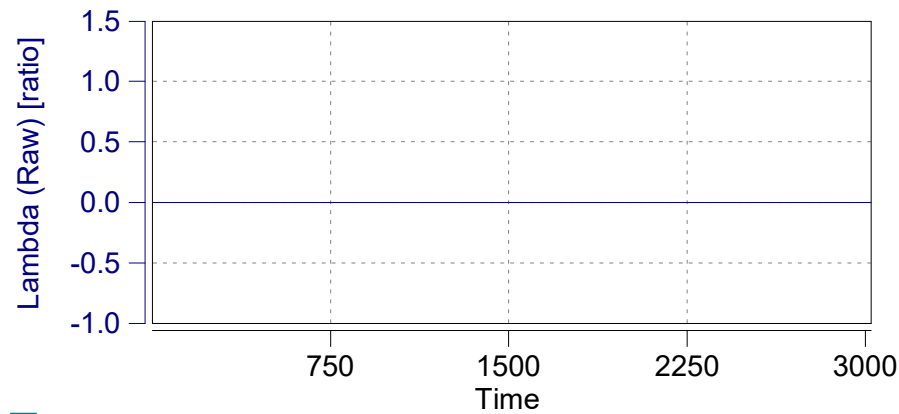






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Vehicle: 2017 VW Jetta / Independent Vehicle
Engine: Gasoline / 1.8L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

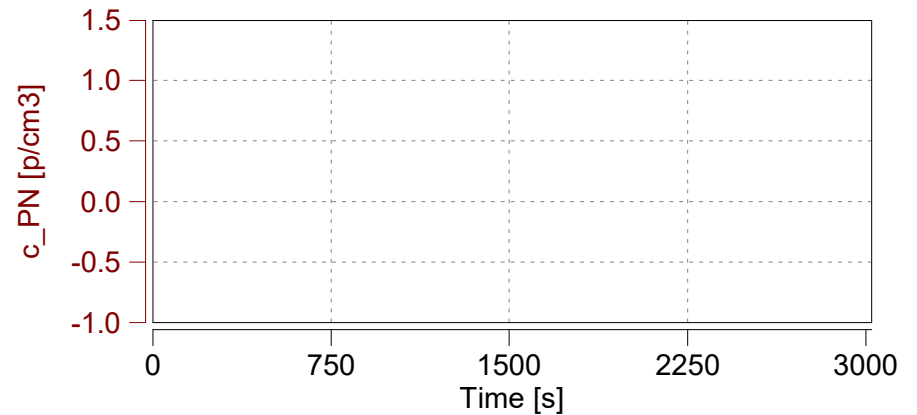
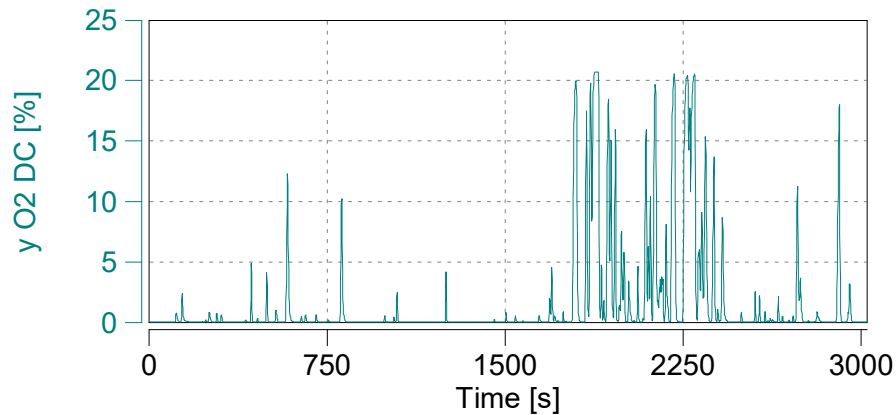
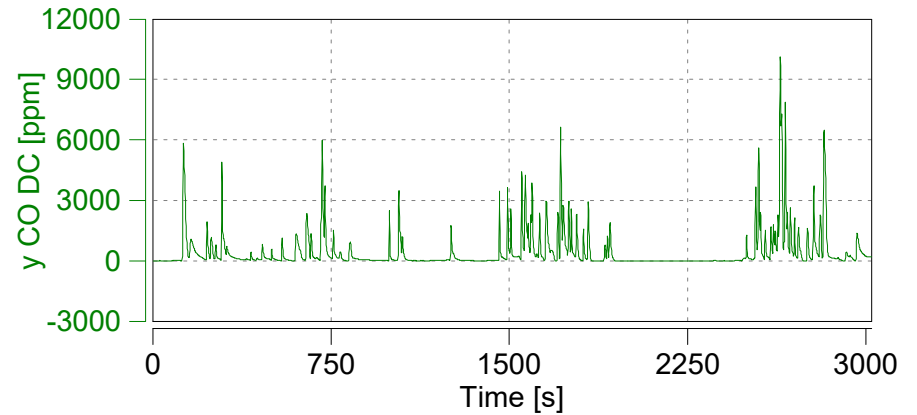
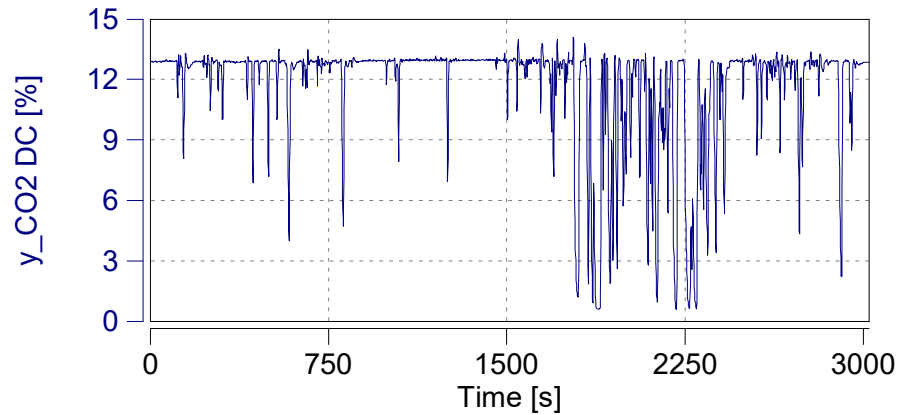


Case: Mountain

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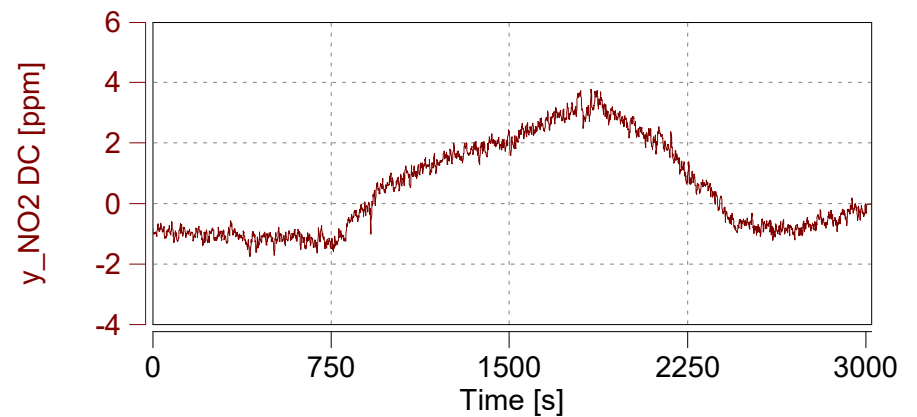
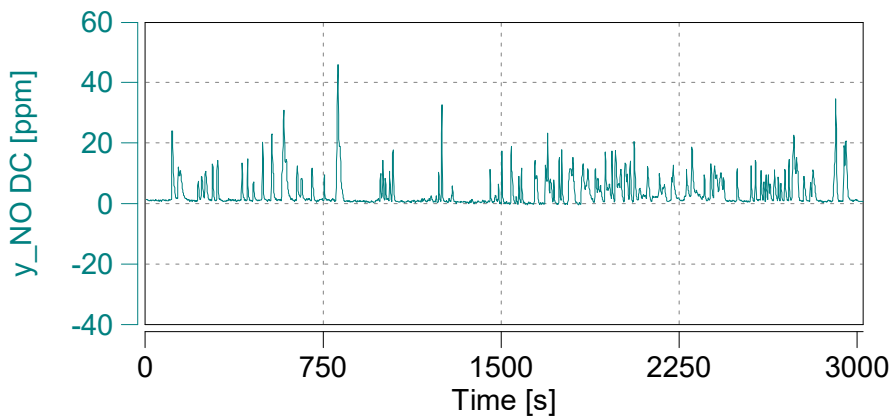
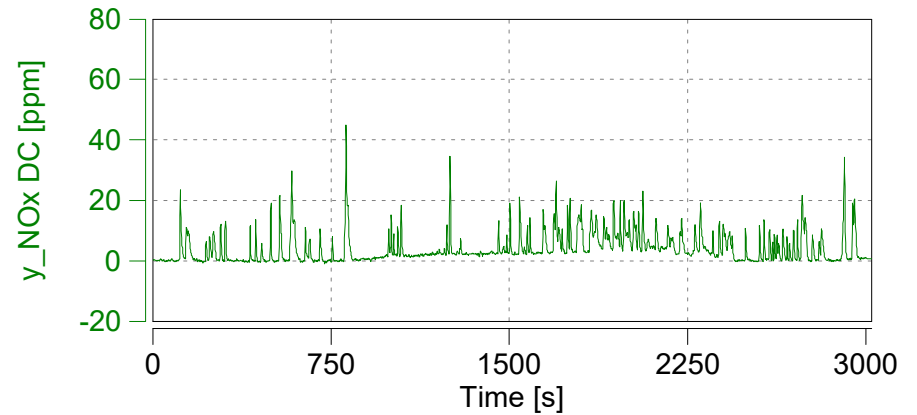
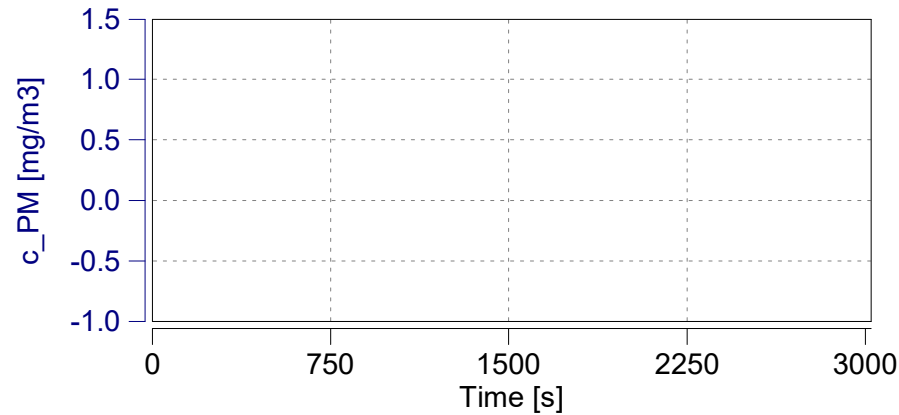
Start Date: 09/29/2017

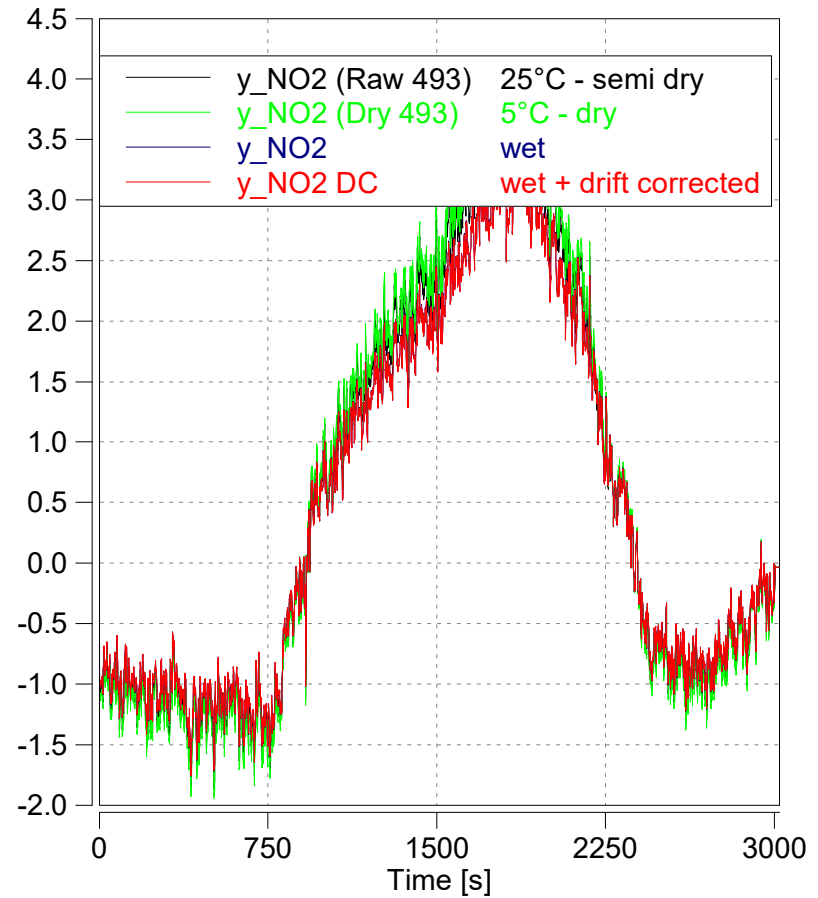
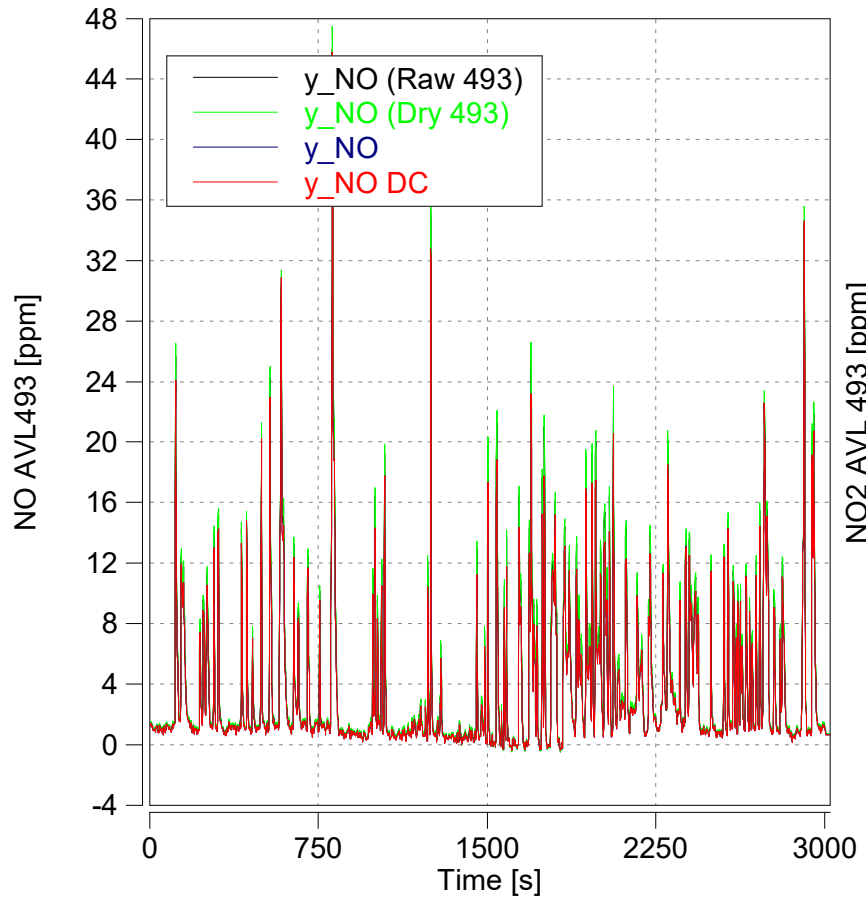
Start Time: 10:38:34.0



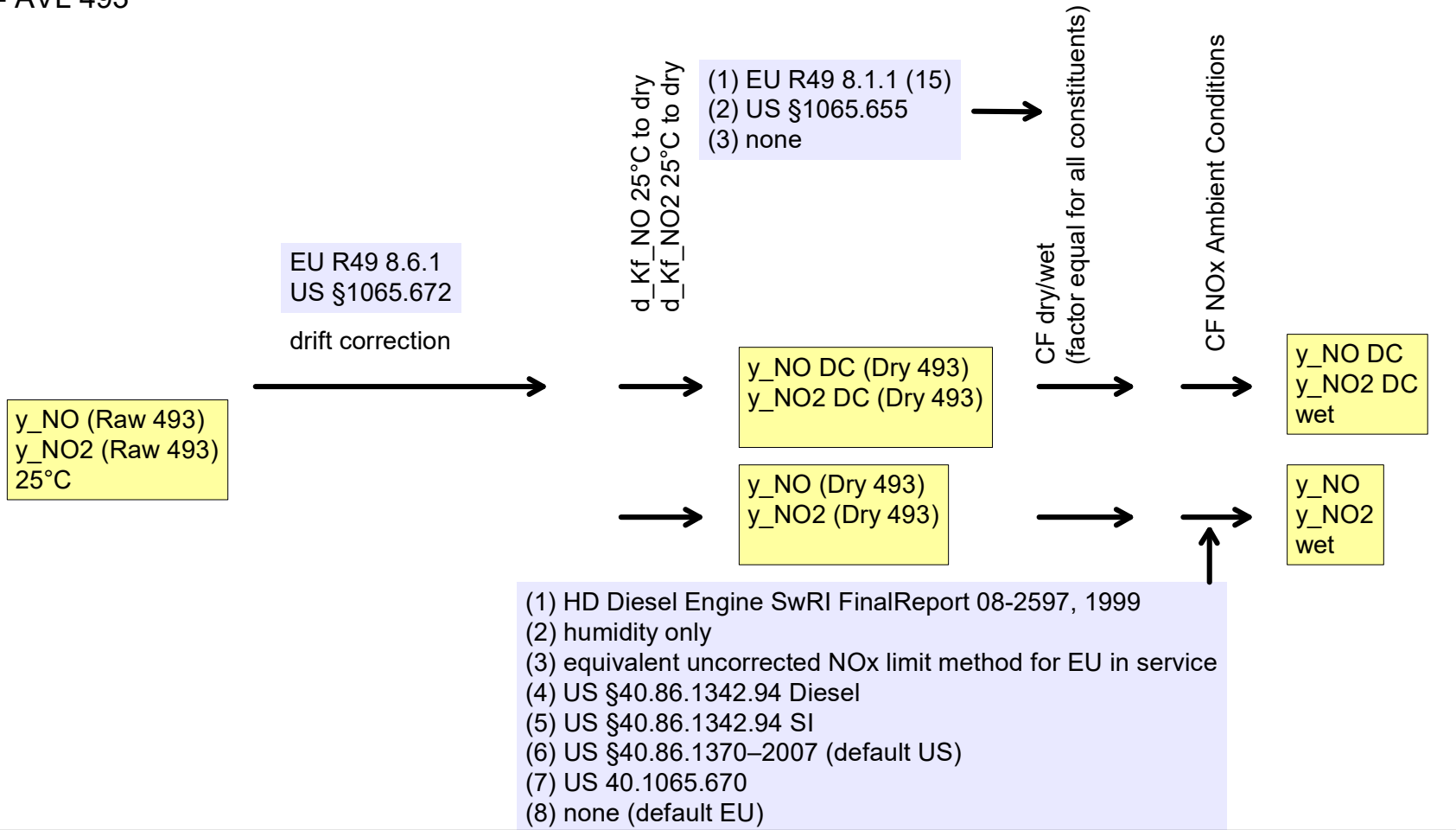
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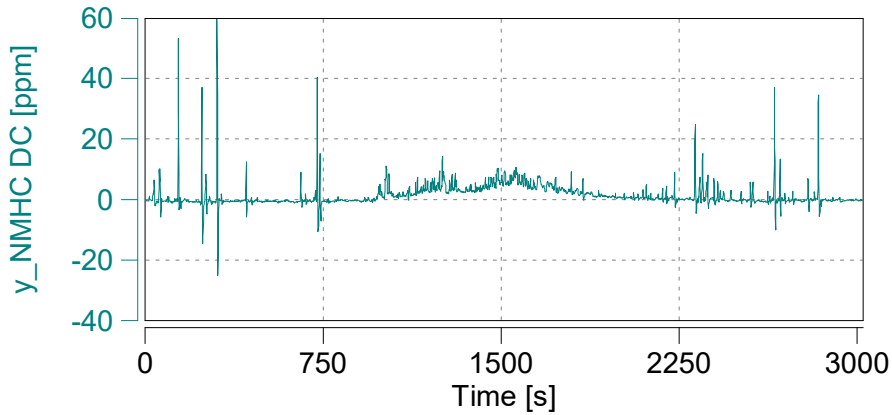
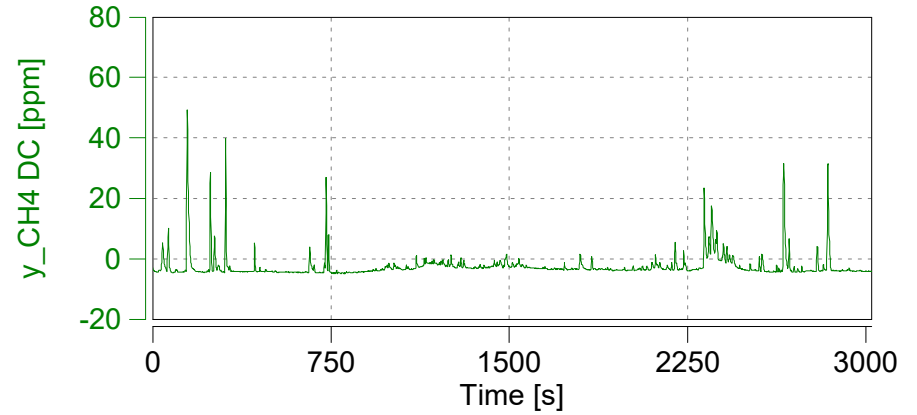
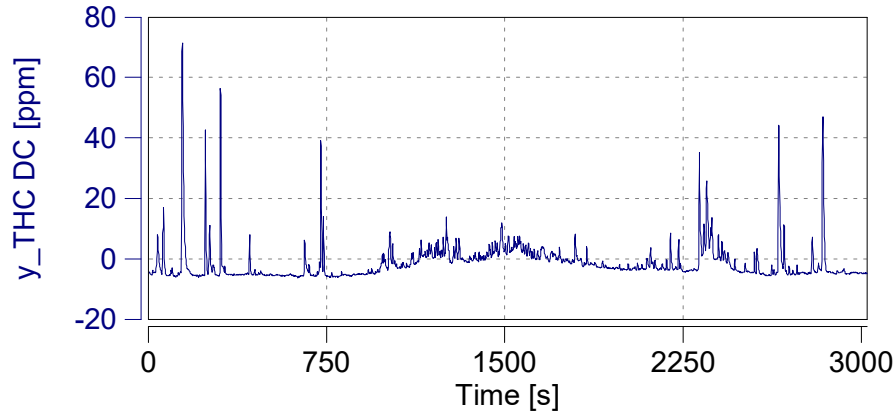
Vehicle: 2017 VW Jetta / Independent Vehicle
Engine: Gasoline / 1.8L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
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NOx - AVL 493



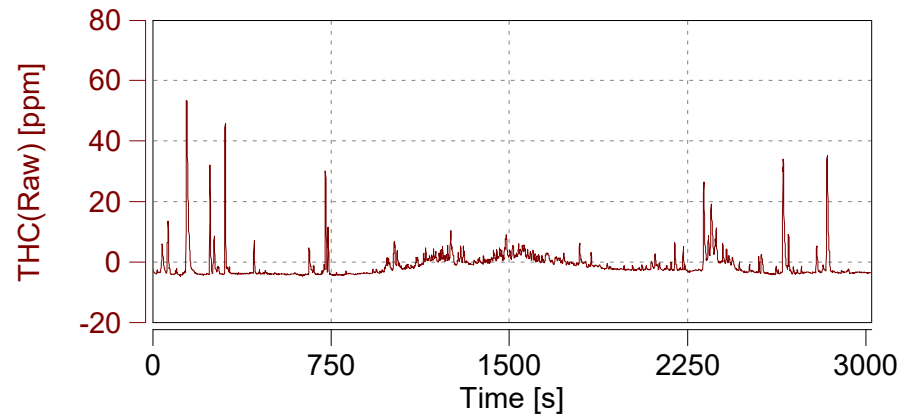
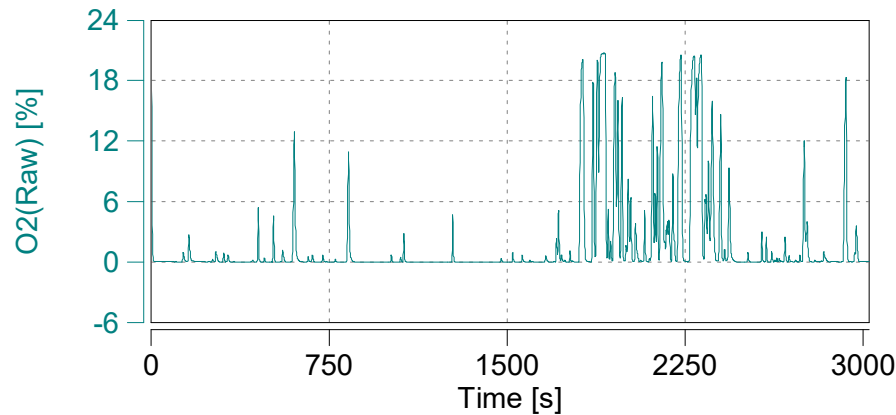
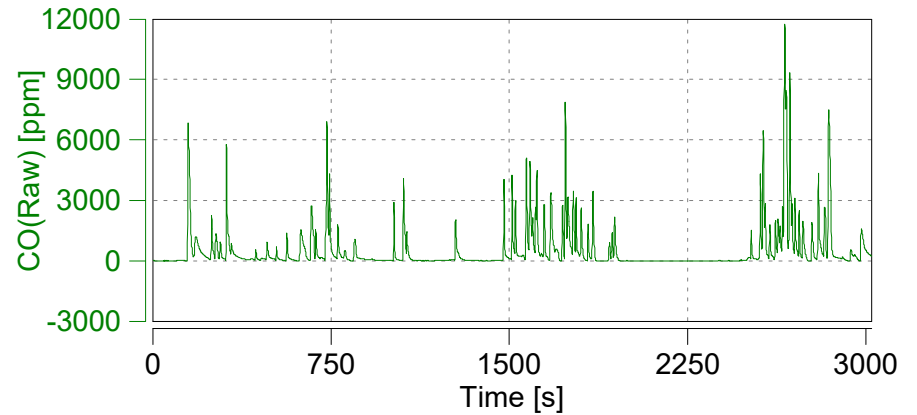
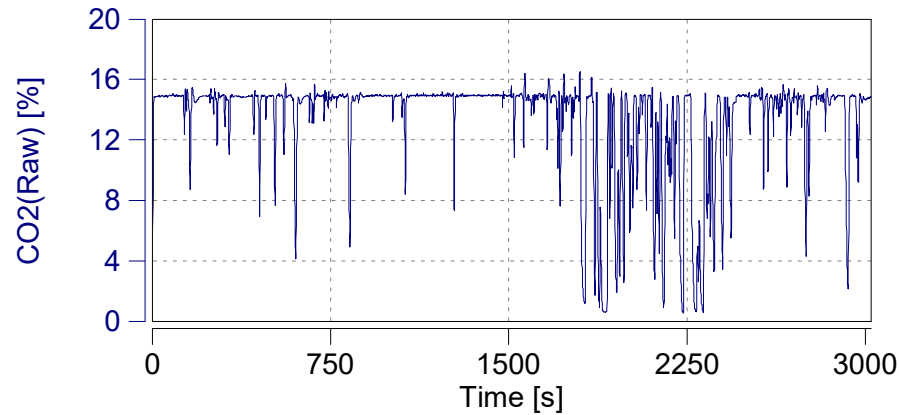


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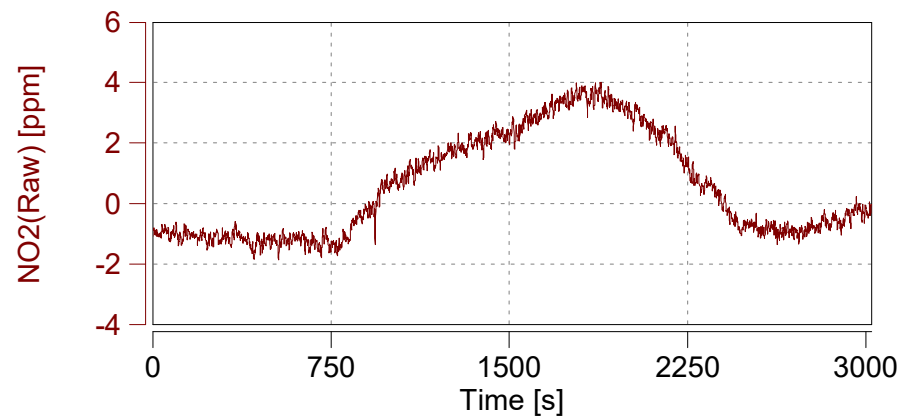
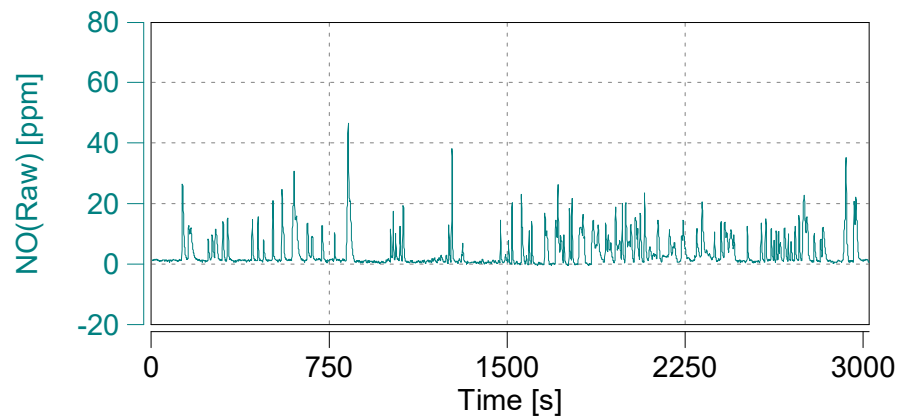
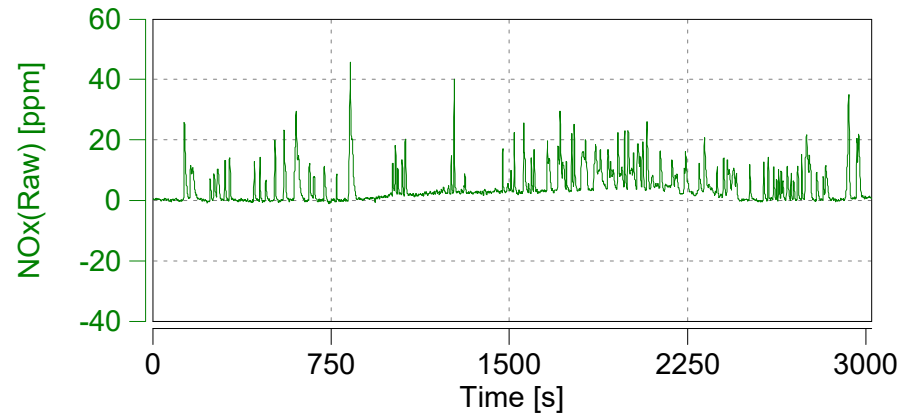
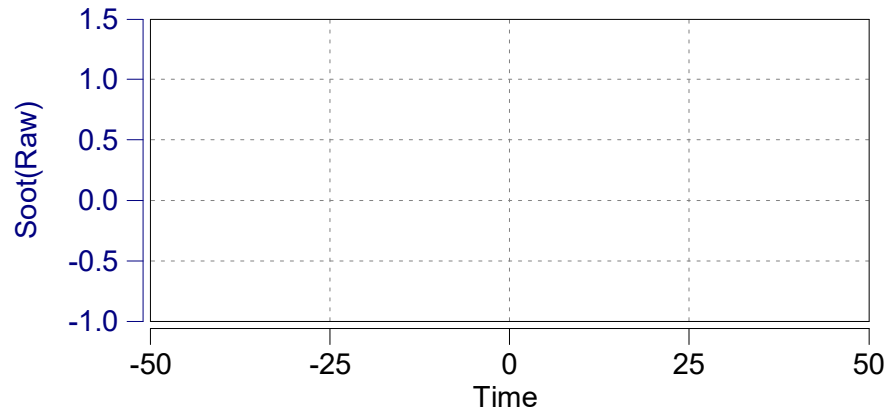
Vehicle: 2017 VW Jetta / Independent Vehicle
Engine: Gasoline / 1.8L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
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Page: Emissions Raw Data (2)

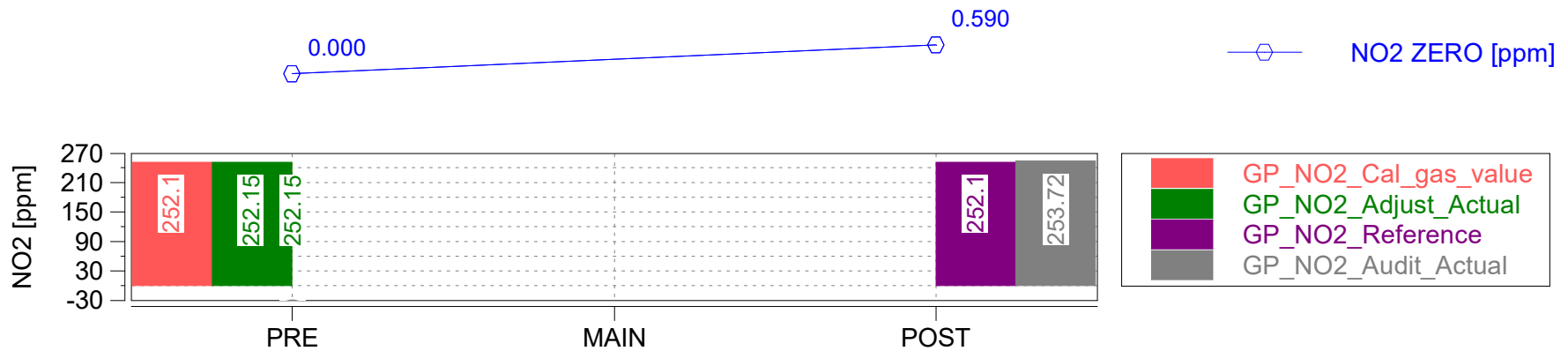
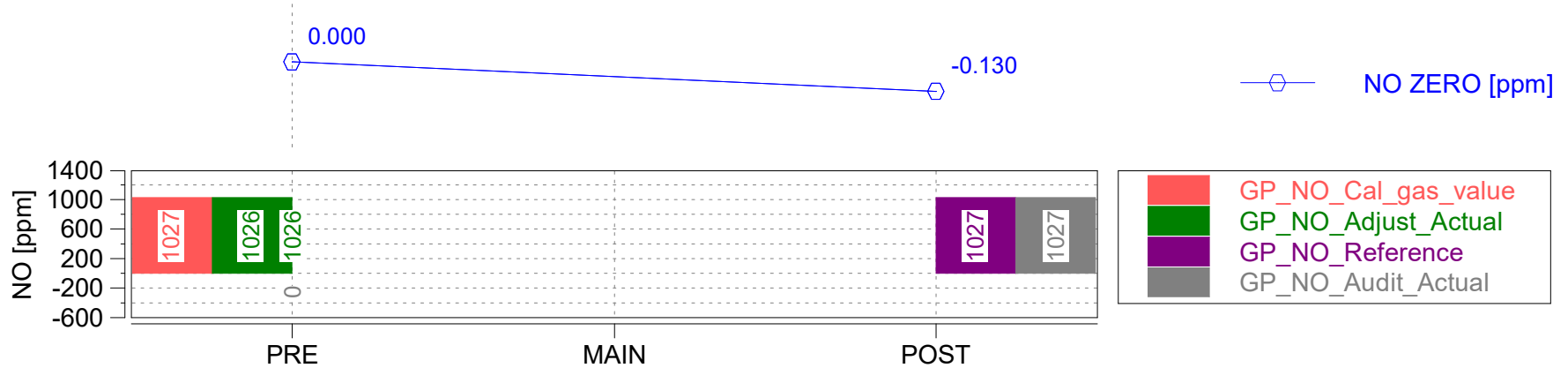
Start Date: 09/29/2017

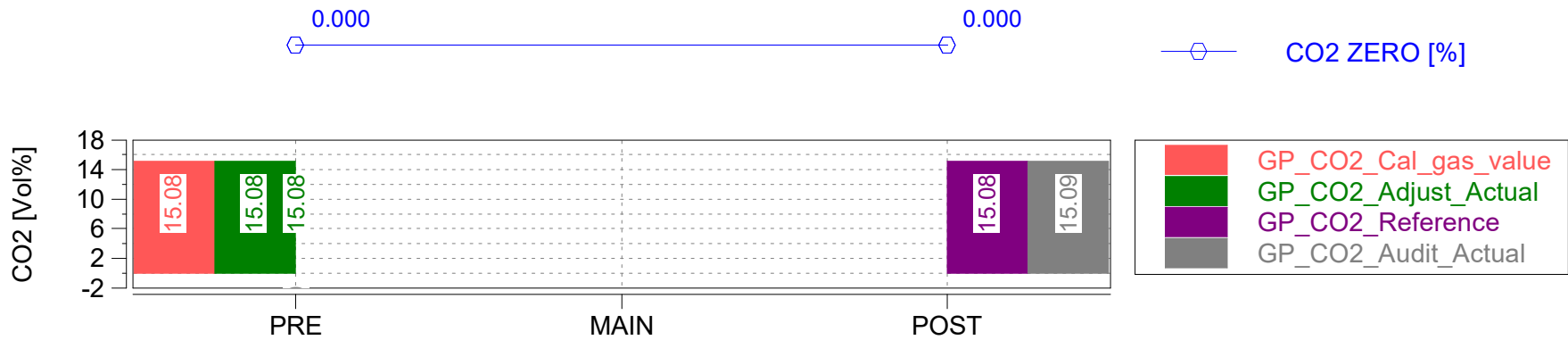
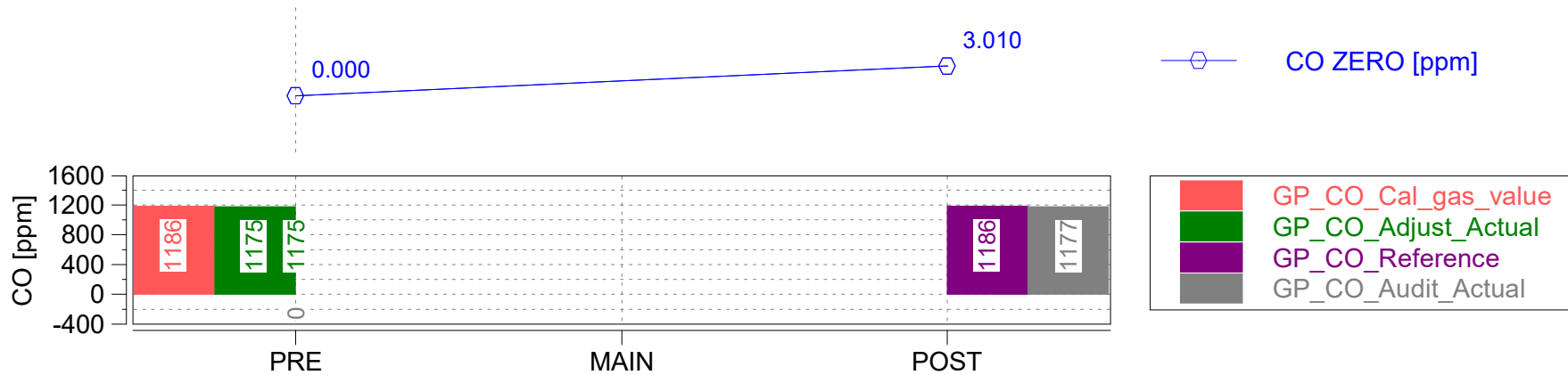
Start Time: 10:38:34.0

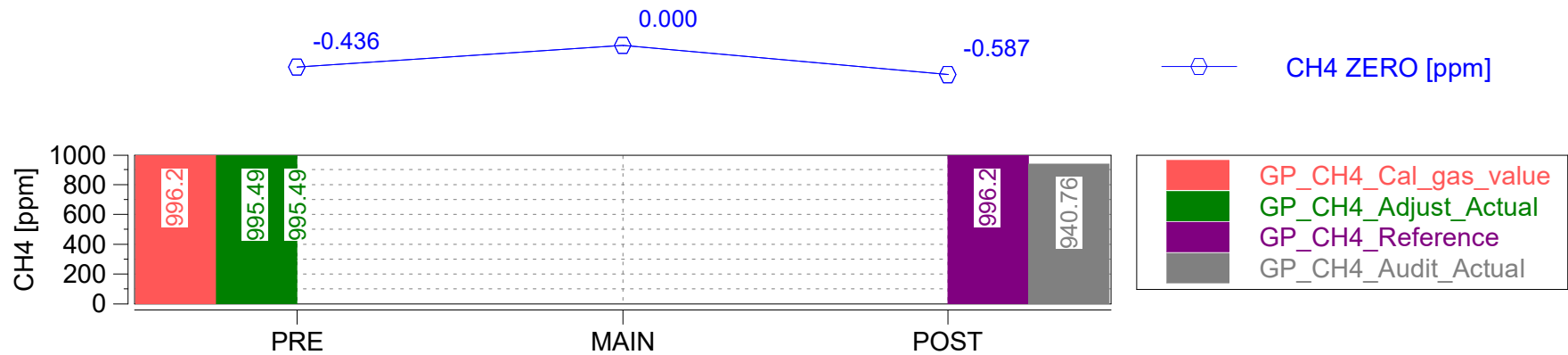
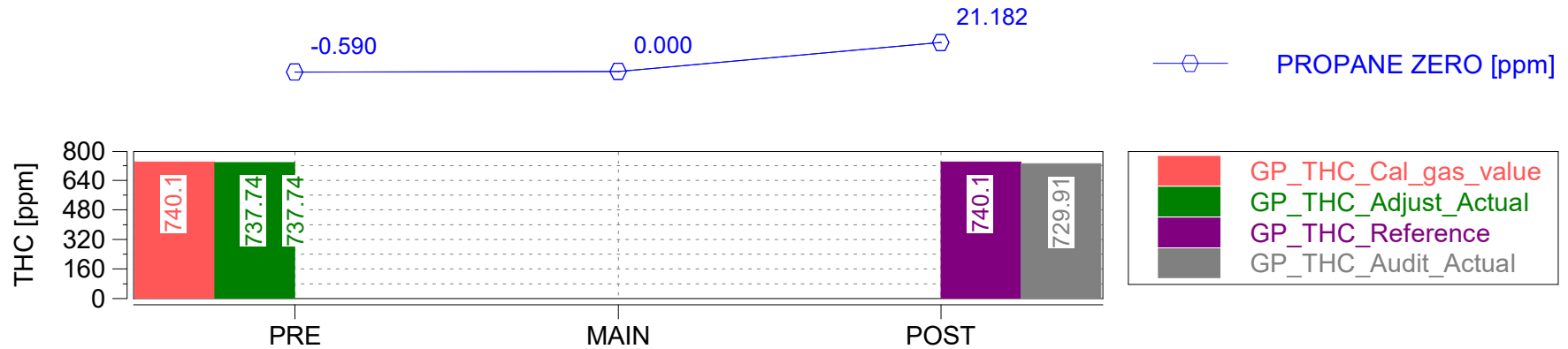


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NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90







#	Text	Value	Unit
-	----	----	----
1.0	Test Start: Date	-	-
2.0	Test Start: Time	-	-
3.0	Ambient Temperature	IFILE1:TM'Temperature	deg C
4.0	Ambient Temperature TS	0.00000	s
5.0	Ambient Pressure	IFILE1:TM'Pressure	kPa
6.0	Ambient Pressure TS	0.00000	s
7.0	Humidity Type	1.00000	-
8.0	Amb. Rel. Humidity	IFILE1:TM'Humidity	%
9.0	Amb. Rel. Humidity	0.00000	s
10.0	GPS Latitude		deg
11.0	GPS Latitude TS	0.00000	s
12.0	GPS Longitude		deg
13.0	GPS Longitude TS	0.00000	s
14.0	Altitude		m
15.0	Altitude TS	0.00000	s
16.0	GPS Quality		-
17.0	GPS Quality TS	0.00000	s
18.0	GroundSpeed		km/h
19.0	GroundSpeed TS	0.00000	s
20.0	Altitude from topographical map		m
21.0	Altitude TS of topographical map		s
22.0	TRIP_AMBIENT_GPS_AVL	YES	-
23.0	CALC_GPS_GROUNDSPEED	NO	-
24.0	EXHAUST_FLOW_AVL	NO	-
25.0	EXHAUST_FLOW_AVL_EFM	YES	-
26.0	Exhaust Flow Type	2.00000	-
27.0	Mass Flow	IFILE1:TM'PitotEFM_ExhaustG	various
28.0	Mass Flow TS	1.30000	s
29.0	Exhaust Pressure		kPa
30.0	Exhaust Pressure TS	1.30000	s

#	Text	Value	Unit
-	----	----	----
31.0	Exhaust Delta Pressure		kPa
32.0	Exhaust Pressure Delta TS	1.30000	s
33.0	Exhaust Temperature	IFILE1:TM'PitotEFM_ExhaustG	degC
34.0	Exhaust Temperature TS	1.30000	s
35.0	Lambda	N/A	-
36.0	Lambda TS		s
37.0	CO2_DIL		%
38.0	CO2_DIL TS		s
39.0	CVS Volume Flow		m3/min
40.0	TimeShift_CVS_VOL_FLOW		s
41.0	IN_CVS_PRESSURE		kPa
42.0	TimeShift_CVS_PRESSURE		s
43.0	IN_CVS_TEMP		degC
44.0	TimeShift_CVS_TEMP		s
45.0	Dry to Wet Conversion CO2	YES	-
46.0	Dry to Wet Conversion O2	YES	-
47.0	Dry to Wet Conversion NO	NO	-
48.0	Dry to Wet Conversion NO2	NO	-
49.0	Dry to Wet Conversion THC	NO	-
50.0	Dry to Wet Conversion CH4	NO	-
51.0	Dry to Wet Conversion O2	NO	-
52.0	CO2	IFILE1:TM'GPiS_CO2	%
53.0	CO2 TS	-19.80000	s
54.0	OS	IFILE1:TM'GPiS_O2	%
55.0	O2 TS	-20.30000	s
56.0	CO	IFILE1:TM'GPiS_CO	ppm
57.0	CO TS	-19.80000	s
58.0	NO	IFILE1:TM'GPiS_NO	ppm
59.0	NO TS	-18.00000	s
60.0	NO2	IFILE1:TM'GPiS_NO2	ppm

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NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
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#	Text	Value	Unit
-	----	----	----
61.0	NO2 TS	-18.00000	s
62.0	THC	IFILE1:TM'FIDiS_THC_C1	ppm
63.0	THC TS	0.00000	s
64.0	CH4	IFILE1:TM'FIDiS_CH4_C1	ppm
65.0	CH4 TS	0.00000	s
66.0	GAS_PEMS_Ethane_Efficiency	IFILE1:MOVE_AVL4925'GP_Et -	
67.0	GAS_PEMS_Methane_Efficiency	IFILE1:MOVE_AVL4925'GP_M -	
68.0	GAS_PEMS_Methane_Response	IFILE1:MOVE_AVL4925'GP_M -	
69.0	Zero Signal	IFILE1:TM'GPiS_STATE	0/1
70.0	Zero Signal TS	-18.00000	s
71.0	Zero Signal_FIDiS	IFILE1:TM'FIDiS_STATE	0/1
72.0	Zero Signal_FIDiS TS		s
73.0	Species Input Type	4.00000	-
74.0	GASPEMS=AVL493	NO	-
75.0	GASPEMS=AVL493_iX	NO	-
76.0	GASPEMS=AVL492	YES	-
77.0	GASPEMS=AVL4925	YES	-
78.0	PM: Type	4.00000	1=GFB+HC, 2=GFB, 3='PM=S
79.0	Filter ID from IFile	NO	-
80.0	Lab ID from IFile	NO	-
81.0	PM Filter: ID	N/A	ID
82.0	PM Filter: Lab	N/A	Name/ID
83.0	PM Filter: Weight before Test	N/A	mg
84.0	PM Filter: Weight after Test	N/A	mg
85.0	PM (HC Corr): Max. Exhaust Flow	N/A	scfm
86.0	Soot		mg/m3
87.0	Soot TS	-5.00000	s
88.0	Soot Sensor		mg/m3
89.0	Soot Sensor TS		s
90.0	PM Filter: Filter Flow Rate		l/min

#	Text	Value	Unit
-	----	----	----
91.0	PM Filter: Filter Flow Rate TS	-5.00000	s
92.0	PM Filter: Filter Dilution Ratio		-
93.0	PM Filter: Filter Dilution Ratio TS	-5.00000	s
94.0	PM Filter: Filter Trigger		-
95.0	PM Filter: Filter Trigger TS	-5.00000	s
96.0	PMPEMS=AVL494	YES	-
97.0	PMPEMS_AVL494_PROP_DIL	NO	-
98.0	PM dilution ratio min		-
99.0	PM_MaxExhaustFlowRate		-
100.0	PM_ExhaustFlow_Thresh		-
101.0	PM_total_flow_val		-
102.0	PM_total_flow_val_TS		-
103.0	PM_exh_mass_flow		-
104.0	PM_exh_mass_flow_TS		-
105.0	PN		#/cm3
106.0	TimeShift_PN		s
107.0	PN_STATE		-
108.0	PN TS STATE		s
109.0	PNPEMS_AVL496	NO	-
110.0	PN_CorrFactor	1.00000	
111.0	Time Alignment	1.00000	-
112.0	Time Alignment Dataset 1	N/A	0/1
113.0	Time Alignment Dataset 2	N/A	0/1
114.0	Time Alignment Thresh 1	N/A	-
115.0	Time Alignment Thresh 2	N/A	-
116.0			
117.0			
118.0			
119.0			
120.0			

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#	Text	Value	Unit
-	----	----	----
121.0			
122.0	Trigger		0/1
123.0	Trigger TS		s
124.0	FTIR_NAME_1		-
125.0	FTIR_MW_1		-
126.0	FTIR_CHANNEL_1		-
127.0	FTIR_CHANNEL_TS_1		-
128.0	FTIR_CHANNEL_DRY_1	NO	-
129.0	FTIR_NAME_2		-
130.0	FTIR_MW_2		-
131.0	FTIR_CHANNEL_2		-
132.0	FTIR_CHANNEL_TS_2		-
133.0	FTIR_CHANNEL_DRY_2	NO	-
134.0	FTIR_NAME_3		-
135.0	FTIR_MW_3		-
136.0	FTIR_CHANNEL_3		-
137.0	FTIR_CHANNEL_TS_3		-
138.0	FTIR_CHANNEL_DRY_3	NO	-
139.0	FTIR_NAME_4		-
140.0	FTIR_MW_4		-
141.0	FTIR_CHANNEL_4		-
142.0	FTIR_CHANNEL_TS_4		-
143.0	FTIR_CHANNEL_DRY_4	NO	-
144.0	FTIR_NAME_5		-
145.0	FTIR_MW_5		-
146.0	FTIR_CHANNEL_5		-
147.0	FTIR_CHANNEL_TS_5		-
148.0	FTIR_CHANNEL_DRY_5	NO	-
149.0	FTIR_NAME_6		-
150.0	FTIR_MW_6		-

#	Text	Value	Unit
-	----	----	----
151.0	FTIR_CHANNEL_6		-
152.0	FTIR_CHANNEL_TS_6		-
153.0	FTIR_CHANNEL_DRY_6	NO	-
154.0	FTIR_NAME_7		-
155.0	FTIR_MW_7		-
156.0	FTIR_CHANNEL_7		-
157.0	FTIR_CHANNEL_TS_7		-
158.0	FTIR_CHANNEL_DRY_7	NO	-
159.0	FTIR_NAME_8		-
160.0	FTIR_MW_8		-
161.0	FTIR_CHANNEL_8		-
162.0	FTIR_CHANNEL_TS_8		-
163.0	FTIR_CHANNEL_DRY_8	NO	-
164.0	FTIR_NAME_9		-
165.0	FTIR_MW_9		-
166.0	FTIR_CHANNEL_9		-
167.0	FTIR_CHANNEL_TS_9		-
168.0	FTIR_CHANNEL_DRY_9	NO	-
169.0	FTIR_NAME_10		-
170.0	FTIR_MW_10		-
171.0	FTIR_CHANNEL_10		-
172.0	FTIR_CHANNEL_TS_10		-
173.0	FTIR_CHANNEL_DRY_10	NO	-
174.0	FTIR_NAME_11		-
175.0	FTIR_MW_11		-
176.0	FTIR_CHANNEL_11		-
177.0	FTIR_CHANNEL_TS_11		-
178.0	FTIR_CHANNEL_DRY_11	NO	-
179.0	FTIR_NAME_12		-
180.0	FTIR_MW_12		-

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#	Text	Value	Unit
-	----	----	----
181.0	FTIR_CHANNEL_12		-
182.0	FTIR_CHANNEL_TS_12		-
183.0	FTIR_CHANNEL_DRY_12	NO	-
184.0	FTIR_NAME_13		-
185.0	FTIR_MW_13		-
186.0	FTIR_CHANNEL_13		-
187.0	FTIR_CHANNEL_TS_13		-
188.0	FTIR_CHANNEL_DRY_13	NO	-
189.0	FTIR_NAME_14		-
190.0	FTIR_MW_14		-
191.0	FTIR_CHANNEL_14		-
192.0	FTIR_CHANNEL_TS_14		-
193.0	FTIR_CHANNEL_DRY_14	NO	-
194.0	FTIR_NAME_15		-
195.0	FTIR_MW_15		-
196.0	FTIR_CHANNEL_15		-
197.0	FTIR_CHANNEL_TS_15		-
198.0	FTIR_CHANNEL_DRY_15	NO	-
199.0	FTIR_NAME_16		-
200.0	FTIR_MW_16		-
201.0	Vehicle Type	2017 VW Jetta	-
202.0	Vehicle Info	Independent Vehicle	-
203.0	Engine Type	Gasoline	-
204.0	Engine Info	1.8L	-
205.0	Engine Torque		Nm
206.0	Curb Idle Load		%
207.0	Idle Speed		rpm
208.0	HYBRID_OVC_REF_CO2_gkm		g/km
209.0	Engine Concept	1.00000	-
210.0	Alpha	1.93000	-

#	Text	Value	Unit
-	----	----	----
211.0	Beta	1.00000	
212.0	Gamma	0.00000	
213.0	Delta	0.00000	
214.0	Epsilon	0.03200	
215.0	X_C	83.00000	
216.0	X_H	13.30000	
217.0	X_N	0.00000	
218.0	X_O	3.50000	
219.0	X_S	0.00000	
220.0	Fuel_Density	747.50000	
221.0	rho_exhaust	1.29310	
222.0	U_CO2	1.51800	
223.0	U_CO	0.96600	
224.0	U_NO	1.58700	
225.0	U_NO2	1.58700	
226.0	U_NOx	1.58700	
227.0	U_HC	0.49900	
228.0	U_NMHC	0.47100	
229.0	U_CH4	0.55300	
230.0	U_O2	1.10400	
231.0	Fuel Type	2.00000	-
232.0	exhaust mass flow type (YES/NO)	YES	-
233.0	Distance Calculation Type	1.00000	-
234.0	Velocity Statistics Calculation Type	2.00000	-
235.0	RDE vehicle class	1.00000	-
236.0	TM_CITY0		s
237.0	TM_CITY1		s
238.0	TM_RURAL0		s
239.0	TM_RURAL1		s
240.0	TM_RURAL2_0		s

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#	Text	Value	Unit
-	----	----	----
241.0	TM_RURAL2_1		s
242.0	Second Rural Part for Time Marks (NO		-
243.0	TM_MW0		s
244.0	TM_MW1		s
245.0	VELOCITY_LIMIT_STOP	2.00000	km/h
246.0	VELOCITY_LIMIT_URBAN	50.00000	km/h
247.0	VELOCITY_LIMIT_RURAL	75.00000	km/h
248.0	Intake Manifold Pressure Type	1.00000	-
249.0	Velocity	IFILE1:TM'OBD_Vehicle_Spee	km/h
250.0	Velocity TS	1.70000	s
251.0	Velocity FACTOR	1.00000	-
252.0	Coolant Temperature	IFILE1:TM'OBD_Engine_Coola	degC
253.0	Coolant Temperature TS	1.70000	s
254.0	Oil Temperature		degC
255.0	Oil Temperature TS	1.70000	s
256.0	Intake Manifold Temperature		degC
257.0	Intake Manifold Temp TS	1.70000	s
258.0	Intake Manifold Pressure	IFILE1:TM'OBD_Intake_manifo	kPa
259.0	Intake Manifold Pressure TS	1.70000	s
260.0	Throttle Position		%
261.0	Throttle TS	1.70000	s
262.0	TYP_IDLE_MASS_FLOW		kg/h
263.0	Torque Type	1.00000	-
264.0	Speed	IFILE1:TM'OBD_Engine_RPM	rpm
265.0	Speed TS	1.70000	s
266.0	Torque		Nm
267.0	Torque TS	1.70000	s
268.0	Friction Torque	N/A	Nm
269.0	Friction Torque TS	N/A	s
270.0	Reference Torque	N/A	Nm

#	Text	Value	Unit
-	----	----	----
271.0	Reference Torque TS	N/A	s
272.0	k_VELINE		-
273.0	D_VELINE		-
274.0	Fuel Flow Type	2.00000	-
275.0	Air Flow Type	1.00000	-
276.0	Fuel Rate		various
277.0	Air Rate		various
278.0	Fuel Rate TS	1.70000	s
279.0	No_Cylinders		-
280.0	Air Rate TS	1.70000	s
281.0	FTIR_CHANNEL_32		-
282.0	FTIR_CHANNEL_TS_32		-
283.0	FTIR_CHANNEL_DRY_32	NO	-
284.0	FTIR_NAME_33		-
285.0	FTIR_MW_33		-
286.0	FTIR_CHANNEL_33		-
287.0	FTIR_CHANNEL_TS_33		-
288.0	FTIR_CHANNEL_DRY_33	NO	-
289.0	FTIR_NAME_34		-
290.0	FTIR_MW_34		-
291.0	FTIR_CHANNEL_34		-
292.0	FTIR_CHANNEL_TS_34		-
293.0	FTIR_CHANNEL_DRY_34	NO	-
294.0	FTIR_NAME_35		-
295.0	FTIR_MW_35		-
296.0	FTIR_CHANNEL_35		-
297.0	FTIR_CHANNEL_TS_35		-
298.0	FTIR_CHANNEL_DRY_35	NO	-
299.0	FTIR_NAME_36		-
300.0	FTIR_MW_36		-

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Jetta / Independent Vehicle
Engine: Gasoline / 1.8L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
301.0	FTIR_CHANNEL_36	-	-
302.0	FTIR_CHANNEL_TS_36	-	-
303.0	FTIR_CHANNEL_DRY_36	NO	-
304.0	FTIR_NAME_37	-	-
305.0	FTIR_MW_37	-	-
306.0	FTIR_CHANNEL_37	-	-
307.0	FTIR_CHANNEL_TS_37	-	-
308.0	FTIR_CHANNEL_DRY_37	NO	-
309.0	FTIR_NAME_38	-	-
310.0	FTIR_MW_38	-	-
311.0	FTIR_CHANNEL_38	-	-
312.0	FTIR_CHANNEL_TS_38	-	-
313.0	FTIR_CHANNEL_DRY_38	NO	-
314.0	FTIR_NAME_39	-	-
315.0	FTIR_MW_39	-	-
316.0	FTIR_CHANNEL_39	-	-
317.0	FTIR_CHANNEL_TS_39	-	-
318.0	FTIR_CHANNEL_DRY_39	NO	-
319.0	FTIR_NAME_40	-	-
320.0	FTIR_MW_40	-	-
321.0	FTIR_CHANNEL_40	-	-
322.0	FTIR_CHANNEL_TS_40	-	-
323.0	FTIR_CHANNEL_DRY_40	NO	-
324.0	Legislation Type (1=HDIUT 2=EU H	4.00000	-
325.0	WholeTest_NOx_corr	5.00000	-
326.0	WholeTest_Hum_corr	2.00000	-
327.0	CD_Distance	0.00000	km
328.0	CD_NOx	0.00000	mg/km
329.0	CD_CO	0.00000	mg/km
330.0	CD_CO2	0.00000	g/km

#	Text	Value	Unit
-	----	----	----
331.0	CD_NMHC	0.00000	mg/km
332.0	CD_CH4	0.00000	mg/km
333.0	CD_THC	0.00000	mg/km
334.0	CD_PN	-	#/km
335.0	WLTC_LOW_SPEED_gkm	-	g/km
336.0	WLTC_LOW_SPEED_FAC	1.20000	-
337.0	WLTC_MEDIUM_SPEED_gkm	-	g/km
338.0	WLTC_HIGH_SPEED_gkm	-	g/km
339.0	WLTC_HIGH_SPEED_FAC	1.10000	-
340.0	WLTC_EXTRA_HIGH_SPEED_gkm	-	g/km
341.0	WLTC_EXTRA_HIGH_SPEED_FA	1.05000	-
342.0	TOL_NORMAL_DRIVING	25.00000	%
343.0	TOL_SEVERE_DRIVING	50.00000	%
344.0	Increase Tolerance Nomral Driving	NO	-
345.0	Bin1_min	-	km/h
346.0	Bin2_min	-	km/h
347.0	Bin3_min	-	km/h
348.0	Bin1_max	-	km/h
349.0	Bin2_max	-	km/h
350.0	Bin3_max	-	km/h
351.0	Clear_R0	125.40000	N
352.0	Clear_R1	0.29300	Nh/km
353.0	Clear_R2	0.02795	N*(h/km) ²
354.0	Clear_SMK	1470.00000	kg
355.0	Clear_Rated_Power	140.00000	kW
356.0	Clear_Ref_Velocity	70.00000	km/h
357.0	Clear_Ref_Acc	0.45000	m/s ²
358.0	Clear_Smooth	3.00000	s
359.0	EXTC_From_High_Temp	30.00000	degC
360.0	EXTC_To_High_Temp	35.00000	degC

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Jetta / Independent Vehicle
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NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
361.0	EXTC_From_Low_Temp	-7.00000	degC
362.0	EXTC_To_Low_Temp	0.00000	degC
363.0	Euro 6d or Euro 6d temp	NO	-
364.0	EXTC_From_Altitude	700.00000	m
365.0	EXTC_To_Altitude	1300.00000	m
366.0	EXTC_CORR_FAC	1.60000	
367.0	weight cold start (YES/NO)	NO	-
368.0	precon and soak done (YES/NO)	NO	-
369.0	PATH_PRECON_FILE		
370.0	filter velocity (YES/NO)	NO	-
371.0	filter velocity auto(YES/NO)	NO	-
372.0	Ki_CO		
373.0	Ki_CO2		
374.0	Ki_NOx		
375.0	Ki_FACTOR_CO2 (YES/NO)	NO	-
376.0	Ki_OFFSET_CO2 (YES/NO)	NO	-
377.0	Ki_FACTOR_CO (YES/NO)	NO	-
378.0	Ki_OFFSET_CO (YES/NO)	NO	-
379.0	Ki_FACTOR_NOx (YES/NO)	NO	-
380.0	Ki_OFFSET_NOx (YES/NO)	NO	-
381.0	Ki_OFF (YES/NO)	NO	-
382.0	HD legislations	1.00000	-
383.0	RDE legislations	1.00000	-
384.0	Submission Documents (YES/NO)	NO	-
385.0	General Setup Parameters Text	Mountain	-
386.0	Legislation Setup Parameters Text	Mountain	-
387.0	Trip Info		-
388.0	IN_TIME_REF		-
389.0	Sub-Trip Start: Auto	YES	-
390.0	Sub-Trip Start: Seconds	N/A	s

#	Text	Value	Unit
-	----	----	----
391.0	Sub-Trip End: Auto	YES	-
392.0	Sub-Trip End: Seconds	N/A	s
393.0	Unit System	2.00000	-
394.0	Calculate: PM Emissions	NO	-
395.0	Calculate: PN Emissions	NO	-
396.0	Output: Summary	YES	-
397.0	Output: Emissions	YES	-
398.0	Output: Raw Data	YES	-
399.0	Output: Zero Span	YES	-
400.0	Output: Data Consistency	NO	-
401.0	Output: Window Plots	YES	-
402.0	Fuel Rate ECU vs. EU ISO16183	$y = 10000000000.0000 x - 0.000 R^2=10000000000.000 SEE=$	
403.0	PEMS post processing version	Rel_10_B192	
404.0	Concerto version	480.00000	
405.0	Concerto build	215.00000	
406.0	USERNAME	EFR	

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Jetta / Independent Vehicle
Engine: Gasoline / 1.8L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City
Page: Trip Summary

Start Date: 09/29/2017
Start Time: 10:38:34.0



Trip Duration	6352.00	s	ave THC	-0.60166	ppm	BS CO2	n/a	g/hphr
Trip Duration (a)	6352.00	s	ave NMHC	0.70980	ppm	BS CO	n/a	g/hphr
Trip Distance	15.71	mi	ave CH4	-1.19223	ppm	BS THC	n/a	g/hphr
Trip Distance (a)	15.71	mi	ave CO	151.81321	ppm	BS NMHC	n/a	g/hphr
Trip Fuel Cons. (b)	n/a	kg	ave CO2	12.83521	%	BS CH4	n/a	g/hphr
Trip Fuel Cons. (ab)	n/a	kg	ave NOx	2.56127	ppm	BS NO (d)	n/a	g/hphr
Trip Fuel Cons. EU (ac)	3.29	kg	ave PM	n/a	mg/m3	BS NO2	n/a	g/hphr
Trip Fuel Cons. US (ac)	3.26	kg	ave Soot meas	n/a	mg/m3	BS NOx	n/a	g/hphr
Trip Fuel Cons. Volume (b)	n/a	gall	ave Soot	n/a	mg/m3	BS Soot	n/a	g/hphr
Trip Fuel Cons. Volume (ab)	n/a	gall	ave PN	n/a	#/cm3	BS Soot meas	n/a	g/hphr
Trip Fuel Cons. Volume EU (ac)	1.16	gall	tot THC	0.02552	g	BS PM	n/a	g/hphr
Trip Fuel Cons. Volume US (ac)	1.15	gall	tot NMHC	0.02189	g	BS PN	n/a	#/hpr
Trip Fuel Economy (b)	n/a	mpg_US	tot CH4	0.02256	g	DS CO2	630.26185	g/mi
Trip Fuel Economy (ab)	n/a	mpg_US	tot CO	6.99050	g	DS CO	0.44504	g/mi
Trip Fuel Economy EU (ac)	13.53	mpg_US	tot CO2	9899.88108	g	DS THC	0.00162	g/mi
Trip Fuel Economy US (ac)	13.65	mpg_US	tot NO (d)	0.12022	g	DS NMHC	0.00139	g/mi
Trip Av. Eng. Speed	1073.44	rpm	tot NO2	0.10362	g	DS CH4	0.00144	g/mi
Trip Av. Torque	n/a	lbft	tot NOx	0.22104	g	DS NO (d)	0.00765	g/mi
Trip Av. Power	n/a	hp	tot Soot	n/a	g	DS NO2	0.00660	g/mi
Trip Work	n/a	hphr	tot Soot meas	n/a	g	DS NOx	0.01407	g/mi
Trip Exhaust Mass	51.01	kg	tot PM	n/a	g	DS Soot	n/a	g/mi
Trip Exhaust Mass EU (ac)	n/a	kg	tot PN	n/a	#	DS Soot meas	n/a	g/mi
Trip Exhaust Mass US (ac)	n/a	kg	PM measurement type	0.00000	-	DS PM	n/a	g/mi
Trip Av. Amb. Temperature	88.22	deg_F	PM correction type	1.00000	alpha(HC)	DS PN	n/a	#/mi
Trip Av. Humidity	33.87	%	tot Soot on PM filter (estim.)	n/a	mg	FS CO2	n/a	g/kg
Fuel Type	Petrol (E10)		Soot --> PM simple scaling factor	1.00000	-	FS CO	n/a	g/kg
			Soot --> PM alpha scaling factor	0.00000	-	FS THC	n/a	g/kg
			Trip Av. Veh. Speed	8.90227	mi/hr	FS NMHC	n/a	g/kg
			Trip Velocity Zero	33.17065	%	FS CH4	n/a	g/kg
			Trip Velocity Urban	97.26071	%	FS NO (d)	n/a	g/kg
			Trip Velocity Rural	2.73929	%	FS NO2	n/a	g/kg
			Trip Velocity Motorway	0.00000	%	FS NOx	n/a	g/kg
						FS Soot	n/a	g/kg
						FS Soot meas	n/a	g/kg
						FS PM	n/a	g/kg
						FS PN	n/a	#/kg

(a) GAS PEMS measurement state only, (b) based on fuel rate input (ECU, Fuel Meter), (c) calculated from carbon balance
(d) NO calculated using molecular weight of NO2

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Jetta / Independent Vehicle
Engine: Gasoline / 1.8L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Trip Summary Drift Corrected

Start Date: 09/29/2017

Start Time: 10:38:34.0

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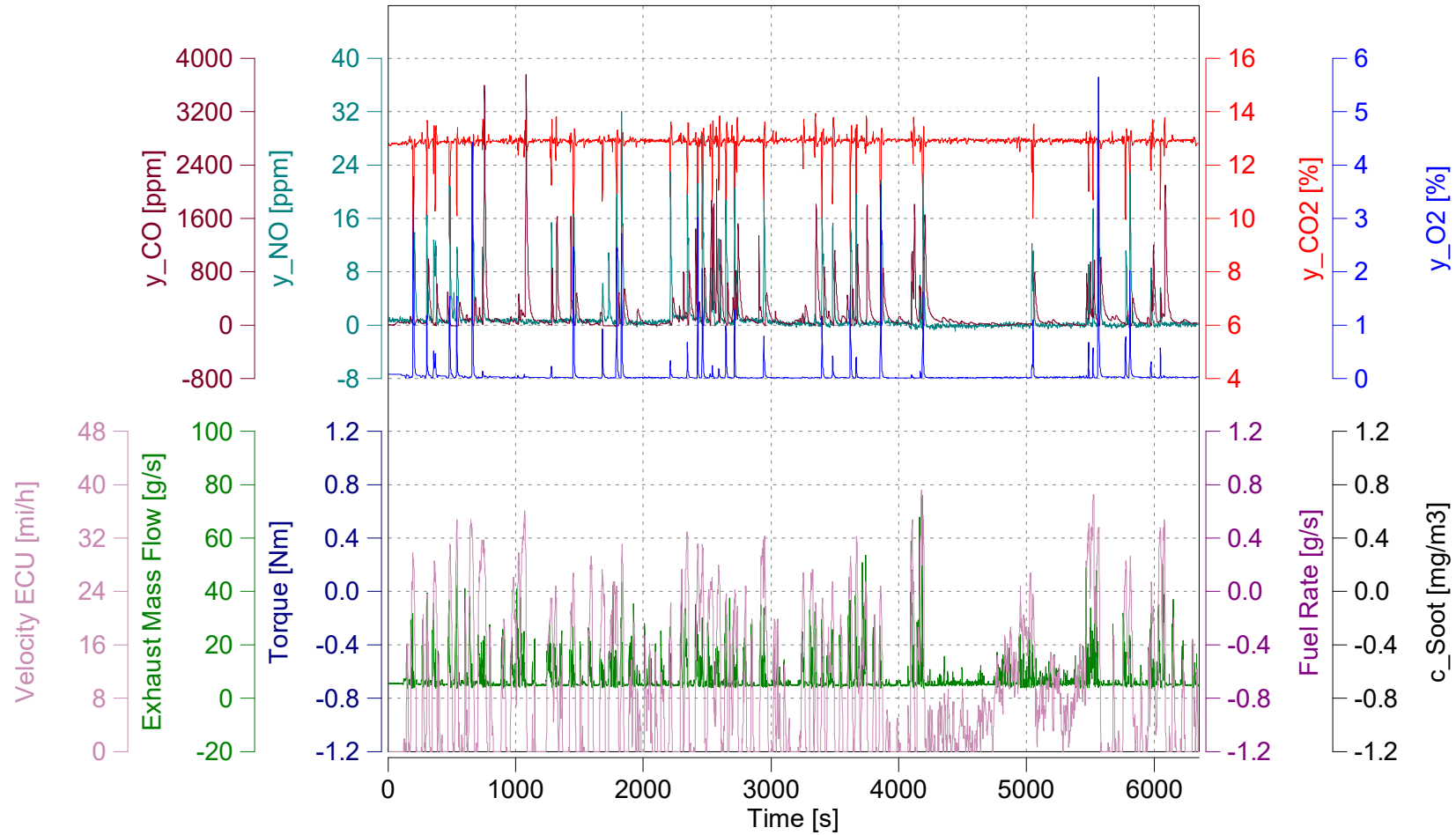
Concerto M.O.V.E, 2017

Trip Duration	6352.00	s	ave THC DC	-0.81678	ppm	BS CO2 DC	n/a	g/hphr
Trip Duration (a)	6352.00	s	ave NMHC DC	0.28900	ppm	BS CO DC	n/a	g/hphr
Trip Distance	15.71	mi	ave CH4 DC	-1.00525	ppm	BS THC DC	n/a	g/hphr
Trip Distance (a)	15.71	mi	ave CO DC	153.04753	ppm	BS NMHC DC	n/a	g/hphr
Trip Fuel Cons. (b)	n/a	kg	ave CO2 DC	12.83096	%	BS CH4 DC	n/a	g/hphr
Trip Fuel Cons. (ab)	n/a	kg	ave NOx DC	2.55689	ppm	BS NO DC (d)	n/a	g/hphr
Trip Fuel Cons. EU (ac)	3.29	kg	ave PM	n/a	mg/m3	BS NO2 DC	n/a	g/hphr
Trip Fuel Cons. US (ac)	3.26	kg	ave Soot meas	n/a	mg/m3	BS NOx DC	n/a	g/hphr
Trip Fuel Cons. Volume (b)	n/a	gall	ave Soot	n/a	mg/m3	BS Soot	n/a	g/hphr
Trip Fuel Cons. Volume (ab)	n/a	gall	ave PN DC	n/a	#/cm3	BS Soot meas	n/a	g/hphr
Trip Fuel Cons. Volume EU (ac)	1.16	gall	tot THC DC	0.03465	g	BS PM	n/a	g/hphr
Trip Fuel Cons. Volume US (ac)	1.15	gall	tot NMHC DC	0.01486	g	BS PN DC	n/a	#/hpr
Trip Fuel Economy (b)	n/a	mpg_US	tot CH4 DC	0.02406	g	DS CO2 DC	630.05294	g/mi
Trip Fuel Economy (ab)	n/a	mpg_US	tot CO DC	7.04733	g	DS CO DC	0.44866	g/mi
Trip Fuel Economy EU (ac)	13.53	mpg_US	tot CO2 DC	9896.59972	g	DS THC DC	0.00221	g/mi
Trip Fuel Economy US (ac)	13.65	mpg_US	tot NO DC (d)	0.12020	g	DS NMHC DC	0.00095	g/mi
Trip Av. Eng. Speed	1073.44	rpm	tot NO2 DC	0.10328	g	DS CH4 DC	0.00153	g/mi
Trip Av. Torque	n/a	lbft	tot NOx DC	0.22069	g	DS NO DC (d)	0.00765	g/mi
Trip Av. Power	n/a	hp	tot Soot	n/a	g	DS NO2 DC	0.00658	g/mi
Trip Work	n/a	hphr	tot Soot meas	n/a	g	DS NOx DC	0.01405	g/mi
Trip Exhaust Mass	51.01	kg	tot PM	n/a	g	DS Soot	n/a	g/mi
Trip Exhaust Mass EU (ac)	n/a	kg	tot PN DC	n/a	#	DS Soot meas	n/a	g/mi
Trip Exhaust Mass US (ac)	n/a	kg	PM measurement type	0.00000	-	DS PM	n/a	g/mi
Trip Av. Amb. Temperature	88.22	deg_F	PM correction type	1.00000	alpha(HC)	DS PN DC	n/a	#/mi
Trip Av. Humidity	33.87	%	tot Soot on PM filter (estim.)	n/a	mg	FS CO2 DC	n/a	g/kg
Fuel Type	Petrol (E10)		Soot --> PM simple scaling factor	1.00000	-	FS CO DC	n/a	g/kg
			Soot --> PM alpha scaling factor	0.00000	-	FS THC DC	n/a	g/kg
			Trip Av. Veh. Speed	8.90227	mi/hr	FS NMHC DC	n/a	g/kg
			Trip Velocity Zero	33.17065	%	FS CH4 DC	n/a	g/kg
			Trip Velocity Urban	97.26071	%	FS NO DC (d)	n/a	g/kg
			Trip Velocity Rural	2.73929	%	FS NO2 DC	n/a	g/kg
			Trip Velocity Motorway	0.00000	%	FS NOx DC	n/a	g/kg
						FS Soot	n/a	g/kg
						FS Soot meas	n/a	g/kg
						FS PM	n/a	g/kg
						FS PN DC	n/a	#/kg

(a) GAS PEMS measurement state only, (b) based on fuel rate input (ECU, Fuel Meter), (c) calculated from carbon balance
 (d) NO calculated using molecular weight of NO2

Concerto Version: 480 Build 215, Serial Number: 8468
 M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Jetta / Independent Vehicle
 Engine: Gasoline / 1.8L
 NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
 Dry / Wet Corr.: 2 - CFR40 §86.1342-90



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

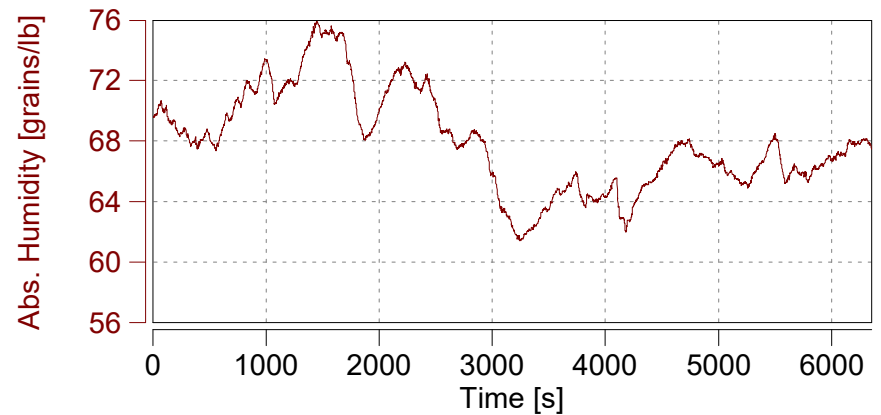
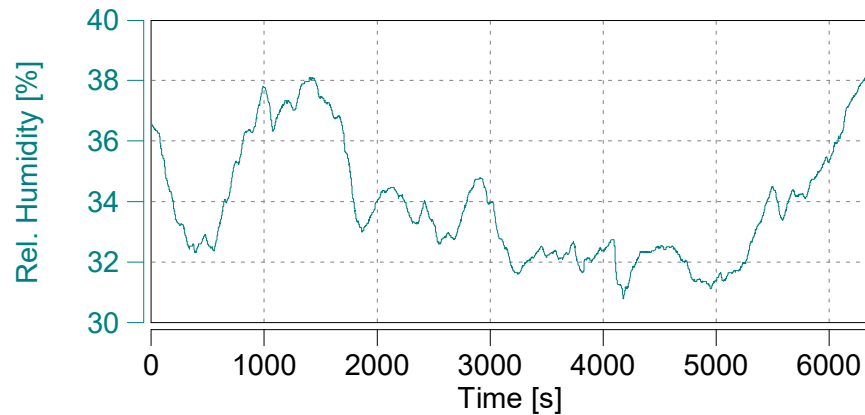
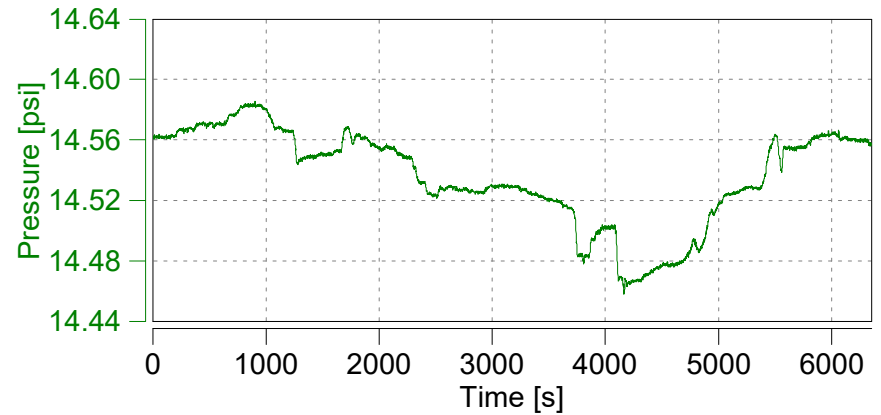
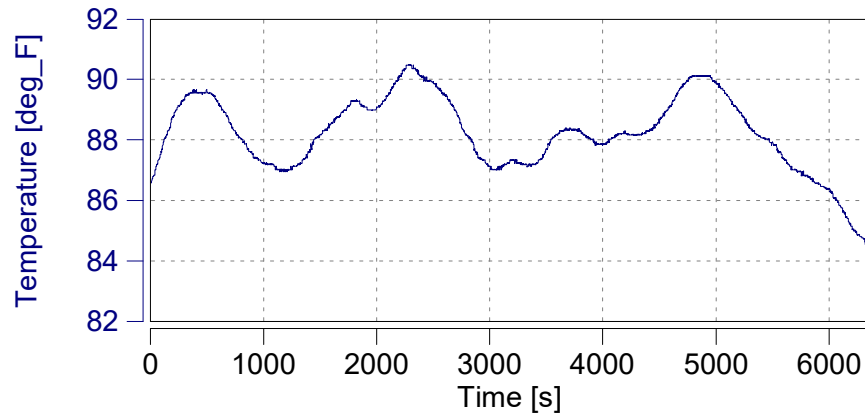
Vehicle: 2017 VW Jetta / Independent Vehicle
Engine: Gasoline / 1.8L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Ambient Conditions

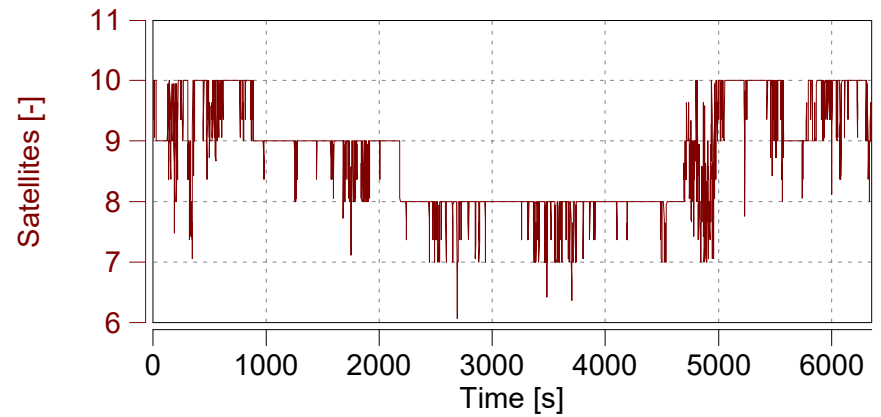
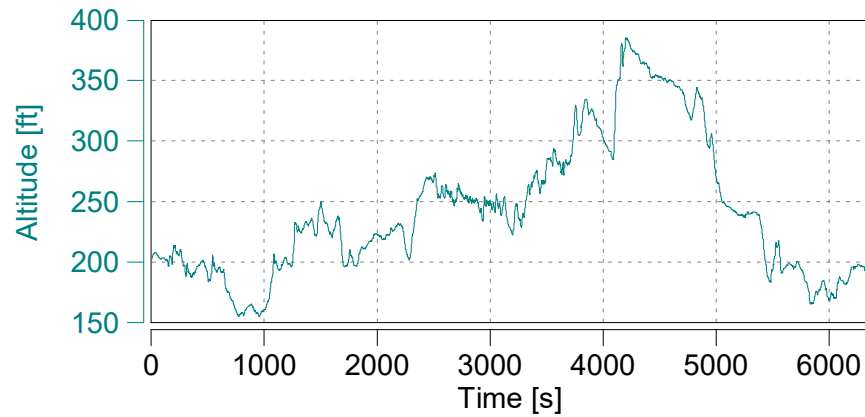
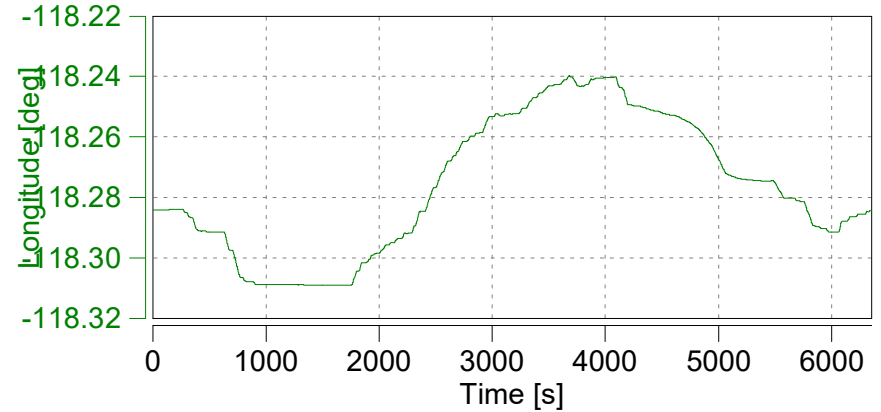
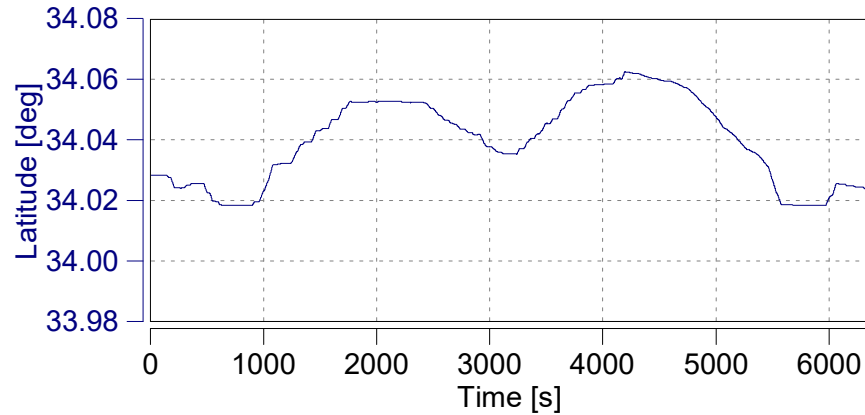
Start Date: 09/29/2017

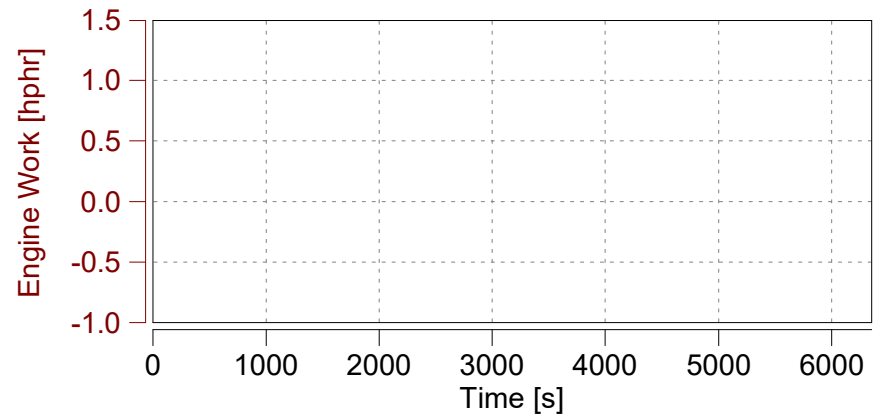
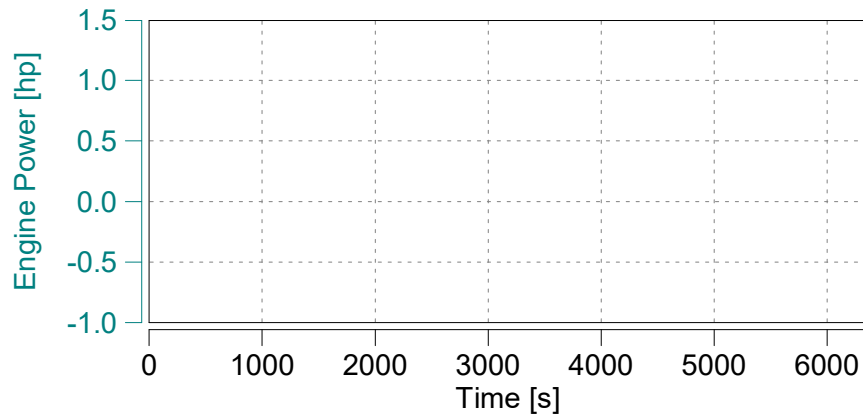
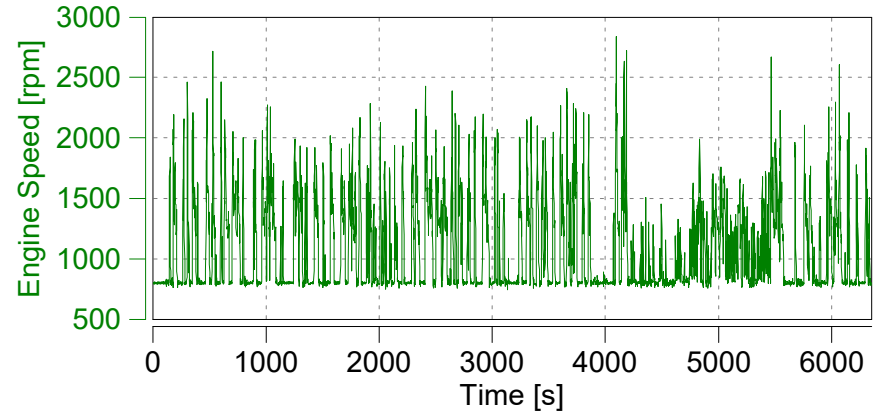
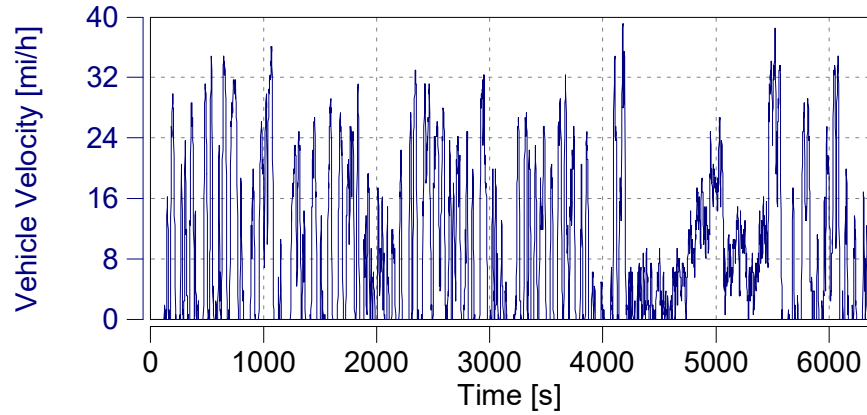
Start Time: 10:38:34.0

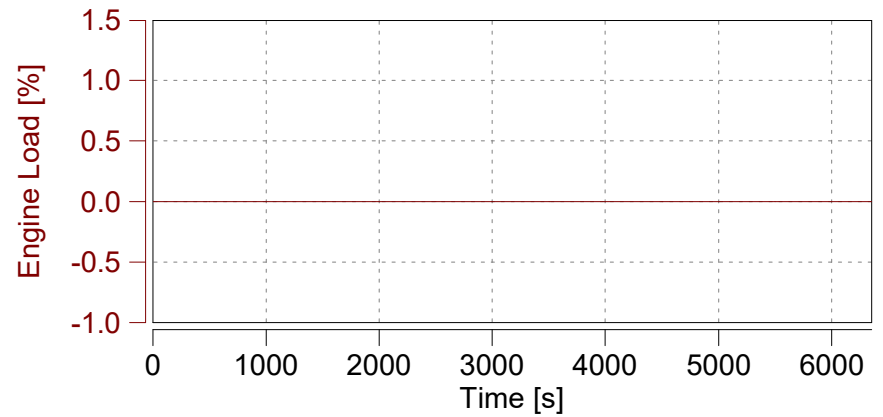
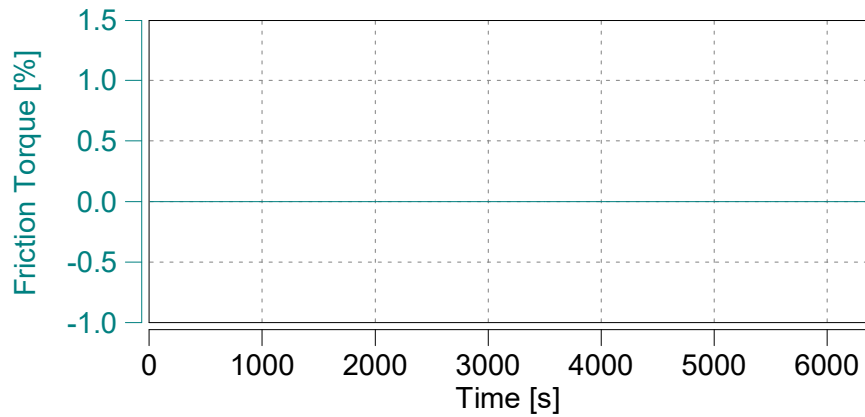
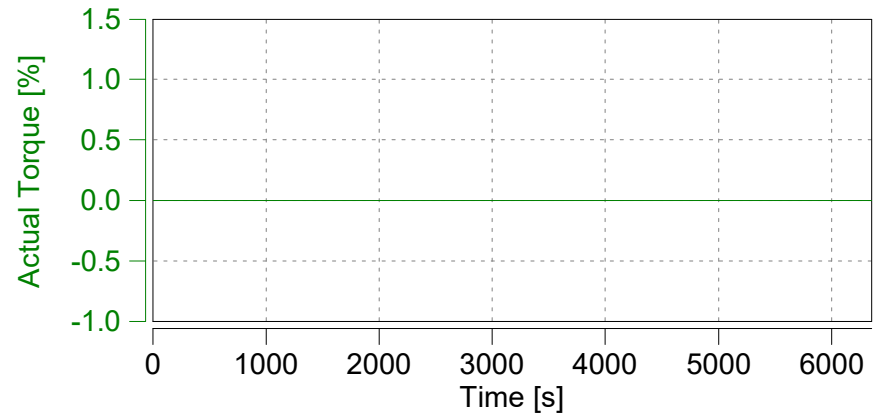
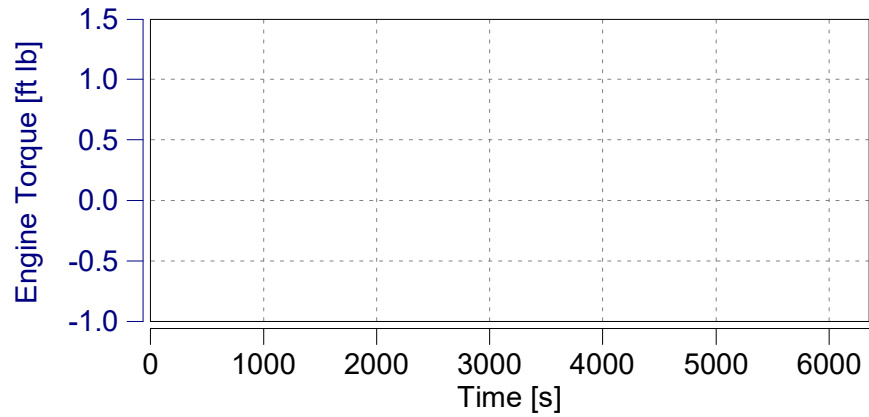


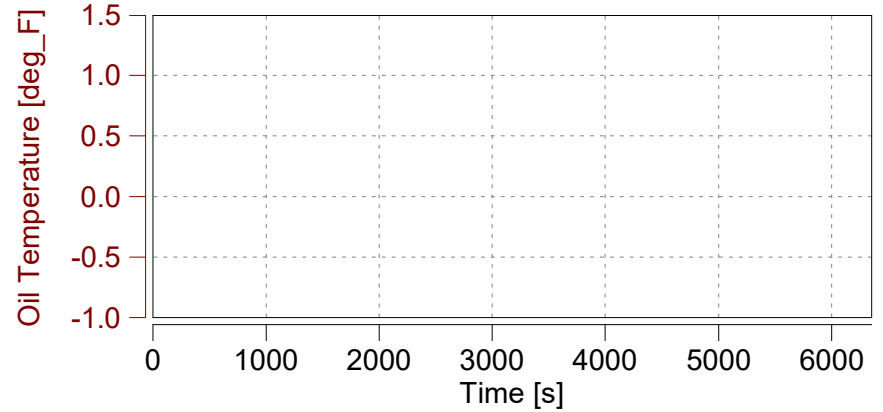
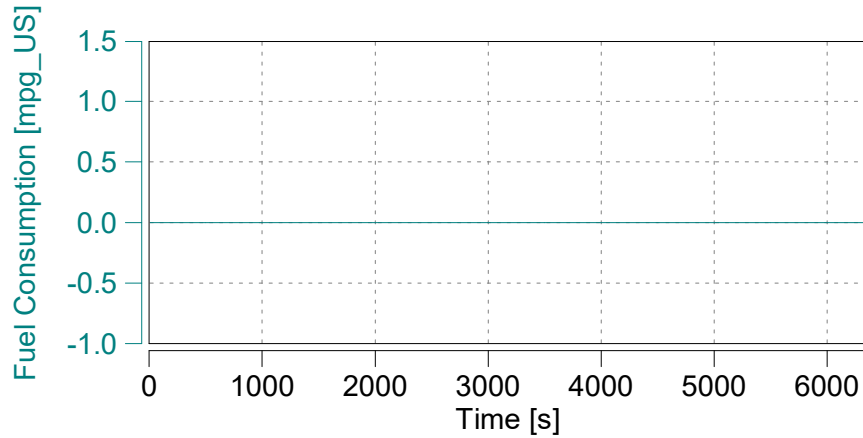
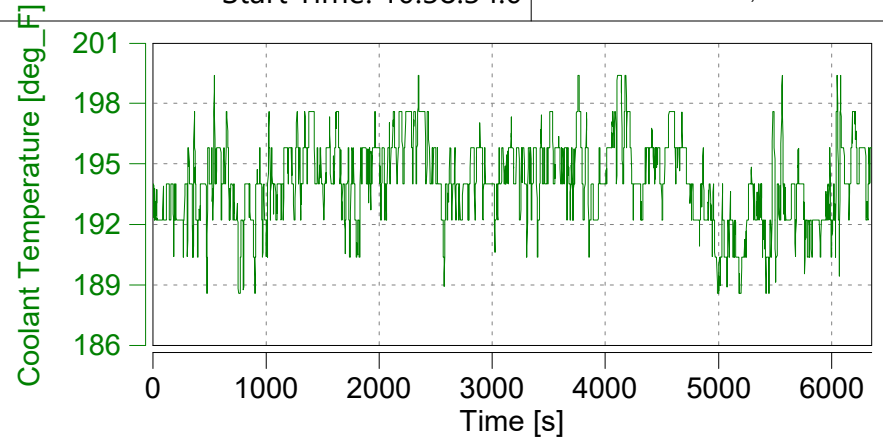
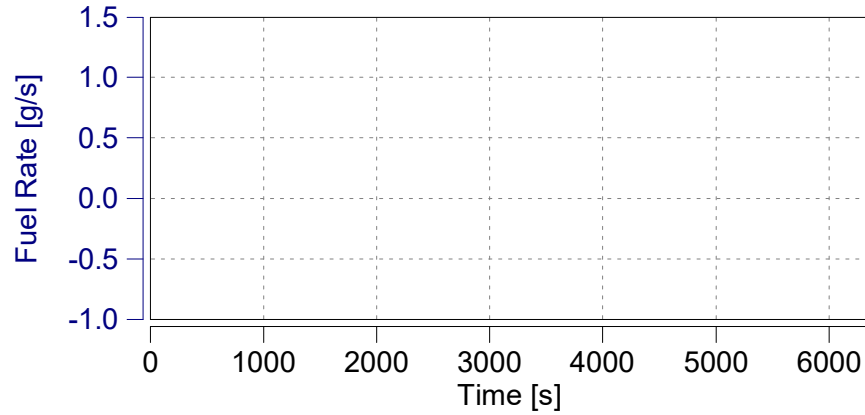
Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Jetta / Independent Vehicle
Engine: Gasoline / 1.8L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90







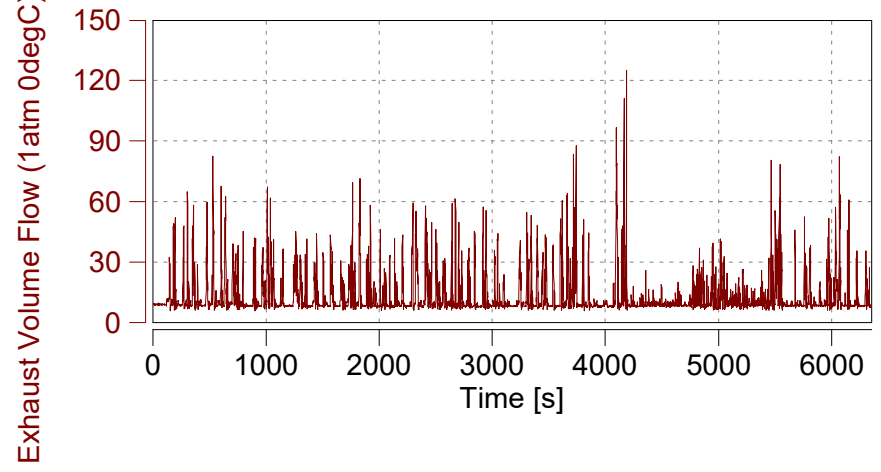
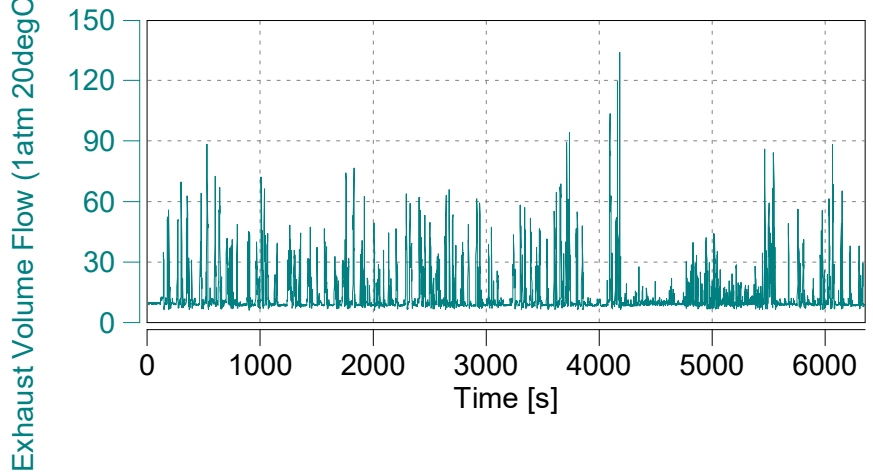
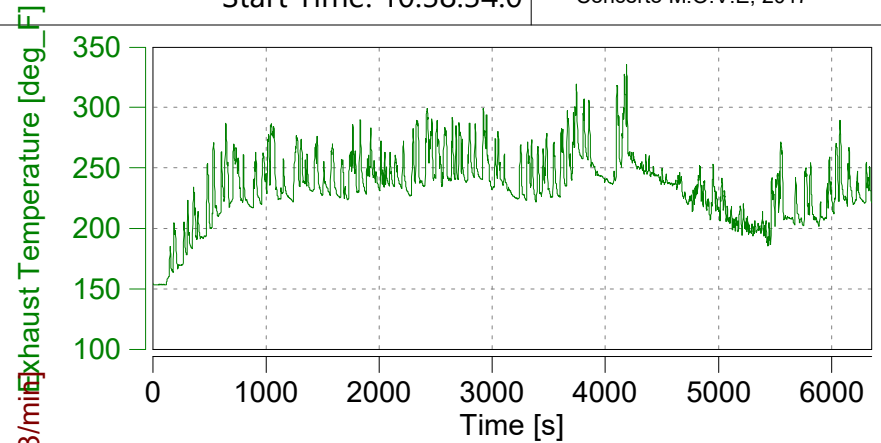
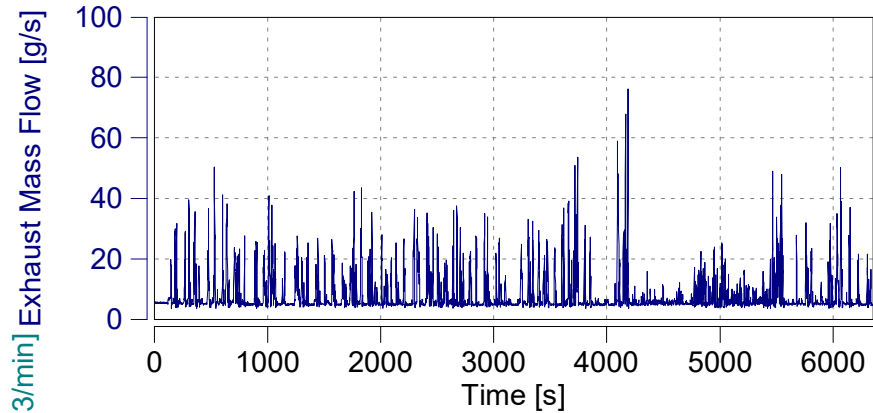


Case: City

Page: Exhaust Flow (1)

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Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

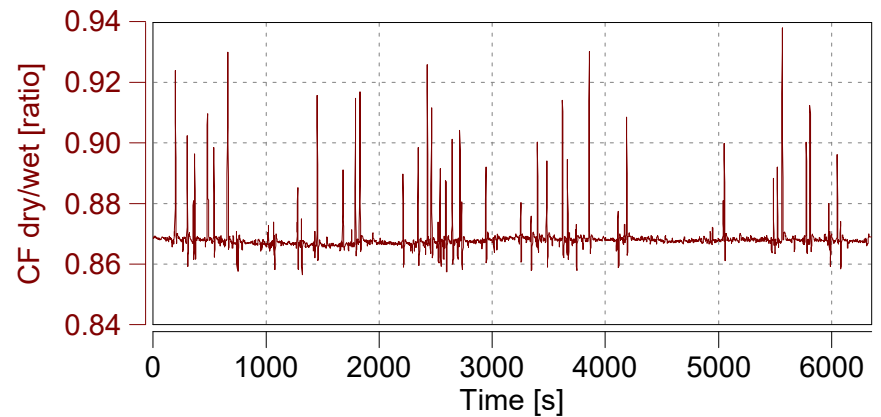
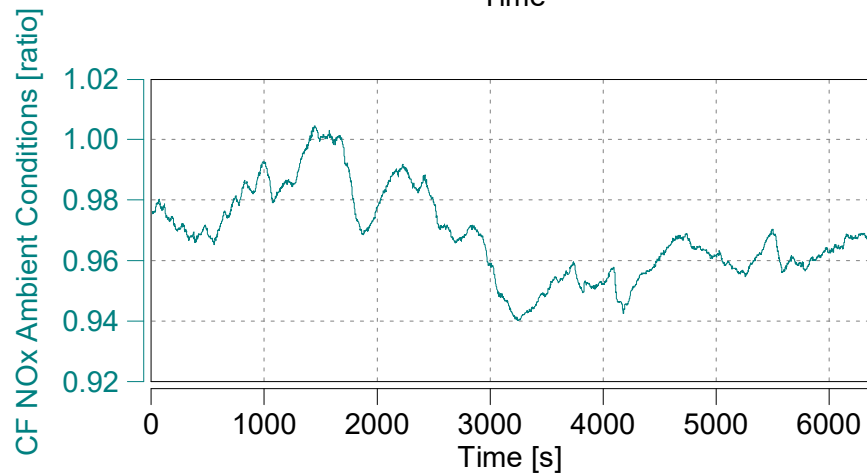
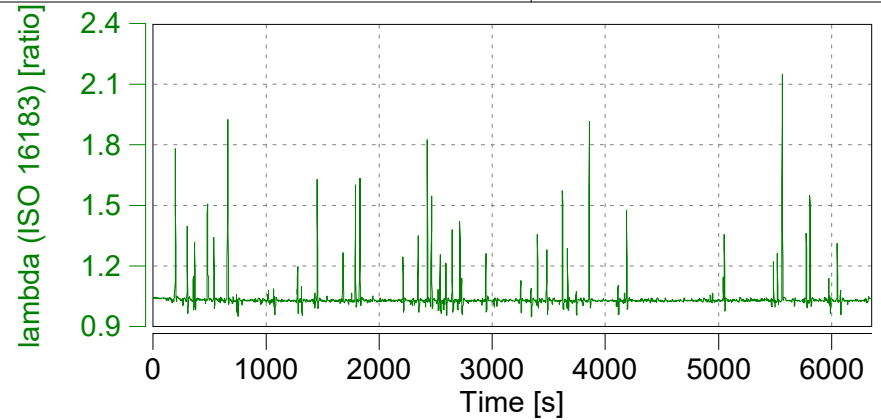
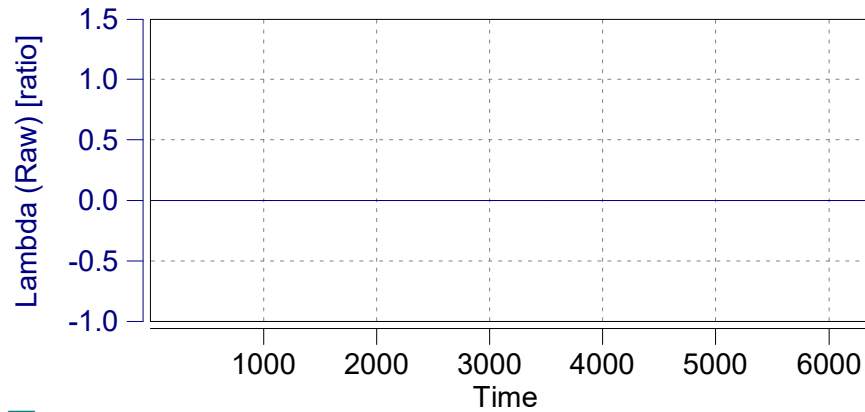
Vehicle: 2017 VW Jetta / Independent Vehicle
Engine: Gasoline / 1.8L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

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Start Date: 09/29/2017

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Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

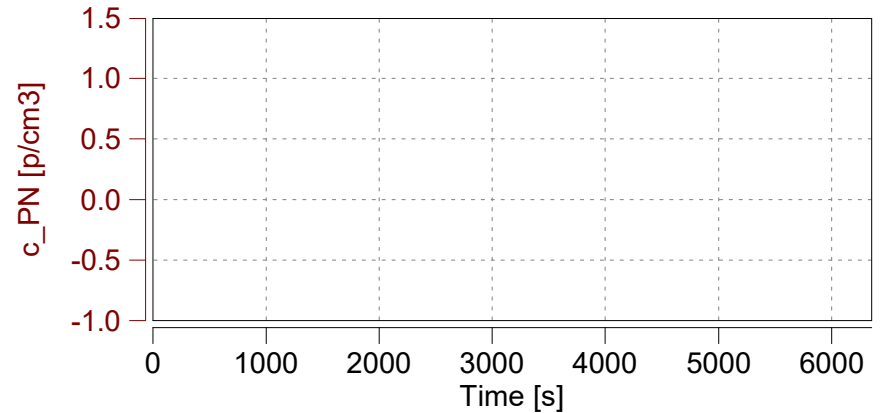
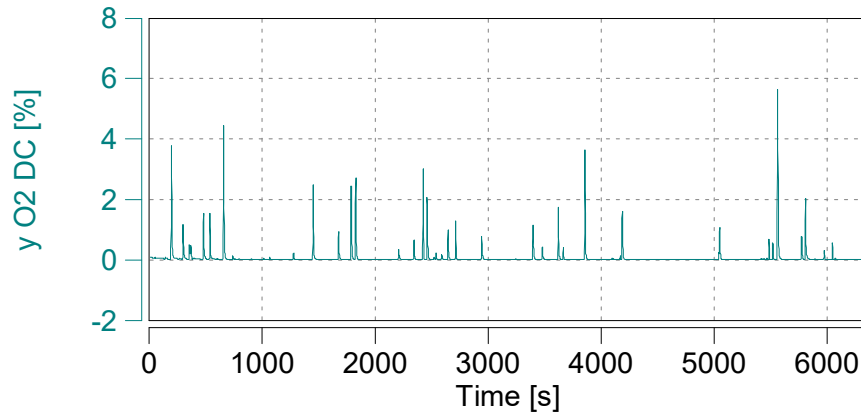
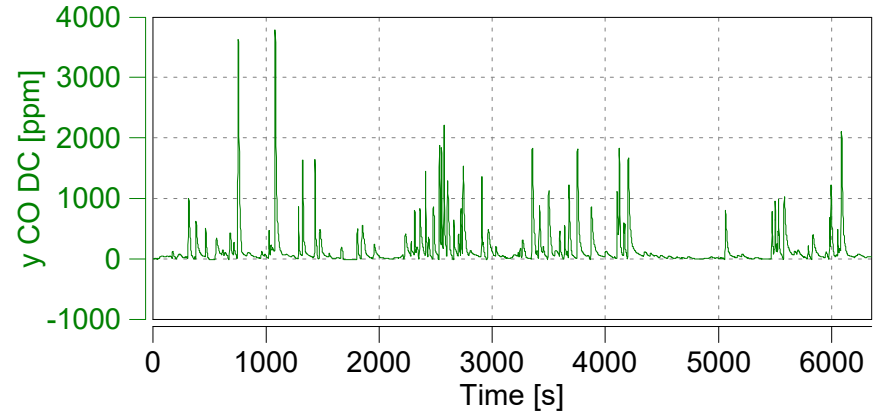
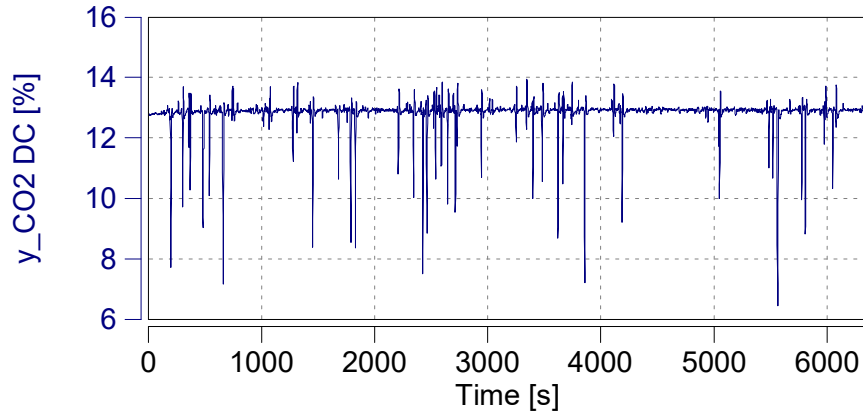
Vehicle: 2017 VW Jetta / Independent Vehicle
Engine: Gasoline / 1.8L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

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Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

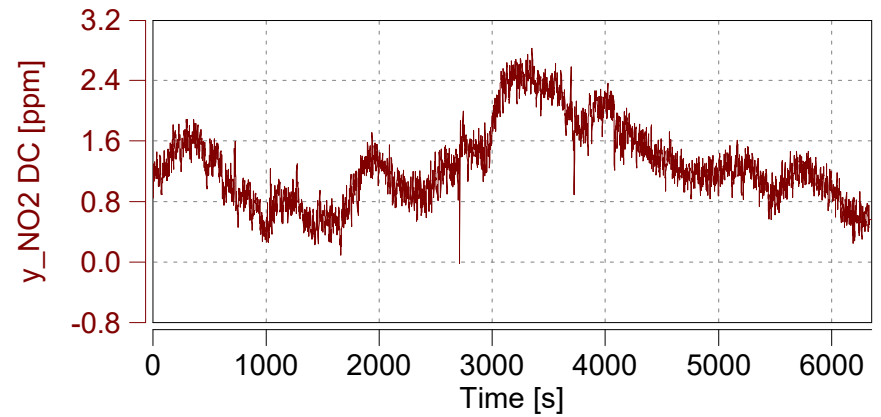
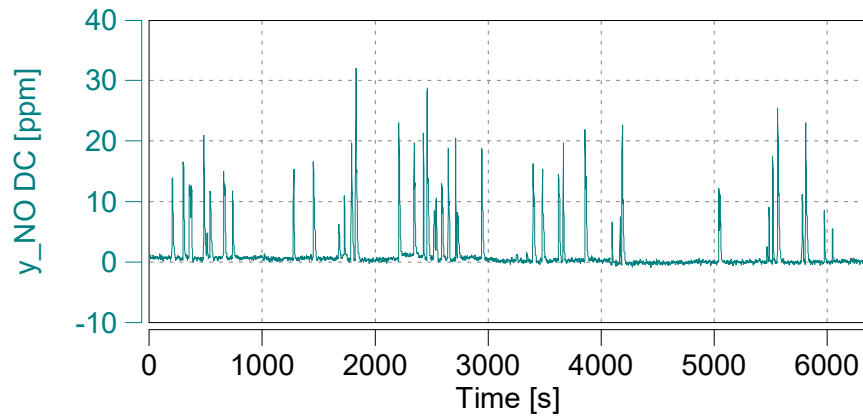
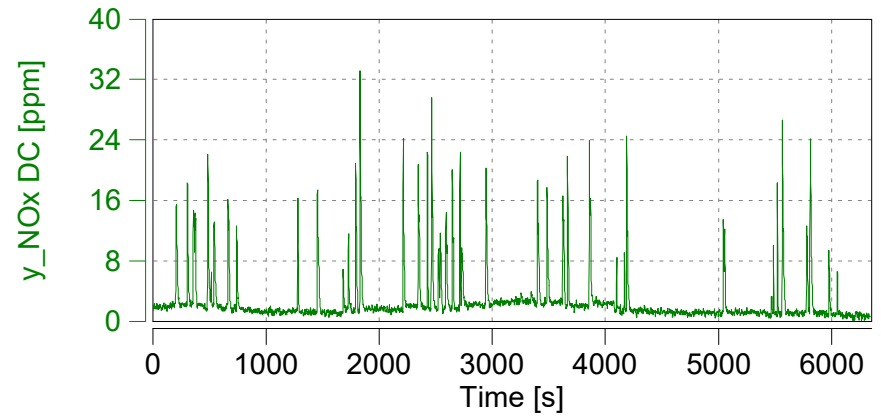
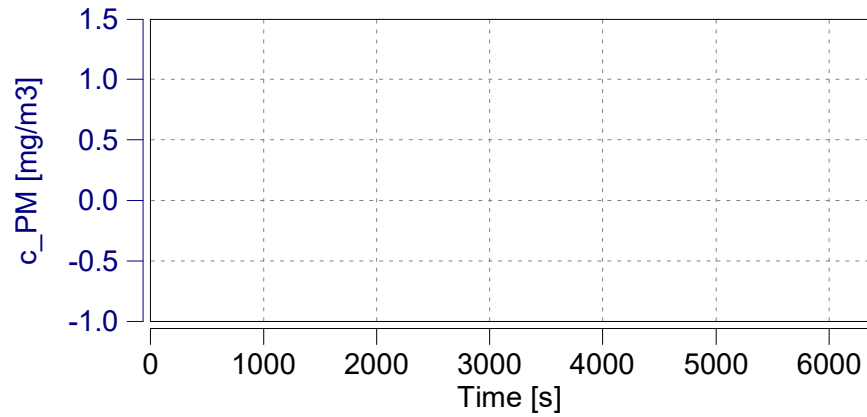
Vehicle: 2017 VW Jetta / Independent Vehicle
Engine: Gasoline / 1.8L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

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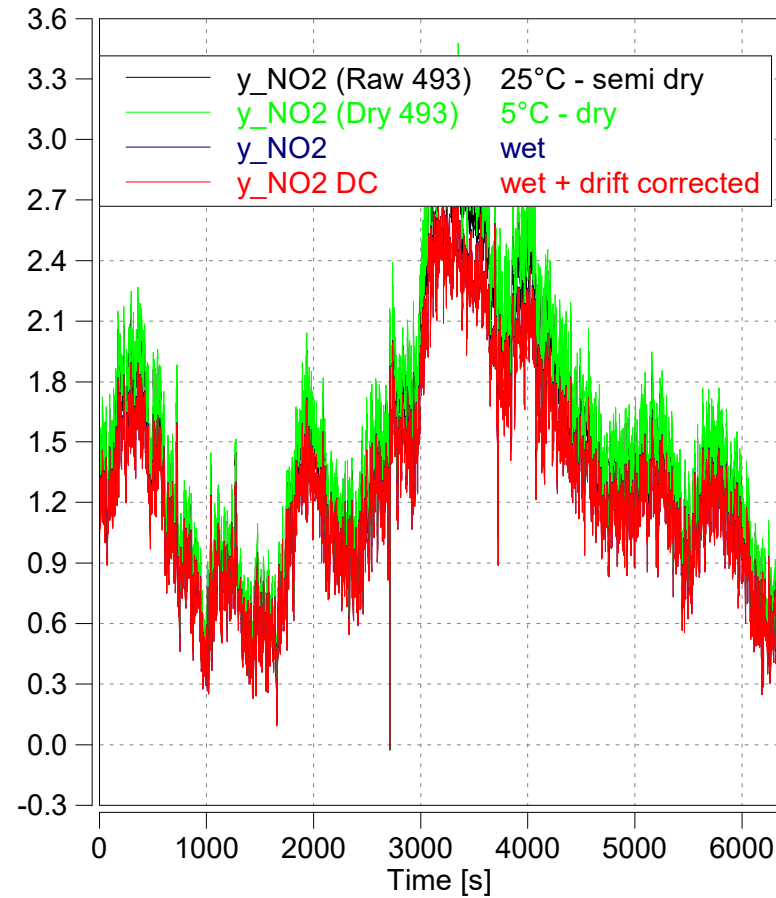
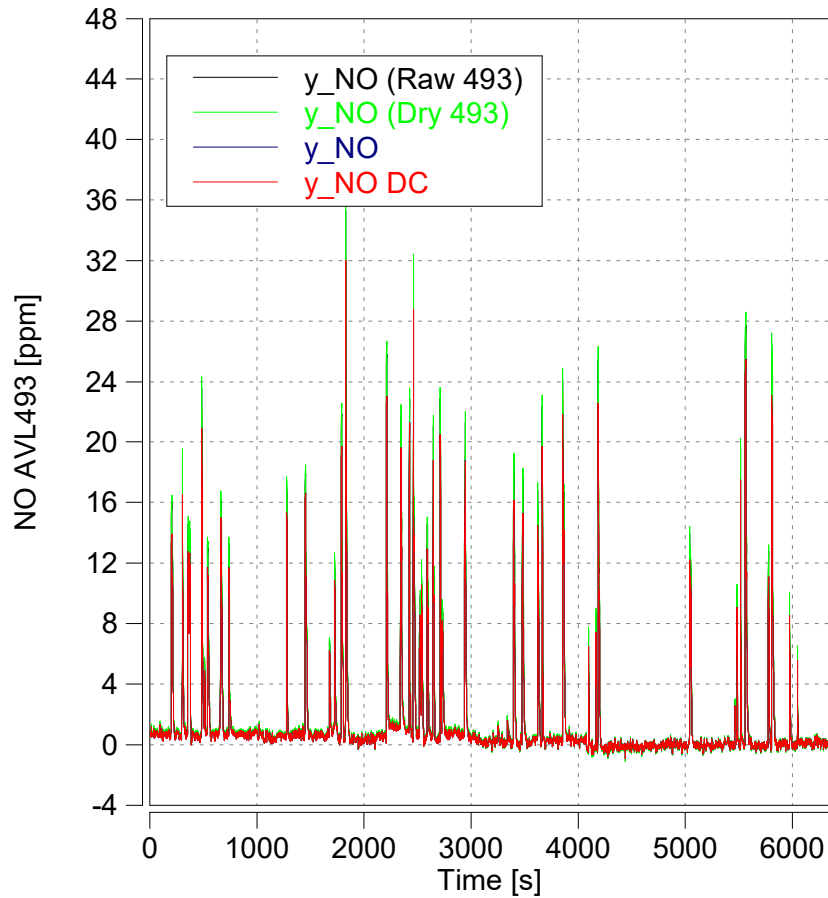
Start Date: 09/29/2017

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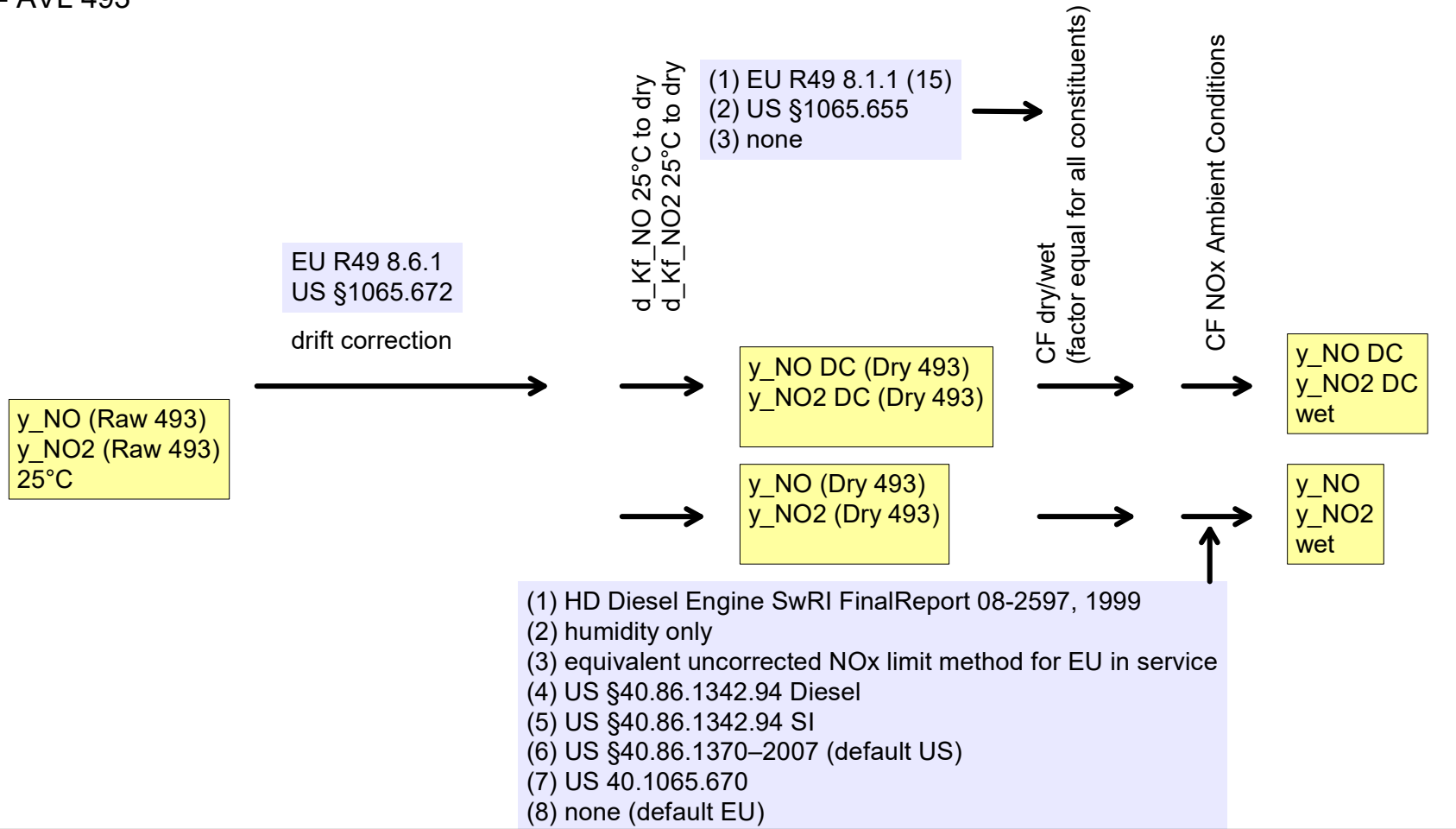


Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Jetta / Independent Vehicle
Engine: Gasoline / 1.8L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90



NOx - AVL 493

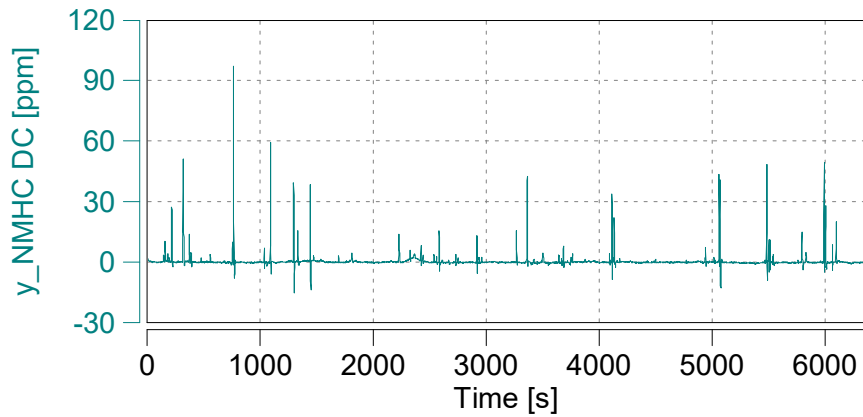
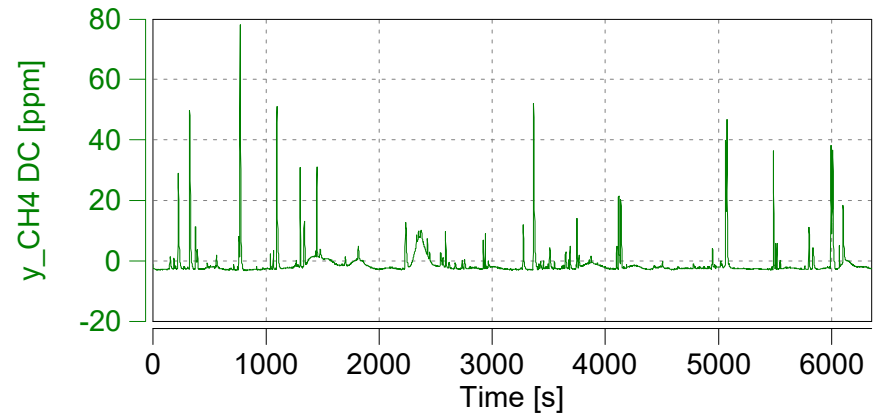
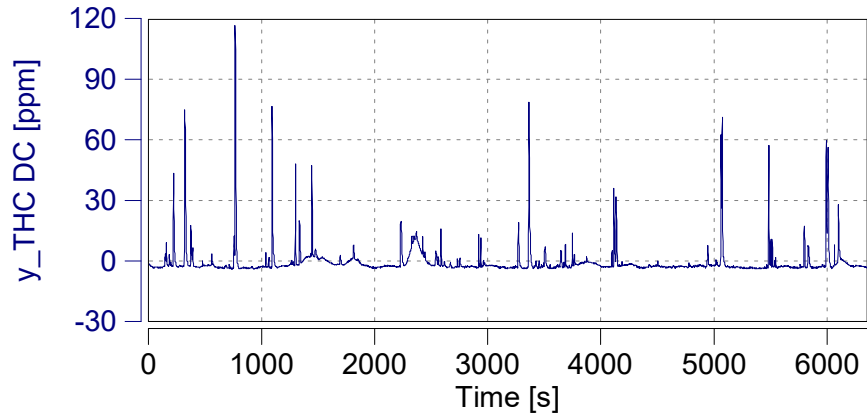


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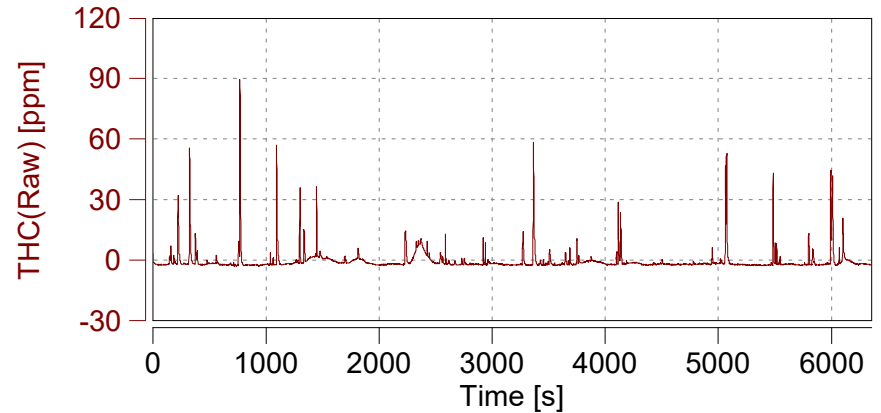
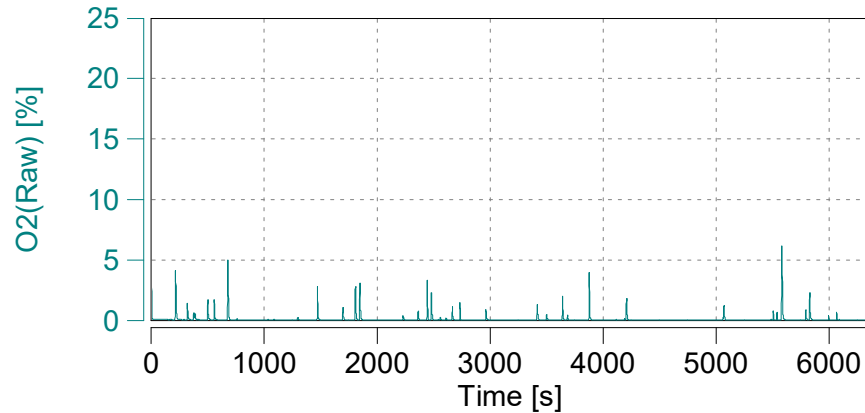
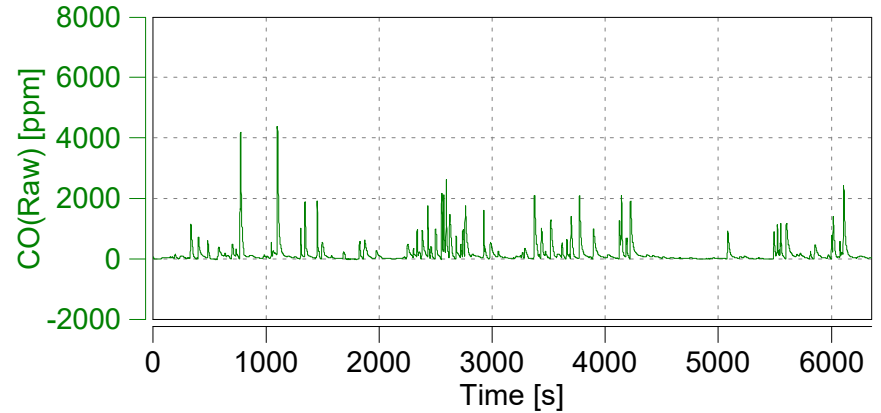
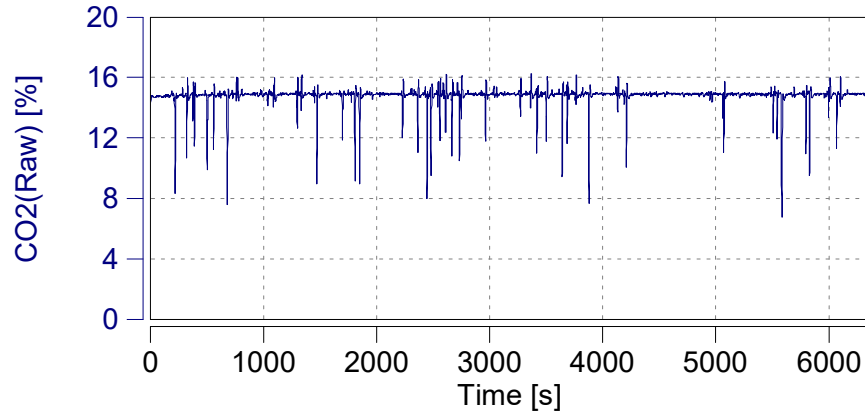
Vehicle: 2017 VW Jetta / Independent Vehicle
Engine: Gasoline / 1.8L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

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Concerto Version: 480 Build 215, Serial Number: 8468
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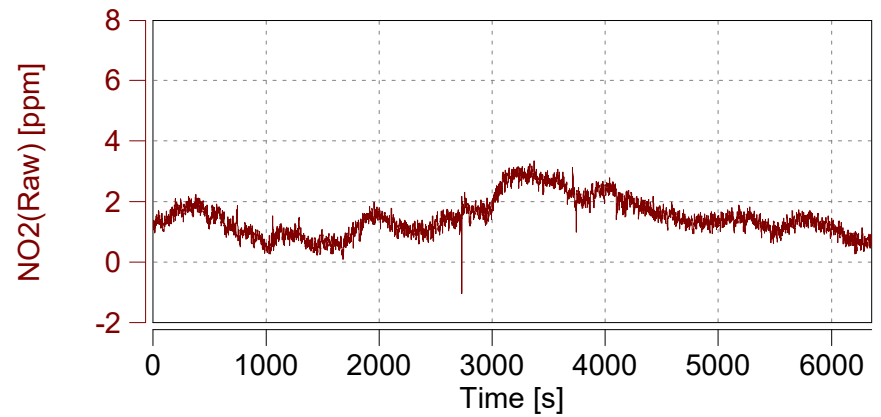
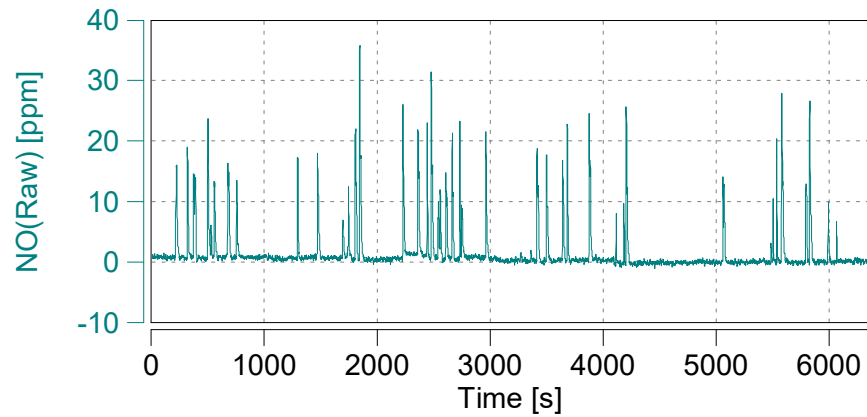
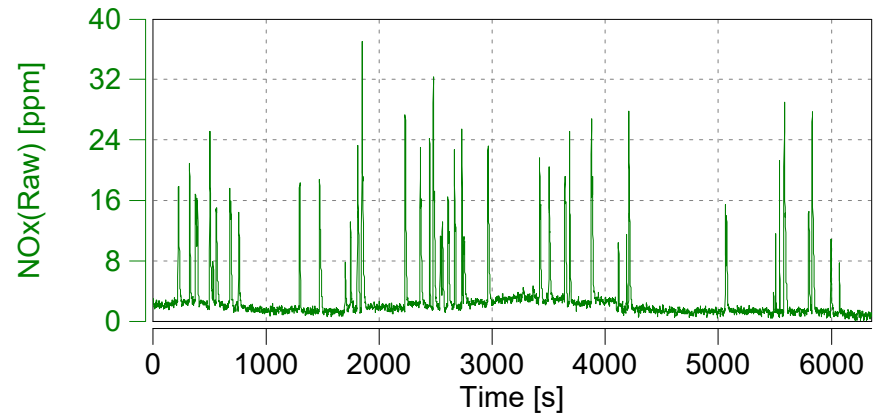
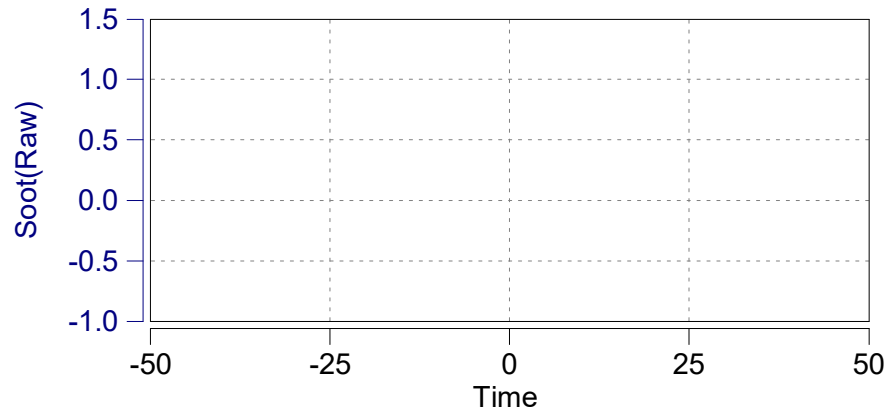
Vehicle: 2017 VW Jetta / Independent Vehicle
Engine: Gasoline / 1.8L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Emissions Raw Data (2)

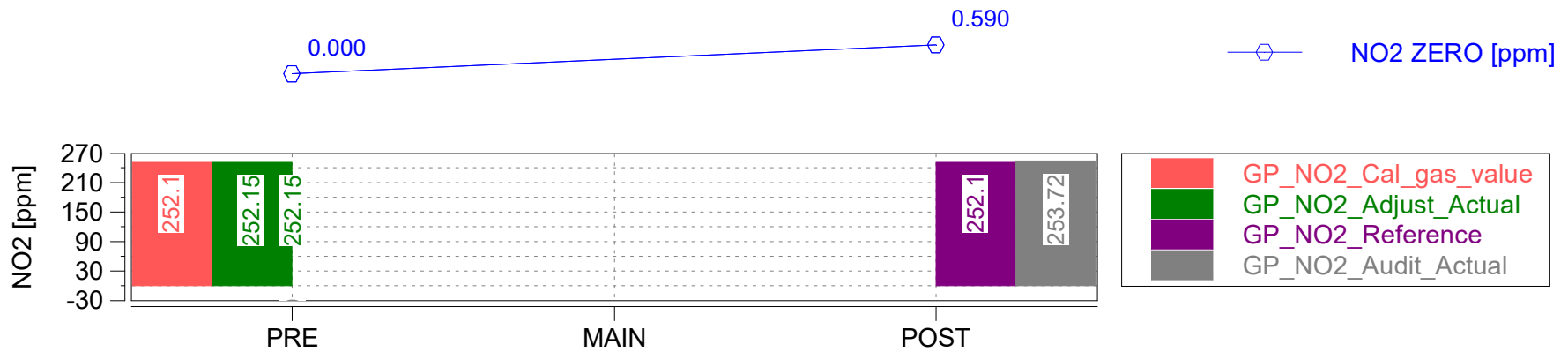
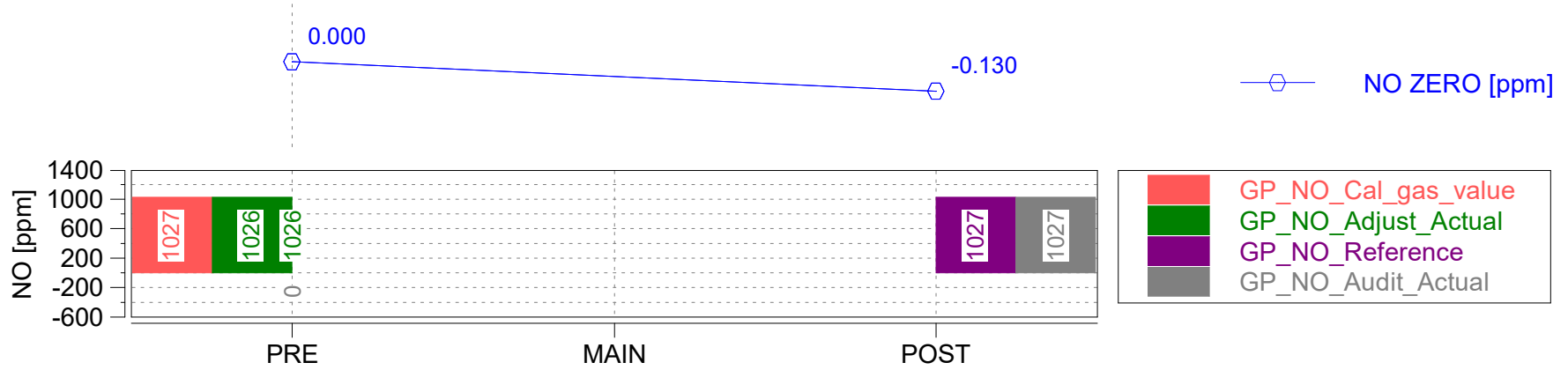
Start Date: 09/29/2017

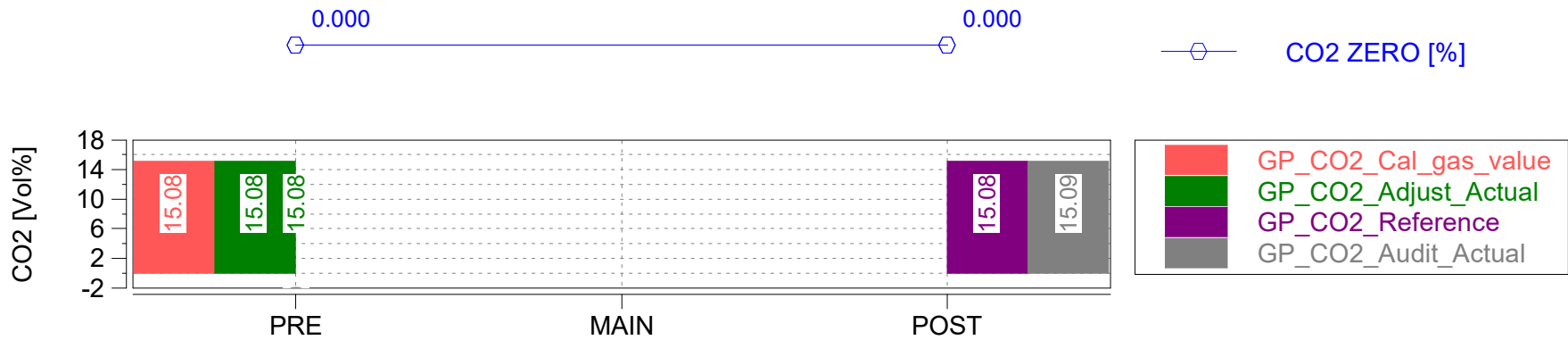
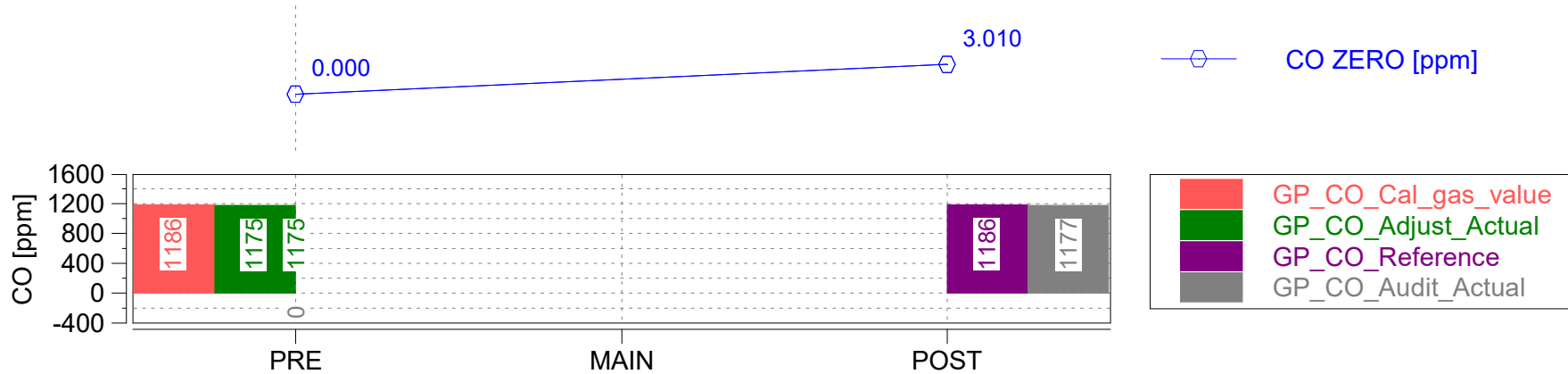
Start Time: 10:38:34.0

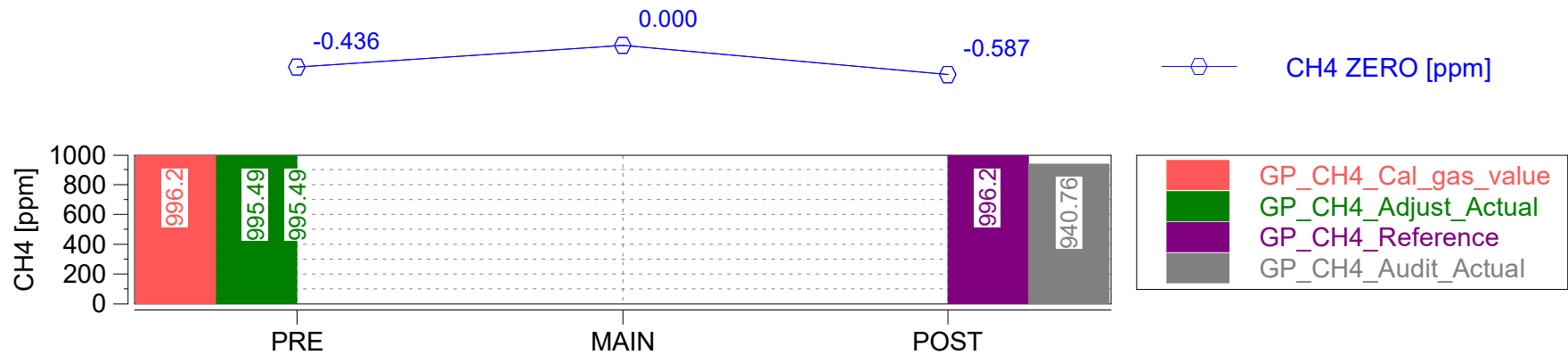
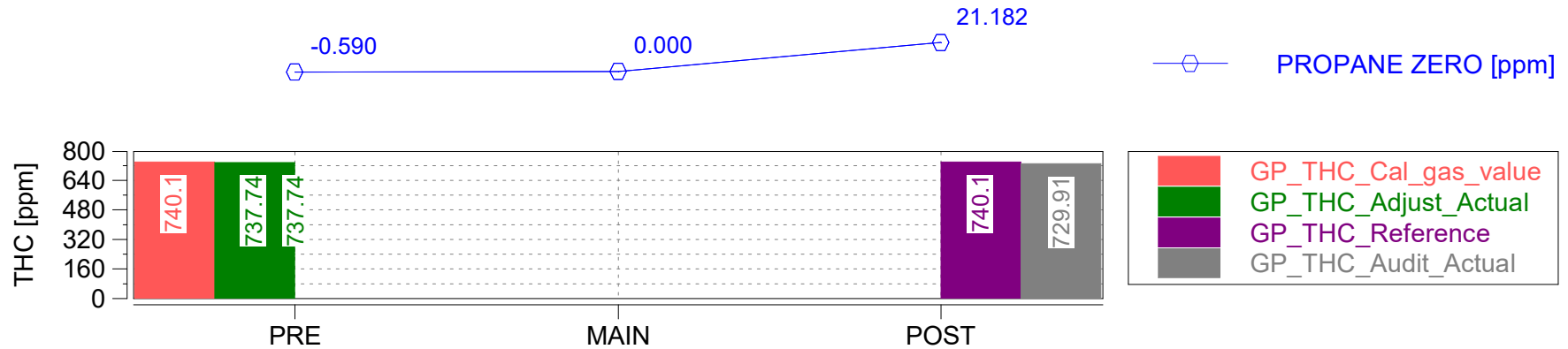


Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Jetta / Independent Vehicle
Engine: Gasoline / 1.8L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90







#	Text	Value	Unit
-	----	----	----
1.0	Test Start: Date	-	-
2.0	Test Start: Time	-	-
3.0	Ambient Temperature	IFILE1:TM'Temperature	deg C
4.0	Ambient Temperature TS	0.00000	s
5.0	Ambient Pressure	IFILE1:TM'Pressure	kPa
6.0	Ambient Pressure TS	0.00000	s
7.0	Humidity Type	1.00000	-
8.0	Amb. Rel. Humidity	IFILE1:TM'Humidity	%
9.0	Amb. Rel. Humidity	0.00000	s
10.0	GPS Latitude		deg
11.0	GPS Latitude TS	0.00000	s
12.0	GPS Longitude		deg
13.0	GPS Longitude TS	0.00000	s
14.0	Altitude		m
15.0	Altitude TS	0.00000	s
16.0	GPS Quality		-
17.0	GPS Quality TS	0.00000	s
18.0	GroundSpeed		km/h
19.0	GroundSpeed TS	0.00000	s
20.0	Altitude from topographical map		m
21.0	Altitude TS of topographical map		s
22.0	TRIP_AMBIENT_GPS_AVL	YES	-
23.0	CALC_GPS_GROUNDSPEED	NO	-
24.0	EXHAUST_FLOW_AVL	NO	-
25.0	EXHAUST_FLOW_AVL_EFM	YES	-
26.0	Exhaust Flow Type	2.00000	-
27.0	Mass Flow	IFILE1:TM'PitotEFM_ExhaustG	various
28.0	Mass Flow TS	1.30000	s
29.0	Exhaust Pressure		kPa
30.0	Exhaust Pressure TS	1.30000	s

#	Text	Value	Unit
-	----	----	----
31.0	Exhaust Delta Pressure		kPa
32.0	Exhaust Pressure Delta TS	1.30000	s
33.0	Exhaust Temperature	IFILE1:TM'PitotEFM_ExhaustG	degC
34.0	Exhaust Temperature TS	1.30000	s
35.0	Lambda	N/A	-
36.0	Lambda TS		s
37.0	CO2_DIL		%
38.0	CO2_DIL TS		s
39.0	CVS Volume Flow		m3/min
40.0	TimeShift_CVS_VOL_FLOW		s
41.0	IN_CVS_PRESSURE		kPa
42.0	TimeShift_CVS_PRESSURE		s
43.0	IN_CVS_TEMP		degC
44.0	TimeShift_CVS_TEMP		s
45.0	Dry to Wet Conversion CO2	YES	-
46.0	Dry to Wet Conversion O2	YES	-
47.0	Dry to Wet Conversion NO	NO	-
48.0	Dry to Wet Conversion NO2	NO	-
49.0	Dry to Wet Conversion THC	NO	-
50.0	Dry to Wet Conversion CH4	NO	-
51.0	Dry to Wet Conversion O2	NO	-
52.0	CO2	IFILE1:TM'GPiS_CO2	%
53.0	CO2 TS	-19.80000	s
54.0	OS	IFILE1:TM'GPiS_O2	%
55.0	O2 TS	-20.30000	s
56.0	CO	IFILE1:TM'GPiS_CO	ppm
57.0	CO TS	-19.80000	s
58.0	NO	IFILE1:TM'GPiS_NO	ppm
59.0	NO TS	-18.00000	s
60.0	NO2	IFILE1:TM'GPiS_NO2	ppm

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M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Jetta / Independent Vehicle
Engine: Gasoline / 1.8L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
61.0	NO2 TS	-18.00000	s
62.0	THC	IFILE1:TM'FIDiS_THC_C1	ppm
63.0	THC TS	0.00000	s
64.0	CH4	IFILE1:TM'FIDiS_CH4_C1	ppm
65.0	CH4 TS	0.00000	s
66.0	GAS_PEMS_Ethane_Efficiency	IFILE1:MOVE_AVL4925'GP_Et -	
67.0	GAS_PEMS_Methane_Efficiency	IFILE1:MOVE_AVL4925'GP_M -	
68.0	GAS_PEMS_Methane_Response	IFILE1:MOVE_AVL4925'GP_M -	
69.0	Zero Signal	IFILE1:TM'GPiS_STATE	0/1
70.0	Zero Signal TS	-18.00000	s
71.0	Zero Signal_FIDiS	IFILE1:TM'FIDiS_STATE	0/1
72.0	Zero Signal_FIDiS TS		s
73.0	Species Input Type	4.00000	-
74.0	GASPEMS=AVL493	NO	-
75.0	GASPEMS=AVL493_iX	NO	-
76.0	GASPEMS=AVL492	YES	-
77.0	GASPEMS=AVL4925	YES	-
78.0	PM: Type	4.00000	1=GFB+HC, 2=GFB, 3='PM=S
79.0	Filter ID from IFile	NO	-
80.0	Lab ID from IFile	NO	-
81.0	PM Filter: ID	N/A	ID
82.0	PM Filter: Lab	N/A	Name/ID
83.0	PM Filter: Weight before Test	N/A	mg
84.0	PM Filter: Weight after Test	N/A	mg
85.0	PM (HC Corr): Max. Exhaust Flow	N/A	scfm
86.0	Soot		mg/m3
87.0	Soot TS	-5.00000	s
88.0	Soot Sensor		mg/m3
89.0	Soot Sensor TS		s
90.0	PM Filter: Filter Flow Rate		l/min

#	Text	Value	Unit
-	----	----	----
91.0	PM Filter: Filter Flow Rate TS	-5.00000	s
92.0	PM Filter: Filter Dilution Ratio		-
93.0	PM Filter: Filter Dilution Ratio TS	-5.00000	s
94.0	PM Filter: Filter Trigger		-
95.0	PM Filter: Filter Trigger TS	-5.00000	s
96.0	PMPEMS=AVL494	YES	-
97.0	PMPEMS_AVL494_PROP_DIL	NO	-
98.0	PM dilution ratio min		-
99.0	PM_MaxExhaustFlowRate		-
100.0	PM_ExhaustFlow_Thresh		-
101.0	PM_total_flow_val		-
102.0	PM_total_flow_val_TS		-
103.0	PM_exh_mass_flow		-
104.0	PM_exh_mass_flow_TS		-
105.0	PN		#/cm3
106.0	TimeShift_PN		s
107.0	PN_STATE		-
108.0	PN TS STATE		s
109.0	PNPEMS_AVL496	NO	-
110.0	PN_CorrFactor	1.00000	
111.0	Time Alignment	1.00000	-
112.0	Time Alignment Dataset 1	N/A	0/1
113.0	Time Alignment Dataset 2	N/A	0/1
114.0	Time Alignment Thresh 1	N/A	-
115.0	Time Alignment Thresh 2	N/A	-
116.0			
117.0			
118.0			
119.0			
120.0			

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Jetta / Independent Vehicle
Engine: Gasoline / 1.8L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
121.0			
122.0	Trigger		0/1
123.0	Trigger TS		s
124.0	FTIR_NAME_1		-
125.0	FTIR_MW_1		-
126.0	FTIR_CHANNEL_1		-
127.0	FTIR_CHANNEL_TS_1		-
128.0	FTIR_CHANNEL_DRY_1	NO	-
129.0	FTIR_NAME_2		-
130.0	FTIR_MW_2		-
131.0	FTIR_CHANNEL_2		-
132.0	FTIR_CHANNEL_TS_2		-
133.0	FTIR_CHANNEL_DRY_2	NO	-
134.0	FTIR_NAME_3		-
135.0	FTIR_MW_3		-
136.0	FTIR_CHANNEL_3		-
137.0	FTIR_CHANNEL_TS_3		-
138.0	FTIR_CHANNEL_DRY_3	NO	-
139.0	FTIR_NAME_4		-
140.0	FTIR_MW_4		-
141.0	FTIR_CHANNEL_4		-
142.0	FTIR_CHANNEL_TS_4		-
143.0	FTIR_CHANNEL_DRY_4	NO	-
144.0	FTIR_NAME_5		-
145.0	FTIR_MW_5		-
146.0	FTIR_CHANNEL_5		-
147.0	FTIR_CHANNEL_TS_5		-
148.0	FTIR_CHANNEL_DRY_5	NO	-
149.0	FTIR_NAME_6		-
150.0	FTIR_MW_6		-

#	Text	Value	Unit
-	----	----	----
151.0	FTIR_CHANNEL_6		-
152.0	FTIR_CHANNEL_TS_6		-
153.0	FTIR_CHANNEL_DRY_6	NO	-
154.0	FTIR_NAME_7		-
155.0	FTIR_MW_7		-
156.0	FTIR_CHANNEL_7		-
157.0	FTIR_CHANNEL_TS_7		-
158.0	FTIR_CHANNEL_DRY_7	NO	-
159.0	FTIR_NAME_8		-
160.0	FTIR_MW_8		-
161.0	FTIR_CHANNEL_8		-
162.0	FTIR_CHANNEL_TS_8		-
163.0	FTIR_CHANNEL_DRY_8	NO	-
164.0	FTIR_NAME_9		-
165.0	FTIR_MW_9		-
166.0	FTIR_CHANNEL_9		-
167.0	FTIR_CHANNEL_TS_9		-
168.0	FTIR_CHANNEL_DRY_9	NO	-
169.0	FTIR_NAME_10		-
170.0	FTIR_MW_10		-
171.0	FTIR_CHANNEL_10		-
172.0	FTIR_CHANNEL_TS_10		-
173.0	FTIR_CHANNEL_DRY_10	NO	-
174.0	FTIR_NAME_11		-
175.0	FTIR_MW_11		-
176.0	FTIR_CHANNEL_11		-
177.0	FTIR_CHANNEL_TS_11		-
178.0	FTIR_CHANNEL_DRY_11	NO	-
179.0	FTIR_NAME_12		-
180.0	FTIR_MW_12		-

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M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Jetta / Independent Vehicle
Engine: Gasoline / 1.8L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
181.0	FTIR_CHANNEL_12		-
182.0	FTIR_CHANNEL_TS_12		-
183.0	FTIR_CHANNEL_DRY_12	NO	-
184.0	FTIR_NAME_13		-
185.0	FTIR_MW_13		-
186.0	FTIR_CHANNEL_13		-
187.0	FTIR_CHANNEL_TS_13		-
188.0	FTIR_CHANNEL_DRY_13	NO	-
189.0	FTIR_NAME_14		-
190.0	FTIR_MW_14		-
191.0	FTIR_CHANNEL_14		-
192.0	FTIR_CHANNEL_TS_14		-
193.0	FTIR_CHANNEL_DRY_14	NO	-
194.0	FTIR_NAME_15		-
195.0	FTIR_MW_15		-
196.0	FTIR_CHANNEL_15		-
197.0	FTIR_CHANNEL_TS_15		-
198.0	FTIR_CHANNEL_DRY_15	NO	-
199.0	FTIR_NAME_16		-
200.0	FTIR_MW_16		-
201.0	Vehicle Type	2017 VW Jetta	-
202.0	Vehicle Info	Independent Vehicle	-
203.0	Engine Type	Gasoline	-
204.0	Engine Info	1.8L	-
205.0	Engine Torque		Nm
206.0	Curb Idle Load		%
207.0	Idle Speed		rpm
208.0	HYBRID_OVC_REF_CO2_gkm		g/km
209.0	Engine Concept	1.00000	-
210.0	Alpha	1.93000	-

#	Text	Value	Unit
-	----	----	----
211.0	Beta	1.00000	
212.0	Gamma	0.00000	
213.0	Delta	0.00000	
214.0	Epsilon	0.03200	
215.0	X_C	83.00000	
216.0	X_H	13.30000	
217.0	X_N	0.00000	
218.0	X_O	3.50000	
219.0	X_S	0.00000	
220.0	Fuel_Density	747.50000	
221.0	rho_exhaust	1.29310	
222.0	U_CO2	1.51800	
223.0	U_CO	0.96600	
224.0	U_NO	1.58700	
225.0	U_NO2	1.58700	
226.0	U_NOx	1.58700	
227.0	U_HC	0.49900	
228.0	U_NMHC	0.47100	
229.0	U_CH4	0.55300	
230.0	U_O2	1.10400	
231.0	Fuel Type	2.00000	-
232.0	exhaust mass flow type (YES/NO)	YES	-
233.0	Distance Calculation Type	1.00000	-
234.0	Velocity Statistics Calculation Type	2.00000	-
235.0	RDE vehicle class	1.00000	-
236.0	TM_CITY0		s
237.0	TM_CITY1		s
238.0	TM_RURAL0		s
239.0	TM_RURAL1		s
240.0	TM_RURAL2_0		s

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Jetta / Independent Vehicle
Engine: Gasoline / 1.8L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
241.0	TM_RURAL2_1		s
242.0	Second Rural Part for Time Marks (NO		-
243.0	TM_MW0		s
244.0	TM_MW1		s
245.0	VELOCITY_LIMIT_STOP	2.00000	km/h
246.0	VELOCITY_LIMIT_URBAN	50.00000	km/h
247.0	VELOCITY_LIMIT_RURAL	75.00000	km/h
248.0	Intake Manifold Pressure Type	1.00000	-
249.0	Velocity	IFILE1:TM'OBD_Vehicle_Spee	km/h
250.0	Velocity TS	1.70000	s
251.0	Velocity FACTOR	1.00000	-
252.0	Coolant Temperature	IFILE1:TM'OBD_Engine_Coola	degC
253.0	Coolant Temperature TS	1.70000	s
254.0	Oil Temperature		degC
255.0	Oil Temperature TS	1.70000	s
256.0	Intake Manifold Temperature		degC
257.0	Intake Manifold Temp TS	1.70000	s
258.0	Intake Manifold Pressure	IFILE1:TM'OBD_Intake_manifo	kPa
259.0	Intake Manifold Pressure TS	1.70000	s
260.0	Throttle Position		%
261.0	Throttle TS	1.70000	s
262.0	TYP_IDLE_MASS_FLOW		kg/h
263.0	Torque Type	1.00000	-
264.0	Speed	IFILE1:TM'OBD_Engine_RPM	rpm
265.0	Speed TS	1.70000	s
266.0	Torque		Nm
267.0	Torque TS	1.70000	s
268.0	Friction Torque	N/A	Nm
269.0	Friction Torque TS	N/A	s
270.0	Reference Torque	N/A	Nm

#	Text	Value	Unit
-	----	----	----
271.0	Reference Torque TS	N/A	s
272.0	k_VELINE		-
273.0	D_VELINE		-
274.0	Fuel Flow Type	2.00000	-
275.0	Air Flow Type	1.00000	-
276.0	Fuel Rate		various
277.0	Air Rate		various
278.0	Fuel Rate TS	1.70000	s
279.0	No_Cylinders		-
280.0	Air Rate TS	1.70000	s
281.0	FTIR_CHANNEL_32		-
282.0	FTIR_CHANNEL_TS_32		-
283.0	FTIR_CHANNEL_DRY_32	NO	-
284.0	FTIR_NAME_33		-
285.0	FTIR_MW_33		-
286.0	FTIR_CHANNEL_33		-
287.0	FTIR_CHANNEL_TS_33		-
288.0	FTIR_CHANNEL_DRY_33	NO	-
289.0	FTIR_NAME_34		-
290.0	FTIR_MW_34		-
291.0	FTIR_CHANNEL_34		-
292.0	FTIR_CHANNEL_TS_34		-
293.0	FTIR_CHANNEL_DRY_34	NO	-
294.0	FTIR_NAME_35		-
295.0	FTIR_MW_35		-
296.0	FTIR_CHANNEL_35		-
297.0	FTIR_CHANNEL_TS_35		-
298.0	FTIR_CHANNEL_DRY_35	NO	-
299.0	FTIR_NAME_36		-
300.0	FTIR_MW_36		-

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Jetta / Independent Vehicle
Engine: Gasoline / 1.8L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
301.0	FTIR_CHANNEL_36		-
302.0	FTIR_CHANNEL_TS_36		-
303.0	FTIR_CHANNEL_DRY_36	NO	-
304.0	FTIR_NAME_37		-
305.0	FTIR_MW_37		-
306.0	FTIR_CHANNEL_37		-
307.0	FTIR_CHANNEL_TS_37		-
308.0	FTIR_CHANNEL_DRY_37	NO	-
309.0	FTIR_NAME_38		-
310.0	FTIR_MW_38		-
311.0	FTIR_CHANNEL_38		-
312.0	FTIR_CHANNEL_TS_38		-
313.0	FTIR_CHANNEL_DRY_38	NO	-
314.0	FTIR_NAME_39		-
315.0	FTIR_MW_39		-
316.0	FTIR_CHANNEL_39		-
317.0	FTIR_CHANNEL_TS_39		-
318.0	FTIR_CHANNEL_DRY_39	NO	-
319.0	FTIR_NAME_40		-
320.0	FTIR_MW_40		-
321.0	FTIR_CHANNEL_40		-
322.0	FTIR_CHANNEL_TS_40		-
323.0	FTIR_CHANNEL_DRY_40	NO	-
324.0	Legislation Type (1=HDIUT 2=EU H	4.00000	-
325.0	WholeTest_NOx_corr	5.00000	-
326.0	WholeTest_Hum_corr	2.00000	-
327.0	CD_Distance	0.00000	km
328.0	CD_NOx	0.00000	mg/km
329.0	CD_CO	0.00000	mg/km
330.0	CD_CO2	0.00000	g/km

#	Text	Value	Unit
-	----	----	----
331.0	CD_NMHC	0.00000	mg/km
332.0	CD_CH4	0.00000	mg/km
333.0	CD_THC	0.00000	mg/km
334.0	CD_PN		#/km
335.0	WLTC_LOW_SPEED_gkm		g/km
336.0	WLTC_LOW_SPEED_FAC	1.20000	-
337.0	WLTC_MEDIUM_SPEED_gkm		g/km
338.0	WLTC_HIGH_SPEED_gkm		g/km
339.0	WLTC_HIGH_SPEED_FAC	1.10000	-
340.0	WLTC_EXTRA_HIGH_SPEED_gkm		g/km
341.0	WLTC_EXTRA_HIGH_SPEED_FA	1.05000	-
342.0	TOL_NORMAL_DRIVING	25.00000	%
343.0	TOL_SEVERE_DRIVING	50.00000	%
344.0	Increase Tolerance Nomral Driving	NO	-
345.0	Bin1_min		km/h
346.0	Bin2_min		km/h
347.0	Bin3_min		km/h
348.0	Bin1_max		km/h
349.0	Bin2_max		km/h
350.0	Bin3_max		km/h
351.0	Clear_R0	125.40000	N
352.0	Clear_R1	0.29300	Nh/km
353.0	Clear_R2	0.02795	N*(h/km) ²
354.0	Clear_SMK	1470.00000	kg
355.0	Clear_Rated_Power	140.00000	kW
356.0	Clear_Ref_Velocity	70.00000	km/h
357.0	Clear_Ref_Acc	0.45000	m/s ²
358.0	Clear_Smooth	3.00000	s
359.0	EXTC_From_High_Temp	30.00000	degC
360.0	EXTC_To_High_Temp	35.00000	degC

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Jetta / Independent Vehicle
Engine: Gasoline / 1.8L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
361.0	EXTC_From_Low_Temp	-7.00000	degC
362.0	EXTC_To_Low_Temp	0.00000	degC
363.0	Euro 6d or Euro 6d temp	NO	-
364.0	EXTC_From_Altitude	700.00000	m
365.0	EXTC_To_Altitude	1300.00000	m
366.0	EXTC_CORR_FAC	1.60000	
367.0	weight cold start (YES/NO)	NO	-
368.0	precon and soak done (YES/NO)	NO	-
369.0	PATH_PRECON_FILE		
370.0	filter velocity (YES/NO)	NO	-
371.0	filter velocity auto(YES/NO)	NO	-
372.0	Ki_CO		
373.0	Ki_CO2		
374.0	Ki_NOx		
375.0	Ki_FACTOR_CO2 (YES/NO)	NO	-
376.0	Ki_OFFSET_CO2 (YES/NO)	NO	-
377.0	Ki_FACTOR_CO (YES/NO)	NO	-
378.0	Ki_OFFSET_CO (YES/NO)	NO	-
379.0	Ki_FACTOR_NOx (YES/NO)	NO	-
380.0	Ki_OFFSET_NOx (YES/NO)	NO	-
381.0	Ki_OFF (YES/NO)	NO	-
382.0	HD legislations	1.00000	-
383.0	RDE legislations	1.00000	-
384.0	Submission Documents (YES/NO)	NO	-
385.0	General Setup Parameters Text	City	-
386.0	Legislation Setup Parameters Text	City	-
387.0	Trip Info		-
388.0	IN_TIME_REF		-
389.0	Sub-Trip Start: Auto	YES	-
390.0	Sub-Trip Start: Seconds	N/A	s

#	Text	Value	Unit
-	----	----	----
391.0	Sub-Trip End: Auto	YES	-
392.0	Sub-Trip End: Seconds	N/A	s
393.0	Unit System	2.00000	-
394.0	Calculate: PM Emissions	NO	-
395.0	Calculate: PN Emissions	NO	-
396.0	Output: Summary	YES	-
397.0	Output: Emissions	YES	-
398.0	Output: Raw Data	YES	-
399.0	Output: Zero Span	YES	-
400.0	Output: Data Consistency	NO	-
401.0	Output: Window Plots	YES	-
402.0	Fuel Rate ECU vs. EU ISO16183	$y = 10000000000.0000 x - 0.000 R^2=10000000000.000 SEE=$	
403.0	PEMS post processing version	Rel_10_B192	
404.0	Concerto version	480.00000	
405.0	Concerto build	215.00000	
406.0	USERNAME	EFR	

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Jetta / Independent Vehicle
Engine: Gasoline / 1.8L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway
Page: Trip Summary

Start Date: 10/03/2017
Start Time: 15:17:03.0



Trip Duration	2572.00	s	ave THC	-0.89159	ppm	BS CO2	n/a	g/hphr
Trip Duration (a)	2572.00	s	ave NMHC	0.81420	ppm	BS CO	n/a	g/hphr
Trip Distance	39.68	mi	ave CH4	-1.55072	ppm	BS THC	n/a	g/hphr
Trip Distance (a)	39.68	mi	ave CO	31.68231	ppm	BS NMHC	n/a	g/hphr
Trip Fuel Cons. (b)	n/a	kg	ave CO2	12.65455	%	BS CH4	n/a	g/hphr
Trip Fuel Cons. (ab)	n/a	kg	ave NOx	4.01563	ppm	BS NO (d)	n/a	g/hphr
Trip Fuel Cons. EU (ac)	2.74	kg	ave PM	n/a	mg/m3	BS NO2	n/a	g/hphr
Trip Fuel Cons. US (ac)	2.71	kg	ave Soot meas	n/a	mg/m3	BS NOx	n/a	g/hphr
Trip Fuel Cons. Volume (b)	n/a	gall	ave Soot	n/a	mg/m3	BS Soot	n/a	g/hphr
Trip Fuel Cons. Volume (ab)	n/a	gall	ave PN	n/a	#/cm3	BS Soot meas	n/a	g/hphr
Trip Fuel Cons. Volume EU (ac)	0.97	gall	tot THC	0.00830	g	BS PM	n/a	g/hphr
Trip Fuel Cons. Volume US (ac)	0.96	gall	tot NMHC	0.01521	g	BS PN	n/a	#/hpr
Trip Fuel Economy (b)	n/a	mpg_US	tot CH4	0.00414	g	DS CO2	207.86232	g/mi
Trip Fuel Economy (ab)	n/a	mpg_US	tot CO	1.70422	g	DS CO	0.04295	g/mi
Trip Fuel Economy EU (ac)	41.05	mpg_US	tot CO2	8247.63079	g	DS THC	0.00021	g/mi
Trip Fuel Economy US (ac)	41.42	mpg_US	tot NO (d)	0.18941	g	DS NMHC	0.00038	g/mi
Trip Av. Eng. Speed	1809.79	rpm	tot NO2	0.06766	g	DS CH4	0.00010	g/mi
Trip Av. Torque	n/a	lbft	tot NOx	0.25561	g	DS NO (d)	0.00477	g/mi
Trip Av. Power	n/a	hp	tot Soot	n/a	g	DS NO2	0.00171	g/mi
Trip Work	n/a	hphr	tot Soot meas	n/a	g	DS NOx	0.00644	g/mi
Trip Exhaust Mass	42.64	kg	tot PM	n/a	g	DS Soot	n/a	g/mi
Trip Exhaust Mass EU (ac)	n/a	kg	tot PN	n/a	#	DS Soot meas	n/a	g/mi
Trip Exhaust Mass US (ac)	n/a	kg	PM measurement type	0.00000	-	DS PM	n/a	g/mi
Trip Av. Amb. Temperature	77.85	deg_F	PM correction type	1.00000	alpha(HC)	DS PN	n/a	#/mi
Trip Av. Humidity	48.10	%	tot Soot on PM filter (estim.)	n/a	mg	FS CO2	n/a	g/kg
Fuel Type	Petrol (E10)		Soot --> PM simple scaling factor	1.00000	-	FS CO	n/a	g/kg
			Soot --> PM alpha scaling factor	0.00000	-	FS THC	n/a	g/kg
			Trip Av. Veh. Speed	55.53733	mi/hr	FS NMHC	n/a	g/kg
			Trip Velocity Zero	4.00467	%	FS CH4	n/a	g/kg
			Trip Velocity Urban	14.30793	%	FS NO (d)	n/a	g/kg
			Trip Velocity Rural	2.52722	%	FS NO2	n/a	g/kg
			Trip Velocity Motorway	83.16485	%	FS NOx	n/a	g/kg
						FS Soot	n/a	g/kg
						FS Soot meas	n/a	g/kg
						FS PM	n/a	g/kg
						FS PN	n/a	#/kg

(a) GAS PEMS measurement state only, (b) based on fuel rate input (ECU, Fuel Meter), (c) calculated from carbon balance
(d) NO calculated using molecular weight of NO2

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Golf / Independent Vehicle
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

Page: Trip Summary Drift Corrected

Start Date: 10/03/2017

Start Time: 15:17:03.0



Trip Duration	2572.00	s	ave THC DC	-1.20653	ppm	BS CO2 DC	n/a	g/hphr
Trip Duration (a)	2572.00	s	ave NMHC DC	0.37441	ppm	BS CO DC	n/a	g/hphr
Trip Distance	39.68	mi	ave CH4 DC	-1.43722	ppm	BS THC DC	n/a	g/hphr
Trip Distance (a)	39.68	mi	ave CO DC	32.04818	ppm	BS NMHC DC	n/a	g/hphr
Trip Fuel Cons. (b)	n/a	kg	ave CO2 DC	12.65455	%	BS CH4 DC	n/a	g/hphr
Trip Fuel Cons. (ab)	n/a	kg	ave NOx DC	4.01653	ppm	BS NO DC (d)	n/a	g/hphr
Trip Fuel Cons. EU (ac)	2.74	kg	ave PM	n/a	mg/m3	BS NO2 DC	n/a	g/hphr
Trip Fuel Cons. US (ac)	2.71	kg	ave Soot meas	n/a	mg/m3	BS NOx DC	n/a	g/hphr
Trip Fuel Cons. Volume (b)	n/a	gall	ave Soot	n/a	mg/m3	BS Soot	n/a	g/hphr
Trip Fuel Cons. Volume (ab)	n/a	gall	ave PN DC	n/a	#/cm3	BS Soot meas	n/a	g/hphr
Trip Fuel Cons. Volume EU (ac)	0.97	gall	tot THC DC	0.01123	g	BS PM	n/a	g/hphr
Trip Fuel Cons. Volume US (ac)	0.96	gall	tot NMHC DC	0.01067	g	BS PN DC	n/a	#/hpr
Trip Fuel Economy (b)	n/a	mpg_US	tot CH4 DC	0.00426	g	DS CO2 DC	207.86232	g/mi
Trip Fuel Economy (ab)	n/a	mpg_US	tot CO DC	1.72390	g	DS CO DC	0.04345	g/mi
Trip Fuel Economy EU (ac)	41.05	mpg_US	tot CO2 DC	8247.63079	g	DS THC DC	0.00028	g/mi
Trip Fuel Economy US (ac)	41.42	mpg_US	tot NO DC (d)	0.18942	g	DS NMHC DC	0.00027	g/mi
Trip Av. Eng. Speed	1809.79	rpm	tot NO2 DC	0.06771	g	DS CH4 DC	0.00011	g/mi
Trip Av. Torque	n/a	lbft	tot NOx DC	0.25567	g	DS NO DC (d)	0.00477	g/mi
Trip Av. Power	n/a	hp	tot Soot	n/a	g	DS NO2 DC	0.00171	g/mi
Trip Work	n/a	hphr	tot Soot meas	n/a	g	DS NOx DC	0.00644	g/mi
Trip Exhaust Mass	42.64	kg	tot PM	n/a	g	DS Soot	n/a	g/mi
Trip Exhaust Mass EU (ac)	n/a	kg	tot PN DC	n/a	#	DS Soot meas	n/a	g/mi
Trip Exhaust Mass US (ac)	n/a	kg	PM measurement type	0.00000	-	DS PM	n/a	g/mi
Trip Av. Amb. Temperature	77.85	deg_F	PM correction type	1.00000	alpha(HC)	DS PN DC	n/a	#/mi
Trip Av. Humidity	48.10	%	tot Soot on PM filter (estim.)	n/a	mg	FS CO2 DC	n/a	g/kg
Fuel Type	Petrol (E10)		Soot --> PM simple scaling factor	1.00000	-	FS CO DC	n/a	g/kg
			Soot --> PM alpha scaling factor	0.00000	-	FS THC DC	n/a	g/kg
			Trip Av. Veh. Speed	55.53733	mi/hr	FS NMHC DC	n/a	g/kg
			Trip Velocity Zero	4.00467	%	FS CH4 DC	n/a	g/kg
			Trip Velocity Urban	14.30793	%	FS NO DC (d)	n/a	g/kg
			Trip Velocity Rural	2.52722	%	FS NO2 DC	n/a	g/kg
			Trip Velocity Motorway	83.16485	%	FS NOx DC	n/a	g/kg
						FS Soot	n/a	g/kg
						FS Soot meas	n/a	g/kg
						FS PM	n/a	g/kg
						FS PN DC	n/a	#/kg

(a) GAS PEMS measurement state only, (b) based on fuel rate input (ECU, Fuel Meter), (c) calculated from carbon balance
 (d) NO calculated using molecular weight of NO2

Concerto Version: 480 Build 215, Serial Number: 8468
 M.O.V.E Post-Processing: Rel_10_B192

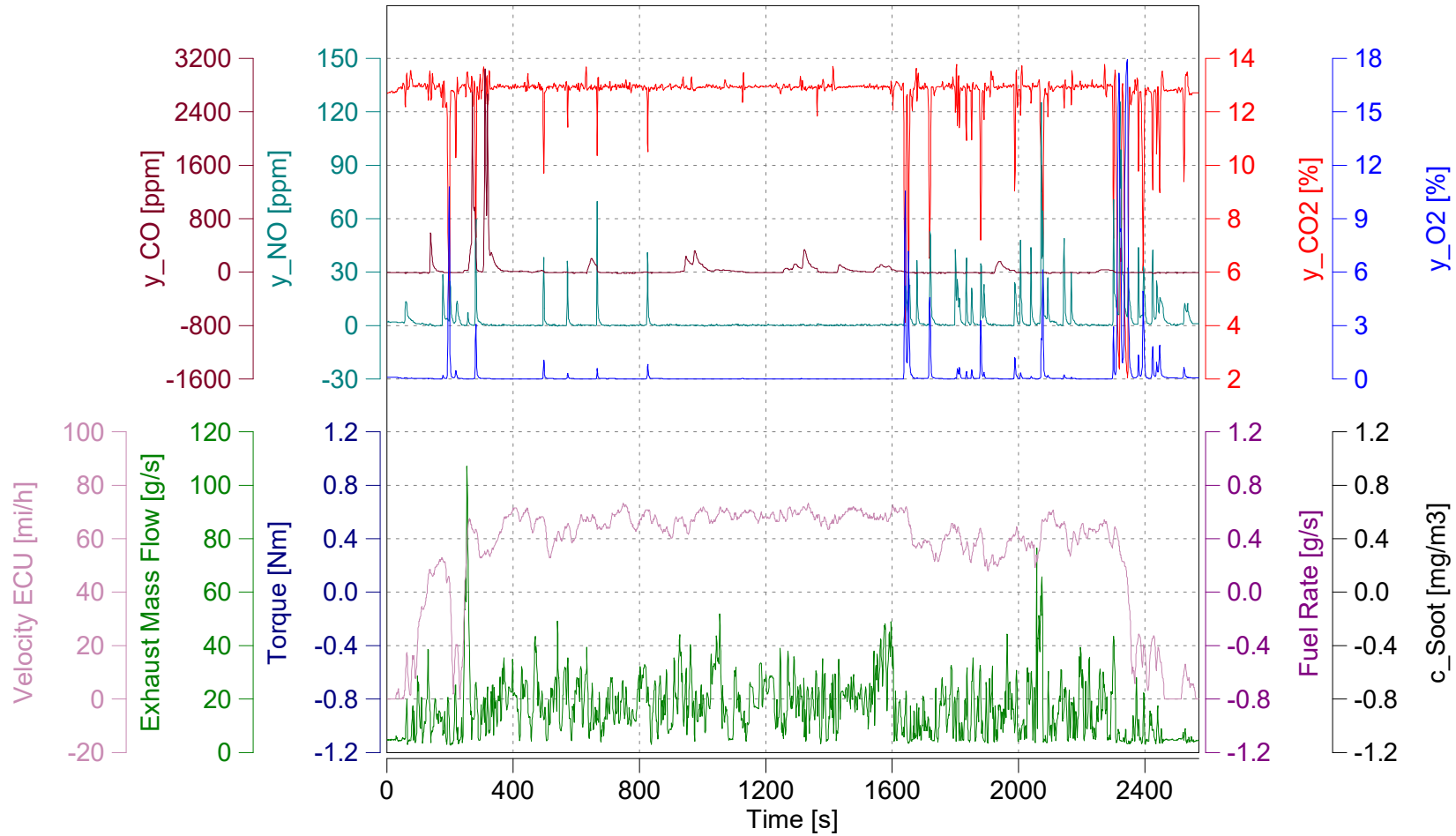
Vehicle: 2017 VW Golf / Independent Vehicle
 Engine: Gasoline / 2.0L
 NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
 Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

Page: Time Alignment Check

Start Date: 10/03/2017

Start Time: 15:17:03.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

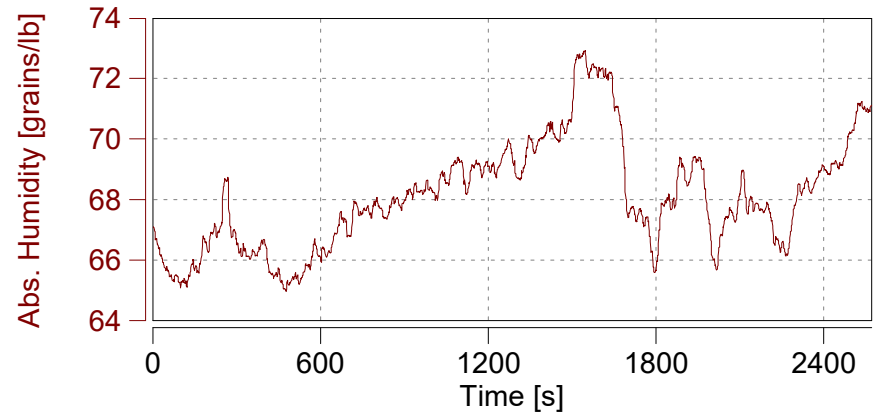
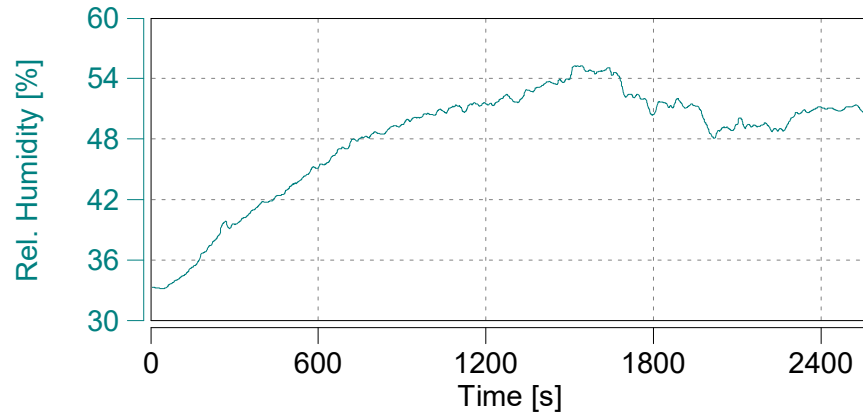
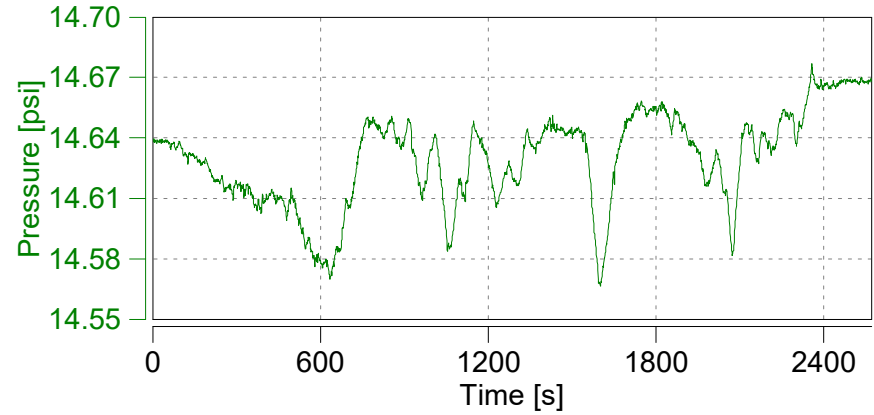
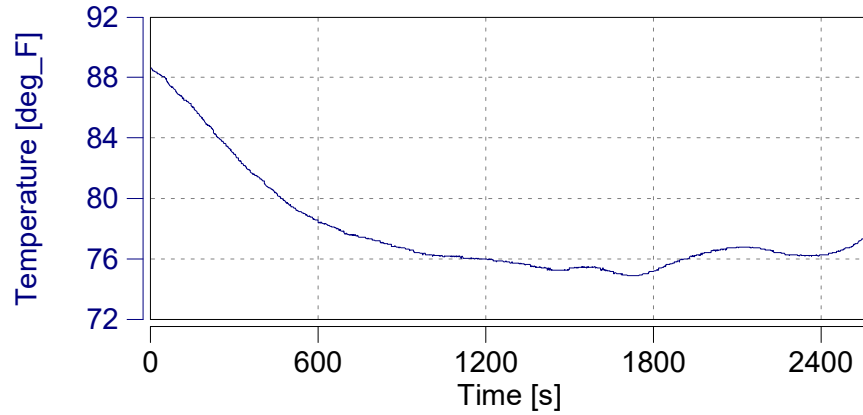
Vehicle: 2017 VW Golf / Independent Vehicle
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

Page: Ambient Conditions

Start Date: 10/03/2017

Start Time: 15:17:03.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

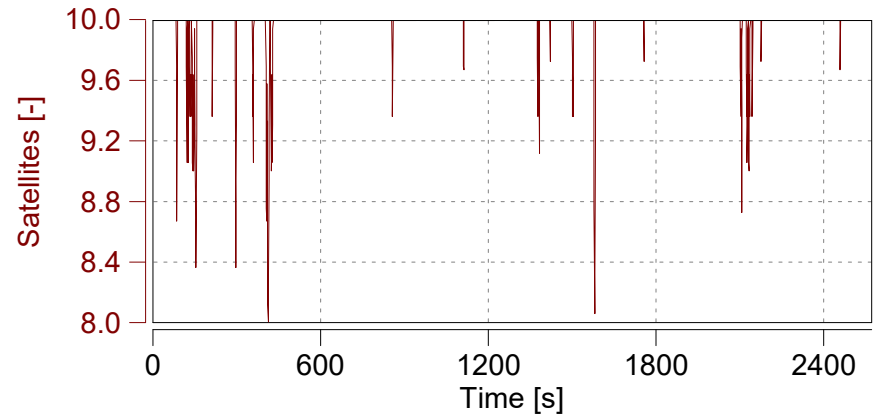
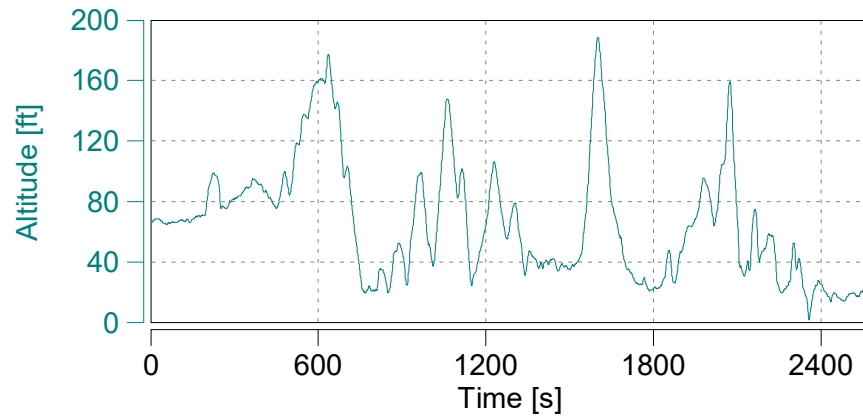
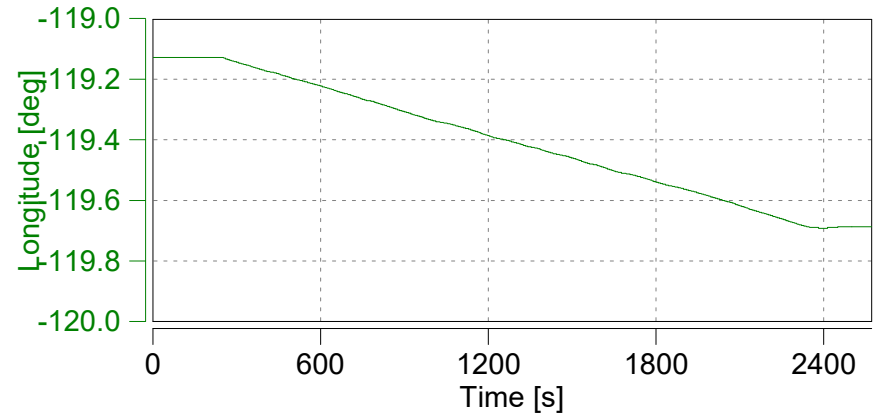
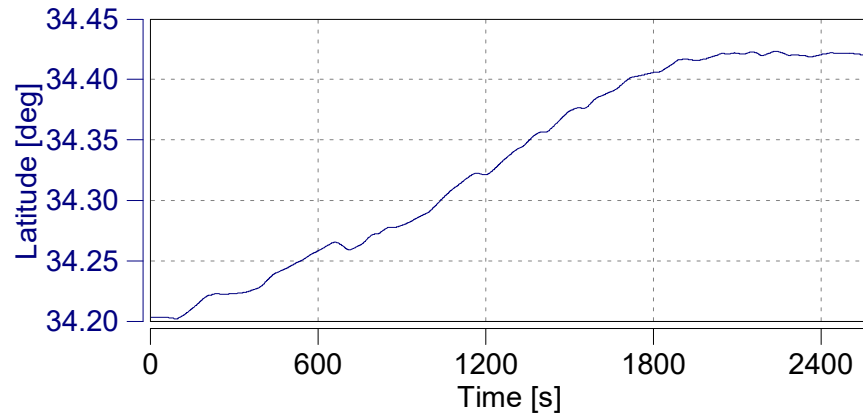
Vehicle: 2017 VW Golf / Independent Vehicle
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

Page: GPS

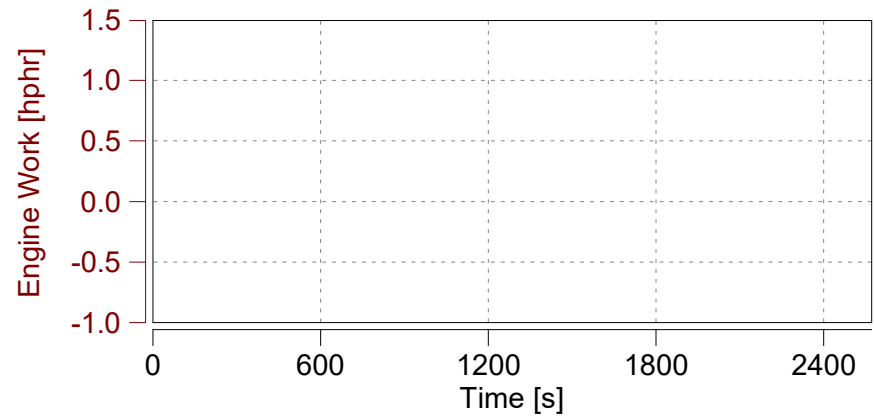
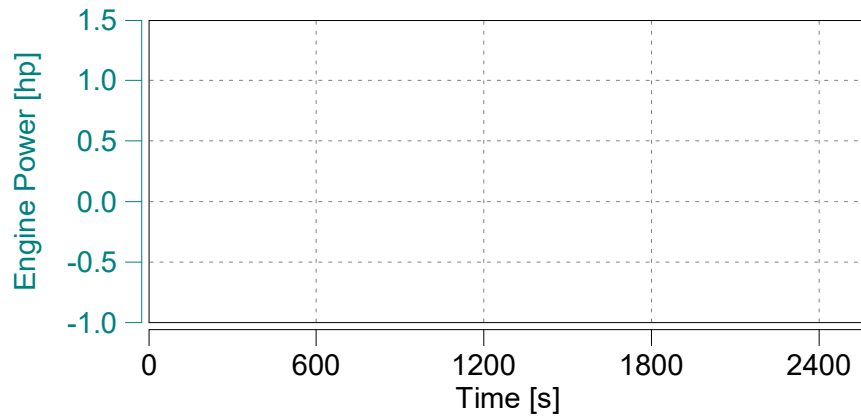
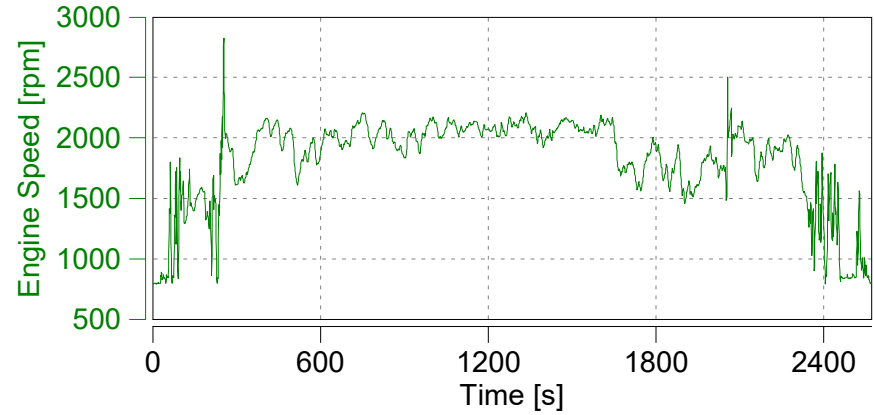
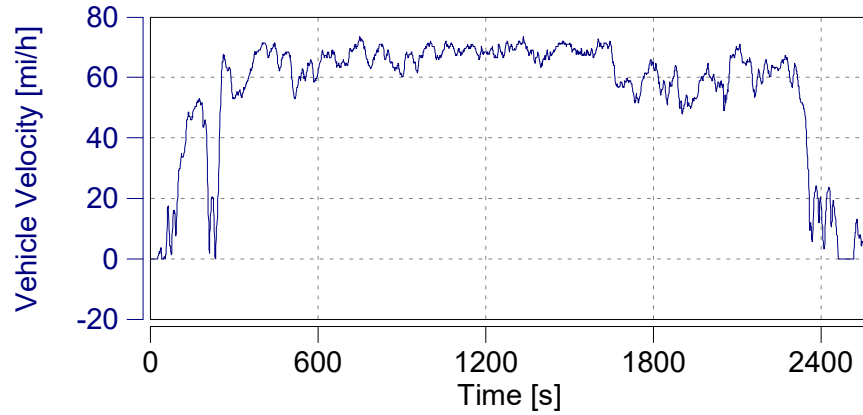
Start Date: 10/03/2017

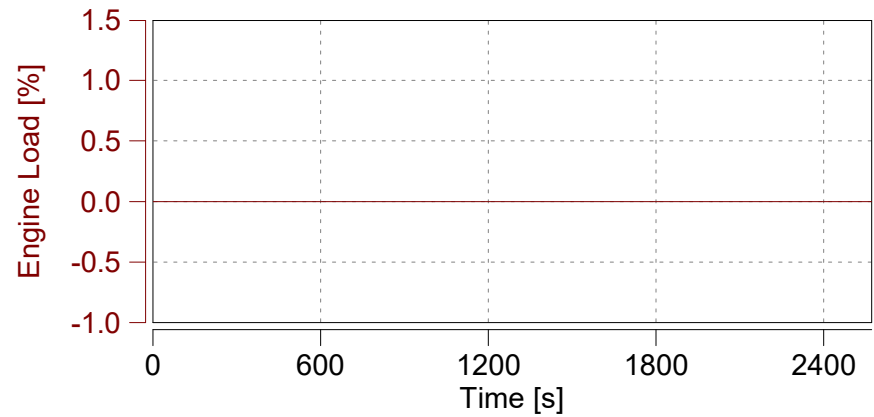
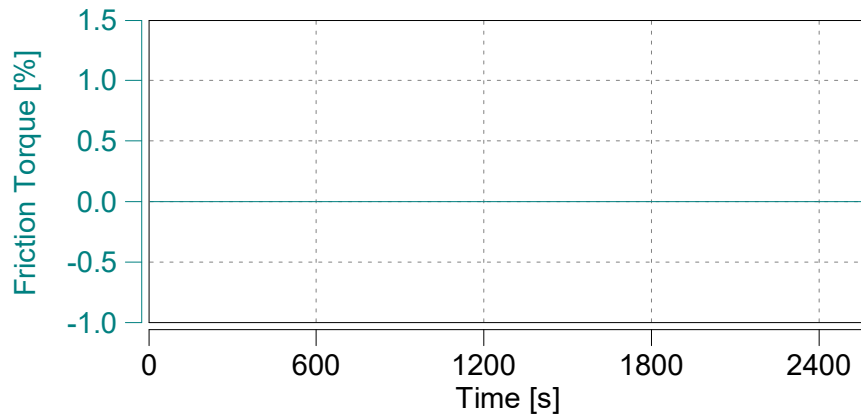
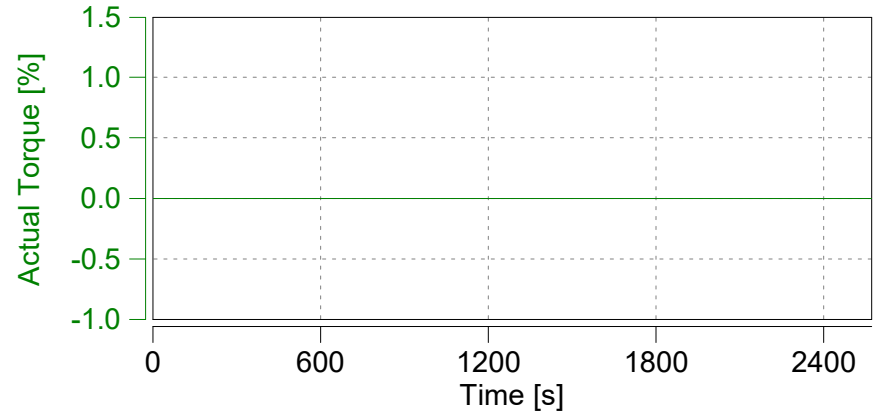
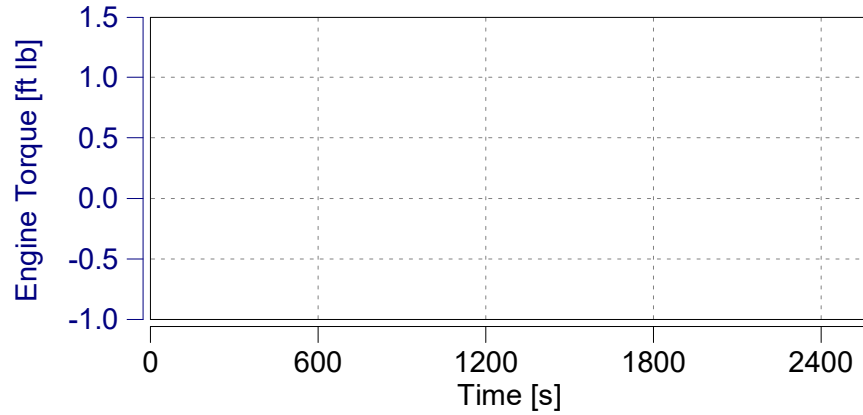
Start Time: 15:17:03.0

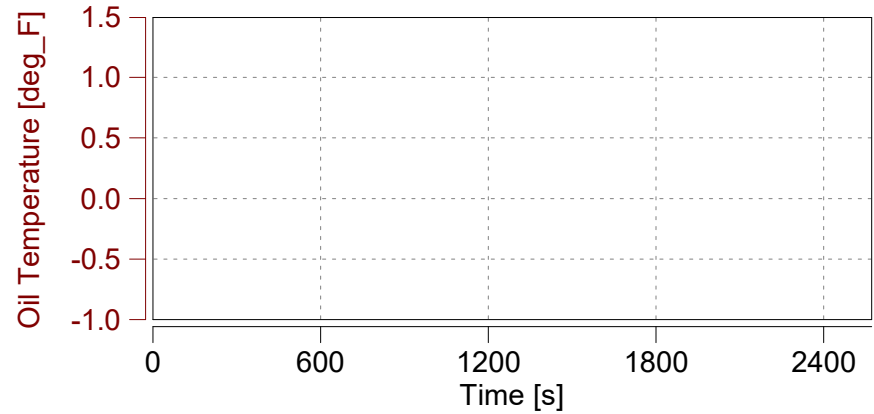
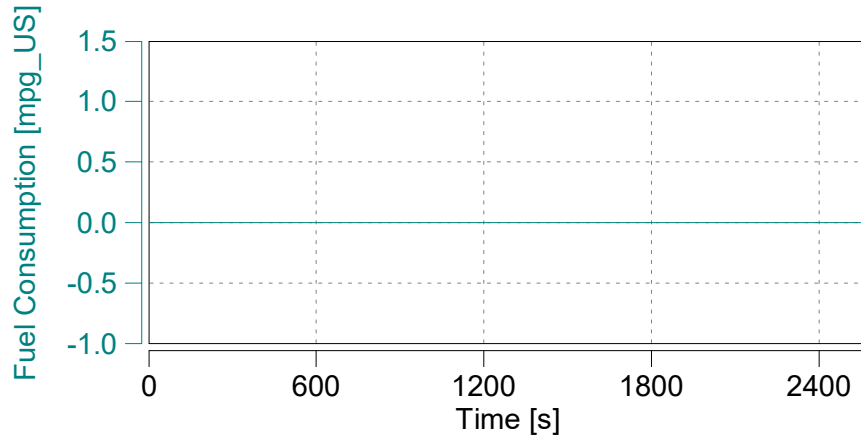
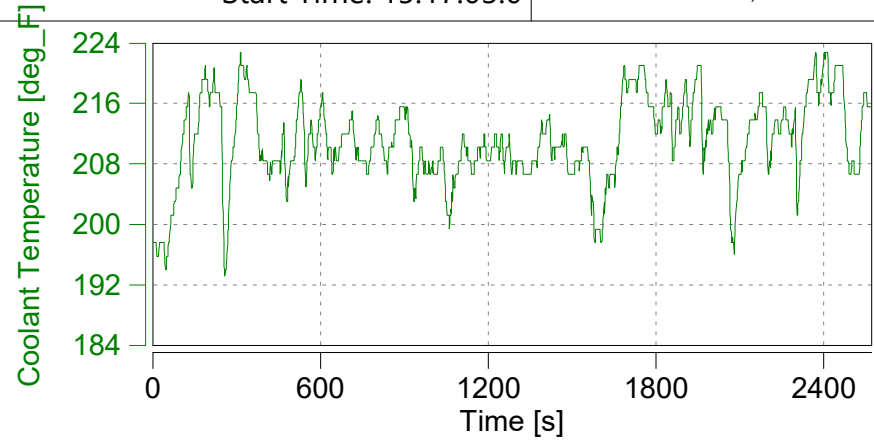
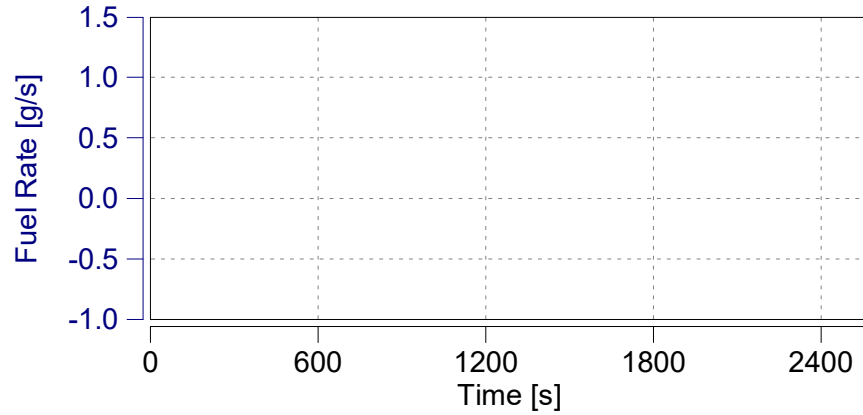


Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Golf / Independent Vehicle
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90





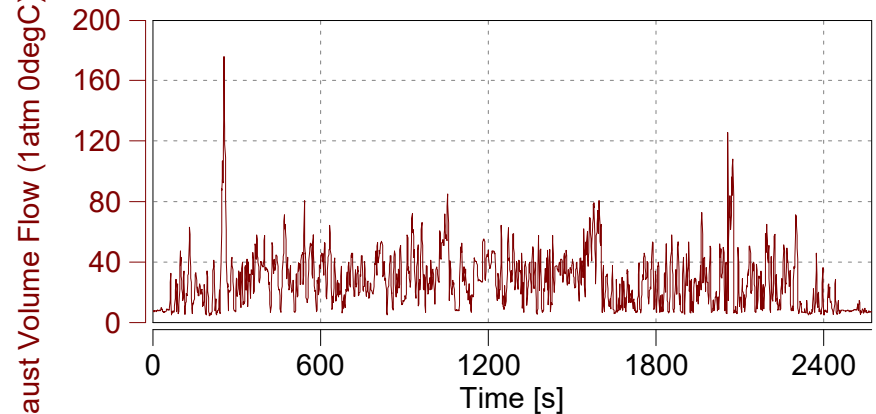
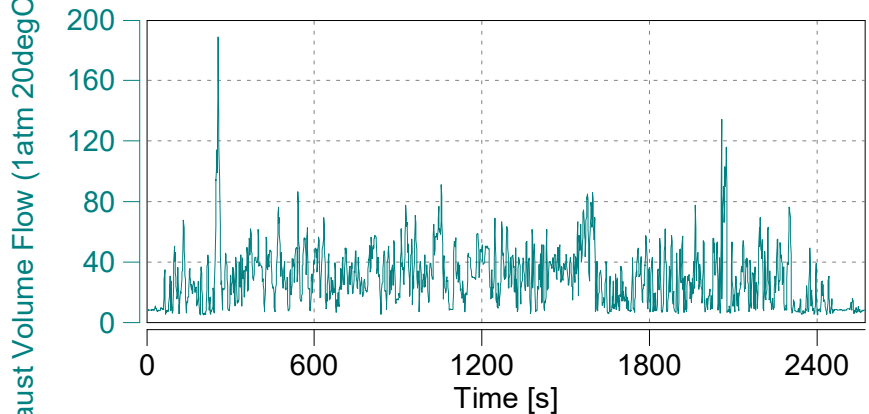
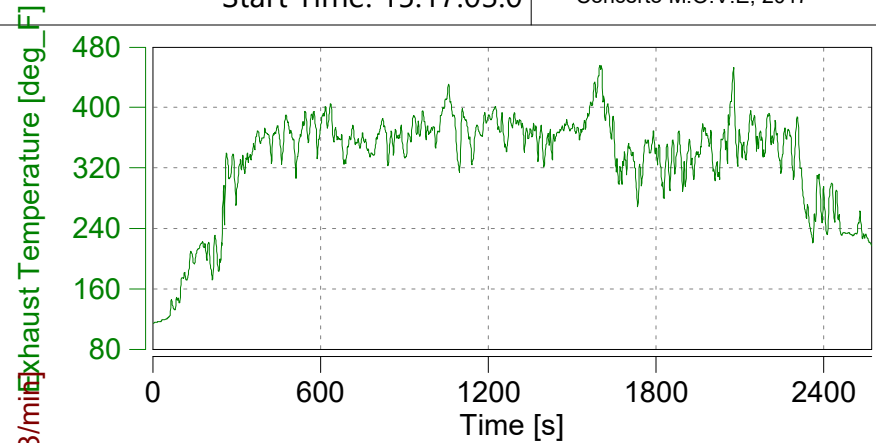
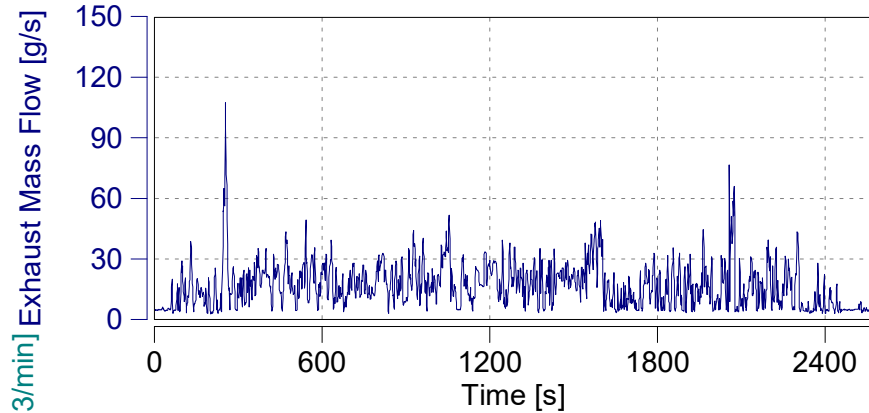


Case: Highway

Page: Exhaust Flow (1)

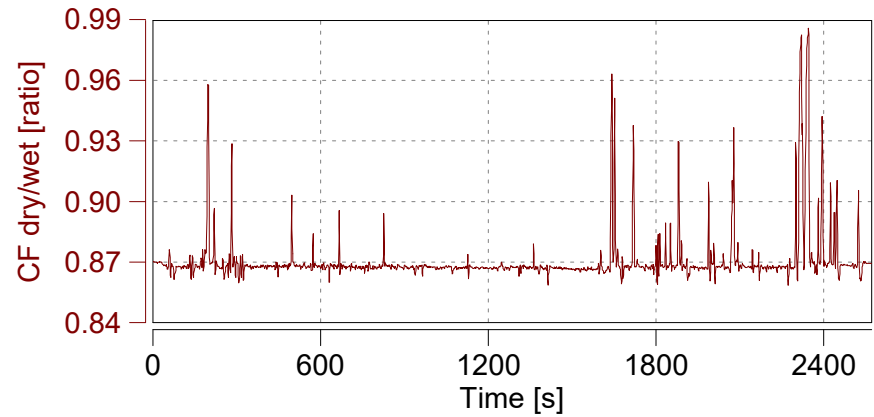
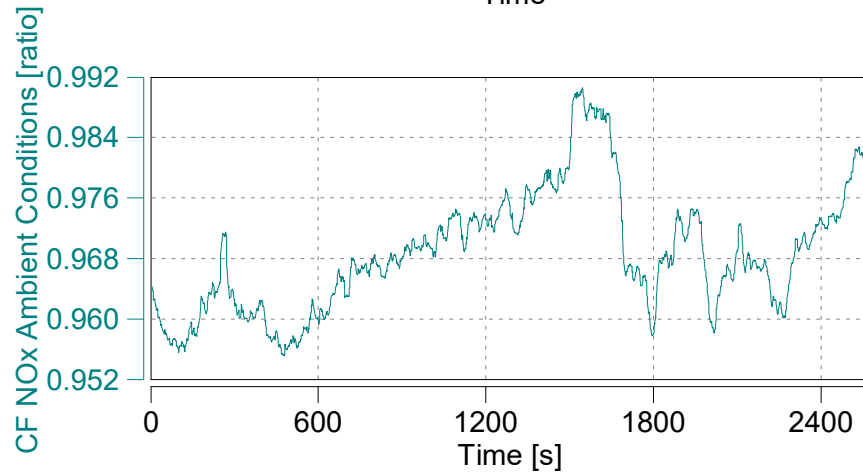
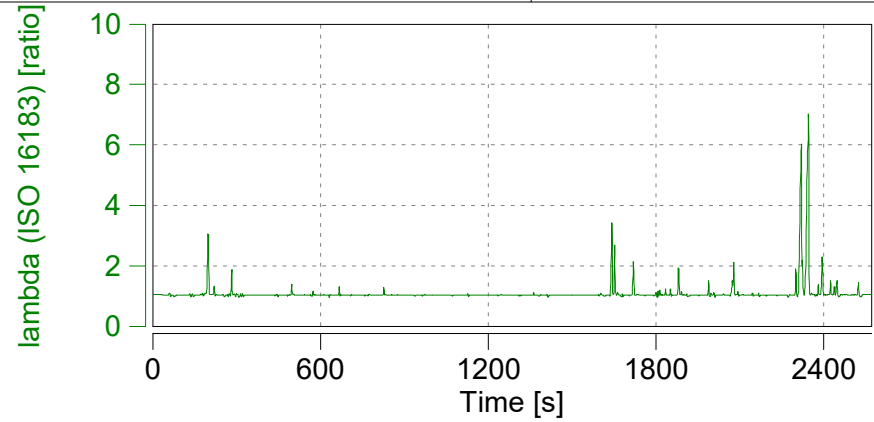
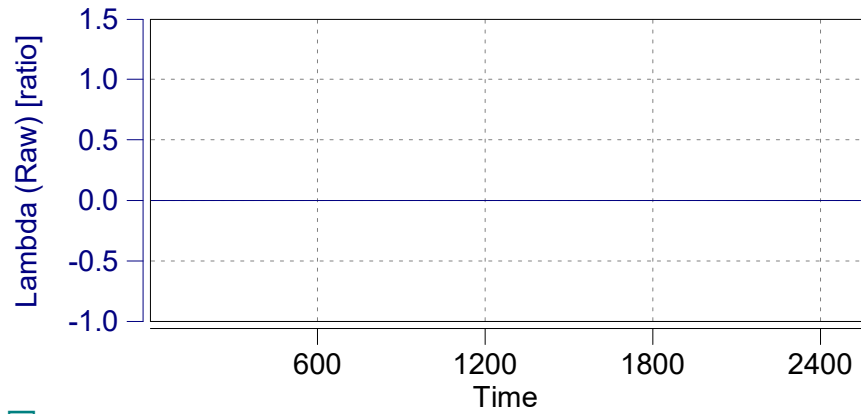
Start Date: 10/03/2017

Start Time: 15:17:03.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Golf / Independent Vehicle
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

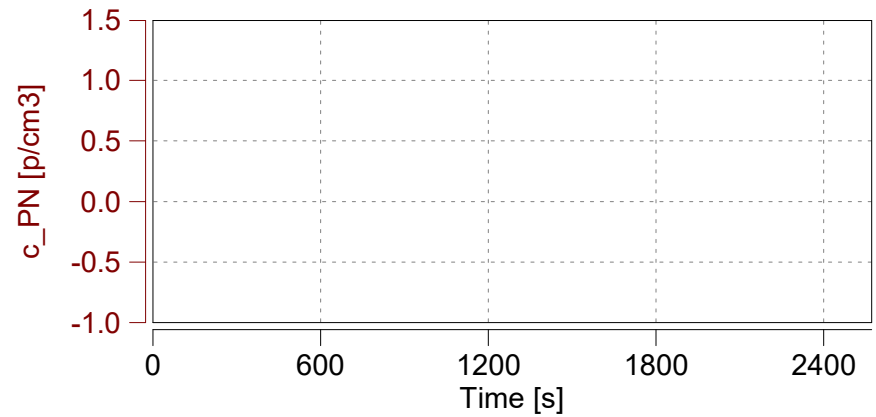
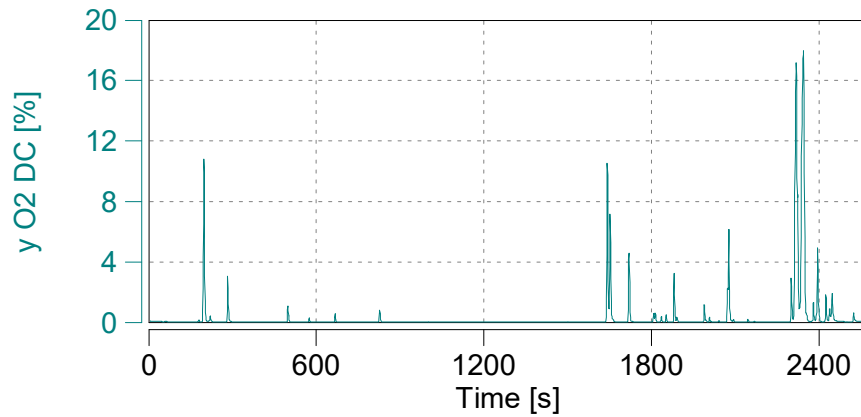
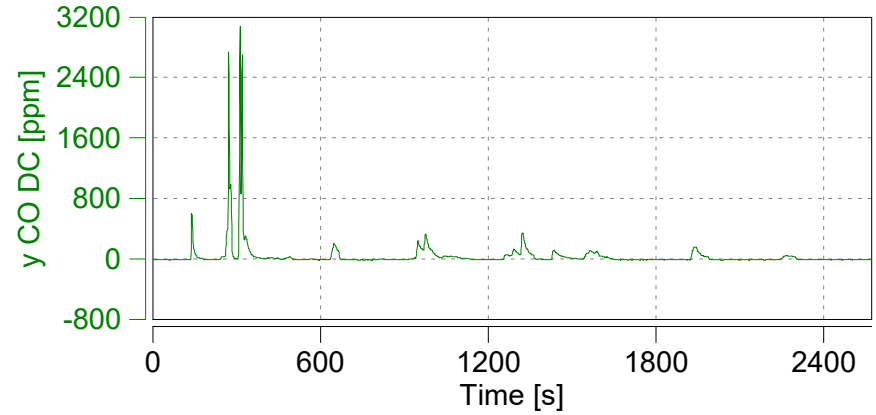
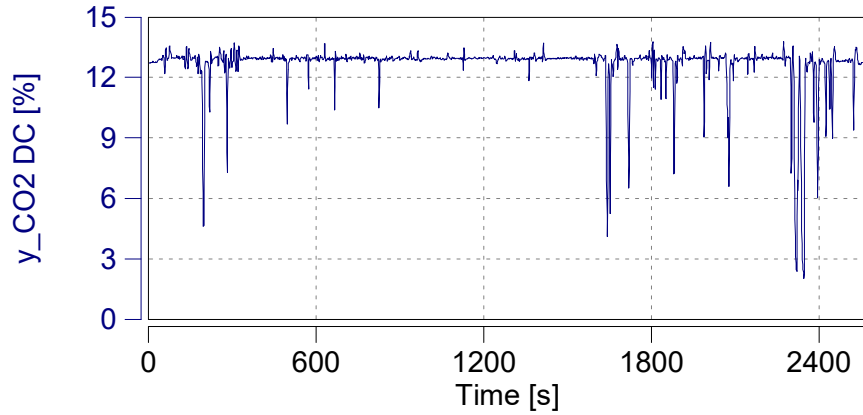


Case: Highway

Page: Corrected Emissions (1)

Start Date: 10/03/2017

Start Time: 15:17:03.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

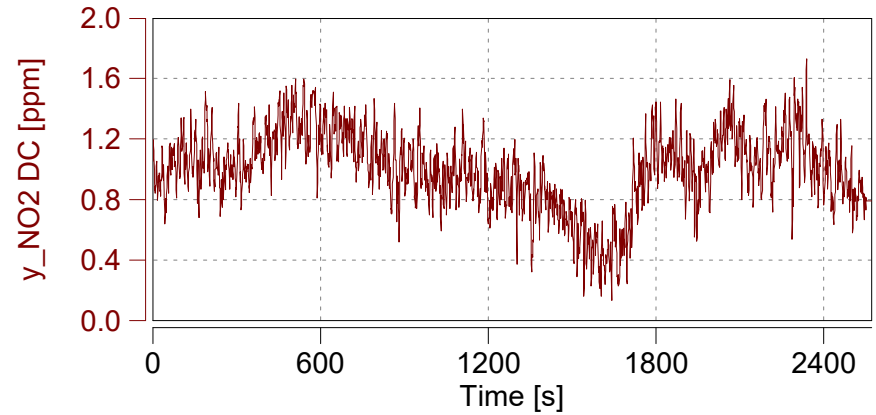
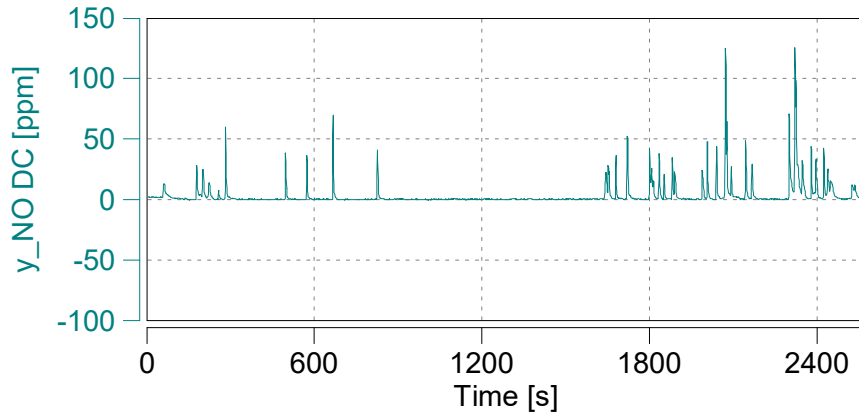
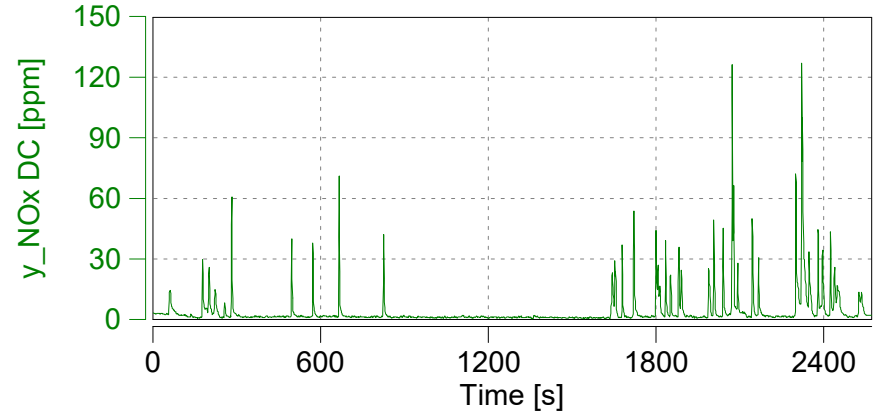
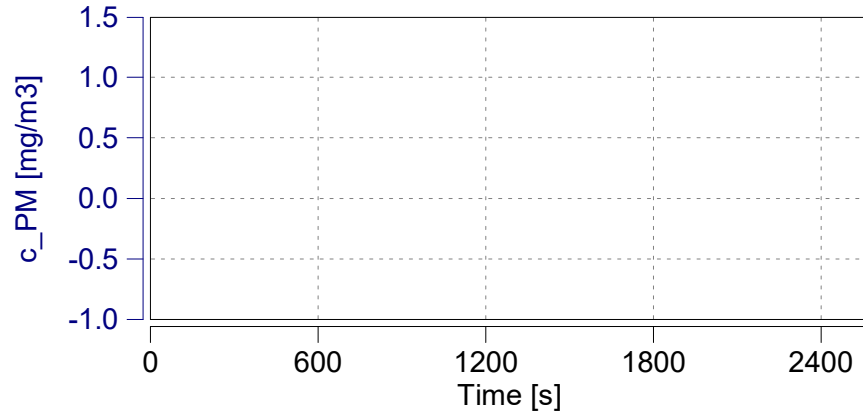
Vehicle: 2017 VW Golf / Independent Vehicle
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

Page: Corrected Emissions (2)

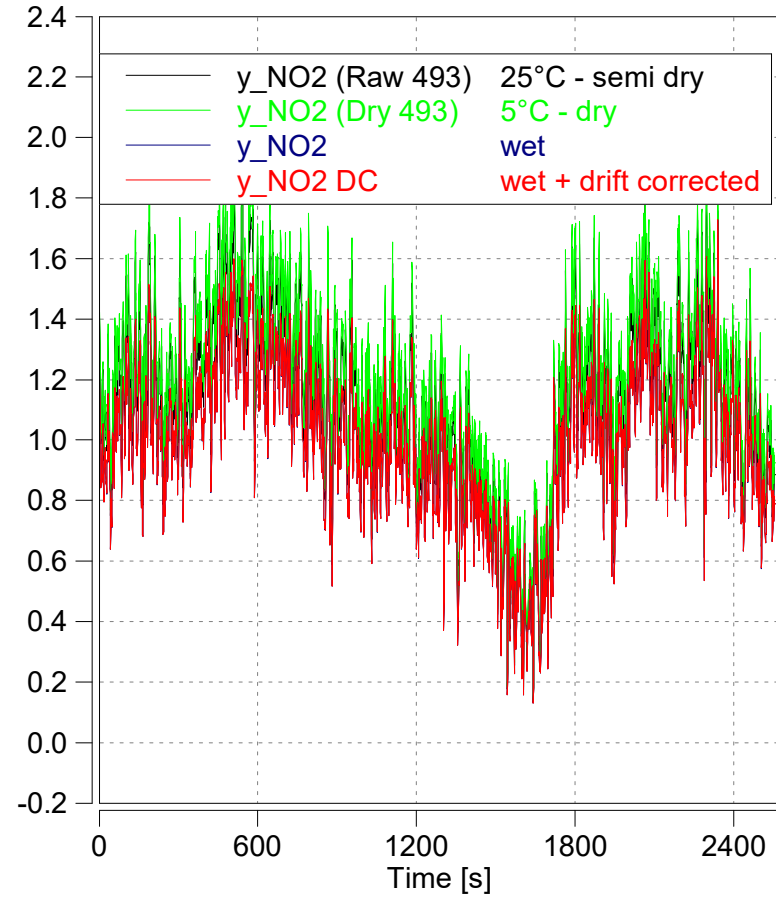
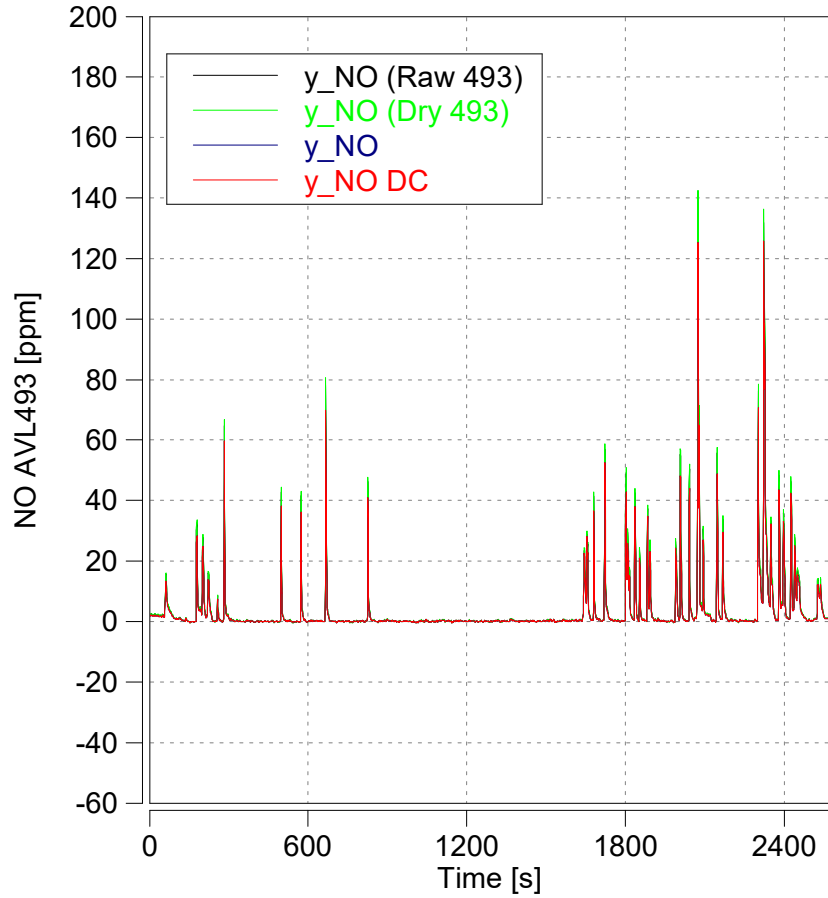
Start Date: 10/03/2017

Start Time: 15:17:03.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

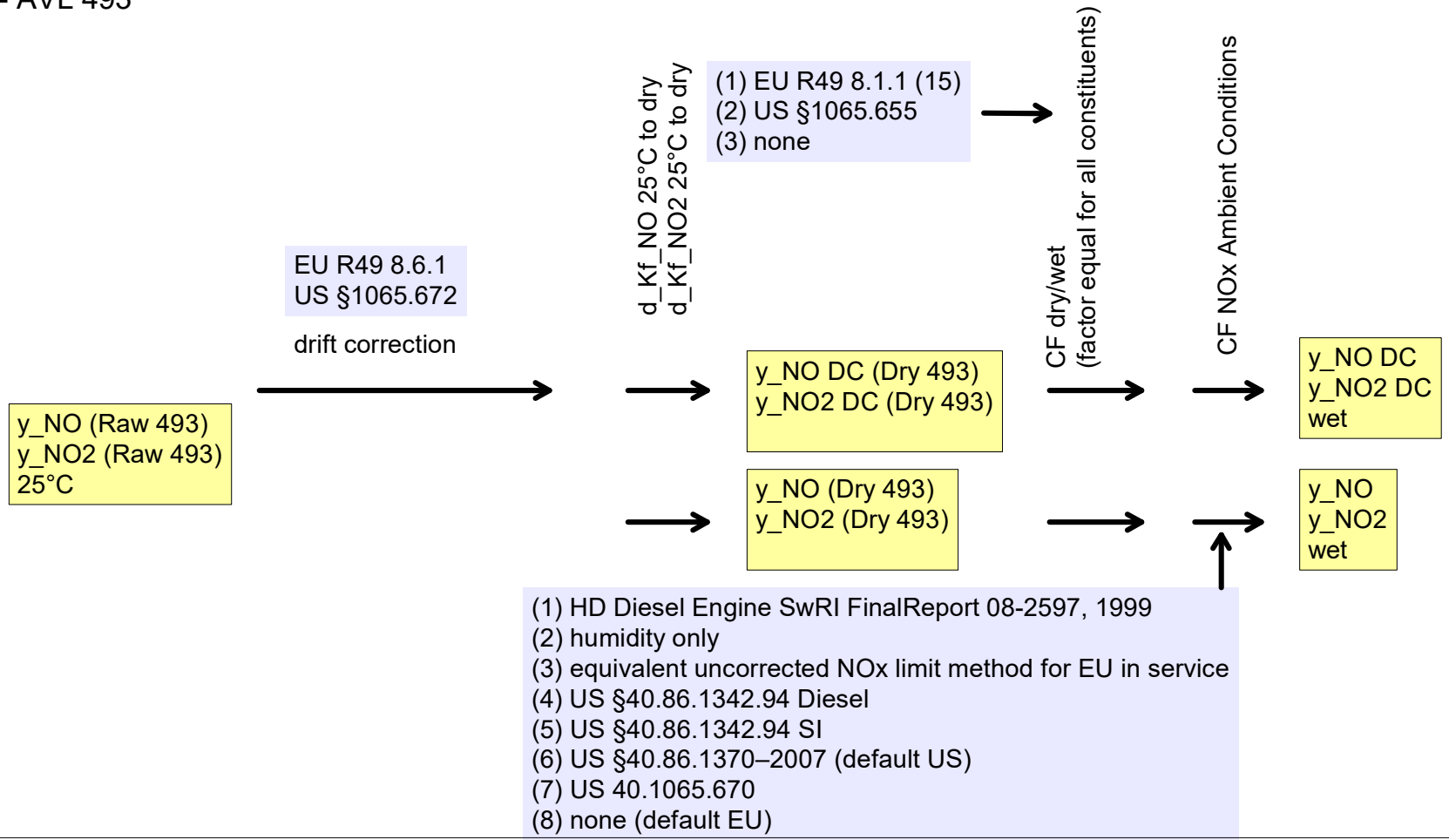
Vehicle: 2017 VW Golf / Independent Vehicle
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Golf / Independent Vehicle
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

NOx - AVL 493

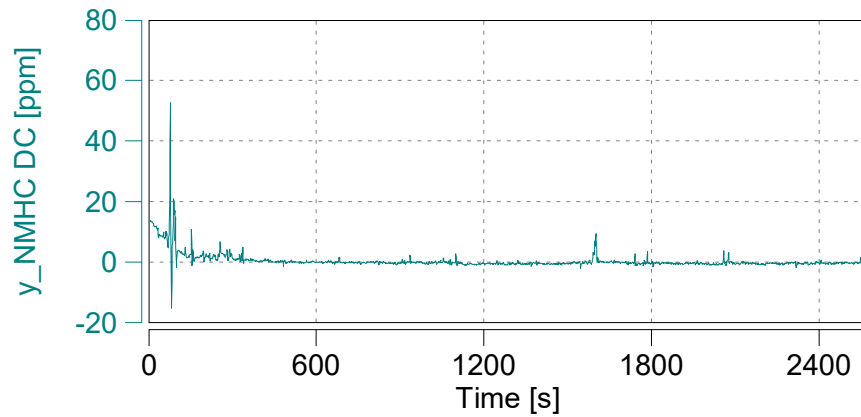
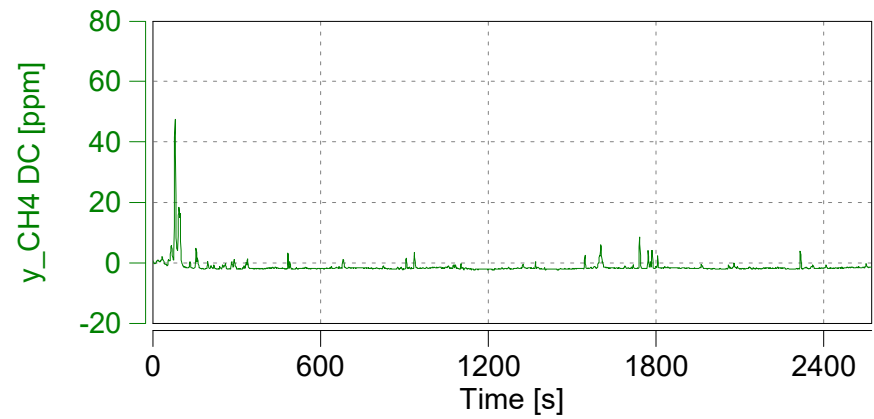
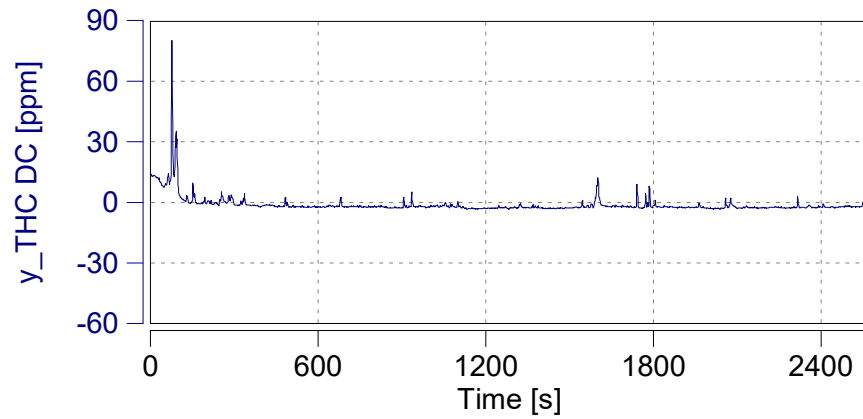


Case: Highway

Page: Corrected Emissions (5)

Start Date: 10/03/2017

Start Time: 15:17:03.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

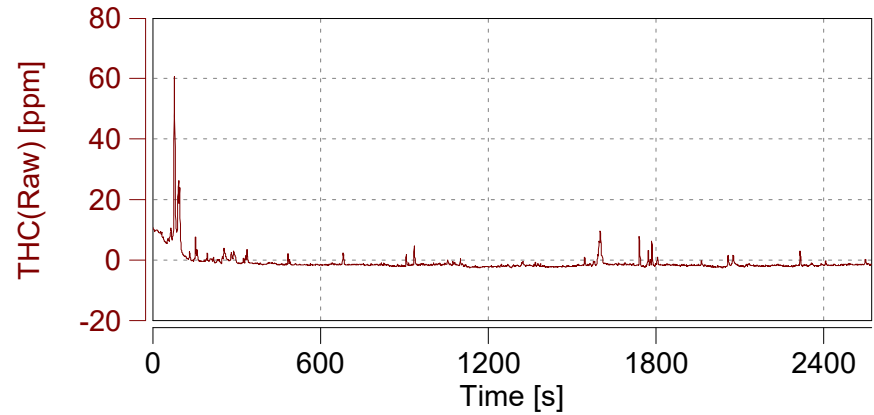
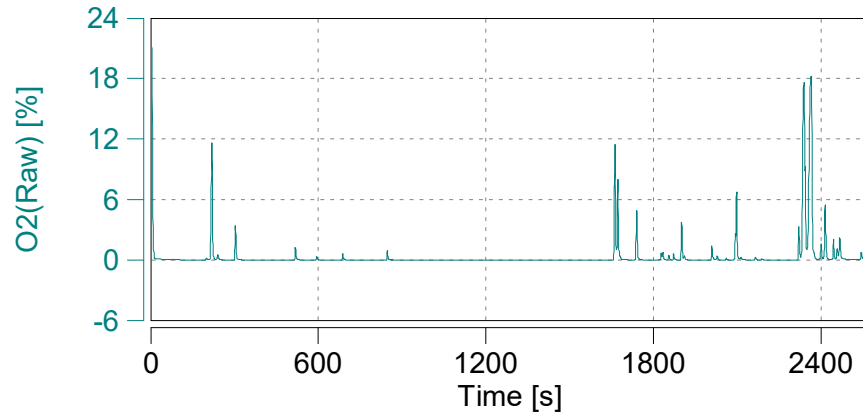
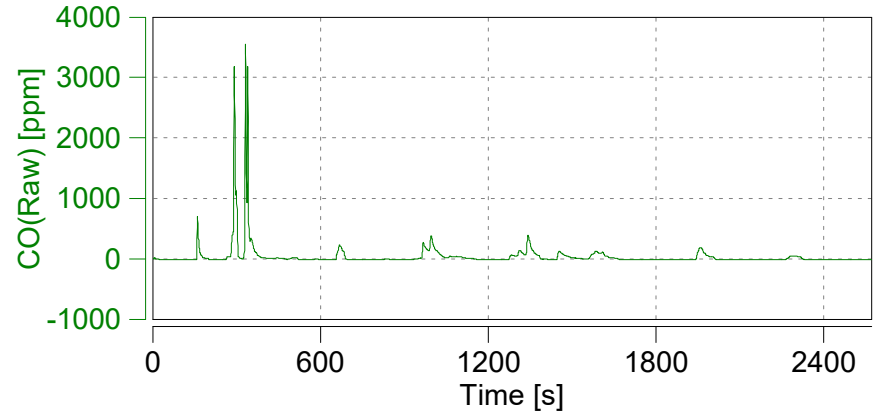
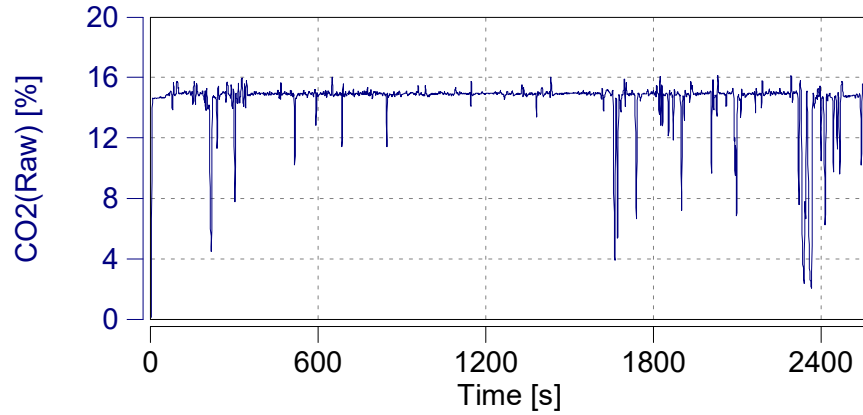
Vehicle: 2017 VW Golf / Independent Vehicle
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

Page: Emissions Raw Data (1)

Start Date: 10/03/2017

Start Time: 15:17:03.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

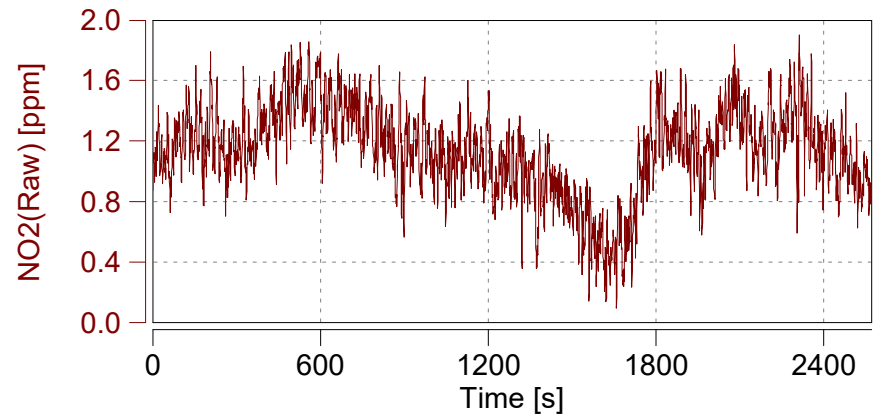
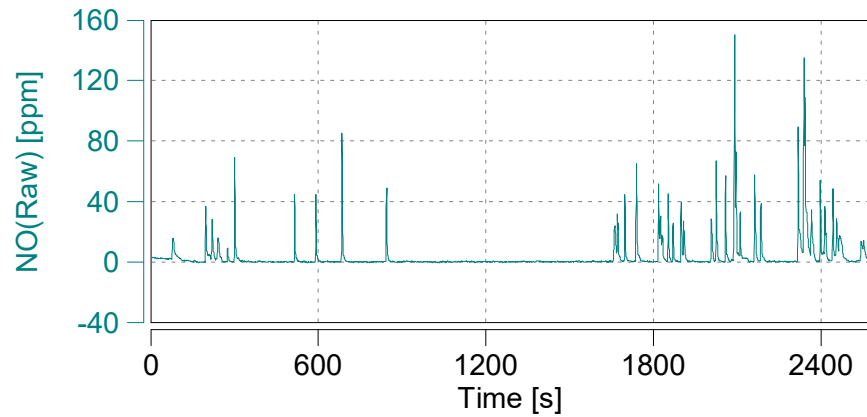
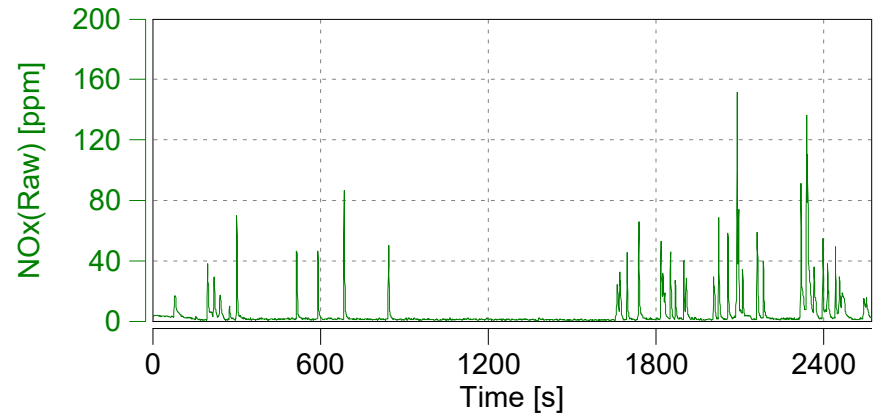
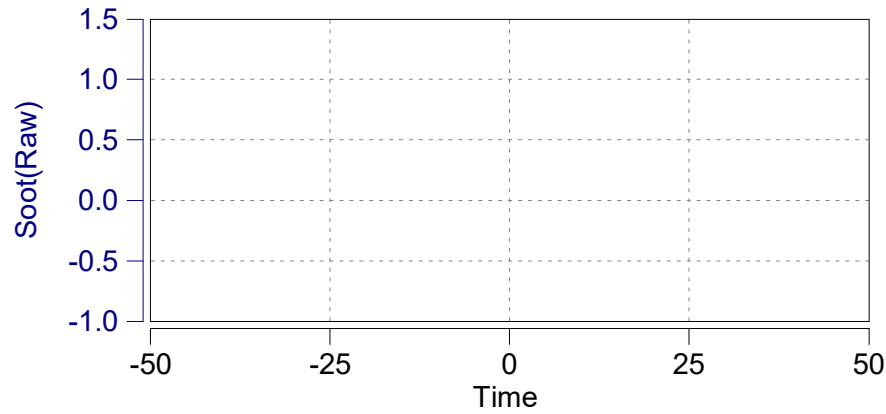
Vehicle: 2017 VW Golf / Independent Vehicle
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

Page: Emissions Raw Data (2)

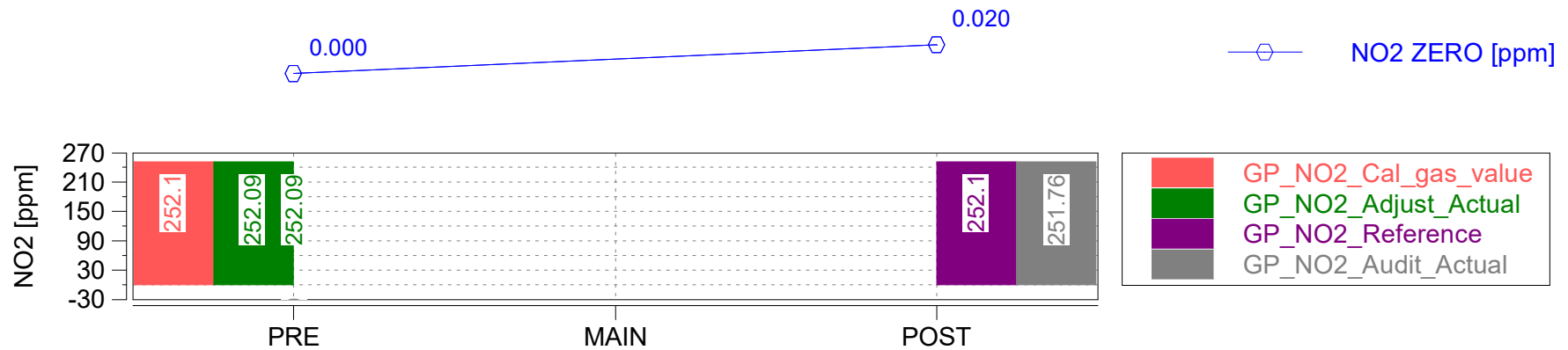
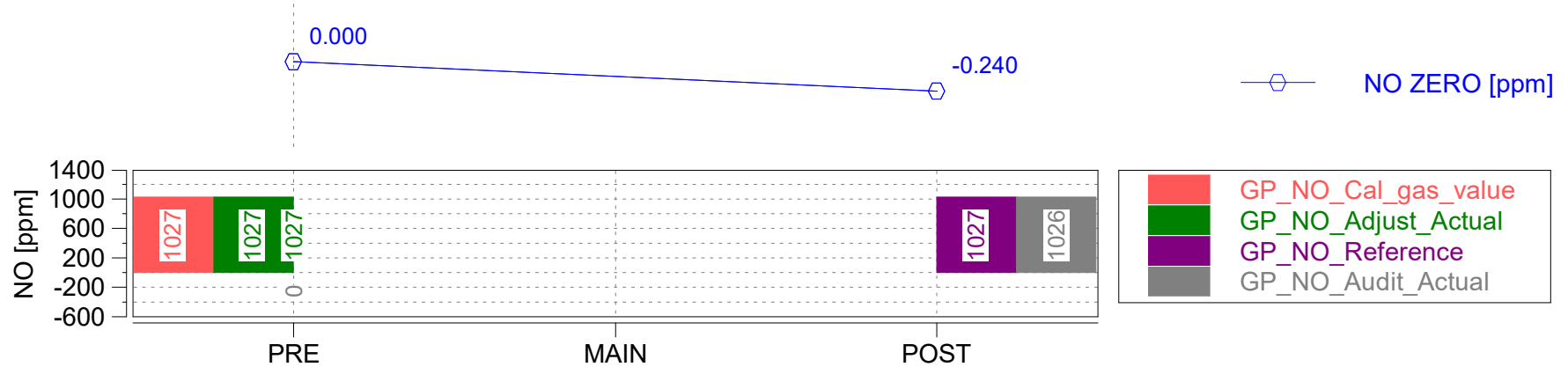
Start Date: 10/03/2017

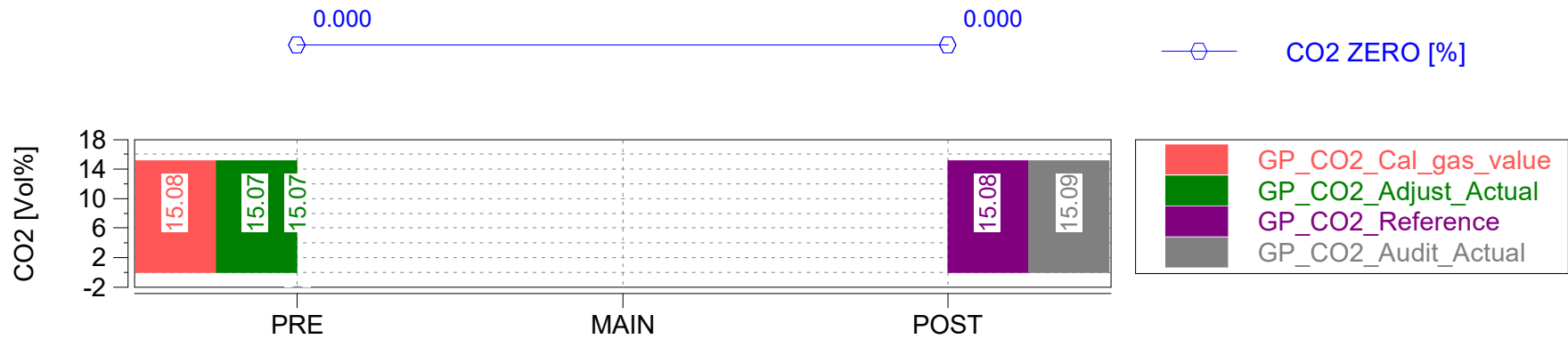
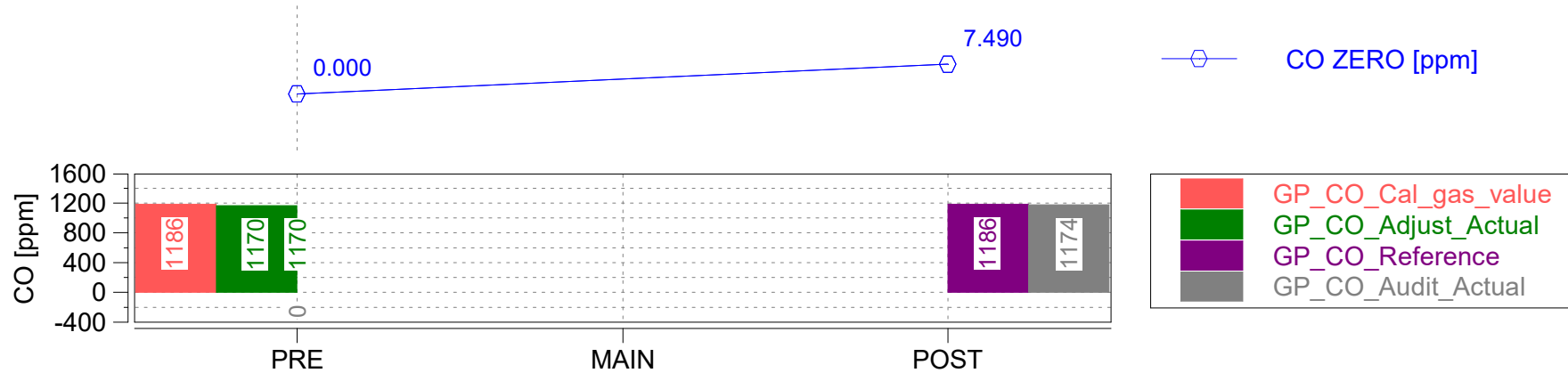
Start Time: 15:17:03.0

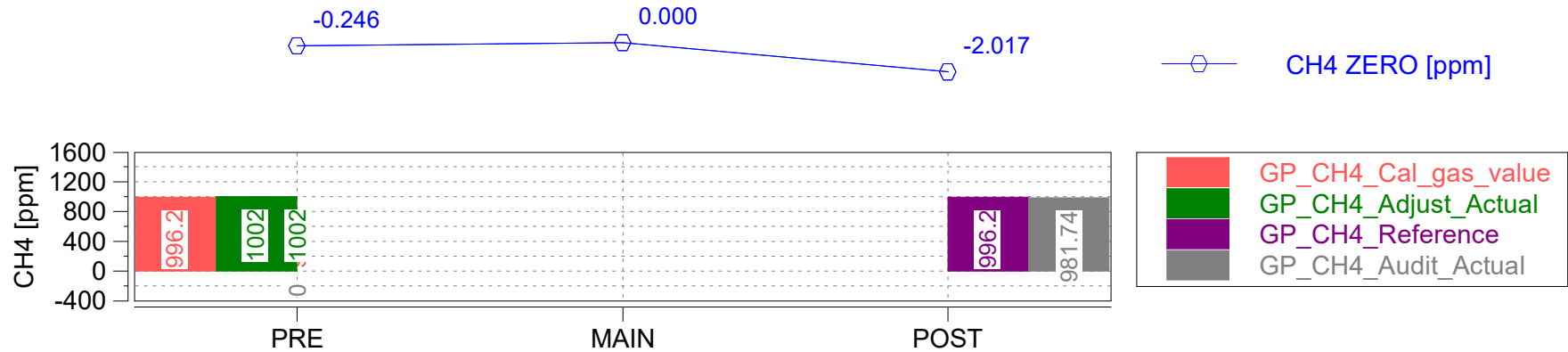
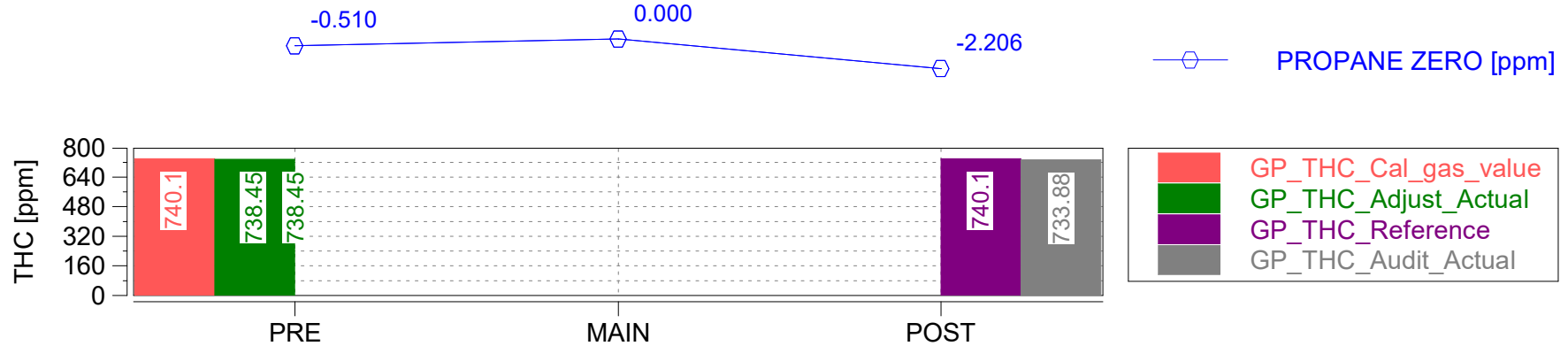


Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Golf / Independent Vehicle
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90







#	Text	Value	Unit
-	----	----	----
1.0	Test Start: Date	-	-
2.0	Test Start: Time	-	-
3.0	Ambient Temperature	IFILE1:TM'Temperature	deg C
4.0	Ambient Temperature TS	0.00000	s
5.0	Ambient Pressure	IFILE1:TM'Pressure	kPa
6.0	Ambient Pressure TS	0.00000	s
7.0	Humidity Type	1.00000	-
8.0	Amb. Rel. Humidity	IFILE1:TM'Humidity	%
9.0	Amb. Rel. Humidity	0.00000	s
10.0	GPS Latitude		deg
11.0	GPS Latitude TS	0.00000	s
12.0	GPS Longitude		deg
13.0	GPS Longitude TS	0.00000	s
14.0	Altitude		m
15.0	Altitude TS	0.00000	s
16.0	GPS Quality		-
17.0	GPS Quality TS	0.00000	s
18.0	GroundSpeed		km/h
19.0	GroundSpeed TS	0.00000	s
20.0	Altitude from topographical map		m
21.0	Altitude TS of topographical map		s
22.0	TRIP_AMBIENT_GPS_AVL	YES	-
23.0	CALC_GPS_GROUNDSPEED	NO	-
24.0	EXHAUST_FLOW_AVL	NO	-
25.0	EXHAUST_FLOW_AVL_EFM	YES	-
26.0	Exhaust Flow Type	2.00000	-
27.0	Mass Flow	IFILE1:TM'PitotEFM_ExhaustG	various
28.0	Mass Flow TS	2.20000	s
29.0	Exhaust Pressure		kPa
30.0	Exhaust Pressure TS	2.20000	s

#	Text	Value	Unit
-	----	----	----
31.0	Exhaust Delta Pressure		kPa
32.0	Exhaust Pressure Delta TS	2.20000	s
33.0	Exhaust Temperature	IFILE1:TM'PitotEFM_ExhaustG	degC
34.0	Exhaust Temperature TS	2.20000	s
35.0	Lambda	N/A	-
36.0	Lambda TS		s
37.0	CO2_DIL		%
38.0	CO2_DIL TS		s
39.0	CVS Volume Flow		m3/min
40.0	TimeShift_CVS_VOL_FLOW		s
41.0	IN_CVS_PRESSURE		kPa
42.0	TimeShift_CVS_PRESSURE		s
43.0	IN_CVS_TEMP		degC
44.0	TimeShift_CVS_TEMP		s
45.0	Dry to Wet Conversion CO2	YES	-
46.0	Dry to Wet Conversion O2	YES	-
47.0	Dry to Wet Conversion NO	NO	-
48.0	Dry to Wet Conversion NO2	NO	-
49.0	Dry to Wet Conversion THC	NO	-
50.0	Dry to Wet Conversion CH4	NO	-
51.0	Dry to Wet Conversion O2	NO	-
52.0	CO2	IFILE1:TM'GPiS_CO2	%
53.0	CO2 TS	-19.90000	s
54.0	OS	IFILE1:TM'GPiS_O2	%
55.0	O2 TS	-20.40000	s
56.0	CO	IFILE1:TM'GPiS_CO	ppm
57.0	CO TS	-19.90000	s
58.0	NO	IFILE1:TM'GPiS_NO	ppm
59.0	NO TS	-18.10000	s
60.0	NO2	IFILE1:TM'GPiS_NO2	ppm

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Golf / Independent Vehicle
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
61.0	NO2 TS	-18.10000	s
62.0	THC	IFILE1:TM'FIDiS_THC_C1	ppm
63.0	THC TS	0.00000	s
64.0	CH4	IFILE1:TM'FIDiS_CH4_C1	ppm
65.0	CH4 TS	0.00000	s
66.0	GAS_PEMS_Ethane_Efficiency	IFILE1:MOVE_AVL4925'GP_Et -	
67.0	GAS_PEMS_Methane_Efficiency	IFILE1:MOVE_AVL4925'GP_M -	
68.0	GAS_PEMS_Methane_Response	IFILE1:MOVE_AVL4925'GP_M -	
69.0	Zero Signal	IFILE1:TM'GPiS_STATE	0/1
70.0	Zero Signal TS	-18.10000	s
71.0	Zero Signal_FIDiS	IFILE1:TM'FIDiS_STATE	0/1
72.0	Zero Signal_FIDiS TS		s
73.0	Species Input Type	4.00000	-
74.0	GASPEMS=AVL493	NO	-
75.0	GASPEMS=AVL493_iX	NO	-
76.0	GASPEMS=AVL492	YES	-
77.0	GASPEMS=AVL4925	YES	-
78.0	PM: Type	4.00000	1=GFB+HC, 2=GFB, 3='PM=S
79.0	Filter ID from IFile	NO	-
80.0	Lab ID from IFile	NO	-
81.0	PM Filter: ID	N/A	ID
82.0	PM Filter: Lab	N/A	Name/ID
83.0	PM Filter: Weight before Test	N/A	mg
84.0	PM Filter: Weight after Test	N/A	mg
85.0	PM (HC Corr): Max. Exhaust Flow	N/A	scfm
86.0	Soot		mg/m3
87.0	Soot TS	-5.00000	s
88.0	Soot Sensor		mg/m3
89.0	Soot Sensor TS		s
90.0	PM Filter: Filter Flow Rate		l/min

#	Text	Value	Unit
-	----	----	----
91.0	PM Filter: Filter Flow Rate TS	-5.00000	s
92.0	PM Filter: Filter Dilution Ratio		-
93.0	PM Filter: Filter Dilution Ratio TS	-5.00000	s
94.0	PM Filter: Filter Trigger		-
95.0	PM Filter: Filter Trigger TS	-5.00000	s
96.0	PMPEMS=AVL494	YES	-
97.0	PMPEMS_AVL494_PROP_DIL	NO	-
98.0	PM dilution ratio min		-
99.0	PM_MaxExhaustFlowRate		-
100.0	PM_ExhaustFlow_Thresh		-
101.0	PM_total_flow_val		-
102.0	PM_total_flow_val_TS		-
103.0	PM_exh_mass_flow		-
104.0	PM_exh_mass_flow_TS		-
105.0	PN		#/cm3
106.0	TimeShift_PN		s
107.0	PN_STATE		-
108.0	PN TS STATE		s
109.0	PNPEMS_AVL496	NO	-
110.0	PN_CorrFactor	1.00000	
111.0	Time Alignment	1.00000	-
112.0	Time Alignment Dataset 1	N/A	0/1
113.0	Time Alignment Dataset 2	N/A	0/1
114.0	Time Alignment Thresh 1	N/A	-
115.0	Time Alignment Thresh 2	N/A	-
116.0			
117.0			
118.0			
119.0			
120.0			

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Golf / Independent Vehicle
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
121.0			
122.0	Trigger		0/1
123.0	Trigger TS		s
124.0	FTIR_NAME_1		-
125.0	FTIR_MW_1		-
126.0	FTIR_CHANNEL_1		-
127.0	FTIR_CHANNEL_TS_1		-
128.0	FTIR_CHANNEL_DRY_1	NO	-
129.0	FTIR_NAME_2		-
130.0	FTIR_MW_2		-
131.0	FTIR_CHANNEL_2		-
132.0	FTIR_CHANNEL_TS_2		-
133.0	FTIR_CHANNEL_DRY_2	NO	-
134.0	FTIR_NAME_3		-
135.0	FTIR_MW_3		-
136.0	FTIR_CHANNEL_3		-
137.0	FTIR_CHANNEL_TS_3		-
138.0	FTIR_CHANNEL_DRY_3	NO	-
139.0	FTIR_NAME_4		-
140.0	FTIR_MW_4		-
141.0	FTIR_CHANNEL_4		-
142.0	FTIR_CHANNEL_TS_4		-
143.0	FTIR_CHANNEL_DRY_4	NO	-
144.0	FTIR_NAME_5		-
145.0	FTIR_MW_5		-
146.0	FTIR_CHANNEL_5		-
147.0	FTIR_CHANNEL_TS_5		-
148.0	FTIR_CHANNEL_DRY_5	NO	-
149.0	FTIR_NAME_6		-
150.0	FTIR_MW_6		-

#	Text	Value	Unit
-	----	----	----
151.0	FTIR_CHANNEL_6		-
152.0	FTIR_CHANNEL_TS_6		-
153.0	FTIR_CHANNEL_DRY_6	NO	-
154.0	FTIR_NAME_7		-
155.0	FTIR_MW_7		-
156.0	FTIR_CHANNEL_7		-
157.0	FTIR_CHANNEL_TS_7		-
158.0	FTIR_CHANNEL_DRY_7	NO	-
159.0	FTIR_NAME_8		-
160.0	FTIR_MW_8		-
161.0	FTIR_CHANNEL_8		-
162.0	FTIR_CHANNEL_TS_8		-
163.0	FTIR_CHANNEL_DRY_8	NO	-
164.0	FTIR_NAME_9		-
165.0	FTIR_MW_9		-
166.0	FTIR_CHANNEL_9		-
167.0	FTIR_CHANNEL_TS_9		-
168.0	FTIR_CHANNEL_DRY_9	NO	-
169.0	FTIR_NAME_10		-
170.0	FTIR_MW_10		-
171.0	FTIR_CHANNEL_10		-
172.0	FTIR_CHANNEL_TS_10		-
173.0	FTIR_CHANNEL_DRY_10	NO	-
174.0	FTIR_NAME_11		-
175.0	FTIR_MW_11		-
176.0	FTIR_CHANNEL_11		-
177.0	FTIR_CHANNEL_TS_11		-
178.0	FTIR_CHANNEL_DRY_11	NO	-
179.0	FTIR_NAME_12		-
180.0	FTIR_MW_12		-

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Golf / Independent Vehicle
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
181.0	FTIR_CHANNEL_12		-
182.0	FTIR_CHANNEL_TS_12		-
183.0	FTIR_CHANNEL_DRY_12	NO	-
184.0	FTIR_NAME_13		-
185.0	FTIR_MW_13		-
186.0	FTIR_CHANNEL_13		-
187.0	FTIR_CHANNEL_TS_13		-
188.0	FTIR_CHANNEL_DRY_13	NO	-
189.0	FTIR_NAME_14		-
190.0	FTIR_MW_14		-
191.0	FTIR_CHANNEL_14		-
192.0	FTIR_CHANNEL_TS_14		-
193.0	FTIR_CHANNEL_DRY_14	NO	-
194.0	FTIR_NAME_15		-
195.0	FTIR_MW_15		-
196.0	FTIR_CHANNEL_15		-
197.0	FTIR_CHANNEL_TS_15		-
198.0	FTIR_CHANNEL_DRY_15	NO	-
199.0	FTIR_NAME_16		-
200.0	FTIR_MW_16		-
201.0	Vehicle Type	2017 VW Golf	-
202.0	Vehicle Info	Independent Vehicle	-
203.0	Engine Type	Gasoline	-
204.0	Engine Info	2.0L	-
205.0	Engine Torque		Nm
206.0	Curb Idle Load		%
207.0	Idle Speed		rpm
208.0	HYBRID_OVC_REF_CO2_gkm		g/km
209.0	Engine Concept	1.00000	-
210.0	Alpha	1.93000	-

#	Text	Value	Unit
-	----	----	----
211.0	Beta	1.00000	
212.0	Gamma	0.00000	
213.0	Delta	0.00000	
214.0	Epsilon	0.03200	
215.0	X_C	83.00000	
216.0	X_H	13.30000	
217.0	X_N	0.00000	
218.0	X_O	3.50000	
219.0	X_S	0.00000	
220.0	Fuel_Density	747.50000	
221.0	rho_exhaust	1.29310	
222.0	U_CO2	1.51800	
223.0	U_CO	0.96600	
224.0	U_NO	1.58700	
225.0	U_NO2	1.58700	
226.0	U_NOx	1.58700	
227.0	U_HC	0.49900	
228.0	U_NMHC	0.47100	
229.0	U_CH4	0.55300	
230.0	U_O2	1.10400	
231.0	Fuel Type	2.00000	-
232.0	exhaust mass flow type (YES/NO)	YES	-
233.0	Distance Calculation Type	1.00000	-
234.0	Velocity Statistics Calculation Type	2.00000	-
235.0	RDE vehicle class	1.00000	-
236.0	TM_CITY0		s
237.0	TM_CITY1		s
238.0	TM_RURAL0		s
239.0	TM_RURAL1		s
240.0	TM_RURAL2_0		s

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Golf / Independent Vehicle
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
241.0	TM_RURAL2_1		s
242.0	Second Rural Part for Time Marks (NO		-
243.0	TM_MW0		s
244.0	TM_MW1		s
245.0	VELOCITY_LIMIT_STOP	2.00000	km/h
246.0	VELOCITY_LIMIT_URBAN	50.00000	km/h
247.0	VELOCITY_LIMIT_RURAL	75.00000	km/h
248.0	Intake Manifold Pressure Type	1.00000	-
249.0	Velocity	IFILE1:TM'OBD_Vehicle_Spee	km/h
250.0	Velocity TS	1.30000	s
251.0	Velocity FACTOR	1.00000	-
252.0	Coolant Temperature	IFILE1:TM'OBD_Engine_Coola	degC
253.0	Coolant Temperature TS	1.30000	s
254.0	Oil Temperature		degC
255.0	Oil Temperature TS	1.30000	s
256.0	Intake Manifold Temperature		degC
257.0	Intake Manifold Temp TS	1.30000	s
258.0	Intake Manifold Pressure	IFILE1:TM'OBD_Intake_manifo	kPa
259.0	Intake Manifold Pressure TS	1.30000	s
260.0	Throttle Position		%
261.0	Throttle TS	1.30000	s
262.0	TYP_IDLE_MASS_FLOW		kg/h
263.0	Torque Type	1.00000	-
264.0	Speed	IFILE1:TM'OBD_Engine_RPM	rpm
265.0	Speed TS	1.30000	s
266.0	Torque		Nm
267.0	Torque TS	1.30000	s
268.0	Friction Torque	N/A	Nm
269.0	Friction Torque TS	N/A	s
270.0	Reference Torque	N/A	Nm

#	Text	Value	Unit
-	----	----	----
271.0	Reference Torque TS	N/A	s
272.0	k_VELINE		-
273.0	D_VELINE		-
274.0	Fuel Flow Type	2.00000	-
275.0	Air Flow Type	1.00000	-
276.0	Fuel Rate		various
277.0	Air Rate		various
278.0	Fuel Rate TS	1.30000	s
279.0	No_Cylinders		-
280.0	Air Rate TS	1.30000	s
281.0	FTIR_CHANNEL_32		-
282.0	FTIR_CHANNEL_TS_32		-
283.0	FTIR_CHANNEL_DRY_32	NO	-
284.0	FTIR_NAME_33		-
285.0	FTIR_MW_33		-
286.0	FTIR_CHANNEL_33		-
287.0	FTIR_CHANNEL_TS_33		-
288.0	FTIR_CHANNEL_DRY_33	NO	-
289.0	FTIR_NAME_34		-
290.0	FTIR_MW_34		-
291.0	FTIR_CHANNEL_34		-
292.0	FTIR_CHANNEL_TS_34		-
293.0	FTIR_CHANNEL_DRY_34	NO	-
294.0	FTIR_NAME_35		-
295.0	FTIR_MW_35		-
296.0	FTIR_CHANNEL_35		-
297.0	FTIR_CHANNEL_TS_35		-
298.0	FTIR_CHANNEL_DRY_35	NO	-
299.0	FTIR_NAME_36		-
300.0	FTIR_MW_36		-

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Golf / Independent Vehicle
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
301.0	FTIR_CHANNEL_36		-
302.0	FTIR_CHANNEL_TS_36		-
303.0	FTIR_CHANNEL_DRY_36	NO	-
304.0	FTIR_NAME_37		-
305.0	FTIR_MW_37		-
306.0	FTIR_CHANNEL_37		-
307.0	FTIR_CHANNEL_TS_37		-
308.0	FTIR_CHANNEL_DRY_37	NO	-
309.0	FTIR_NAME_38		-
310.0	FTIR_MW_38		-
311.0	FTIR_CHANNEL_38		-
312.0	FTIR_CHANNEL_TS_38		-
313.0	FTIR_CHANNEL_DRY_38	NO	-
314.0	FTIR_NAME_39		-
315.0	FTIR_MW_39		-
316.0	FTIR_CHANNEL_39		-
317.0	FTIR_CHANNEL_TS_39		-
318.0	FTIR_CHANNEL_DRY_39	NO	-
319.0	FTIR_NAME_40		-
320.0	FTIR_MW_40		-
321.0	FTIR_CHANNEL_40		-
322.0	FTIR_CHANNEL_TS_40		-
323.0	FTIR_CHANNEL_DRY_40	NO	-
324.0	Legislation Type (1=HDIUT 2=EU H	4.00000	-
325.0	WholeTest_NOx_corr	5.00000	-
326.0	WholeTest_Hum_corr	2.00000	-
327.0	CD_Distance	0.00000	km
328.0	CD_NOx	0.00000	mg/km
329.0	CD_CO	0.00000	mg/km
330.0	CD_CO2	0.00000	g/km

#	Text	Value	Unit
-	----	----	----
331.0	CD_NMHC	0.00000	mg/km
332.0	CD_CH4	0.00000	mg/km
333.0	CD_THC	0.00000	mg/km
334.0	CD_PN		#/km
335.0	WLTC_LOW_SPEED_gkm		g/km
336.0	WLTC_LOW_SPEED_FAC	1.20000	-
337.0	WLTC_MEDIUM_SPEED_gkm		g/km
338.0	WLTC_HIGH_SPEED_gkm		g/km
339.0	WLTC_HIGH_SPEED_FAC	1.10000	-
340.0	WLTC_EXTRA_HIGH_SPEED_gkm		g/km
341.0	WLTC_EXTRA_HIGH_SPEED_FA	1.05000	-
342.0	TOL_NORMAL_DRIVING	25.00000	%
343.0	TOL_SEVERE_DRIVING	50.00000	%
344.0	Increase Tolerance Nomral Driving	NO	-
345.0	Bin1_min		km/h
346.0	Bin2_min		km/h
347.0	Bin3_min		km/h
348.0	Bin1_max		km/h
349.0	Bin2_max		km/h
350.0	Bin3_max		km/h
351.0	Clear_R0	125.40000	N
352.0	Clear_R1	0.29300	Nh/km
353.0	Clear_R2	0.02795	N*(h/km) ²
354.0	Clear_SMK	1470.00000	kg
355.0	Clear_Rated_Power	140.00000	kW
356.0	Clear_Ref_Velocity	70.00000	km/h
357.0	Clear_Ref_Acc	0.45000	m/s ²
358.0	Clear_Smooth	3.00000	s
359.0	EXTC_From_High_Temp	30.00000	degC
360.0	EXTC_To_High_Temp	35.00000	degC

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Golf / Independent Vehicle
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
361.0	EXTC_From_Low_Temp	-7.00000	degC
362.0	EXTC_To_Low_Temp	0.00000	degC
363.0	Euro 6d or Euro 6d temp	NO	-
364.0	EXTC_From_Altitude	700.00000	m
365.0	EXTC_To_Altitude	1300.00000	m
366.0	EXTC_CORR_FAC	1.60000	
367.0	weight cold start (YES/NO)	NO	-
368.0	precon and soak done (YES/NO)	NO	-
369.0	PATH_PRECON_FILE		
370.0	filter velocity (YES/NO)	NO	-
371.0	filter velocity auto(YES/NO)	NO	-
372.0	Ki_CO		
373.0	Ki_CO2		
374.0	Ki_NOx		
375.0	Ki_FACTOR_CO2 (YES/NO)	NO	-
376.0	Ki_OFFSET_CO2 (YES/NO)	NO	-
377.0	Ki_FACTOR_CO (YES/NO)	NO	-
378.0	Ki_OFFSET_CO (YES/NO)	NO	-
379.0	Ki_FACTOR_NOx (YES/NO)	NO	-
380.0	Ki_OFFSET_NOx (YES/NO)	NO	-
381.0	Ki_OFF (YES/NO)	NO	-
382.0	HD legislations	1.00000	-
383.0	RDE legislations	1.00000	-
384.0	Submission Documents (YES/NO)	NO	-
385.0	General Setup Parameters Text	Highway	-
386.0	Legislation Setup Parameters Text	Highway	-
387.0	Trip Info		-
388.0	IN_TIME_REF		-
389.0	Sub-Trip Start: Auto	YES	-
390.0	Sub-Trip Start: Seconds	N/A	s

#	Text	Value	Unit
-	----	----	----
391.0	Sub-Trip End: Auto	YES	-
392.0	Sub-Trip End: Seconds	N/A	s
393.0	Unit System	2.00000	-
394.0	Calculate: PM Emissions	NO	-
395.0	Calculate: PN Emissions	NO	-
396.0	Output: Summary	YES	-
397.0	Output: Emissions	YES	-
398.0	Output: Raw Data	YES	-
399.0	Output: Zero Span	YES	-
400.0	Output: Data Consistency	NO	-
401.0	Output: Window Plots	YES	-
402.0	Fuel Rate ECU vs. EU ISO16183	$y = 10000000000.0000 x - 0.000 R^2=10000000000.000 SEE=$	
403.0	PEMS post processing version	Rel_10_B192	
404.0	Concerto version	480.00000	
405.0	Concerto build	215.00000	
406.0	USERNAME	EFR	

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Golf / Independent Vehicle
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Mountain
Page: Trip Summary

Start Date: 10/03/2017
Start Time: 15:17:03.0



Trip Duration	3139.00	s	ave THC	0.18507	ppm	BS CO2	n/a	g/hphr
Trip Duration (a)	3139.00	s	ave NMHC	1.09146	ppm	BS CO	n/a	g/hphr
Trip Distance	29.42	mi	ave CH4	-0.82399	ppm	BS THC	n/a	g/hphr
Trip Distance (a)	29.42	mi	ave CO	-0.09511	ppm	BS NMHC	n/a	g/hphr
Trip Fuel Cons. (b)	n/a	kg	ave CO2	10.90307	%	BS CH4	n/a	g/hphr
Trip Fuel Cons. (ab)	n/a	kg	ave NOx	6.55486	ppm	BS NO (d)	n/a	g/hphr
Trip Fuel Cons. EU (ac)	2.44	kg	ave PM	n/a	mg/m3	BS NO2	n/a	g/hphr
Trip Fuel Cons. US (ac)	2.42	kg	ave Soot meas	n/a	mg/m3	BS NOx	n/a	g/hphr
Trip Fuel Cons. Volume (b)	n/a	gall	ave Soot	n/a	mg/m3	BS Soot	n/a	g/hphr
Trip Fuel Cons. Volume (ab)	n/a	gall	ave PN	n/a	#/cm3	BS Soot meas	n/a	g/hphr
Trip Fuel Cons. Volume EU (ac)	0.86	gall	tot THC	0.05005	g	BS PM	n/a	g/hphr
Trip Fuel Cons. Volume US (ac)	0.86	gall	tot NMHC	0.04476	g	BS PN	n/a	#/hpr
Trip Fuel Economy (b)	n/a	mpg_US	tot CH4	0.01826	g	DS CO2	250.60056	g/mi
Trip Fuel Economy (ab)	n/a	mpg_US	tot CO	1.04950	g	DS CO	0.03567	g/mi
Trip Fuel Economy EU (ac)	34.07	mpg_US	tot CO2	7373.27867	g	DS THC	0.00170	g/mi
Trip Fuel Economy US (ac)	34.36	mpg_US	tot NO (d)	0.20682	g	DS NMHC	0.00152	g/mi
Trip Av. Eng. Speed	1517.52	rpm	tot NO2	0.09569	g	DS CH4	0.00062	g/mi
Trip Av. Torque	n/a	lbft	tot NOx	0.30168	g	DS NO (d)	0.00703	g/mi
Trip Av. Power	n/a	hp	tot Soot	n/a	g	DS NO2	0.00325	g/mi
Trip Work	n/a	hphr	tot Soot meas	n/a	g	DS NOx	0.01025	g/mi
Trip Exhaust Mass	40.47	kg	tot PM	n/a	g	DS Soot	n/a	g/mi
Trip Exhaust Mass EU (ac)	n/a	kg	tot PN	n/a	#	DS Soot meas	n/a	g/mi
Trip Exhaust Mass US (ac)	n/a	kg	PM measurement type	0.00000	-	DS PM	n/a	g/mi
Trip Av. Amb. Temperature	73.87	deg_F	PM correction type	1.00000	alpha(HC)	DS PN	n/a	#/mi
Trip Av. Humidity	52.62	%	tot Soot on PM filter (estim.)	n/a	mg	FS CO2	n/a	g/kg
Fuel Type	Petrol (E10)		Soot --> PM simple scaling factor	1.00000	-	FS CO	n/a	g/kg
			Soot --> PM alpha scaling factor	0.00000	-	FS THC	n/a	g/kg
			Trip Av. Veh. Speed	33.74347	mi/hr	FS NMHC	n/a	g/kg
			Trip Velocity Zero	10.44919	%	FS CH4	n/a	g/kg
			Trip Velocity Urban	43.38961	%	FS NO (d)	n/a	g/kg
			Trip Velocity Rural	24.27525	%	FS NO2	n/a	g/kg
			Trip Velocity Motorway	32.33514	%	FS NOx	n/a	g/kg
						FS Soot	n/a	g/kg
						FS Soot meas	n/a	g/kg
						FS PM	n/a	g/kg
						FS PN	n/a	#/kg

(a) GAS PEMS measurement state only, (b) based on fuel rate input (ECU, Fuel Meter), (c) calculated from carbon balance
(d) NO calculated using molecular weight of NO2

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Golf / Independent Vehicle
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Mountain

Page: Trip Summary Drift Corrected

Start Date: 10/03/2017

Start Time: 15:17:03.0

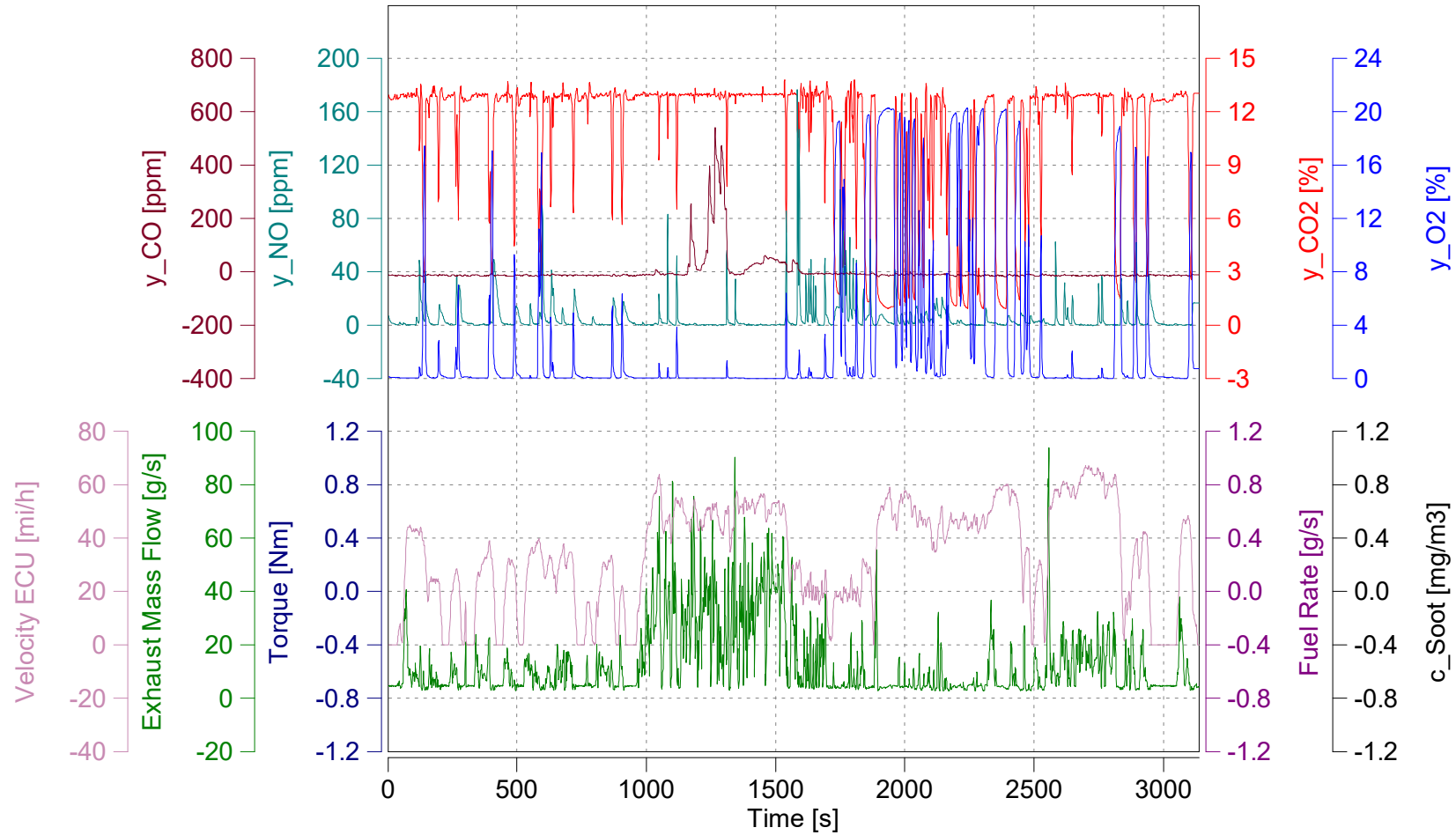


Trip Duration	3139.00	s	ave THC DC	0.25044	ppm	BS CO2 DC	n/a	g/hphr
Trip Duration (a)	3139.00	s	ave NMHC DC	1.03617	ppm	BS CO DC	n/a	g/hphr
Trip Distance	29.42	mi	ave CH4 DC	-0.71429	ppm	BS THC DC	n/a	g/hphr
Trip Distance (a)	29.42	mi	ave CO DC	-0.09621	ppm	BS NMHC DC	n/a	g/hphr
Trip Fuel Cons. (b)	n/a	kg	ave CO2 DC	10.90307	%	BS CH4 DC	n/a	g/hphr
Trip Fuel Cons. (ab)	n/a	kg	ave NOx DC	6.55624	ppm	BS NO DC (d)	n/a	g/hphr
Trip Fuel Cons. EU (ac)	2.44	kg	ave PM	n/a	mg/m3	BS NO2 DC	n/a	g/hphr
Trip Fuel Cons. US (ac)	2.42	kg	ave Soot meas	n/a	mg/m3	BS NOx DC	n/a	g/hphr
Trip Fuel Cons. Volume (b)	n/a	gall	ave Soot	n/a	mg/m3	BS Soot	n/a	g/hphr
Trip Fuel Cons. Volume (ab)	n/a	gall	ave PN DC	n/a	#/cm3	BS Soot meas	n/a	g/hphr
Trip Fuel Cons. Volume EU (ac)	0.86	gall	tot THC DC	0.06772	g	BS PM	n/a	g/hphr
Trip Fuel Cons. Volume US (ac)	0.86	gall	tot NMHC DC	0.05682	g	BS PN DC	n/a	#/hpr
Trip Fuel Economy (b)	n/a	mpg_US	tot CH4 DC	0.01852	g	DS CO2 DC	250.60056	g/mi
Trip Fuel Economy (ab)	n/a	mpg_US	tot CO DC	1.06162	g	DS CO DC	0.03608	g/mi
Trip Fuel Economy EU (ac)	34.07	mpg_US	tot CO2 DC	7373.27867	g	DS THC DC	0.00230	g/mi
Trip Fuel Economy US (ac)	34.36	mpg_US	tot NO DC (d)	0.20683	g	DS NMHC DC	0.00193	g/mi
Trip Av. Eng. Speed	1517.52	rpm	tot NO2 DC	0.09576	g	DS CH4 DC	0.00063	g/mi
Trip Av. Torque	n/a	lbft	tot NOx DC	0.30176	g	DS NO DC (d)	0.00703	g/mi
Trip Av. Power	n/a	hp	tot Soot	n/a	g	DS NO2 DC	0.00325	g/mi
Trip Work	n/a	hphr	tot Soot meas	n/a	g	DS NOx DC	0.01026	g/mi
Trip Exhaust Mass	40.47	kg	tot PM	n/a	g	DS Soot	n/a	g/mi
Trip Exhaust Mass EU (ac)	n/a	kg	tot PN DC	n/a	#	DS Soot meas	n/a	g/mi
Trip Exhaust Mass US (ac)	n/a	kg	PM measurement type	0.00000	-	DS PM	n/a	g/mi
Trip Av. Amb. Temperature	73.87	deg_F	PM correction type	1.00000	alpha(HC)	DS PN DC	n/a	#/mi
Trip Av. Humidity	52.62	%	tot Soot on PM filter (estim.)	n/a	mg	FS CO2 DC	n/a	g/kg
Fuel Type	Petrol (E10)		Soot --> PM simple scaling factor	1.00000	-	FS CO DC	n/a	g/kg
			Soot --> PM alpha scaling factor	0.00000	-	FS THC DC	n/a	g/kg
			Trip Av. Veh. Speed	33.74347	mi/hr	FS NMHC DC	n/a	g/kg
			Trip Velocity Zero	10.44919	%	FS CH4 DC	n/a	g/kg
			Trip Velocity Urban	43.38961	%	FS NO DC (d)	n/a	g/kg
			Trip Velocity Rural	24.27525	%	FS NO2 DC	n/a	g/kg
			Trip Velocity Motorway	32.33514	%	FS NOx DC	n/a	g/kg
						FS Soot	n/a	g/kg
						FS Soot meas	n/a	g/kg
						FS PM	n/a	g/kg
						FS PN DC	n/a	#/kg

(a) GAS PEMS measurement state only, (b) based on fuel rate input (ECU, Fuel Meter), (c) calculated from carbon balance
 (d) NO calculated using molecular weight of NO2

Concerto Version: 480 Build 215, Serial Number: 8468
 M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Golf / Independent Vehicle
 Engine: Gasoline / 2.0L
 NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
 Dry / Wet Corr.: 2 - CFR40 §86.1342-90



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

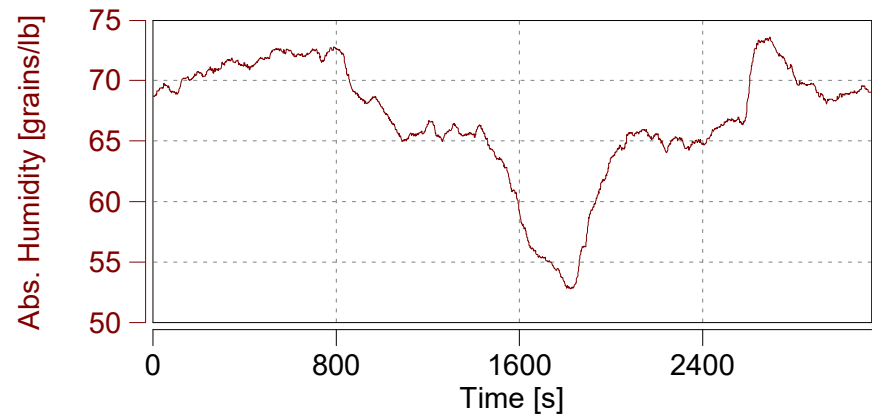
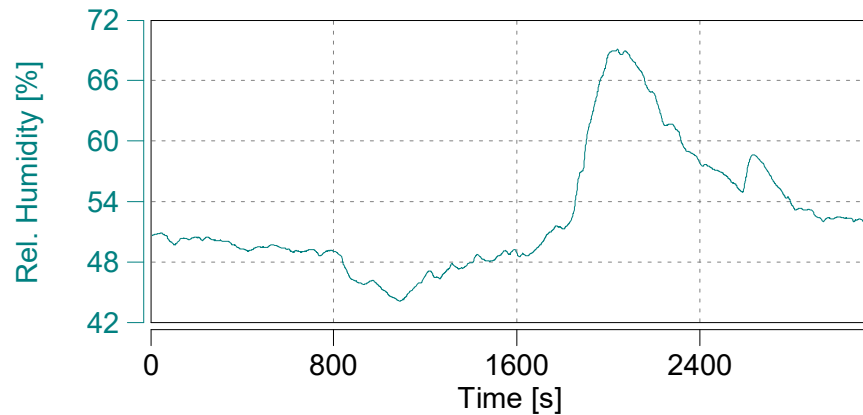
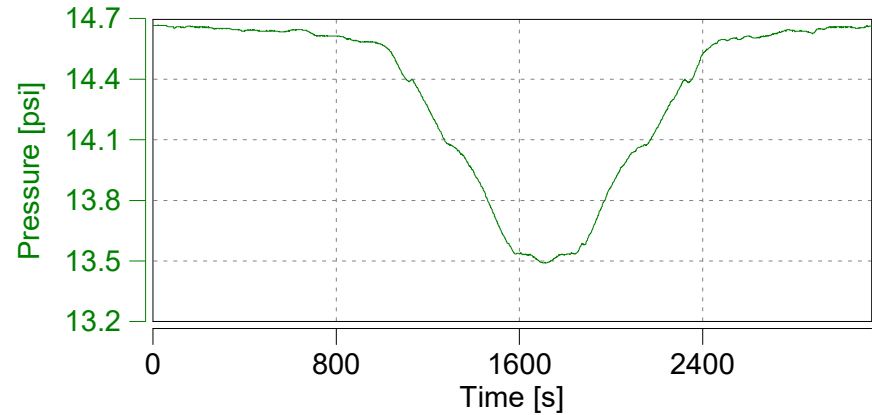
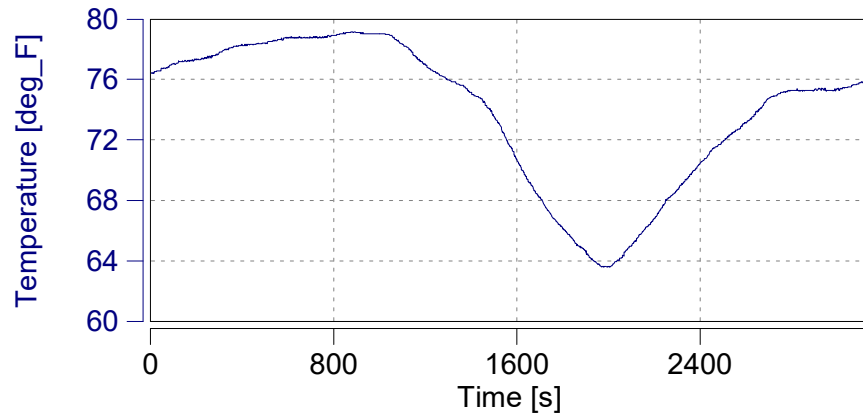
Vehicle: 2017 VW Golf / Independent Vehicle
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Mountain

Page: Ambient Conditions

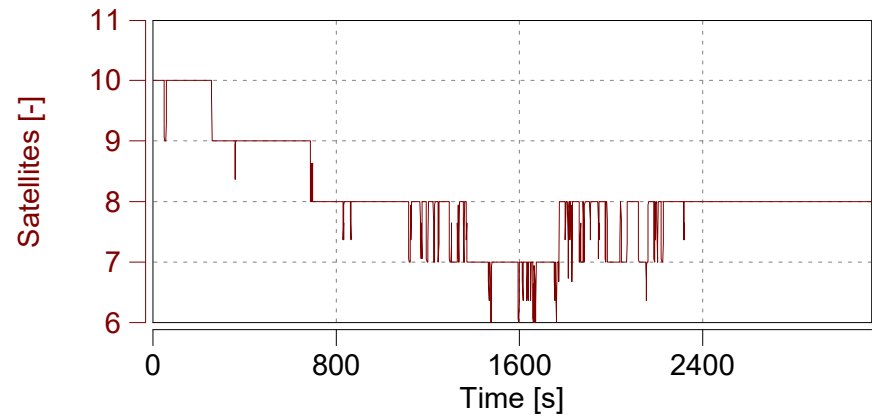
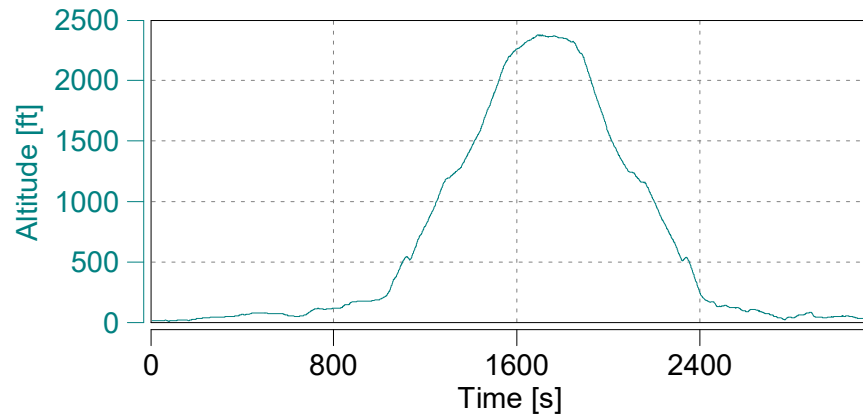
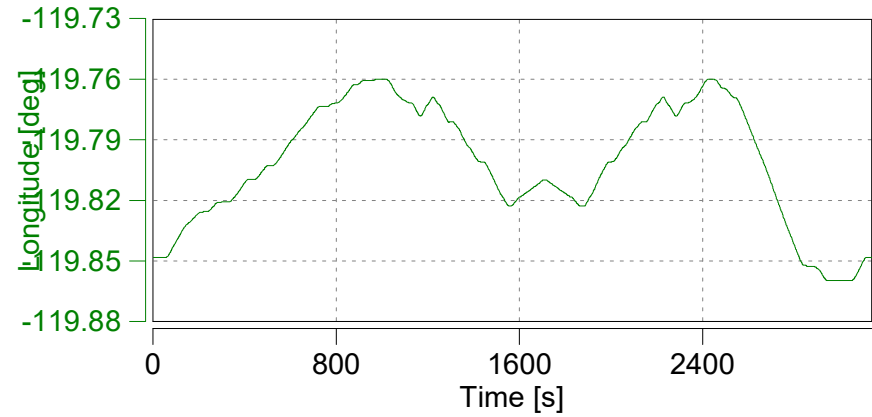
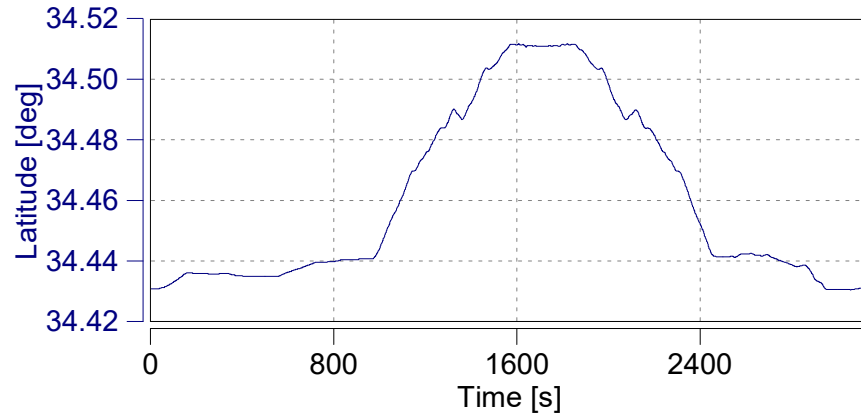
Start Date: 10/03/2017

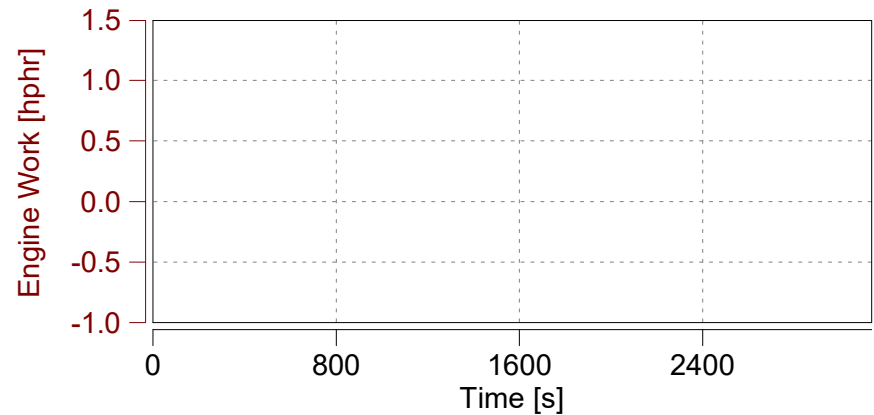
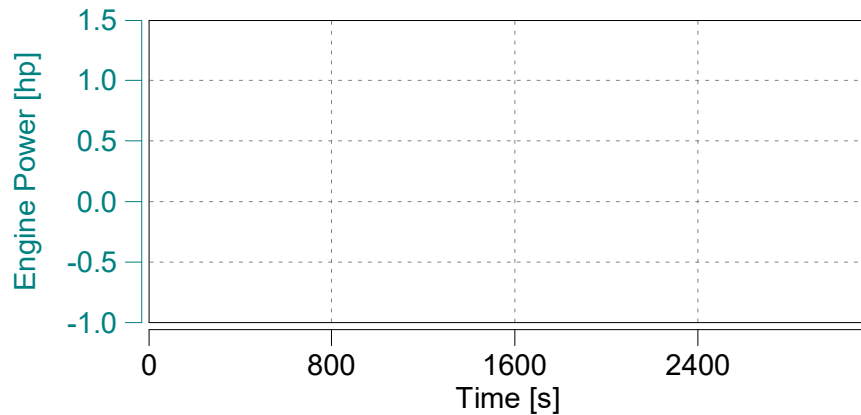
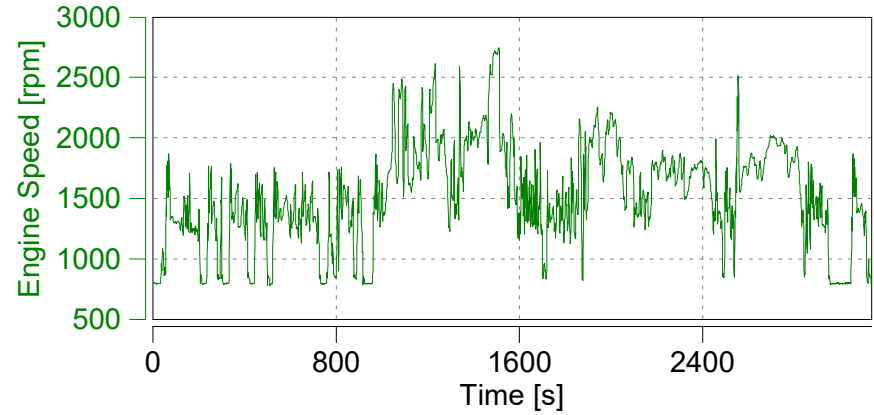
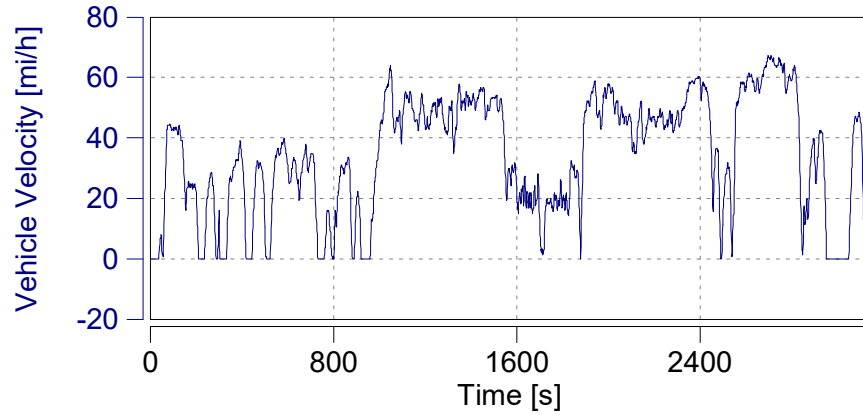
Start Time: 15:17:03.0

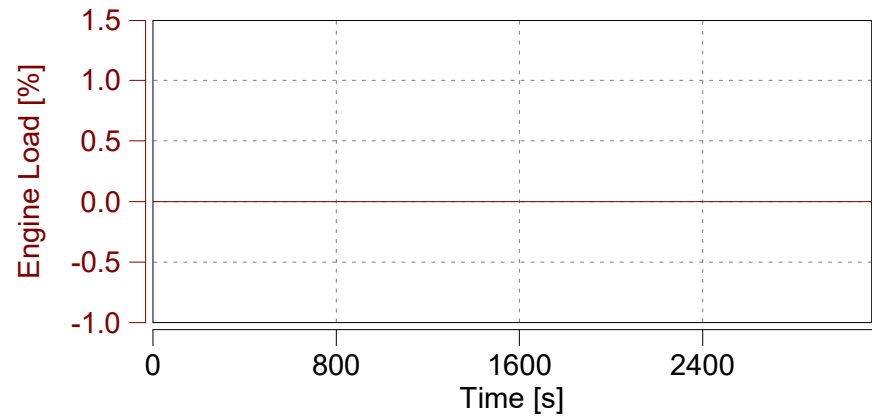
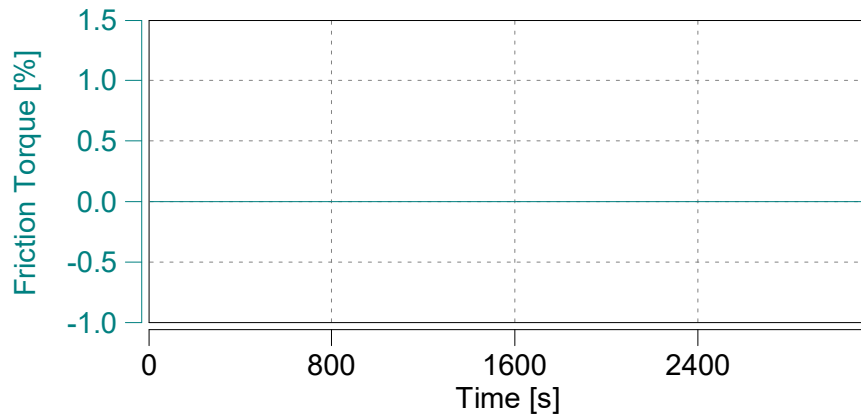
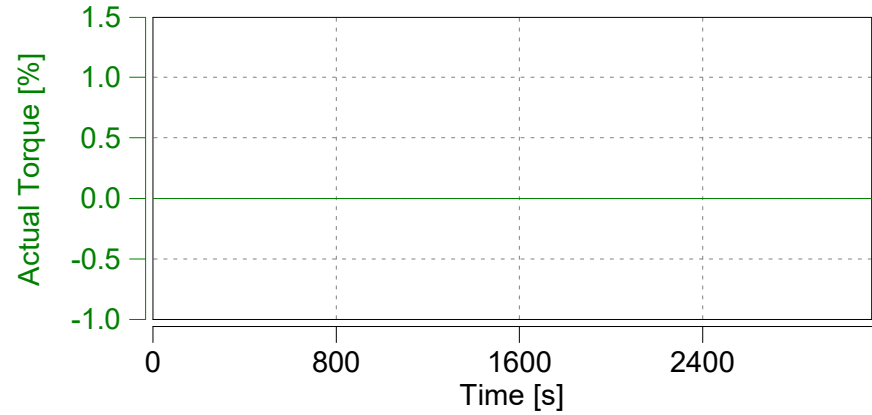
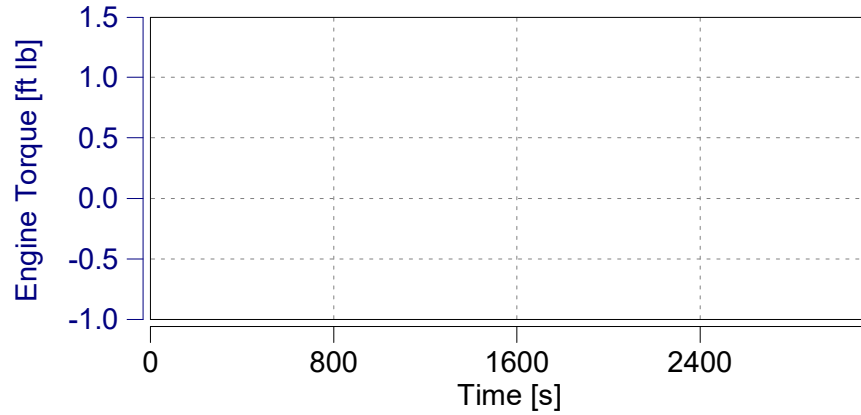


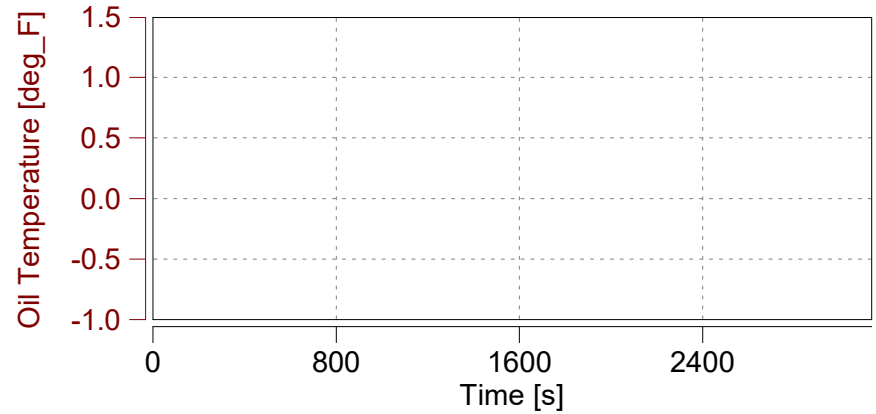
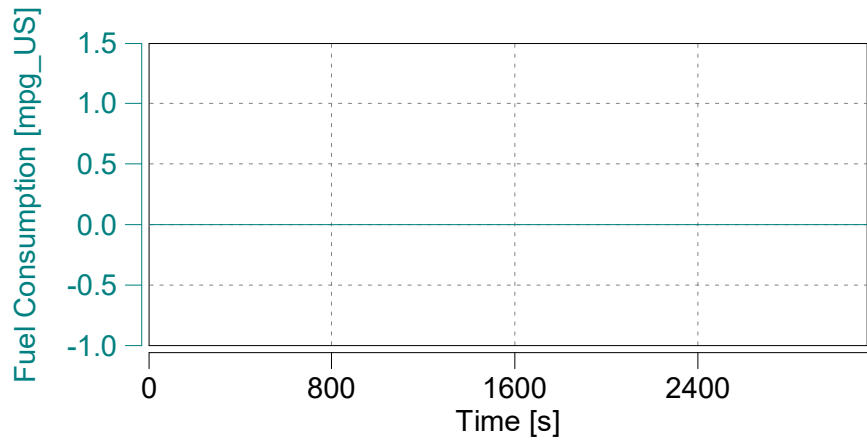
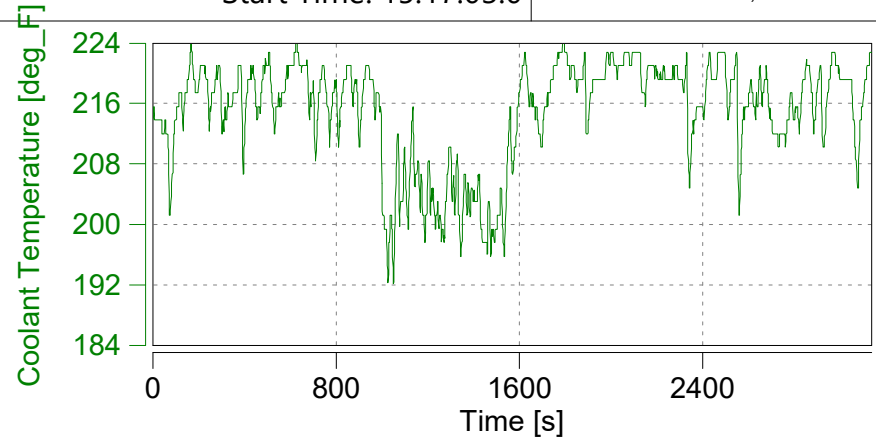
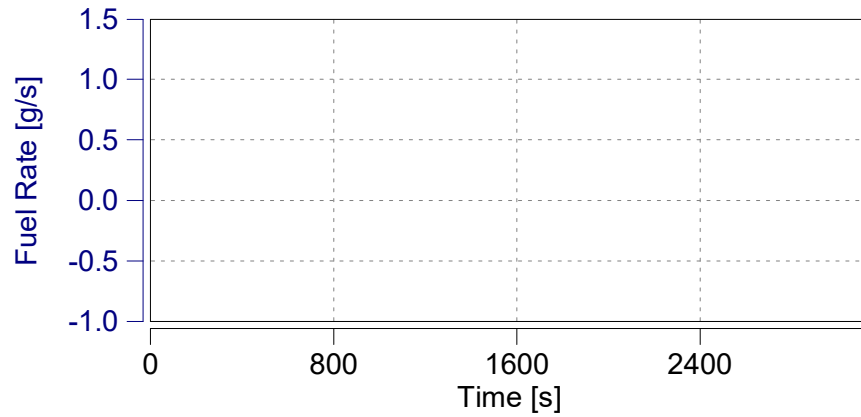
Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

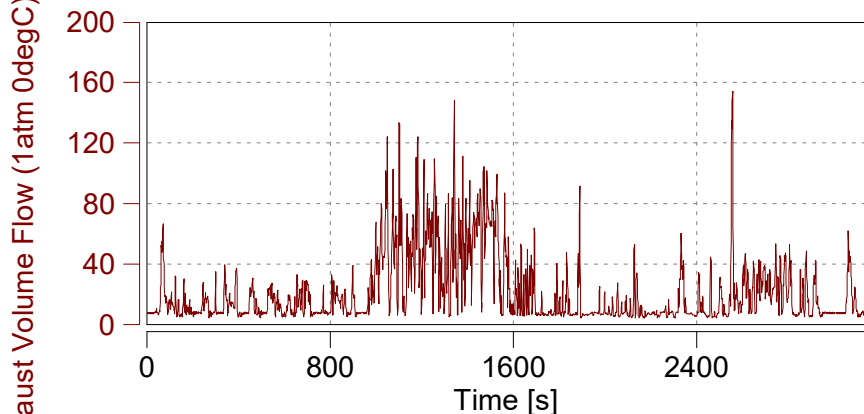
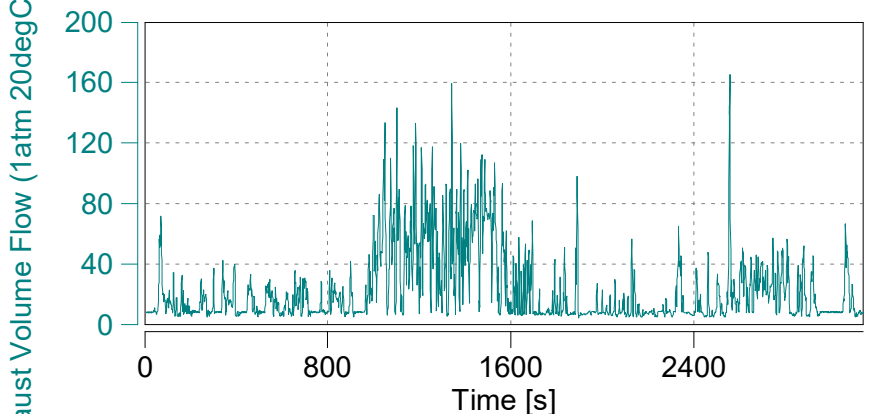
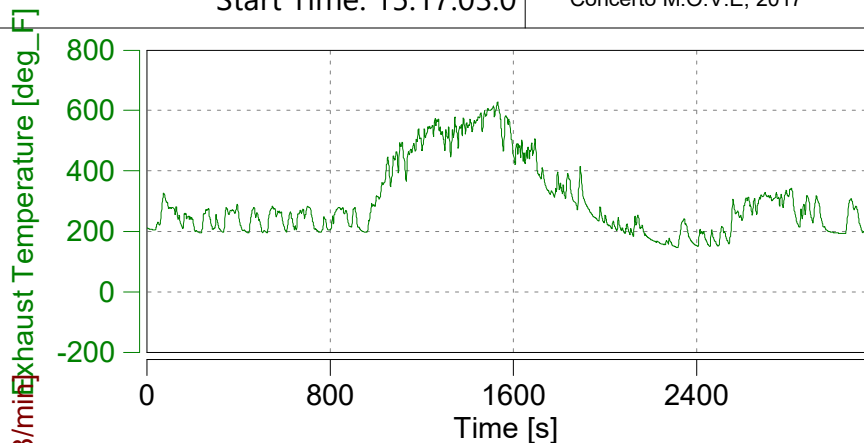
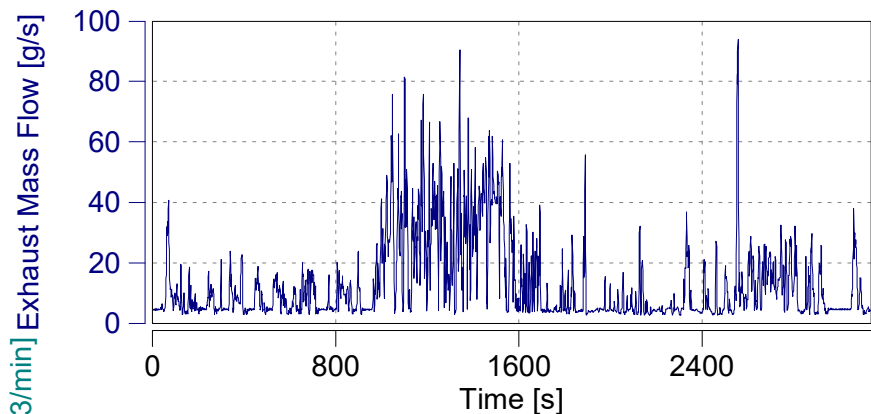
Vehicle: 2017 VW Golf / Independent Vehicle
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90









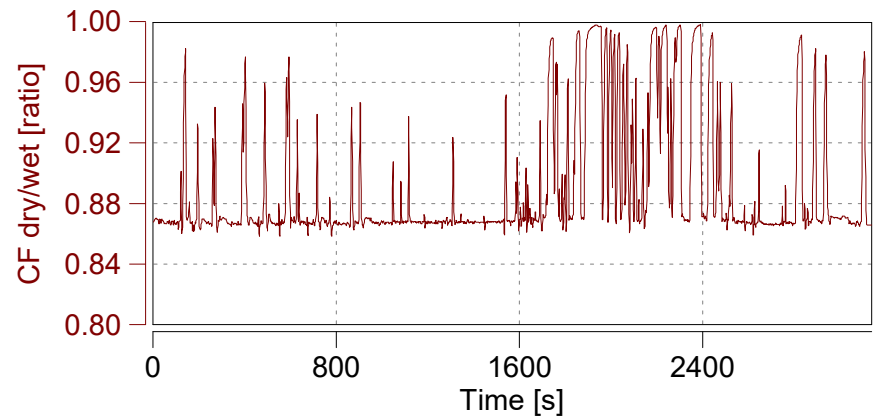
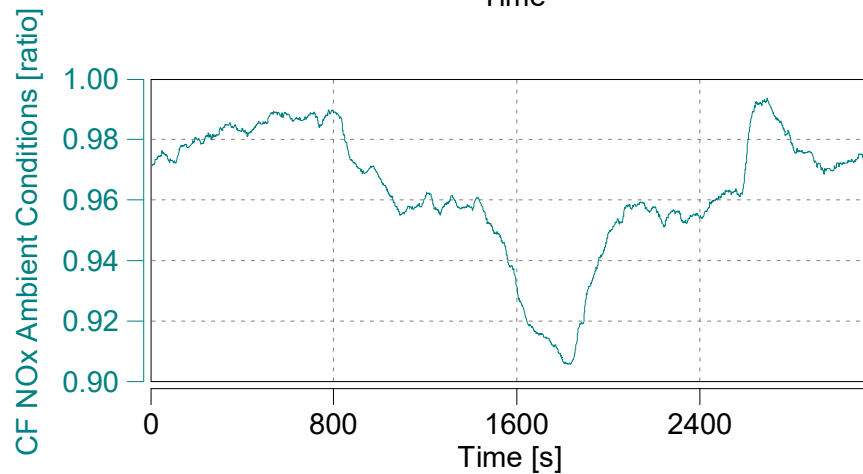
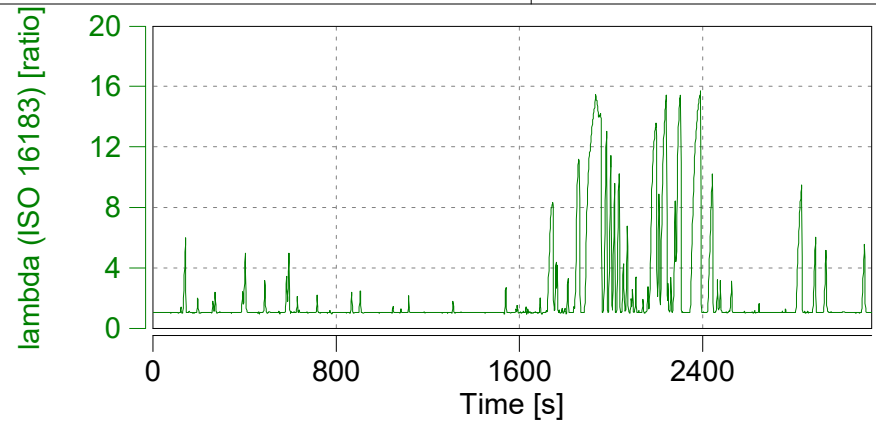
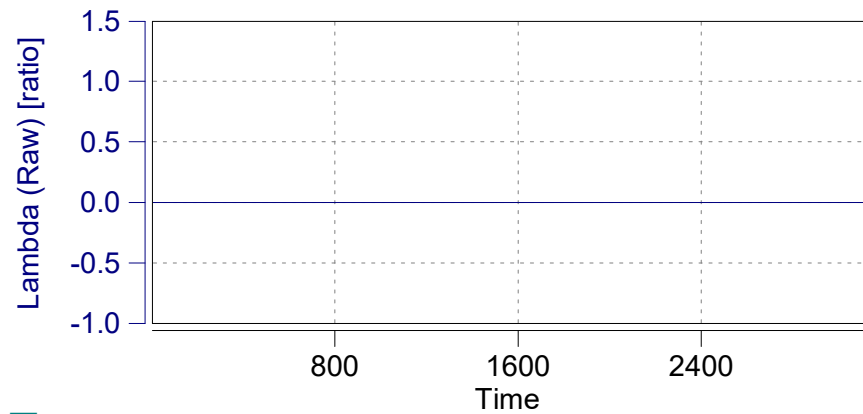


Case: Mountain

Page: Exhaust Flow (2)

Start Date: 10/03/2017

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Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

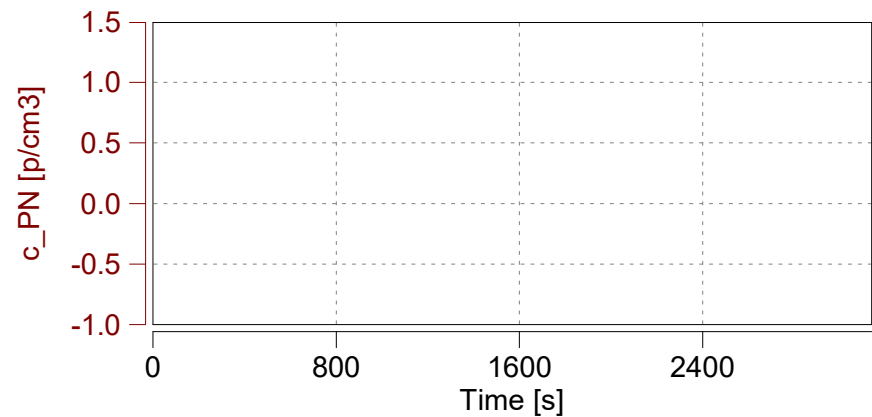
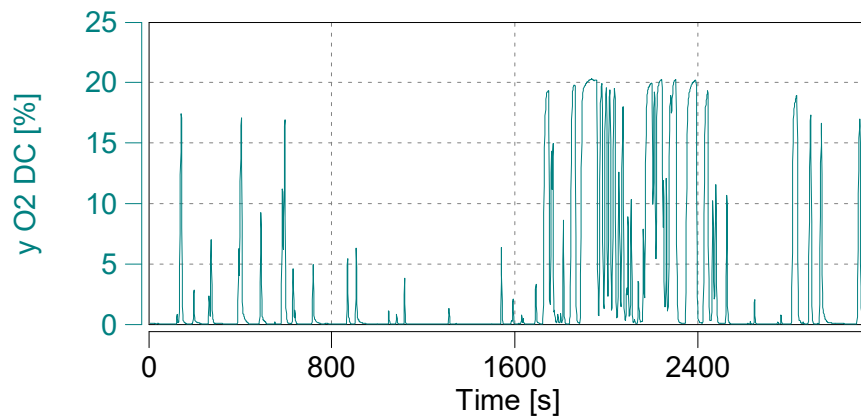
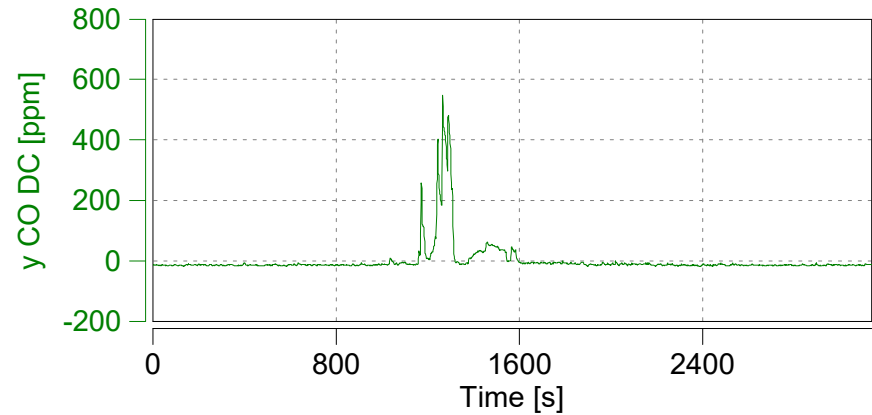
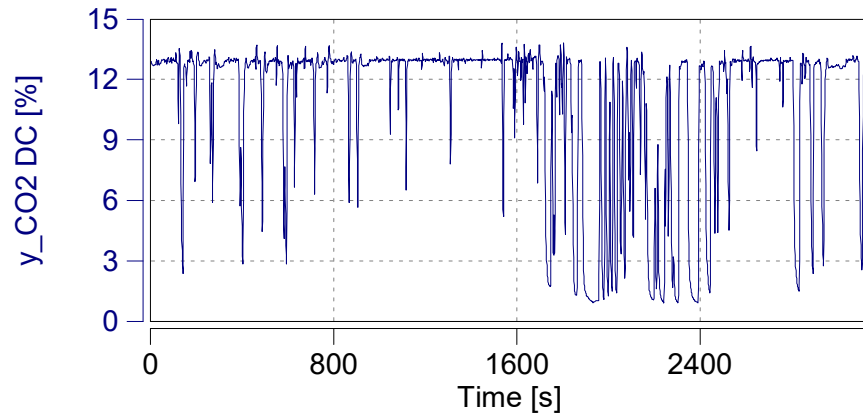
Vehicle: 2017 VW Golf / Independent Vehicle
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Mountain

Page: Corrected Emissions (1)

Start Date: 10/03/2017

Start Time: 15:17:03.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

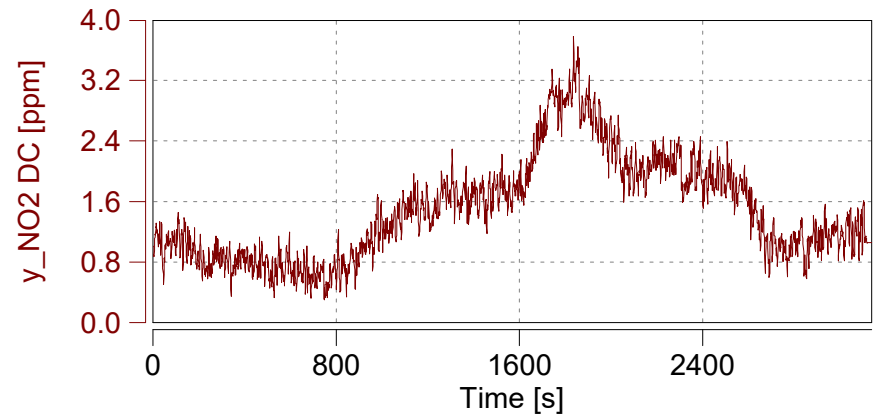
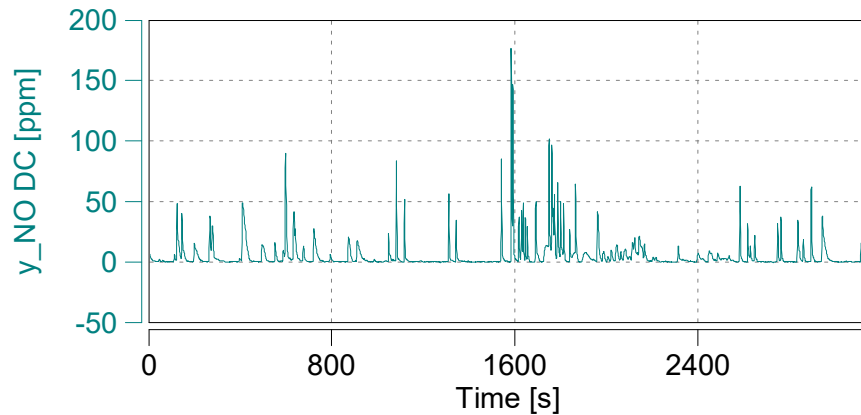
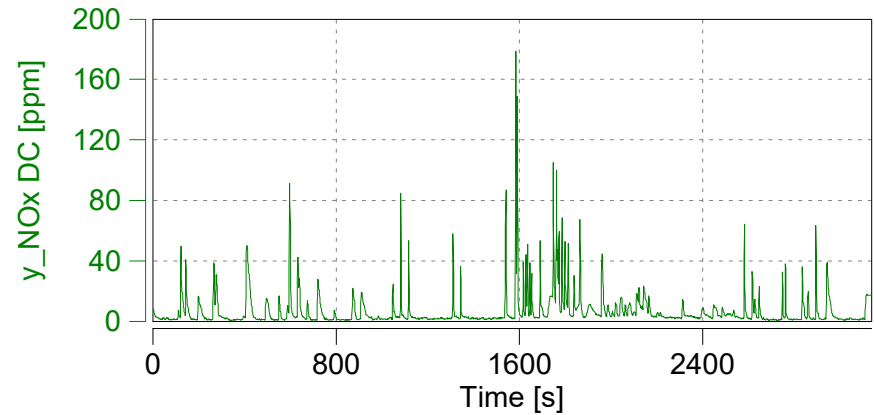
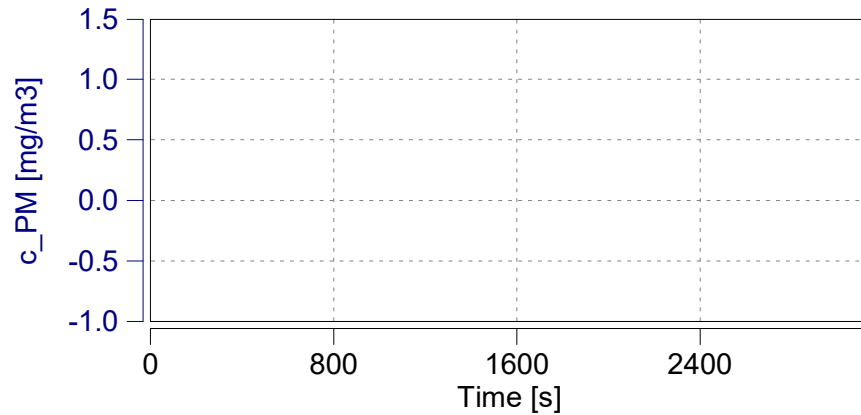
Vehicle: 2017 VW Golf / Independent Vehicle
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Mountain

Page: Corrected Emissions (2)

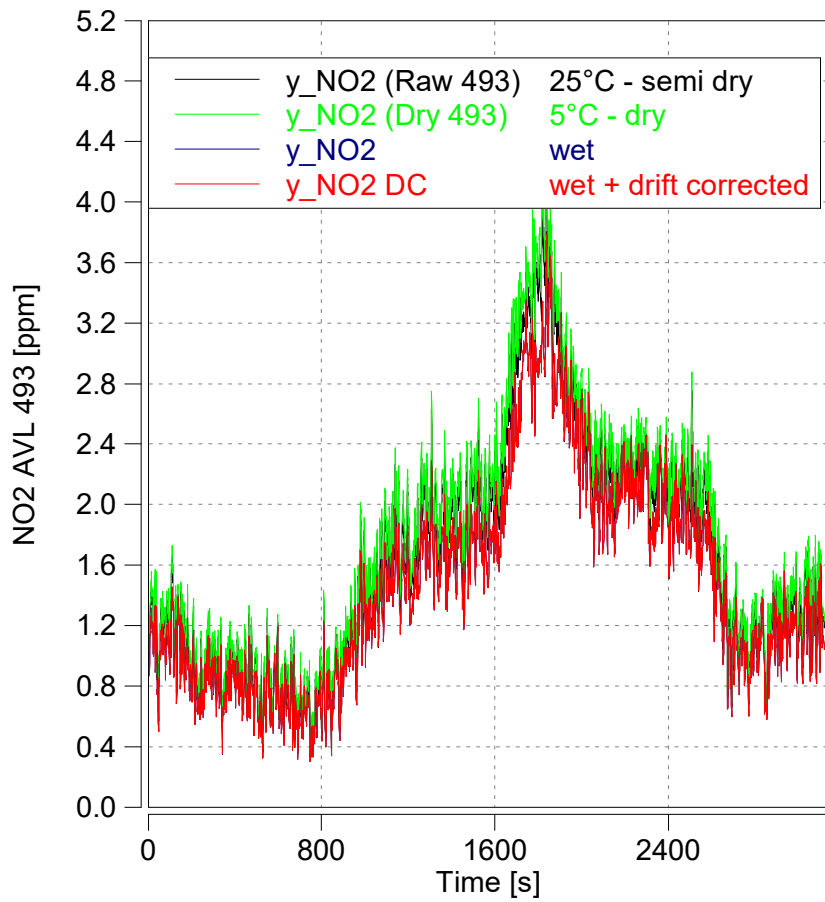
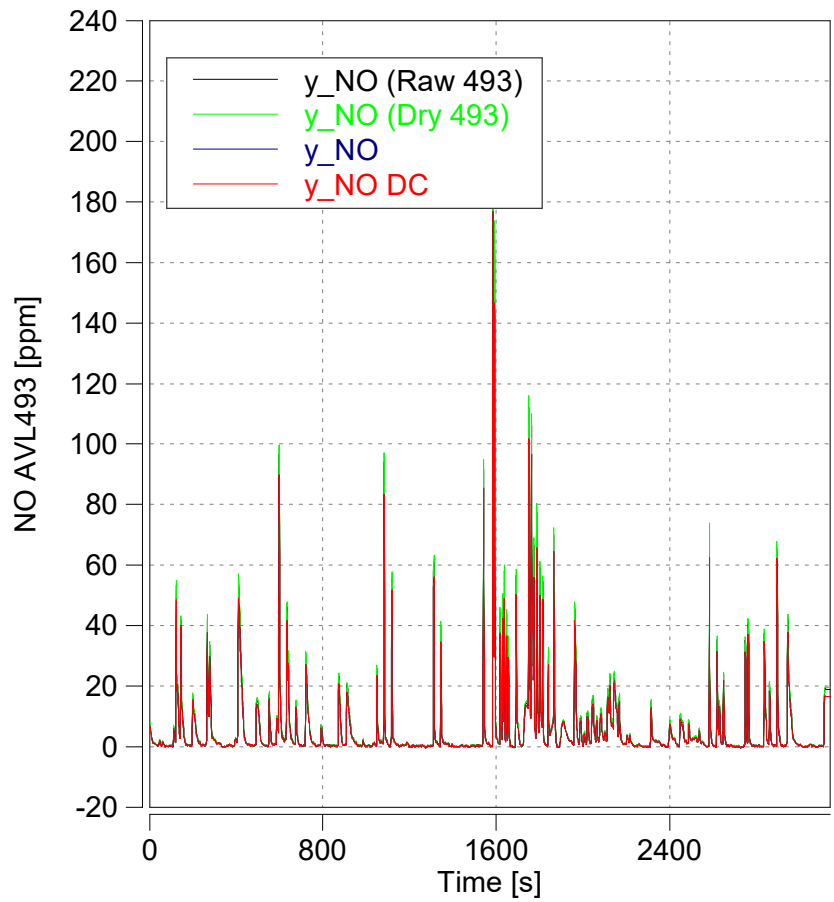
Start Date: 10/03/2017

Start Time: 15:17:03.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

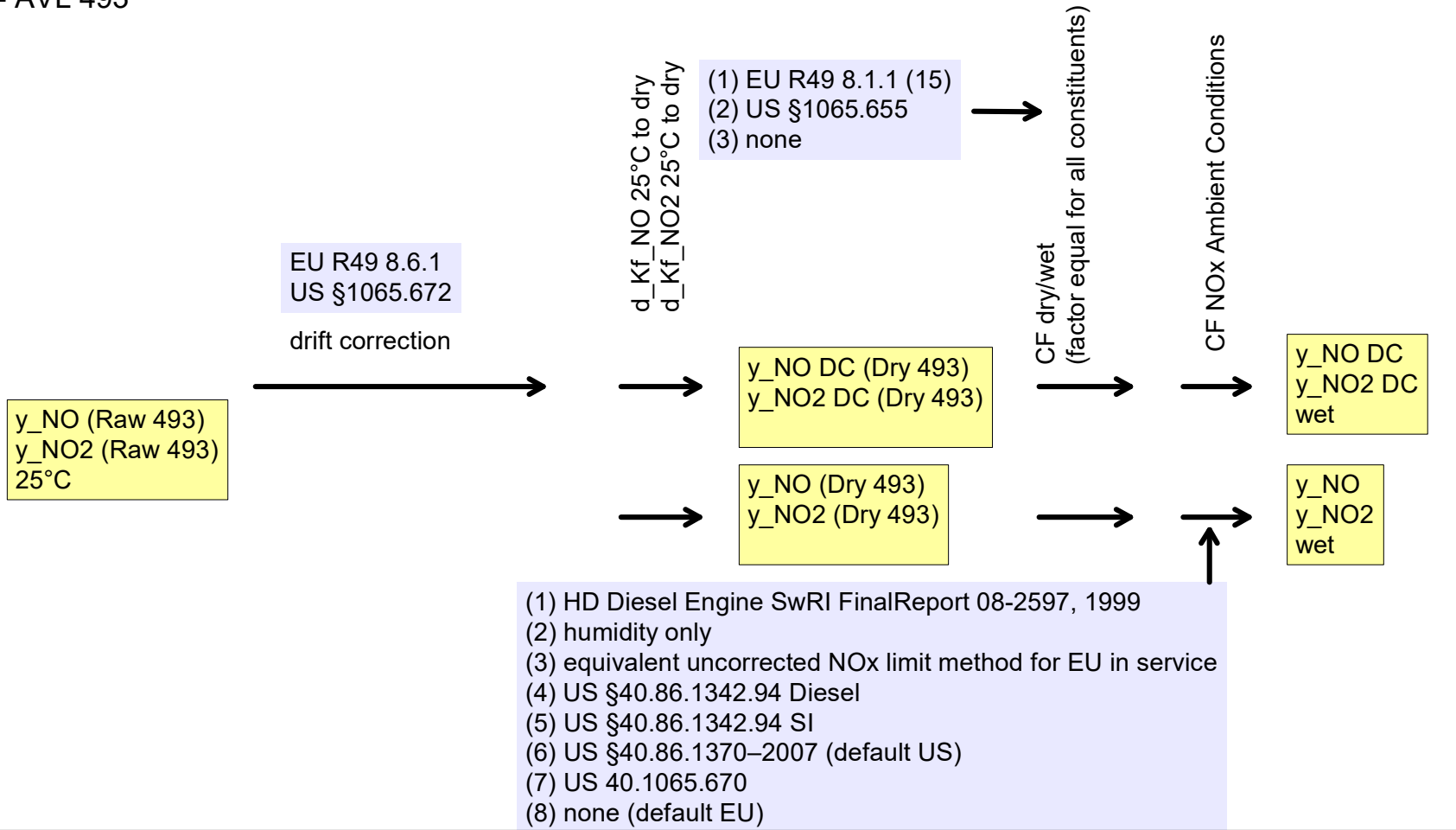
Vehicle: 2017 VW Golf / Independent Vehicle
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Golf / Independent Vehicle
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

NOx - AVL 493

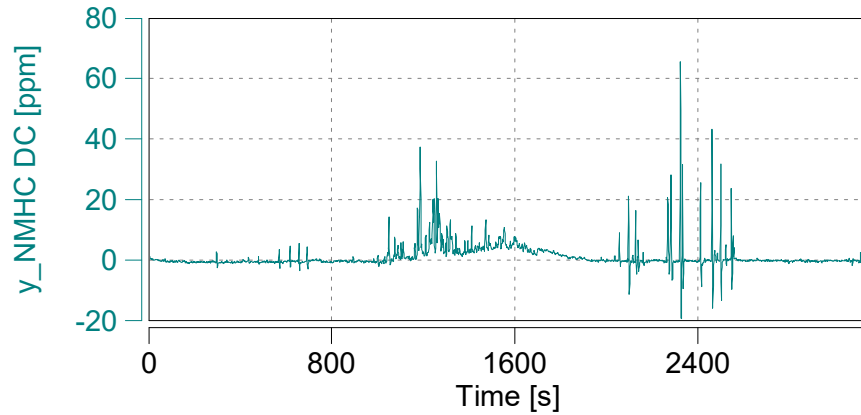
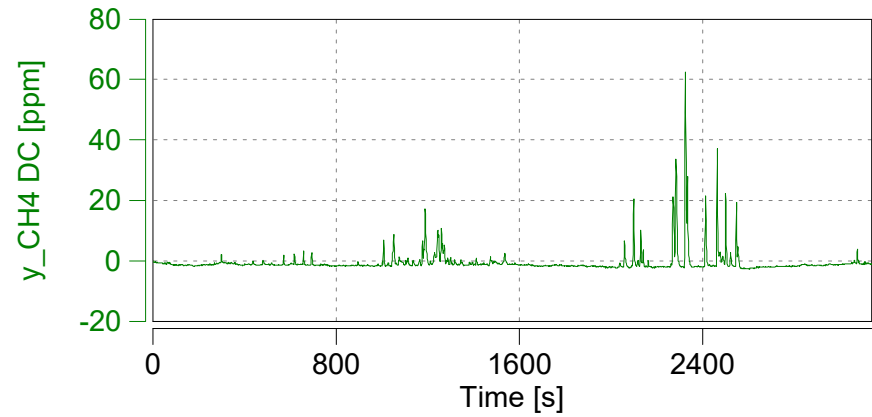
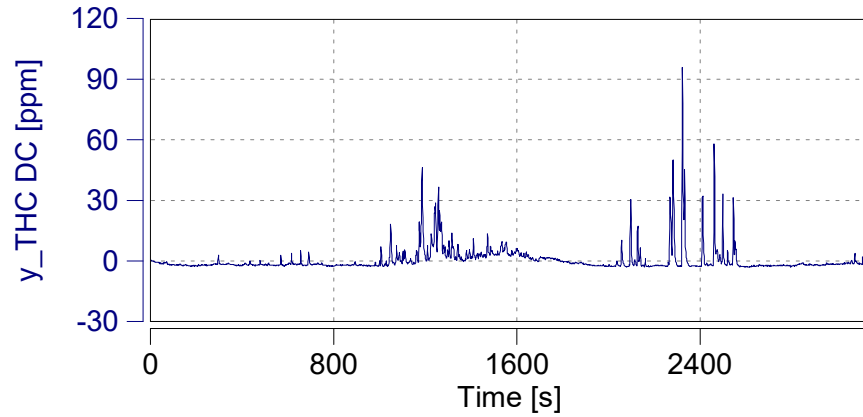


Case: Mountain

Page: Corrected Emissions (5)

Start Date: 10/03/2017

Start Time: 15:17:03.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

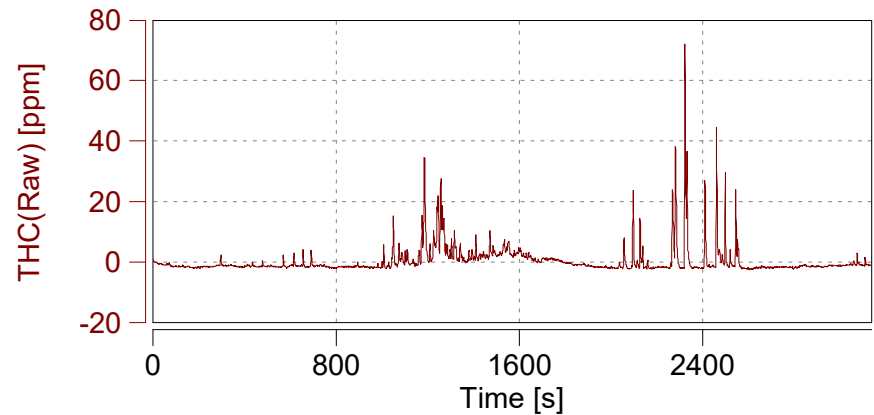
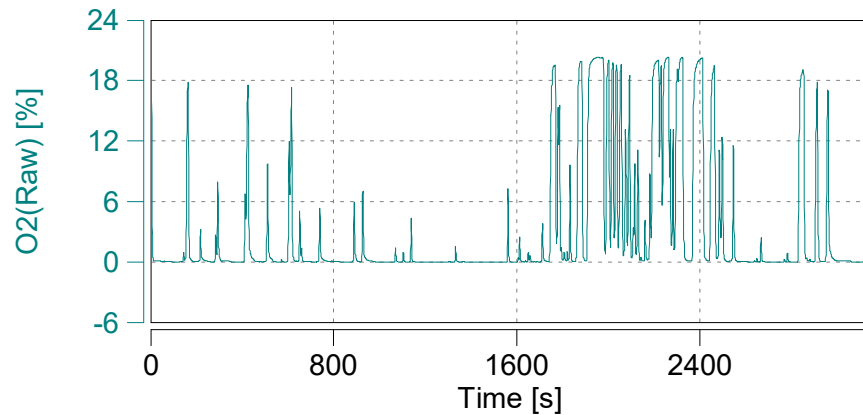
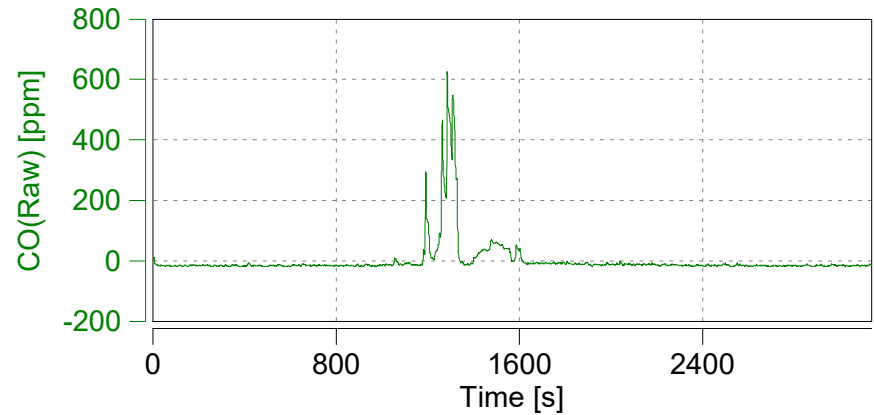
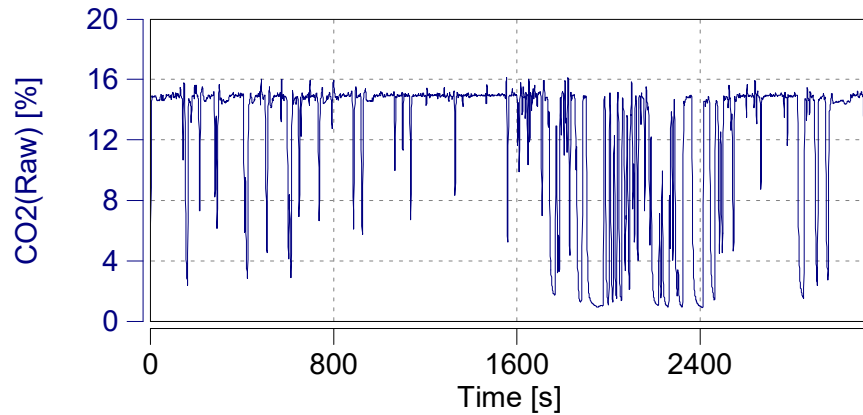
Vehicle: 2017 VW Golf / Independent Vehicle
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Mountain

Page: Emissions Raw Data (1)

Start Date: 10/03/2017

Start Time: 15:17:03.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

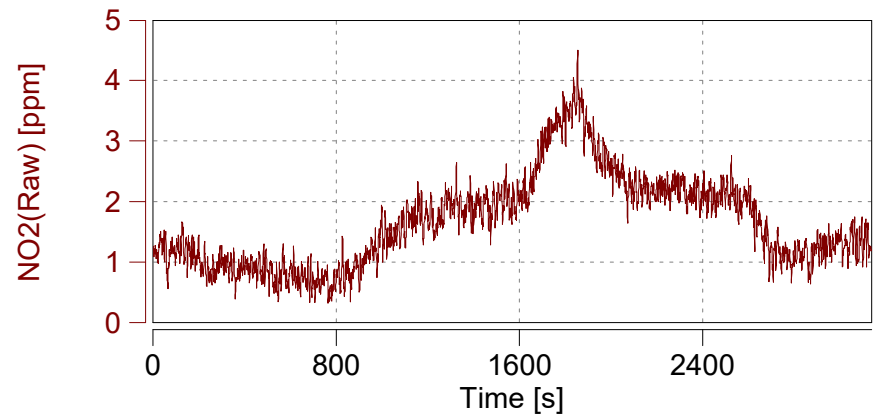
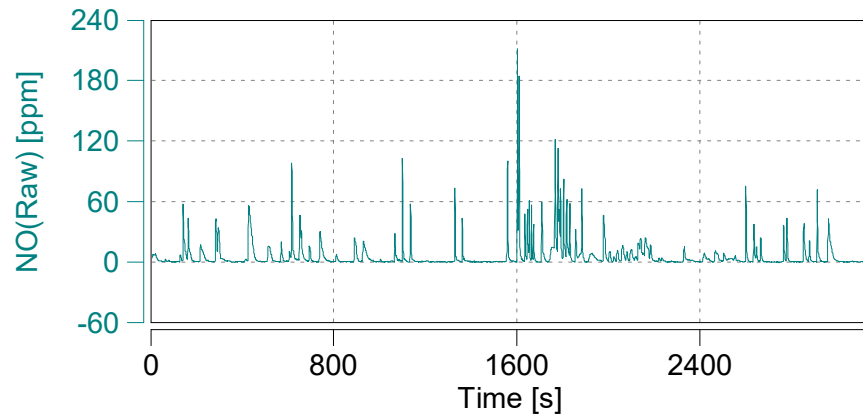
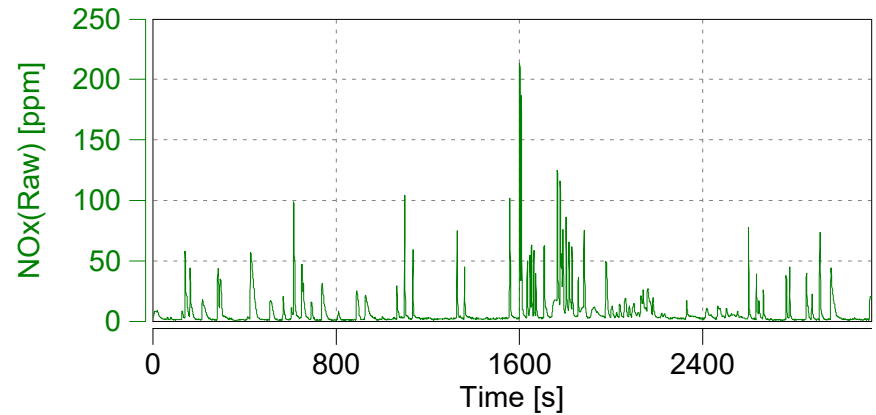
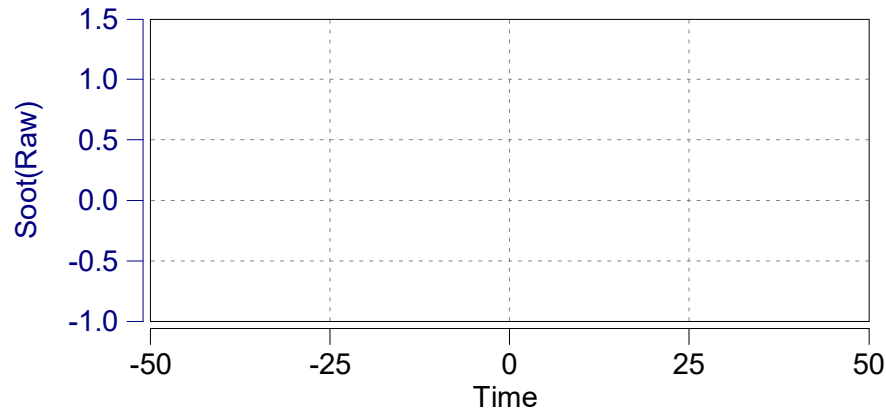
Vehicle: 2017 VW Golf / Independent Vehicle
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Mountain

Page: Emissions Raw Data (2)

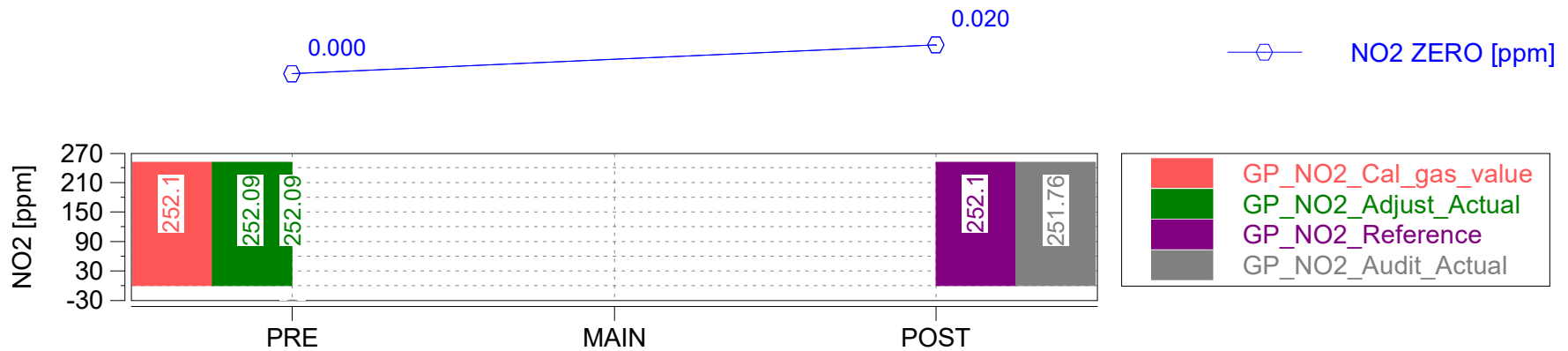
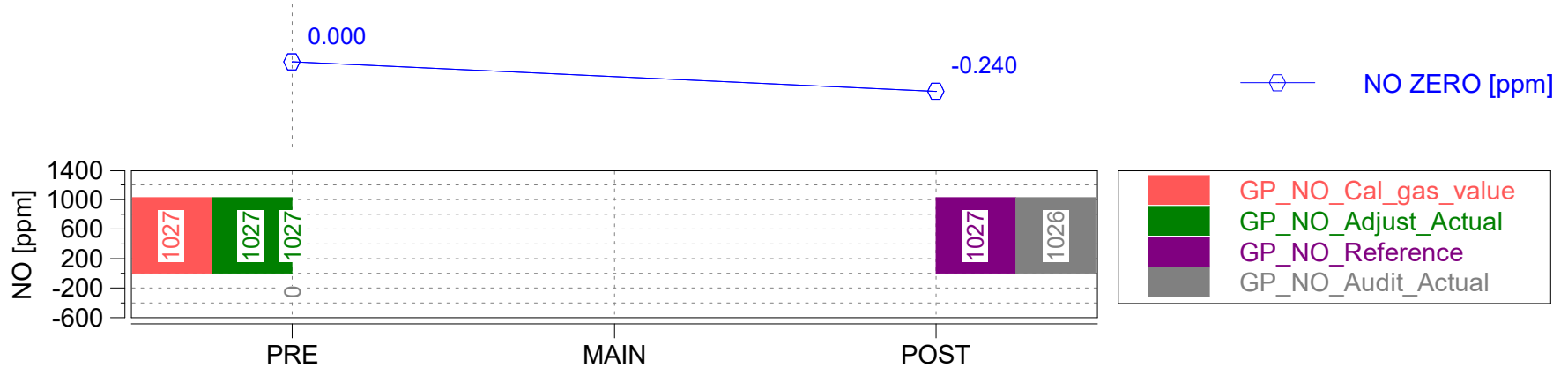
Start Date: 10/03/2017

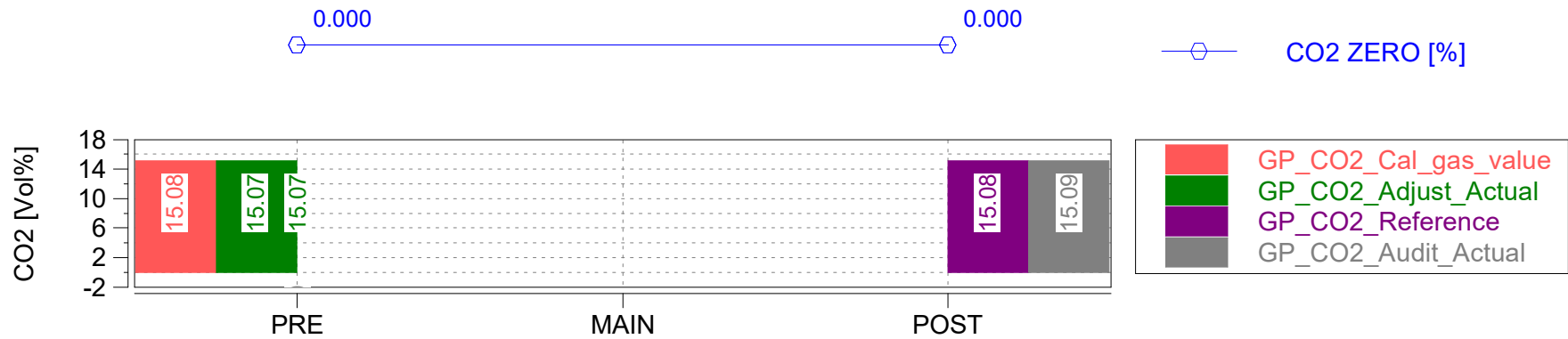
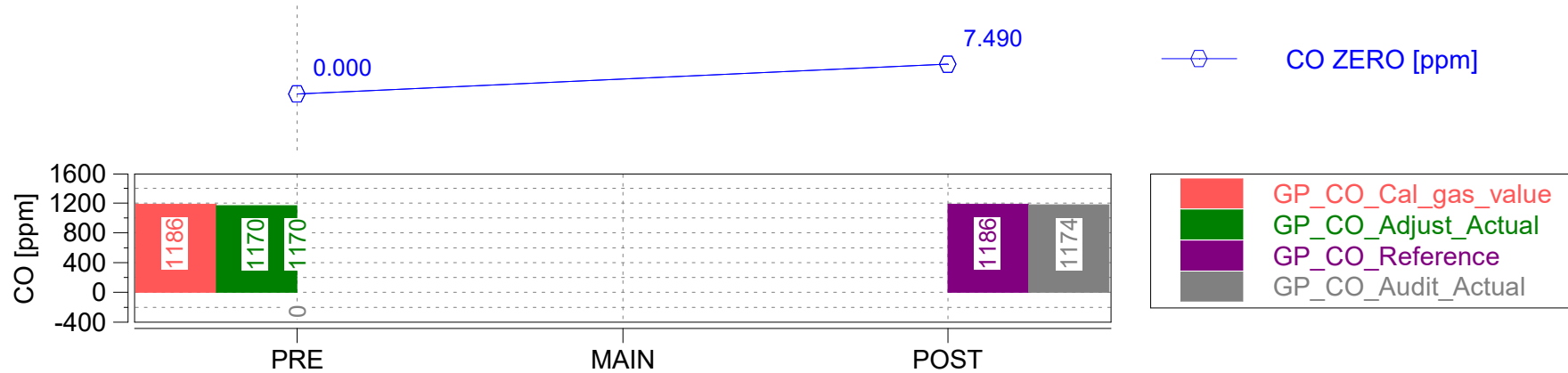
Start Time: 15:17:03.0

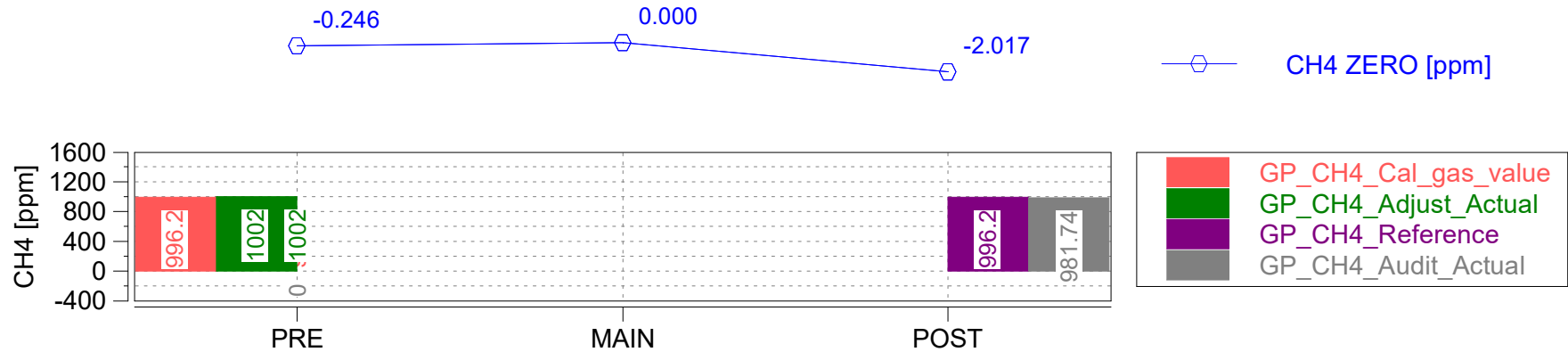
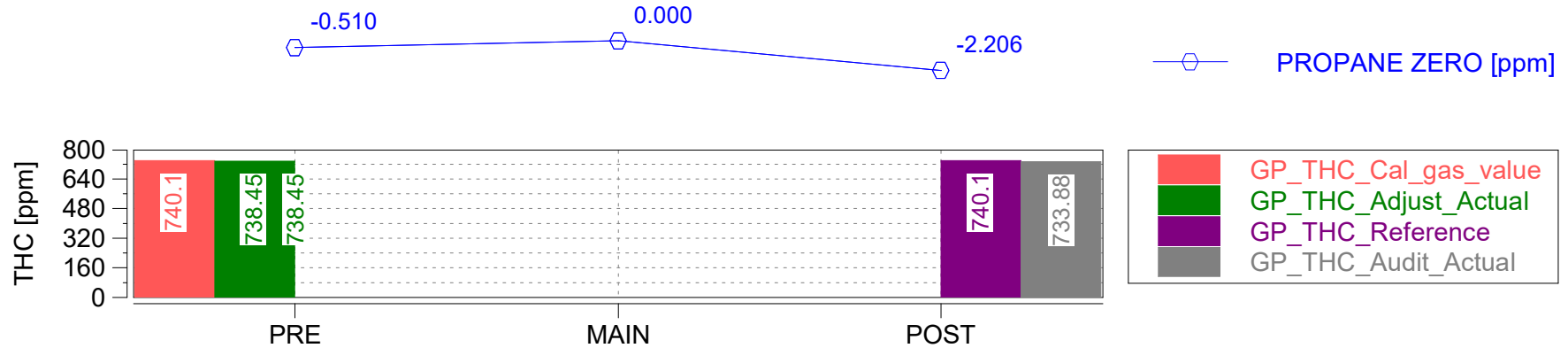


Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Golf / Independent Vehicle
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90







#	Text	Value	Unit
-	----	----	----
1.0	Test Start: Date	-	-
2.0	Test Start: Time	-	-
3.0	Ambient Temperature	IFILE1:TM'Temperature	deg C
4.0	Ambient Temperature TS	0.00000	s
5.0	Ambient Pressure	IFILE1:TM'Pressure	kPa
6.0	Ambient Pressure TS	0.00000	s
7.0	Humidity Type	1.00000	-
8.0	Amb. Rel. Humidity	IFILE1:TM'Humidity	%
9.0	Amb. Rel. Humidity	0.00000	s
10.0	GPS Latitude		deg
11.0	GPS Latitude TS	0.00000	s
12.0	GPS Longitude		deg
13.0	GPS Longitude TS	0.00000	s
14.0	Altitude		m
15.0	Altitude TS	0.00000	s
16.0	GPS Quality		-
17.0	GPS Quality TS	0.00000	s
18.0	GroundSpeed		km/h
19.0	GroundSpeed TS	0.00000	s
20.0	Altitude from topographical map		m
21.0	Altitude TS of topographical map		s
22.0	TRIP_AMBIENT_GPS_AVL	YES	-
23.0	CALC_GPS_GROUNDSPEED	NO	-
24.0	EXHAUST_FLOW_AVL	NO	-
25.0	EXHAUST_FLOW_AVL_EFM	YES	-
26.0	Exhaust Flow Type	2.00000	-
27.0	Mass Flow	IFILE1:TM'PitotEFM_ExhaustG	various
28.0	Mass Flow TS	2.20000	s
29.0	Exhaust Pressure		kPa
30.0	Exhaust Pressure TS	2.20000	s

#	Text	Value	Unit
-	----	----	----
31.0	Exhaust Delta Pressure		kPa
32.0	Exhaust Pressure Delta TS	2.20000	s
33.0	Exhaust Temperature	IFILE1:TM'PitotEFM_ExhaustG	degC
34.0	Exhaust Temperature TS	2.20000	s
35.0	Lambda	N/A	-
36.0	Lambda TS		s
37.0	CO2_DIL		%
38.0	CO2_DIL TS		s
39.0	CVS Volume Flow		m3/min
40.0	TimeShift_CVS_VOL_FLOW		s
41.0	IN_CVS_PRESSURE		kPa
42.0	TimeShift_CVS_PRESSURE		s
43.0	IN_CVS_TEMP		degC
44.0	TimeShift_CVS_TEMP		s
45.0	Dry to Wet Conversion CO2	YES	-
46.0	Dry to Wet Conversion O2	YES	-
47.0	Dry to Wet Conversion NO	NO	-
48.0	Dry to Wet Conversion NO2	NO	-
49.0	Dry to Wet Conversion THC	NO	-
50.0	Dry to Wet Conversion CH4	NO	-
51.0	Dry to Wet Conversion O2	NO	-
52.0	CO2	IFILE1:TM'GPiS_CO2	%
53.0	CO2 TS	-19.90000	s
54.0	OS	IFILE1:TM'GPiS_O2	%
55.0	O2 TS	-20.40000	s
56.0	CO	IFILE1:TM'GPiS_CO	ppm
57.0	CO TS	-19.90000	s
58.0	NO	IFILE1:TM'GPiS_NO	ppm
59.0	NO TS	-18.10000	s
60.0	NO2	IFILE1:TM'GPiS_NO2	ppm

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Golf / Independent Vehicle
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
61.0	NO2 TS	-18.10000	s
62.0	THC	IFILE1:TM'FIDiS_THC_C1	ppm
63.0	THC TS	0.00000	s
64.0	CH4	IFILE1:TM'FIDiS_CH4_C1	ppm
65.0	CH4 TS	0.00000	s
66.0	GAS_PEMS_Ethane_Efficiency	IFILE1:MOVE_AVL4925'GP_Et -	
67.0	GAS_PEMS_Methane_Efficiency	IFILE1:MOVE_AVL4925'GP_M -	
68.0	GAS_PEMS_Methane_Response	IFILE1:MOVE_AVL4925'GP_M -	
69.0	Zero Signal	IFILE1:TM'GPiS_STATE	0/1
70.0	Zero Signal TS	-18.10000	s
71.0	Zero Signal_FIDiS	IFILE1:TM'FIDiS_STATE	0/1
72.0	Zero Signal_FIDiS TS		s
73.0	Species Input Type	4.00000	-
74.0	GASPEMS=AVL493	NO	-
75.0	GASPEMS=AVL493_iX	NO	-
76.0	GASPEMS=AVL492	YES	-
77.0	GASPEMS=AVL4925	YES	-
78.0	PM: Type	4.00000	1=GFB+HC, 2=GFB, 3='PM=S
79.0	Filter ID from IFile	NO	-
80.0	Lab ID from IFile	NO	-
81.0	PM Filter: ID	N/A	ID
82.0	PM Filter: Lab	N/A	Name/ID
83.0	PM Filter: Weight before Test	N/A	mg
84.0	PM Filter: Weight after Test	N/A	mg
85.0	PM (HC Corr): Max. Exhaust Flow	N/A	scfm
86.0	Soot		mg/m3
87.0	Soot TS	-5.00000	s
88.0	Soot Sensor		mg/m3
89.0	Soot Sensor TS		s
90.0	PM Filter: Filter Flow Rate		l/min

#	Text	Value	Unit
-	----	----	----
91.0	PM Filter: Filter Flow Rate TS	-5.00000	s
92.0	PM Filter: Filter Dilution Ratio		-
93.0	PM Filter: Filter Dilution Ratio TS	-5.00000	s
94.0	PM Filter: Filter Trigger		-
95.0	PM Filter: Filter Trigger TS	-5.00000	s
96.0	PMPEMS=AVL494	YES	-
97.0	PMPEMS_AVL494_PROP_DIL	NO	-
98.0	PM dilution ratio min		-
99.0	PM_MaxExhaustFlowRate		-
100.0	PM_ExhaustFlow_Thresh		-
101.0	PM_total_flow_val		-
102.0	PM_total_flow_val_TS		-
103.0	PM_exh_mass_flow		-
104.0	PM_exh_mass_flow_TS		-
105.0	PN		#/cm3
106.0	TimeShift_PN		s
107.0	PN_STATE		-
108.0	PN TS STATE		s
109.0	PNPEMS_AVL496	NO	-
110.0	PN_CorrFactor	1.00000	
111.0	Time Alignment	1.00000	-
112.0	Time Alignment Dataset 1	N/A	0/1
113.0	Time Alignment Dataset 2	N/A	0/1
114.0	Time Alignment Thresh 1	N/A	-
115.0	Time Alignment Thresh 2	N/A	-
116.0			
117.0			
118.0			
119.0			
120.0			

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Golf / Independent Vehicle
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
121.0			
122.0	Trigger		0/1
123.0	Trigger TS		s
124.0	FTIR_NAME_1		-
125.0	FTIR_MW_1		-
126.0	FTIR_CHANNEL_1		-
127.0	FTIR_CHANNEL_TS_1		-
128.0	FTIR_CHANNEL_DRY_1	NO	-
129.0	FTIR_NAME_2		-
130.0	FTIR_MW_2		-
131.0	FTIR_CHANNEL_2		-
132.0	FTIR_CHANNEL_TS_2		-
133.0	FTIR_CHANNEL_DRY_2	NO	-
134.0	FTIR_NAME_3		-
135.0	FTIR_MW_3		-
136.0	FTIR_CHANNEL_3		-
137.0	FTIR_CHANNEL_TS_3		-
138.0	FTIR_CHANNEL_DRY_3	NO	-
139.0	FTIR_NAME_4		-
140.0	FTIR_MW_4		-
141.0	FTIR_CHANNEL_4		-
142.0	FTIR_CHANNEL_TS_4		-
143.0	FTIR_CHANNEL_DRY_4	NO	-
144.0	FTIR_NAME_5		-
145.0	FTIR_MW_5		-
146.0	FTIR_CHANNEL_5		-
147.0	FTIR_CHANNEL_TS_5		-
148.0	FTIR_CHANNEL_DRY_5	NO	-
149.0	FTIR_NAME_6		-
150.0	FTIR_MW_6		-

#	Text	Value	Unit
-	----	----	----
151.0	FTIR_CHANNEL_6		-
152.0	FTIR_CHANNEL_TS_6		-
153.0	FTIR_CHANNEL_DRY_6	NO	-
154.0	FTIR_NAME_7		-
155.0	FTIR_MW_7		-
156.0	FTIR_CHANNEL_7		-
157.0	FTIR_CHANNEL_TS_7		-
158.0	FTIR_CHANNEL_DRY_7	NO	-
159.0	FTIR_NAME_8		-
160.0	FTIR_MW_8		-
161.0	FTIR_CHANNEL_8		-
162.0	FTIR_CHANNEL_TS_8		-
163.0	FTIR_CHANNEL_DRY_8	NO	-
164.0	FTIR_NAME_9		-
165.0	FTIR_MW_9		-
166.0	FTIR_CHANNEL_9		-
167.0	FTIR_CHANNEL_TS_9		-
168.0	FTIR_CHANNEL_DRY_9	NO	-
169.0	FTIR_NAME_10		-
170.0	FTIR_MW_10		-
171.0	FTIR_CHANNEL_10		-
172.0	FTIR_CHANNEL_TS_10		-
173.0	FTIR_CHANNEL_DRY_10	NO	-
174.0	FTIR_NAME_11		-
175.0	FTIR_MW_11		-
176.0	FTIR_CHANNEL_11		-
177.0	FTIR_CHANNEL_TS_11		-
178.0	FTIR_CHANNEL_DRY_11	NO	-
179.0	FTIR_NAME_12		-
180.0	FTIR_MW_12		-

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Golf / Independent Vehicle
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
181.0	FTIR_CHANNEL_12		-
182.0	FTIR_CHANNEL_TS_12		-
183.0	FTIR_CHANNEL_DRY_12	NO	-
184.0	FTIR_NAME_13		-
185.0	FTIR_MW_13		-
186.0	FTIR_CHANNEL_13		-
187.0	FTIR_CHANNEL_TS_13		-
188.0	FTIR_CHANNEL_DRY_13	NO	-
189.0	FTIR_NAME_14		-
190.0	FTIR_MW_14		-
191.0	FTIR_CHANNEL_14		-
192.0	FTIR_CHANNEL_TS_14		-
193.0	FTIR_CHANNEL_DRY_14	NO	-
194.0	FTIR_NAME_15		-
195.0	FTIR_MW_15		-
196.0	FTIR_CHANNEL_15		-
197.0	FTIR_CHANNEL_TS_15		-
198.0	FTIR_CHANNEL_DRY_15	NO	-
199.0	FTIR_NAME_16		-
200.0	FTIR_MW_16		-
201.0	Vehicle Type	2017 VW Golf	-
202.0	Vehicle Info	Independent Vehicle	-
203.0	Engine Type	Gasoline	-
204.0	Engine Info	2.0L	-
205.0	Engine Torque		Nm
206.0	Curb Idle Load		%
207.0	Idle Speed		rpm
208.0	HYBRID_OVC_REF_CO2_gkm		g/km
209.0	Engine Concept	1.00000	-
210.0	Alpha	1.93000	-

#	Text	Value	Unit
-	----	----	----
211.0	Beta	1.00000	
212.0	Gamma	0.00000	
213.0	Delta	0.00000	
214.0	Epsilon	0.03200	
215.0	X_C	83.00000	
216.0	X_H	13.30000	
217.0	X_N	0.00000	
218.0	X_O	3.50000	
219.0	X_S	0.00000	
220.0	Fuel_Density	747.50000	
221.0	rho_exhaust	1.29310	
222.0	U_CO2	1.51800	
223.0	U_CO	0.96600	
224.0	U_NO	1.58700	
225.0	U_NO2	1.58700	
226.0	U_NOx	1.58700	
227.0	U_HC	0.49900	
228.0	U_NMHC	0.47100	
229.0	U_CH4	0.55300	
230.0	U_O2	1.10400	
231.0	Fuel Type	2.00000	-
232.0	exhaust mass flow type (YES/NO)	YES	-
233.0	Distance Calculation Type	1.00000	-
234.0	Velocity Statistics Calculation Type	2.00000	-
235.0	RDE vehicle class	1.00000	-
236.0	TM_CITY0		s
237.0	TM_CITY1		s
238.0	TM_RURAL0		s
239.0	TM_RURAL1		s
240.0	TM_RURAL2_0		s

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Golf / Independent Vehicle
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
241.0	TM_RURAL2_1		s
242.0	Second Rural Part for Time Marks (NO		-
243.0	TM_MW0		s
244.0	TM_MW1		s
245.0	VELOCITY_LIMIT_STOP	2.00000	km/h
246.0	VELOCITY_LIMIT_URBAN	50.00000	km/h
247.0	VELOCITY_LIMIT_RURAL	75.00000	km/h
248.0	Intake Manifold Pressure Type	1.00000	-
249.0	Velocity	IFILE1:TM'OBD_Vehicle_Spee	km/h
250.0	Velocity TS	1.30000	s
251.0	Velocity FACTOR	1.00000	-
252.0	Coolant Temperature	IFILE1:TM'OBD_Engine_Coola	degC
253.0	Coolant Temperature TS	1.30000	s
254.0	Oil Temperature		degC
255.0	Oil Temperature TS	1.30000	s
256.0	Intake Manifold Temperature		degC
257.0	Intake Manifold Temp TS	1.30000	s
258.0	Intake Manifold Pressure	IFILE1:TM'OBD_Intake_manifo	kPa
259.0	Intake Manifold Pressure TS	1.30000	s
260.0	Throttle Position		%
261.0	Throttle TS	1.30000	s
262.0	TYP_IDLE_MASS_FLOW		kg/h
263.0	Torque Type	1.00000	-
264.0	Speed	IFILE1:TM'OBD_Engine_RPM	rpm
265.0	Speed TS	1.30000	s
266.0	Torque		Nm
267.0	Torque TS	1.30000	s
268.0	Friction Torque	N/A	Nm
269.0	Friction Torque TS	N/A	s
270.0	Reference Torque	N/A	Nm

#	Text	Value	Unit
-	----	----	----
271.0	Reference Torque TS	N/A	s
272.0	k_VELINE		-
273.0	D_VELINE		-
274.0	Fuel Flow Type	2.00000	-
275.0	Air Flow Type	1.00000	-
276.0	Fuel Rate		various
277.0	Air Rate		various
278.0	Fuel Rate TS	1.30000	s
279.0	No_Cylinders		-
280.0	Air Rate TS	1.30000	s
281.0	FTIR_CHANNEL_32		-
282.0	FTIR_CHANNEL_TS_32		-
283.0	FTIR_CHANNEL_DRY_32	NO	-
284.0	FTIR_NAME_33		-
285.0	FTIR_MW_33		-
286.0	FTIR_CHANNEL_33		-
287.0	FTIR_CHANNEL_TS_33		-
288.0	FTIR_CHANNEL_DRY_33	NO	-
289.0	FTIR_NAME_34		-
290.0	FTIR_MW_34		-
291.0	FTIR_CHANNEL_34		-
292.0	FTIR_CHANNEL_TS_34		-
293.0	FTIR_CHANNEL_DRY_34	NO	-
294.0	FTIR_NAME_35		-
295.0	FTIR_MW_35		-
296.0	FTIR_CHANNEL_35		-
297.0	FTIR_CHANNEL_TS_35		-
298.0	FTIR_CHANNEL_DRY_35	NO	-
299.0	FTIR_NAME_36		-
300.0	FTIR_MW_36		-

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Golf / Independent Vehicle
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
301.0	FTIR_CHANNEL_36		-
302.0	FTIR_CHANNEL_TS_36		-
303.0	FTIR_CHANNEL_DRY_36	NO	-
304.0	FTIR_NAME_37		-
305.0	FTIR_MW_37		-
306.0	FTIR_CHANNEL_37		-
307.0	FTIR_CHANNEL_TS_37		-
308.0	FTIR_CHANNEL_DRY_37	NO	-
309.0	FTIR_NAME_38		-
310.0	FTIR_MW_38		-
311.0	FTIR_CHANNEL_38		-
312.0	FTIR_CHANNEL_TS_38		-
313.0	FTIR_CHANNEL_DRY_38	NO	-
314.0	FTIR_NAME_39		-
315.0	FTIR_MW_39		-
316.0	FTIR_CHANNEL_39		-
317.0	FTIR_CHANNEL_TS_39		-
318.0	FTIR_CHANNEL_DRY_39	NO	-
319.0	FTIR_NAME_40		-
320.0	FTIR_MW_40		-
321.0	FTIR_CHANNEL_40		-
322.0	FTIR_CHANNEL_TS_40		-
323.0	FTIR_CHANNEL_DRY_40	NO	-
324.0	Legislation Type (1=HDIUT 2=EU H	4.00000	-
325.0	WholeTest_NOx_corr	5.00000	-
326.0	WholeTest_Hum_corr	2.00000	-
327.0	CD_Distance	0.00000	km
328.0	CD_NOx	0.00000	mg/km
329.0	CD_CO	0.00000	mg/km
330.0	CD_CO2	0.00000	g/km

#	Text	Value	Unit
-	----	----	----
331.0	CD_NMHC	0.00000	mg/km
332.0	CD_CH4	0.00000	mg/km
333.0	CD_THC	0.00000	mg/km
334.0	CD_PN		#/km
335.0	WLTC_LOW_SPEED_gkm		g/km
336.0	WLTC_LOW_SPEED_FAC	1.20000	-
337.0	WLTC_MEDIUM_SPEED_gkm		g/km
338.0	WLTC_HIGH_SPEED_gkm		g/km
339.0	WLTC_HIGH_SPEED_FAC	1.10000	-
340.0	WLTC_EXTRA_HIGH_SPEED_gkm		g/km
341.0	WLTC_EXTRA_HIGH_SPEED_FA	1.05000	-
342.0	TOL_NORMAL_DRIVING	25.00000	%
343.0	TOL_SEVERE_DRIVING	50.00000	%
344.0	Increase Tolerance Nomral Driving	NO	-
345.0	Bin1_min		km/h
346.0	Bin2_min		km/h
347.0	Bin3_min		km/h
348.0	Bin1_max		km/h
349.0	Bin2_max		km/h
350.0	Bin3_max		km/h
351.0	Clear_R0	125.40000	N
352.0	Clear_R1	0.29300	Nh/km
353.0	Clear_R2	0.02795	N*(h/km) ²
354.0	Clear_SMK	1470.00000	kg
355.0	Clear_Rated_Power	140.00000	kW
356.0	Clear_Ref_Velocity	70.00000	km/h
357.0	Clear_Ref_Acc	0.45000	m/s ²
358.0	Clear_Smooth	3.00000	s
359.0	EXTC_From_High_Temp	30.00000	degC
360.0	EXTC_To_High_Temp	35.00000	degC

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Golf / Independent Vehicle
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
361.0	EXTC_From_Low_Temp	-7.00000	degC
362.0	EXTC_To_Low_Temp	0.00000	degC
363.0	Euro 6d or Euro 6d temp	NO	-
364.0	EXTC_From_Altitude	700.00000	m
365.0	EXTC_To_Altitude	1300.00000	m
366.0	EXTC_CORR_FAC	1.60000	
367.0	weight cold start (YES/NO)	NO	-
368.0	precon and soak done (YES/NO)	NO	-
369.0	PATH_PRECON_FILE		
370.0	filter velocity (YES/NO)	NO	-
371.0	filter velocity auto(YES/NO)	NO	-
372.0	Ki_CO		
373.0	Ki_CO2		
374.0	Ki_NOx		
375.0	Ki_FACTOR_CO2 (YES/NO)	NO	-
376.0	Ki_OFFSET_CO2 (YES/NO)	NO	-
377.0	Ki_FACTOR_CO (YES/NO)	NO	-
378.0	Ki_OFFSET_CO (YES/NO)	NO	-
379.0	Ki_FACTOR_NOx (YES/NO)	NO	-
380.0	Ki_OFFSET_NOx (YES/NO)	NO	-
381.0	Ki_OFF (YES/NO)	NO	-
382.0	HD legislations	1.00000	-
383.0	RDE legislations	1.00000	-
384.0	Submission Documents (YES/NO)	NO	-
385.0	General Setup Parameters Text	Mountain	-
386.0	Legislation Setup Parameters Text	Mountain	-
387.0	Trip Info		-
388.0	IN_TIME_REF		-
389.0	Sub-Trip Start: Auto	YES	-
390.0	Sub-Trip Start: Seconds	N/A	s

#	Text	Value	Unit
-	----	----	----
391.0	Sub-Trip End: Auto	YES	-
392.0	Sub-Trip End: Seconds	N/A	s
393.0	Unit System	2.00000	-
394.0	Calculate: PM Emissions	NO	-
395.0	Calculate: PN Emissions	NO	-
396.0	Output: Summary	YES	-
397.0	Output: Emissions	YES	-
398.0	Output: Raw Data	YES	-
399.0	Output: Zero Span	YES	-
400.0	Output: Data Consistency	NO	-
401.0	Output: Window Plots	YES	-
402.0	Fuel Rate ECU vs. EU ISO16183	$y = 10000000000.0000 x - 0.000 R^2=10000000000.000 SEE=$	
403.0	PEMS post processing version	Rel_10_B192	
404.0	Concerto version	480.00000	
405.0	Concerto build	215.00000	
406.0	USERNAME	EFR	

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Golf / Independent Vehicle
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City
Page: Trip Summary

Start Date: 10/03/2017
Start Time: 15:17:03.0



Trip Duration	3691.00	s	ave THC	-1.55591	ppm	BS CO2	n/a	g/hphr
Trip Duration (a)	3691.00	s	ave NMHC	0.13958	ppm	BS CO	n/a	g/hphr
Trip Distance	16.19	mi	ave CH4	-1.54135	ppm	BS THC	n/a	g/hphr
Trip Distance (a)	16.19	mi	ave CO	-12.68853	ppm	BS NMHC	n/a	g/hphr
Trip Fuel Cons. (b)	n/a	kg	ave CO2	12.03753	%	BS CH4	n/a	g/hphr
Trip Fuel Cons. (ab)	n/a	kg	ave NOx	6.74455	ppm	BS NO (d)	n/a	g/hphr
Trip Fuel Cons. EU (ac)	1.70	kg	ave PM	n/a	mg/m3	BS NO2	n/a	g/hphr
Trip Fuel Cons. US (ac)	1.69	kg	ave Soot meas	n/a	mg/m3	BS NOx	n/a	g/hphr
Trip Fuel Cons. Volume (b)	n/a	gall	ave Soot	n/a	mg/m3	BS Soot	n/a	g/hphr
Trip Fuel Cons. Volume (ab)	n/a	gall	ave PN	n/a	#/cm3	BS Soot meas	n/a	g/hphr
Trip Fuel Cons. Volume EU (ac)	0.60	gall	tot THC	0.00393	g	BS PM	n/a	g/hphr
Trip Fuel Cons. Volume US (ac)	0.60	gall	tot NMHC	0.00396	g	BS PN	n/a	#/hpr
Trip Fuel Economy (b)	n/a	mpg_US	tot CH4	0.00423	g	DS CO2	317.40968	g/mi
Trip Fuel Economy (ab)	n/a	mpg_US	tot CO	0.00000	g	DS CO	0.00000	g/mi
Trip Fuel Economy EU (ac)	26.90	mpg_US	tot CO2	5138.86088	g	DS THC	0.00024	g/mi
Trip Fuel Economy US (ac)	27.13	mpg_US	tot NO (d)	0.23015	g	DS NMHC	0.00024	g/mi
Trip Av. Eng. Speed	1192.49	rpm	tot NO2	0.03491	g	DS CH4	0.00026	g/mi
Trip Av. Torque	n/a	lbft	tot NOx	0.26440	g	DS NO (d)	0.01422	g/mi
Trip Av. Power	n/a	hp	tot Soot	n/a	g	DS NO2	0.00216	g/mi
Trip Work	n/a	hphr	tot Soot meas	n/a	g	DS NOx	0.01633	g/mi
Trip Exhaust Mass	28.46	kg	tot PM	n/a	g	DS Soot	n/a	g/mi
Trip Exhaust Mass EU (ac)	n/a	kg	tot PN	n/a	#	DS Soot meas	n/a	g/mi
Trip Exhaust Mass US (ac)	n/a	kg	PM measurement type	0.00000	-	DS PM	n/a	g/mi
Trip Av. Amb. Temperature	66.76	deg_F	PM correction type	1.00000	alpha(HC)	DS PN	n/a	#/mi
Trip Av. Humidity	70.15	%	tot Soot on PM filter (estim.)	n/a	mg	FS CO2	n/a	g/kg
Fuel Type	Petrol (E10)		Soot --> PM simple scaling factor	1.00000	-	FS CO	n/a	g/kg
			Soot --> PM alpha scaling factor	0.00000	-	FS THC	n/a	g/kg
			Trip Av. Veh. Speed	15.79084	mi/hr	FS NMHC	n/a	g/kg
			Trip Velocity Zero	27.44514	%	FS CH4	n/a	g/kg
			Trip Velocity Urban	86.02005	%	FS NO (d)	n/a	g/kg
			Trip Velocity Rural	9.53671	%	FS NO2	n/a	g/kg
			Trip Velocity Motorway	4.44324	%	FS NOx	n/a	g/kg
						FS Soot	n/a	g/kg
						FS Soot meas	n/a	g/kg
						FS PM	n/a	g/kg
						FS PN	n/a	#/kg

(a) GAS PEMS measurement state only, (b) based on fuel rate input (ECU, Fuel Meter), (c) calculated from carbon balance
(d) NO calculated using molecular weight of NO2

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Golf / Independent Vehicle
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Trip Summary Drift Corrected

Start Date: 10/03/2017

Start Time: 15:17:03.0

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Concerto M.O.V.E., 2017

Trip Duration	3691.00	s	ave THC DC	-2.10549	ppm	BS CO2 DC	n/a	g/hphr
Trip Duration (a)	3691.00	s	ave NMHC DC	-0.54501	ppm	BS CO DC	n/a	g/hphr
Trip Distance	16.19	mi	ave CH4 DC	-1.41862	ppm	BS THC DC	n/a	g/hphr
Trip Distance (a)	16.19	mi	ave CO DC	-12.83506	ppm	BS NMHC DC	n/a	g/hphr
Trip Fuel Cons. (b)	n/a	kg	ave CO2 DC	12.03753	%	BS CH4 DC	n/a	g/hphr
Trip Fuel Cons. (ab)	n/a	kg	ave NOx DC	6.74549	ppm	BS NO DC (d)	n/a	g/hphr
Trip Fuel Cons. EU (ac)	1.70	kg	ave PM	n/a	mg/m3	BS NO2 DC	n/a	g/hphr
Trip Fuel Cons. US (ac)	1.69	kg	ave Soot meas	n/a	mg/m3	BS NOx DC	n/a	g/hphr
Trip Fuel Cons. Volume (b)	n/a	gall	ave Soot	n/a	mg/m3	BS Soot	n/a	g/hphr
Trip Fuel Cons. Volume (ab)	n/a	gall	ave PN DC	n/a	#/cm3	BS Soot meas	n/a	g/hphr
Trip Fuel Cons. Volume EU (ac)	0.60	gall	tot THC DC	0.00532	g	BS PM	n/a	g/hphr
Trip Fuel Cons. Volume US (ac)	0.60	gall	tot NMHC DC	0.00251	g	BS PN DC	n/a	#/hpr
Trip Fuel Economy (b)	n/a	mpg_US	tot CH4 DC	0.00438	g	DS CO2 DC	317.40968	g/mi
Trip Fuel Economy (ab)	n/a	mpg_US	tot CO DC	0.00000	g	DS CO DC	0.00000	g/mi
Trip Fuel Economy EU (ac)	26.90	mpg_US	tot CO2 DC	5138.86088	g	DS THC DC	0.00033	g/mi
Trip Fuel Economy US (ac)	27.13	mpg_US	tot NO DC (d)	0.23017	g	DS NMHC DC	0.00015	g/mi
Trip Av. Eng. Speed	1192.49	rpm	tot NO2 DC	0.03494	g	DS CH4 DC	0.00027	g/mi
Trip Av. Torque	n/a	lbft	tot NOx DC	0.26444	g	DS NO DC (d)	0.01422	g/mi
Trip Av. Power	n/a	hp	tot Soot	n/a	g	DS NO2 DC	0.00216	g/mi
Trip Work	n/a	hphr	tot Soot meas	n/a	g	DS NOx DC	0.01633	g/mi
Trip Exhaust Mass	28.46	kg	tot PM	n/a	g	DS Soot	n/a	g/mi
Trip Exhaust Mass EU (ac)	n/a	kg	tot PN DC	n/a	#	DS Soot meas	n/a	g/mi
Trip Exhaust Mass US (ac)	n/a	kg	PM measurement type	0.00000	-	DS PM	n/a	g/mi
Trip Av. Amb. Temperature	66.76	deg_F	PM correction type	1.00000	alpha(HC)	DS PN DC	n/a	#/mi
Trip Av. Humidity	70.15	%	tot Soot on PM filter (estim.)	n/a	mg	FS CO2 DC	n/a	g/kg
Fuel Type	Petrol (E10)		Soot --> PM simple scaling factor	1.00000	-	FS CO DC	n/a	g/kg
			Soot --> PM alpha scaling factor	0.00000	-	FS THC DC	n/a	g/kg
			Trip Av. Veh. Speed	15.79084	mi/hr	FS NMHC DC	n/a	g/kg
			Trip Velocity Zero	27.44514	%	FS CH4 DC	n/a	g/kg
			Trip Velocity Urban	86.02005	%	FS NO DC (d)	n/a	g/kg
			Trip Velocity Rural	9.53671	%	FS NO2 DC	n/a	g/kg
			Trip Velocity Motorway	4.44324	%	FS NOx DC	n/a	g/kg
						FS Soot	n/a	g/kg
						FS Soot meas	n/a	g/kg
						FS PM	n/a	g/kg
						FS PN DC	n/a	#/kg

(a) GAS PEMS measurement state only, (b) based on fuel rate input (ECU, Fuel Meter), (c) calculated from carbon balance
 (d) NO calculated using molecular weight of NO2

Concerto Version: 480 Build 215, Serial Number: 8468
 M.O.V.E Post-Processing: Rel_10_B192

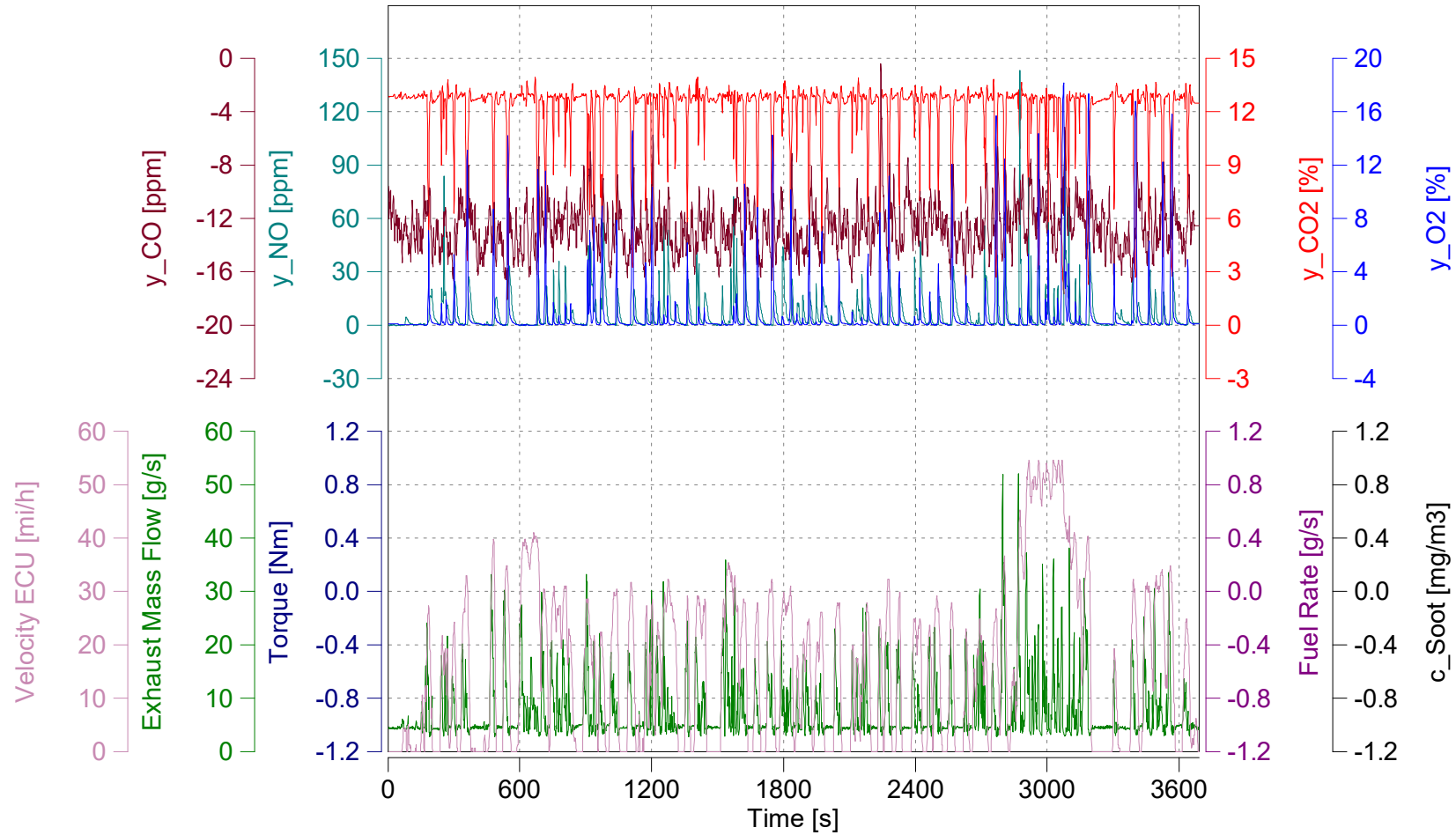
Vehicle: 2017 VW Golf / Independent Vehicle
 Engine: Gasoline / 2.0L
 NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
 Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Time Alignment Check

Start Date: 10/03/2017

Start Time: 15:17:03.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

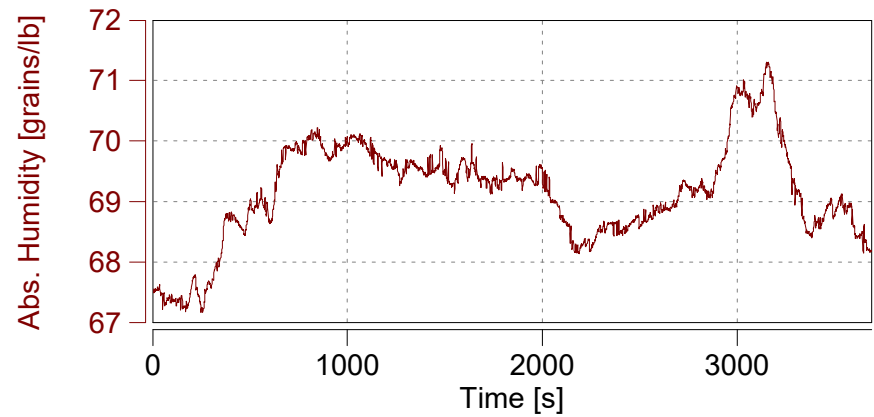
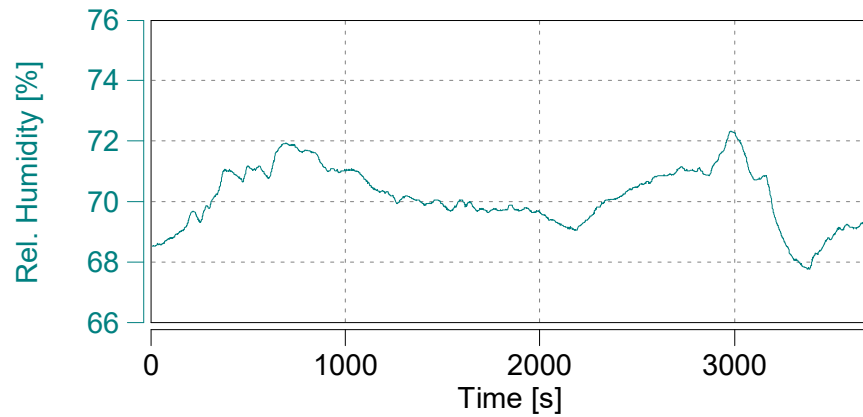
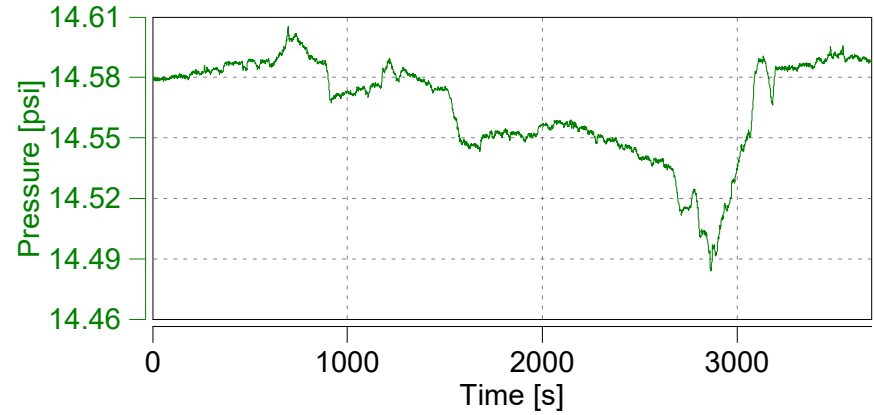
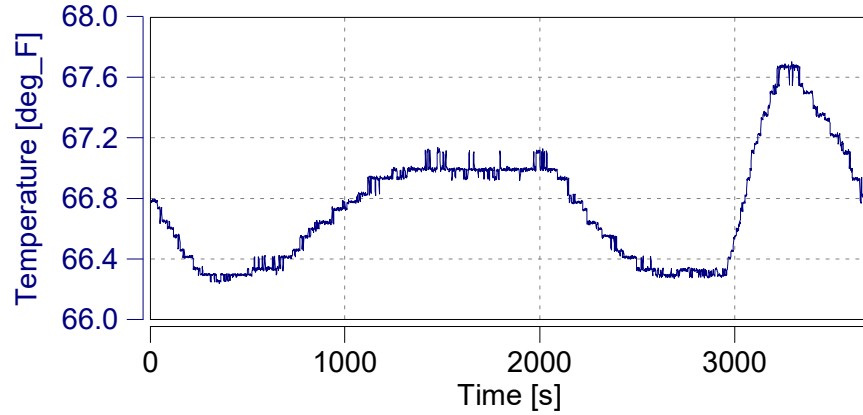
Vehicle: 2017 VW Golf / Independent Vehicle
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Ambient Conditions

Start Date: 10/03/2017

Start Time: 15:17:03.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

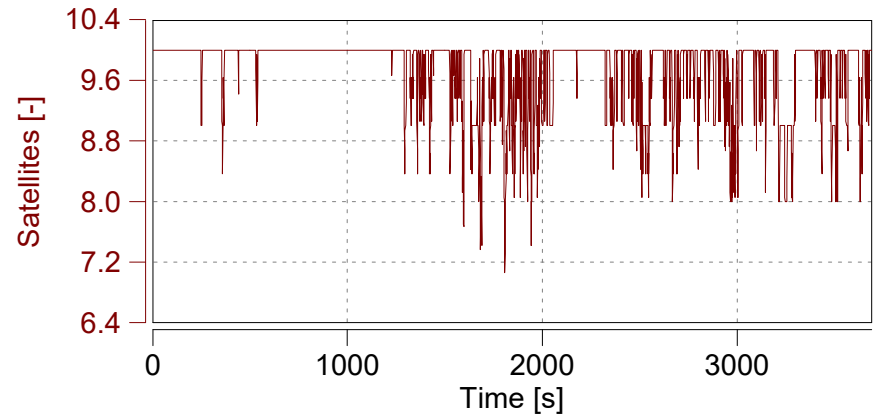
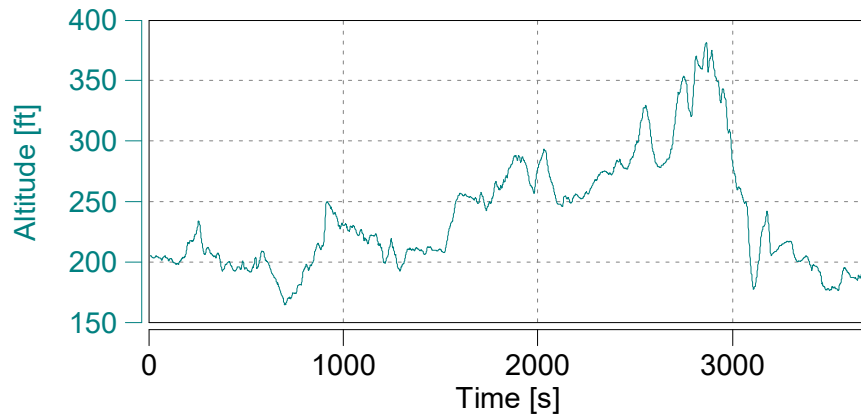
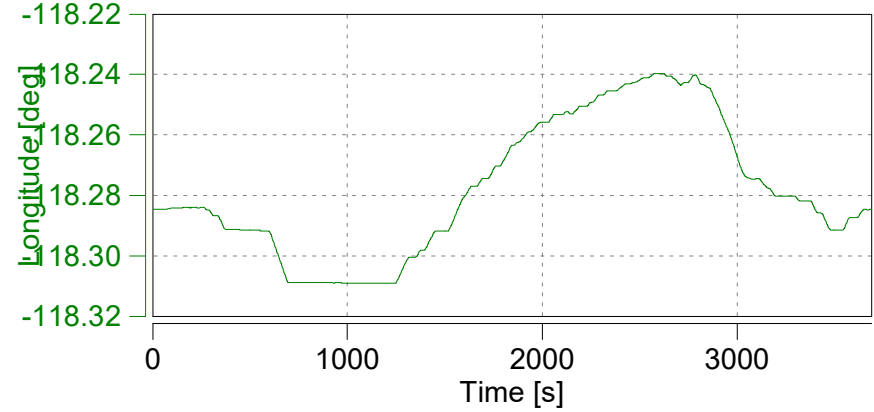
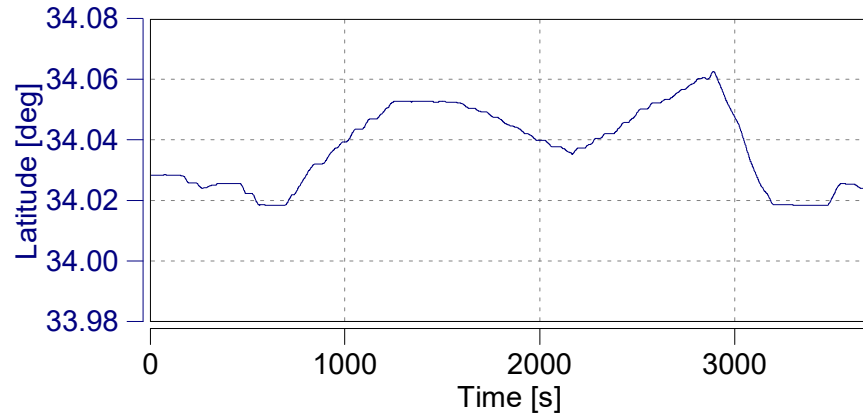
Vehicle: 2017 VW Golf / Independent Vehicle
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: GPS

Start Date: 10/03/2017

Start Time: 15:17:03.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

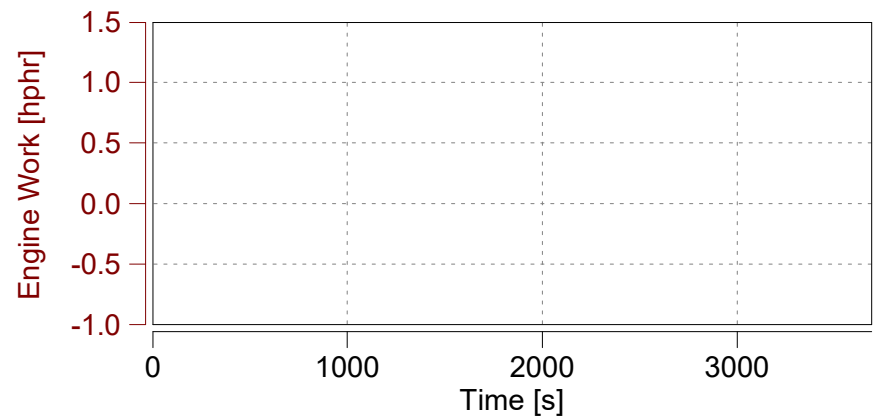
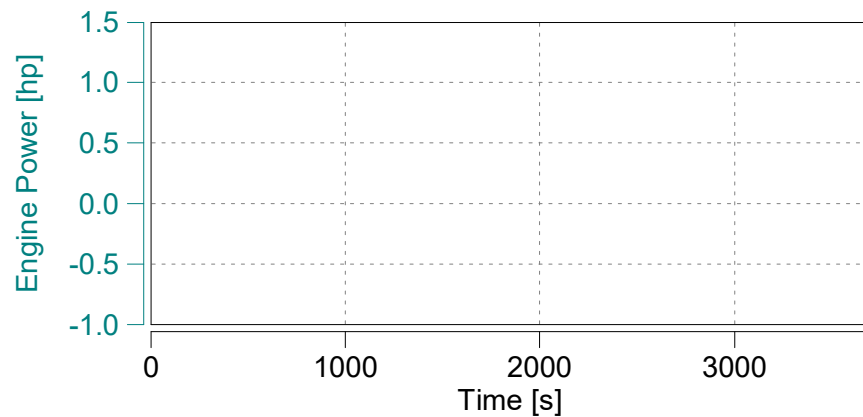
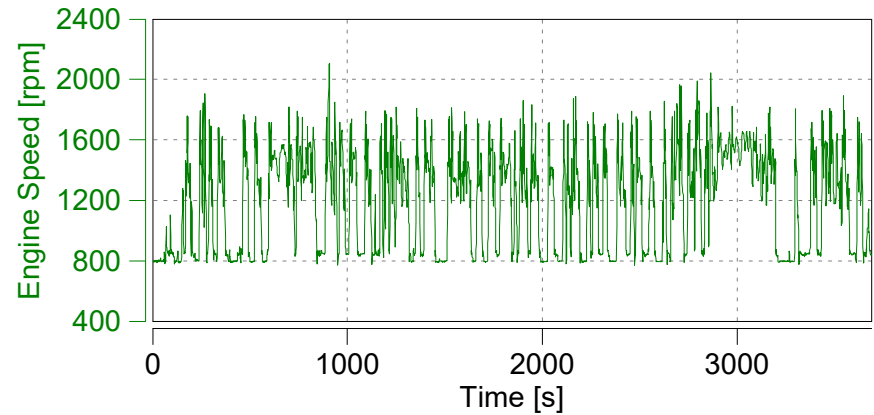
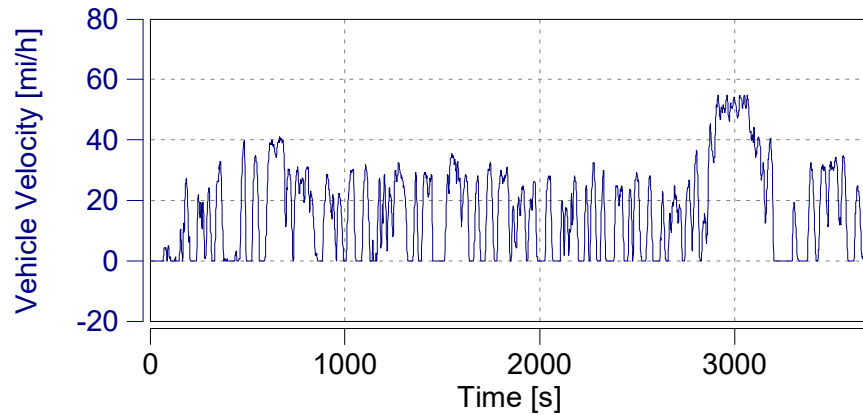
Vehicle: 2017 VW Golf / Independent Vehicle
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Engine (1)

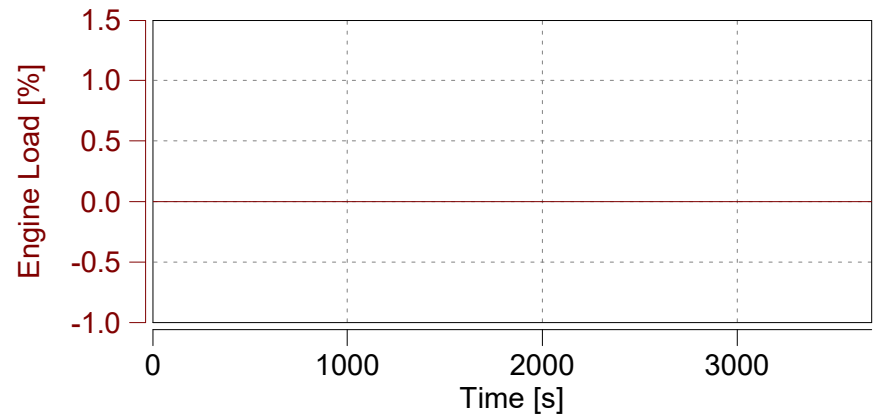
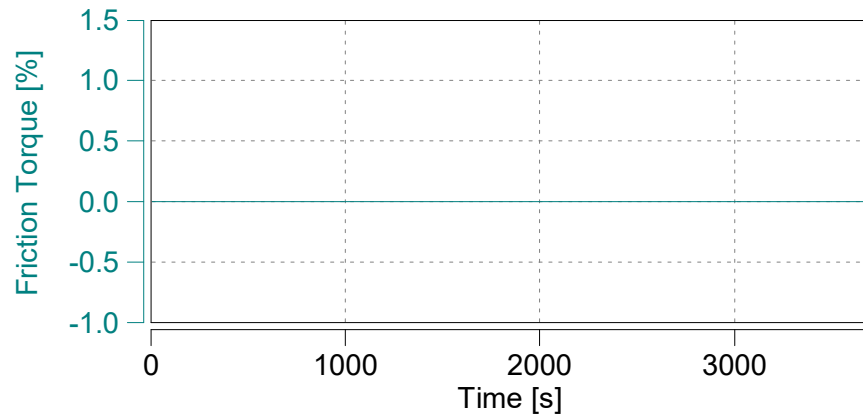
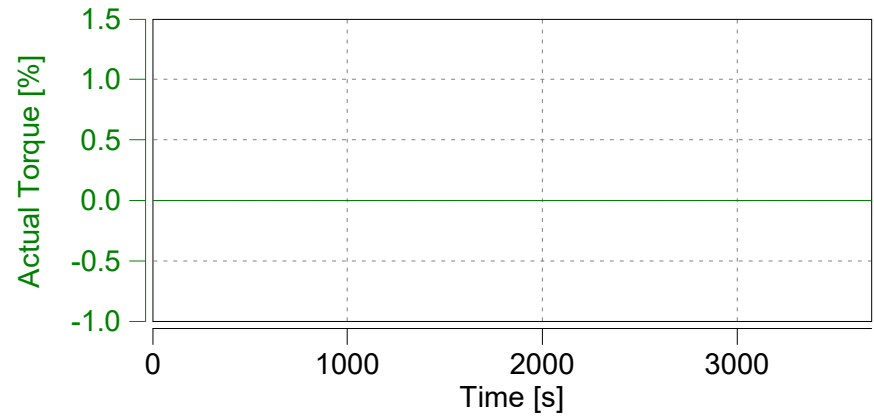
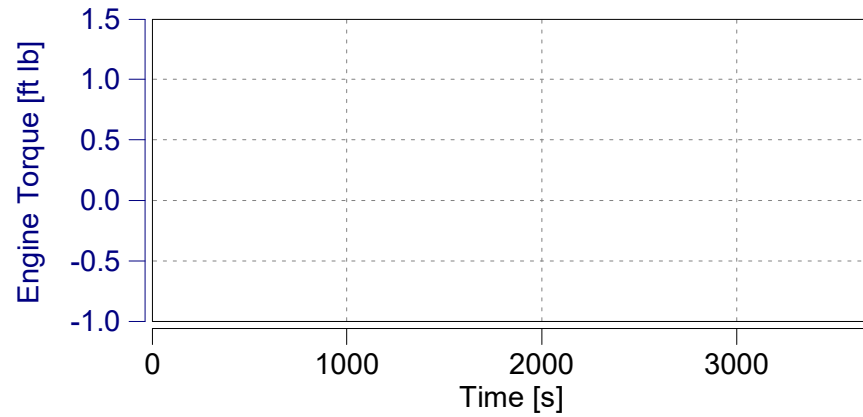
Start Date: 10/03/2017

Start Time: 15:17:03.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Golf / Independent Vehicle
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

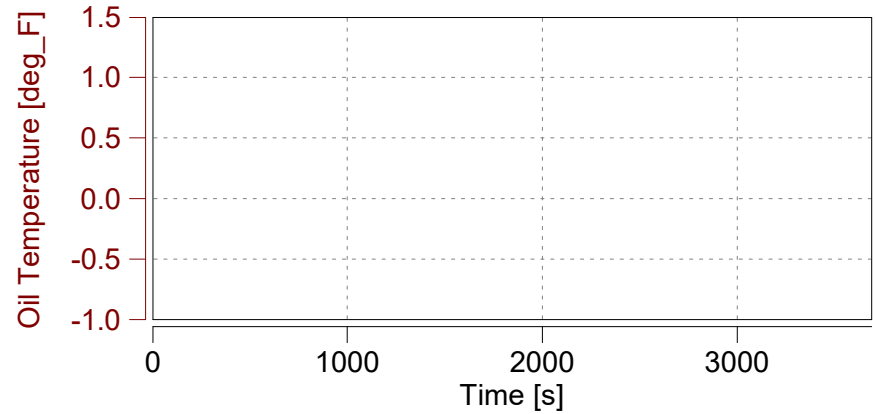
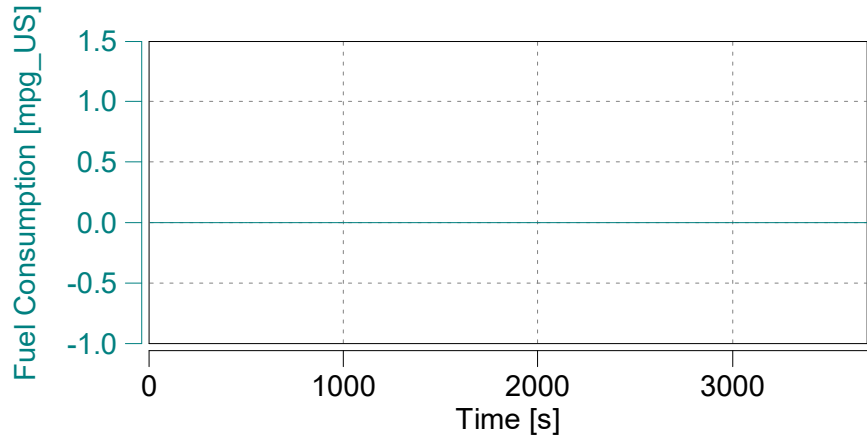
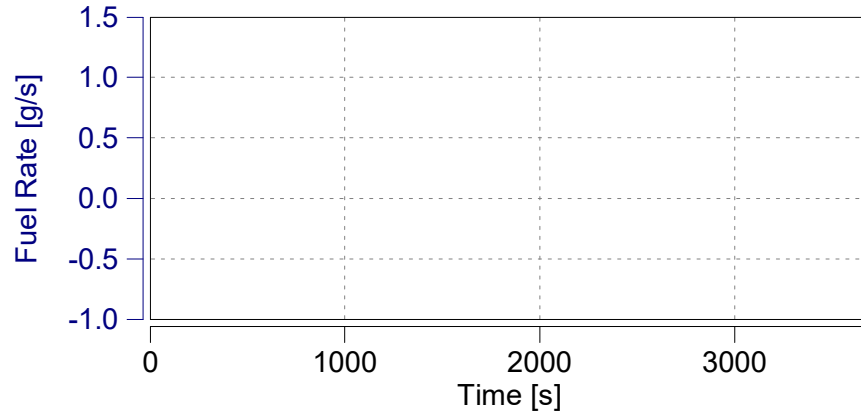


Case: City

Page: Engine (3)

Start Date: 10/03/2017

Start Time: 15:17:03.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

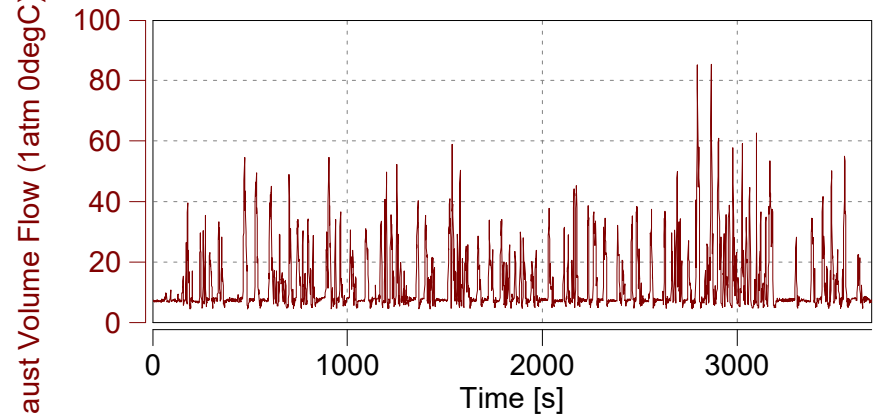
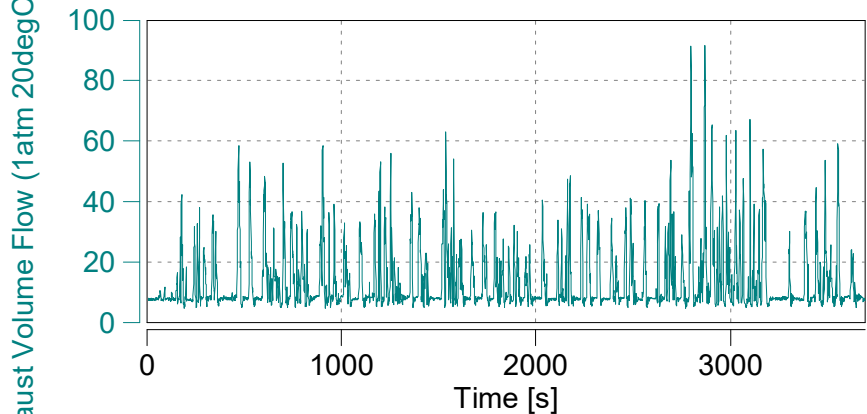
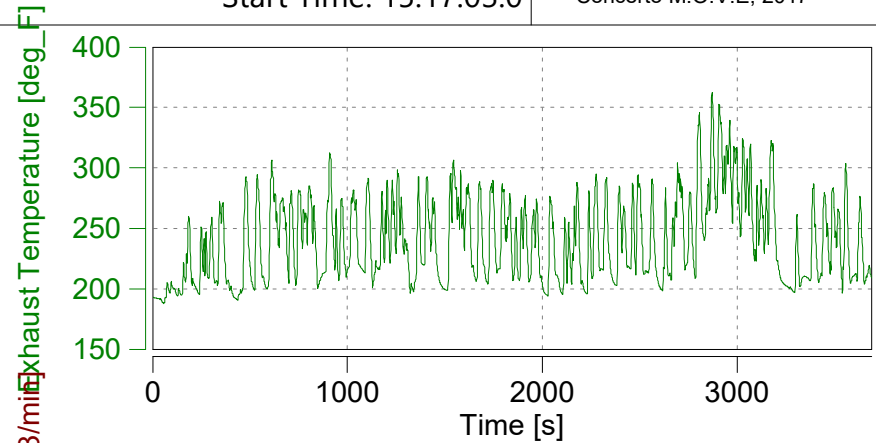
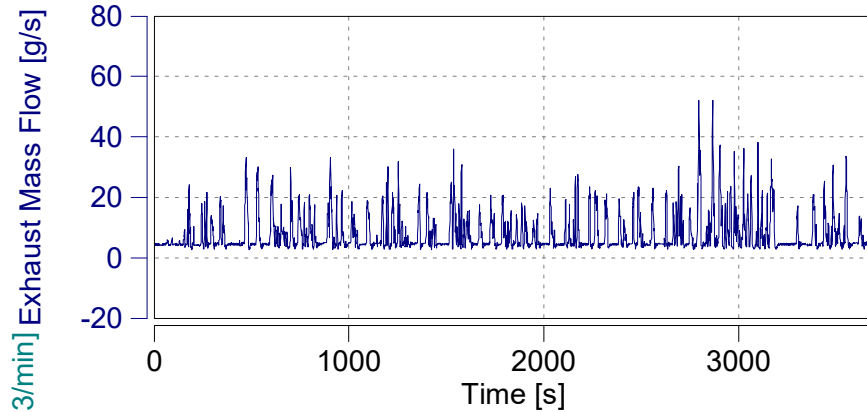
Vehicle: 2017 VW Golf / Independent Vehicle
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Exhaust Flow (1)

Start Date: 10/03/2017

Start Time: 15:17:03.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

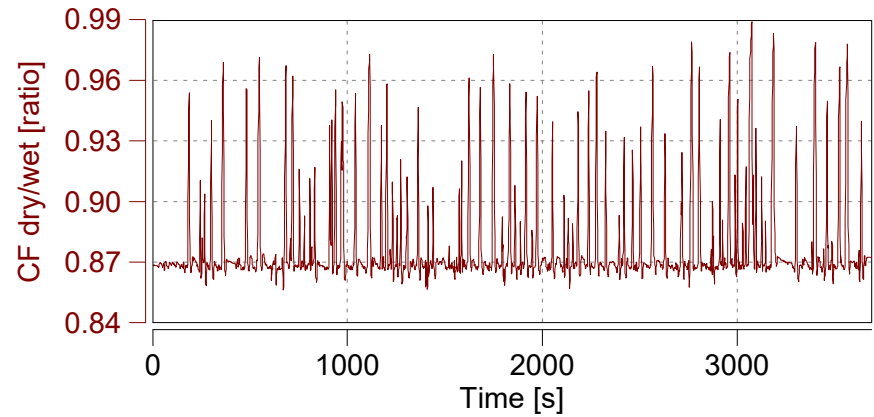
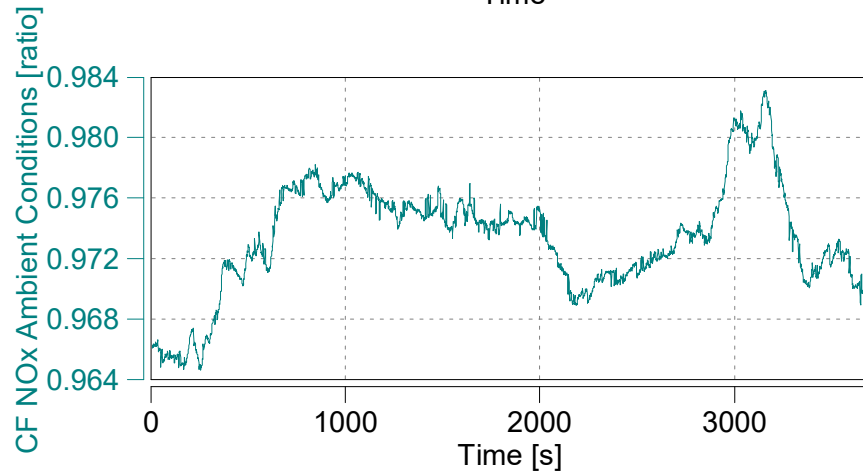
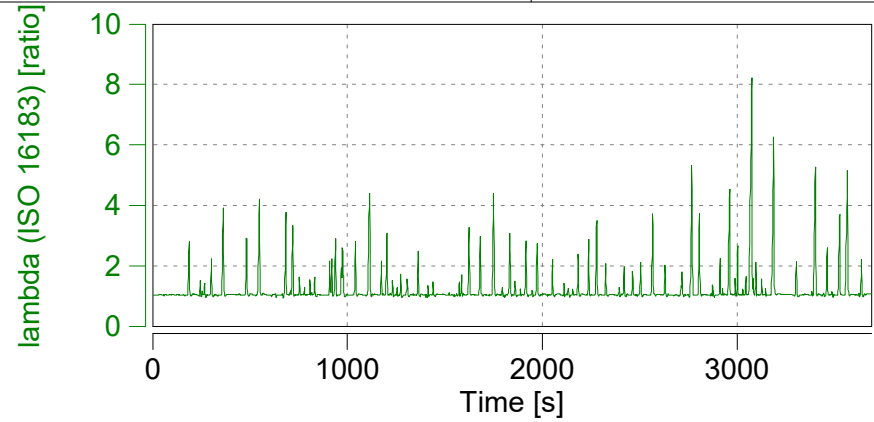
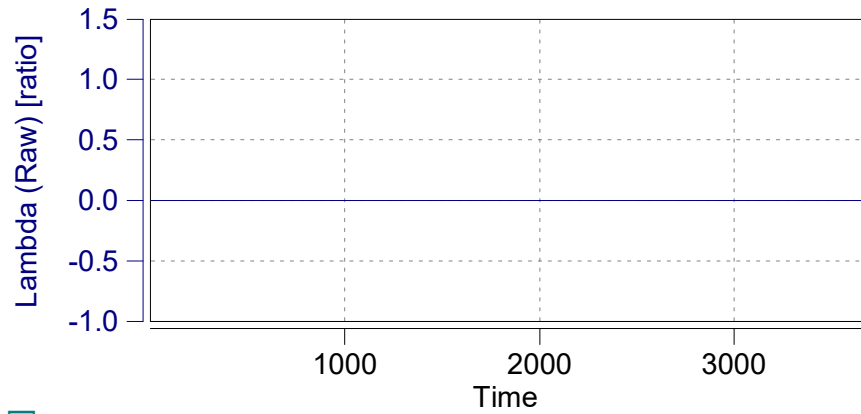
Vehicle: 2017 VW Golf / Independent Vehicle
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Exhaust Flow (2)

Start Date: 10/03/2017

Start Time: 15:17:03.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

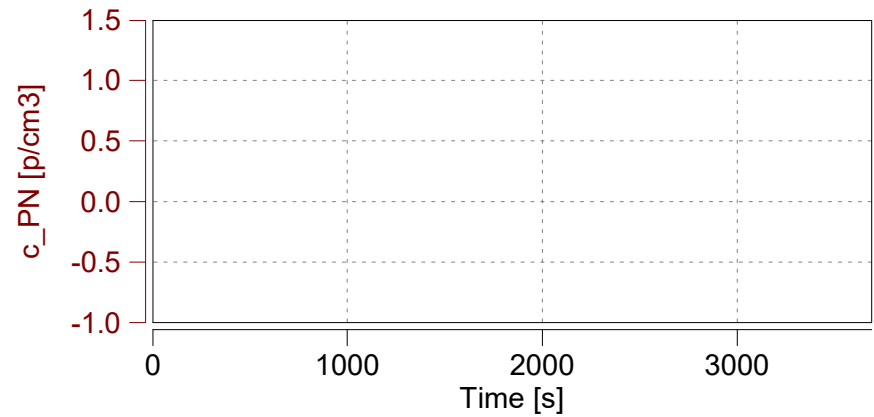
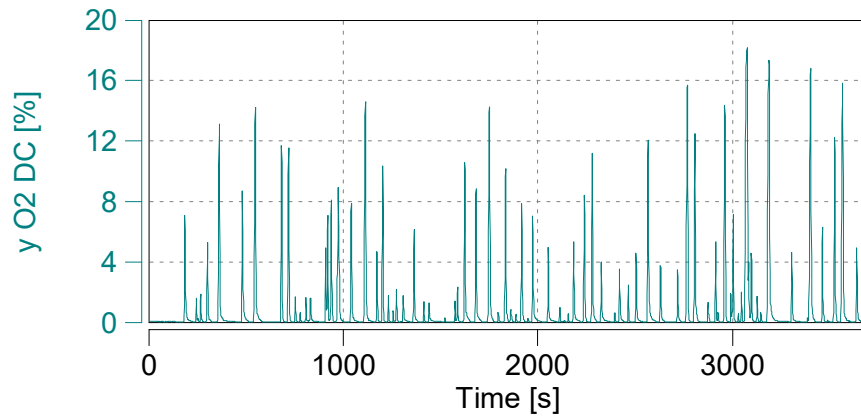
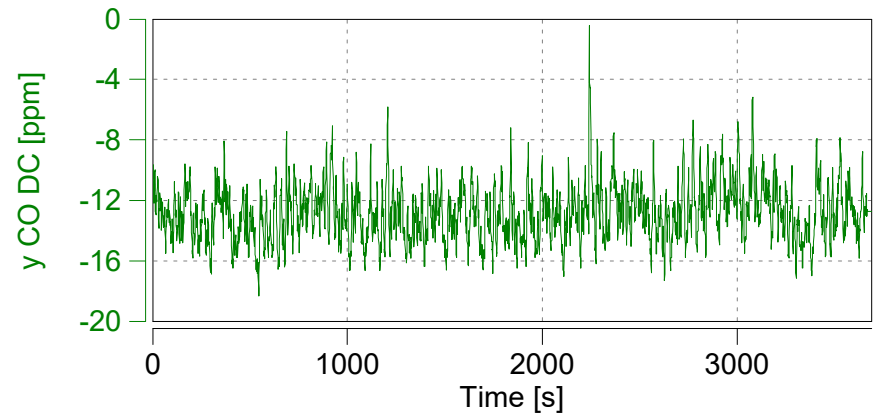
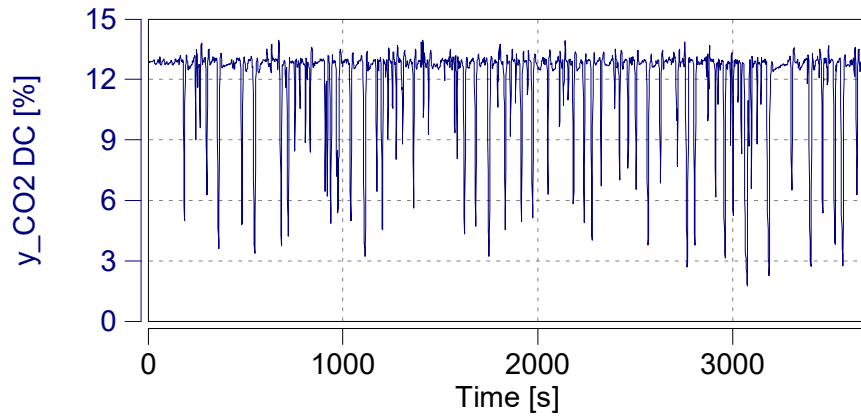
Vehicle: 2017 VW Golf / Independent Vehicle
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Corrected Emissions (1)

Start Date: 10/03/2017

Start Time: 15:17:03.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

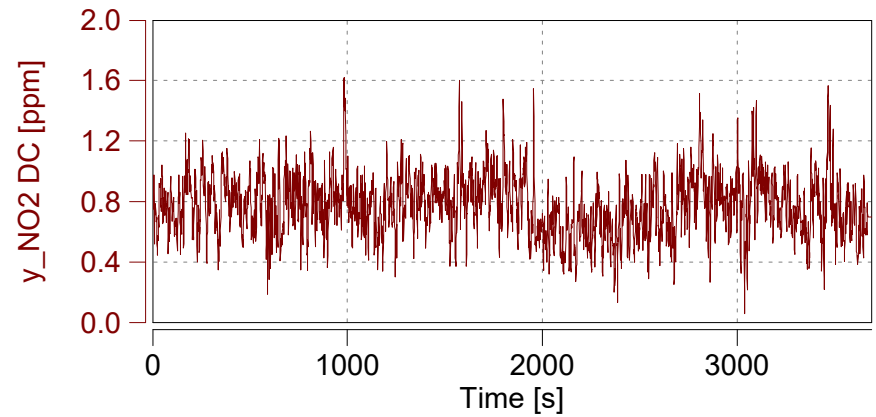
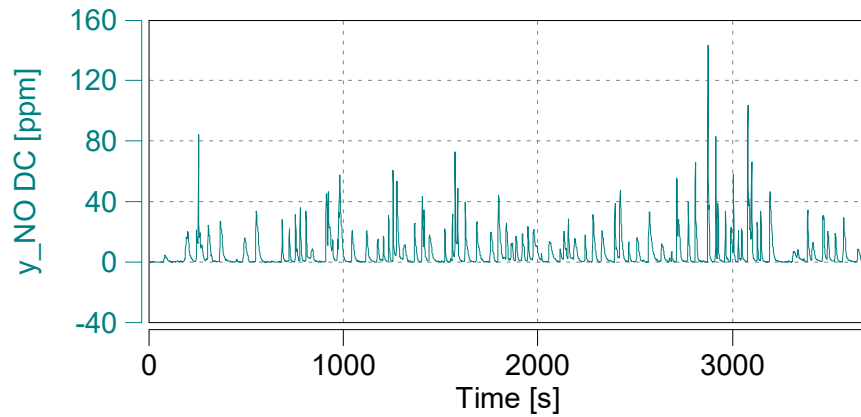
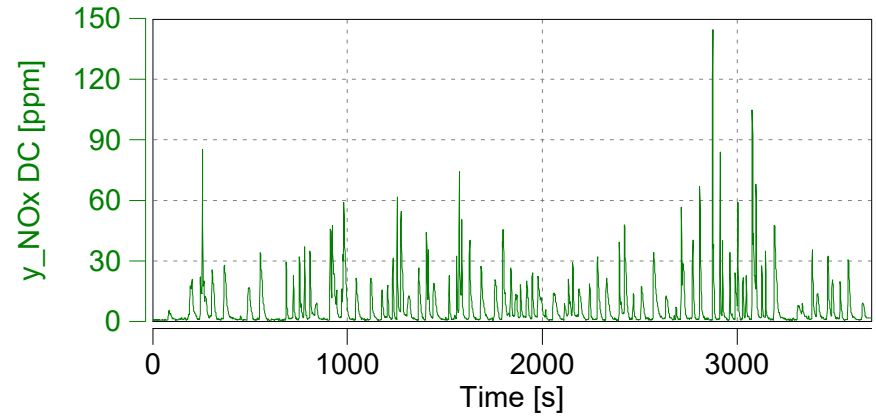
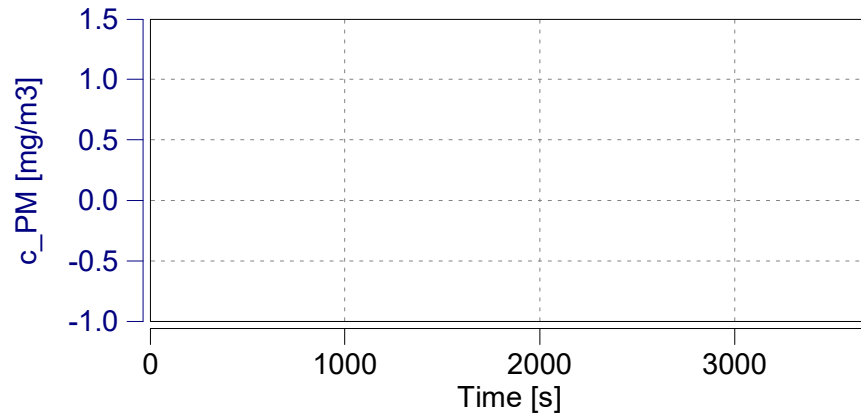
Vehicle: 2017 VW Golf / Independent Vehicle
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Corrected Emissions (2)

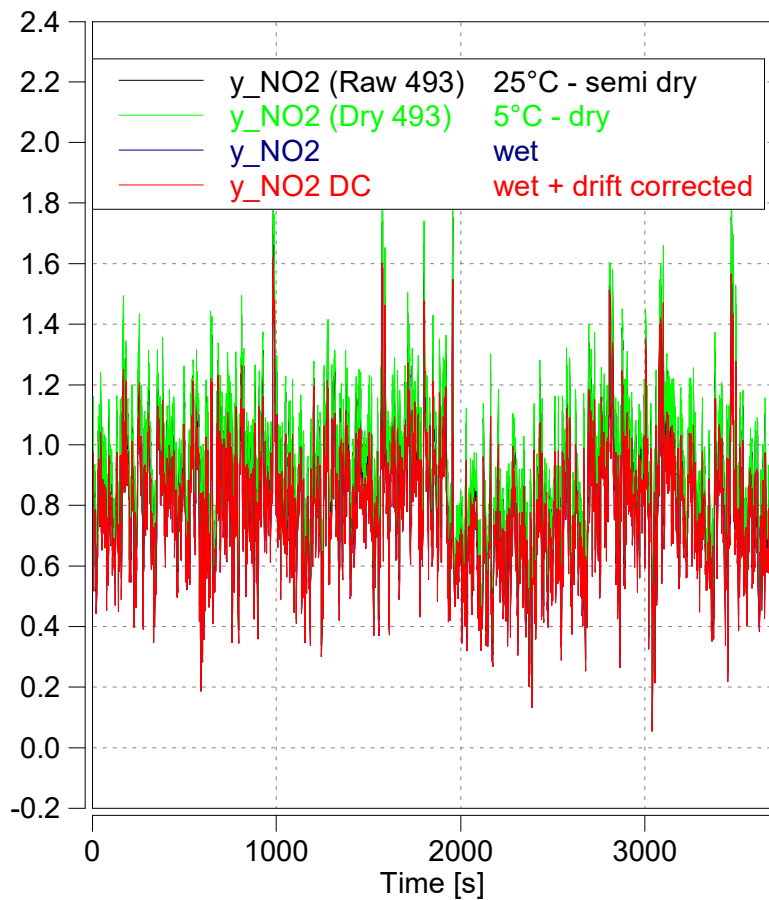
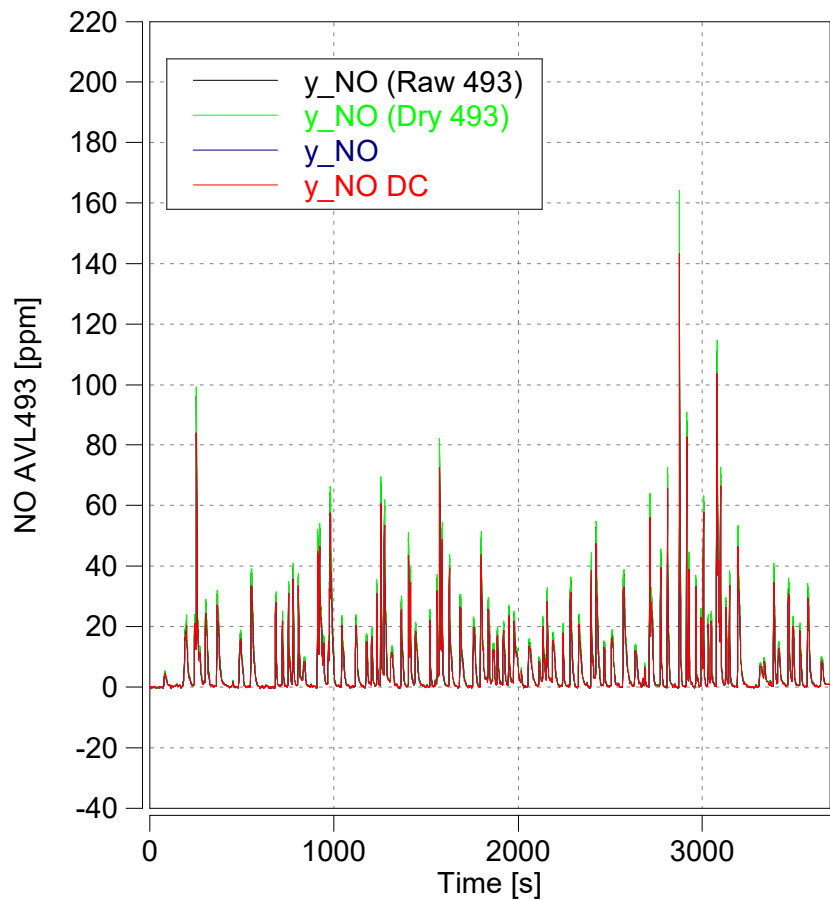
Start Date: 10/03/2017

Start Time: 15:17:03.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Golf / Independent Vehicle
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Golf / Independent Vehicle
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

NOx - AVL 493

y_NO (Raw 493)
y_NO2 (Raw 493)
25°C

EU R49 8.6.1
US §1065.672
drift correction

d_Kf_NO 25°C to dry
d_Kf_NO2 25°C to dry

- (1) EU R49 8.1.1 (15)
- (2) US §1065.655
- (3) none

y_NO DC (Dry 493)
y_NO2 DC (Dry 493)

y_NO (Dry 493)
y_NO2 (Dry 493)

CF dry/wet
(factor equal for all constituents)

CF NOx Ambient Conditions

y_NO DC
y_NO2 DC
wet

y_NO
y_NO2
wet

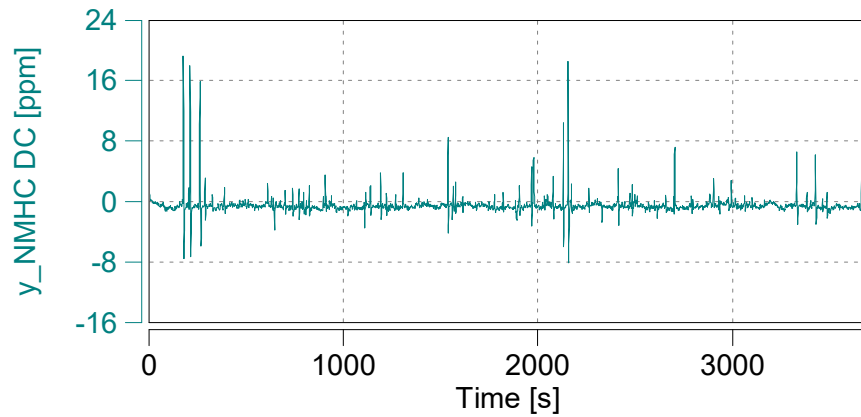
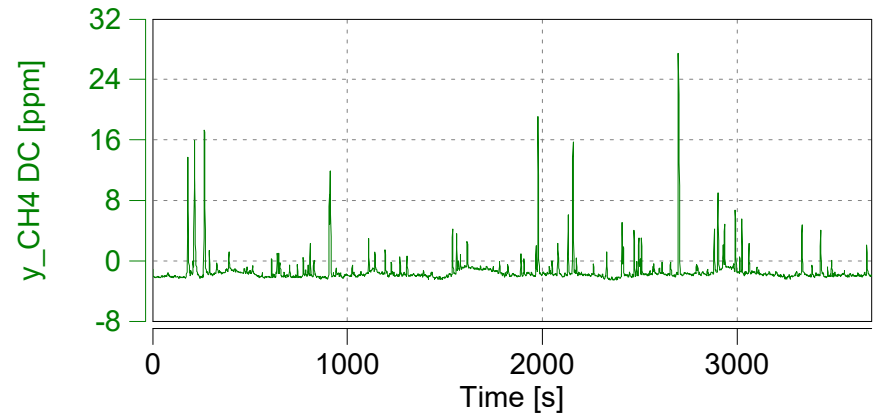
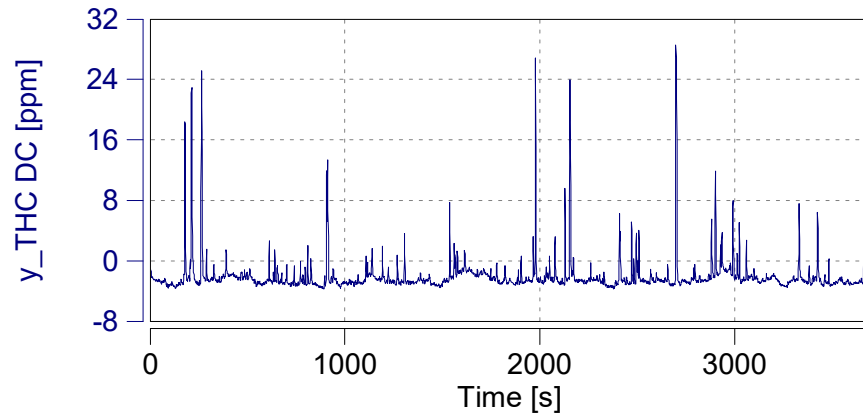
- (1) HD Diesel Engine SwRI FinalReport 08-2597, 1999
- (2) humidity only
- (3) equivalent uncorrected NOx limit method for EU in service
- (4) US §40.86.1342.94 Diesel
- (5) US §40.86.1342.94 SI
- (6) US §40.86.1370-2007 (default US)
- (7) US 40.1065.670
- (8) none (default EU)

Case: City

Page: Corrected Emissions (5)

Start Date: 10/03/2017

Start Time: 15:17:03.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

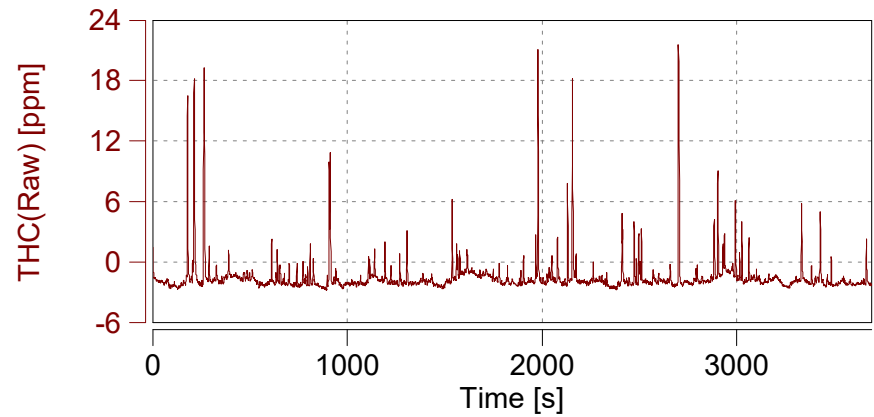
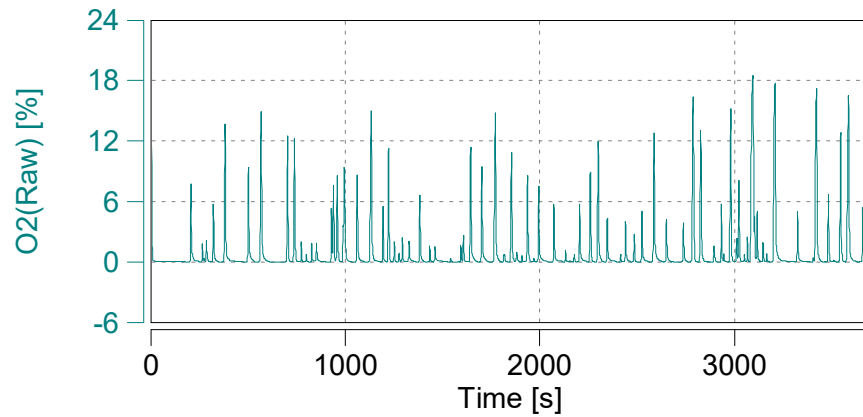
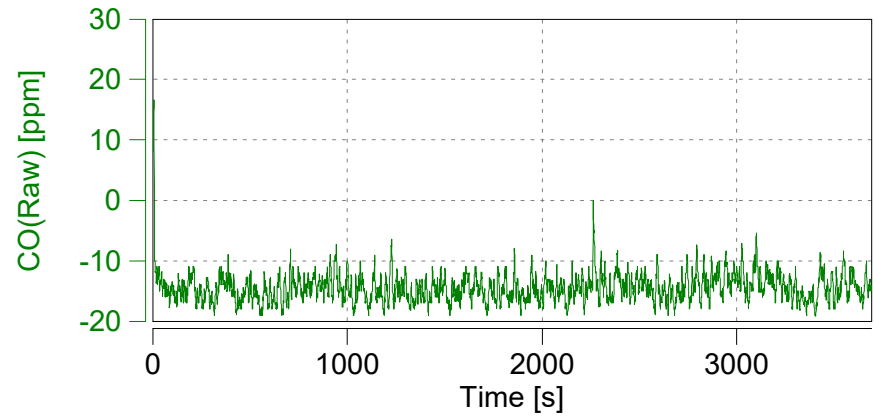
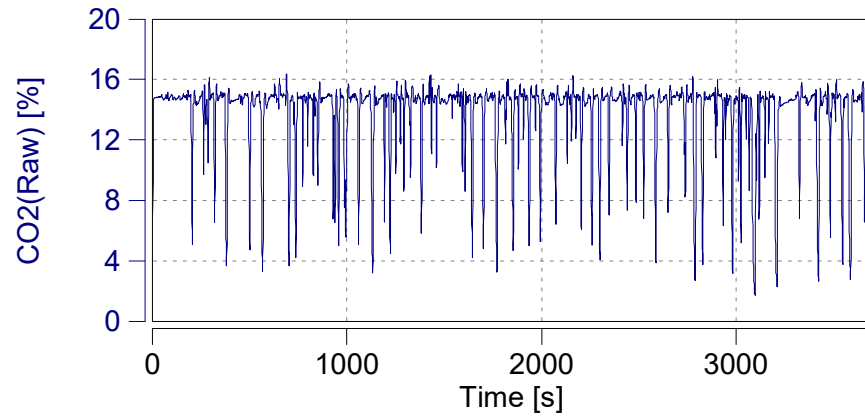
Vehicle: 2017 VW Golf / Independent Vehicle
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Emissions Raw Data (1)

Start Date: 10/03/2017

Start Time: 15:17:03.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

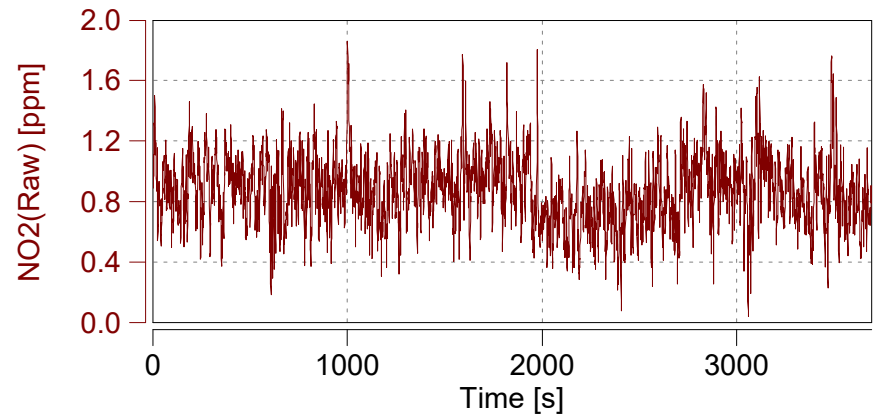
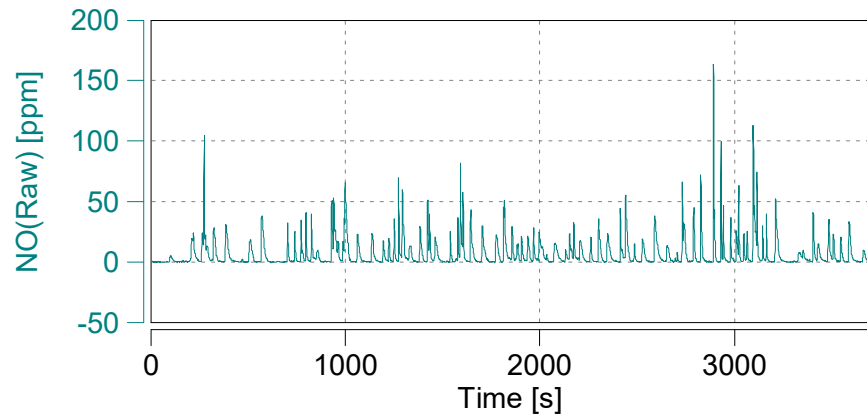
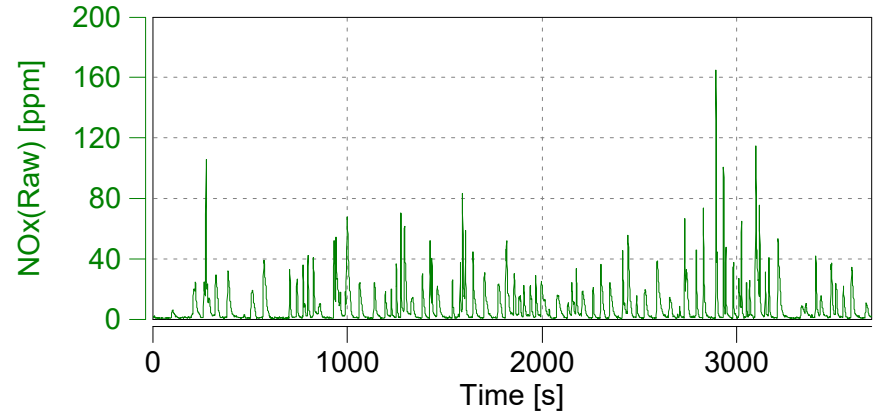
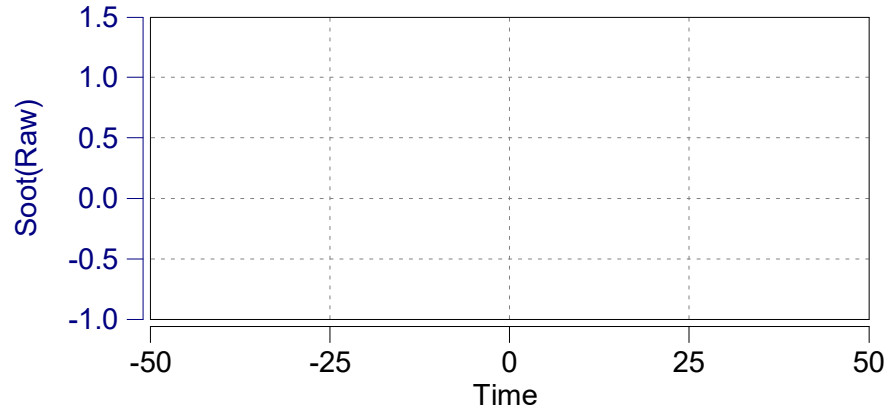
Vehicle: 2017 VW Golf / Independent Vehicle
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Emissions Raw Data (2)

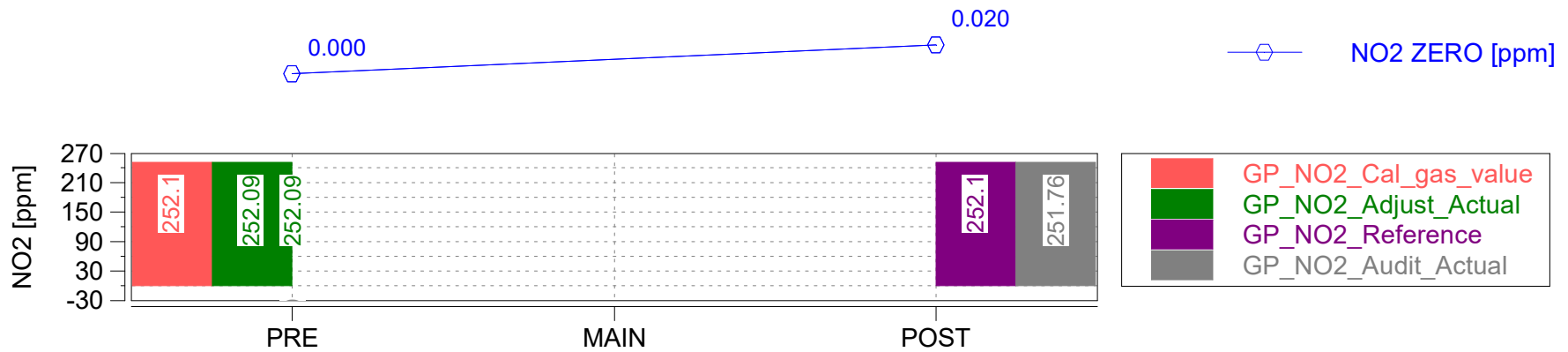
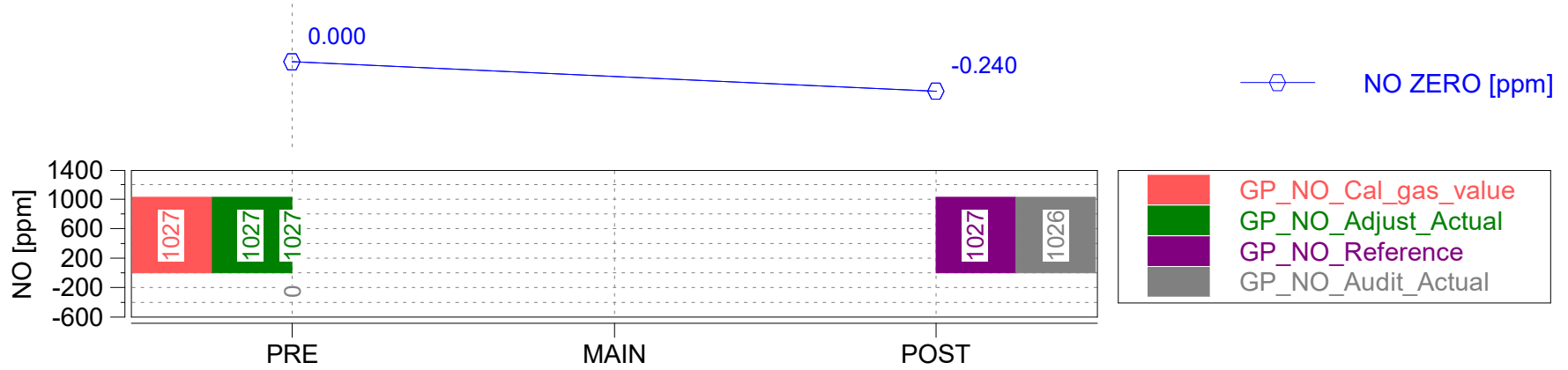
Start Date: 10/03/2017

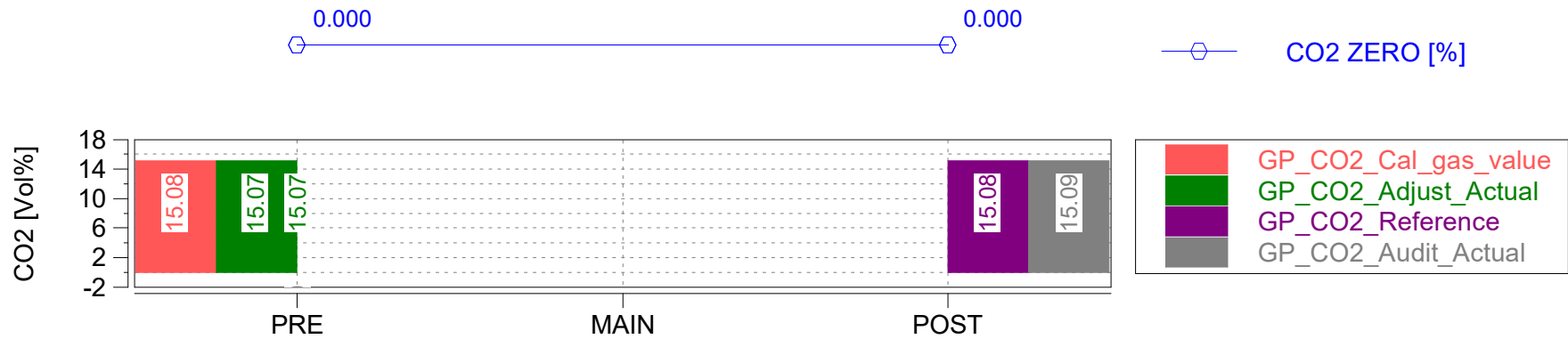
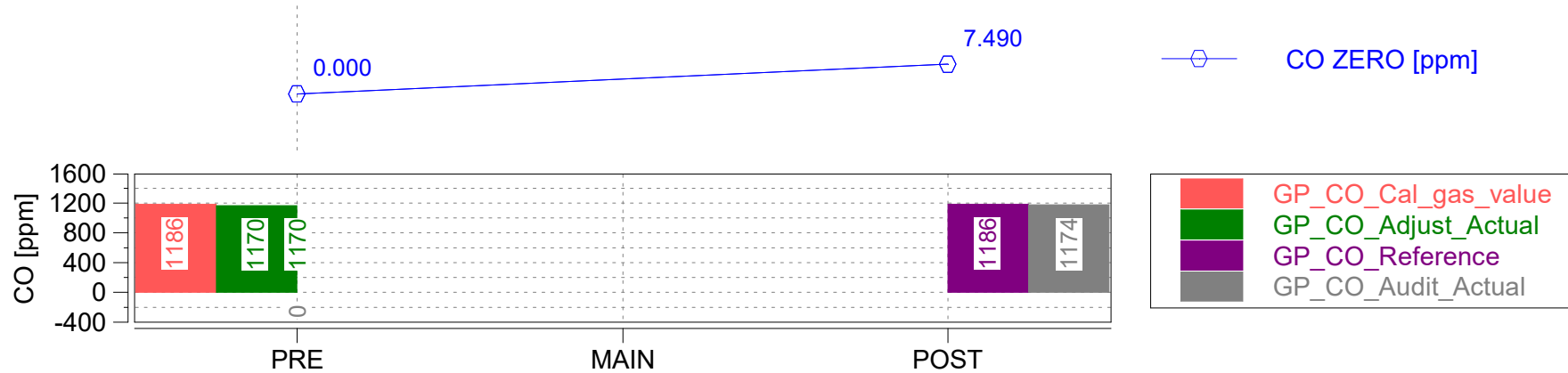
Start Time: 15:17:03.0

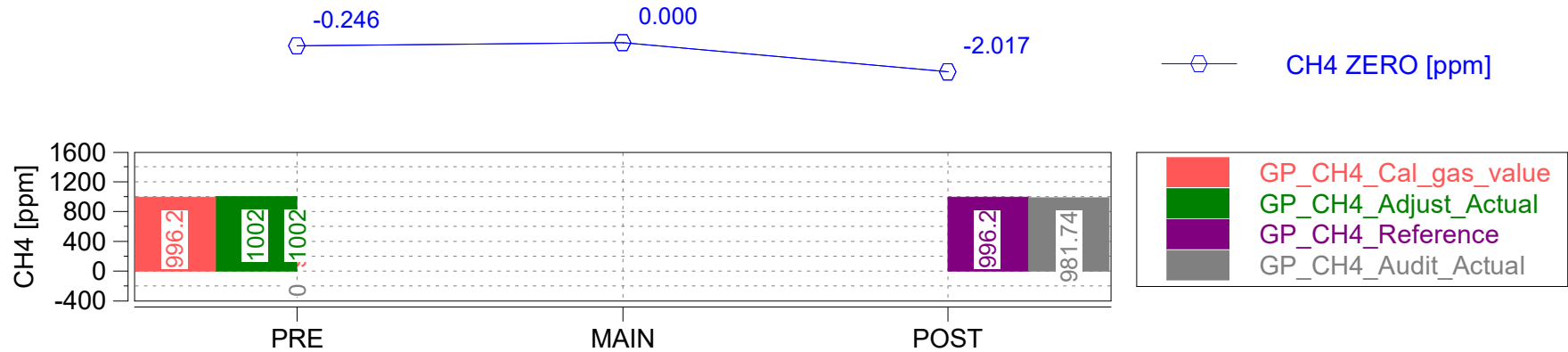
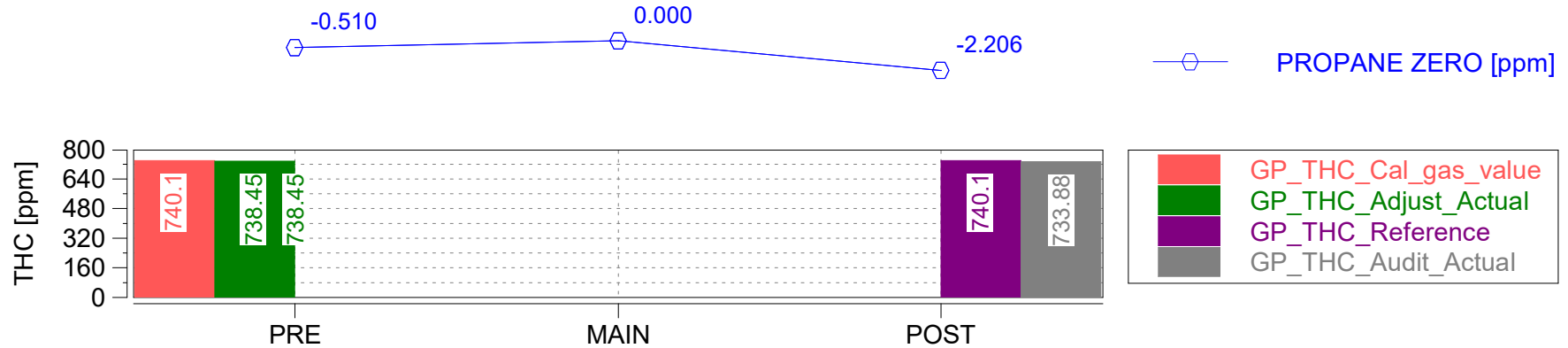


Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Golf / Independent Vehicle
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90







#	Text	Value	Unit
-	----	----	----
1.0	Test Start: Date	-	-
2.0	Test Start: Time	-	-
3.0	Ambient Temperature	IFILE1:TM'Temperature	deg C
4.0	Ambient Temperature TS	0.00000	s
5.0	Ambient Pressure	IFILE1:TM'Pressure	kPa
6.0	Ambient Pressure TS	0.00000	s
7.0	Humidity Type	1.00000	-
8.0	Amb. Rel. Humidity	IFILE1:TM'Humidity	%
9.0	Amb. Rel. Humidity	0.00000	s
10.0	GPS Latitude		deg
11.0	GPS Latitude TS	0.00000	s
12.0	GPS Longitude		deg
13.0	GPS Longitude TS	0.00000	s
14.0	Altitude		m
15.0	Altitude TS	0.00000	s
16.0	GPS Quality		-
17.0	GPS Quality TS	0.00000	s
18.0	GroundSpeed		km/h
19.0	GroundSpeed TS	0.00000	s
20.0	Altitude from topographical map		m
21.0	Altitude TS of topographical map		s
22.0	TRIP_AMBIENT_GPS_AVL	YES	-
23.0	CALC_GPS_GROUNDSPEED	NO	-
24.0	EXHAUST_FLOW_AVL	NO	-
25.0	EXHAUST_FLOW_AVL_EFM	YES	-
26.0	Exhaust Flow Type	2.00000	-
27.0	Mass Flow	IFILE1:TM'PitotEFM_ExhaustG	various
28.0	Mass Flow TS	2.20000	s
29.0	Exhaust Pressure		kPa
30.0	Exhaust Pressure TS	2.20000	s

#	Text	Value	Unit
-	----	----	----
31.0	Exhaust Delta Pressure		kPa
32.0	Exhaust Pressure Delta TS	2.20000	s
33.0	Exhaust Temperature	IFILE1:TM'PitotEFM_ExhaustG	degC
34.0	Exhaust Temperature TS	2.20000	s
35.0	Lambda	N/A	-
36.0	Lambda TS		s
37.0	CO2_DIL		%
38.0	CO2_DIL TS		s
39.0	CVS Volume Flow		m3/min
40.0	TimeShift_CVS_VOL_FLOW		s
41.0	IN_CVS_PRESSURE		kPa
42.0	TimeShift_CVS_PRESSURE		s
43.0	IN_CVS_TEMP		degC
44.0	TimeShift_CVS_TEMP		s
45.0	Dry to Wet Conversion CO2	YES	-
46.0	Dry to Wet Conversion O2	YES	-
47.0	Dry to Wet Conversion NO	NO	-
48.0	Dry to Wet Conversion NO2	NO	-
49.0	Dry to Wet Conversion THC	NO	-
50.0	Dry to Wet Conversion CH4	NO	-
51.0	Dry to Wet Conversion O2	NO	-
52.0	CO2	IFILE1:TM'GPiS_CO2	%
53.0	CO2 TS	-19.90000	s
54.0	OS	IFILE1:TM'GPiS_O2	%
55.0	O2 TS	-20.40000	s
56.0	CO	IFILE1:TM'GPiS_CO	ppm
57.0	CO TS	-19.90000	s
58.0	NO	IFILE1:TM'GPiS_NO	ppm
59.0	NO TS	-18.10000	s
60.0	NO2	IFILE1:TM'GPiS_NO2	ppm

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Golf / Independent Vehicle
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
61.0	NO2 TS	-18.10000	s
62.0	THC	IFILE1:TM'FIDiS_THC_C1	ppm
63.0	THC TS	0.00000	s
64.0	CH4	IFILE1:TM'FIDiS_CH4_C1	ppm
65.0	CH4 TS	0.00000	s
66.0	GAS_PEMS_Ethane_Efficiency	IFILE1:MOVE_AVL4925'GP_Et -	
67.0	GAS_PEMS_Methane_Efficiency	IFILE1:MOVE_AVL4925'GP_M -	
68.0	GAS_PEMS_Methane_Response	IFILE1:MOVE_AVL4925'GP_M -	
69.0	Zero Signal	IFILE1:TM'GPiS_STATE	0/1
70.0	Zero Signal TS	-18.10000	s
71.0	Zero Signal_FIDiS	IFILE1:TM'FIDiS_STATE	0/1
72.0	Zero Signal_FIDiS TS		s
73.0	Species Input Type	4.00000	-
74.0	GASPEMS=AVL493	NO	-
75.0	GASPEMS=AVL493_iX	NO	-
76.0	GASPEMS=AVL492	YES	-
77.0	GASPEMS=AVL4925	YES	-
78.0	PM: Type	4.00000	1=GFB+HC, 2=GFB, 3='PM=S
79.0	Filter ID from IFile	NO	-
80.0	Lab ID from IFile	NO	-
81.0	PM Filter: ID	N/A	ID
82.0	PM Filter: Lab	N/A	Name/ID
83.0	PM Filter: Weight before Test	N/A	mg
84.0	PM Filter: Weight after Test	N/A	mg
85.0	PM (HC Corr): Max. Exhaust Flow	N/A	scfm
86.0	Soot		mg/m3
87.0	Soot TS	-5.00000	s
88.0	Soot Sensor		mg/m3
89.0	Soot Sensor TS		s
90.0	PM Filter: Filter Flow Rate		l/min

#	Text	Value	Unit
-	----	----	----
91.0	PM Filter: Filter Flow Rate TS	-5.00000	s
92.0	PM Filter: Filter Dilution Ratio		-
93.0	PM Filter: Filter Dilution Ratio TS	-5.00000	s
94.0	PM Filter: Filter Trigger		-
95.0	PM Filter: Filter Trigger TS	-5.00000	s
96.0	PMPEMS=AVL494	YES	-
97.0	PMPEMS_AVL494_PROP_DIL	NO	-
98.0	PM dilution ratio min		-
99.0	PM_MaxExhaustFlowRate		-
100.0	PM_ExhaustFlow_Thresh		-
101.0	PM_total_flow_val		-
102.0	PM_total_flow_val_TS		-
103.0	PM_exh_mass_flow		-
104.0	PM_exh_mass_flow_TS		-
105.0	PN		#/cm3
106.0	TimeShift_PN		s
107.0	PN_STATE		-
108.0	PN TS STATE		s
109.0	PNPEMS_AVL496	NO	-
110.0	PN_CorrFactor	1.00000	
111.0	Time Alignment	1.00000	-
112.0	Time Alignment Dataset 1	N/A	0/1
113.0	Time Alignment Dataset 2	N/A	0/1
114.0	Time Alignment Thresh 1	N/A	-
115.0	Time Alignment Thresh 2	N/A	-
116.0			
117.0			
118.0			
119.0			
120.0			

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Golf / Independent Vehicle
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
121.0			
122.0	Trigger		0/1
123.0	Trigger TS		s
124.0	FTIR_NAME_1		-
125.0	FTIR_MW_1		-
126.0	FTIR_CHANNEL_1		-
127.0	FTIR_CHANNEL_TS_1		-
128.0	FTIR_CHANNEL_DRY_1	NO	-
129.0	FTIR_NAME_2		-
130.0	FTIR_MW_2		-
131.0	FTIR_CHANNEL_2		-
132.0	FTIR_CHANNEL_TS_2		-
133.0	FTIR_CHANNEL_DRY_2	NO	-
134.0	FTIR_NAME_3		-
135.0	FTIR_MW_3		-
136.0	FTIR_CHANNEL_3		-
137.0	FTIR_CHANNEL_TS_3		-
138.0	FTIR_CHANNEL_DRY_3	NO	-
139.0	FTIR_NAME_4		-
140.0	FTIR_MW_4		-
141.0	FTIR_CHANNEL_4		-
142.0	FTIR_CHANNEL_TS_4		-
143.0	FTIR_CHANNEL_DRY_4	NO	-
144.0	FTIR_NAME_5		-
145.0	FTIR_MW_5		-
146.0	FTIR_CHANNEL_5		-
147.0	FTIR_CHANNEL_TS_5		-
148.0	FTIR_CHANNEL_DRY_5	NO	-
149.0	FTIR_NAME_6		-
150.0	FTIR_MW_6		-

#	Text	Value	Unit
-	----	----	----
151.0	FTIR_CHANNEL_6		-
152.0	FTIR_CHANNEL_TS_6		-
153.0	FTIR_CHANNEL_DRY_6	NO	-
154.0	FTIR_NAME_7		-
155.0	FTIR_MW_7		-
156.0	FTIR_CHANNEL_7		-
157.0	FTIR_CHANNEL_TS_7		-
158.0	FTIR_CHANNEL_DRY_7	NO	-
159.0	FTIR_NAME_8		-
160.0	FTIR_MW_8		-
161.0	FTIR_CHANNEL_8		-
162.0	FTIR_CHANNEL_TS_8		-
163.0	FTIR_CHANNEL_DRY_8	NO	-
164.0	FTIR_NAME_9		-
165.0	FTIR_MW_9		-
166.0	FTIR_CHANNEL_9		-
167.0	FTIR_CHANNEL_TS_9		-
168.0	FTIR_CHANNEL_DRY_9	NO	-
169.0	FTIR_NAME_10		-
170.0	FTIR_MW_10		-
171.0	FTIR_CHANNEL_10		-
172.0	FTIR_CHANNEL_TS_10		-
173.0	FTIR_CHANNEL_DRY_10	NO	-
174.0	FTIR_NAME_11		-
175.0	FTIR_MW_11		-
176.0	FTIR_CHANNEL_11		-
177.0	FTIR_CHANNEL_TS_11		-
178.0	FTIR_CHANNEL_DRY_11	NO	-
179.0	FTIR_NAME_12		-
180.0	FTIR_MW_12		-

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Golf / Independent Vehicle
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
181.0	FTIR_CHANNEL_12		-
182.0	FTIR_CHANNEL_TS_12		-
183.0	FTIR_CHANNEL_DRY_12	NO	-
184.0	FTIR_NAME_13		-
185.0	FTIR_MW_13		-
186.0	FTIR_CHANNEL_13		-
187.0	FTIR_CHANNEL_TS_13		-
188.0	FTIR_CHANNEL_DRY_13	NO	-
189.0	FTIR_NAME_14		-
190.0	FTIR_MW_14		-
191.0	FTIR_CHANNEL_14		-
192.0	FTIR_CHANNEL_TS_14		-
193.0	FTIR_CHANNEL_DRY_14	NO	-
194.0	FTIR_NAME_15		-
195.0	FTIR_MW_15		-
196.0	FTIR_CHANNEL_15		-
197.0	FTIR_CHANNEL_TS_15		-
198.0	FTIR_CHANNEL_DRY_15	NO	-
199.0	FTIR_NAME_16		-
200.0	FTIR_MW_16		-
201.0	Vehicle Type	2017 VW Golf	-
202.0	Vehicle Info	Independent Vehicle	-
203.0	Engine Type	Gasoline	-
204.0	Engine Info	2.0L	-
205.0	Engine Torque		Nm
206.0	Curb Idle Load		%
207.0	Idle Speed		rpm
208.0	HYBRID_OVC_REF_CO2_gkm		g/km
209.0	Engine Concept	1.00000	-
210.0	Alpha	1.93000	-

#	Text	Value	Unit
-	----	----	----
211.0	Beta	1.00000	
212.0	Gamma	0.00000	
213.0	Delta	0.00000	
214.0	Epsilon	0.03200	
215.0	X_C	83.00000	
216.0	X_H	13.30000	
217.0	X_N	0.00000	
218.0	X_O	3.50000	
219.0	X_S	0.00000	
220.0	Fuel_Density	747.50000	
221.0	rho_exhaust	1.29310	
222.0	U_CO2	1.51800	
223.0	U_CO	0.96600	
224.0	U_NO	1.58700	
225.0	U_NO2	1.58700	
226.0	U_NOx	1.58700	
227.0	U_HC	0.49900	
228.0	U_NMHC	0.47100	
229.0	U_CH4	0.55300	
230.0	U_O2	1.10400	
231.0	Fuel Type	2.00000	-
232.0	exhaust mass flow type (YES/NO)	YES	-
233.0	Distance Calculation Type	1.00000	-
234.0	Velocity Statistics Calculation Type	2.00000	-
235.0	RDE vehicle class	1.00000	-
236.0	TM_CITY0		s
237.0	TM_CITY1		s
238.0	TM_RURAL0		s
239.0	TM_RURAL1		s
240.0	TM_RURAL2_0		s

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Golf / Independent Vehicle
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
241.0	TM_RURAL2_1		s
242.0	Second Rural Part for Time Marks (NO		-
243.0	TM_MW0		s
244.0	TM_MW1		s
245.0	VELOCITY_LIMIT_STOP	2.00000	km/h
246.0	VELOCITY_LIMIT_URBAN	50.00000	km/h
247.0	VELOCITY_LIMIT_RURAL	75.00000	km/h
248.0	Intake Manifold Pressure Type	1.00000	-
249.0	Velocity	IFILE1:TM'OBD_Vehicle_Spee	km/h
250.0	Velocity TS	1.30000	s
251.0	Velocity FACTOR	1.00000	-
252.0	Coolant Temperature	IFILE1:TM'OBD_Engine_Coola	degC
253.0	Coolant Temperature TS	1.30000	s
254.0	Oil Temperature		degC
255.0	Oil Temperature TS	1.30000	s
256.0	Intake Manifold Temperature		degC
257.0	Intake Manifold Temp TS	1.30000	s
258.0	Intake Manifold Pressure	IFILE1:TM'OBD_Intake_manifo	kPa
259.0	Intake Manifold Pressure TS	1.30000	s
260.0	Throttle Position		%
261.0	Throttle TS	1.30000	s
262.0	TYP_IDLE_MASS_FLOW		kg/h
263.0	Torque Type	1.00000	-
264.0	Speed	IFILE1:TM'OBD_Engine_RPM	rpm
265.0	Speed TS	1.30000	s
266.0	Torque		Nm
267.0	Torque TS	1.30000	s
268.0	Friction Torque	N/A	Nm
269.0	Friction Torque TS	N/A	s
270.0	Reference Torque	N/A	Nm

#	Text	Value	Unit
-	----	----	----
271.0	Reference Torque TS	N/A	s
272.0	k_VELINE		-
273.0	D_VELINE		-
274.0	Fuel Flow Type	2.00000	-
275.0	Air Flow Type	1.00000	-
276.0	Fuel Rate		various
277.0	Air Rate		various
278.0	Fuel Rate TS	1.30000	s
279.0	No_Cylinders		-
280.0	Air Rate TS	1.30000	s
281.0	FTIR_CHANNEL_32		-
282.0	FTIR_CHANNEL_TS_32		-
283.0	FTIR_CHANNEL_DRY_32	NO	-
284.0	FTIR_NAME_33		-
285.0	FTIR_MW_33		-
286.0	FTIR_CHANNEL_33		-
287.0	FTIR_CHANNEL_TS_33		-
288.0	FTIR_CHANNEL_DRY_33	NO	-
289.0	FTIR_NAME_34		-
290.0	FTIR_MW_34		-
291.0	FTIR_CHANNEL_34		-
292.0	FTIR_CHANNEL_TS_34		-
293.0	FTIR_CHANNEL_DRY_34	NO	-
294.0	FTIR_NAME_35		-
295.0	FTIR_MW_35		-
296.0	FTIR_CHANNEL_35		-
297.0	FTIR_CHANNEL_TS_35		-
298.0	FTIR_CHANNEL_DRY_35	NO	-
299.0	FTIR_NAME_36		-
300.0	FTIR_MW_36		-

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Golf / Independent Vehicle
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
301.0	FTIR_CHANNEL_36		-
302.0	FTIR_CHANNEL_TS_36		-
303.0	FTIR_CHANNEL_DRY_36	NO	-
304.0	FTIR_NAME_37		-
305.0	FTIR_MW_37		-
306.0	FTIR_CHANNEL_37		-
307.0	FTIR_CHANNEL_TS_37		-
308.0	FTIR_CHANNEL_DRY_37	NO	-
309.0	FTIR_NAME_38		-
310.0	FTIR_MW_38		-
311.0	FTIR_CHANNEL_38		-
312.0	FTIR_CHANNEL_TS_38		-
313.0	FTIR_CHANNEL_DRY_38	NO	-
314.0	FTIR_NAME_39		-
315.0	FTIR_MW_39		-
316.0	FTIR_CHANNEL_39		-
317.0	FTIR_CHANNEL_TS_39		-
318.0	FTIR_CHANNEL_DRY_39	NO	-
319.0	FTIR_NAME_40		-
320.0	FTIR_MW_40		-
321.0	FTIR_CHANNEL_40		-
322.0	FTIR_CHANNEL_TS_40		-
323.0	FTIR_CHANNEL_DRY_40	NO	-
324.0	Legislation Type (1=HDIUT 2=EU H	4.00000	-
325.0	WholeTest_NOx_corr	5.00000	-
326.0	WholeTest_Hum_corr	2.00000	-
327.0	CD_Distance	0.00000	km
328.0	CD_NOx	0.00000	mg/km
329.0	CD_CO	0.00000	mg/km
330.0	CD_CO2	0.00000	g/km

#	Text	Value	Unit
-	----	----	----
331.0	CD_NMHC	0.00000	mg/km
332.0	CD_CH4	0.00000	mg/km
333.0	CD_THC	0.00000	mg/km
334.0	CD_PN		#/km
335.0	WLTC_LOW_SPEED_gkm		g/km
336.0	WLTC_LOW_SPEED_FAC	1.20000	-
337.0	WLTC_MEDIUM_SPEED_gkm		g/km
338.0	WLTC_HIGH_SPEED_gkm		g/km
339.0	WLTC_HIGH_SPEED_FAC	1.10000	-
340.0	WLTC_EXTRA_HIGH_SPEED_gkm		g/km
341.0	WLTC_EXTRA_HIGH_SPEED_FA	1.05000	-
342.0	TOL_NORMAL_DRIVING	25.00000	%
343.0	TOL_SEVERE_DRIVING	50.00000	%
344.0	Increase Tolerance Nomral Driving	NO	-
345.0	Bin1_min		km/h
346.0	Bin2_min		km/h
347.0	Bin3_min		km/h
348.0	Bin1_max		km/h
349.0	Bin2_max		km/h
350.0	Bin3_max		km/h
351.0	Clear_R0	125.40000	N
352.0	Clear_R1	0.29300	Nh/km
353.0	Clear_R2	0.02795	N*(h/km) ²
354.0	Clear_SMK	1470.00000	kg
355.0	Clear_Rated_Power	140.00000	kW
356.0	Clear_Ref_Velocity	70.00000	km/h
357.0	Clear_Ref_Acc	0.45000	m/s ²
358.0	Clear_Smooth	3.00000	s
359.0	EXTC_From_High_Temp	30.00000	degC
360.0	EXTC_To_High_Temp	35.00000	degC

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Golf / Independent Vehicle
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
361.0	EXTC_From_Low_Temp	-7.00000	degC
362.0	EXTC_To_Low_Temp	0.00000	degC
363.0	Euro 6d or Euro 6d temp	NO	-
364.0	EXTC_From_Altitude	700.00000	m
365.0	EXTC_To_Altitude	1300.00000	m
366.0	EXTC_CORR_FAC	1.60000	
367.0	weight cold start (YES/NO)	NO	-
368.0	precon and soak done (YES/NO)	NO	-
369.0	PATH_PRECON_FILE		
370.0	filter velocity (YES/NO)	NO	-
371.0	filter velocity auto(YES/NO)	NO	-
372.0	Ki_CO		
373.0	Ki_CO2		
374.0	Ki_NOx		
375.0	Ki_FACTOR_CO2 (YES/NO)	NO	-
376.0	Ki_OFFSET_CO2 (YES/NO)	NO	-
377.0	Ki_FACTOR_CO (YES/NO)	NO	-
378.0	Ki_OFFSET_CO (YES/NO)	NO	-
379.0	Ki_FACTOR_NOx (YES/NO)	NO	-
380.0	Ki_OFFSET_NOx (YES/NO)	NO	-
381.0	Ki_OFF (YES/NO)	NO	-
382.0	HD legislations	1.00000	-
383.0	RDE legislations	1.00000	-
384.0	Submission Documents (YES/NO)	NO	-
385.0	General Setup Parameters Text	City	-
386.0	Legislation Setup Parameters Text	City	-
387.0	Trip Info		-
388.0	IN_TIME_REF		-
389.0	Sub-Trip Start: Auto	YES	-
390.0	Sub-Trip Start: Seconds	N/A	s

#	Text	Value	Unit
-	----	----	----
391.0	Sub-Trip End: Auto	YES	-
392.0	Sub-Trip End: Seconds	N/A	s
393.0	Unit System	2.00000	-
394.0	Calculate: PM Emissions	NO	-
395.0	Calculate: PN Emissions	NO	-
396.0	Output: Summary	YES	-
397.0	Output: Emissions	YES	-
398.0	Output: Raw Data	YES	-
399.0	Output: Zero Span	YES	-
400.0	Output: Data Consistency	NO	-
401.0	Output: Window Plots	YES	-
402.0	Fuel Rate ECU vs. EU ISO16183	$y = 10000000000.0000 x - 0.000 R^2=10000000000.000 SEE=$	
403.0	PEMS post processing version	Rel_10_B192	
404.0	Concerto version	480.00000	
405.0	Concerto build	215.00000	
406.0	USERNAME	EFR	

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Golf / Independent Vehicle
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway
Page: Trip Summary

Start Date: 10/10/2017
Start Time: 07:19:28.0



Trip Duration	3589.00	s	ave THC	3.06019	ppm	BS CO2	n/a	g/hphr
Trip Duration (a)	3589.00	s	ave NMHC	4.41777	ppm	BS CO	n/a	g/hphr
Trip Distance	38.45	mi	ave CH4	-1.23417	ppm	BS THC	n/a	g/hphr
Trip Distance (a)	38.45	mi	ave CO	188.88496	ppm	BS NMHC	n/a	g/hphr
Trip Fuel Cons. (b)	n/a	kg	ave CO2	12.36206	%	BS CH4	n/a	g/hphr
Trip Fuel Cons. (ab)	n/a	kg	ave NOx	4.56667	ppm	BS NO (d)	n/a	g/hphr
Trip Fuel Cons. EU (ac)	4.39	kg	ave PM	n/a	mg/m3	BS NO2	n/a	g/hphr
Trip Fuel Cons. US (ac)	4.37	kg	ave Soot meas	n/a	mg/m3	BS NOx	n/a	g/hphr
Trip Fuel Cons. Volume (b)	n/a	gall	ave Soot	n/a	mg/m3	BS Soot	n/a	g/hphr
Trip Fuel Cons. Volume (ab)	n/a	gall	ave PN	n/a	#/cm3	BS Soot meas	n/a	g/hphr
Trip Fuel Cons. Volume EU (ac)	1.55	gall	tot THC	0.24809	g	BS PM	n/a	g/hphr
Trip Fuel Cons. Volume US (ac)	1.54	gall	tot NMHC	0.24795	g	BS PN	n/a	#/hpr
Trip Fuel Economy (b)	n/a	mpg_US	tot CH4	0.01599	g	DS CO2	344.65045	g/mi
Trip Fuel Economy (ab)	n/a	mpg_US	tot CO	22.66603	g	DS CO	0.58956	g/mi
Trip Fuel Economy EU (ac)	24.77	mpg_US	tot CO2	13250.41397	g	DS THC	0.00645	g/mi
Trip Fuel Economy US (ac)	24.92	mpg_US	tot NO (d)	0.28749	g	DS NMHC	0.00645	g/mi
Trip Av. Eng. Speed	1389.64	rpm	tot NO2	0.07790	g	DS CH4	0.00042	g/mi
Trip Av. Torque	n/a	lbft	tot NOx	0.29183	g	DS NO (d)	0.00748	g/mi
Trip Av. Power	n/a	hp	tot Soot	n/a	g	DS NO2	0.00203	g/mi
Trip Work	n/a	hphr	tot Soot meas	n/a	g	DS NOx	0.00759	g/mi
Trip Exhaust Mass	68.55	kg	tot PM	n/a	g	DS Soot	n/a	g/mi
Trip Exhaust Mass EU (ac)	n/a	kg	tot PN	n/a	#	DS Soot meas	n/a	g/mi
Trip Exhaust Mass US (ac)	n/a	kg	PM measurement type	0.00000	-	DS PM	n/a	g/mi
Trip Av. Amb. Temperature	61.81	deg_F	PM correction type	1.00000	alpha(HC)	DS PN	n/a	#/mi
Trip Av. Humidity	61.66	%	tot Soot on PM filter (estim.)	n/a	mg	FS CO2	n/a	g/kg
Fuel Type	Petrol (E10)		Soot --> PM simple scaling factor	1.00000	-	FS CO	n/a	g/kg
			Soot --> PM alpha scaling factor	0.00000	-	FS THC	n/a	g/kg
			Trip Av. Veh. Speed	38.56378	mi/hr	FS NMHC	n/a	g/kg
			Trip Velocity Zero	2.36835	%	FS CH4	n/a	g/kg
			Trip Velocity Urban	41.68292	%	FS NO (d)	n/a	g/kg
			Trip Velocity Rural	10.92226	%	FS NO2	n/a	g/kg
			Trip Velocity Motorway	47.39482	%	FS NOx	n/a	g/kg
						FS Soot	n/a	g/kg
						FS Soot meas	n/a	g/kg
						FS PM	n/a	g/kg
						FS PN	n/a	#/kg

(a) GAS PEMS measurement state only, (b) based on fuel rate input (ECU, Fuel Meter), (c) calculated from carbon balance
(d) NO calculated using molecular weight of NO2

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi S5 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

Page: Trip Summary Drift Corrected

Start Date: 10/10/2017

Start Time: 07:19:28.0

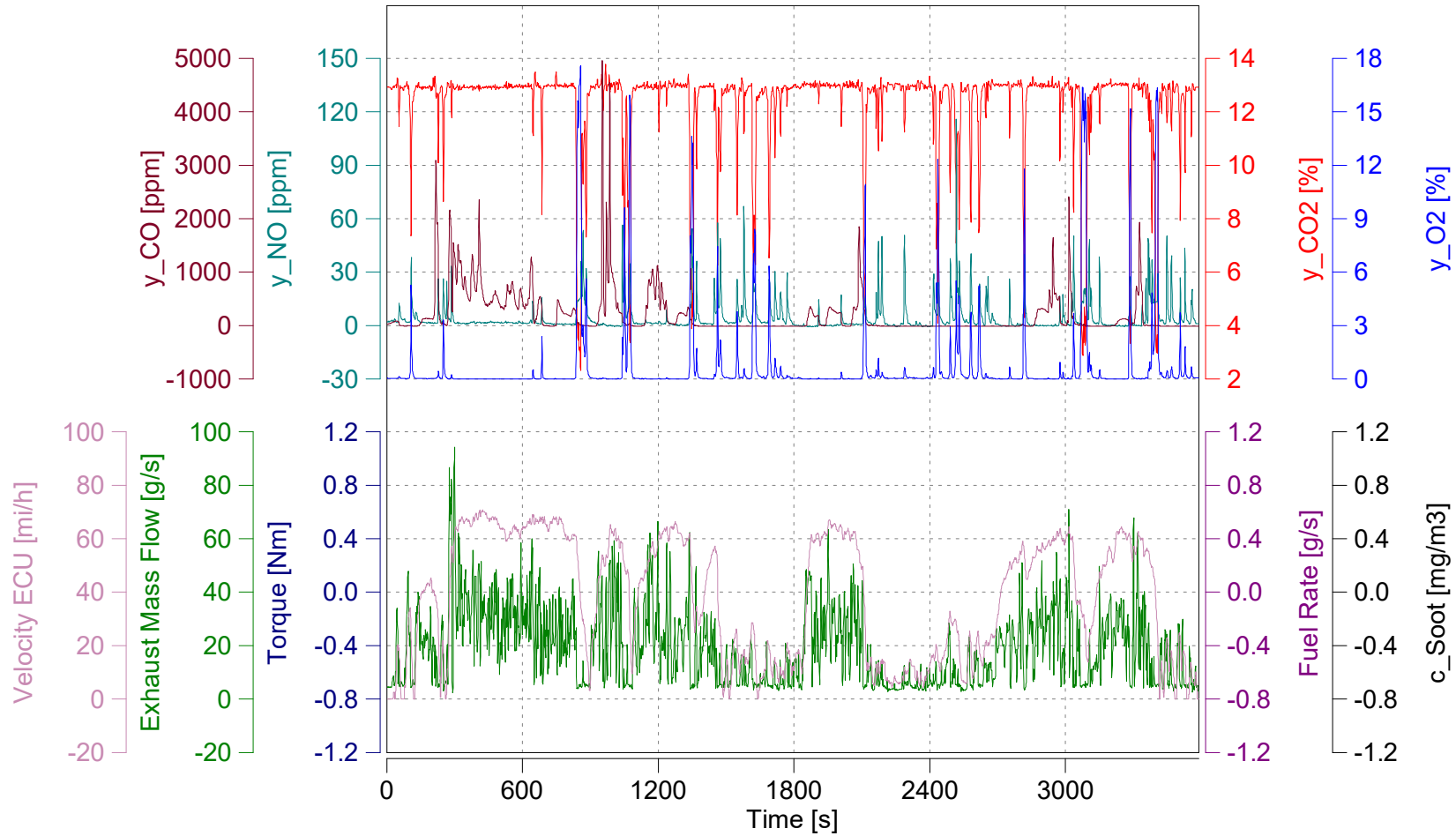


Trip Duration	3589.00	s	ave THC DC	4.16472	ppm	BS CO2 DC	n/a	g/hphr
Trip Duration (a)	3589.00	s	ave NMHC DC	5.45337	ppm	BS CO DC	n/a	g/hphr
Trip Distance	38.45	mi	ave CH4 DC	-1.17150	ppm	BS THC DC	n/a	g/hphr
Trip Distance (a)	38.45	mi	ave CO DC	190.48295	ppm	BS NMHC DC	n/a	g/hphr
Trip Fuel Cons. (b)	n/a	kg	ave CO2 DC	12.36206	%	BS CH4 DC	n/a	g/hphr
Trip Fuel Cons. (ab)	n/a	kg	ave NOx DC	4.61925	ppm	BS NO DC (d)	n/a	g/hphr
Trip Fuel Cons. EU (ac)	4.39	kg	ave PM	n/a	mg/m3	BS NO2 DC	n/a	g/hphr
Trip Fuel Cons. US (ac)	4.37	kg	ave Soot meas	n/a	mg/m3	BS NOx DC	n/a	g/hphr
Trip Fuel Cons. Volume (b)	n/a	gall	ave Soot	n/a	mg/m3	BS Soot	n/a	g/hphr
Trip Fuel Cons. Volume (ab)	n/a	gall	ave PN DC	n/a	#/cm3	BS Soot meas	n/a	g/hphr
Trip Fuel Cons. Volume EU (ac)	1.55	gall	tot THC DC	0.33763	g	BS PM	n/a	g/hphr
Trip Fuel Cons. Volume US (ac)	1.54	gall	tot NMHC DC	0.32733	g	BS PN DC	n/a	#/hpr
Trip Fuel Economy (b)	n/a	mpg_US	tot CH4 DC	0.01506	g	DS CO2 DC	344.65045	g/mi
Trip Fuel Economy (ab)	n/a	mpg_US	tot CO DC	22.86959	g	DS CO DC	0.59485	g/mi
Trip Fuel Economy EU (ac)	24.77	mpg_US	tot CO2 DC	13250.41397	g	DS THC DC	0.00878	g/mi
Trip Fuel Economy US (ac)	24.92	mpg_US	tot NO DC (d)	0.28493	g	DS NMHC DC	0.00851	g/mi
Trip Av. Eng. Speed	1389.64	rpm	tot NO2 DC	0.08580	g	DS CH4 DC	0.00039	g/mi
Trip Av. Torque	n/a	lbft	tot NOx DC	0.29611	g	DS NO DC (d)	0.00741	g/mi
Trip Av. Power	n/a	hp	tot Soot	n/a	g	DS NO2 DC	0.00223	g/mi
Trip Work	n/a	hphr	tot Soot meas	n/a	g	DS NOx DC	0.00770	g/mi
Trip Exhaust Mass	68.55	kg	tot PM	n/a	g	DS Soot	n/a	g/mi
Trip Exhaust Mass EU (ac)	n/a	kg	tot PN DC	n/a	#	DS Soot meas	n/a	g/mi
Trip Exhaust Mass US (ac)	n/a	kg	PM measurement type	0.00000	-	DS PM	n/a	g/mi
Trip Av. Amb. Temperature	61.81	deg_F	PM correction type	1.00000	alpha(HC)	DS PN DC	n/a	#/mi
Trip Av. Humidity	61.66	%	tot Soot on PM filter (estim.)	n/a	mg	FS CO2 DC	n/a	g/kg
Fuel Type	Petrol (E10)		Soot --> PM simple scaling factor	1.00000	-	FS CO DC	n/a	g/kg
			Soot --> PM alpha scaling factor	0.00000	-	FS THC DC	n/a	g/kg
			Trip Av. Veh. Speed	38.56378	mi/hr	FS NMHC DC	n/a	g/kg
			Trip Velocity Zero	2.36835	%	FS CH4 DC	n/a	g/kg
			Trip Velocity Urban	41.68292	%	FS NO DC (d)	n/a	g/kg
			Trip Velocity Rural	10.92226	%	FS NO2 DC	n/a	g/kg
			Trip Velocity Motorway	47.39482	%	FS NOx DC	n/a	g/kg
						FS Soot	n/a	g/kg
						FS Soot meas	n/a	g/kg
						FS PM	n/a	g/kg
						FS PN DC	n/a	#/kg

(a) GAS PEMS measurement state only, (b) based on fuel rate input (ECU, Fuel Meter), (c) calculated from carbon balance
 (d) NO calculated using molecular weight of NO2

Concerto Version: 480 Build 215, Serial Number: 8468
 M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi S5 /
 Engine: Gasoline / 3.0L
 NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
 Dry / Wet Corr.: 2 - CFR40 §86.1342-90



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

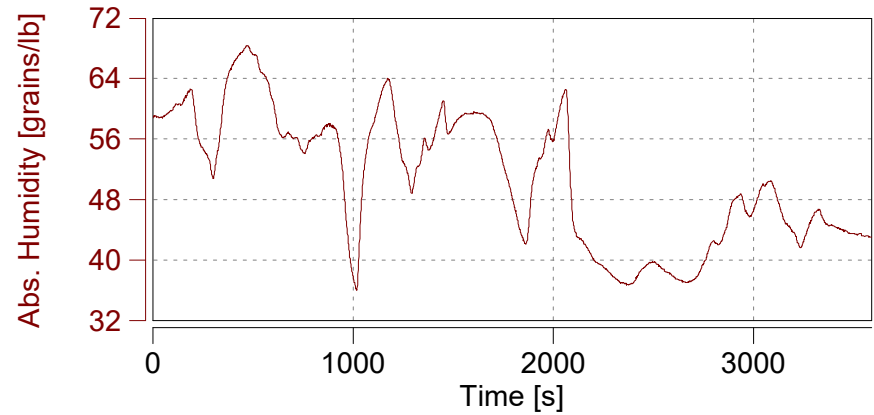
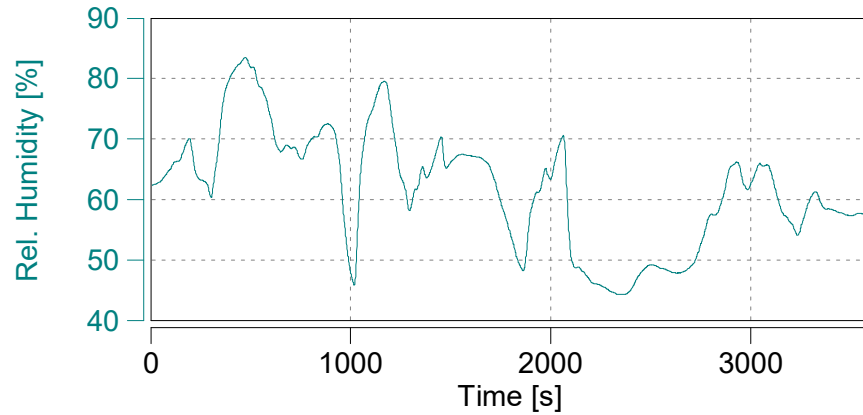
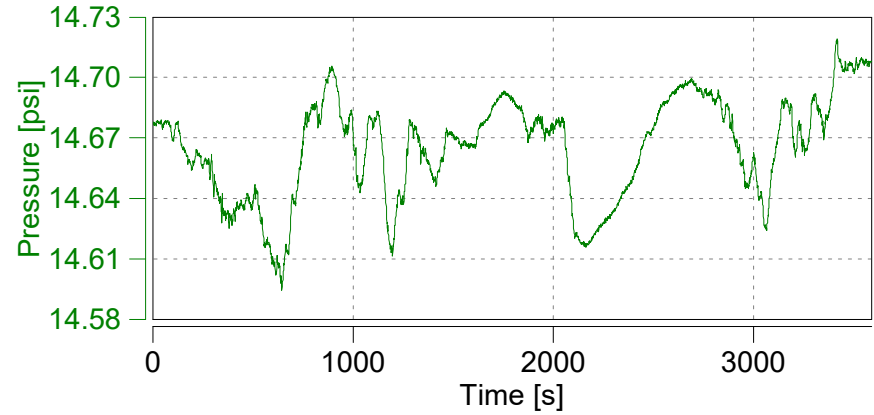
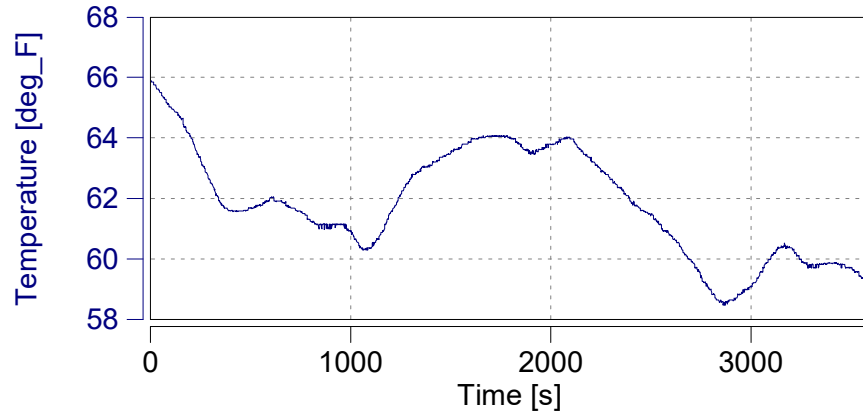
Vehicle: 2017 Audi S5 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

Page: Ambient Conditions

Start Date: 10/10/2017

Start Time: 07:19:28.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

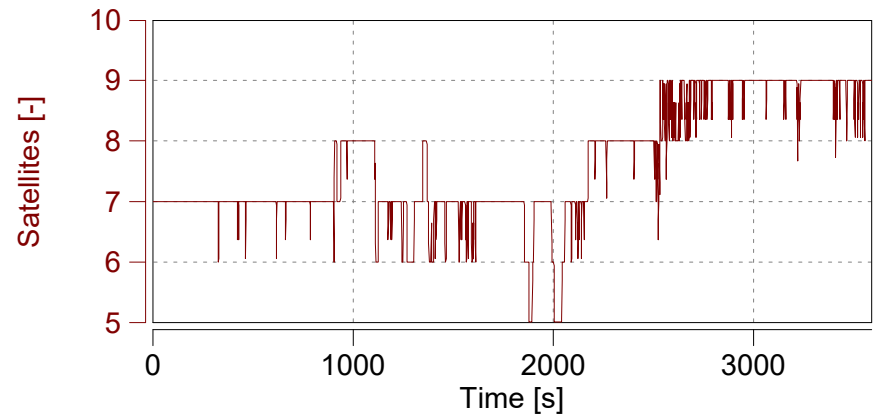
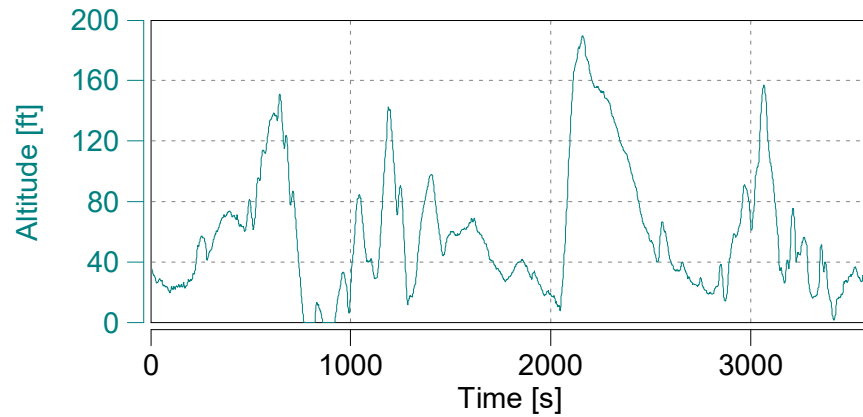
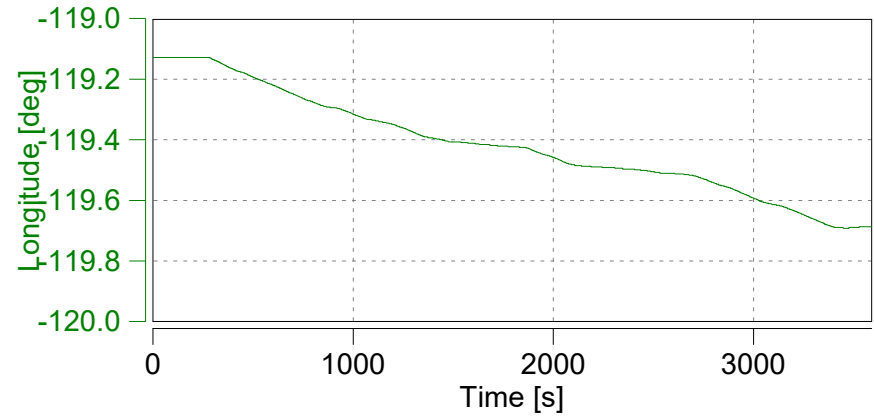
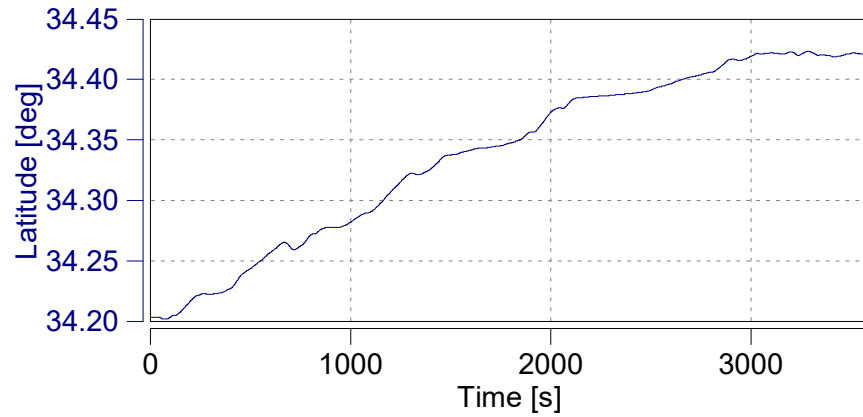
Vehicle: 2017 Audi S5 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

Page: GPS

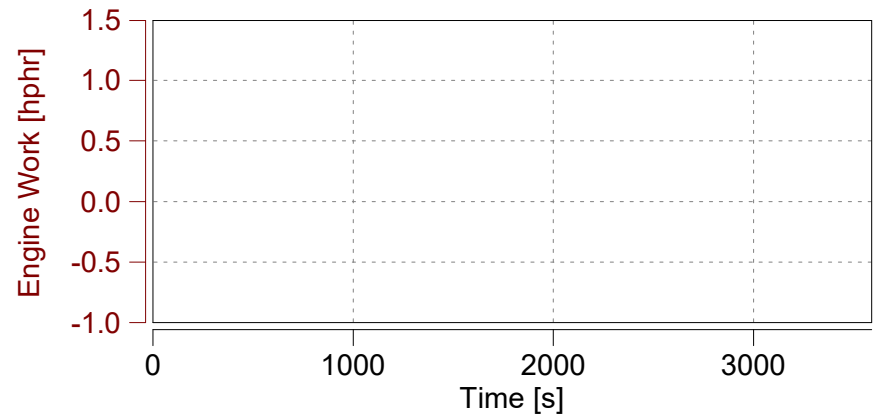
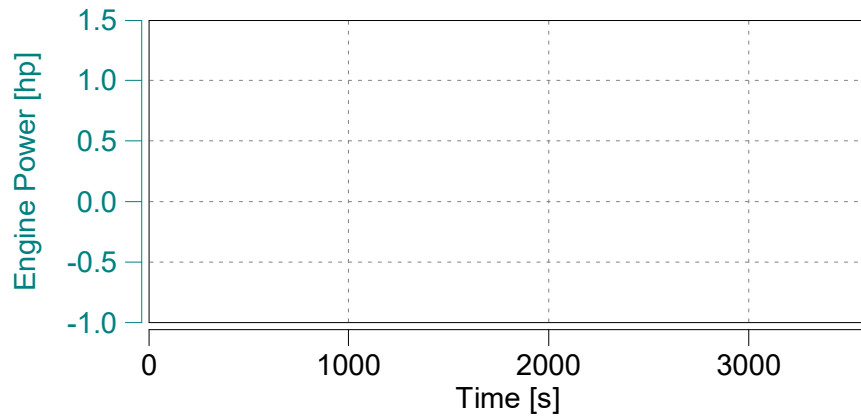
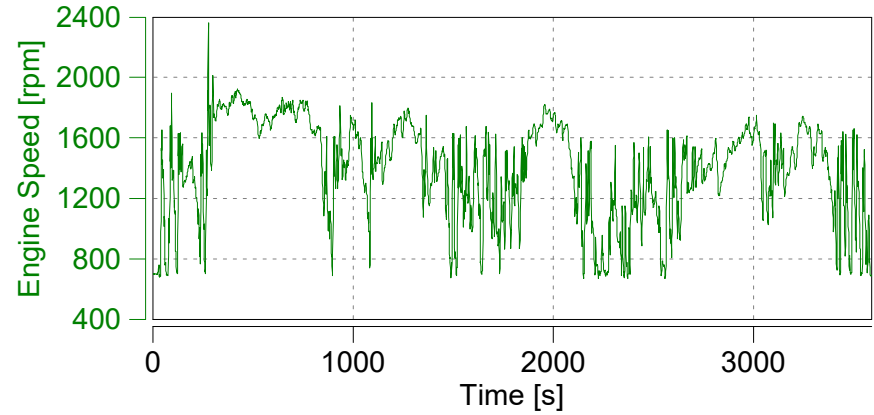
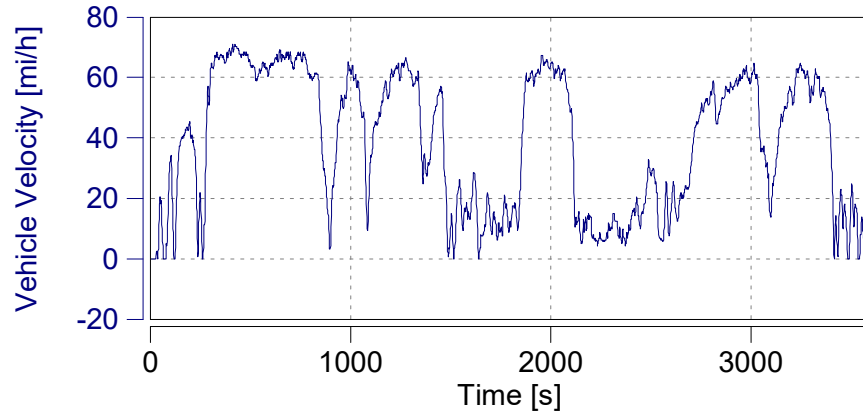
Start Date: 10/10/2017

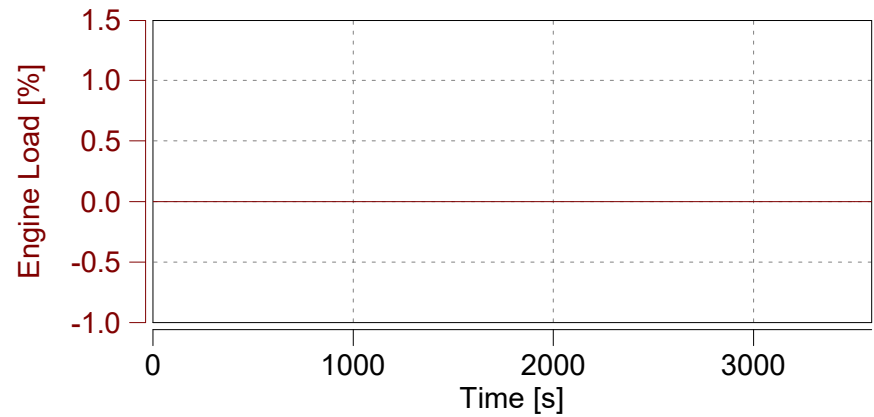
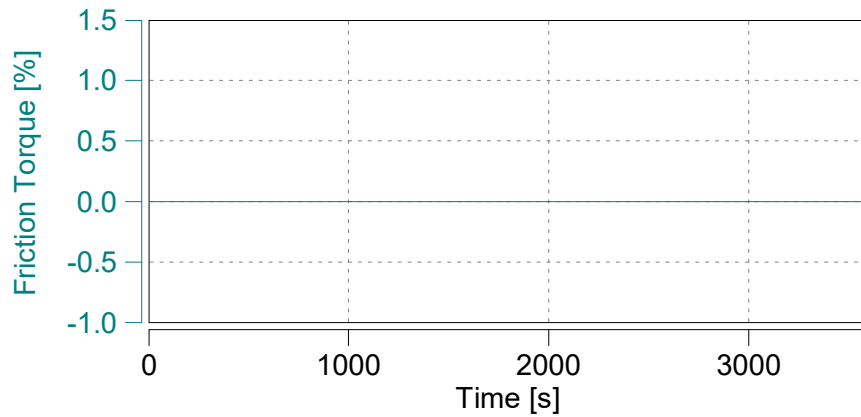
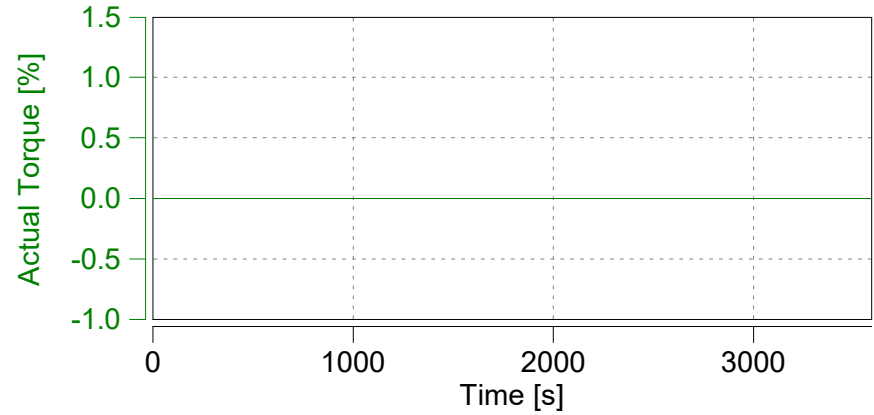
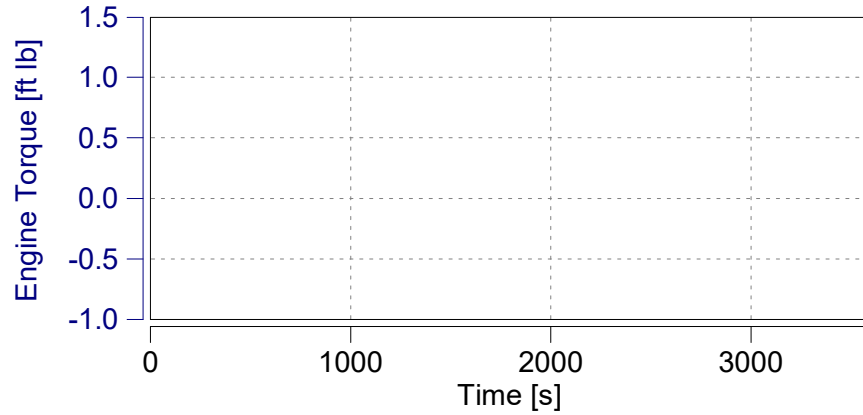
Start Time: 07:19:28.0

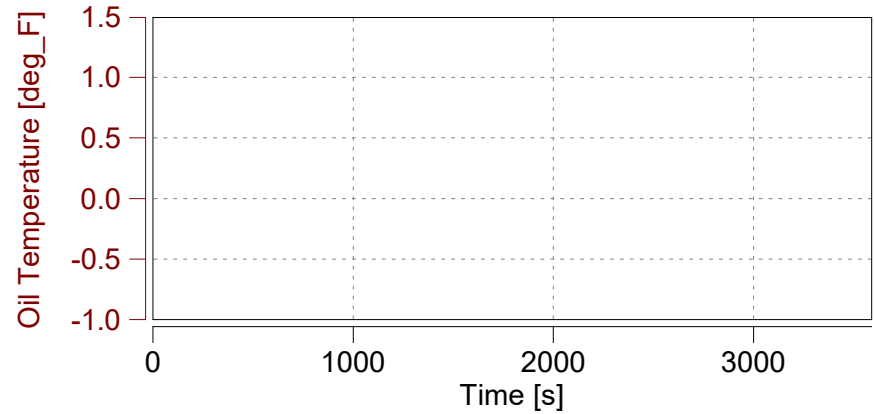
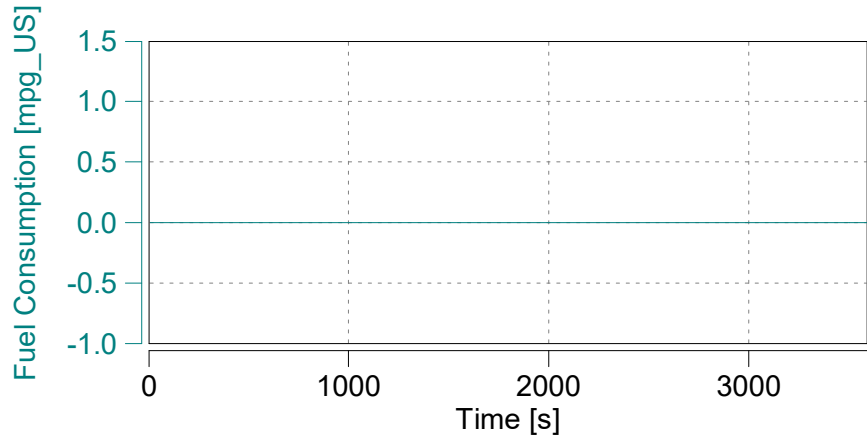
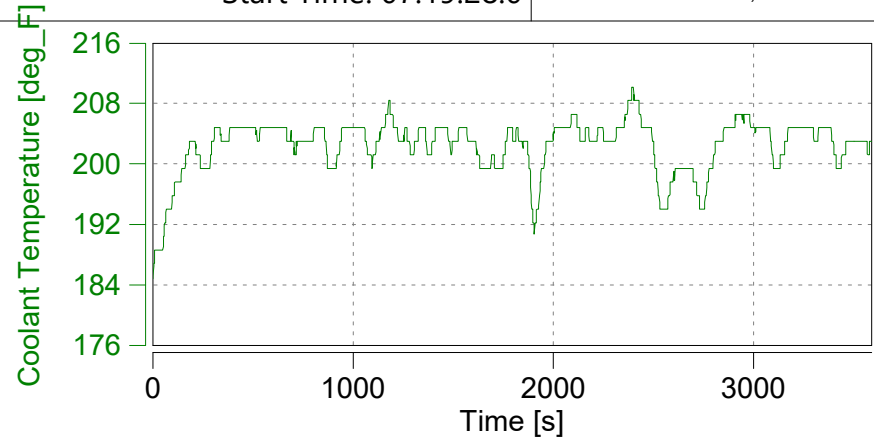
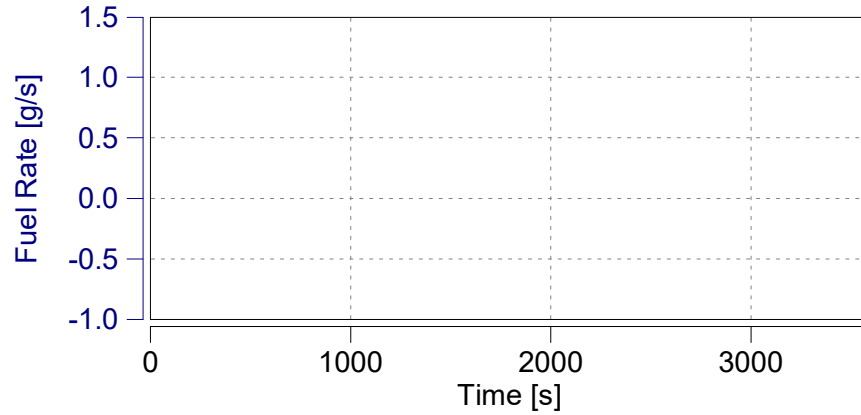


Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi S5 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90





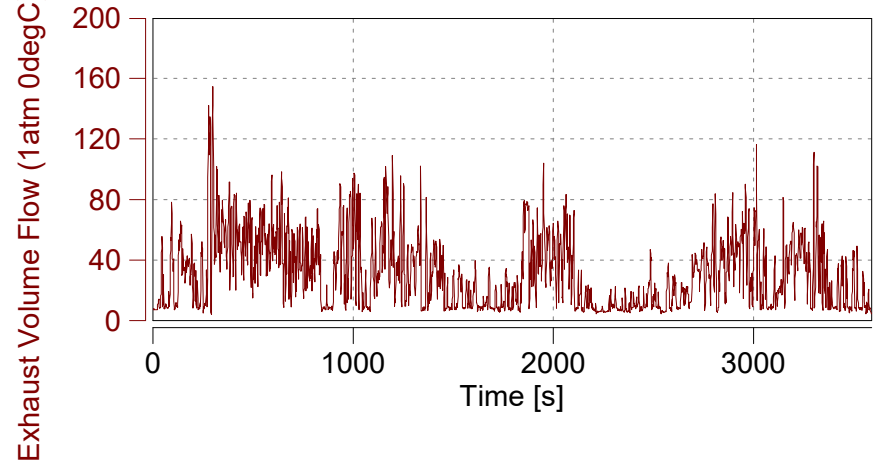
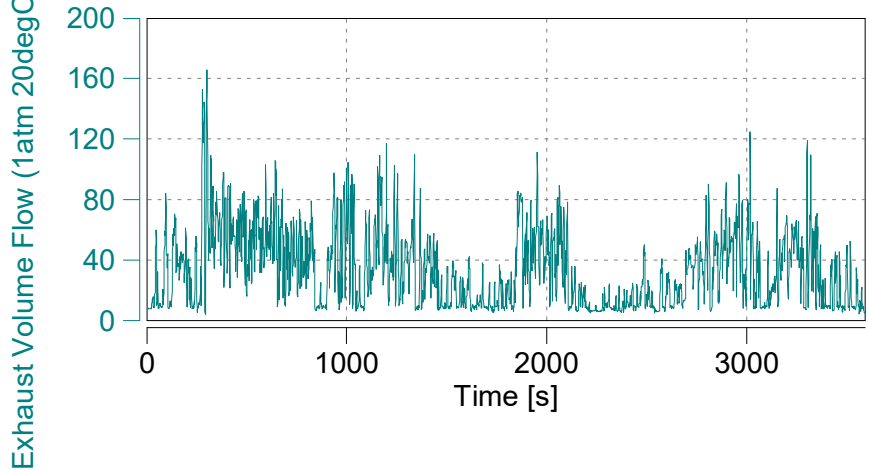
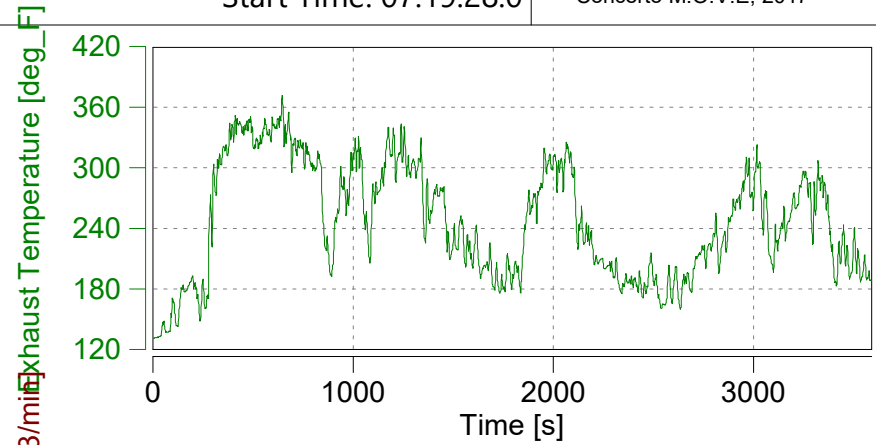
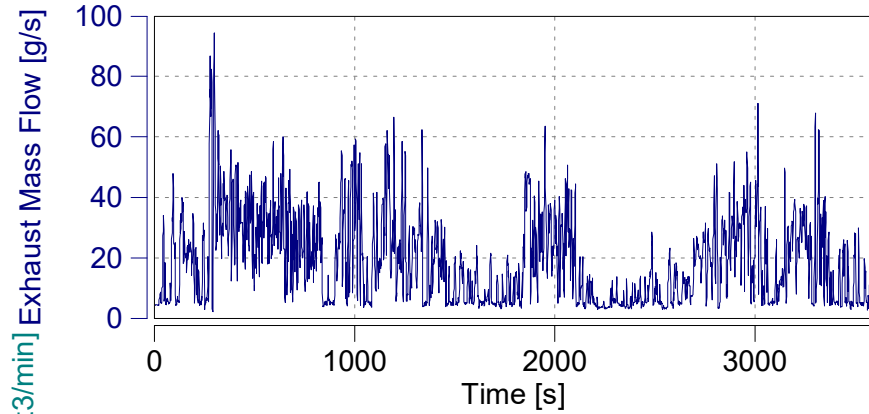


Case: Highway

Page: Exhaust Flow (1)

Start Date: 10/10/2017

Start Time: 07:19:28.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

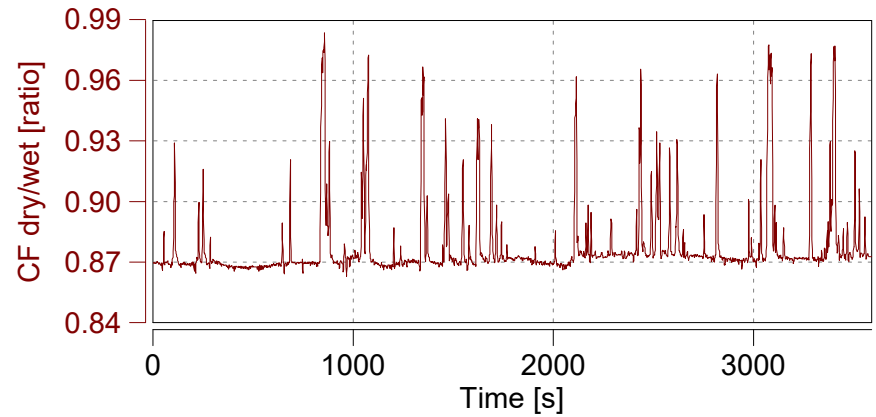
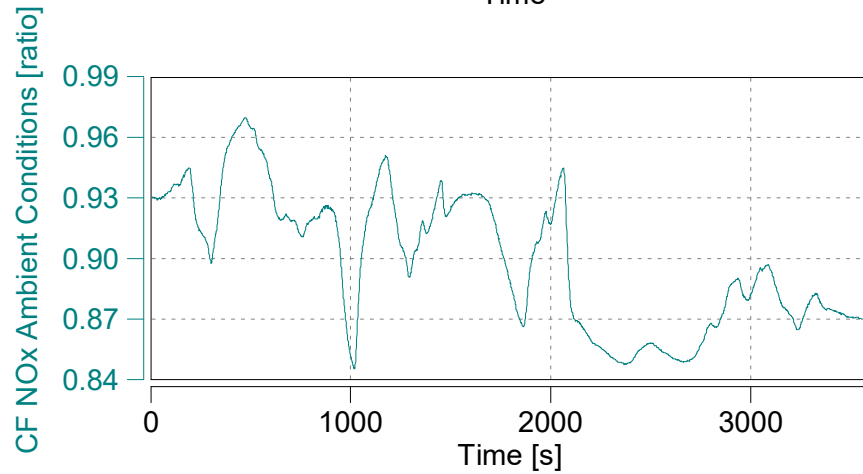
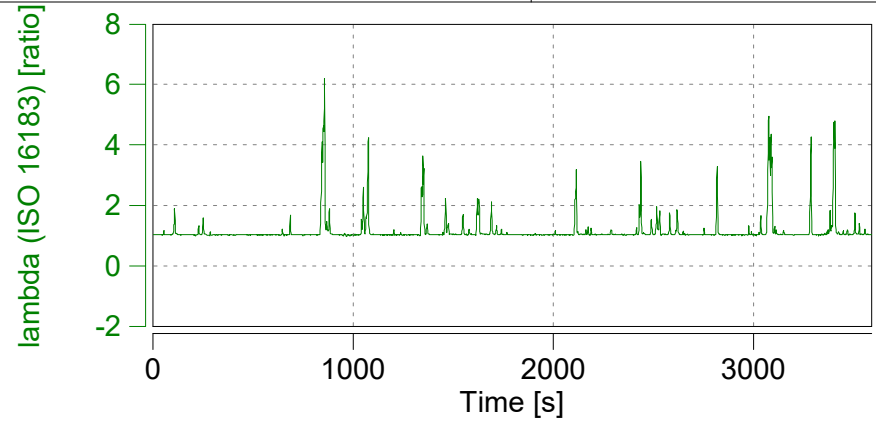
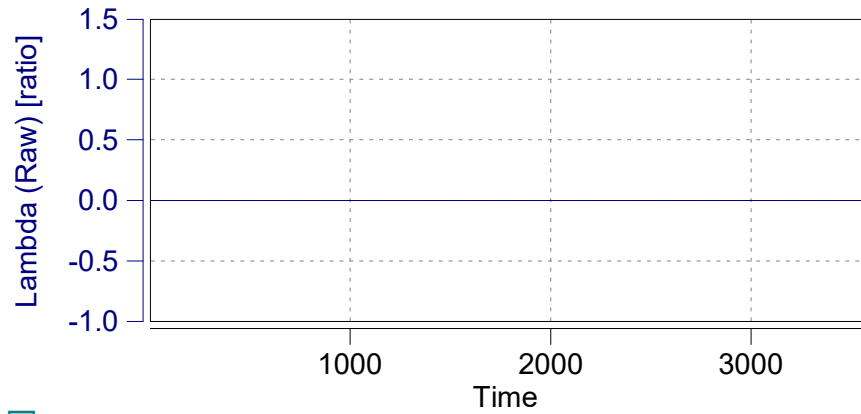
Vehicle: 2017 Audi S5 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

Page: Exhaust Flow (2)

Start Date: 10/10/2017

Start Time: 07:19:28.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

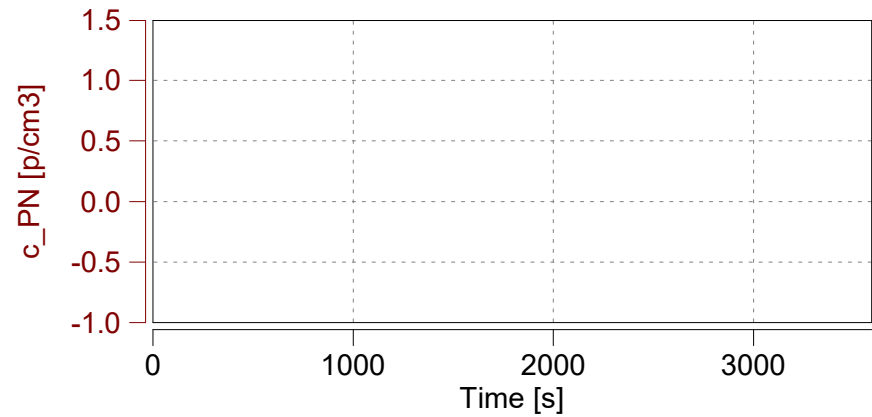
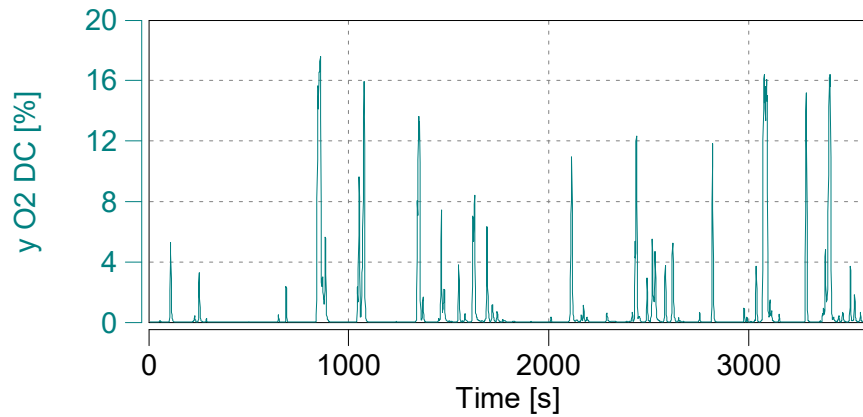
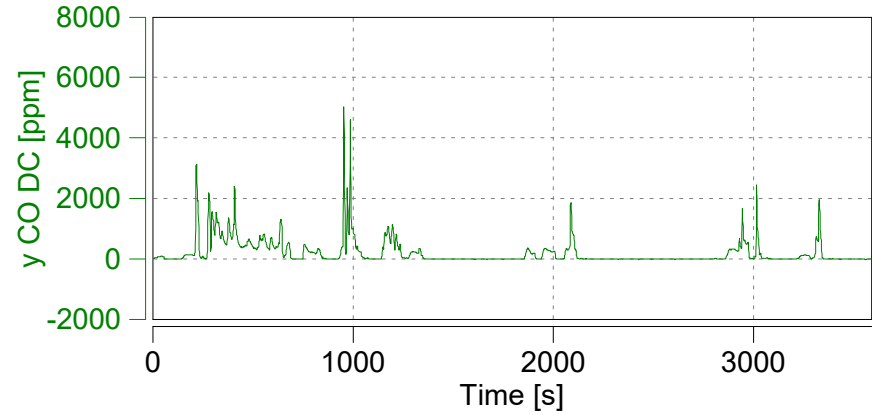
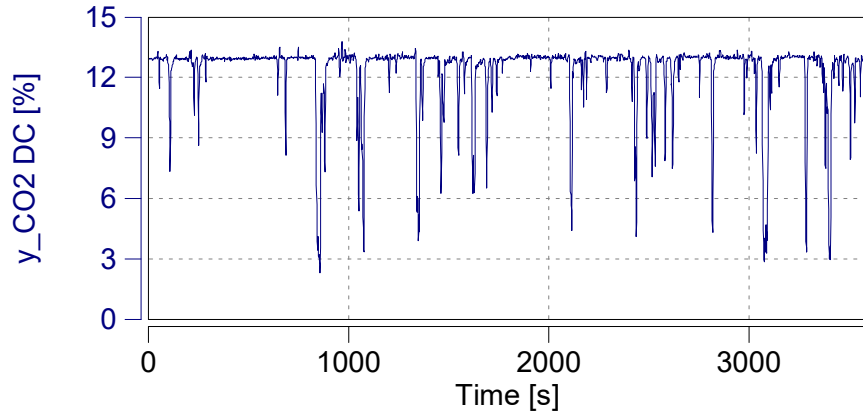
Vehicle: 2017 Audi S5 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

Page: Corrected Emissions (1)

Start Date: 10/10/2017

Start Time: 07:19:28.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

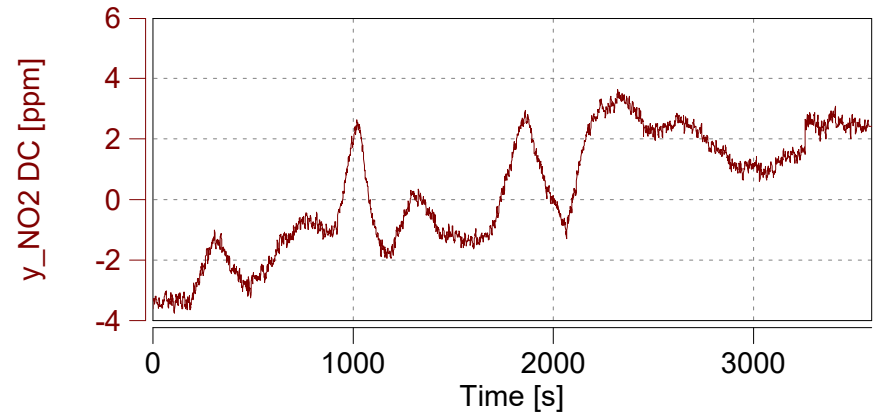
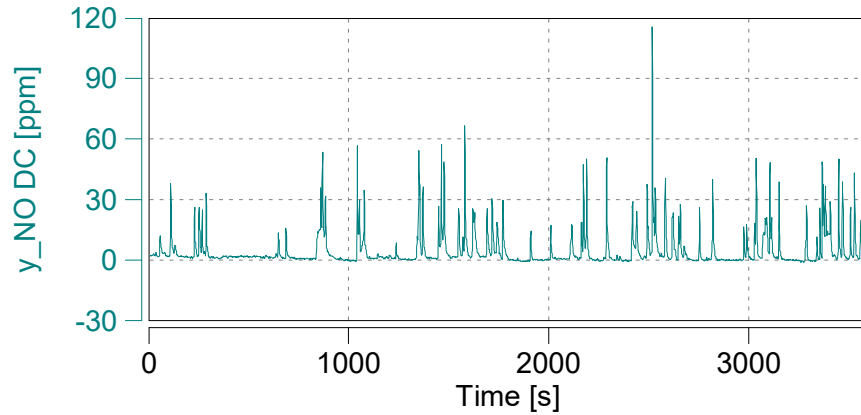
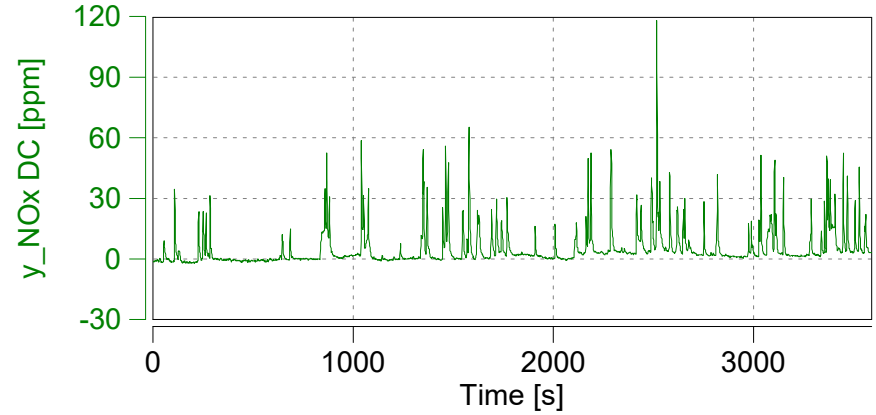
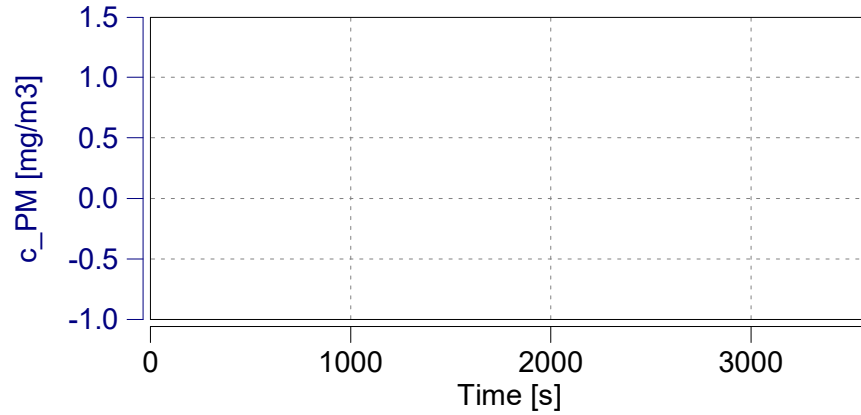
Vehicle: 2017 Audi S5 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

Page: Corrected Emissions (2)

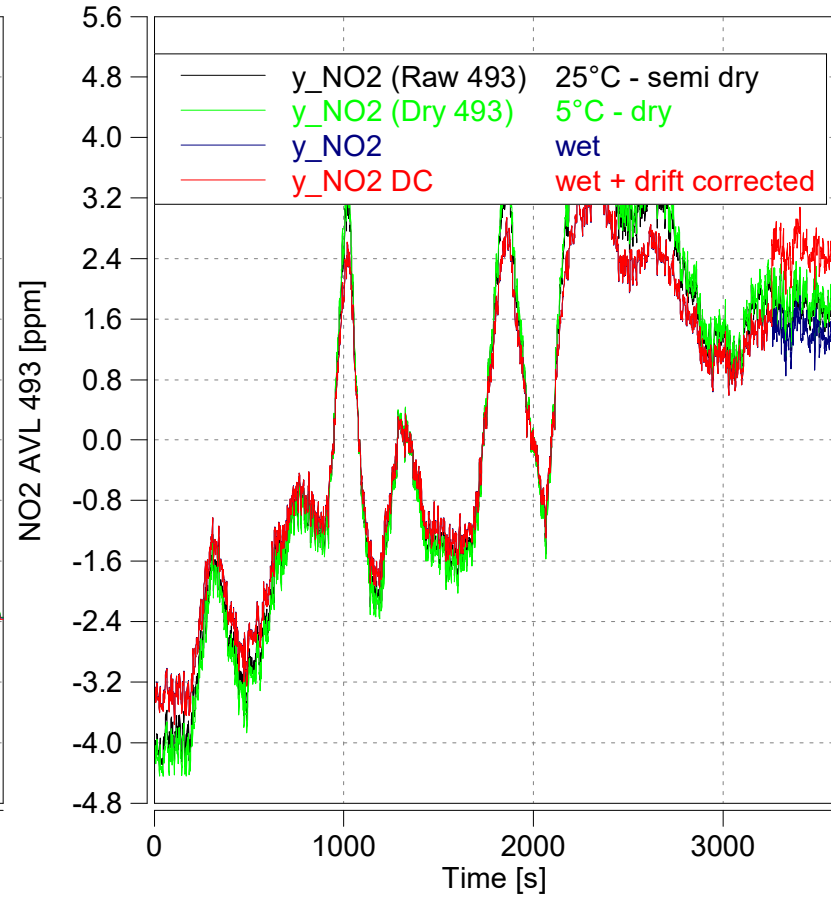
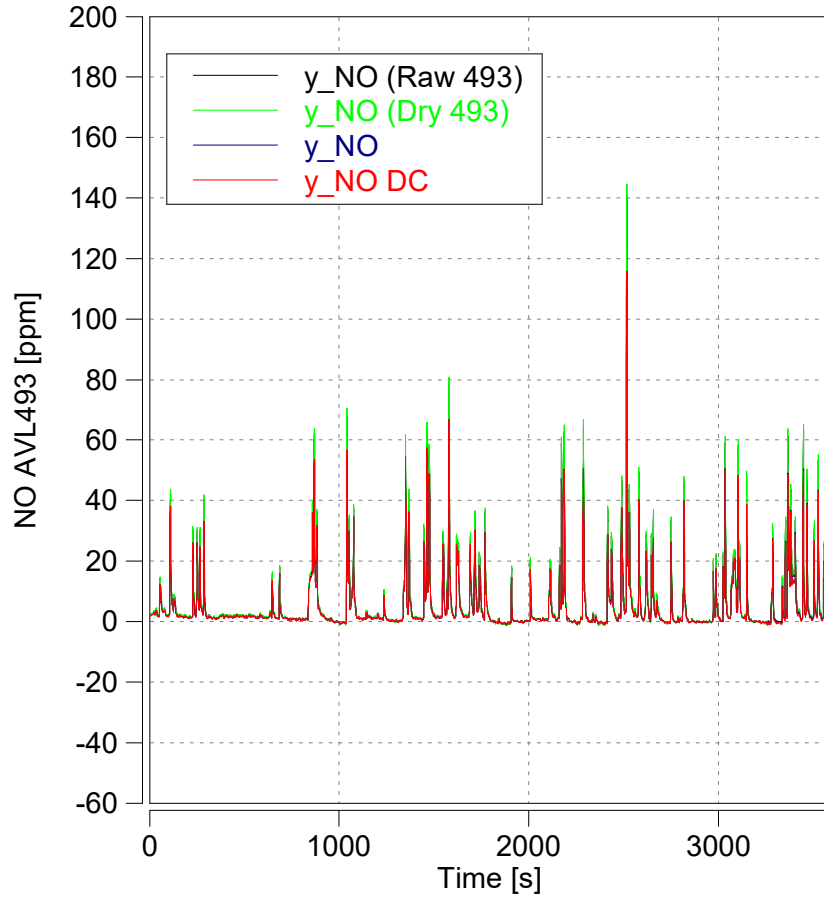
Start Date: 10/10/2017

Start Time: 07:19:28.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

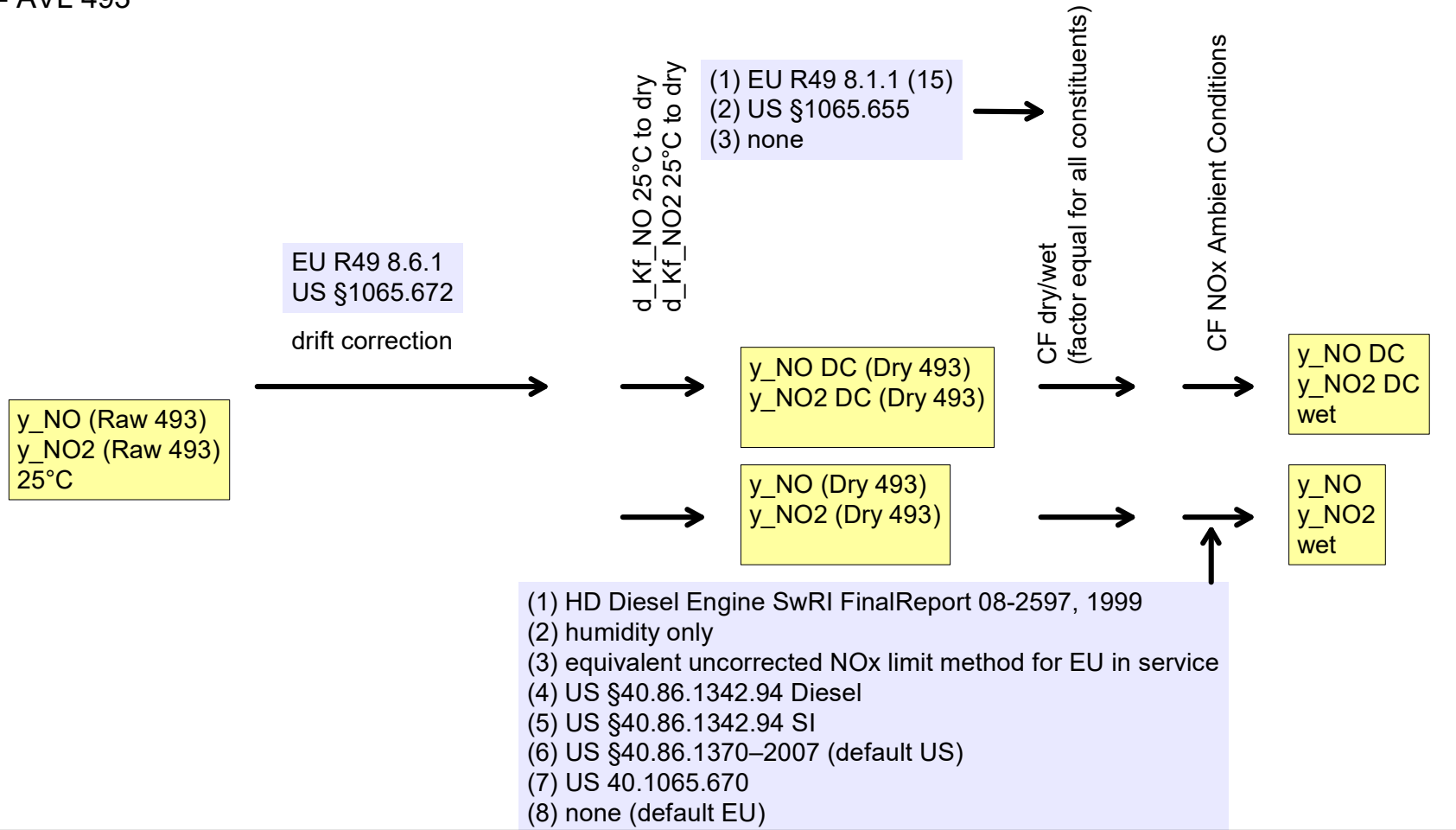
Vehicle: 2017 Audi S5 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi S5 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

NOx - AVL 493

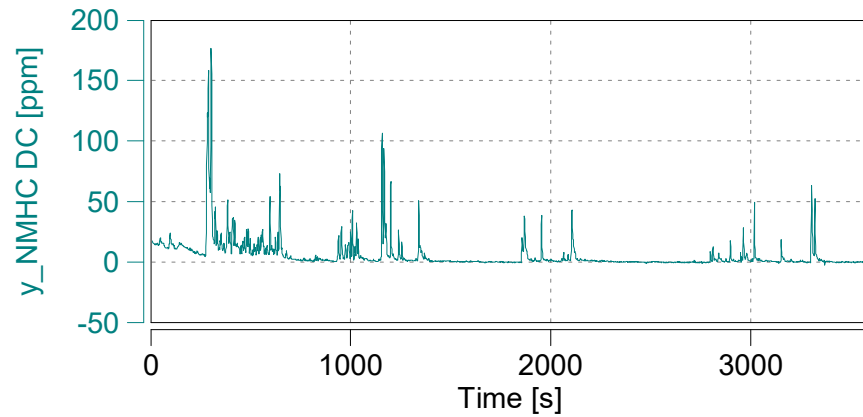
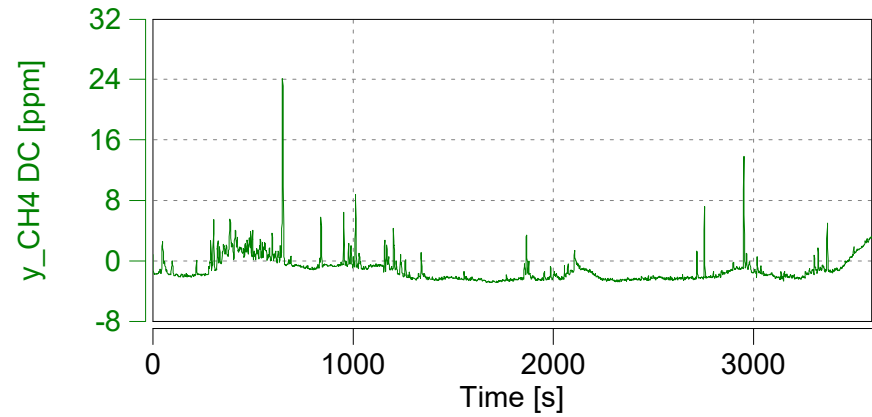
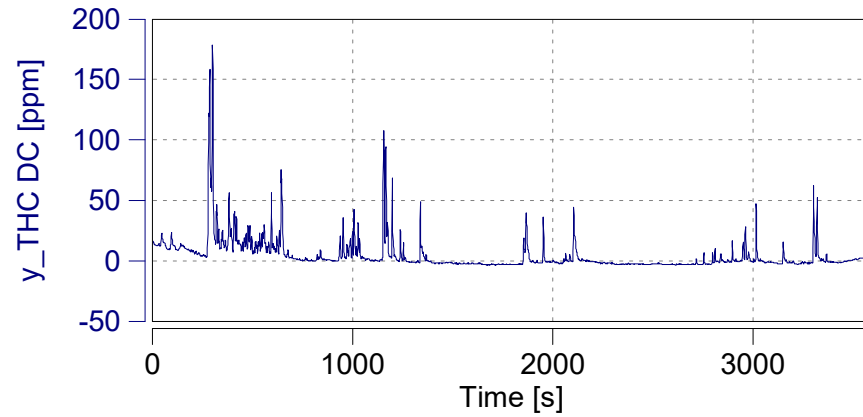


Case: Highway

Page: Corrected Emissions (5)

Start Date: 10/10/2017

Start Time: 07:19:28.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

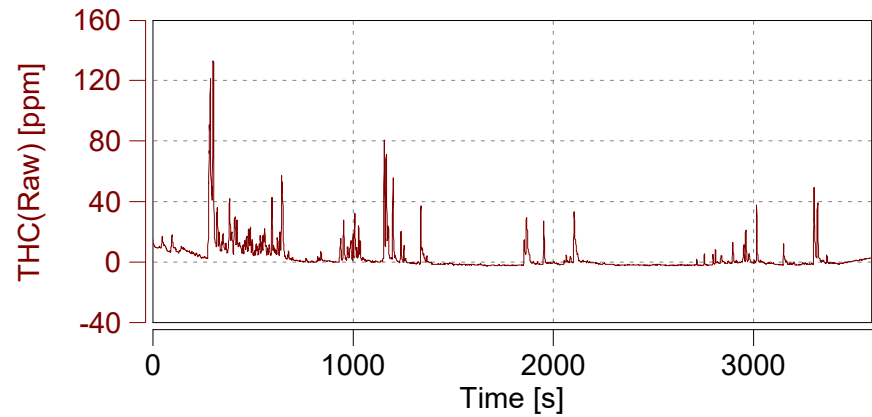
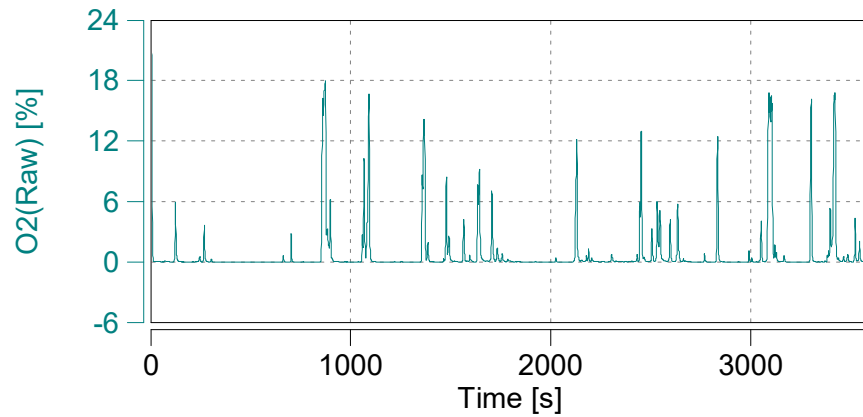
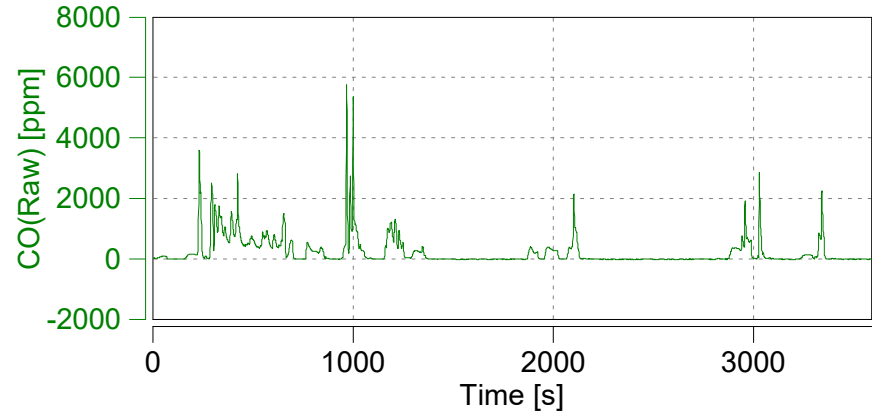
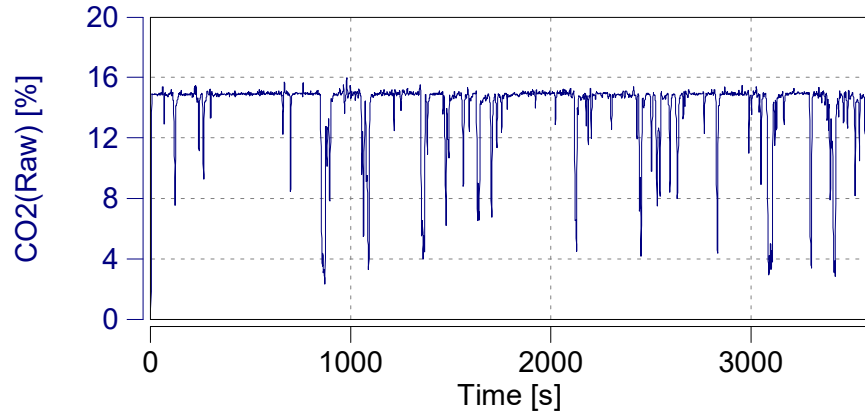
Vehicle: 2017 Audi S5 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

Page: Emissions Raw Data (1)

Start Date: 10/10/2017

Start Time: 07:19:28.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

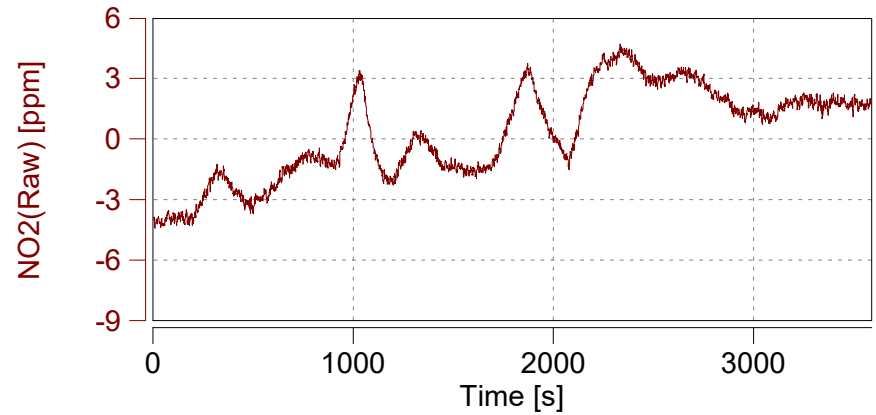
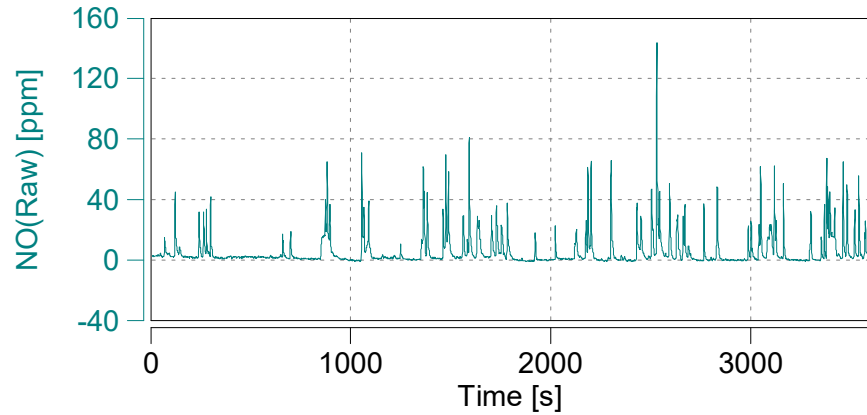
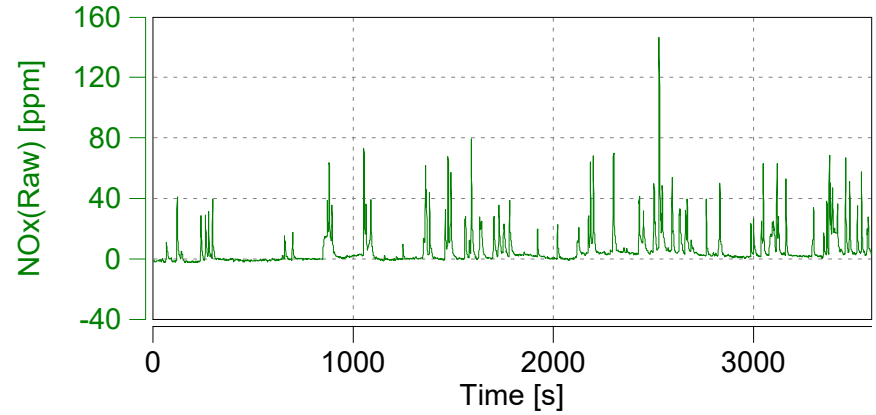
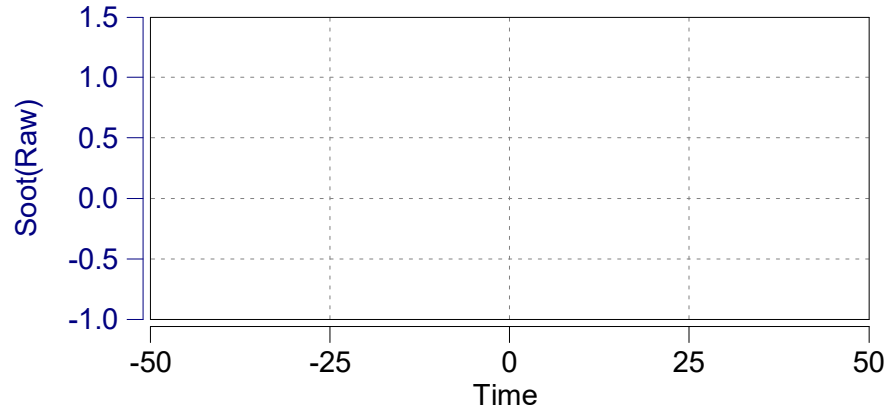
Vehicle: 2017 Audi S5 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

Page: Emissions Raw Data (2)

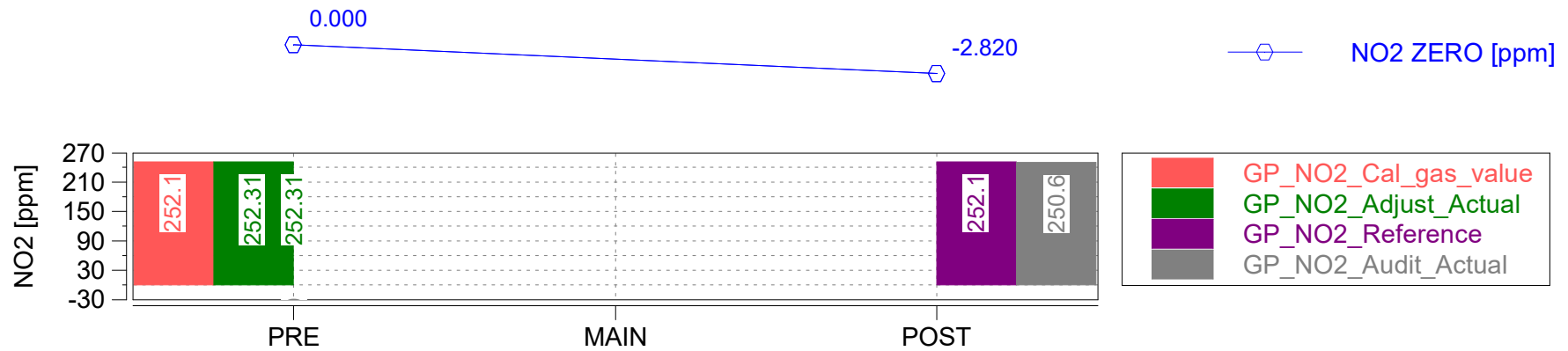
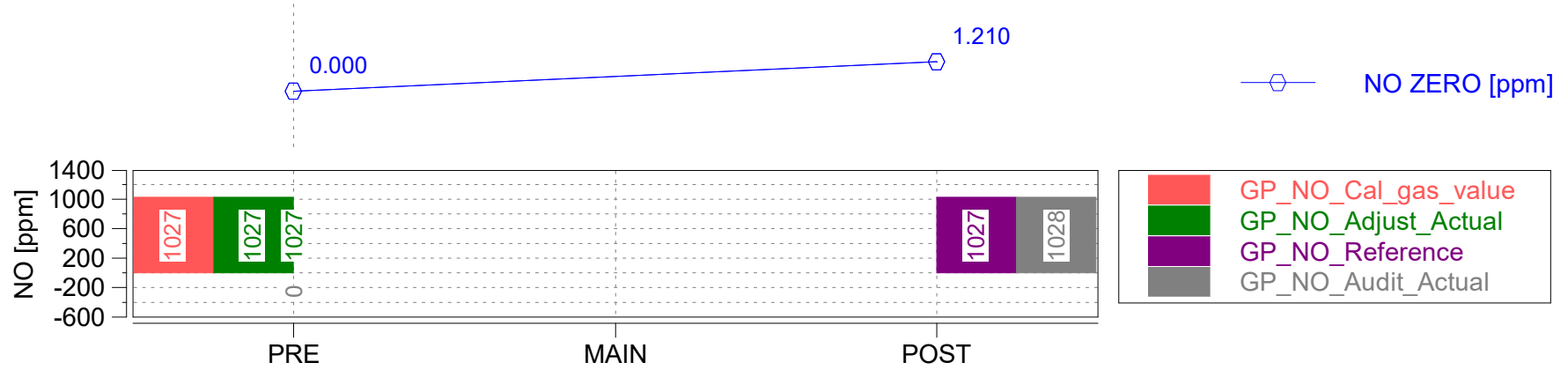
Start Date: 10/10/2017

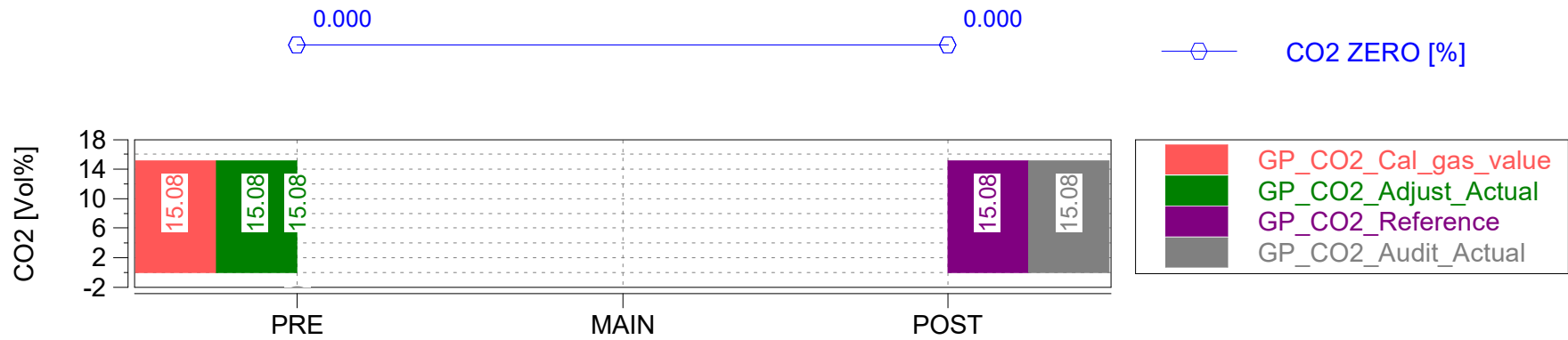
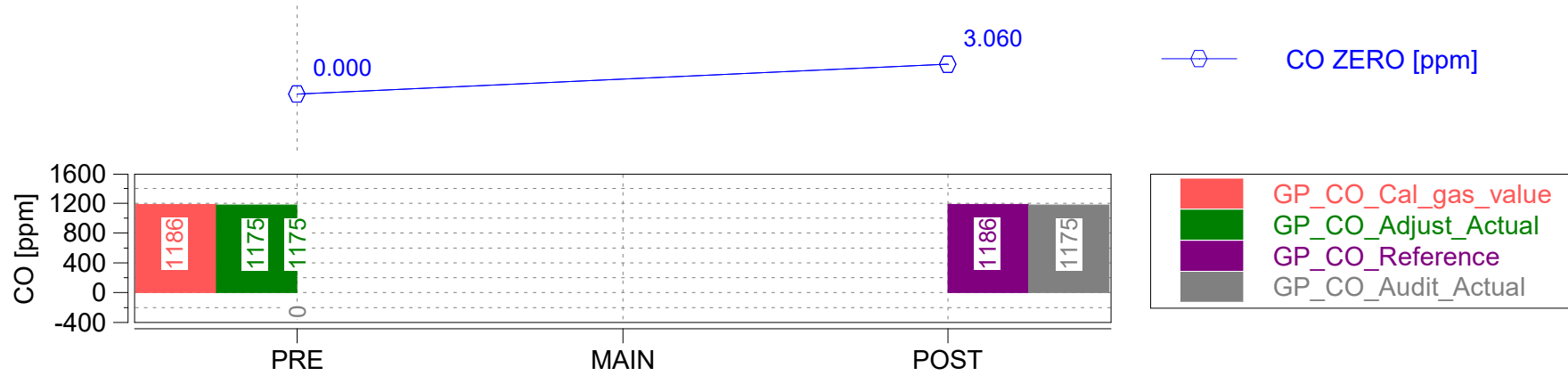
Start Time: 07:19:28.0

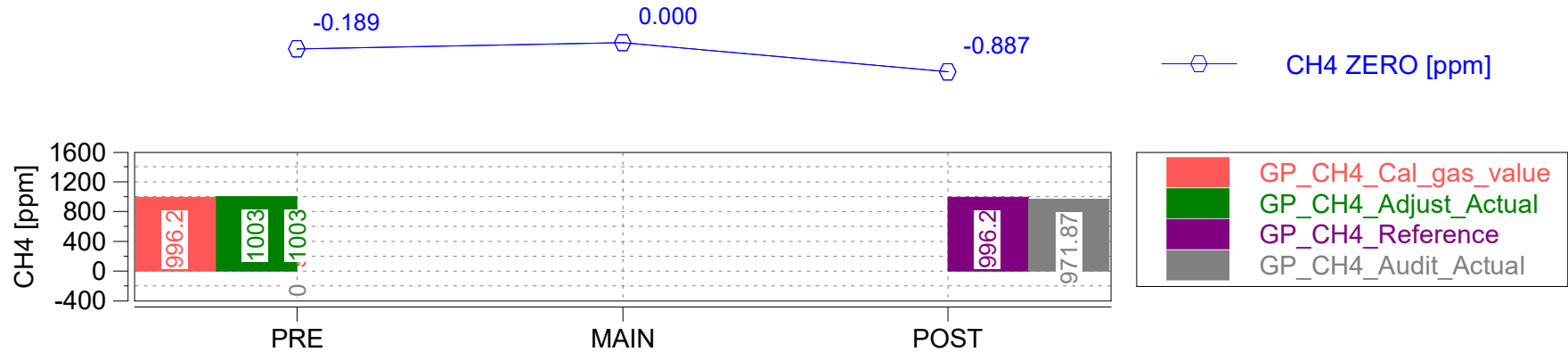
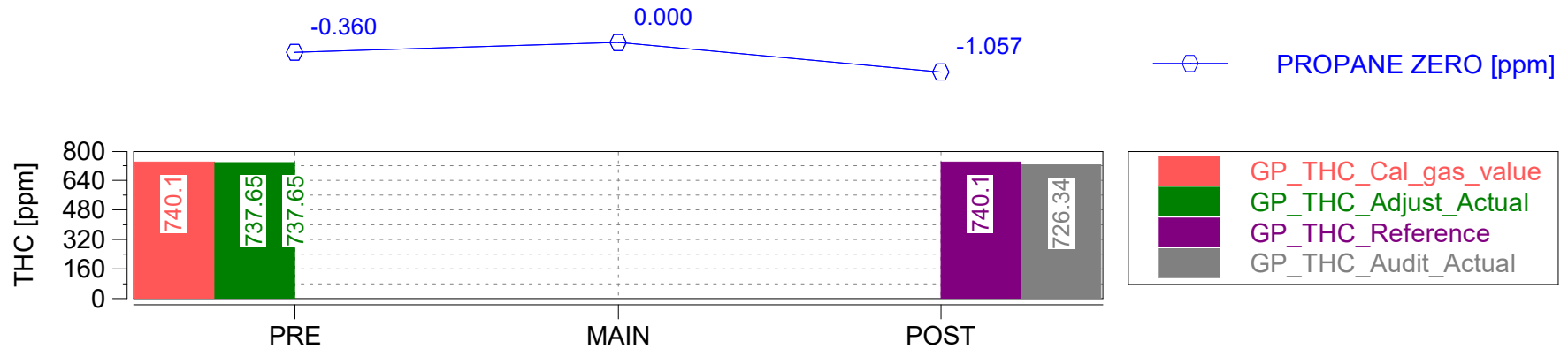


Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi S5 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90







#	Text	Value	Unit
-	----	----	----
1.0	Test Start: Date	-	-
2.0	Test Start: Time	-	-
3.0	Ambient Temperature	IFILE1:TM'Temperature	deg C
4.0	Ambient Temperature TS	0.00000	s
5.0	Ambient Pressure	IFILE1:TM'Pressure	kPa
6.0	Ambient Pressure TS	0.00000	s
7.0	Humidity Type	1.00000	-
8.0	Amb. Rel. Humidity	IFILE1:TM'Humidity	%
9.0	Amb. Rel. Humidity	0.00000	s
10.0	GPS Latitude		deg
11.0	GPS Latitude TS	0.00000	s
12.0	GPS Longitude		deg
13.0	GPS Longitude TS	0.00000	s
14.0	Altitude		m
15.0	Altitude TS	0.00000	s
16.0	GPS Quality		-
17.0	GPS Quality TS	0.00000	s
18.0	GroundSpeed		km/h
19.0	GroundSpeed TS	0.00000	s
20.0	Altitude from topographical map		m
21.0	Altitude TS of topographical map		s
22.0	TRIP_AMBIENT_GPS_AVL	YES	-
23.0	CALC_GPS_GROUNDSPEED	NO	-
24.0	EXHAUST_FLOW_AVL	NO	-
25.0	EXHAUST_FLOW_AVL_EFM	YES	-
26.0	Exhaust Flow Type	2.00000	-
27.0	Mass Flow	IFILE1:TM'PitotEFM_ExhaustG	various
28.0	Mass Flow TS	1.30000	s
29.0	Exhaust Pressure		kPa
30.0	Exhaust Pressure TS	1.30000	s

#	Text	Value	Unit
-	----	----	----
31.0	Exhaust Delta Pressure		kPa
32.0	Exhaust Pressure Delta TS	1.30000	s
33.0	Exhaust Temperature	IFILE1:TM'PitotEFM_ExhaustG	degC
34.0	Exhaust Temperature TS	1.30000	s
35.0	Lambda	N/A	-
36.0	Lambda TS		s
37.0	CO2_DIL		%
38.0	CO2_DIL TS		s
39.0	CVS Volume Flow		m3/min
40.0	TimeShift_CVS_VOL_FLOW		s
41.0	IN_CVS_PRESSURE		kPa
42.0	TimeShift_CVS_PRESSURE		s
43.0	IN_CVS_TEMP		degC
44.0	TimeShift_CVS_TEMP		s
45.0	Dry to Wet Conversion CO2	YES	-
46.0	Dry to Wet Conversion O2	YES	-
47.0	Dry to Wet Conversion NO	NO	-
48.0	Dry to Wet Conversion NO2	NO	-
49.0	Dry to Wet Conversion THC	NO	-
50.0	Dry to Wet Conversion CH4	NO	-
51.0	Dry to Wet Conversion O2	NO	-
52.0	CO2	IFILE1:TM'GPiS_CO2	%
53.0	CO2 TS	-14.30000	s
54.0	OS	IFILE1:TM'GPiS_O2	%
55.0	O2 TS	-14.80000	s
56.0	CO	IFILE1:TM'GPiS_CO	ppm
57.0	CO TS	-14.30000	s
58.0	NO	IFILE1:TM'GPiS_NO	ppm
59.0	NO TS	-12.50000	s
60.0	NO2	IFILE1:TM'GPiS_NO2	ppm

Concerto Version: 480 Build 215, Serial Number: 8468
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Vehicle: 2017 Audi S5 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
61.0	NO2 TS	-12.50000	s
62.0	THC	IFILE1:TM'FIDiS_THC_C1	ppm
63.0	THC TS	0.00000	s
64.0	CH4	IFILE1:TM'FIDiS_CH4_C1	ppm
65.0	CH4 TS	0.00000	s
66.0	GAS_PEMS_Ethane_Efficiency	IFILE1:MOVE_AVL4925'GP_Et -	
67.0	GAS_PEMS_Methane_Efficiency	IFILE1:MOVE_AVL4925'GP_M -	
68.0	GAS_PEMS_Methane_Response	IFILE1:MOVE_AVL4925'GP_M -	
69.0	Zero Signal	IFILE1:TM'GPiS_STATE	0/1
70.0	Zero Signal TS	-12.50000	s
71.0	Zero Signal_FIDiS	IFILE1:TM'FIDiS_STATE	0/1
72.0	Zero Signal_FIDiS TS		s
73.0	Species Input Type	4.00000	-
74.0	GASPEMS=AVL493	NO	-
75.0	GASPEMS=AVL493_iX	NO	-
76.0	GASPEMS=AVL492	YES	-
77.0	GASPEMS=AVL4925	YES	-
78.0	PM: Type	4.00000	1=GFB+HC, 2=GFB, 3='PM=S
79.0	Filter ID from IFile	NO	-
80.0	Lab ID from IFile	NO	-
81.0	PM Filter: ID	N/A	ID
82.0	PM Filter: Lab	N/A	Name/ID
83.0	PM Filter: Weight before Test	N/A	mg
84.0	PM Filter: Weight after Test	N/A	mg
85.0	PM (HC Corr): Max. Exhaust Flow	N/A	scfm
86.0	Soot		mg/m3
87.0	Soot TS	-5.00000	s
88.0	Soot Sensor		mg/m3
89.0	Soot Sensor TS		s
90.0	PM Filter: Filter Flow Rate		l/min

#	Text	Value	Unit
-	----	----	----
91.0	PM Filter: Filter Flow Rate TS	-5.00000	s
92.0	PM Filter: Filter Dilution Ratio		-
93.0	PM Filter: Filter Dilution Ratio TS	-5.00000	s
94.0	PM Filter: Filter Trigger		-
95.0	PM Filter: Filter Trigger TS	-5.00000	s
96.0	PMPEMS=AVL494	YES	-
97.0	PMPEMS_AVL494_PROP_DIL	NO	-
98.0	PM dilution ratio min		-
99.0	PM_MaxExhaustFlowRate		-
100.0	PM_ExhaustFlow_Thresh		-
101.0	PM_total_flow_val		-
102.0	PM_total_flow_val_TS		-
103.0	PM_exh_mass_flow		-
104.0	PM_exh_mass_flow_TS		-
105.0	PN		#/cm3
106.0	TimeShift_PN		s
107.0	PN_STATE		-
108.0	PN TS STATE		s
109.0	PNPEMS_AVL496	NO	-
110.0	PN_CorrFactor	1.00000	
111.0	Time Alignment	1.00000	-
112.0	Time Alignment Dataset 1	N/A	0/1
113.0	Time Alignment Dataset 2	N/A	0/1
114.0	Time Alignment Thresh 1	N/A	-
115.0	Time Alignment Thresh 2	N/A	-
116.0			
117.0			
118.0			
119.0			
120.0			

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#	Text	Value	Unit
-	----	----	----
121.0			
122.0	Trigger		0/1
123.0	Trigger TS		s
124.0	FTIR_NAME_1		-
125.0	FTIR_MW_1		-
126.0	FTIR_CHANNEL_1		-
127.0	FTIR_CHANNEL_TS_1		-
128.0	FTIR_CHANNEL_DRY_1	NO	-
129.0	FTIR_NAME_2		-
130.0	FTIR_MW_2		-
131.0	FTIR_CHANNEL_2		-
132.0	FTIR_CHANNEL_TS_2		-
133.0	FTIR_CHANNEL_DRY_2	NO	-
134.0	FTIR_NAME_3		-
135.0	FTIR_MW_3		-
136.0	FTIR_CHANNEL_3		-
137.0	FTIR_CHANNEL_TS_3		-
138.0	FTIR_CHANNEL_DRY_3	NO	-
139.0	FTIR_NAME_4		-
140.0	FTIR_MW_4		-
141.0	FTIR_CHANNEL_4		-
142.0	FTIR_CHANNEL_TS_4		-
143.0	FTIR_CHANNEL_DRY_4	NO	-
144.0	FTIR_NAME_5		-
145.0	FTIR_MW_5		-
146.0	FTIR_CHANNEL_5		-
147.0	FTIR_CHANNEL_TS_5		-
148.0	FTIR_CHANNEL_DRY_5	NO	-
149.0	FTIR_NAME_6		-
150.0	FTIR_MW_6		-

#	Text	Value	Unit
-	----	----	----
151.0	FTIR_CHANNEL_6		-
152.0	FTIR_CHANNEL_TS_6		-
153.0	FTIR_CHANNEL_DRY_6	NO	-
154.0	FTIR_NAME_7		-
155.0	FTIR_MW_7		-
156.0	FTIR_CHANNEL_7		-
157.0	FTIR_CHANNEL_TS_7		-
158.0	FTIR_CHANNEL_DRY_7	NO	-
159.0	FTIR_NAME_8		-
160.0	FTIR_MW_8		-
161.0	FTIR_CHANNEL_8		-
162.0	FTIR_CHANNEL_TS_8		-
163.0	FTIR_CHANNEL_DRY_8	NO	-
164.0	FTIR_NAME_9		-
165.0	FTIR_MW_9		-
166.0	FTIR_CHANNEL_9		-
167.0	FTIR_CHANNEL_TS_9		-
168.0	FTIR_CHANNEL_DRY_9	NO	-
169.0	FTIR_NAME_10		-
170.0	FTIR_MW_10		-
171.0	FTIR_CHANNEL_10		-
172.0	FTIR_CHANNEL_TS_10		-
173.0	FTIR_CHANNEL_DRY_10	NO	-
174.0	FTIR_NAME_11		-
175.0	FTIR_MW_11		-
176.0	FTIR_CHANNEL_11		-
177.0	FTIR_CHANNEL_TS_11		-
178.0	FTIR_CHANNEL_DRY_11	NO	-
179.0	FTIR_NAME_12		-
180.0	FTIR_MW_12		-

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Vehicle: 2017 Audi S5 /
Engine: Gasoline / 3.0L
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Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
181.0	FTIR_CHANNEL_12		-
182.0	FTIR_CHANNEL_TS_12		-
183.0	FTIR_CHANNEL_DRY_12	NO	-
184.0	FTIR_NAME_13		-
185.0	FTIR_MW_13		-
186.0	FTIR_CHANNEL_13		-
187.0	FTIR_CHANNEL_TS_13		-
188.0	FTIR_CHANNEL_DRY_13	NO	-
189.0	FTIR_NAME_14		-
190.0	FTIR_MW_14		-
191.0	FTIR_CHANNEL_14		-
192.0	FTIR_CHANNEL_TS_14		-
193.0	FTIR_CHANNEL_DRY_14	NO	-
194.0	FTIR_NAME_15		-
195.0	FTIR_MW_15		-
196.0	FTIR_CHANNEL_15		-
197.0	FTIR_CHANNEL_TS_15		-
198.0	FTIR_CHANNEL_DRY_15	NO	-
199.0	FTIR_NAME_16		-
200.0	FTIR_MW_16		-
201.0	Vehicle Type	2017 Audi S5	-
202.0	Vehicle Info		-
203.0	Engine Type	Gasoline	-
204.0	Engine Info	3.0L	-
205.0	Engine Torque		Nm
206.0	Curb Idle Load		%
207.0	Idle Speed		rpm
208.0	HYBRID_OVC_REF_CO2_gkm		g/km
209.0	Engine Concept	1.00000	-
210.0	Alpha	1.93000	-

#	Text	Value	Unit
-	----	----	----
211.0	Beta	1.00000	
212.0	Gamma	0.00000	
213.0	Delta	0.00000	
214.0	Epsilon	0.03200	
215.0	X_C	83.00000	
216.0	X_H	13.30000	
217.0	X_N	0.00000	
218.0	X_O	3.50000	
219.0	X_S	0.00000	
220.0	Fuel_Density	747.50000	
221.0	rho_exhaust	1.29310	
222.0	U_CO2	1.51800	
223.0	U_CO	0.96600	
224.0	U_NO	1.58700	
225.0	U_NO2	1.58700	
226.0	U_NOx	1.58700	
227.0	U_HC	0.49900	
228.0	U_NMHC	0.47100	
229.0	U_CH4	0.55300	
230.0	U_O2	1.10400	
231.0	Fuel Type	2.00000	-
232.0	exhaust mass flow type (YES/NO)	YES	-
233.0	Distance Calculation Type	1.00000	-
234.0	Velocity Statistics Calculation Type	2.00000	-
235.0	RDE vehicle class	1.00000	-
236.0	TM_CITY0		s
237.0	TM_CITY1		s
238.0	TM_RURAL0		s
239.0	TM_RURAL1		s
240.0	TM_RURAL2_0		s

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#	Text	Value	Unit
-	----	----	----
241.0	TM_RURAL2_1		s
242.0	Second Rural Part for Time Marks (NO		-
243.0	TM_MW0		s
244.0	TM_MW1		s
245.0	VELOCITY_LIMIT_STOP	2.00000	km/h
246.0	VELOCITY_LIMIT_URBAN	50.00000	km/h
247.0	VELOCITY_LIMIT_RURAL	75.00000	km/h
248.0	Intake Manifold Pressure Type	1.00000	-
249.0	Velocity	IFILE1:TM'OBD_Vehicle_Spee	km/h
250.0	Velocity TS	1.30000	s
251.0	Velocity FACTOR	1.00000	-
252.0	Coolant Temperature	IFILE1:TM'OBD_Engine_Coola	degC
253.0	Coolant Temperature TS	1.30000	s
254.0	Oil Temperature		degC
255.0	Oil Temperature TS	1.30000	s
256.0	Intake Manifold Temperature		degC
257.0	Intake Manifold Temp TS	1.30000	s
258.0	Intake Manifold Pressure	IFILE1:TM'OBD_Intake_manifo	kPa
259.0	Intake Manifold Pressure TS	1.30000	s
260.0	Throttle Position		%
261.0	Throttle TS	1.30000	s
262.0	TYP_IDLE_MASS_FLOW		kg/h
263.0	Torque Type	1.00000	-
264.0	Speed	IFILE1:TM'OBD_Engine_RPM	rpm
265.0	Speed TS	1.30000	s
266.0	Torque		Nm
267.0	Torque TS	1.30000	s
268.0	Friction Torque	N/A	Nm
269.0	Friction Torque TS	N/A	s
270.0	Reference Torque	N/A	Nm

#	Text	Value	Unit
-	----	----	----
271.0	Reference Torque TS	N/A	s
272.0	k_VELINE		-
273.0	D_VELINE		-
274.0	Fuel Flow Type	2.00000	-
275.0	Air Flow Type	1.00000	-
276.0	Fuel Rate		various
277.0	Air Rate		various
278.0	Fuel Rate TS	1.30000	s
279.0	No_Cylinders		-
280.0	Air Rate TS	1.30000	s
281.0	FTIR_CHANNEL_32		-
282.0	FTIR_CHANNEL_TS_32		-
283.0	FTIR_CHANNEL_DRY_32	NO	-
284.0	FTIR_NAME_33		-
285.0	FTIR_MW_33		-
286.0	FTIR_CHANNEL_33		-
287.0	FTIR_CHANNEL_TS_33		-
288.0	FTIR_CHANNEL_DRY_33	NO	-
289.0	FTIR_NAME_34		-
290.0	FTIR_MW_34		-
291.0	FTIR_CHANNEL_34		-
292.0	FTIR_CHANNEL_TS_34		-
293.0	FTIR_CHANNEL_DRY_34	NO	-
294.0	FTIR_NAME_35		-
295.0	FTIR_MW_35		-
296.0	FTIR_CHANNEL_35		-
297.0	FTIR_CHANNEL_TS_35		-
298.0	FTIR_CHANNEL_DRY_35	NO	-
299.0	FTIR_NAME_36		-
300.0	FTIR_MW_36		-

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#	Text	Value	Unit
-	----	----	----
301.0	FTIR_CHANNEL_36		-
302.0	FTIR_CHANNEL_TS_36		-
303.0	FTIR_CHANNEL_DRY_36	NO	-
304.0	FTIR_NAME_37		-
305.0	FTIR_MW_37		-
306.0	FTIR_CHANNEL_37		-
307.0	FTIR_CHANNEL_TS_37		-
308.0	FTIR_CHANNEL_DRY_37	NO	-
309.0	FTIR_NAME_38		-
310.0	FTIR_MW_38		-
311.0	FTIR_CHANNEL_38		-
312.0	FTIR_CHANNEL_TS_38		-
313.0	FTIR_CHANNEL_DRY_38	NO	-
314.0	FTIR_NAME_39		-
315.0	FTIR_MW_39		-
316.0	FTIR_CHANNEL_39		-
317.0	FTIR_CHANNEL_TS_39		-
318.0	FTIR_CHANNEL_DRY_39	NO	-
319.0	FTIR_NAME_40		-
320.0	FTIR_MW_40		-
321.0	FTIR_CHANNEL_40		-
322.0	FTIR_CHANNEL_TS_40		-
323.0	FTIR_CHANNEL_DRY_40	NO	-
324.0	Legislation Type (1=HDIUT 2=EU H	4.00000	-
325.0	WholeTest_NOx_corr	5.00000	-
326.0	WholeTest_Hum_corr	2.00000	-
327.0	CD_Distance	0.00000	km
328.0	CD_NOx	0.00000	mg/km
329.0	CD_CO	0.00000	mg/km
330.0	CD_CO2	0.00000	g/km

#	Text	Value	Unit
-	----	----	----
331.0	CD_NMHC	0.00000	mg/km
332.0	CD_CH4	0.00000	mg/km
333.0	CD_THC	0.00000	mg/km
334.0	CD_PN		#/km
335.0	WLTC_LOW_SPEED_gkm		g/km
336.0	WLTC_LOW_SPEED_FAC	1.20000	-
337.0	WLTC_MEDIUM_SPEED_gkm		g/km
338.0	WLTC_HIGH_SPEED_gkm		g/km
339.0	WLTC_HIGH_SPEED_FAC	1.10000	-
340.0	WLTC_EXTRA_HIGH_SPEED_gkm		g/km
341.0	WLTC_EXTRA_HIGH_SPEED_FA	1.05000	-
342.0	TOL_NORMAL_DRIVING	25.00000	%
343.0	TOL_SEVERE_DRIVING	50.00000	%
344.0	Increase Tolerance Nomral Driving	NO	-
345.0	Bin1_min		km/h
346.0	Bin2_min		km/h
347.0	Bin3_min		km/h
348.0	Bin1_max		km/h
349.0	Bin2_max		km/h
350.0	Bin3_max		km/h
351.0	Clear_R0	125.40000	N
352.0	Clear_R1	0.29300	Nh/km
353.0	Clear_R2	0.02795	N*(h/km) ²
354.0	Clear_SMK	1470.00000	kg
355.0	Clear_Rated_Power	140.00000	kW
356.0	Clear_Ref_Velocity	70.00000	km/h
357.0	Clear_Ref_Acc	0.45000	m/s ²
358.0	Clear_Smooth	3.00000	s
359.0	EXTC_From_High_Temp	30.00000	degC
360.0	EXTC_To_High_Temp	35.00000	degC

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Vehicle: 2017 Audi S5 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
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#	Text	Value	Unit
-	----	----	----
361.0	EXTC_From_Low_Temp	-7.00000	degC
362.0	EXTC_To_Low_Temp	0.00000	degC
363.0	Euro 6d or Euro 6d temp	NO	-
364.0	EXTC_From_Altitude	700.00000	m
365.0	EXTC_To_Altitude	1300.00000	m
366.0	EXTC_CORR_FAC	1.60000	
367.0	weight cold start (YES/NO)	NO	-
368.0	precon and soak done (YES/NO)	NO	-
369.0	PATH_PRECON_FILE		
370.0	filter velocity (YES/NO)	NO	-
371.0	filter velocity auto(YES/NO)	NO	-
372.0	Ki_CO		
373.0	Ki_CO2		
374.0	Ki_NOx		
375.0	Ki_FACTOR_CO2 (YES/NO)	NO	-
376.0	Ki_OFFSET_CO2 (YES/NO)	NO	-
377.0	Ki_FACTOR_CO (YES/NO)	NO	-
378.0	Ki_OFFSET_CO (YES/NO)	NO	-
379.0	Ki_FACTOR_NOx (YES/NO)	NO	-
380.0	Ki_OFFSET_NOx (YES/NO)	NO	-
381.0	Ki_OFF (YES/NO)	NO	-
382.0	HD legislations	1.00000	-
383.0	RDE legislations	1.00000	-
384.0	Submission Documents (YES/NO)	NO	-
385.0	General Setup Parameters Text	Highway	-
386.0	Legislation Setup Parameters Text	Highway	-
387.0	Trip Info		-
388.0	IN_TIME_REF		-
389.0	Sub-Trip Start: Auto	YES	-
390.0	Sub-Trip Start: Seconds	N/A	s

#	Text	Value	Unit
-	----	----	----
391.0	Sub-Trip End: Auto	YES	-
392.0	Sub-Trip End: Seconds	N/A	s
393.0	Unit System	2.00000	-
394.0	Calculate: PM Emissions	NO	-
395.0	Calculate: PN Emissions	NO	-
396.0	Output: Summary	YES	-
397.0	Output: Emissions	YES	-
398.0	Output: Raw Data	YES	-
399.0	Output: Zero Span	YES	-
400.0	Output: Data Consistency	NO	-
401.0	Output: Window Plots	YES	-
402.0	Fuel Rate ECU vs. EU ISO16183	y = 10000000000.0000 x - 0.000 R ² =10000000000.000 SEE=	
403.0	PEMS post processing version	Rel_10_B192	
404.0	Concerto version	480.00000	
405.0	Concerto build	215.00000	
406.0	USERNAME	EFR	

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Vehicle: 2017 Audi S5 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
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Case: Mountain
Page: Trip Summary

Start Date: 10/10/2017
Start Time: 07:19:28.0



Trip Duration	3211.00	s	ave THC	8.32185	ppm	BS CO2	n/a	g/hphr
Trip Duration (a)	3211.00	s	ave NMHC	8.00655	ppm	BS CO	n/a	g/hphr
Trip Distance	28.53	mi	ave CH4	0.28664	ppm	BS THC	n/a	g/hphr
Trip Distance (a)	28.53	mi	ave CO	210.04617	ppm	BS NMHC	n/a	g/hphr
Trip Fuel Cons. (b)	n/a	kg	ave CO2	11.18291	%	BS CH4	n/a	g/hphr
Trip Fuel Cons. (ab)	n/a	kg	ave NOx	7.96632	ppm	BS NO (d)	n/a	g/hphr
Trip Fuel Cons. EU (ac)	3.58	kg	ave PM	n/a	mg/m3	BS NO2	n/a	g/hphr
Trip Fuel Cons. US (ac)	3.56	kg	ave Soot meas	n/a	mg/m3	BS NOx	n/a	g/hphr
Trip Fuel Cons. Volume (b)	n/a	gall	ave Soot	n/a	mg/m3	BS Soot	n/a	g/hphr
Trip Fuel Cons. Volume (ab)	n/a	gall	ave PN	n/a	#/cm3	BS Soot meas	n/a	g/hphr
Trip Fuel Cons. Volume EU (ac)	1.26	gall	tot THC	0.64095	g	BS PM	n/a	g/hphr
Trip Fuel Cons. Volume US (ac)	1.26	gall	tot NMHC	0.54557	g	BS PN	n/a	#/hpr
Trip Fuel Economy (b)	n/a	mpg_US	tot CH4	0.08152	g	DS CO2	378.39639	g/mi
Trip Fuel Economy (ab)	n/a	mpg_US	tot CO	30.36966	g	DS CO	1.06457	g/mi
Trip Fuel Economy EU (ac)	22.57	mpg_US	tot CO2	10794.76378	g	DS THC	0.02247	g/mi
Trip Fuel Economy US (ac)	22.65	mpg_US	tot NO (d)	0.27954	g	DS NMHC	0.01912	g/mi
Trip Av. Eng. Speed	1342.45	rpm	tot NO2	0.21518	g	DS CH4	0.00286	g/mi
Trip Av. Torque	n/a	lbft	tot NOx	0.48926	g	DS NO (d)	0.00980	g/mi
Trip Av. Power	n/a	hp	tot Soot	n/a	g	DS NO2	0.00754	g/mi
Trip Work	n/a	hphr	tot Soot meas	n/a	g	DS NOx	0.01715	g/mi
Trip Exhaust Mass	57.64	kg	tot PM	n/a	g	DS Soot	n/a	g/mi
Trip Exhaust Mass EU (ac)	n/a	kg	tot PN	n/a	#	DS Soot meas	n/a	g/mi
Trip Exhaust Mass US (ac)	n/a	kg	PM measurement type	0.00000	-	DS PM	n/a	g/mi
Trip Av. Amb. Temperature	61.28	deg_F	PM correction type	1.00000	alpha(HC)	DS PN	n/a	#/mi
Trip Av. Humidity	51.38	%	tot Soot on PM filter (estim.)	n/a	mg	FS CO2	n/a	g/kg
Fuel Type	Petrol (E10)		Soot --> PM simple scaling factor	1.00000	-	FS CO	n/a	g/kg
			Soot --> PM alpha scaling factor	0.00000	-	FS THC	n/a	g/kg
			Trip Av. Veh. Speed	31.98367	mi/hr	FS NMHC	n/a	g/kg
			Trip Velocity Zero	9.28060	%	FS CH4	n/a	g/kg
			Trip Velocity Urban	46.15385	%	FS NO (d)	n/a	g/kg
			Trip Velocity Rural	27.99751	%	FS NO2	n/a	g/kg
			Trip Velocity Motorway	25.84865	%	FS NOx	n/a	g/kg
						FS Soot	n/a	g/kg
						FS Soot meas	n/a	g/kg
						FS PM	n/a	g/kg
						FS PN	n/a	#/kg

(a) GAS PEMS measurement state only, (b) based on fuel rate input (ECU, Fuel Meter), (c) calculated from carbon balance
(d) NO calculated using molecular weight of NO2

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi S5 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Mountain

Page: Trip Summary Drift Corrected

Start Date: 10/10/2017

Start Time: 07:19:28.0

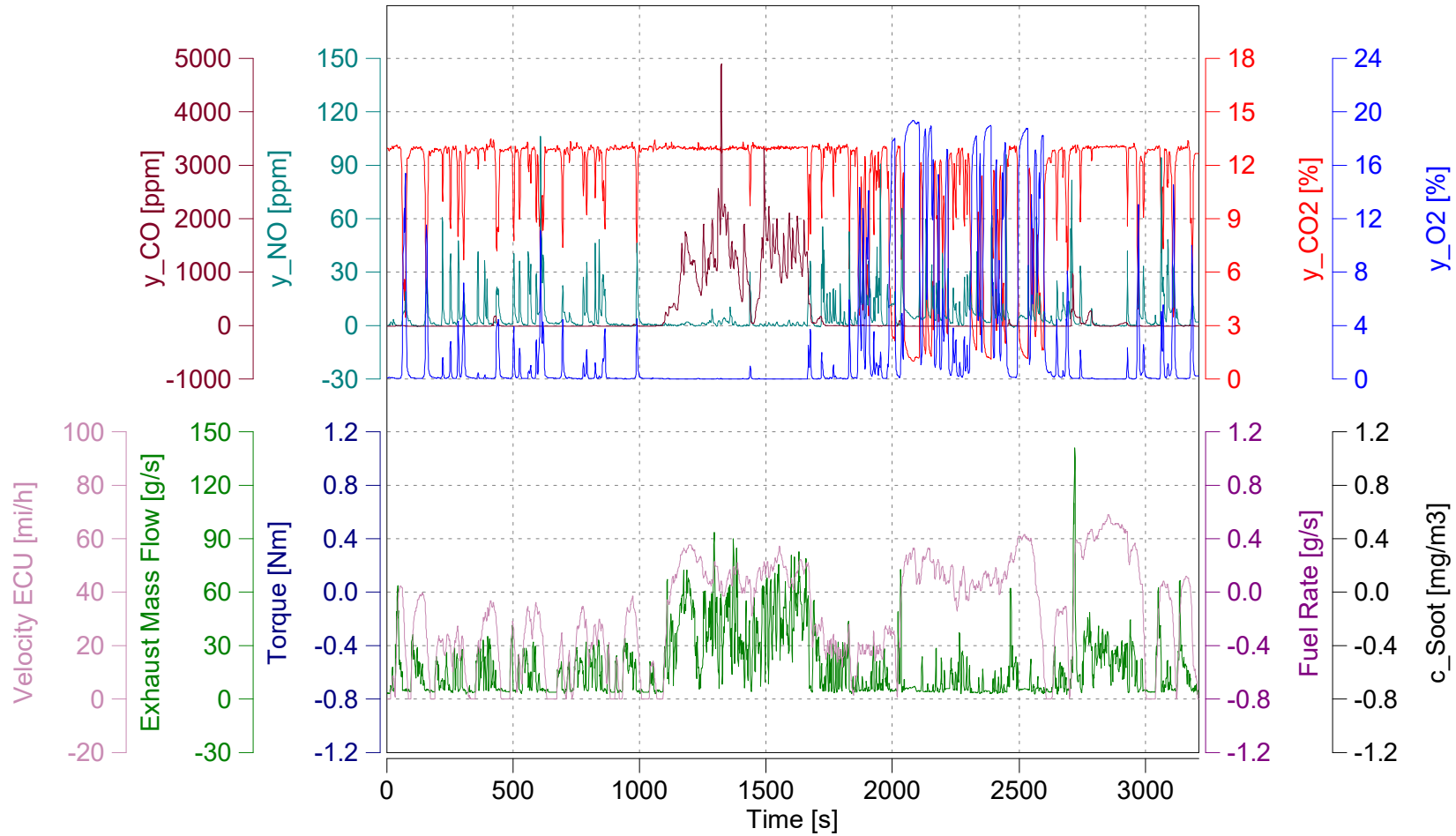


Trip Duration	3211.00	s	ave THC DC	11.32551	ppm	BS CO2 DC	n/a	g/hphr
Trip Duration (a)	3211.00	s	ave NMHC DC	11.02371	ppm	BS CO DC	n/a	g/hphr
Trip Distance	28.53	mi	ave CH4 DC	0.27436	ppm	BS THC DC	n/a	g/hphr
Trip Distance (a)	28.53	mi	ave CO DC	211.95123	ppm	BS NMHC DC	n/a	g/hphr
Trip Fuel Cons. (b)	n/a	kg	ave CO2 DC	11.18291	%	BS CH4 DC	n/a	g/hphr
Trip Fuel Cons. (ab)	n/a	kg	ave NOx DC	7.96659	ppm	BS NO DC (d)	n/a	g/hphr
Trip Fuel Cons. EU (ac)	3.58	kg	ave PM	n/a	mg/m3	BS NO2 DC	n/a	g/hphr
Trip Fuel Cons. US (ac)	3.56	kg	ave Soot meas	n/a	mg/m3	BS NOx DC	n/a	g/hphr
Trip Fuel Cons. Volume (b)	n/a	gall	ave Soot	n/a	mg/m3	BS Soot	n/a	g/hphr
Trip Fuel Cons. Volume (ab)	n/a	gall	ave PN DC	n/a	#/cm3	BS Soot meas	n/a	g/hphr
Trip Fuel Cons. Volume EU (ac)	1.26	gall	tot THC DC	0.87230	g	BS PM	n/a	g/hphr
Trip Fuel Cons. Volume US (ac)	1.26	gall	tot NMHC DC	0.76796	g	BS PN DC	n/a	#/hpr
Trip Fuel Economy (b)	n/a	mpg_US	tot CH4 DC	0.07625	g	DS CO2 DC	378.39639	g/mi
Trip Fuel Economy (ab)	n/a	mpg_US	tot CO DC	30.64511	g	DS CO DC	1.07422	g/mi
Trip Fuel Economy EU (ac)	22.57	mpg_US	tot CO2 DC	10794.76378	g	DS THC DC	0.03058	g/mi
Trip Fuel Economy US (ac)	22.65	mpg_US	tot NO DC (d)	0.27925	g	DS NMHC DC	0.02692	g/mi
Trip Av. Eng. Speed	1342.45	rpm	tot NO2 DC	0.21573	g	DS CH4 DC	0.00267	g/mi
Trip Av. Torque	n/a	lbft	tot NOx DC	0.48953	g	DS NO DC (d)	0.00979	g/mi
Trip Av. Power	n/a	hp	tot Soot	n/a	g	DS NO2 DC	0.00756	g/mi
Trip Work	n/a	hphr	tot Soot meas	n/a	g	DS NOx DC	0.01716	g/mi
Trip Exhaust Mass	57.64	kg	tot PM	n/a	g	DS Soot	n/a	g/mi
Trip Exhaust Mass EU (ac)	n/a	kg	tot PN DC	n/a	#	DS Soot meas	n/a	g/mi
Trip Exhaust Mass US (ac)	n/a	kg	PM measurement type	0.00000	-	DS PM	n/a	g/mi
Trip Av. Amb. Temperature	61.28	deg_F	PM correction type	1.00000	alpha(HC)	DS PN DC	n/a	#/mi
Trip Av. Humidity	51.38	%	tot Soot on PM filter (estim.)	n/a	mg	FS CO2 DC	n/a	g/kg
Fuel Type	Petrol (E10)		Soot --> PM simple scaling factor	1.00000	-	FS CO DC	n/a	g/kg
			Soot --> PM alpha scaling factor	0.00000	-	FS THC DC	n/a	g/kg
			Trip Av. Veh. Speed	31.98367	mi/hr	FS NMHC DC	n/a	g/kg
			Trip Velocity Zero	9.28060	%	FS CH4 DC	n/a	g/kg
			Trip Velocity Urban	46.15385	%	FS NO DC (d)	n/a	g/kg
			Trip Velocity Rural	27.99751	%	FS NO2 DC	n/a	g/kg
			Trip Velocity Motorway	25.84865	%	FS NOx DC	n/a	g/kg
						FS Soot	n/a	g/kg
						FS Soot meas	n/a	g/kg
						FS PM	n/a	g/kg
						FS PN DC	n/a	#/kg

(a) GAS PEMS measurement state only, (b) based on fuel rate input (ECU, Fuel Meter), (c) calculated from carbon balance
 (d) NO calculated using molecular weight of NO2

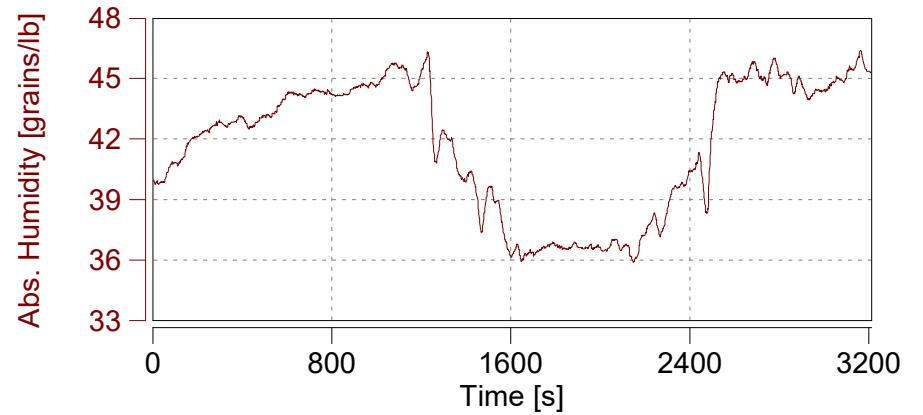
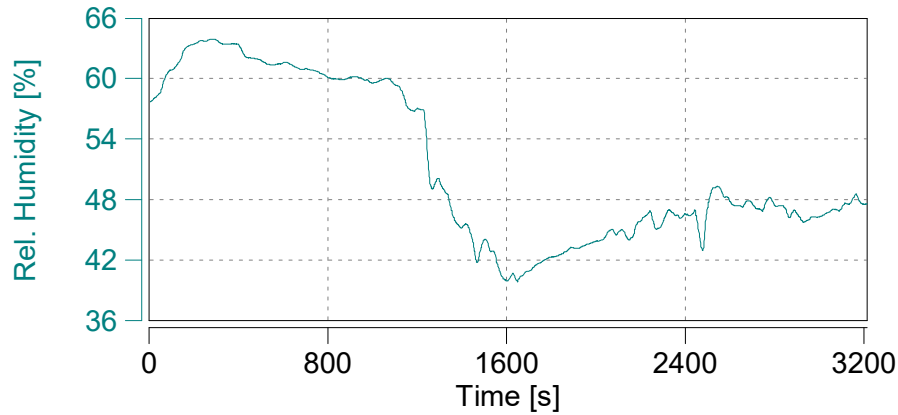
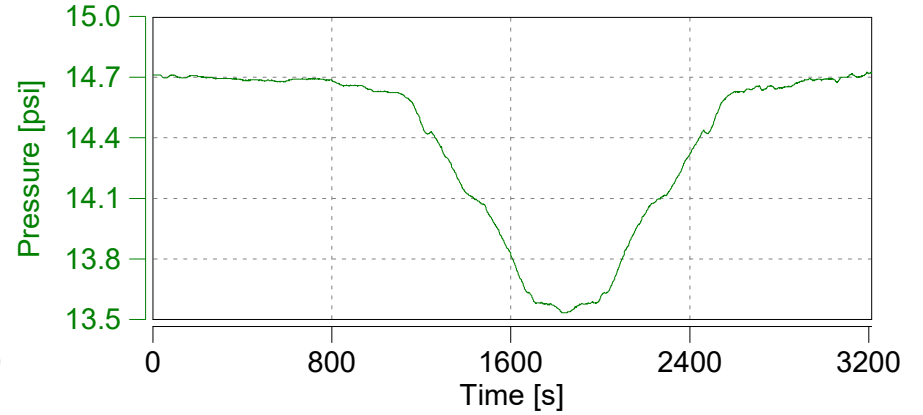
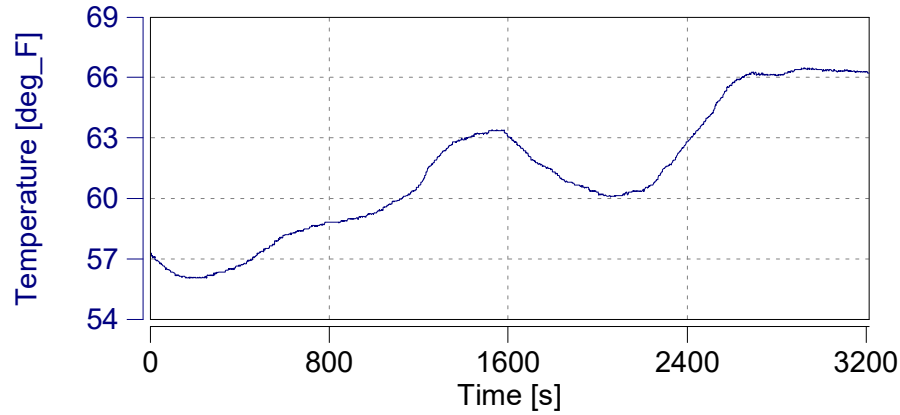
Concerto Version: 480 Build 215, Serial Number: 8468
 M.O.V.E Post-Processing: Rel_10_B192

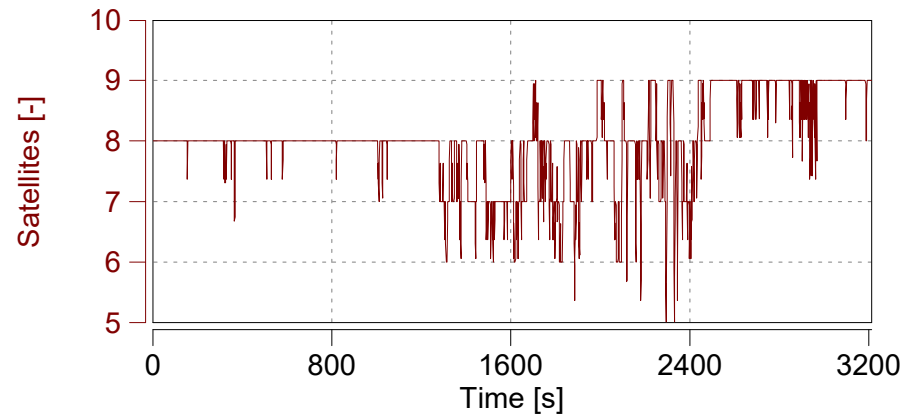
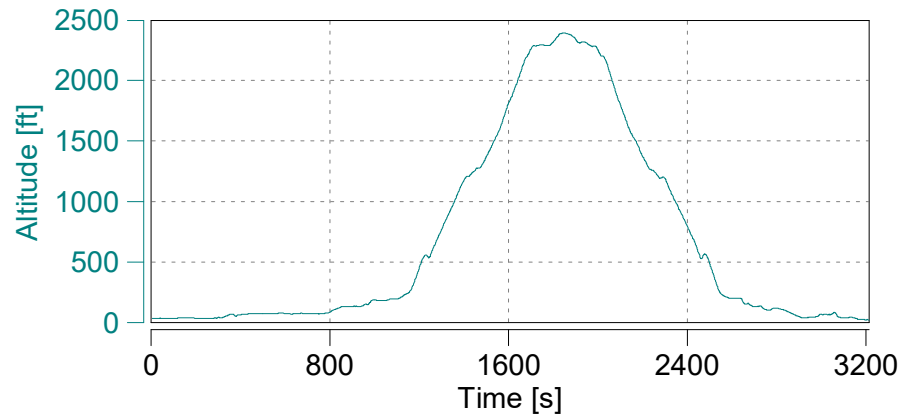
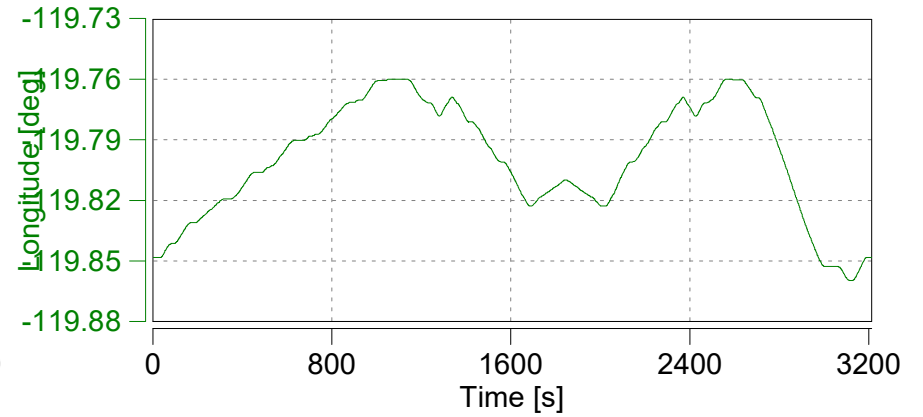
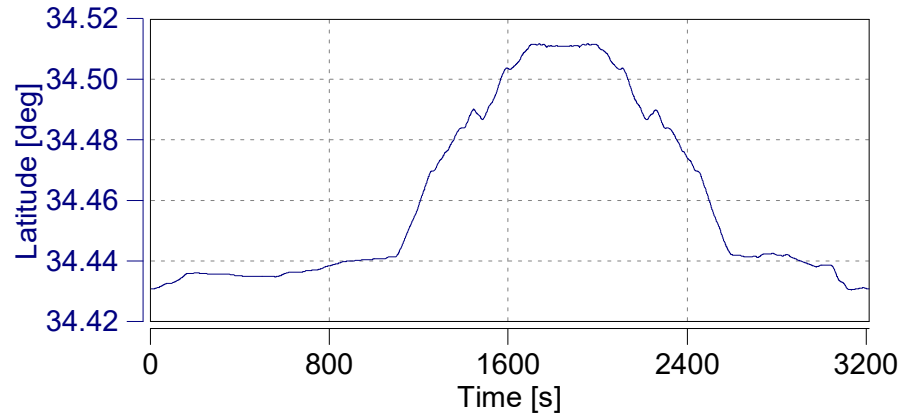
Vehicle: 2017 Audi S5 /
 Engine: Gasoline / 3.0L
 NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
 Dry / Wet Corr.: 2 - CFR40 §86.1342-90

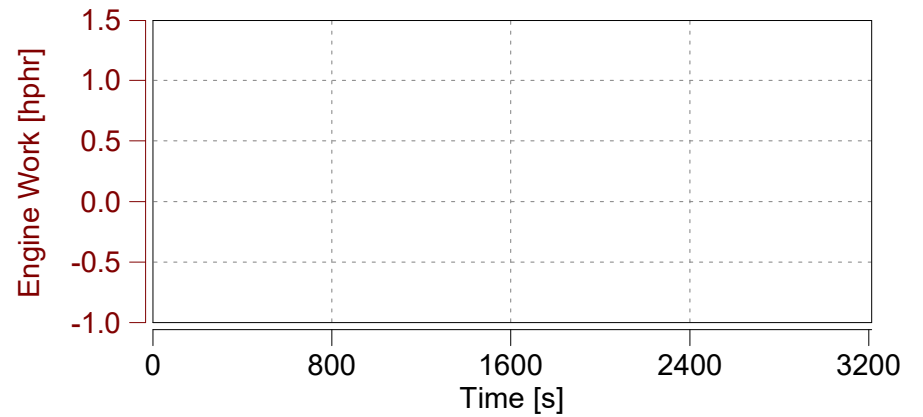
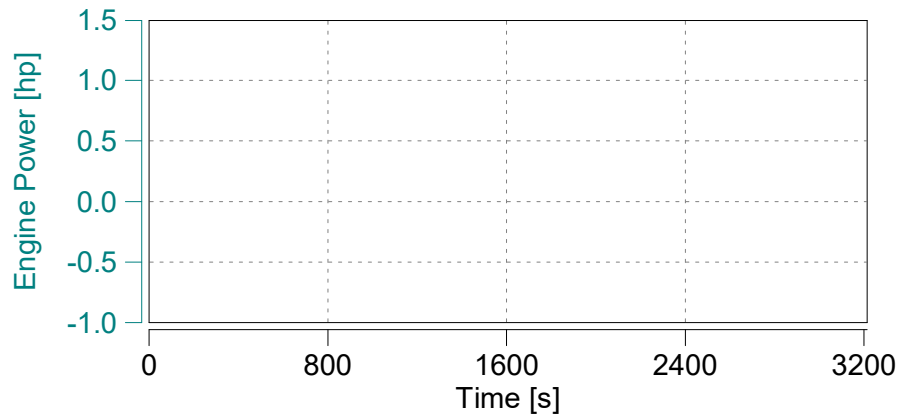
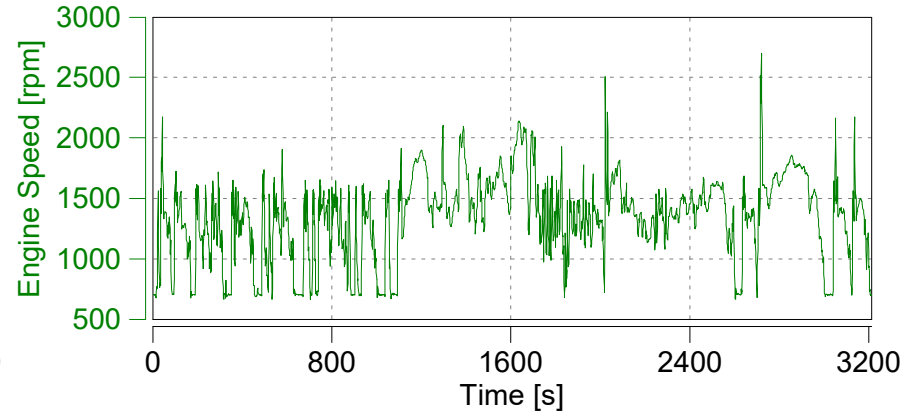
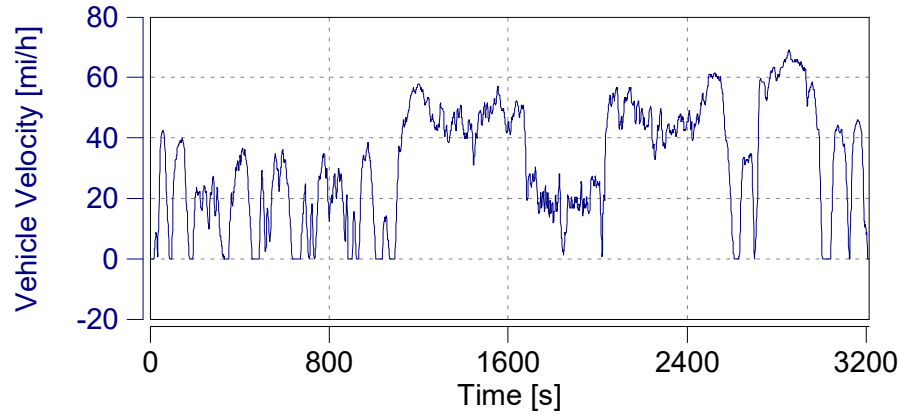


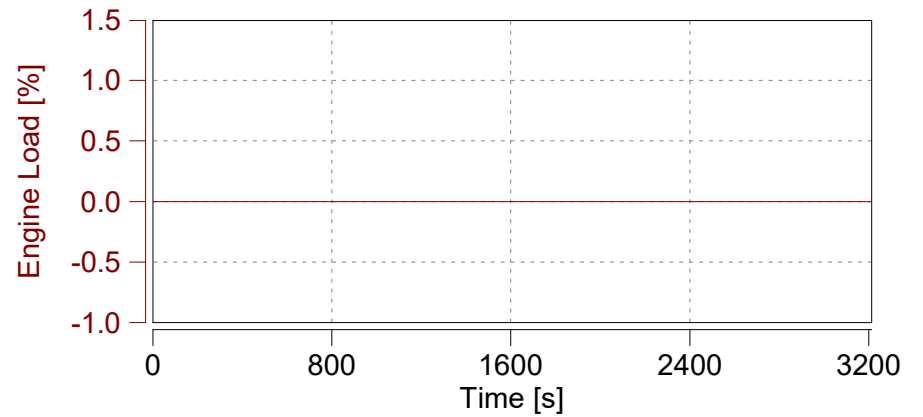
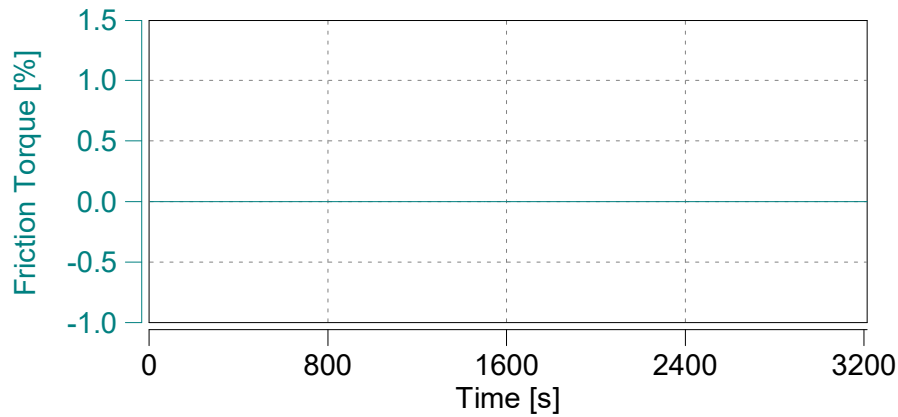
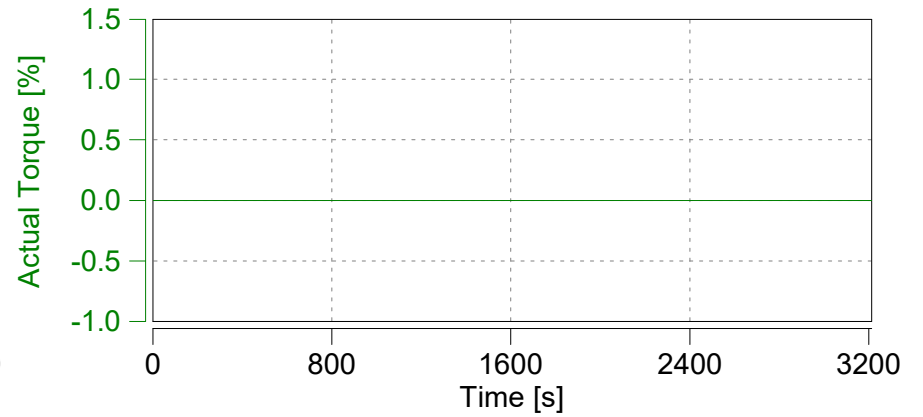
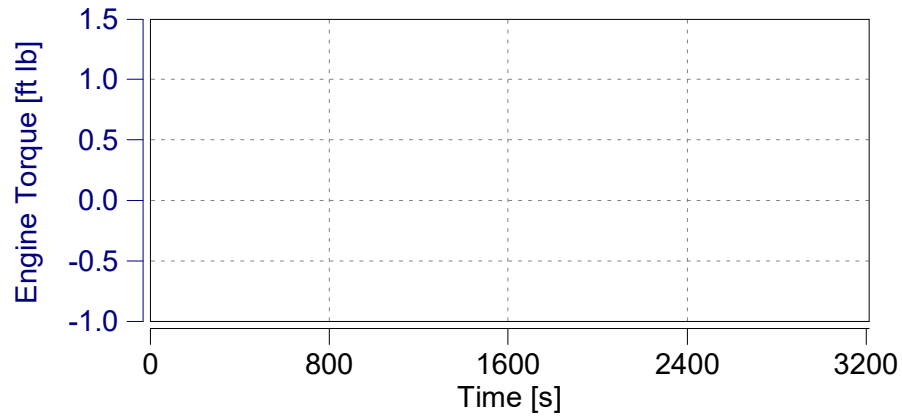
Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

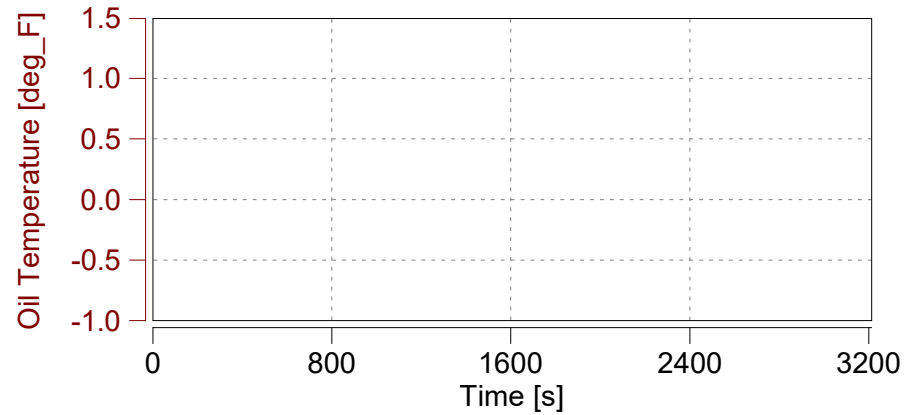
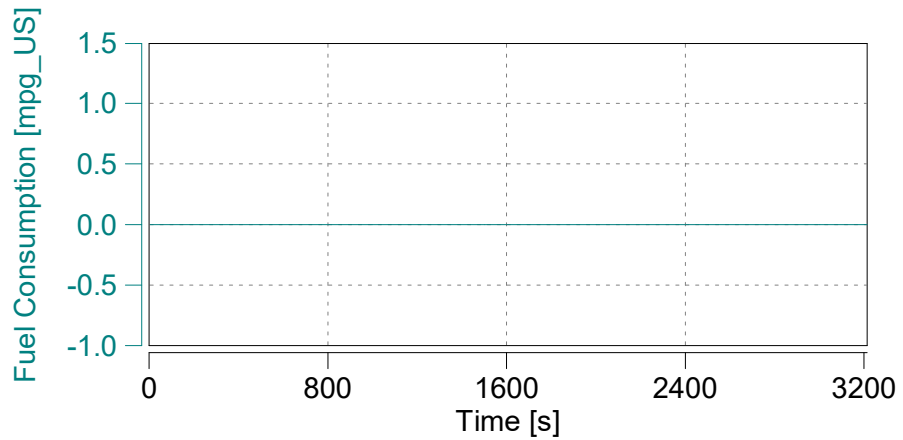
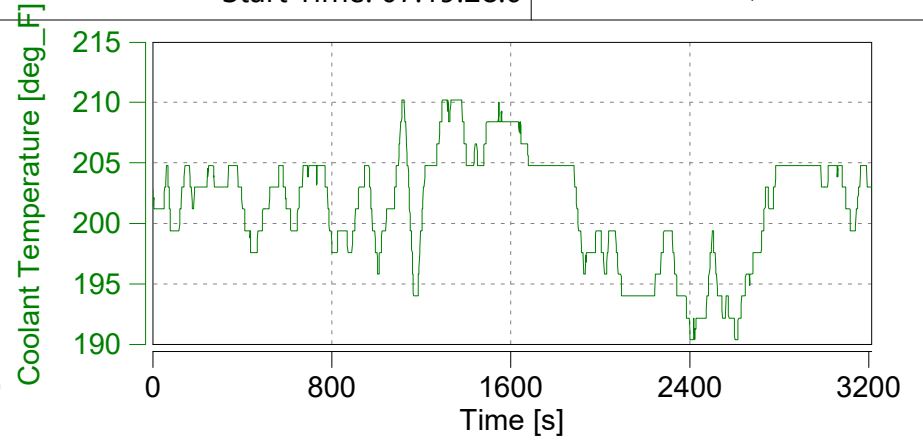
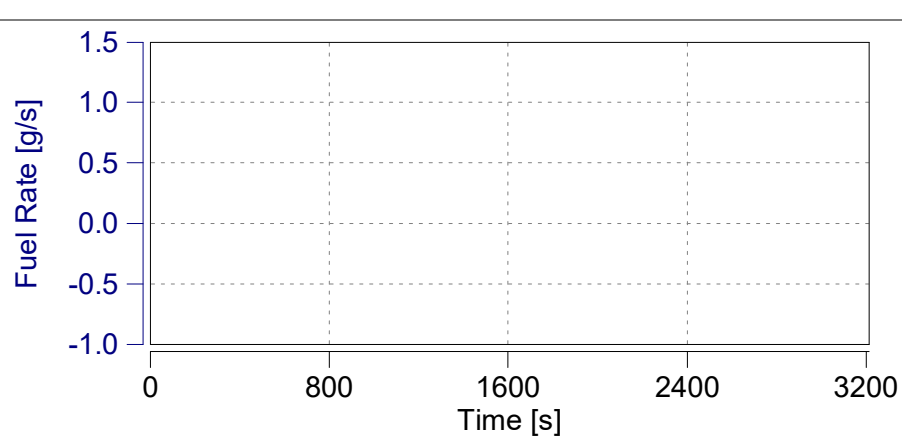
Vehicle: 2017 Audi S5 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

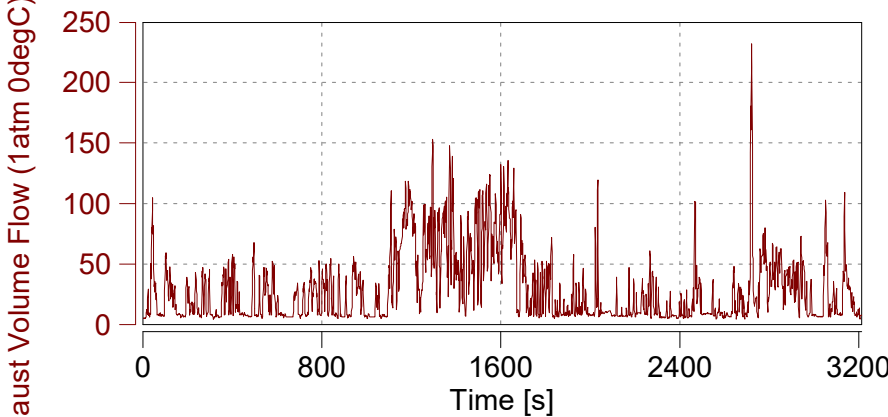
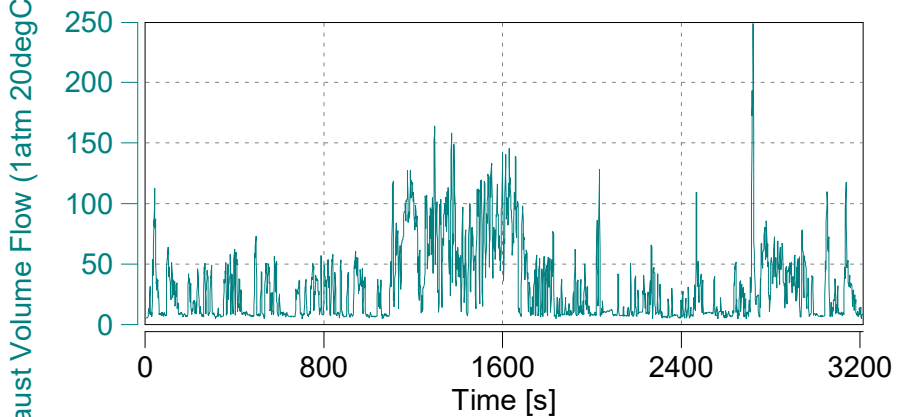
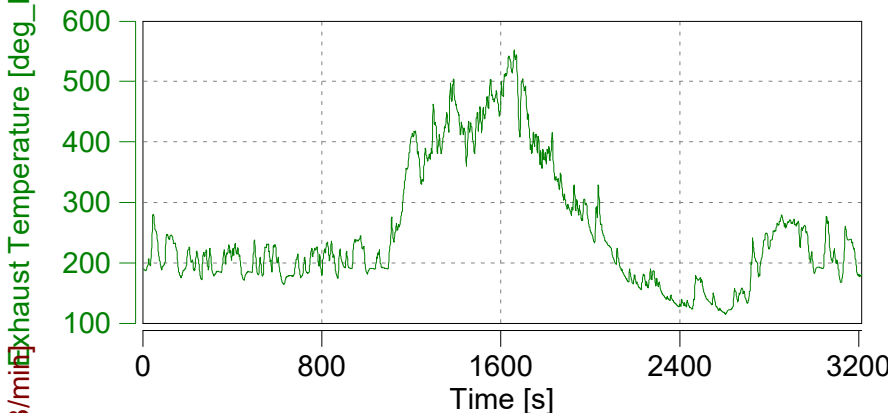
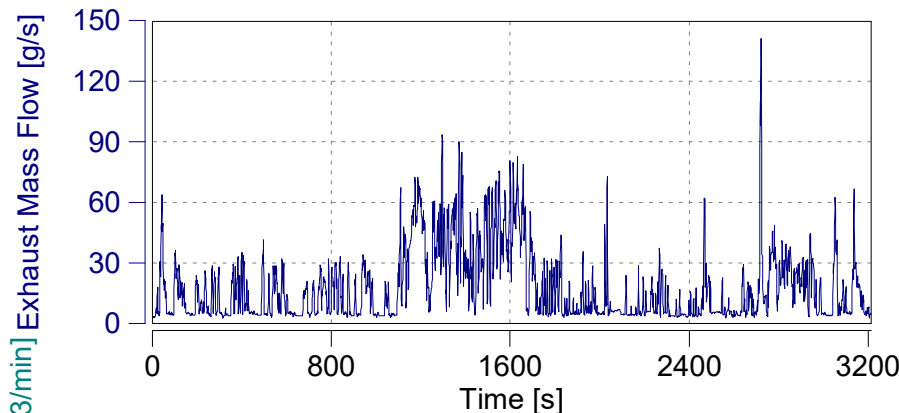






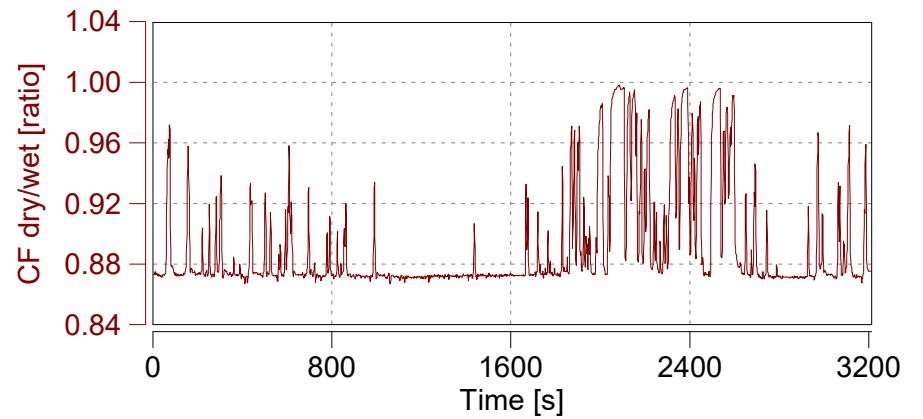
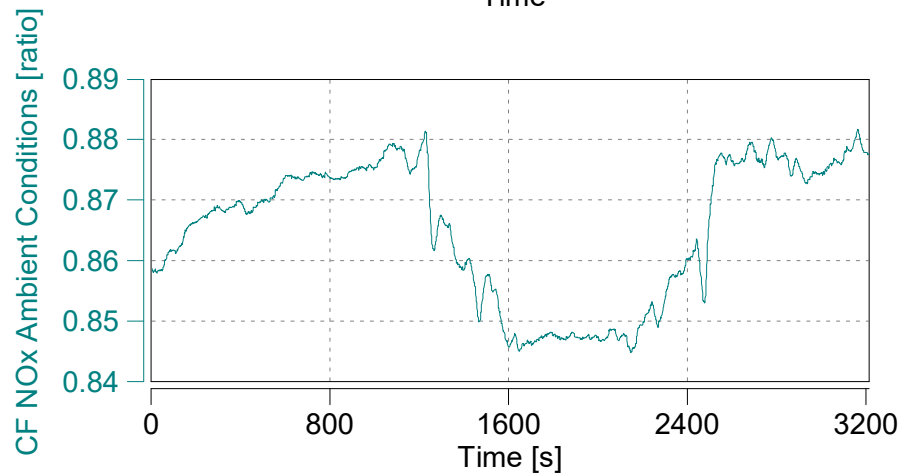
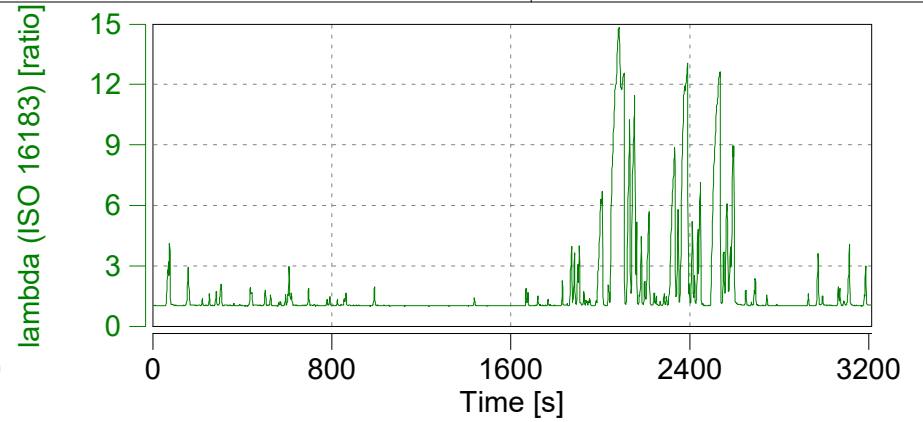
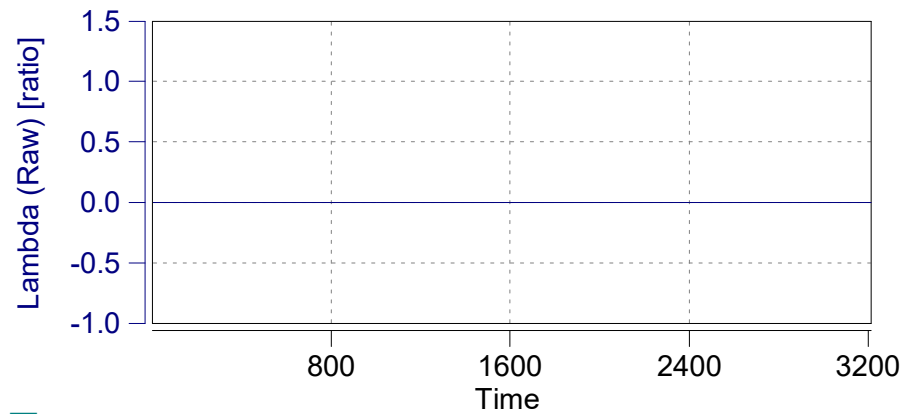






Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi S5 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

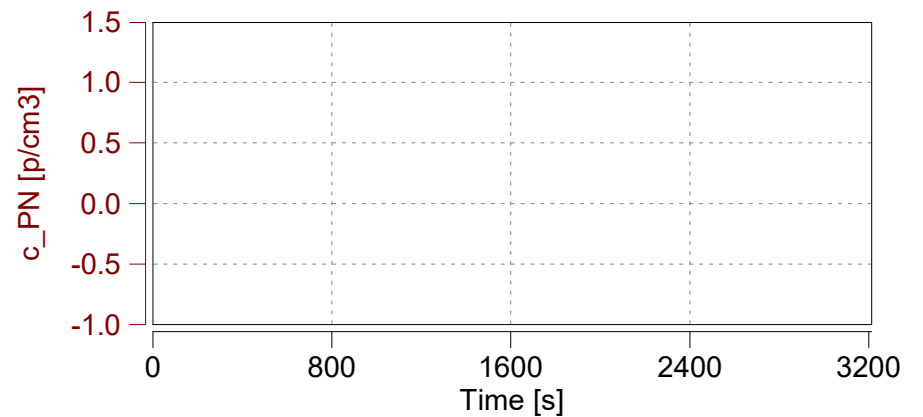
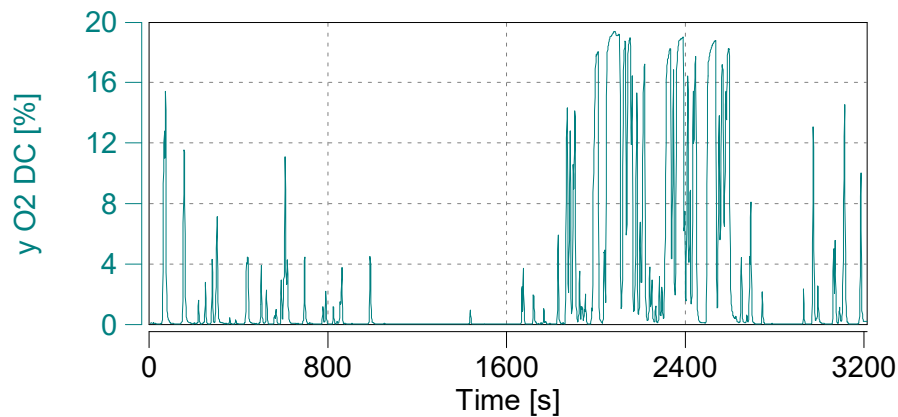
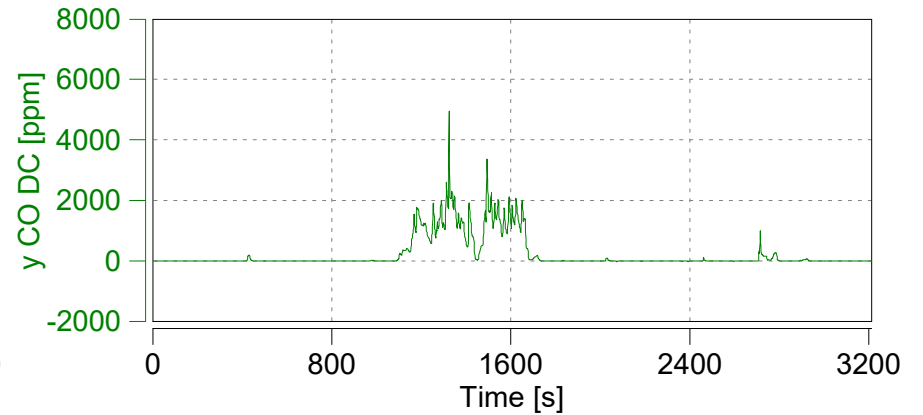
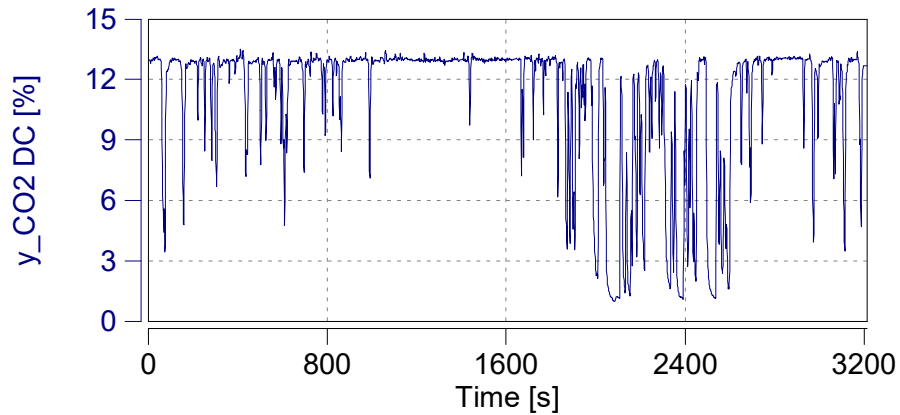


Case: Mountain

Page: Corrected Emissions (1)

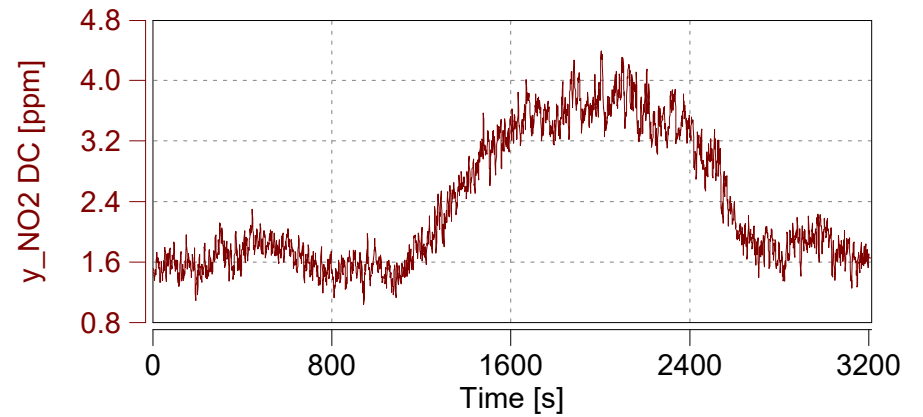
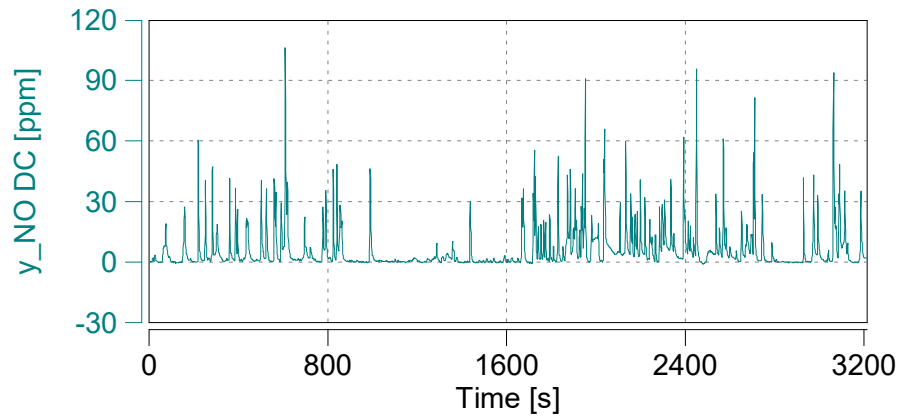
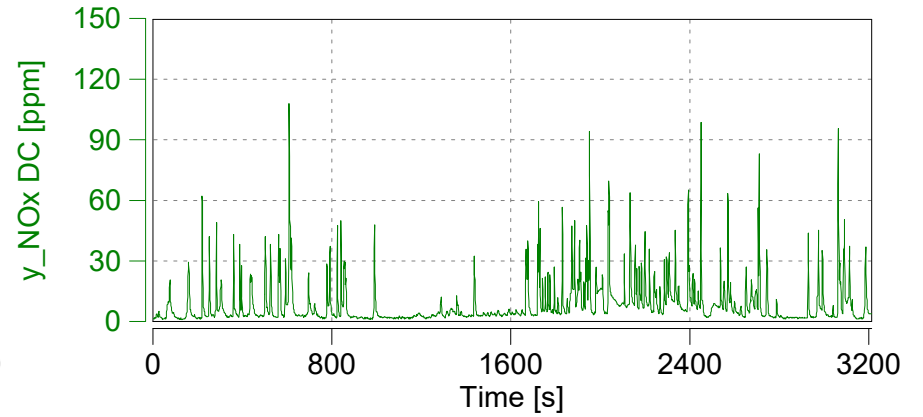
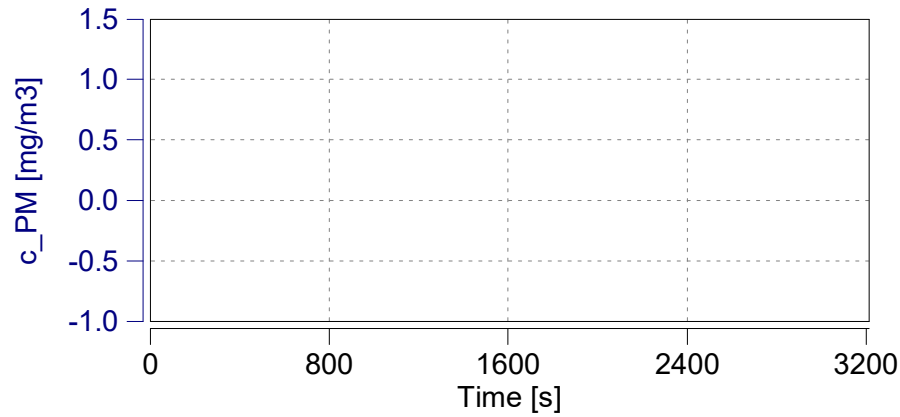
Start Date: 10/10/2017

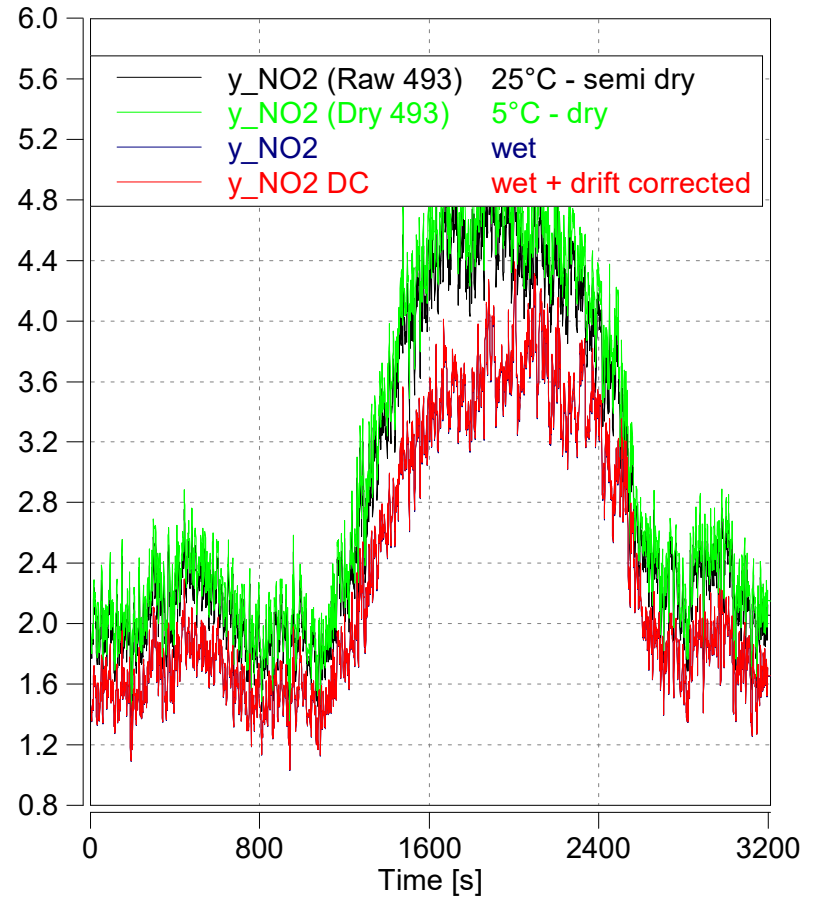
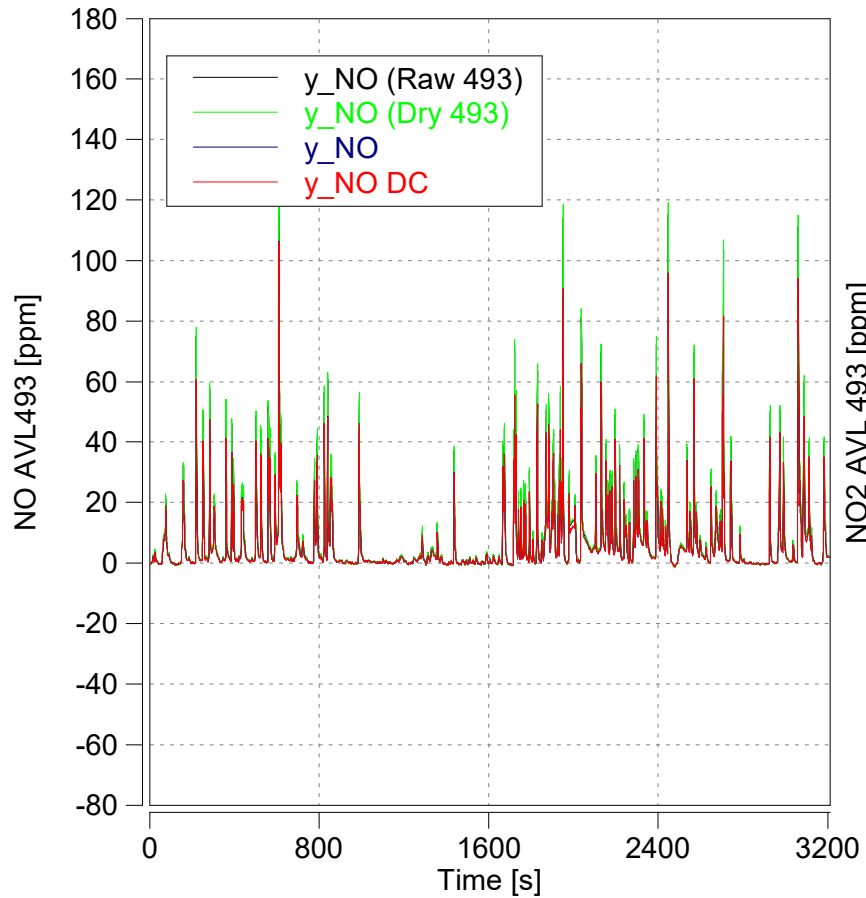
Start Time: 07:19:28.0



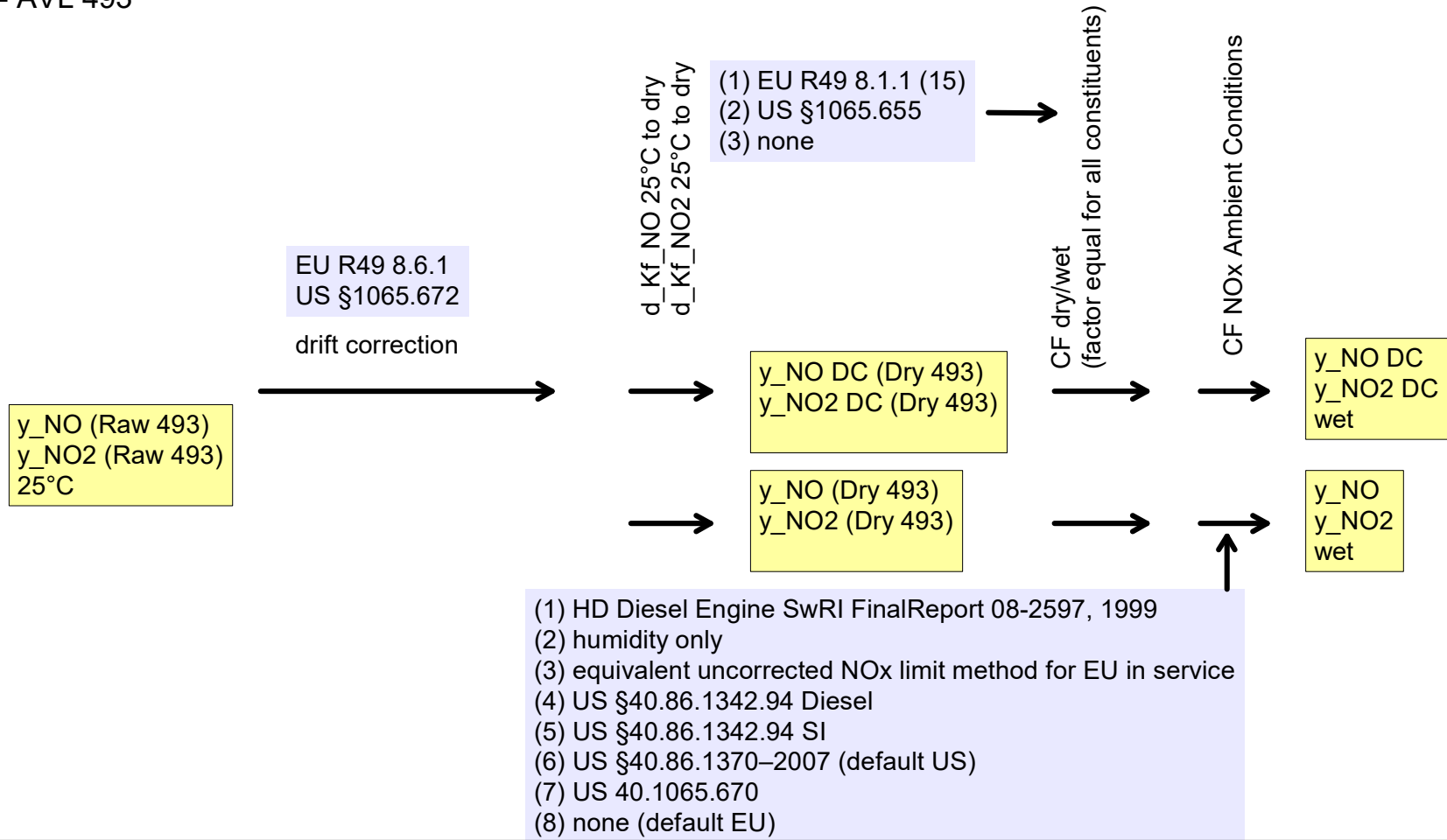
Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi S5 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90





NOx - AVL 493

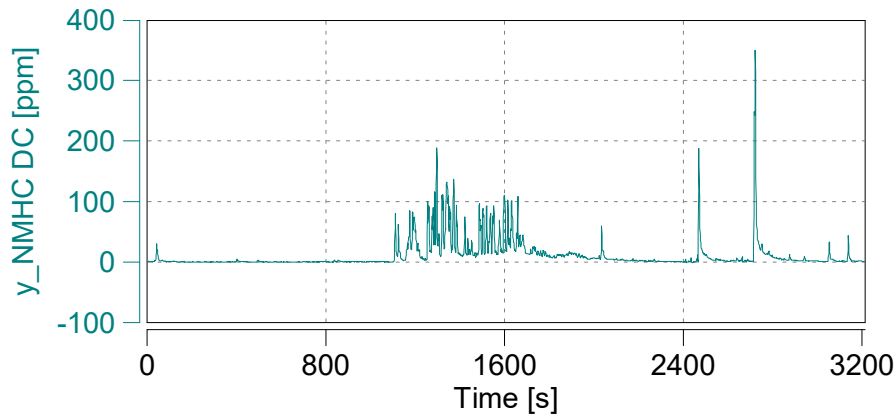
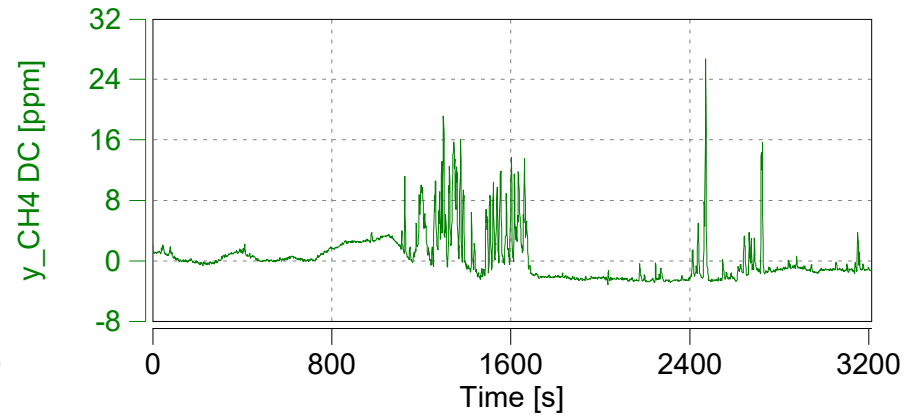
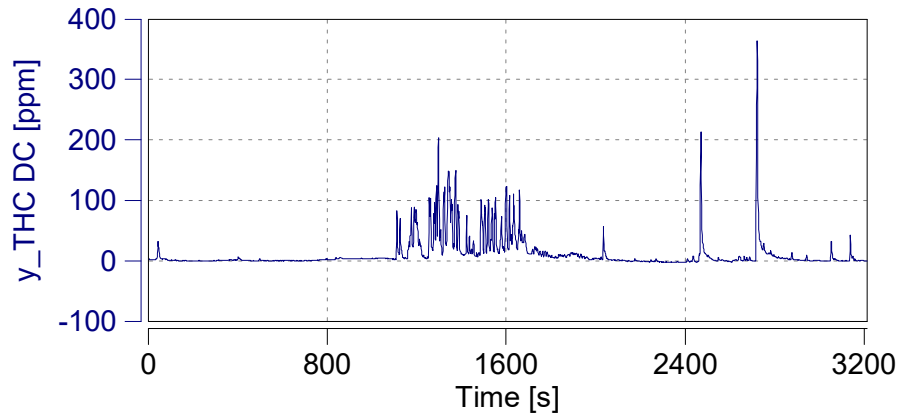


Case: Mountain

Page: Corrected Emissions (5)

Start Date: 10/10/2017

Start Time: 07:19:28.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

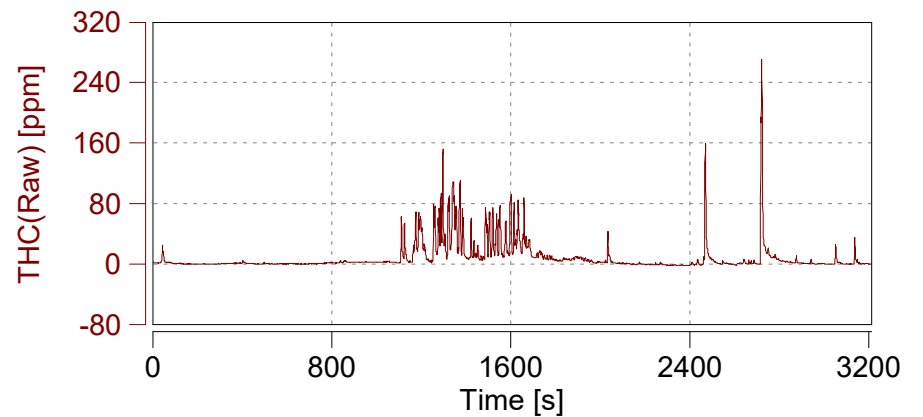
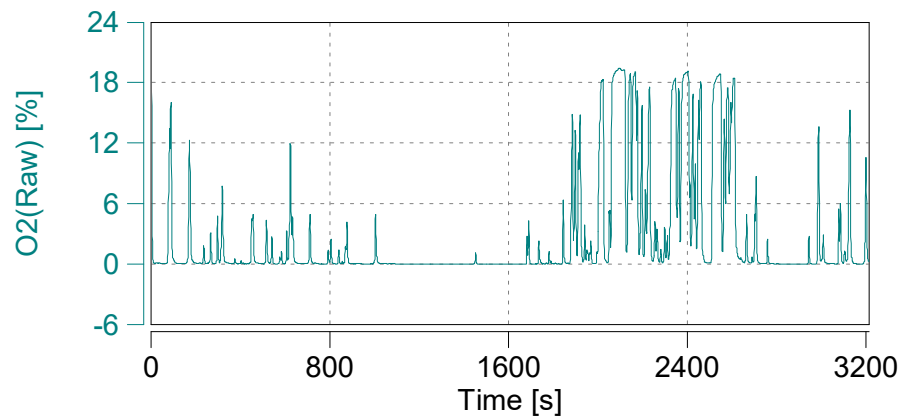
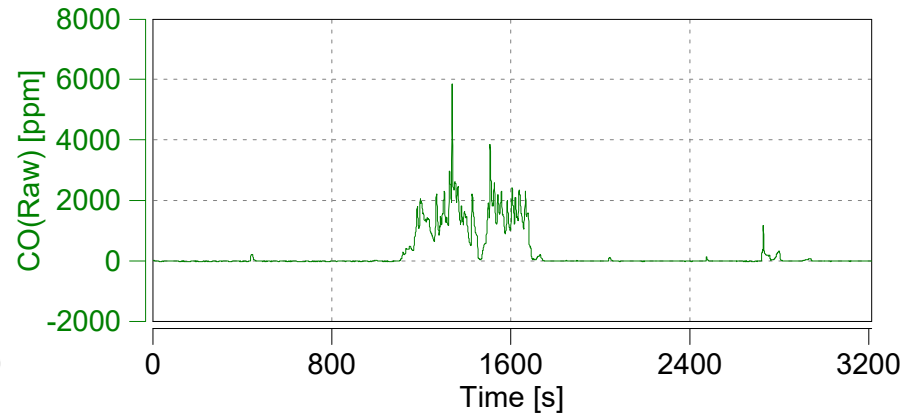
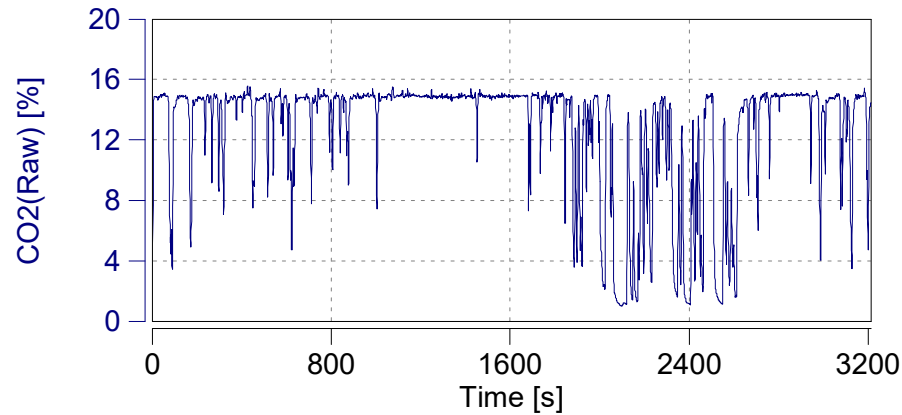
Vehicle: 2017 Audi S5 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Mountain

Page: Emissions Raw Data (1)

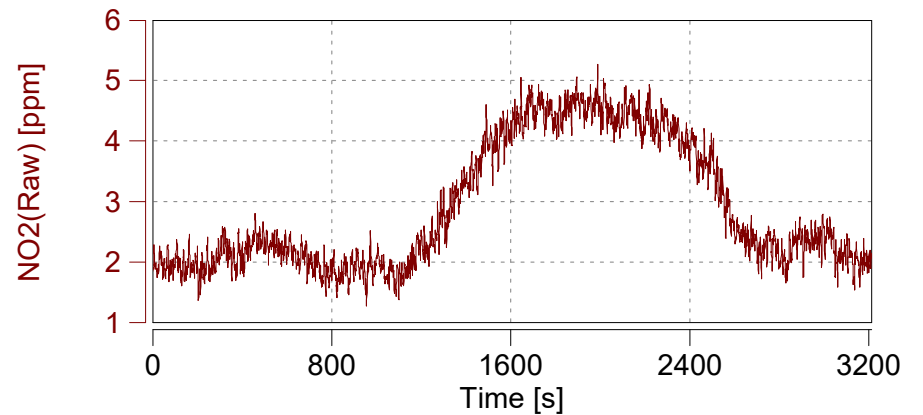
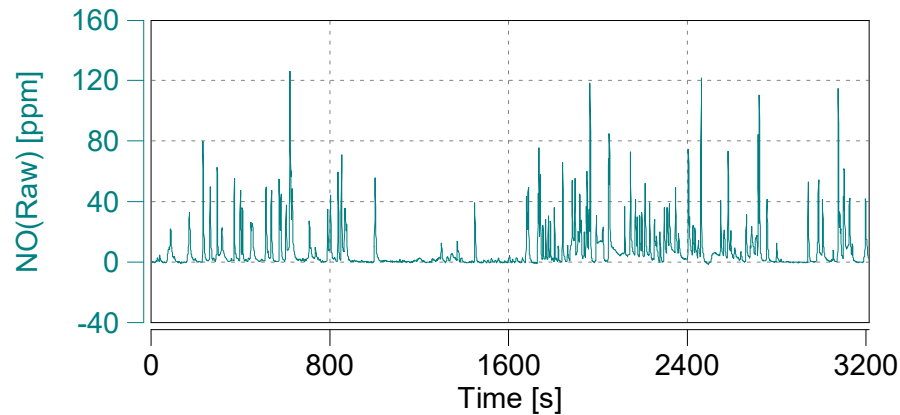
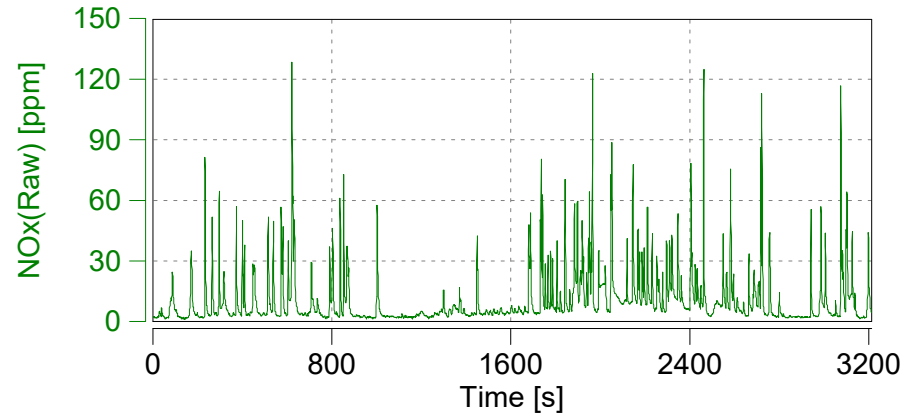
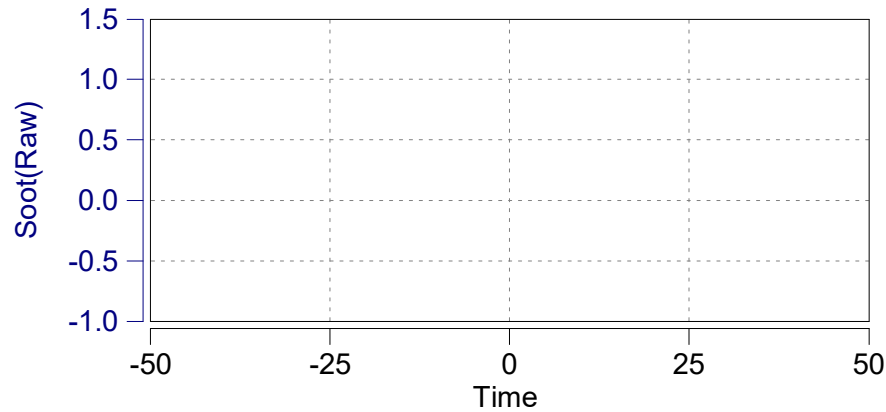
Start Date: 10/10/2017

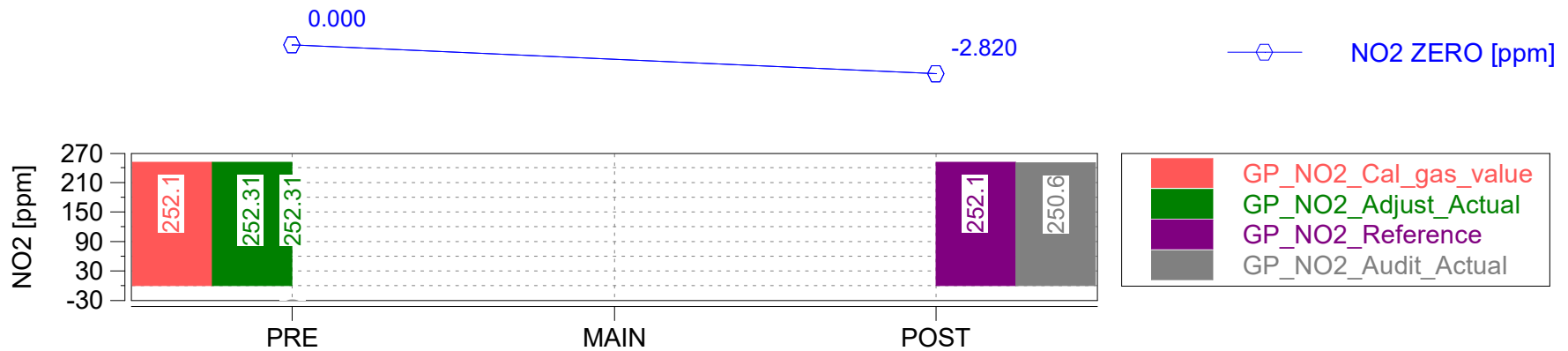
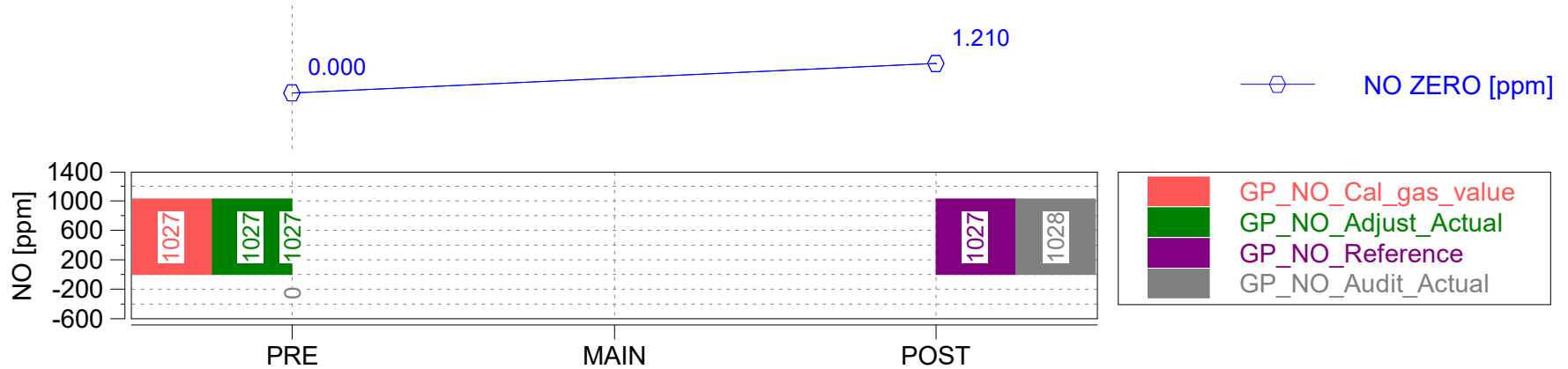
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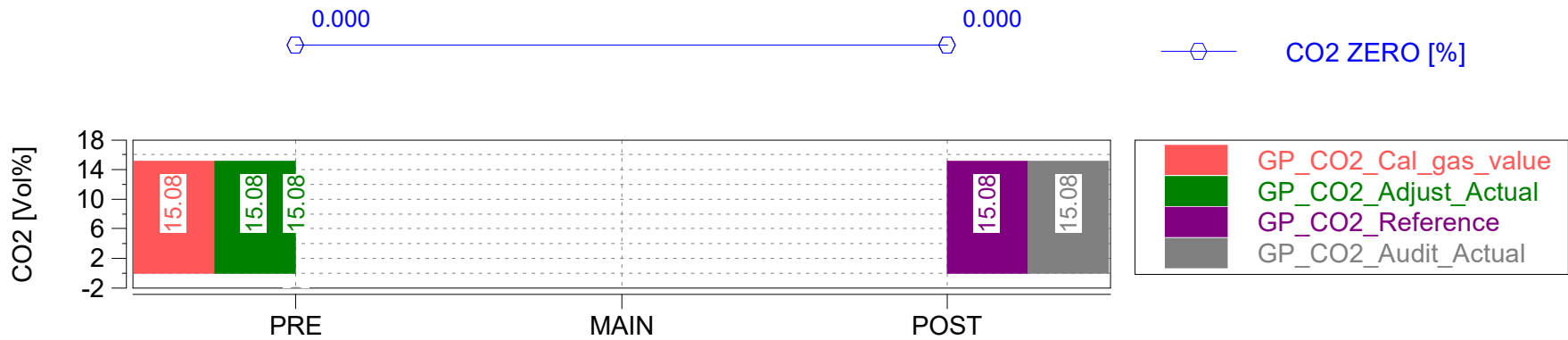
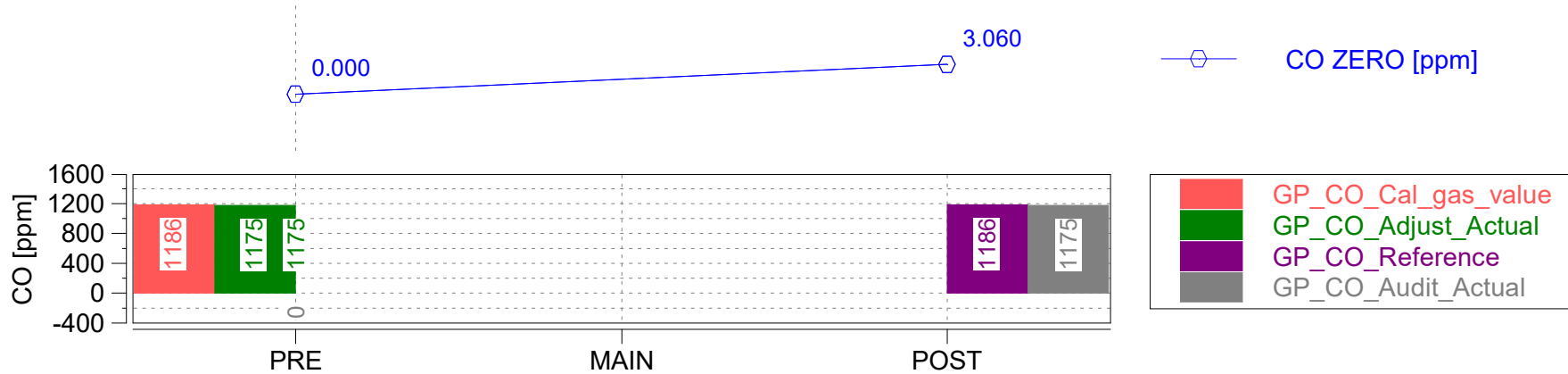


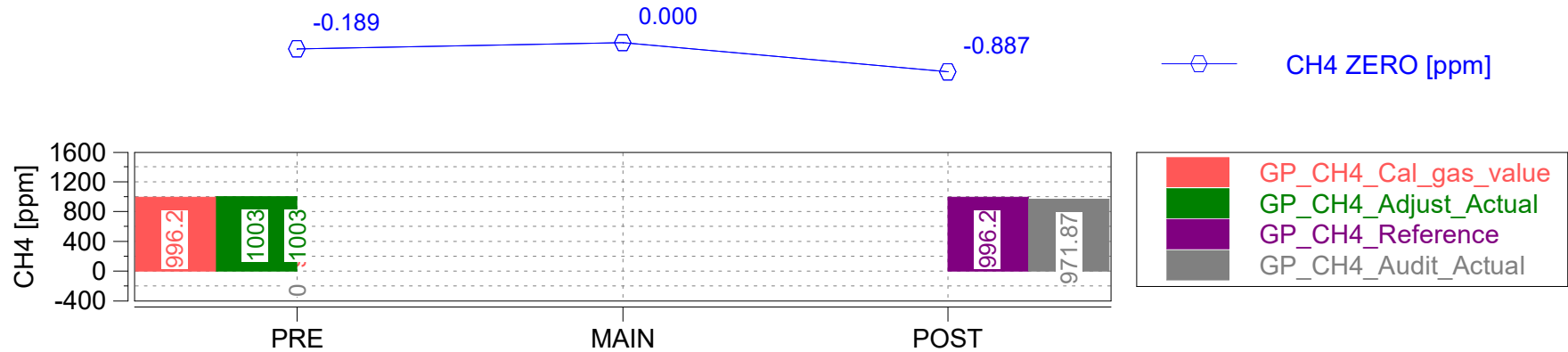
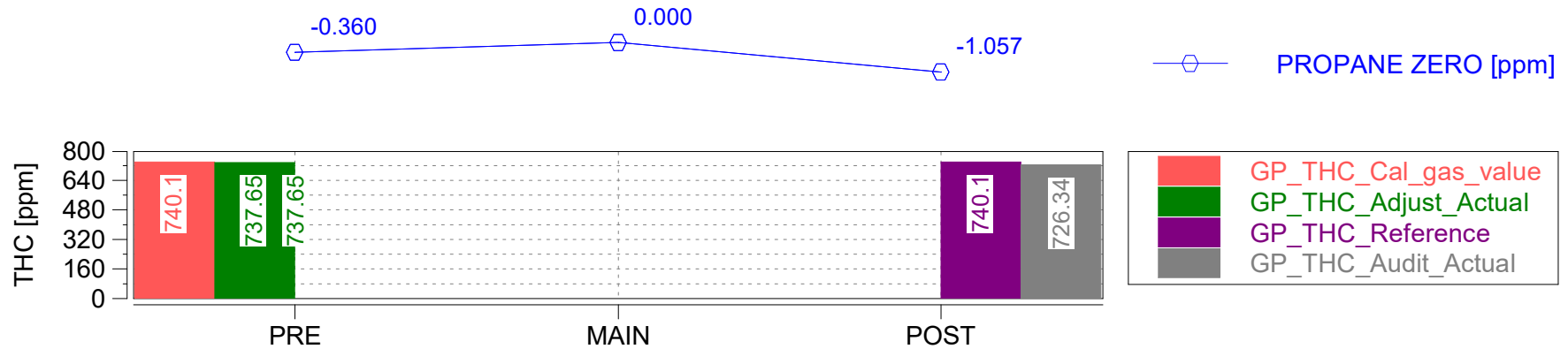
Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi S5 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90









#	Text	Value	Unit
-	----	----	----
1.0	Test Start: Date	-	-
2.0	Test Start: Time	-	-
3.0	Ambient Temperature	IFILE1:TM'Temperature	deg C
4.0	Ambient Temperature TS	0.00000	s
5.0	Ambient Pressure	IFILE1:TM'Pressure	kPa
6.0	Ambient Pressure TS	0.00000	s
7.0	Humidity Type	1.00000	-
8.0	Amb. Rel. Humidity	IFILE1:TM'Humidity	%
9.0	Amb. Rel. Humidity	0.00000	s
10.0	GPS Latitude		deg
11.0	GPS Latitude TS	0.00000	s
12.0	GPS Longitude		deg
13.0	GPS Longitude TS	0.00000	s
14.0	Altitude		m
15.0	Altitude TS	0.00000	s
16.0	GPS Quality		-
17.0	GPS Quality TS	0.00000	s
18.0	GroundSpeed		km/h
19.0	GroundSpeed TS	0.00000	s
20.0	Altitude from topographical map		m
21.0	Altitude TS of topographical map		s
22.0	TRIP_AMBIENT_GPS_AVL	YES	-
23.0	CALC_GPS_GROUNDSPEED	NO	-
24.0	EXHAUST_FLOW_AVL	NO	-
25.0	EXHAUST_FLOW_AVL_EFM	YES	-
26.0	Exhaust Flow Type	2.00000	-
27.0	Mass Flow	IFILE1:TM'PitotEFM_ExhaustG	various
28.0	Mass Flow TS	1.30000	s
29.0	Exhaust Pressure		kPa
30.0	Exhaust Pressure TS	1.30000	s

#	Text	Value	Unit
-	----	----	----
31.0	Exhaust Delta Pressure		kPa
32.0	Exhaust Pressure Delta TS	1.30000	s
33.0	Exhaust Temperature	IFILE1:TM'PitotEFM_ExhaustG	degC
34.0	Exhaust Temperature TS	1.30000	s
35.0	Lambda	N/A	-
36.0	Lambda TS		s
37.0	CO2_DIL		%
38.0	CO2_DIL TS		s
39.0	CVS Volume Flow		m3/min
40.0	TimeShift_CVS_VOL_FLOW		s
41.0	IN_CVS_PRESSURE		kPa
42.0	TimeShift_CVS_PRESSURE		s
43.0	IN_CVS_TEMP		degC
44.0	TimeShift_CVS_TEMP		s
45.0	Dry to Wet Conversion CO2	YES	-
46.0	Dry to Wet Conversion O2	YES	-
47.0	Dry to Wet Conversion NO	NO	-
48.0	Dry to Wet Conversion NO2	NO	-
49.0	Dry to Wet Conversion THC	NO	-
50.0	Dry to Wet Conversion CH4	NO	-
51.0	Dry to Wet Conversion O2	NO	-
52.0	CO2	IFILE1:TM'GPiS_CO2	%
53.0	CO2 TS	-14.30000	s
54.0	OS	IFILE1:TM'GPiS_O2	%
55.0	O2 TS	-14.80000	s
56.0	CO	IFILE1:TM'GPiS_CO	ppm
57.0	CO TS	-14.30000	s
58.0	NO	IFILE1:TM'GPiS_NO	ppm
59.0	NO TS	-12.50000	s
60.0	NO2	IFILE1:TM'GPiS_NO2	ppm

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Vehicle: 2017 Audi S5 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
61.0	NO2 TS	-12.50000	s
62.0	THC	IFILE1:TM'FIDiS_THC_C1	ppm
63.0	THC TS	0.00000	s
64.0	CH4	IFILE1:TM'FIDiS_CH4_C1	ppm
65.0	CH4 TS	0.00000	s
66.0	GAS_PEMS_Ethane_Efficiency	IFILE1:MOVE_AVL4925'GP_Et -	
67.0	GAS_PEMS_Methane_Efficiency	IFILE1:MOVE_AVL4925'GP_M -	
68.0	GAS_PEMS_Methane_Response	IFILE1:MOVE_AVL4925'GP_M -	
69.0	Zero Signal	IFILE1:TM'GPiS_STATE	0/1
70.0	Zero Signal TS	-12.50000	s
71.0	Zero Signal_FIDiS	IFILE1:TM'FIDiS_STATE	0/1
72.0	Zero Signal_FIDiS TS		s
73.0	Species Input Type	4.00000	-
74.0	GASPEMS=AVL493	NO	-
75.0	GASPEMS=AVL493_iX	NO	-
76.0	GASPEMS=AVL492	YES	-
77.0	GASPEMS=AVL4925	YES	-
78.0	PM: Type	4.00000	1=GFB+HC, 2=GFB, 3='PM=S
79.0	Filter ID from IFile	NO	-
80.0	Lab ID from IFile	NO	-
81.0	PM Filter: ID	N/A	ID
82.0	PM Filter: Lab	N/A	Name/ID
83.0	PM Filter: Weight before Test	N/A	mg
84.0	PM Filter: Weight after Test	N/A	mg
85.0	PM (HC Corr): Max. Exhaust Flow	N/A	scfm
86.0	Soot		mg/m3
87.0	Soot TS	-5.00000	s
88.0	Soot Sensor		mg/m3
89.0	Soot Sensor TS		s
90.0	PM Filter: Filter Flow Rate		l/min

#	Text	Value	Unit
-	----	----	----
91.0	PM Filter: Filter Flow Rate TS	-5.00000	s
92.0	PM Filter: Filter Dilution Ratio		-
93.0	PM Filter: Filter Dilution Ratio TS	-5.00000	s
94.0	PM Filter: Filter Trigger		-
95.0	PM Filter: Filter Trigger TS	-5.00000	s
96.0	PMPEMS=AVL494	YES	-
97.0	PMPEMS_AVL494_PROP_DIL	NO	-
98.0	PM dilution ratio min		-
99.0	PM_MaxExhaustFlowRate		-
100.0	PM_ExhaustFlow_Thresh		-
101.0	PM_total_flow_val		-
102.0	PM_total_flow_val_TS		-
103.0	PM_exh_mass_flow		-
104.0	PM_exh_mass_flow_TS		-
105.0	PN		#/cm3
106.0	TimeShift_PN		s
107.0	PN_STATE		-
108.0	PN TS STATE		s
109.0	PNPEMS_AVL496	NO	-
110.0	PN_CorrFactor	1.00000	
111.0	Time Alignment	1.00000	-
112.0	Time Alignment Dataset 1	N/A	0/1
113.0	Time Alignment Dataset 2	N/A	0/1
114.0	Time Alignment Thresh 1	N/A	-
115.0	Time Alignment Thresh 2	N/A	-
116.0			
117.0			
118.0			
119.0			
120.0			

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Vehicle: 2017 Audi S5 /
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#	Text	Value	Unit
-	----	----	----
121.0			
122.0	Trigger		0/1
123.0	Trigger TS		s
124.0	FTIR_NAME_1		-
125.0	FTIR_MW_1		-
126.0	FTIR_CHANNEL_1		-
127.0	FTIR_CHANNEL_TS_1		-
128.0	FTIR_CHANNEL_DRY_1	NO	-
129.0	FTIR_NAME_2		-
130.0	FTIR_MW_2		-
131.0	FTIR_CHANNEL_2		-
132.0	FTIR_CHANNEL_TS_2		-
133.0	FTIR_CHANNEL_DRY_2	NO	-
134.0	FTIR_NAME_3		-
135.0	FTIR_MW_3		-
136.0	FTIR_CHANNEL_3		-
137.0	FTIR_CHANNEL_TS_3		-
138.0	FTIR_CHANNEL_DRY_3	NO	-
139.0	FTIR_NAME_4		-
140.0	FTIR_MW_4		-
141.0	FTIR_CHANNEL_4		-
142.0	FTIR_CHANNEL_TS_4		-
143.0	FTIR_CHANNEL_DRY_4	NO	-
144.0	FTIR_NAME_5		-
145.0	FTIR_MW_5		-
146.0	FTIR_CHANNEL_5		-
147.0	FTIR_CHANNEL_TS_5		-
148.0	FTIR_CHANNEL_DRY_5	NO	-
149.0	FTIR_NAME_6		-
150.0	FTIR_MW_6		-

#	Text	Value	Unit
-	----	----	----
151.0	FTIR_CHANNEL_6		-
152.0	FTIR_CHANNEL_TS_6		-
153.0	FTIR_CHANNEL_DRY_6	NO	-
154.0	FTIR_NAME_7		-
155.0	FTIR_MW_7		-
156.0	FTIR_CHANNEL_7		-
157.0	FTIR_CHANNEL_TS_7		-
158.0	FTIR_CHANNEL_DRY_7	NO	-
159.0	FTIR_NAME_8		-
160.0	FTIR_MW_8		-
161.0	FTIR_CHANNEL_8		-
162.0	FTIR_CHANNEL_TS_8		-
163.0	FTIR_CHANNEL_DRY_8	NO	-
164.0	FTIR_NAME_9		-
165.0	FTIR_MW_9		-
166.0	FTIR_CHANNEL_9		-
167.0	FTIR_CHANNEL_TS_9		-
168.0	FTIR_CHANNEL_DRY_9	NO	-
169.0	FTIR_NAME_10		-
170.0	FTIR_MW_10		-
171.0	FTIR_CHANNEL_10		-
172.0	FTIR_CHANNEL_TS_10		-
173.0	FTIR_CHANNEL_DRY_10	NO	-
174.0	FTIR_NAME_11		-
175.0	FTIR_MW_11		-
176.0	FTIR_CHANNEL_11		-
177.0	FTIR_CHANNEL_TS_11		-
178.0	FTIR_CHANNEL_DRY_11	NO	-
179.0	FTIR_NAME_12		-
180.0	FTIR_MW_12		-

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Vehicle: 2017 Audi S5 /
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Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
181.0	FTIR_CHANNEL_12	-	-
182.0	FTIR_CHANNEL_TS_12	-	-
183.0	FTIR_CHANNEL_DRY_12	NO	-
184.0	FTIR_NAME_13	-	-
185.0	FTIR_MW_13	-	-
186.0	FTIR_CHANNEL_13	-	-
187.0	FTIR_CHANNEL_TS_13	-	-
188.0	FTIR_CHANNEL_DRY_13	NO	-
189.0	FTIR_NAME_14	-	-
190.0	FTIR_MW_14	-	-
191.0	FTIR_CHANNEL_14	-	-
192.0	FTIR_CHANNEL_TS_14	-	-
193.0	FTIR_CHANNEL_DRY_14	NO	-
194.0	FTIR_NAME_15	-	-
195.0	FTIR_MW_15	-	-
196.0	FTIR_CHANNEL_15	-	-
197.0	FTIR_CHANNEL_TS_15	-	-
198.0	FTIR_CHANNEL_DRY_15	NO	-
199.0	FTIR_NAME_16	-	-
200.0	FTIR_MW_16	-	-
201.0	Vehicle Type	2017 Audi S5	-
202.0	Vehicle Info	-	-
203.0	Engine Type	Gasoline	-
204.0	Engine Info	3.0L	-
205.0	Engine Torque	-	Nm
206.0	Curb Idle Load	-	%
207.0	Idle Speed	-	rpm
208.0	HYBRID_OVC_REF_CO2_gkm	-	g/km
209.0	Engine Concept	1.00000	-
210.0	Alpha	1.93000	-

#	Text	Value	Unit
-	----	----	----
211.0	Beta	1.00000	-
212.0	Gamma	0.00000	-
213.0	Delta	0.00000	-
214.0	Epsilon	0.03200	-
215.0	X_C	83.00000	-
216.0	X_H	13.30000	-
217.0	X_N	0.00000	-
218.0	X_O	3.50000	-
219.0	X_S	0.00000	-
220.0	Fuel_Density	747.50000	-
221.0	rho_exhaust	1.29310	-
222.0	U_CO2	1.51800	-
223.0	U_CO	0.96600	-
224.0	U_NO	1.58700	-
225.0	U_NO2	1.58700	-
226.0	U_NOx	1.58700	-
227.0	U_HC	0.49900	-
228.0	U_NMHC	0.47100	-
229.0	U_CH4	0.55300	-
230.0	U_O2	1.10400	-
231.0	Fuel Type	2.00000	-
232.0	exhaust mass flow type (YES/NO)	YES	-
233.0	Distance Calculation Type	1.00000	-
234.0	Velocity Statistics Calculation Type	2.00000	-
235.0	RDE vehicle class	1.00000	-
236.0	TM_CITY0	-	s
237.0	TM_CITY1	-	s
238.0	TM_RURAL0	-	s
239.0	TM_RURAL1	-	s
240.0	TM_RURAL2_0	-	s

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#	Text	Value	Unit
-	----	----	----
241.0	TM_RURAL2_1		s
242.0	Second Rural Part for Time Marks (NO		-
243.0	TM_MW0		s
244.0	TM_MW1		s
245.0	VELOCITY_LIMIT_STOP	2.00000	km/h
246.0	VELOCITY_LIMIT_URBAN	50.00000	km/h
247.0	VELOCITY_LIMIT_RURAL	75.00000	km/h
248.0	Intake Manifold Pressure Type	1.00000	-
249.0	Velocity	IFILE1:TM'OBD_Vehicle_Spee	km/h
250.0	Velocity TS	1.30000	s
251.0	Velocity FACTOR	1.00000	-
252.0	Coolant Temperature	IFILE1:TM'OBD_Engine_Coola	degC
253.0	Coolant Temperature TS	1.30000	s
254.0	Oil Temperature		degC
255.0	Oil Temperature TS	1.30000	s
256.0	Intake Manifold Temperature		degC
257.0	Intake Manifold Temp TS	1.30000	s
258.0	Intake Manifold Pressure	IFILE1:TM'OBD_Intake_manifo	kPa
259.0	Intake Manifold Pressure TS	1.30000	s
260.0	Throttle Position		%
261.0	Throttle TS	1.30000	s
262.0	TYP_IDLE_MASS_FLOW		kg/h
263.0	Torque Type	1.00000	-
264.0	Speed	IFILE1:TM'OBD_Engine_RPM	rpm
265.0	Speed TS	1.30000	s
266.0	Torque		Nm
267.0	Torque TS	1.30000	s
268.0	Friction Torque	N/A	Nm
269.0	Friction Torque TS	N/A	s
270.0	Reference Torque	N/A	Nm

#	Text	Value	Unit
-	----	----	----
271.0	Reference Torque TS	N/A	s
272.0	k_VELINE		-
273.0	D_VELINE		-
274.0	Fuel Flow Type	2.00000	-
275.0	Air Flow Type	1.00000	-
276.0	Fuel Rate		various
277.0	Air Rate		various
278.0	Fuel Rate TS	1.30000	s
279.0	No_Cylinders		-
280.0	Air Rate TS	1.30000	s
281.0	FTIR_CHANNEL_32		-
282.0	FTIR_CHANNEL_TS_32		-
283.0	FTIR_CHANNEL_DRY_32	NO	-
284.0	FTIR_NAME_33		-
285.0	FTIR_MW_33		-
286.0	FTIR_CHANNEL_33		-
287.0	FTIR_CHANNEL_TS_33		-
288.0	FTIR_CHANNEL_DRY_33	NO	-
289.0	FTIR_NAME_34		-
290.0	FTIR_MW_34		-
291.0	FTIR_CHANNEL_34		-
292.0	FTIR_CHANNEL_TS_34		-
293.0	FTIR_CHANNEL_DRY_34	NO	-
294.0	FTIR_NAME_35		-
295.0	FTIR_MW_35		-
296.0	FTIR_CHANNEL_35		-
297.0	FTIR_CHANNEL_TS_35		-
298.0	FTIR_CHANNEL_DRY_35	NO	-
299.0	FTIR_NAME_36		-
300.0	FTIR_MW_36		-

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Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
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#	Text	Value	Unit
-	----	----	----
301.0	FTIR_CHANNEL_36	-	-
302.0	FTIR_CHANNEL_TS_36	-	-
303.0	FTIR_CHANNEL_DRY_36	NO	-
304.0	FTIR_NAME_37	-	-
305.0	FTIR_MW_37	-	-
306.0	FTIR_CHANNEL_37	-	-
307.0	FTIR_CHANNEL_TS_37	-	-
308.0	FTIR_CHANNEL_DRY_37	NO	-
309.0	FTIR_NAME_38	-	-
310.0	FTIR_MW_38	-	-
311.0	FTIR_CHANNEL_38	-	-
312.0	FTIR_CHANNEL_TS_38	-	-
313.0	FTIR_CHANNEL_DRY_38	NO	-
314.0	FTIR_NAME_39	-	-
315.0	FTIR_MW_39	-	-
316.0	FTIR_CHANNEL_39	-	-
317.0	FTIR_CHANNEL_TS_39	-	-
318.0	FTIR_CHANNEL_DRY_39	NO	-
319.0	FTIR_NAME_40	-	-
320.0	FTIR_MW_40	-	-
321.0	FTIR_CHANNEL_40	-	-
322.0	FTIR_CHANNEL_TS_40	-	-
323.0	FTIR_CHANNEL_DRY_40	NO	-
324.0	Legislation Type (1=HDIUT 2=EU H	4.00000	-
325.0	WholeTest_NOx_corr	5.00000	-
326.0	WholeTest_Hum_corr	2.00000	-
327.0	CD_Distance	0.00000	km
328.0	CD_NOx	0.00000	mg/km
329.0	CD_CO	0.00000	mg/km
330.0	CD_CO2	0.00000	g/km

#	Text	Value	Unit
-	----	----	----
331.0	CD_NMHC	0.00000	mg/km
332.0	CD_CH4	0.00000	mg/km
333.0	CD_THC	0.00000	mg/km
334.0	CD_PN	-	#/km
335.0	WLTC_LOW_SPEED_gkm	-	g/km
336.0	WLTC_LOW_SPEED_FAC	1.20000	-
337.0	WLTC_MEDIUM_SPEED_gkm	-	g/km
338.0	WLTC_HIGH_SPEED_gkm	-	g/km
339.0	WLTC_HIGH_SPEED_FAC	1.10000	-
340.0	WLTC_EXTRA_HIGH_SPEED_gkm	-	g/km
341.0	WLTC_EXTRA_HIGH_SPEED_FA	1.05000	-
342.0	TOL_NORMAL_DRIVING	25.00000	%
343.0	TOL_SEVERE_DRIVING	50.00000	%
344.0	Increase Tolerance Nomral Driving	NO	-
345.0	Bin1_min	-	km/h
346.0	Bin2_min	-	km/h
347.0	Bin3_min	-	km/h
348.0	Bin1_max	-	km/h
349.0	Bin2_max	-	km/h
350.0	Bin3_max	-	km/h
351.0	Clear_R0	125.40000	N
352.0	Clear_R1	0.29300	Nh/km
353.0	Clear_R2	0.02795	N*(h/km) ²
354.0	Clear_SMK	1470.00000	kg
355.0	Clear_Rated_Power	140.00000	kW
356.0	Clear_Ref_Velocity	70.00000	km/h
357.0	Clear_Ref_Acc	0.45000	m/s ²
358.0	Clear_Smooth	3.00000	s
359.0	EXTC_From_High_Temp	30.00000	degC
360.0	EXTC_To_High_Temp	35.00000	degC

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Vehicle: 2017 Audi S5 /
Engine: Gasoline / 3.0L
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#	Text	Value	Unit
-	----	----	----
361.0	EXTC_From_Low_Temp	-7.00000	degC
362.0	EXTC_To_Low_Temp	0.00000	degC
363.0	Euro 6d or Euro 6d temp	NO	-
364.0	EXTC_From_Altitude	700.00000	m
365.0	EXTC_To_Altitude	1300.00000	m
366.0	EXTC_CORR_FAC	1.60000	
367.0	weight cold start (YES/NO)	NO	-
368.0	precon and soak done (YES/NO)	NO	-
369.0	PATH_PRECON_FILE		
370.0	filter velocity (YES/NO)	NO	-
371.0	filter velocity auto(YES/NO)	NO	-
372.0	Ki_CO		
373.0	Ki_CO2		
374.0	Ki_NOx		
375.0	Ki_FACTOR_CO2 (YES/NO)	NO	-
376.0	Ki_OFFSET_CO2 (YES/NO)	NO	-
377.0	Ki_FACTOR_CO (YES/NO)	NO	-
378.0	Ki_OFFSET_CO (YES/NO)	NO	-
379.0	Ki_FACTOR_NOx (YES/NO)	NO	-
380.0	Ki_OFFSET_NOx (YES/NO)	NO	-
381.0	Ki_OFF (YES/NO)	NO	-
382.0	HD legislations	1.00000	-
383.0	RDE legislations	1.00000	-
384.0	Submission Documents (YES/NO)	NO	-
385.0	General Setup Parameters Text	Mountain	-
386.0	Legislation Setup Parameters Text	Mountain	-
387.0	Trip Info		-
388.0	IN_TIME_REF		-
389.0	Sub-Trip Start: Auto	YES	-
390.0	Sub-Trip Start: Seconds	N/A	s

#	Text	Value	Unit
-	----	----	----
391.0	Sub-Trip End: Auto	YES	-
392.0	Sub-Trip End: Seconds	N/A	s
393.0	Unit System	2.00000	-
394.0	Calculate: PM Emissions	NO	-
395.0	Calculate: PN Emissions	NO	-
396.0	Output: Summary	YES	-
397.0	Output: Emissions	YES	-
398.0	Output: Raw Data	YES	-
399.0	Output: Zero Span	YES	-
400.0	Output: Data Consistency	NO	-
401.0	Output: Window Plots	YES	-
402.0	Fuel Rate ECU vs. EU ISO16183	$y = 10000000000.0000 x - 0.000 R^2=10000000000.000 SEE=$	
403.0	PEMS post processing version	Rel_10_B192	
404.0	Concerto version	480.00000	
405.0	Concerto build	215.00000	
406.0	USERNAME	EFR	

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Vehicle: 2017 Audi S5 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
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Case: City
Page: Trip Summary

Start Date: 10/10/2017
Start Time: 07:19:28.0



Trip Duration	4078.00	s	ave THC	1.19660	ppm	BS CO2	n/a	g/hphr
Trip Duration (a)	4078.00	s	ave NMHC	0.95333	ppm	BS CO	n/a	g/hphr
Trip Distance	15.63	mi	ave CH4	0.22115	ppm	BS THC	n/a	g/hphr
Trip Distance (a)	15.63	mi	ave CO	-7.87131	ppm	BS NMHC	n/a	g/hphr
Trip Fuel Cons. (b)	n/a	kg	ave CO2	12.41324	%	BS CH4	n/a	g/hphr
Trip Fuel Cons. (ab)	n/a	kg	ave NOx	11.91680	ppm	BS NO (d)	n/a	g/hphr
Trip Fuel Cons. EU (ac)	2.76	kg	ave PM	n/a	mg/m3	BS NO2	n/a	g/hphr
Trip Fuel Cons. US (ac)	2.76	kg	ave Soot meas	n/a	mg/m3	BS NOx	n/a	g/hphr
Trip Fuel Cons. Volume (b)	n/a	gall	ave Soot	n/a	mg/m3	BS Soot	n/a	g/hphr
Trip Fuel Cons. Volume (ab)	n/a	gall	ave PN	n/a	#/cm3	BS Soot meas	n/a	g/hphr
Trip Fuel Cons. Volume EU (ac)	0.97	gall	tot THC	0.03707	g	BS PM	n/a	g/hphr
Trip Fuel Cons. Volume US (ac)	0.97	gall	tot NMHC	0.02904	g	BS PN	n/a	#/hpr
Trip Fuel Economy (b)	n/a	mpg_US	tot CH4	0.01054	g	DS CO2	537.27910	g/mi
Trip Fuel Economy (ab)	n/a	mpg_US	tot CO	0.22211	g	DS CO	0.01421	g/mi
Trip Fuel Economy EU (ac)	16.03	mpg_US	tot CO2	8395.76230	g	DS THC	0.00237	g/mi
Trip Fuel Economy US (ac)	16.03	mpg_US	tot NO (d)	0.29567	g	DS NMHC	0.00186	g/mi
Trip Av. Eng. Speed	1072.45	rpm	tot NO2	0.48827	g	DS CH4	0.00067	g/mi
Trip Av. Torque	n/a	lbft	tot NOx	0.74232	g	DS NO (d)	0.01892	g/mi
Trip Av. Power	n/a	hp	tot Soot	n/a	g	DS NO2	0.03125	g/mi
Trip Work	n/a	hphr	tot Soot meas	n/a	g	DS NOx	0.04750	g/mi
Trip Exhaust Mass	43.81	kg	tot PM	n/a	g	DS Soot	n/a	g/mi
Trip Exhaust Mass EU (ac)	n/a	kg	tot PN	n/a	#	DS Soot meas	n/a	g/mi
Trip Exhaust Mass US (ac)	n/a	kg	PM measurement type	0.00000	-	DS PM	n/a	g/mi
Trip Av. Amb. Temperature	93.37	deg_F	PM correction type	1.00000	alpha(HC)	DS PN	n/a	#/mi
Trip Av. Humidity	10.73	%	tot Soot on PM filter (estim.)	n/a	mg	FS CO2	n/a	g/kg
Fuel Type	Petrol (E10)		Soot --> PM simple scaling factor	1.00000	-	FS CO	n/a	g/kg
			Soot --> PM alpha scaling factor	0.00000	-	FS THC	n/a	g/kg
			Trip Av. Veh. Speed	13.79480	mi/hr	FS NMHC	n/a	g/kg
			Trip Velocity Zero	26.41000	%	FS CH4	n/a	g/kg
			Trip Velocity Urban	90.06866	%	FS NO (d)	n/a	g/kg
			Trip Velocity Rural	6.59637	%	FS NO2	n/a	g/kg
			Trip Velocity Motorway	3.33497	%	FS NOx	n/a	g/kg
						FS Soot	n/a	g/kg
						FS Soot meas	n/a	g/kg
						FS PM	n/a	g/kg
						FS PN	n/a	#/kg

(a) GAS PEMS measurement state only, (b) based on fuel rate input (ECU, Fuel Meter), (c) calculated from carbon balance
(d) NO calculated using molecular weight of NO2

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi S5 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Trip Summary Drift Corrected

Start Date: 10/10/2017

Start Time: 07:19:28.0

"



Concerto M.O.V.E, 2017

Trip Duration	4078.00	s	ave THC DC	1.62849	ppm	BS CO2 DC	n/a	g/hphr
Trip Duration (a)	4078.00	s	ave NMHC DC	1.29232	ppm	BS CO DC	n/a	g/hphr
Trip Distance	15.63	mi	ave CH4 DC	0.30561	ppm	BS THC DC	n/a	g/hphr
Trip Distance (a)	15.63	mi	ave CO DC	-7.94270	ppm	BS NMHC DC	n/a	g/hphr
			ave CO2 DC	12.41324	%	BS CH4 DC	n/a	g/hphr
Trip Fuel Cons. (b)	n/a	kg	ave NOx DC	11.92945	ppm	BS NO DC (d)	n/a	g/hphr
Trip Fuel Cons. (ab)	n/a	kg	ave PM	n/a	mg/m3	BS NO2 DC	n/a	g/hphr
Trip Fuel Cons. EU (ac)	2.76	kg	ave Soot meas	n/a	mg/m3	BS NOx DC	n/a	g/hphr
Trip Fuel Cons. US (ac)	2.76	kg	ave Soot	n/a	mg/m3	BS Soot	n/a	g/hphr
			ave PN DC	n/a	#/cm3	BS Soot meas	n/a	g/hphr
Trip Fuel Cons. Volume (b)	n/a	gall				BS PM	n/a	g/hphr
Trip Fuel Cons. Volume (ab)	n/a	gall	tot THC DC	0.05045	g	BS PN DC	n/a	#/hpr
Trip Fuel Cons. Volume EU (ac)	0.97	gall	tot NMHC DC	0.03966	g			
Trip Fuel Cons. Volume US (ac)	0.97	gall	tot CH4 DC	0.01162	g	DS CO2 DC	537.27910	g/mi
			tot CO DC	0.22413	g	DS CO DC	0.01434	g/mi
Trip Fuel Economy (b)	n/a	mpg_US	tot CO2 DC	8395.76230	g	DS THC DC	0.00323	g/mi
Trip Fuel Economy (ab)	n/a	mpg_US	tot NO DC (d)	0.29537	g	DS NMHC DC	0.00254	g/mi
Trip Fuel Economy EU (ac)	16.03	mpg_US	tot NO2 DC	0.48952	g	DS CH4 DC	0.00074	g/mi
Trip Fuel Economy US (ac)	16.03	mpg_US	tot NOx DC	0.74332	g	DS NO DC (d)	0.01890	g/mi
			tot Soot	n/a	g	DS NO2 DC	0.03133	g/mi
Trip Av. Eng. Speed	1072.45	rpm	tot Soot meas	n/a	g	DS NOx DC	0.04757	g/mi
Trip Av. Torque	n/a	lbft	tot PM	n/a	g	DS Soot	n/a	g/mi
Trip Av. Power	n/a	hp	tot PN DC	n/a	#	DS Soot meas	n/a	g/mi
Trip Work	n/a	hphr				DS PM	n/a	g/mi
			PM measurement type	0.00000	-	DS PN DC	n/a	#/mi
Trip Exhaust Mass	43.81	kg	PM correction type	1.00000	alpha(HC)			
Trip Exhaust Mass EU (ac)	n/a	kg	tot Soot on PM filter (estim.)	n/a	mg	FS CO2 DC	n/a	g/kg
Trip Exhaust Mass US (ac)	n/a	kg	Soot --> PM simple scaling factor	1.00000	-	FS CO DC	n/a	g/kg
			Soot --> PM alpha scaling factor	0.00000	-	FS THC DC	n/a	g/kg
Trip Av. Amb. Temperature	93.37	deg_F				FS NMHC DC	n/a	g/kg
Trip Av. Humidity	10.73	%	Trip Av. Veh. Speed	13.79480	mi/hr	FS CH4 DC	n/a	g/kg
			Trip Velocity Zero	26.41000	%	FS NO DC (d)	n/a	g/kg
Fuel Type	Petrol (E10)		Trip Velocity Urban	90.06866	%	FS NO2 DC	n/a	g/kg
			Trip Velocity Rural	6.59637	%	FS NOx DC	n/a	g/kg
			Trip Velocity Motorway	3.33497	%	FS Soot	n/a	g/kg
						FS Soot meas	n/a	g/kg
						FS PM	n/a	g/kg
						FS PN DC	n/a	#/kg

(a) GAS PEMS measurement state only, (b) based on fuel rate input (ECU, Fuel Meter), (c) calculated from carbon balance
 (d) NO calculated using molecular weight of NO2

Concerto Version: 480 Build 215, Serial Number: 8468
 M.O.V.E Post-Processing: Rel_10_B192

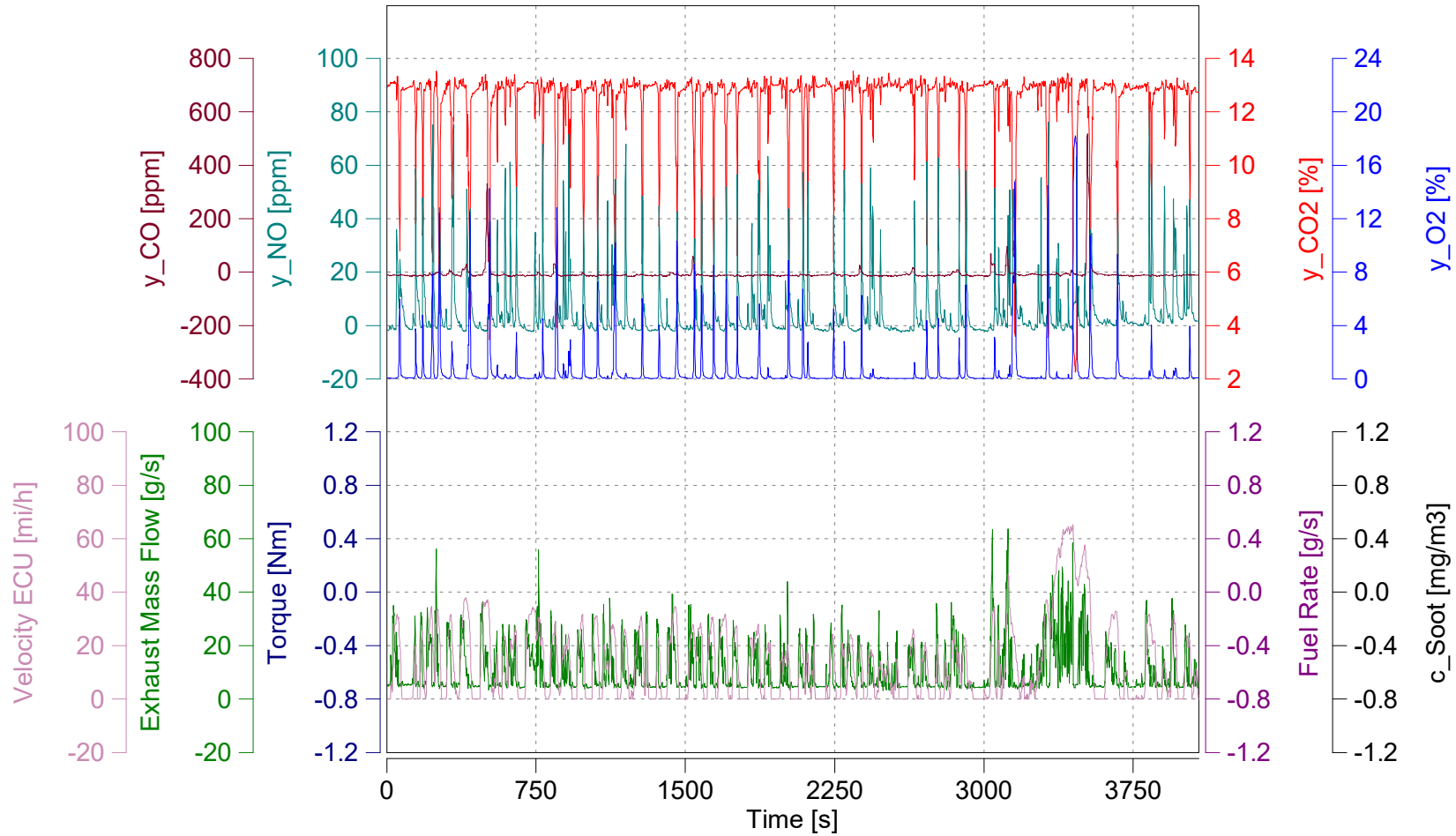
Vehicle: 2017 Audi S5 /
 Engine: Gasoline / 3.0L
 NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
 Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Time Alignment Check

Start Date: 10/10/2017

Start Time: 07:19:28.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

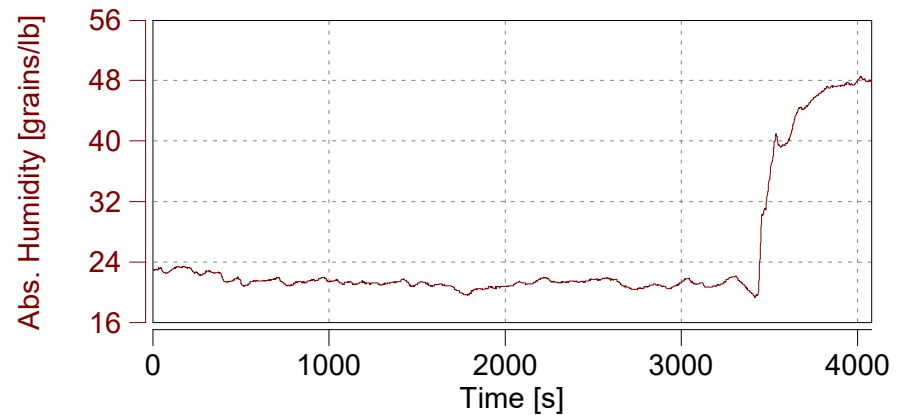
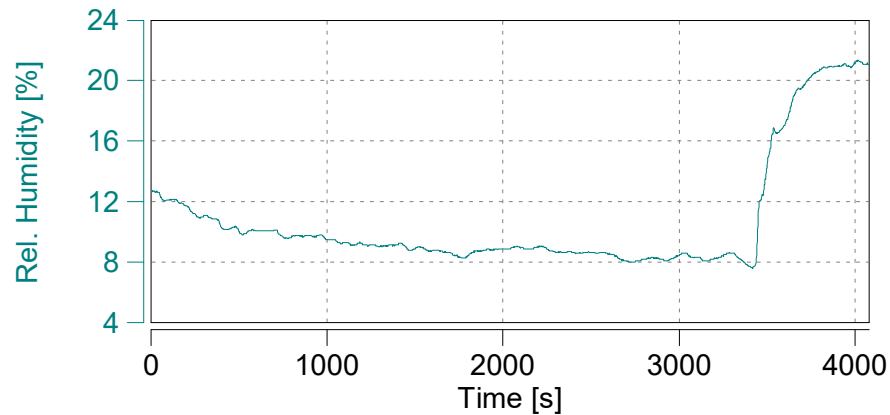
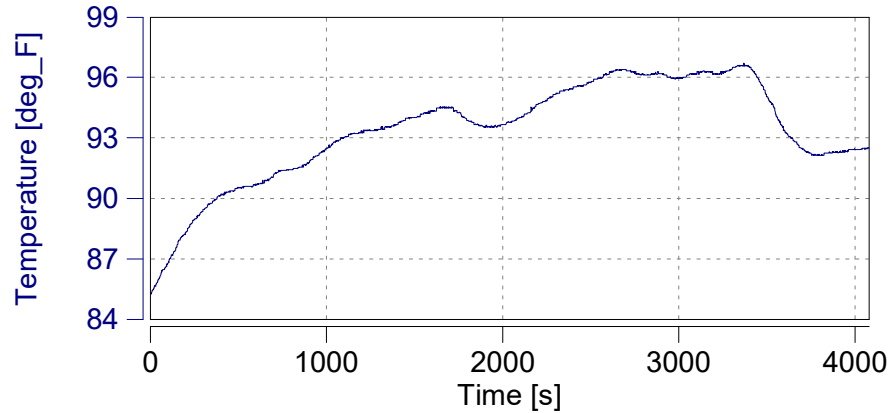
Vehicle: 2017 Audi S5 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Ambient Conditions

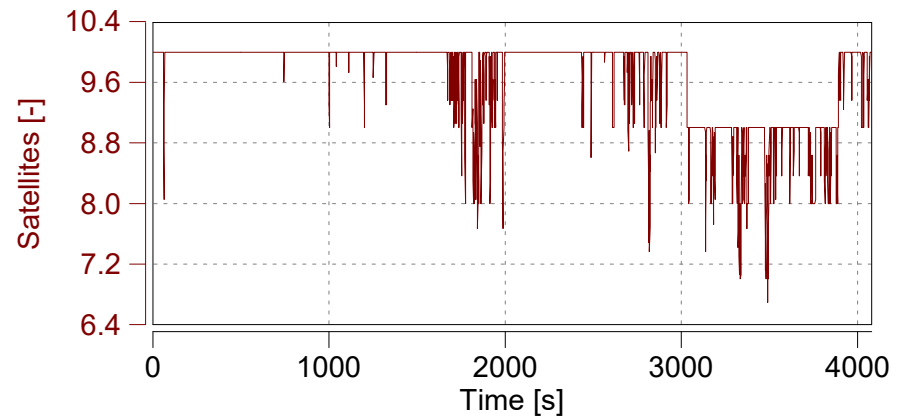
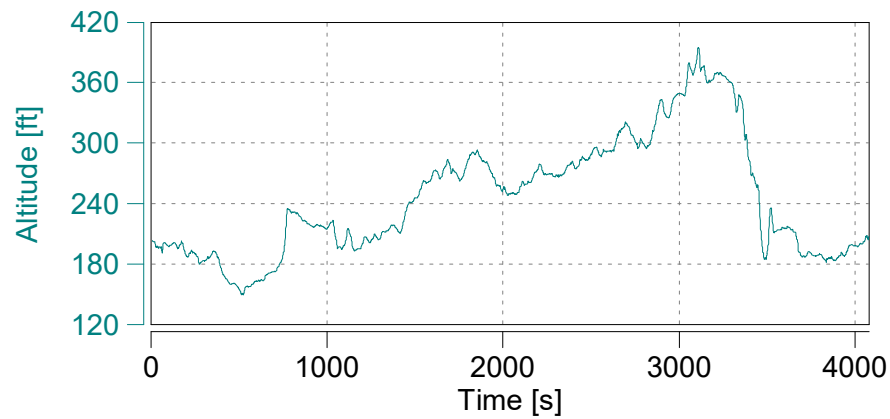
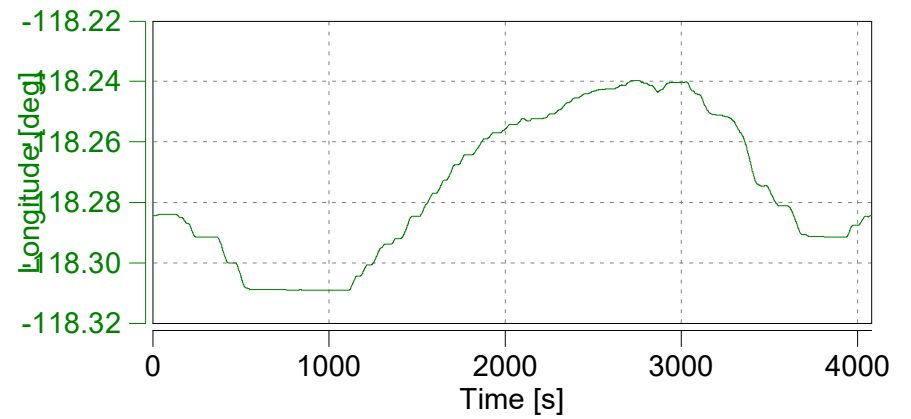
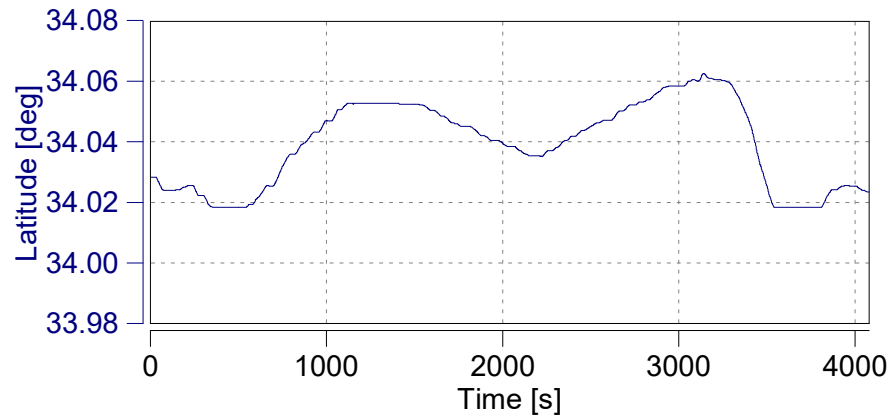
Start Date: 10/10/2017

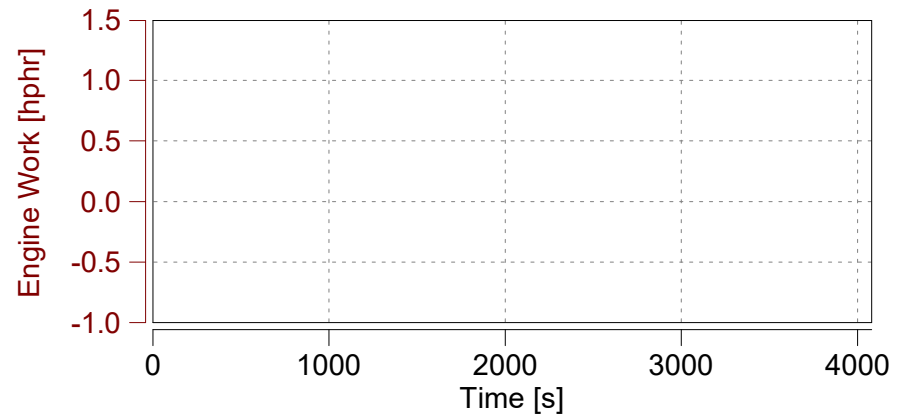
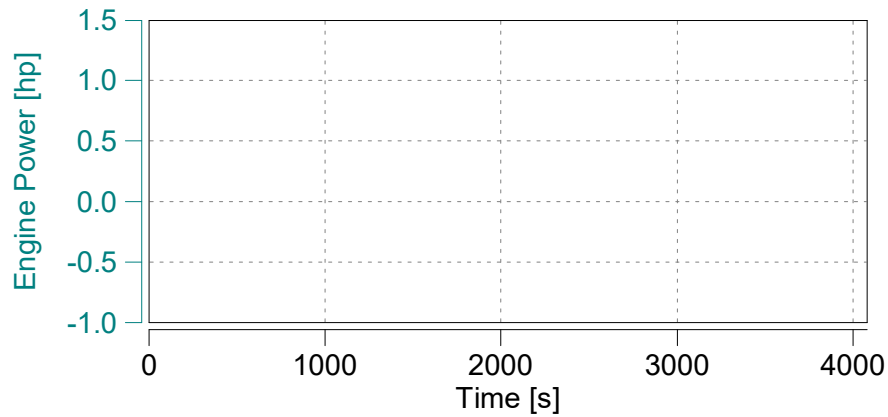
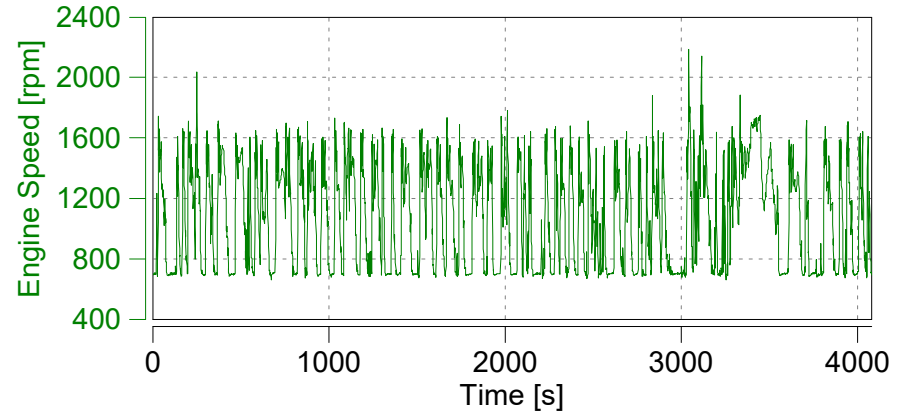
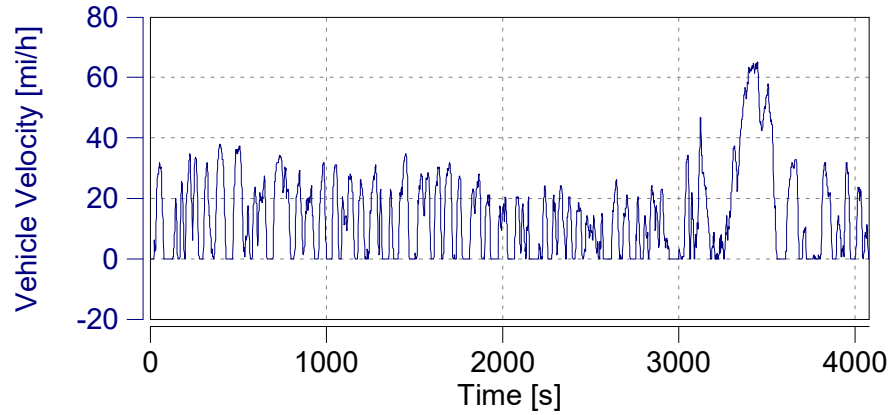
Start Time: 07:19:28.0

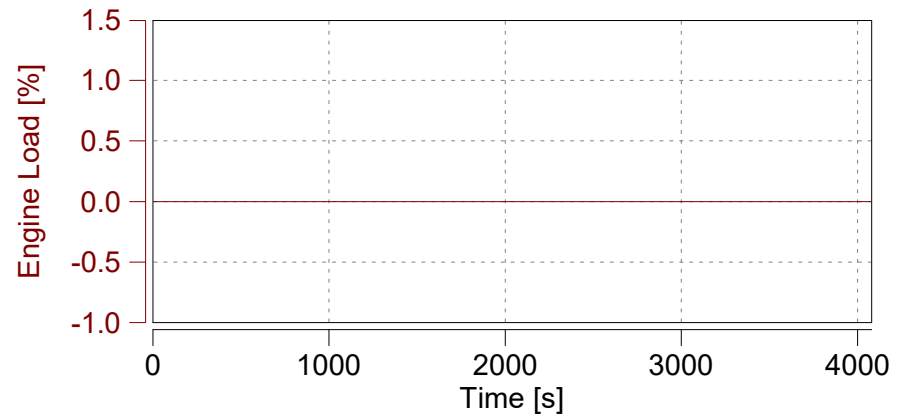
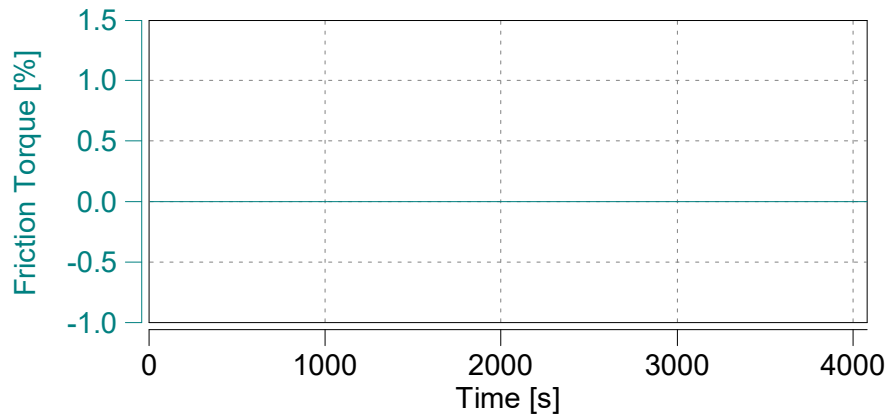
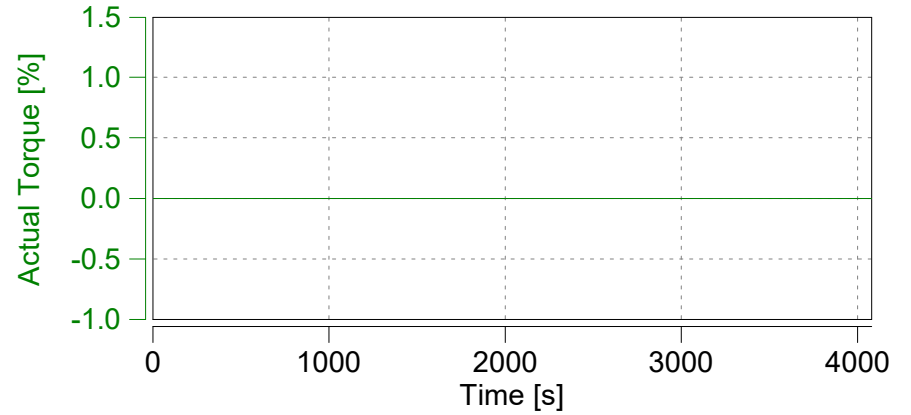
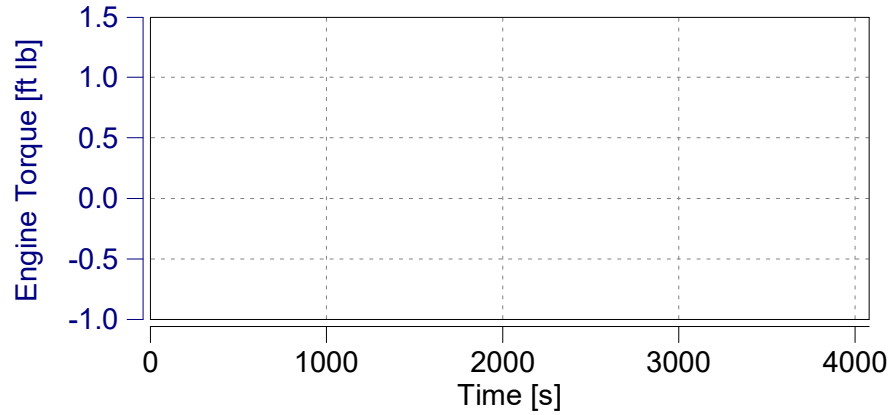


Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi S5 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90





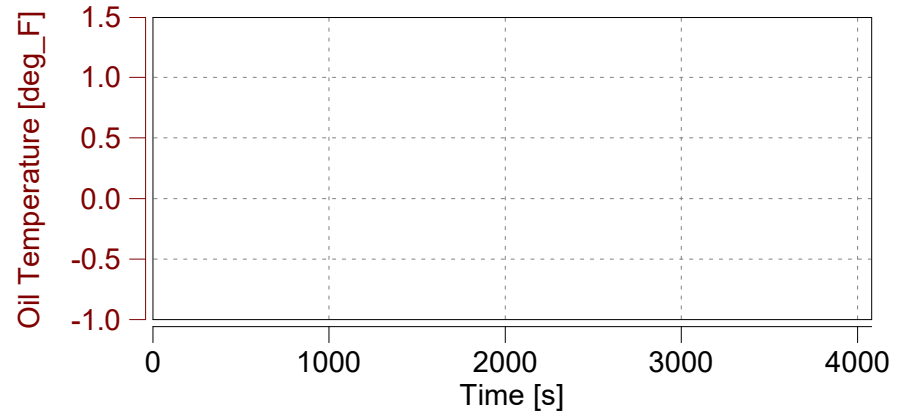
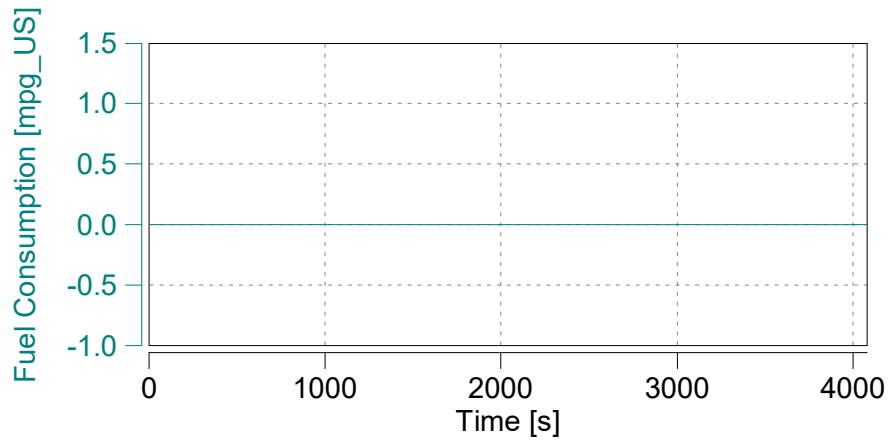
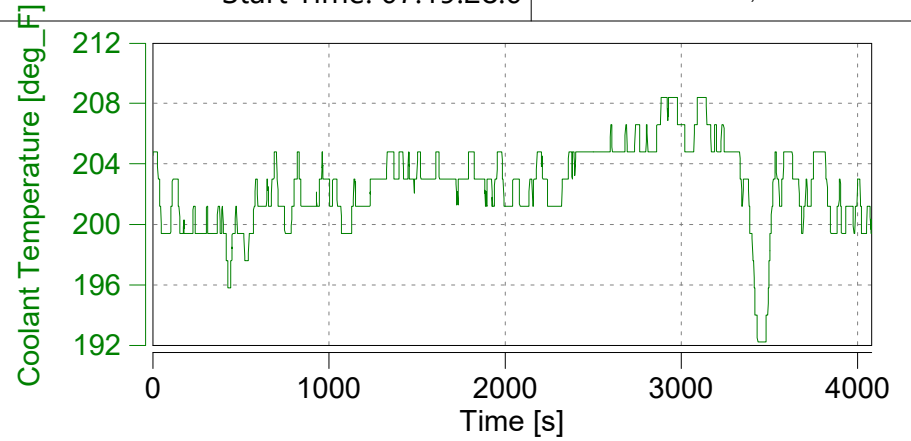
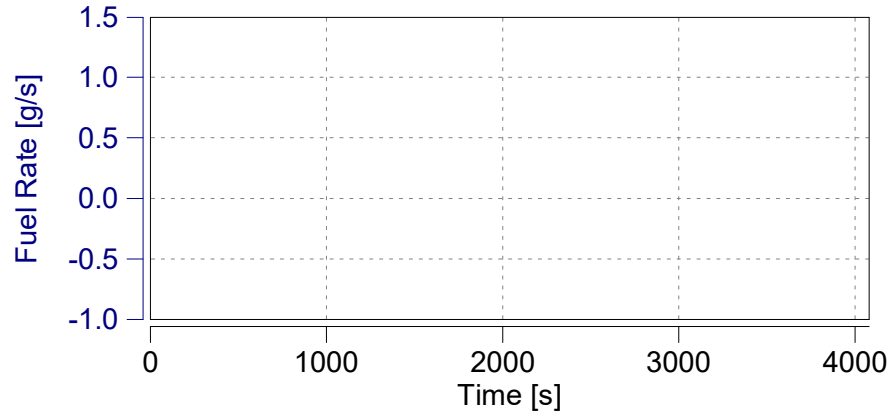


Case: City

Page: Engine (3)

Start Date: 10/10/2017

Start Time: 07:19:28.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

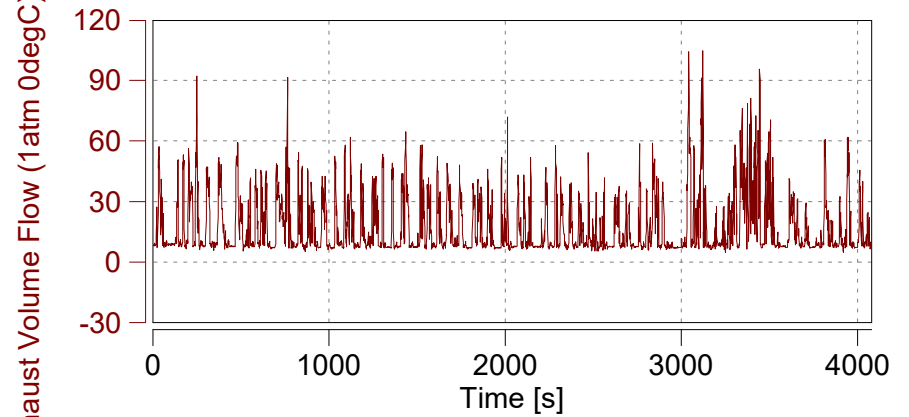
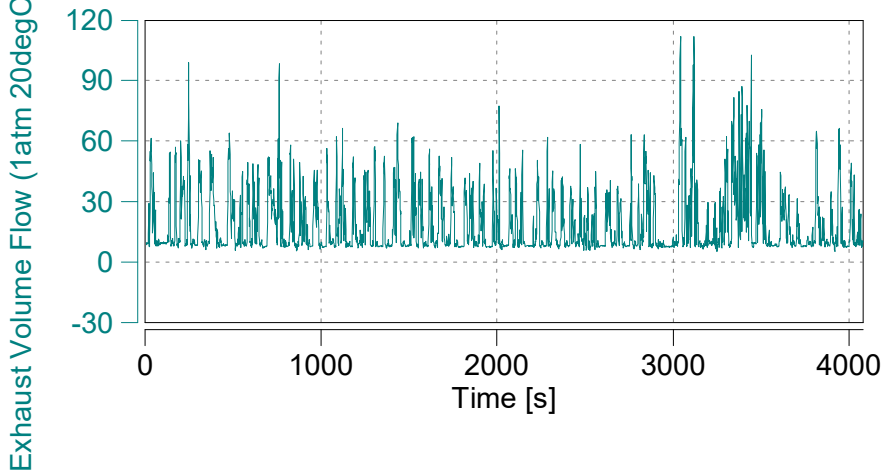
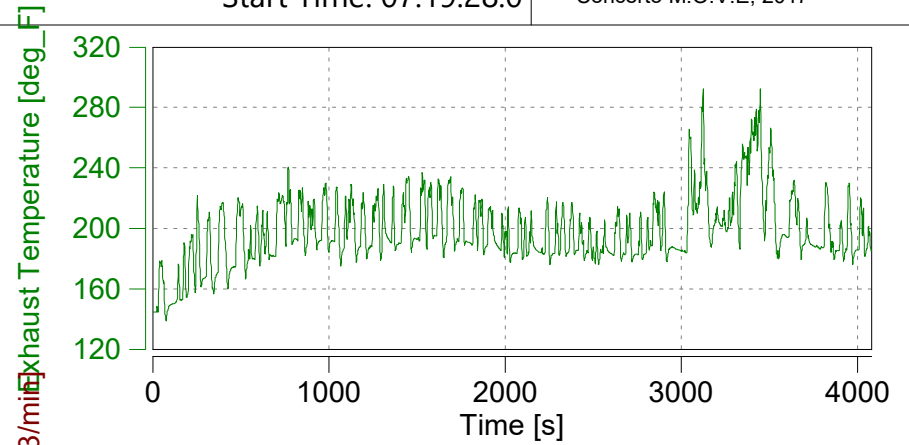
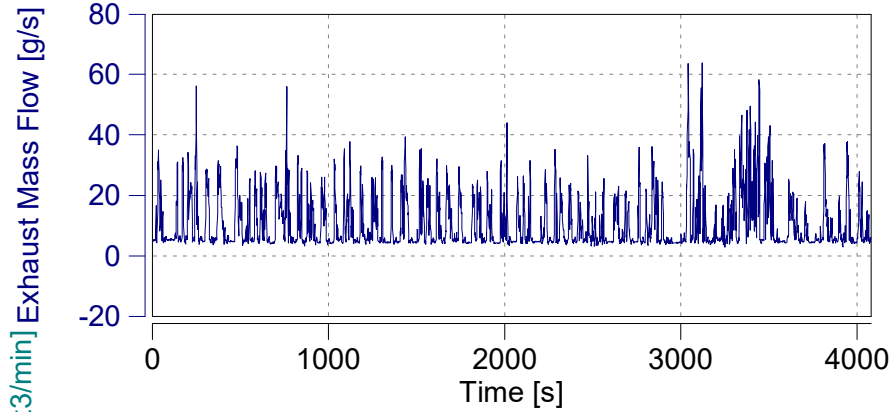
Vehicle: 2017 Audi S5 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Exhaust Flow (1)

Start Date: 10/10/2017

Start Time: 07:19:28.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

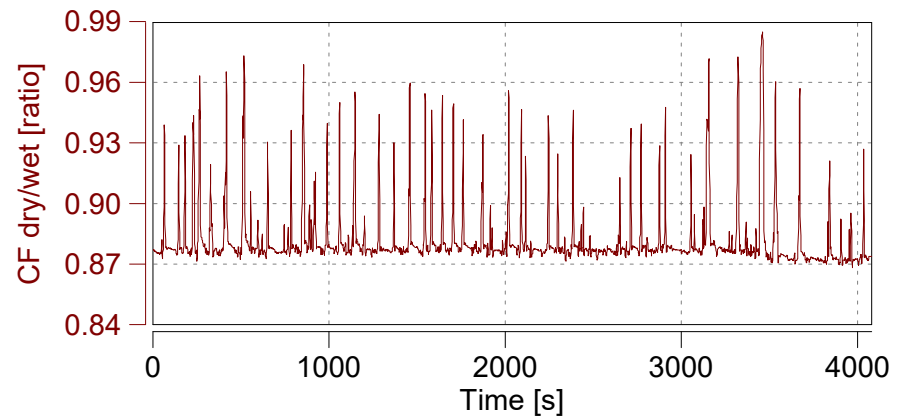
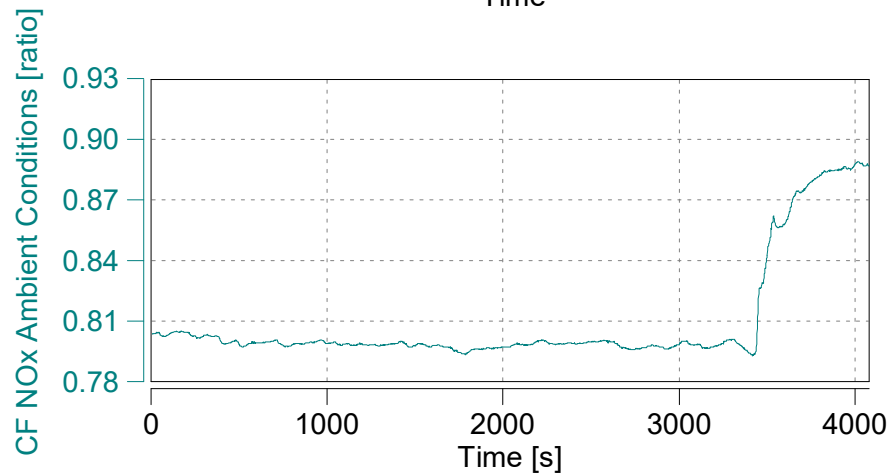
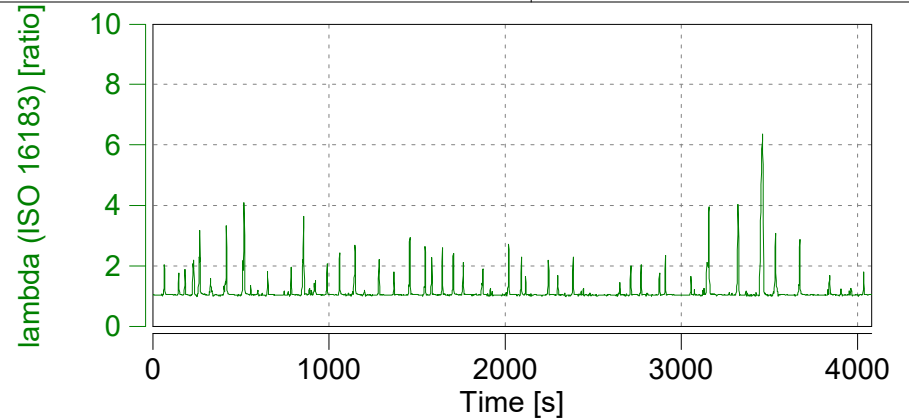
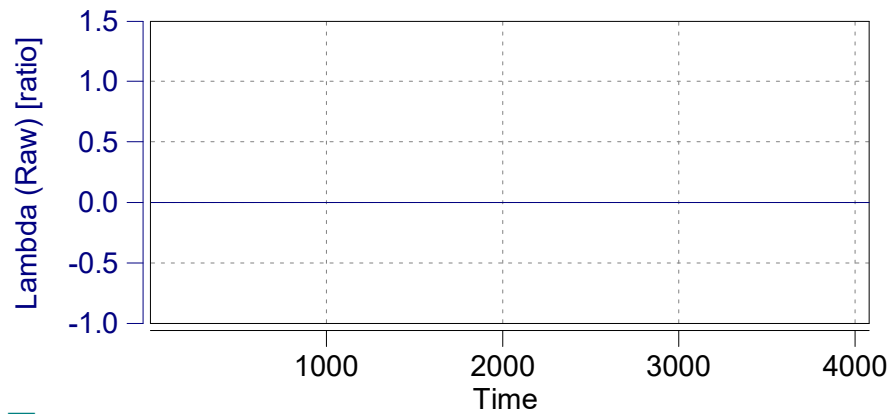
Vehicle: 2017 Audi S5 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Exhaust Flow (2)

Start Date: 10/10/2017

Start Time: 07:19:28.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

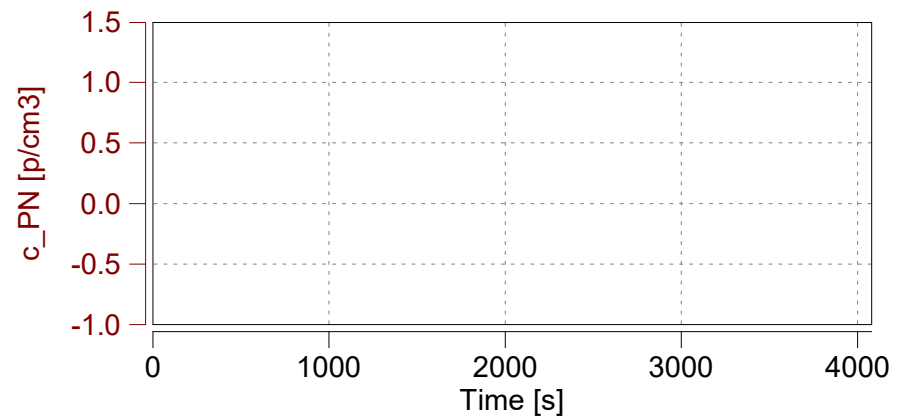
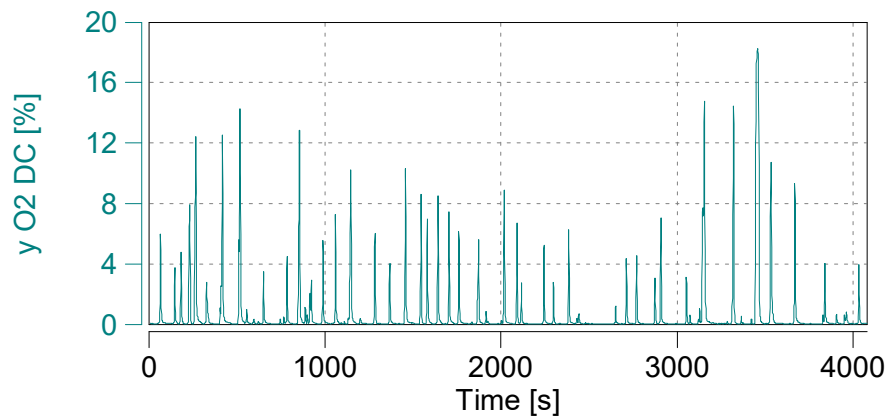
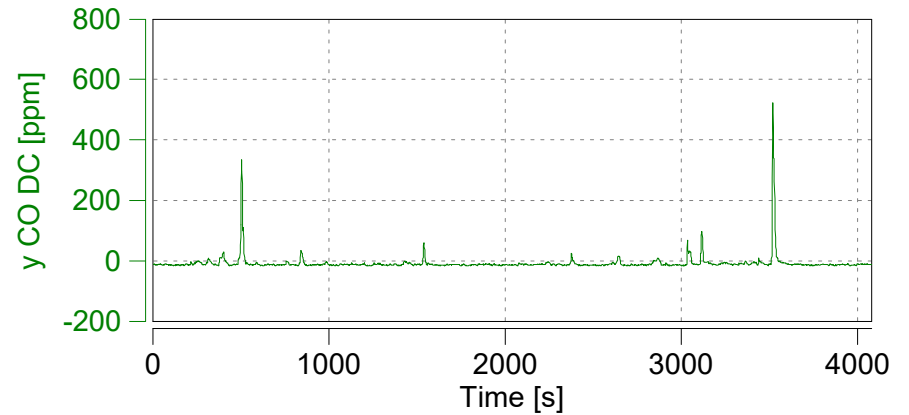
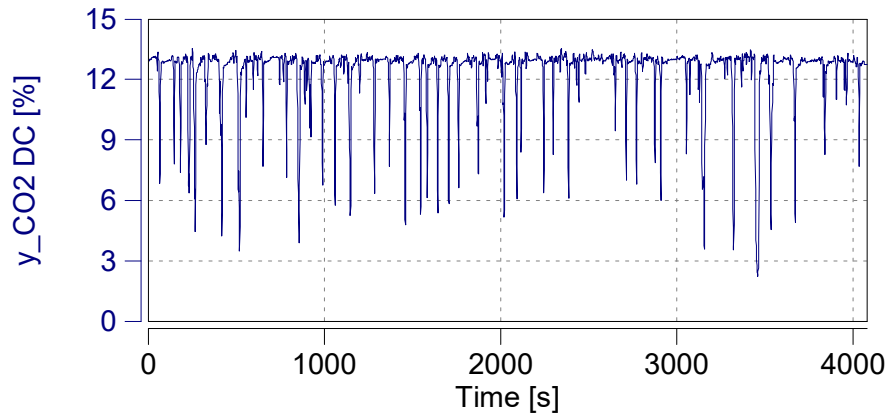
Vehicle: 2017 Audi S5 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Corrected Emissions (1)

Start Date: 10/10/2017

Start Time: 07:19:28.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

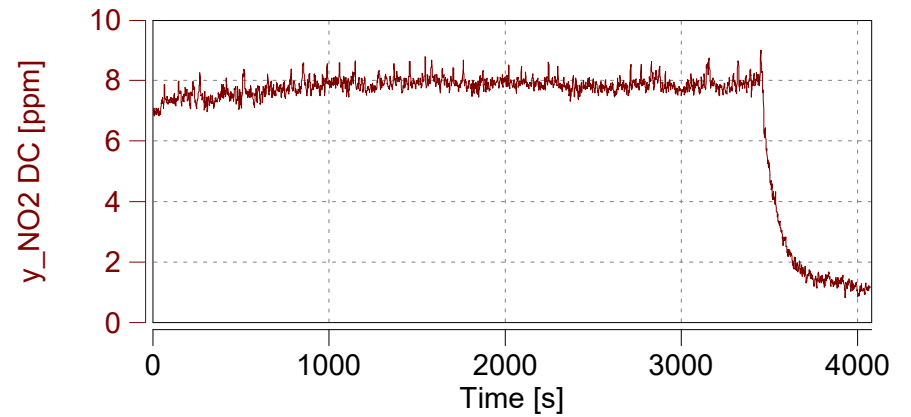
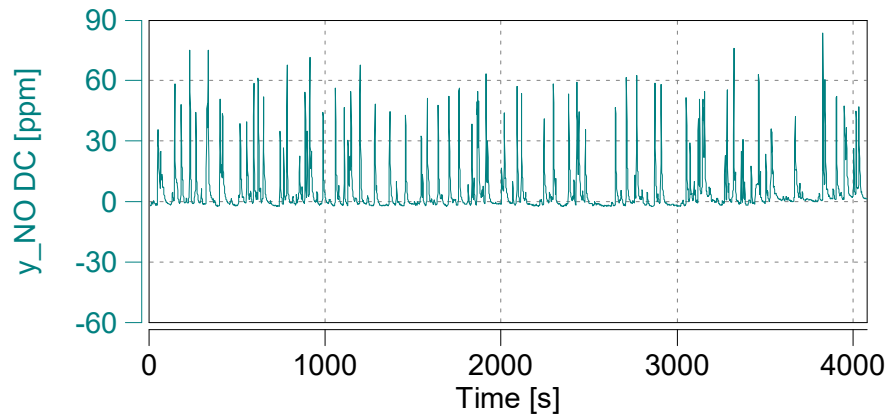
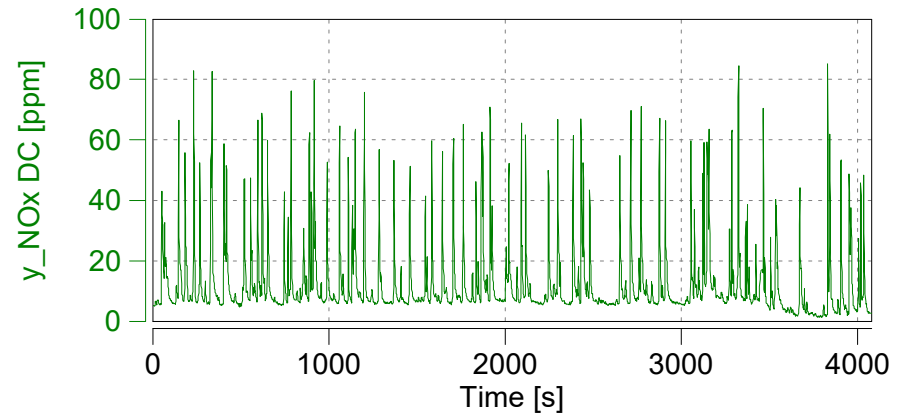
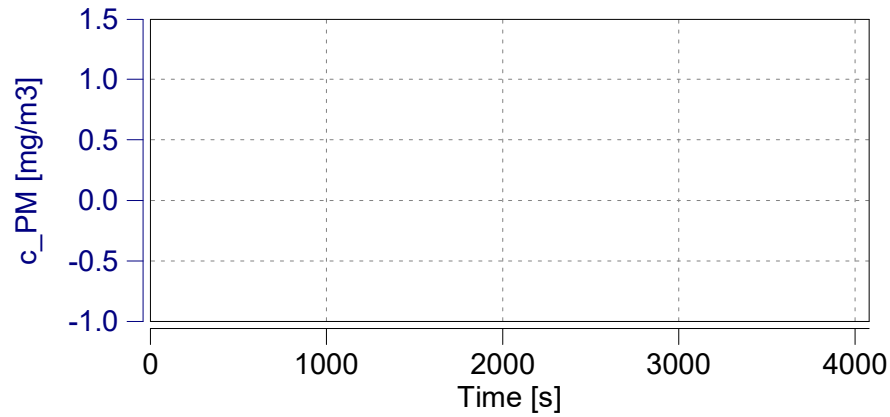
Vehicle: 2017 Audi S5 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Corrected Emissions (2)

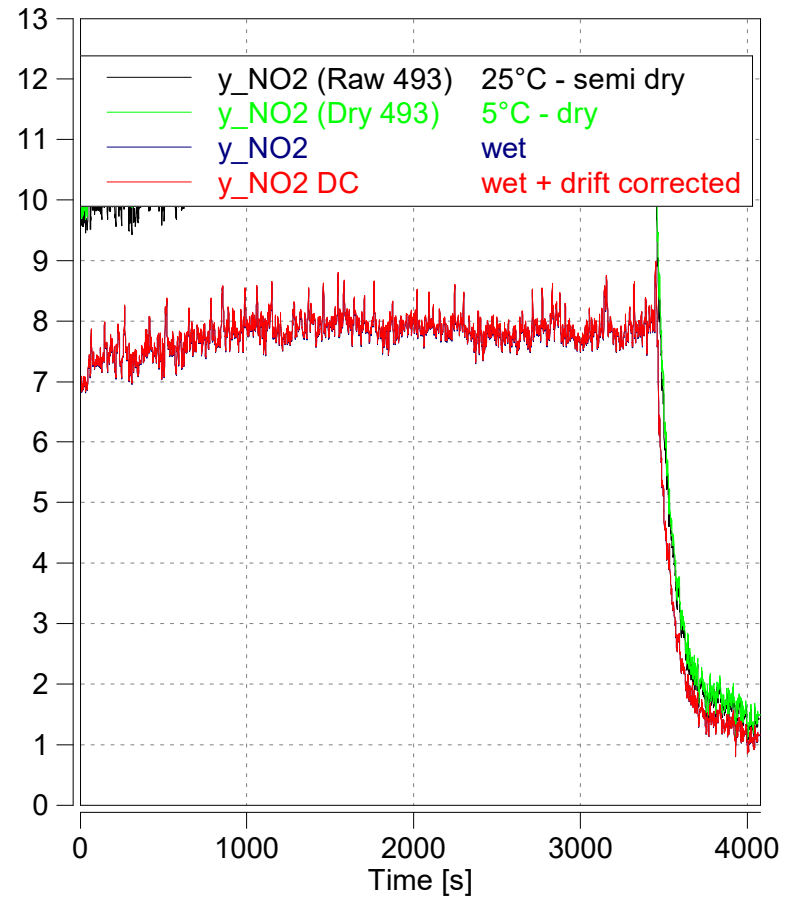
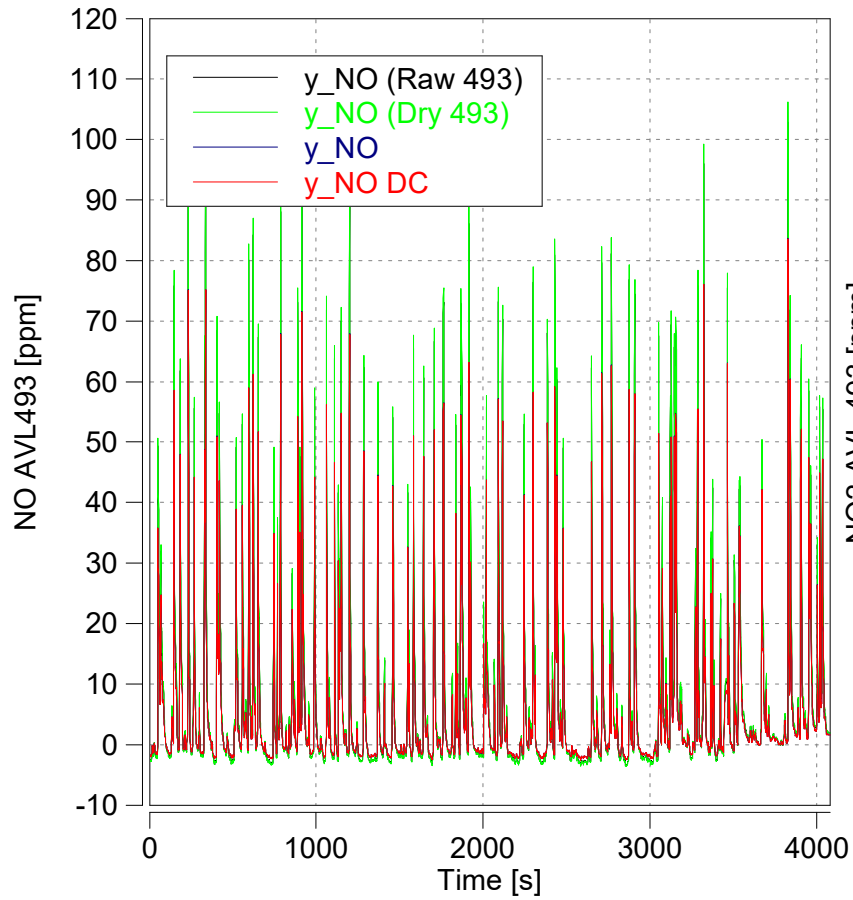
Start Date: 10/10/2017

Start Time: 07:19:28.0

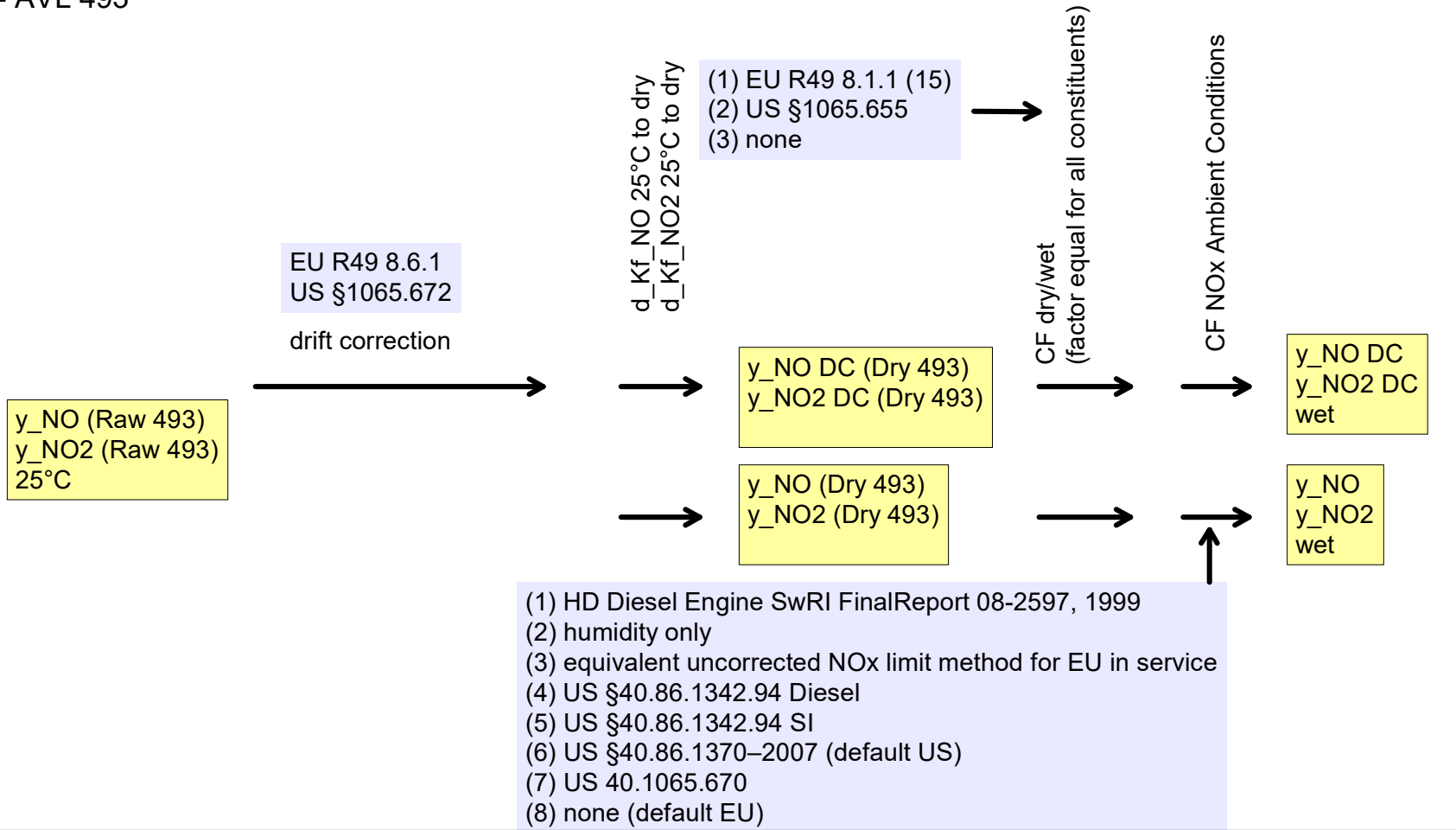


Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi S5 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90



NOx - AVL 493

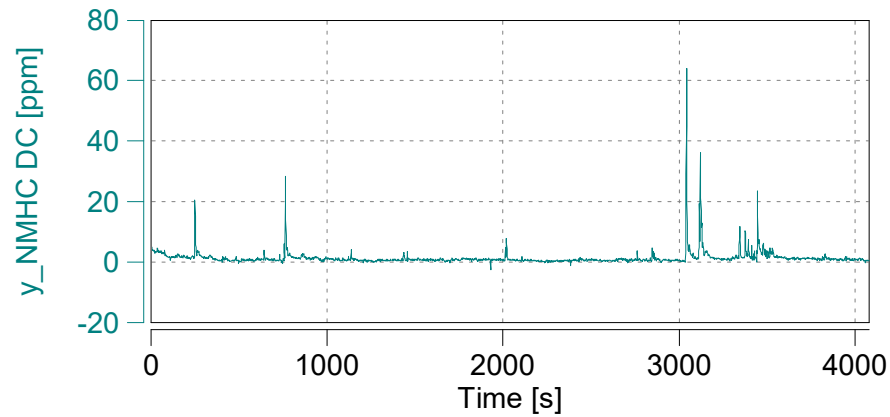
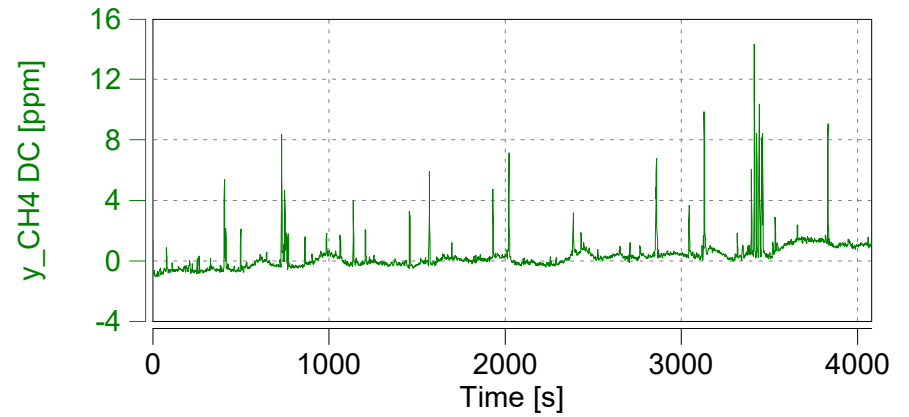
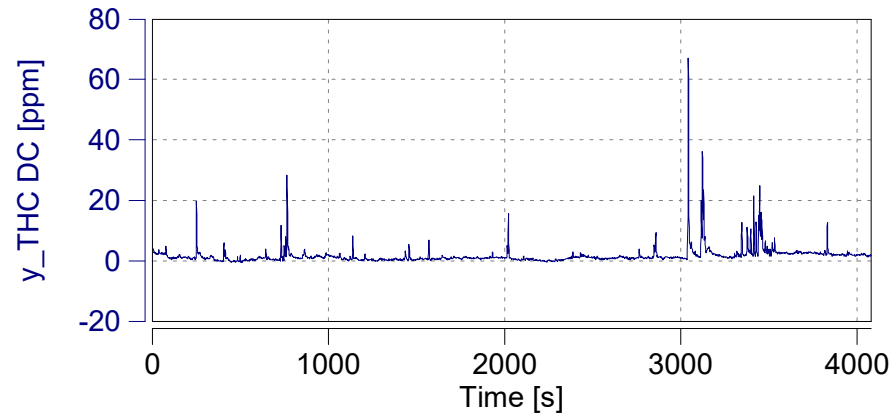


Case: City

Page: Corrected Emissions (5)

Start Date: 10/10/2017

Start Time: 07:19:28.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

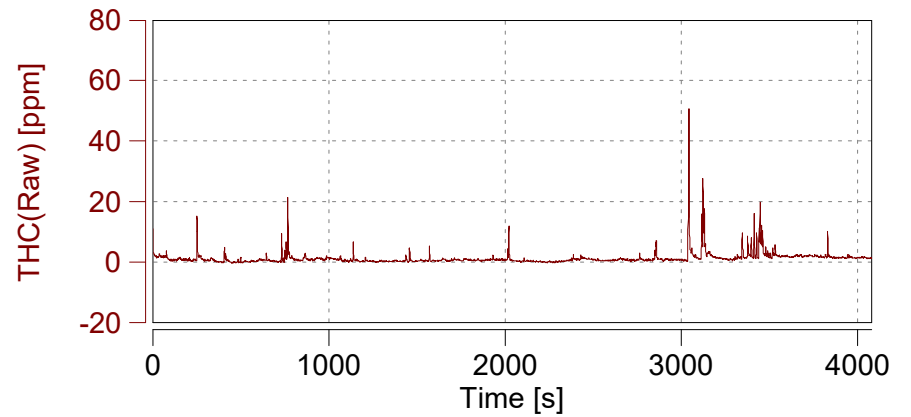
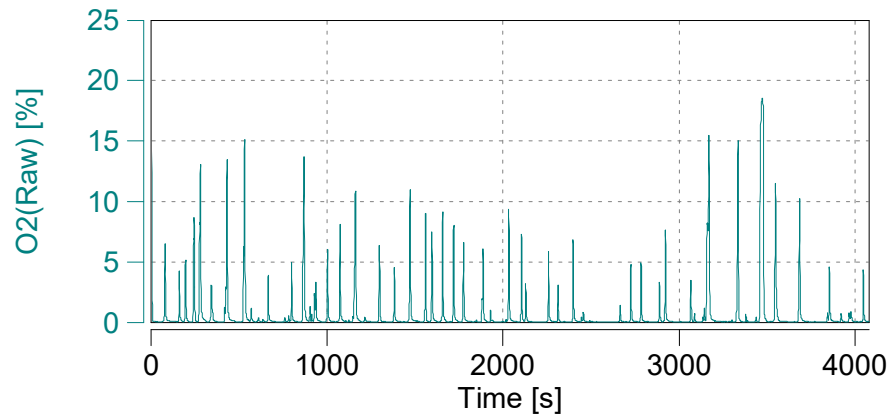
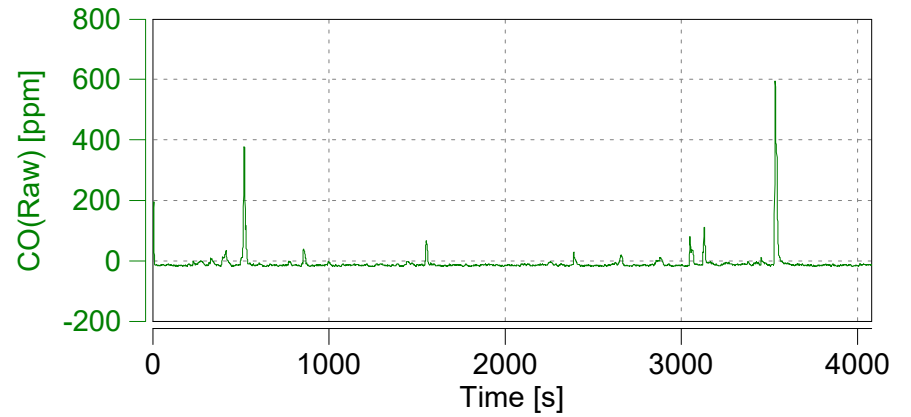
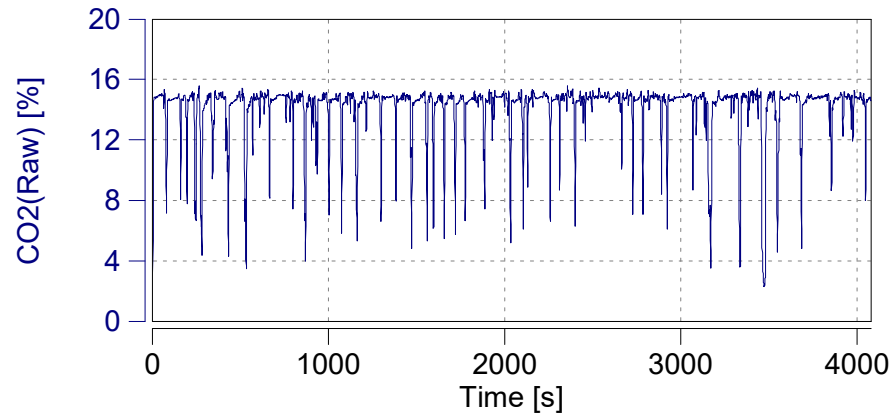
Vehicle: 2017 Audi S5 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Emissions Raw Data (1)

Start Date: 10/10/2017

Start Time: 07:19:28.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

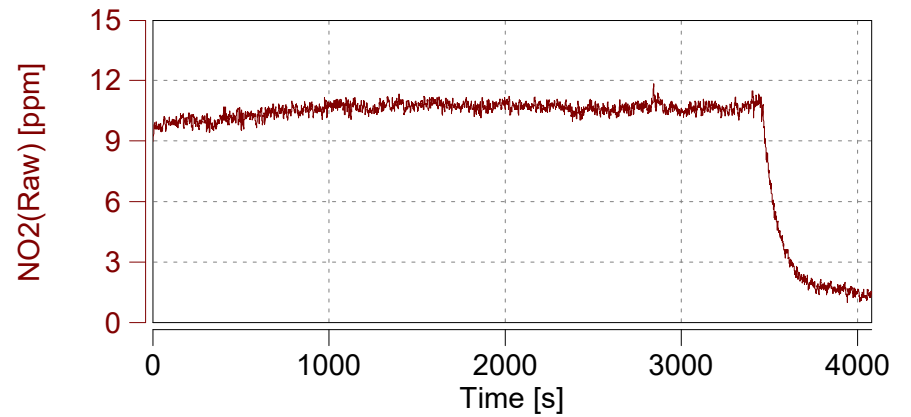
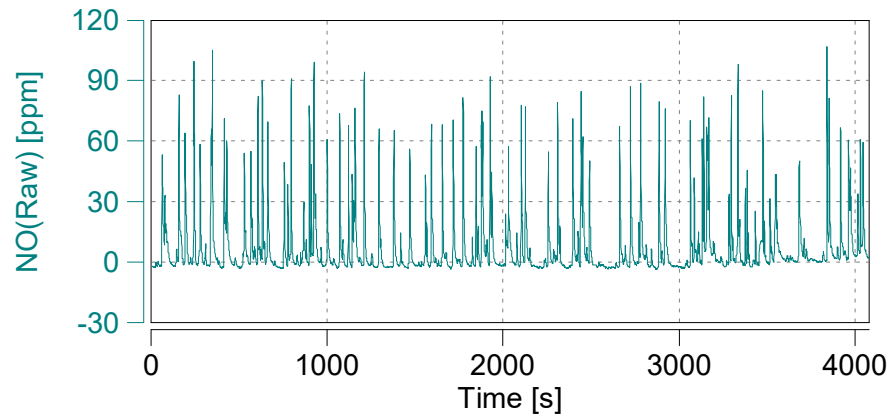
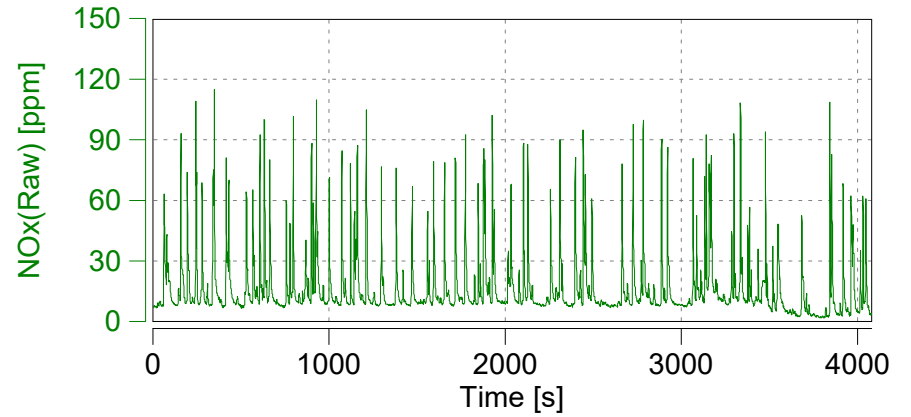
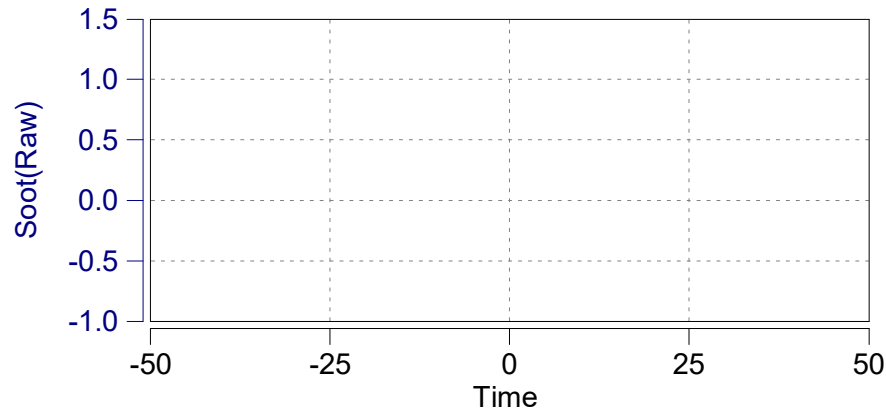
Vehicle: 2017 Audi S5 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Emissions Raw Data (2)

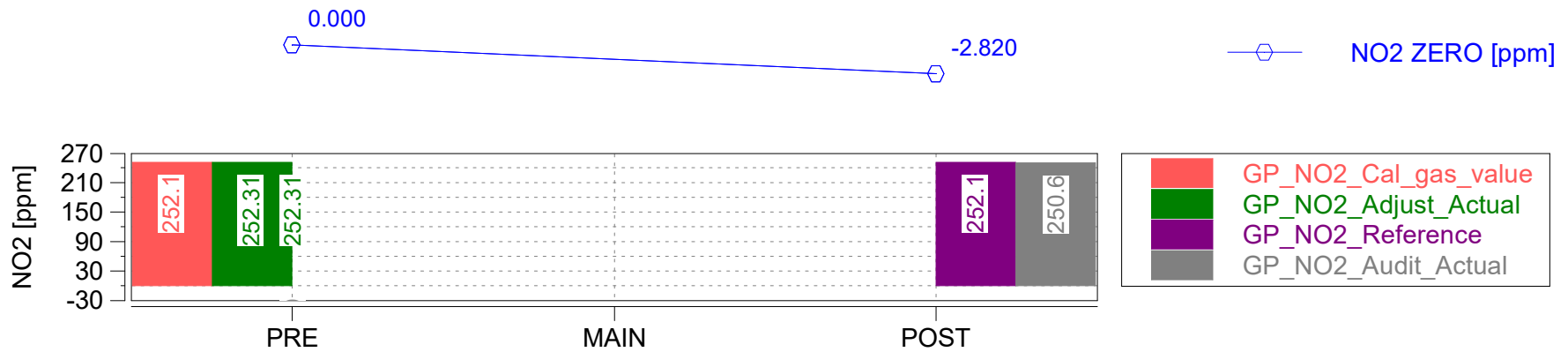
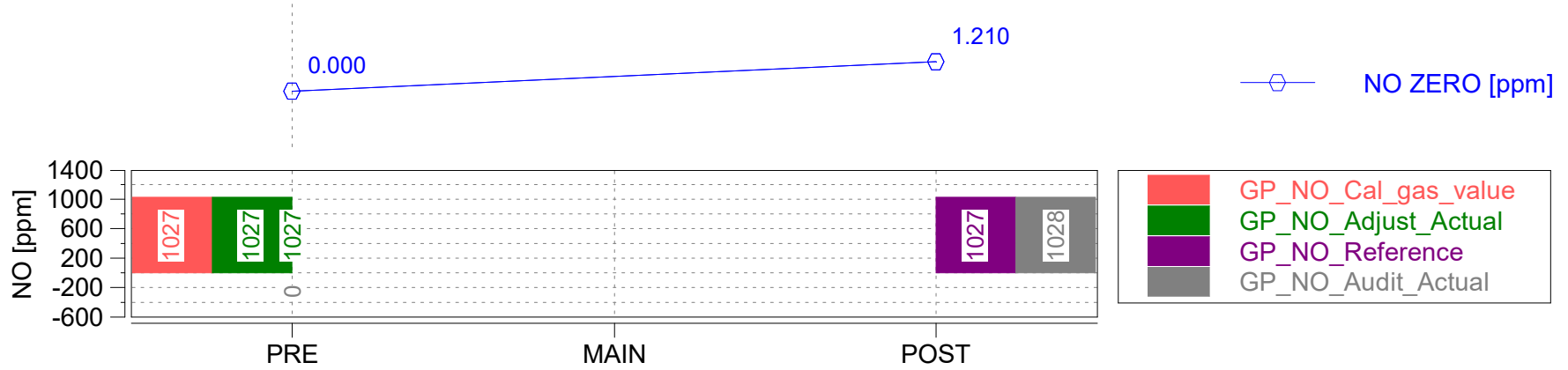
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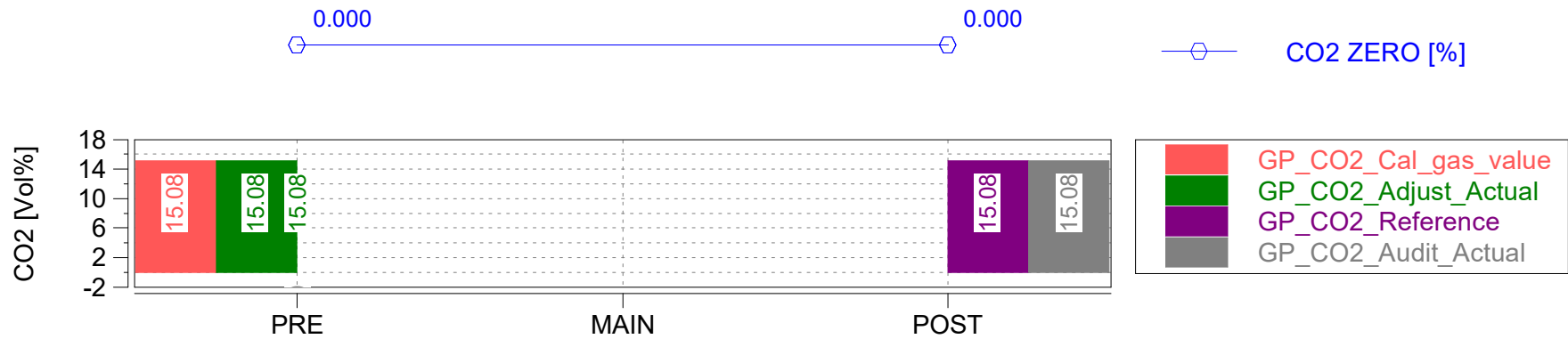
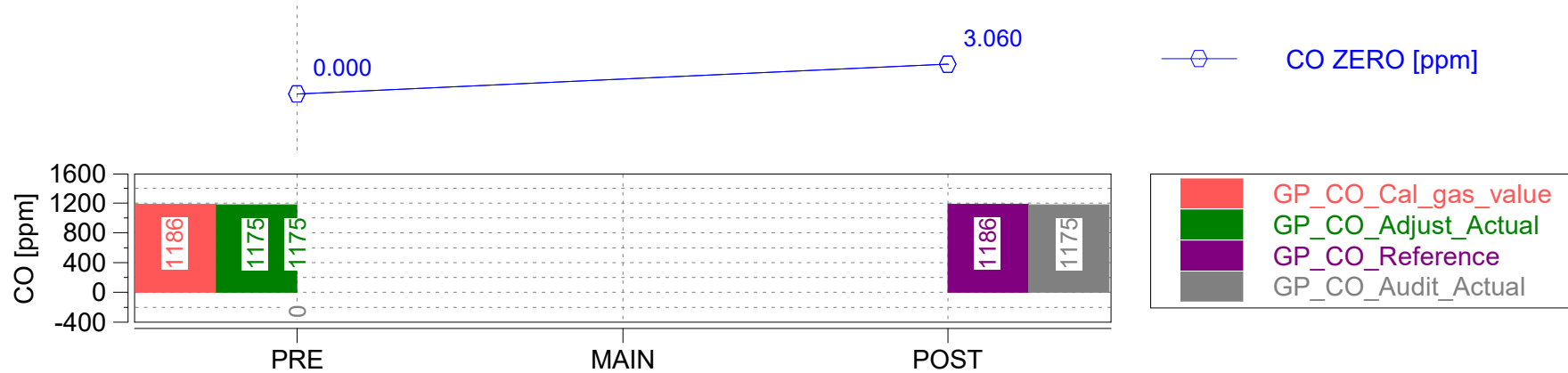
Start Time: 07:19:28.0

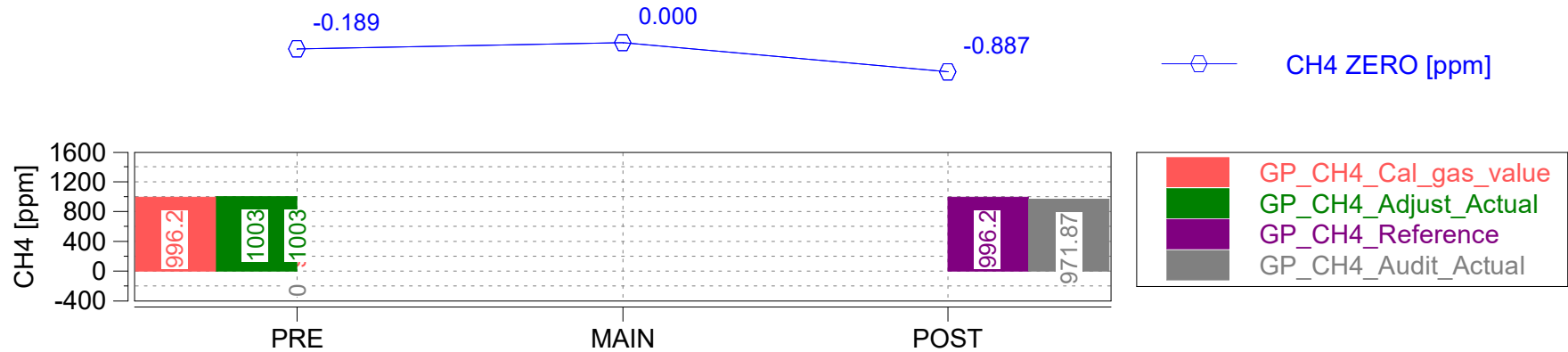
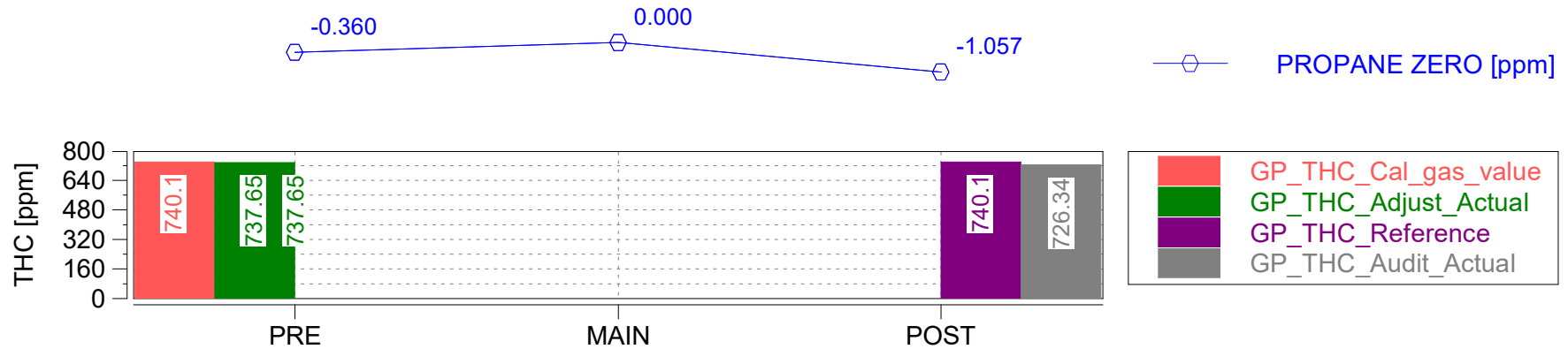


Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi S5 /
Engine: Gasoline / 3.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90







#	Text	Value	Unit
-	----	----	----
1.0	Test Start: Date		-
2.0	Test Start: Time		-
3.0	Ambient Temperature	IFILE1:TM'Temperature	deg C
4.0	Ambient Temperature TS	0.00000	s
5.0	Ambient Pressure	IFILE1:TM'Pressure	kPa
6.0	Ambient Pressure TS	0.00000	s
7.0	Humidity Type	1.00000	-
8.0	Amb. Rel. Humidity	IFILE1:TM'Humidity	%
9.0	Amb. Rel. Humidity	0.00000	s
10.0	GPS Latitude		deg
11.0	GPS Latitude TS	0.00000	s
12.0	GPS Longitude		deg
13.0	GPS Longitude TS	0.00000	s
14.0	Altitude		m
15.0	Altitude TS	0.00000	s
16.0	GPS Quality		-
17.0	GPS Quality TS	0.00000	s
18.0	GroundSpeed		km/h
19.0	GroundSpeed TS	0.00000	s
20.0	Altitude from topographical map		m
21.0	Altitude TS of topographical map		s
22.0	TRIP_AMBIENT_GPS_AVL	YES	-
23.0	CALC_GPS_GROUNDSPEED	NO	-
24.0	EXHAUST_FLOW_AVL	NO	-
25.0	EXHAUST_FLOW_AVL_EFM	YES	-
26.0	Exhaust Flow Type	2.00000	-
27.0	Mass Flow	IFILE1:TM'PitotEFM_ExhaustG	various
28.0	Mass Flow TS	1.30000	s
29.0	Exhaust Pressure		kPa
30.0	Exhaust Pressure TS	1.30000	s

#	Text	Value	Unit
-	----	----	----
31.0	Exhaust Delta Pressure		kPa
32.0	Exhaust Pressure Delta TS	1.30000	s
33.0	Exhaust Temperature	IFILE1:TM'PitotEFM_ExhaustG	degC
34.0	Exhaust Temperature TS	1.30000	s
35.0	Lambda	N/A	-
36.0	Lambda TS		s
37.0	CO2_DIL		%
38.0	CO2_DIL TS		s
39.0	CVS Volume Flow		m3/min
40.0	TimeShift_CVS_VOL_FLOW		s
41.0	IN_CVS_PRESSURE		kPa
42.0	TimeShift_CVS_PRESSURE		s
43.0	IN_CVS_TEMP		degC
44.0	TimeShift_CVS_TEMP		s
45.0	Dry to Wet Conversion CO2	YES	-
46.0	Dry to Wet Conversion O2	YES	-
47.0	Dry to Wet Conversion NO	NO	-
48.0	Dry to Wet Conversion NO2	NO	-
49.0	Dry to Wet Conversion THC	NO	-
50.0	Dry to Wet Conversion CH4	NO	-
51.0	Dry to Wet Conversion O2	NO	-
52.0	CO2	IFILE1:TM'GPiS_CO2	%
53.0	CO2 TS	-14.30000	s
54.0	OS	IFILE1:TM'GPiS_O2	%
55.0	O2 TS	-14.80000	s
56.0	CO	IFILE1:TM'GPiS_CO	ppm
57.0	CO TS	-14.30000	s
58.0	NO	IFILE1:TM'GPiS_NO	ppm
59.0	NO TS	-12.50000	s
60.0	NO2	IFILE1:TM'GPiS_NO2	ppm

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#	Text	Value	Unit
-	----	----	----
61.0	NO2 TS	-12.50000	s
62.0	THC	IFILE1:TM'FIDiS_THC_C1	ppm
63.0	THC TS	0.00000	s
64.0	CH4	IFILE1:TM'FIDiS_CH4_C1	ppm
65.0	CH4 TS	0.00000	s
66.0	GAS_PEMS_Ethane_Efficiency	IFILE1:MOVE_AVL4925'GP_Et -	
67.0	GAS_PEMS_Methane_Efficiency	IFILE1:MOVE_AVL4925'GP_M -	
68.0	GAS_PEMS_Methane_Response	IFILE1:MOVE_AVL4925'GP_M -	
69.0	Zero Signal	IFILE1:TM'GPiS_STATE	0/1
70.0	Zero Signal TS	-12.50000	s
71.0	Zero Signal_FIDiS	IFILE1:TM'FIDiS_STATE	0/1
72.0	Zero Signal_FIDiS TS		s
73.0	Species Input Type	4.00000	-
74.0	GASPEMS=AVL493	NO	-
75.0	GASPEMS=AVL493_iX	NO	-
76.0	GASPEMS=AVL492	YES	-
77.0	GASPEMS=AVL4925	YES	-
78.0	PM: Type	4.00000	1=GFB+HC, 2=GFB, 3='PM=S
79.0	Filter ID from IFile	NO	-
80.0	Lab ID from IFile	NO	-
81.0	PM Filter: ID	N/A	ID
82.0	PM Filter: Lab	N/A	Name/ID
83.0	PM Filter: Weight before Test	N/A	mg
84.0	PM Filter: Weight after Test	N/A	mg
85.0	PM (HC Corr): Max. Exhaust Flow	N/A	scfm
86.0	Soot		mg/m3
87.0	Soot TS	-5.00000	s
88.0	Soot Sensor		mg/m3
89.0	Soot Sensor TS		s
90.0	PM Filter: Filter Flow Rate		l/min

#	Text	Value	Unit
-	----	----	----
91.0	PM Filter: Filter Flow Rate TS	-5.00000	s
92.0	PM Filter: Filter Dilution Ratio		-
93.0	PM Filter: Filter Dilution Ratio TS	-5.00000	s
94.0	PM Filter: Filter Trigger		-
95.0	PM Filter: Filter Trigger TS	-5.00000	s
96.0	PMPEMS=AVL494	YES	-
97.0	PMPEMS_AVL494_PROP_DIL	NO	-
98.0	PM dilution ratio min		-
99.0	PM_MaxExhaustFlowRate		-
100.0	PM_ExhaustFlow_Thresh		-
101.0	PM_total_flow_val		-
102.0	PM_total_flow_val_TS		-
103.0	PM_exh_mass_flow		-
104.0	PM_exh_mass_flow_TS		-
105.0	PN		#/cm3
106.0	TimeShift_PN		s
107.0	PN_STATE		-
108.0	PN TS STATE		s
109.0	PNPEMS_AVL496	NO	-
110.0	PN_CorrFactor	1.00000	
111.0	Time Alignment	1.00000	-
112.0	Time Alignment Dataset 1	N/A	0/1
113.0	Time Alignment Dataset 2	N/A	0/1
114.0	Time Alignment Thresh 1	N/A	-
115.0	Time Alignment Thresh 2	N/A	-
116.0			
117.0			
118.0			
119.0			
120.0			

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#	Text	Value	Unit
-	----	----	----
121.0			
122.0	Trigger		0/1
123.0	Trigger TS		s
124.0	FTIR_NAME_1		-
125.0	FTIR_MW_1		-
126.0	FTIR_CHANNEL_1		-
127.0	FTIR_CHANNEL_TS_1		-
128.0	FTIR_CHANNEL_DRY_1	NO	-
129.0	FTIR_NAME_2		-
130.0	FTIR_MW_2		-
131.0	FTIR_CHANNEL_2		-
132.0	FTIR_CHANNEL_TS_2		-
133.0	FTIR_CHANNEL_DRY_2	NO	-
134.0	FTIR_NAME_3		-
135.0	FTIR_MW_3		-
136.0	FTIR_CHANNEL_3		-
137.0	FTIR_CHANNEL_TS_3		-
138.0	FTIR_CHANNEL_DRY_3	NO	-
139.0	FTIR_NAME_4		-
140.0	FTIR_MW_4		-
141.0	FTIR_CHANNEL_4		-
142.0	FTIR_CHANNEL_TS_4		-
143.0	FTIR_CHANNEL_DRY_4	NO	-
144.0	FTIR_NAME_5		-
145.0	FTIR_MW_5		-
146.0	FTIR_CHANNEL_5		-
147.0	FTIR_CHANNEL_TS_5		-
148.0	FTIR_CHANNEL_DRY_5	NO	-
149.0	FTIR_NAME_6		-
150.0	FTIR_MW_6		-

#	Text	Value	Unit
-	----	----	----
151.0	FTIR_CHANNEL_6		-
152.0	FTIR_CHANNEL_TS_6		-
153.0	FTIR_CHANNEL_DRY_6	NO	-
154.0	FTIR_NAME_7		-
155.0	FTIR_MW_7		-
156.0	FTIR_CHANNEL_7		-
157.0	FTIR_CHANNEL_TS_7		-
158.0	FTIR_CHANNEL_DRY_7	NO	-
159.0	FTIR_NAME_8		-
160.0	FTIR_MW_8		-
161.0	FTIR_CHANNEL_8		-
162.0	FTIR_CHANNEL_TS_8		-
163.0	FTIR_CHANNEL_DRY_8	NO	-
164.0	FTIR_NAME_9		-
165.0	FTIR_MW_9		-
166.0	FTIR_CHANNEL_9		-
167.0	FTIR_CHANNEL_TS_9		-
168.0	FTIR_CHANNEL_DRY_9	NO	-
169.0	FTIR_NAME_10		-
170.0	FTIR_MW_10		-
171.0	FTIR_CHANNEL_10		-
172.0	FTIR_CHANNEL_TS_10		-
173.0	FTIR_CHANNEL_DRY_10	NO	-
174.0	FTIR_NAME_11		-
175.0	FTIR_MW_11		-
176.0	FTIR_CHANNEL_11		-
177.0	FTIR_CHANNEL_TS_11		-
178.0	FTIR_CHANNEL_DRY_11	NO	-
179.0	FTIR_NAME_12		-
180.0	FTIR_MW_12		-

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#	Text	Value	Unit
-	----	----	----
181.0	FTIR_CHANNEL_12	-	-
182.0	FTIR_CHANNEL_TS_12	-	-
183.0	FTIR_CHANNEL_DRY_12	NO	-
184.0	FTIR_NAME_13	-	-
185.0	FTIR_MW_13	-	-
186.0	FTIR_CHANNEL_13	-	-
187.0	FTIR_CHANNEL_TS_13	-	-
188.0	FTIR_CHANNEL_DRY_13	NO	-
189.0	FTIR_NAME_14	-	-
190.0	FTIR_MW_14	-	-
191.0	FTIR_CHANNEL_14	-	-
192.0	FTIR_CHANNEL_TS_14	-	-
193.0	FTIR_CHANNEL_DRY_14	NO	-
194.0	FTIR_NAME_15	-	-
195.0	FTIR_MW_15	-	-
196.0	FTIR_CHANNEL_15	-	-
197.0	FTIR_CHANNEL_TS_15	-	-
198.0	FTIR_CHANNEL_DRY_15	NO	-
199.0	FTIR_NAME_16	-	-
200.0	FTIR_MW_16	-	-
201.0	Vehicle Type	2017 Audi S5	-
202.0	Vehicle Info	-	-
203.0	Engine Type	Gasoline	-
204.0	Engine Info	3.0L	-
205.0	Engine Torque	-	Nm
206.0	Curb Idle Load	-	%
207.0	Idle Speed	-	rpm
208.0	HYBRID_OVC_REF_CO2_gkm	-	g/km
209.0	Engine Concept	1.00000	-
210.0	Alpha	1.93000	-

#	Text	Value	Unit
-	----	----	----
211.0	Beta	1.00000	-
212.0	Gamma	0.00000	-
213.0	Delta	0.00000	-
214.0	Epsilon	0.03200	-
215.0	X_C	83.00000	-
216.0	X_H	13.30000	-
217.0	X_N	0.00000	-
218.0	X_O	3.50000	-
219.0	X_S	0.00000	-
220.0	Fuel_Density	747.50000	-
221.0	rho_exhaust	1.29310	-
222.0	U_CO2	1.51800	-
223.0	U_CO	0.96600	-
224.0	U_NO	1.58700	-
225.0	U_NO2	1.58700	-
226.0	U_NOx	1.58700	-
227.0	U_HC	0.49900	-
228.0	U_NMHC	0.47100	-
229.0	U_CH4	0.55300	-
230.0	U_O2	1.10400	-
231.0	Fuel Type	2.00000	-
232.0	exhaust mass flow type (YES/NO)	YES	-
233.0	Distance Calculation Type	1.00000	-
234.0	Velocity Statistics Calculation Type	2.00000	-
235.0	RDE vehicle class	1.00000	-
236.0	TM_CITY0	-	s
237.0	TM_CITY1	-	s
238.0	TM_RURAL0	-	s
239.0	TM_RURAL1	-	s
240.0	TM_RURAL2_0	-	s

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#	Text	Value	Unit
-	----	----	----
241.0	TM_RURAL2_1		s
242.0	Second Rural Part for Time Marks (NO		-
243.0	TM_MW0		s
244.0	TM_MW1		s
245.0	VELOCITY_LIMIT_STOP	2.00000	km/h
246.0	VELOCITY_LIMIT_URBAN	50.00000	km/h
247.0	VELOCITY_LIMIT_RURAL	75.00000	km/h
248.0	Intake Manifold Pressure Type	1.00000	-
249.0	Velocity	IFILE1:TM'OBD_Vehicle_Spee	km/h
250.0	Velocity TS	1.30000	s
251.0	Velocity FACTOR	1.00000	-
252.0	Coolant Temperature	IFILE1:TM'OBD_Engine_Coola	degC
253.0	Coolant Temperature TS	1.30000	s
254.0	Oil Temperature		degC
255.0	Oil Temperature TS	1.30000	s
256.0	Intake Manifold Temperature		degC
257.0	Intake Manifold Temp TS	1.30000	s
258.0	Intake Manifold Pressure	IFILE1:TM'OBD_Intake_manifo	kPa
259.0	Intake Manifold Pressure TS	1.30000	s
260.0	Throttle Position		%
261.0	Throttle TS	1.30000	s
262.0	TYP_IDLE_MASS_FLOW		kg/h
263.0	Torque Type	1.00000	-
264.0	Speed	IFILE1:TM'OBD_Engine_RPM	rpm
265.0	Speed TS	1.30000	s
266.0	Torque		Nm
267.0	Torque TS	1.30000	s
268.0	Friction Torque	N/A	Nm
269.0	Friction Torque TS	N/A	s
270.0	Reference Torque	N/A	Nm

#	Text	Value	Unit
-	----	----	----
271.0	Reference Torque TS	N/A	s
272.0	k_VELINE		-
273.0	D_VELINE		-
274.0	Fuel Flow Type	2.00000	-
275.0	Air Flow Type	1.00000	-
276.0	Fuel Rate		various
277.0	Air Rate		various
278.0	Fuel Rate TS	1.30000	s
279.0	No_Cylinders		-
280.0	Air Rate TS	1.30000	s
281.0	FTIR_CHANNEL_32		-
282.0	FTIR_CHANNEL_TS_32		-
283.0	FTIR_CHANNEL_DRY_32	NO	-
284.0	FTIR_NAME_33		-
285.0	FTIR_MW_33		-
286.0	FTIR_CHANNEL_33		-
287.0	FTIR_CHANNEL_TS_33		-
288.0	FTIR_CHANNEL_DRY_33	NO	-
289.0	FTIR_NAME_34		-
290.0	FTIR_MW_34		-
291.0	FTIR_CHANNEL_34		-
292.0	FTIR_CHANNEL_TS_34		-
293.0	FTIR_CHANNEL_DRY_34	NO	-
294.0	FTIR_NAME_35		-
295.0	FTIR_MW_35		-
296.0	FTIR_CHANNEL_35		-
297.0	FTIR_CHANNEL_TS_35		-
298.0	FTIR_CHANNEL_DRY_35	NO	-
299.0	FTIR_NAME_36		-
300.0	FTIR_MW_36		-

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#	Text	Value	Unit
-	----	----	----
301.0	FTIR_CHANNEL_36		-
302.0	FTIR_CHANNEL_TS_36		-
303.0	FTIR_CHANNEL_DRY_36	NO	-
304.0	FTIR_NAME_37		-
305.0	FTIR_MW_37		-
306.0	FTIR_CHANNEL_37		-
307.0	FTIR_CHANNEL_TS_37		-
308.0	FTIR_CHANNEL_DRY_37	NO	-
309.0	FTIR_NAME_38		-
310.0	FTIR_MW_38		-
311.0	FTIR_CHANNEL_38		-
312.0	FTIR_CHANNEL_TS_38		-
313.0	FTIR_CHANNEL_DRY_38	NO	-
314.0	FTIR_NAME_39		-
315.0	FTIR_MW_39		-
316.0	FTIR_CHANNEL_39		-
317.0	FTIR_CHANNEL_TS_39		-
318.0	FTIR_CHANNEL_DRY_39	NO	-
319.0	FTIR_NAME_40		-
320.0	FTIR_MW_40		-
321.0	FTIR_CHANNEL_40		-
322.0	FTIR_CHANNEL_TS_40		-
323.0	FTIR_CHANNEL_DRY_40	NO	-
324.0	Legislation Type (1=HDIUT 2=EU H	4.00000	-
325.0	WholeTest_NOx_corr	5.00000	-
326.0	WholeTest_Hum_corr	2.00000	-
327.0	CD_Distance	0.00000	km
328.0	CD_NOx	0.00000	mg/km
329.0	CD_CO	0.00000	mg/km
330.0	CD_CO2	0.00000	g/km

#	Text	Value	Unit
-	----	----	----
331.0	CD_NMHC	0.00000	mg/km
332.0	CD_CH4	0.00000	mg/km
333.0	CD_THC	0.00000	mg/km
334.0	CD_PN		#/km
335.0	WLTC_LOW_SPEED_gkm		g/km
336.0	WLTC_LOW_SPEED_FAC	1.20000	-
337.0	WLTC_MEDIUM_SPEED_gkm		g/km
338.0	WLTC_HIGH_SPEED_gkm		g/km
339.0	WLTC_HIGH_SPEED_FAC	1.10000	-
340.0	WLTC_EXTRA_HIGH_SPEED_gkm		g/km
341.0	WLTC_EXTRA_HIGH_SPEED_FA	1.05000	-
342.0	TOL_NORMAL_DRIVING	25.00000	%
343.0	TOL_SEVERE_DRIVING	50.00000	%
344.0	Increase Tolerance Nomral Driving	NO	-
345.0	Bin1_min		km/h
346.0	Bin2_min		km/h
347.0	Bin3_min		km/h
348.0	Bin1_max		km/h
349.0	Bin2_max		km/h
350.0	Bin3_max		km/h
351.0	Clear_R0	125.40000	N
352.0	Clear_R1	0.29300	Nh/km
353.0	Clear_R2	0.02795	N*(h/km) ²
354.0	Clear_SMK	1470.00000	kg
355.0	Clear_Rated_Power	140.00000	kW
356.0	Clear_Ref_Velocity	70.00000	km/h
357.0	Clear_Ref_Acc	0.45000	m/s ²
358.0	Clear_Smooth	3.00000	s
359.0	EXTC_From_High_Temp	30.00000	degC
360.0	EXTC_To_High_Temp	35.00000	degC

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#	Text	Value	Unit
-	----	----	----
361.0	EXTC_From_Low_Temp	-7.00000	degC
362.0	EXTC_To_Low_Temp	0.00000	degC
363.0	Euro 6d or Euro 6d temp	NO	-
364.0	EXTC_From_Altitude	700.00000	m
365.0	EXTC_To_Altitude	1300.00000	m
366.0	EXTC_CORR_FAC	1.60000	
367.0	weight cold start (YES/NO)	NO	-
368.0	precon and soak done (YES/NO)	NO	-
369.0	PATH_PRECON_FILE		
370.0	filter velocity (YES/NO)	NO	-
371.0	filter velocity auto(YES/NO)	NO	-
372.0	Ki_CO		
373.0	Ki_CO2		
374.0	Ki_NOx		
375.0	Ki_FACTOR_CO2 (YES/NO)	NO	-
376.0	Ki_OFFSET_CO2 (YES/NO)	NO	-
377.0	Ki_FACTOR_CO (YES/NO)	NO	-
378.0	Ki_OFFSET_CO (YES/NO)	NO	-
379.0	Ki_FACTOR_NOx (YES/NO)	NO	-
380.0	Ki_OFFSET_NOx (YES/NO)	NO	-
381.0	Ki_OFF (YES/NO)	NO	-
382.0	HD legislations	1.00000	-
383.0	RDE legislations	1.00000	-
384.0	Submission Documents (YES/NO)	NO	-
385.0	General Setup Parameters Text	City	-
386.0	Legislation Setup Parameters Text	City	-
387.0	Trip Info		-
388.0	IN_TIME_REF		-
389.0	Sub-Trip Start: Auto	YES	-
390.0	Sub-Trip Start: Seconds	N/A	s

#	Text	Value	Unit
-	----	----	----
391.0	Sub-Trip End: Auto	YES	-
392.0	Sub-Trip End: Seconds	N/A	s
393.0	Unit System	2.00000	-
394.0	Calculate: PM Emissions	NO	-
395.0	Calculate: PN Emissions	NO	-
396.0	Output: Summary	YES	-
397.0	Output: Emissions	YES	-
398.0	Output: Raw Data	YES	-
399.0	Output: Zero Span	YES	-
400.0	Output: Data Consistency	NO	-
401.0	Output: Window Plots	YES	-
402.0	Fuel Rate ECU vs. EU ISO16183	y = 10000000000.0000 x - 0.000 R ² =10000000000.000 SEE=	
403.0	PEMS post processing version	Rel_10_B192	
404.0	Concerto version	480.00000	
405.0	Concerto build	215.00000	
406.0	USERNAME	EFR	

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Case: Highway
Page: Trip Summary

Start Date: 10/11/2017
Start Time: 07:35:54.0



Trip Duration	3620.00	s	ave THC	3.16463	ppm	BS CO2	n/a	g/hphr
Trip Duration (a)	3620.00	s	ave NMHC	4.29218	ppm	BS CO	n/a	g/hphr
Trip Distance	38.90	mi	ave CH4	-1.02504	ppm	BS THC	n/a	g/hphr
Trip Distance (a)	38.90	mi	ave CO	15.79238	ppm	BS NMHC	n/a	g/hphr
Trip Fuel Cons. (b)	n/a	kg	ave CO2	12.43293	%	BS CH4	n/a	g/hphr
Trip Fuel Cons. (ab)	n/a	kg	ave NOx	2.96221	ppm	BS NO (d)	n/a	g/hphr
Trip Fuel Cons. EU (ac)	4.11	kg	ave PM	n/a	mg/m3	BS NO2	n/a	g/hphr
Trip Fuel Cons. US (ac)	4.09	kg	ave Soot meas	n/a	mg/m3	BS NOx	n/a	g/hphr
Trip Fuel Cons. Volume (b)	n/a	gall	ave Soot	n/a	mg/m3	BS Soot	n/a	g/hphr
Trip Fuel Cons. Volume (ab)	n/a	gall	ave PN	n/a	#/cm3	BS Soot meas	n/a	g/hphr
Trip Fuel Cons. Volume EU (ac)	1.45	gall	tot THC	0.21231	g	BS PM	n/a	g/hphr
Trip Fuel Cons. Volume US (ac)	1.44	gall	tot NMHC	0.19035	g	BS PN	n/a	#/hpr
Trip Fuel Economy (b)	n/a	mpg_US	tot CH4	0.05517	g	DS CO2	319.35383	g/mi
Trip Fuel Economy (ab)	n/a	mpg_US	tot CO	2.69299	g	DS CO	0.06923	g/mi
Trip Fuel Economy EU (ac)	26.79	mpg_US	tot CO2	12422.44499	g	DS THC	0.00546	g/mi
Trip Fuel Economy US (ac)	26.93	mpg_US	tot NO (d)	0.14113	g	DS NMHC	0.00489	g/mi
Trip Av. Eng. Speed	1561.81	rpm	tot NO2	0.14450	g	DS CH4	0.00142	g/mi
Trip Av. Torque	n/a	lbft	tot NOx	0.25759	g	DS NO (d)	0.00363	g/mi
Trip Av. Power	n/a	hp	tot Soot	n/a	g	DS NO2	0.00371	g/mi
Trip Work	n/a	hphr	tot Soot meas	n/a	g	DS NOx	0.00662	g/mi
Trip Exhaust Mass	64.34	kg	tot PM	n/a	g	DS Soot	n/a	g/mi
Trip Exhaust Mass EU (ac)	n/a	kg	tot PN	n/a	#	DS Soot meas	n/a	g/mi
Trip Exhaust Mass US (ac)	n/a	kg	PM measurement type	0.00000	-	DS PM	n/a	g/mi
Trip Av. Amb. Temperature	60.39	deg_F	PM correction type	1.00000	alpha(HC)	DS PN	n/a	#/mi
Trip Av. Humidity	67.21	%	tot Soot on PM filter (estim.)	n/a	mg	FS CO2	n/a	g/kg
Fuel Type	Petrol (E10)		Soot --> PM simple scaling factor	1.00000	-	FS CO	n/a	g/kg
			Soot --> PM alpha scaling factor	0.00000	-	FS THC	n/a	g/kg
			Trip Av. Veh. Speed	38.68378	mi/hr	FS NMHC	n/a	g/kg
			Trip Velocity Zero	4.30939	%	FS CH4	n/a	g/kg
			Trip Velocity Urban	37.32044	%	FS NO (d)	n/a	g/kg
			Trip Velocity Rural	14.55801	%	FS NO2	n/a	g/kg
			Trip Velocity Motorway	48.12155	%	FS NOx	n/a	g/kg
						FS Soot	n/a	g/kg
						FS Soot meas	n/a	g/kg
						FS PM	n/a	g/kg
						FS PN	n/a	#/kg

(a) GAS PEMS measurement state only, (b) based on fuel rate input (ECU, Fuel Meter), (c) calculated from carbon balance
(d) NO calculated using molecular weight of NO2

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Passat / Model CC
Engine: Gasoline / 3.6L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

Page: Trip Summary Drift Corrected

Start Date: 10/11/2017

Start Time: 07:35:54.0

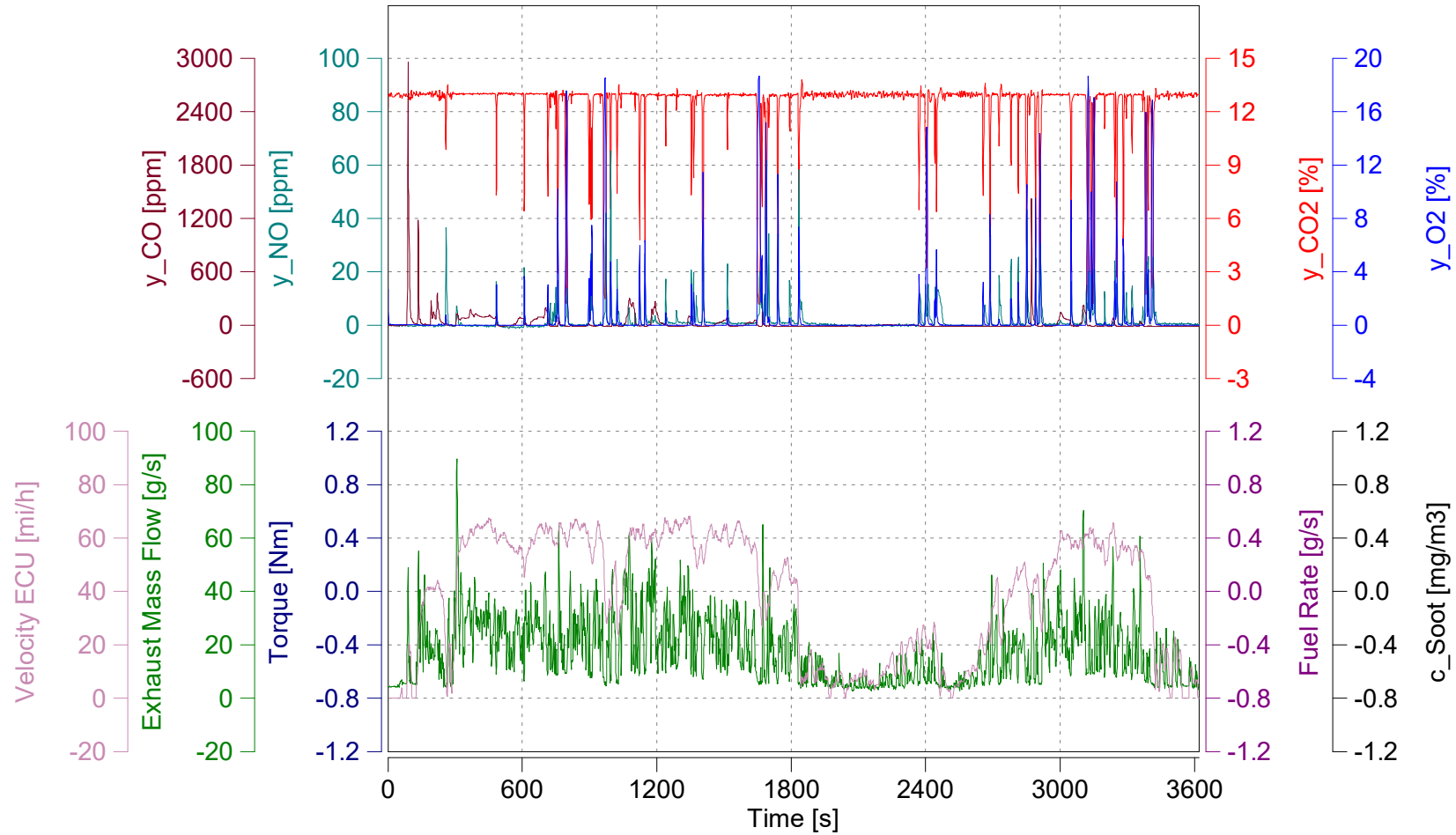


Trip Duration	3620.00	s	ave THC DC	4.31522	ppm	BS CO2 DC	n/a	g/hphr
Trip Duration (a)	3620.00	s	ave NMHC DC	5.09770	ppm	BS CO DC	n/a	g/hphr
Trip Distance	38.90	mi	ave CH4 DC	-0.71135	ppm	BS THC DC	n/a	g/hphr
Trip Distance (a)	38.90	mi	ave CO DC	15.86709	ppm	BS NMHC DC	n/a	g/hphr
Trip Fuel Cons. (b)	n/a	kg	ave CO2 DC	12.44531	%	BS CH4 DC	n/a	g/hphr
Trip Fuel Cons. (ab)	n/a	kg	ave NOx DC	3.01406	ppm	BS NO DC (d)	n/a	g/hphr
Trip Fuel Cons. EU (ac)	4.11	kg	ave PM	n/a	mg/m3	BS NO2 DC	n/a	g/hphr
Trip Fuel Cons. US (ac)	4.09	kg	ave Soot meas	n/a	mg/m3	BS NOx DC	n/a	g/hphr
Trip Fuel Cons. Volume (b)	n/a	gall	ave Soot	n/a	mg/m3	BS Soot	n/a	g/hphr
Trip Fuel Cons. Volume (ab)	n/a	gall	ave PN DC	n/a	#/cm3	BS Soot meas	n/a	g/hphr
Trip Fuel Cons. Volume EU (ac)	1.45	gall	tot THC DC	0.28950	g	BS PM	n/a	g/hphr
Trip Fuel Cons. Volume US (ac)	1.44	gall	tot NMHC DC	0.24657	g	BS PN DC	n/a	#/hpr
Trip Fuel Economy (b)	n/a	mpg_US	tot CH4 DC	0.05429	g	DS CO2 DC	319.67181	g/mi
Trip Fuel Economy (ab)	n/a	mpg_US	tot CO DC	2.72441	g	DS CO DC	0.07004	g/mi
Trip Fuel Economy EU (ac)	26.79	mpg_US	tot CO2 DC	12434.81384	g	DS THC DC	0.00744	g/mi
Trip Fuel Economy US (ac)	26.93	mpg_US	tot NO DC (d)	0.13191	g	DS NMHC DC	0.00634	g/mi
Trip Av. Eng. Speed	1561.81	rpm	tot NO2 DC	0.16224	g	DS CH4 DC	0.00140	g/mi
Trip Av. Torque	n/a	lbft	tot NOx DC	0.26294	g	DS NO DC (d)	0.00339	g/mi
Trip Av. Power	n/a	hp	tot Soot	n/a	g	DS NO2 DC	0.00417	g/mi
Trip Work	n/a	hphr	tot Soot meas	n/a	g	DS NOx DC	0.00676	g/mi
Trip Exhaust Mass	64.34	kg	tot PM	n/a	g	DS Soot	n/a	g/mi
Trip Exhaust Mass EU (ac)	n/a	kg	tot PN DC	n/a	#	DS Soot meas	n/a	g/mi
Trip Exhaust Mass US (ac)	n/a	kg	PM measurement type	0.00000	-	DS PM	n/a	g/mi
Trip Av. Amb. Temperature	60.39	deg_F	PM correction type	1.00000	alpha(HC)	DS PN DC	n/a	#/mi
Trip Av. Humidity	67.21	%	tot Soot on PM filter (estim.)	n/a	mg	FS CO2 DC	n/a	g/kg
Fuel Type	Petrol (E10)		Soot --> PM simple scaling factor	1.00000	-	FS CO DC	n/a	g/kg
			Soot --> PM alpha scaling factor	0.00000	-	FS THC DC	n/a	g/kg
			Trip Av. Veh. Speed	38.68378	mi/hr	FS NMHC DC	n/a	g/kg
			Trip Velocity Zero	4.30939	%	FS CH4 DC	n/a	g/kg
			Trip Velocity Urban	37.32044	%	FS NO DC (d)	n/a	g/kg
			Trip Velocity Rural	14.55801	%	FS NO2 DC	n/a	g/kg
			Trip Velocity Motorway	48.12155	%	FS NOx DC	n/a	g/kg
						FS Soot	n/a	g/kg
						FS Soot meas	n/a	g/kg
						FS PM	n/a	g/kg
						FS PN DC	n/a	#/kg

(a) GAS PEMS measurement state only, (b) based on fuel rate input (ECU, Fuel Meter), (c) calculated from carbon balance
 (d) NO calculated using molecular weight of NO2

Concerto Version: 480 Build 215, Serial Number: 8468
 M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Passat / Model CC
 Engine: Gasoline / 3.6L
 NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
 Dry / Wet Corr.: 2 - CFR40 §86.1342-90



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

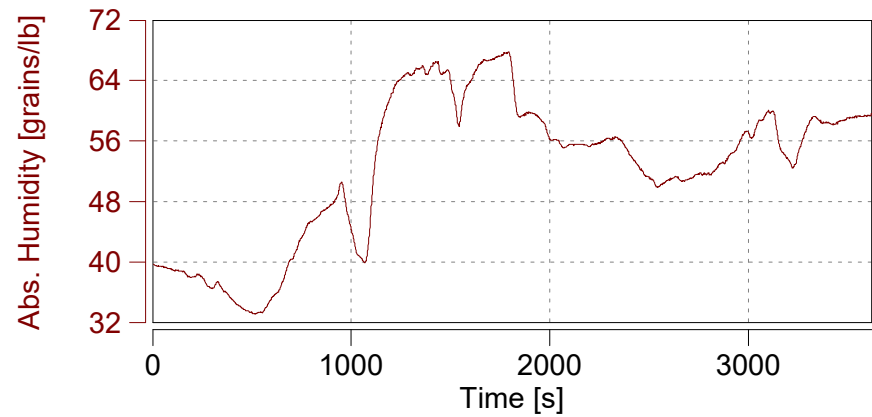
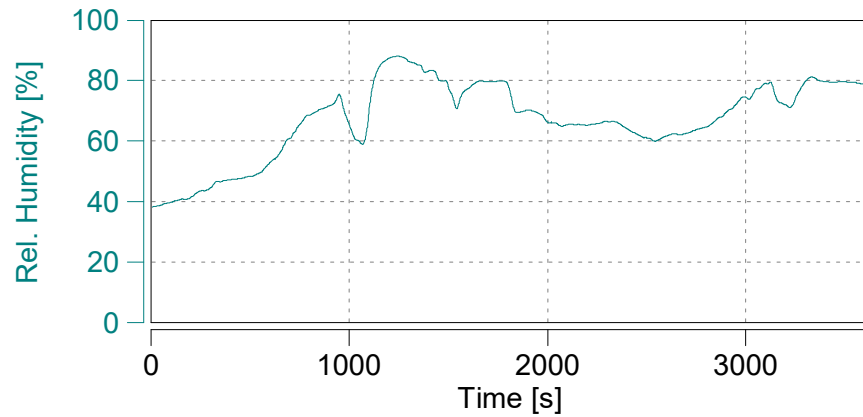
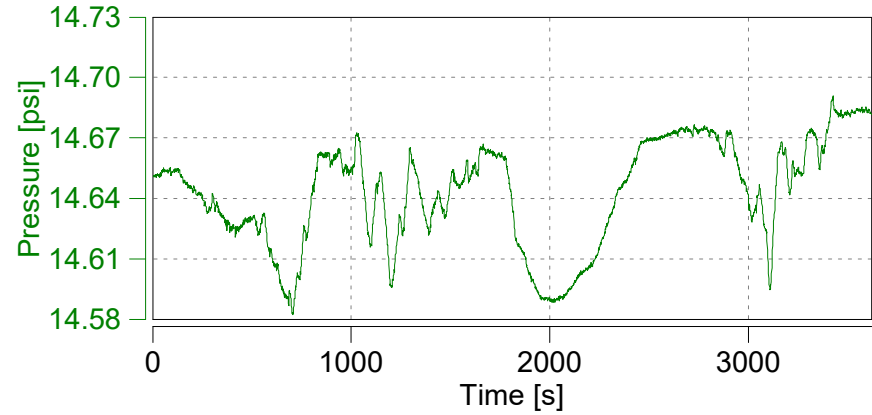
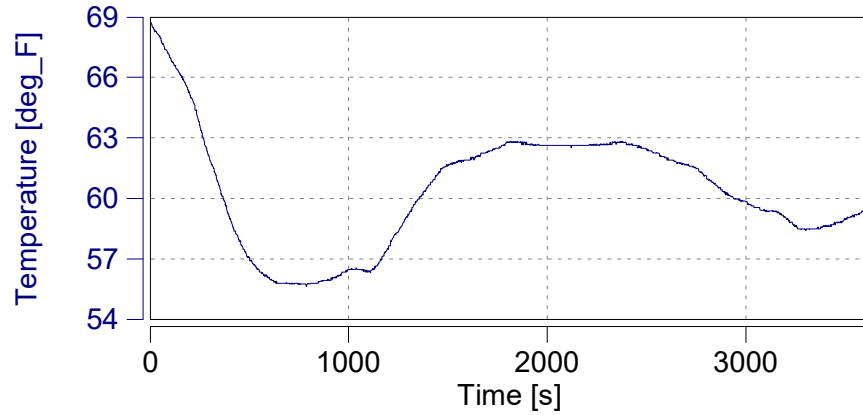
Vehicle: 2017 VW Passat / Model CC
Engine: Gasoline / 3.6L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

Page: Ambient Conditions

Start Date: 10/11/2017

Start Time: 07:35:54.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

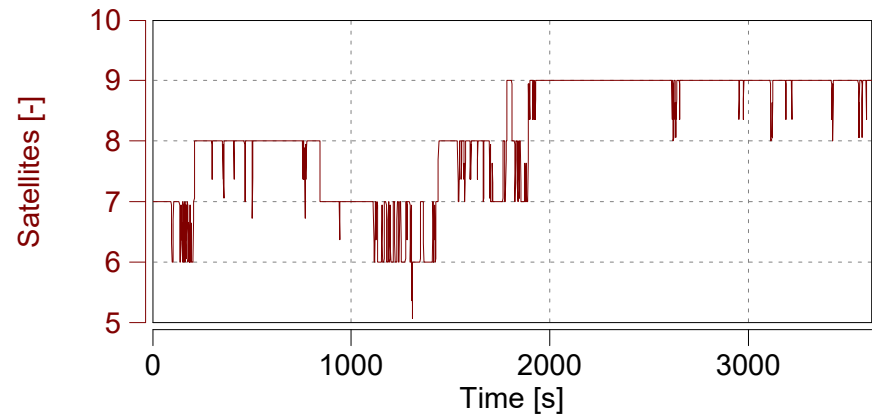
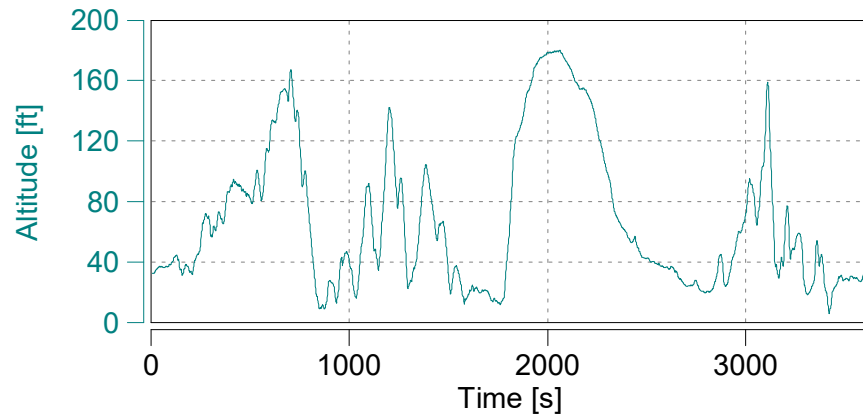
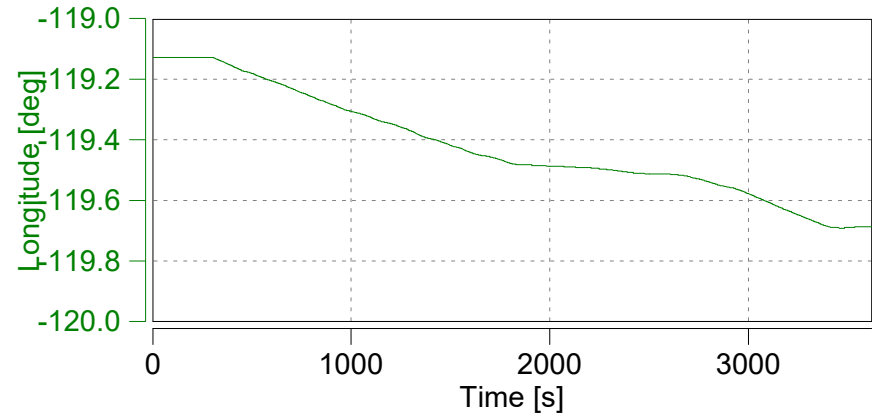
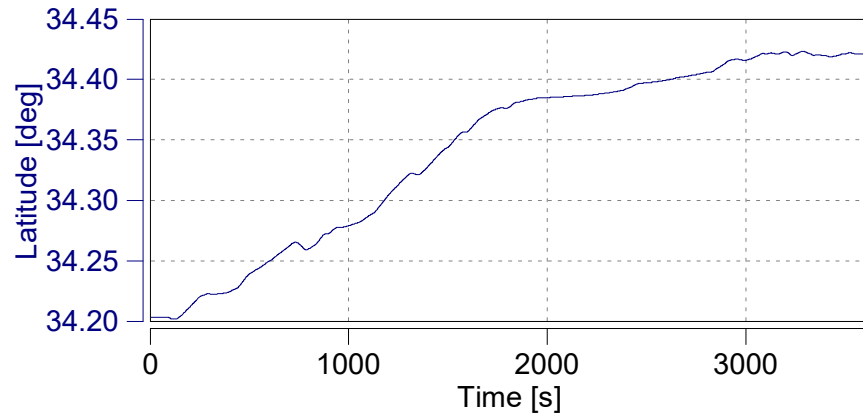
Vehicle: 2017 VW Passat / Model CC
Engine: Gasoline / 3.6L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

Page: GPS

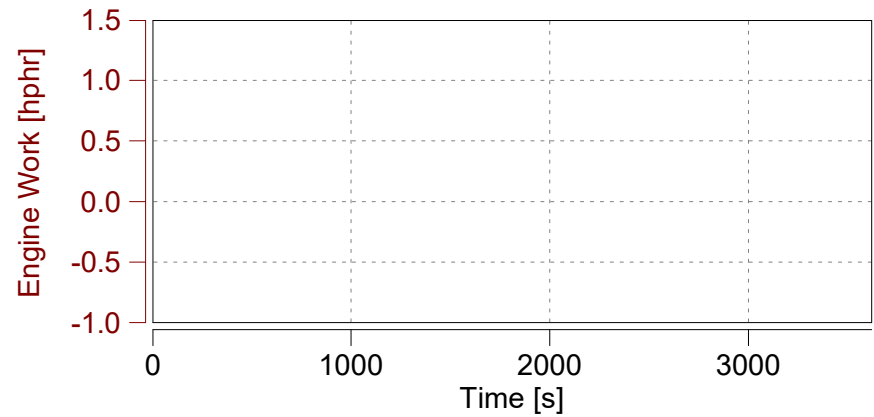
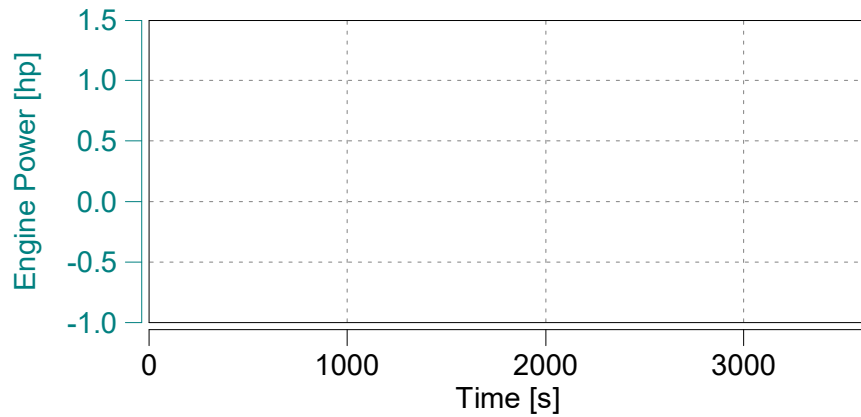
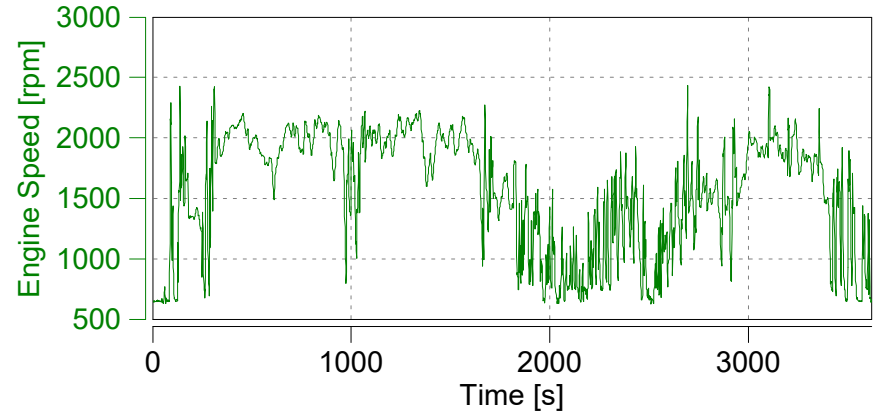
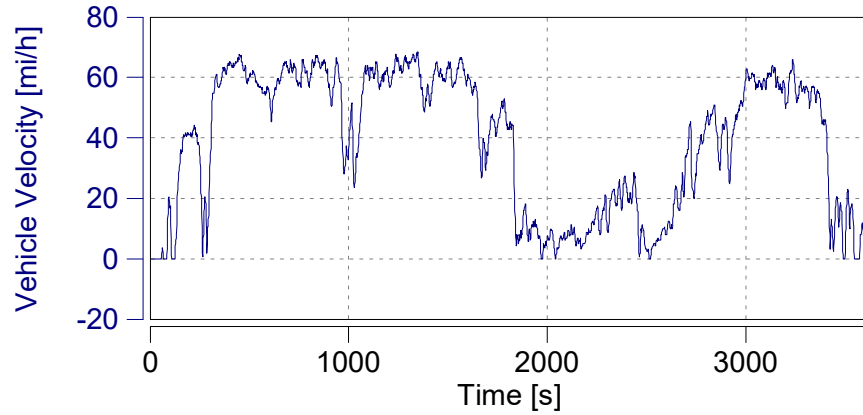
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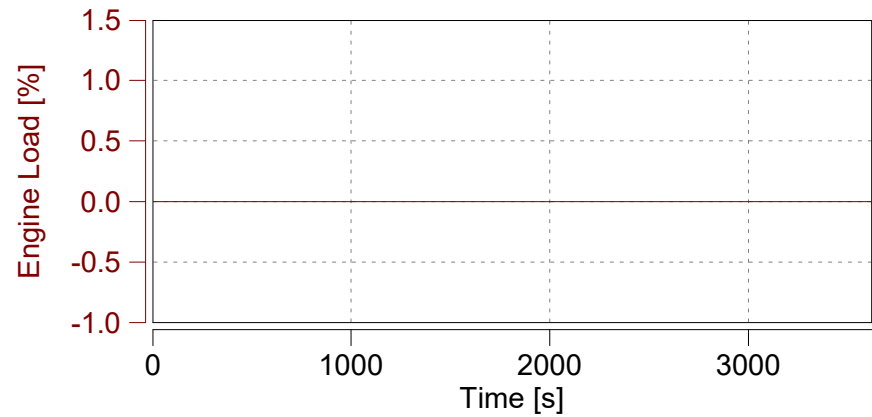
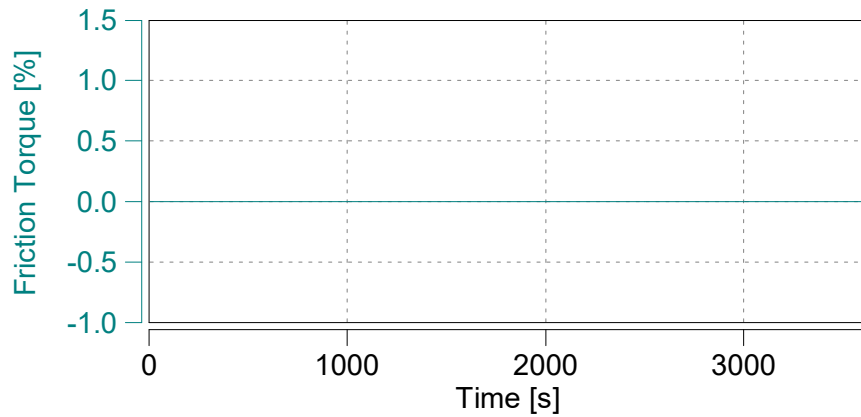
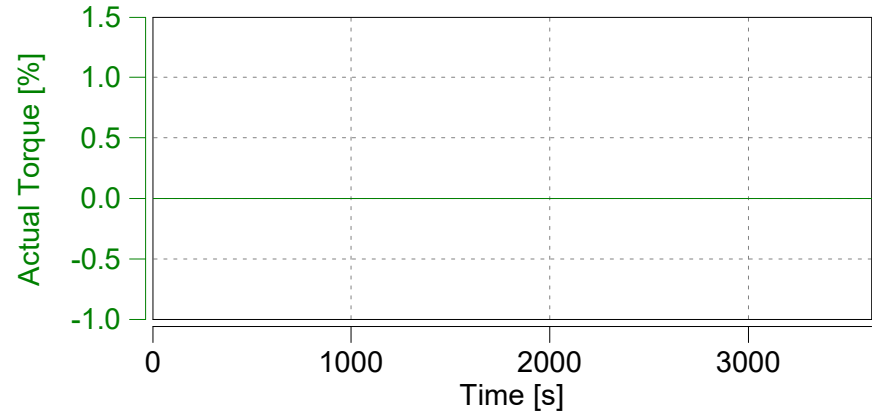
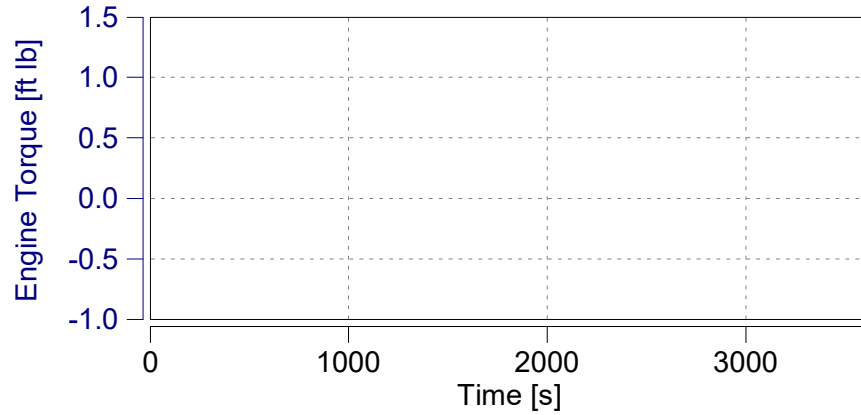
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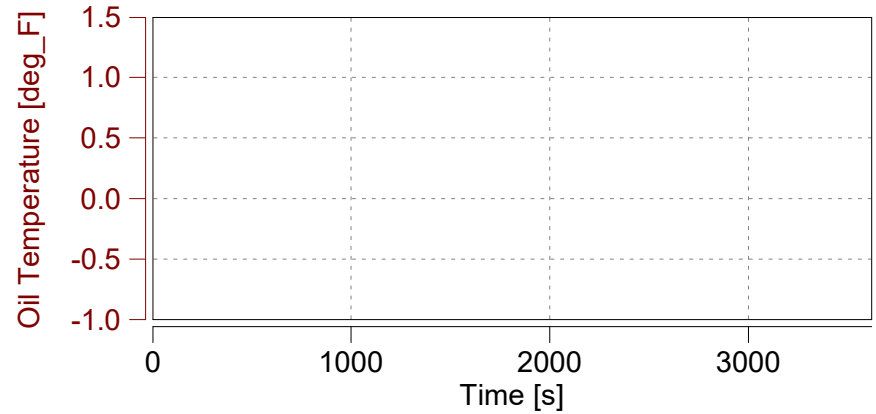
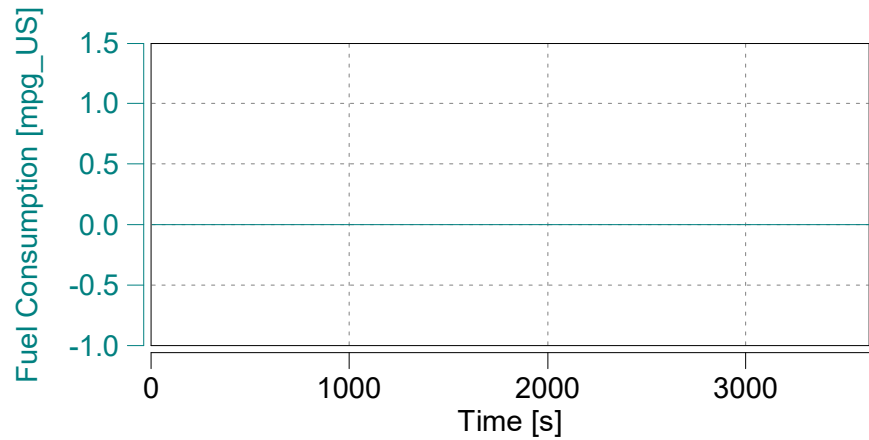
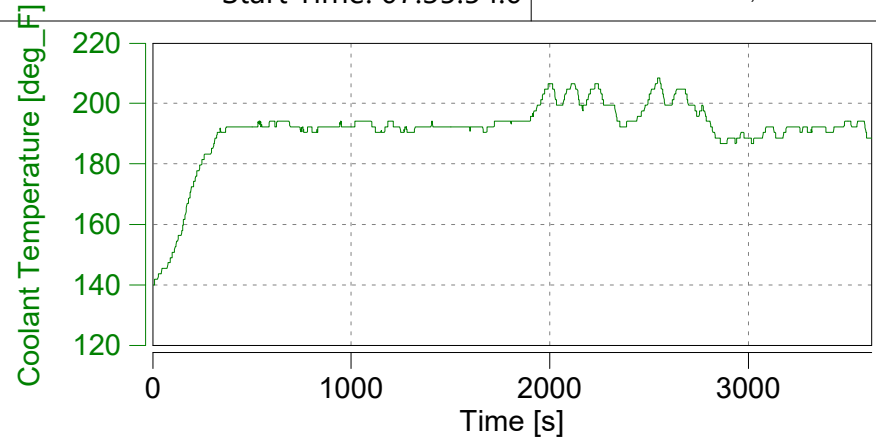
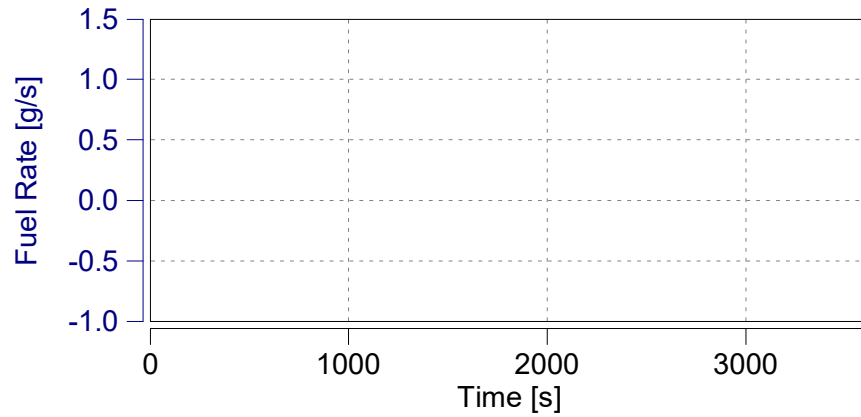


Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Passat / Model CC
Engine: Gasoline / 3.6L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90





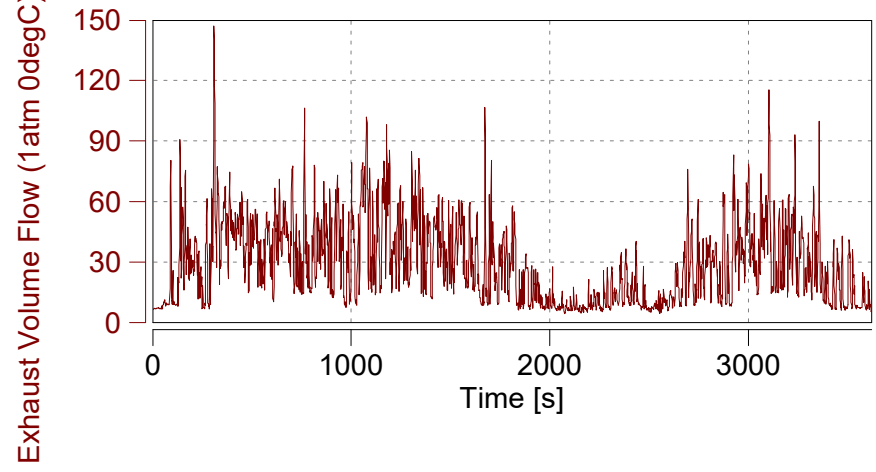
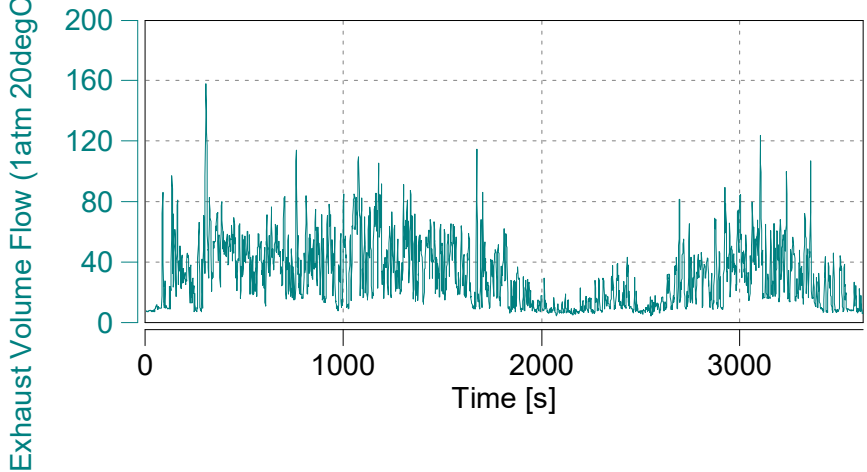
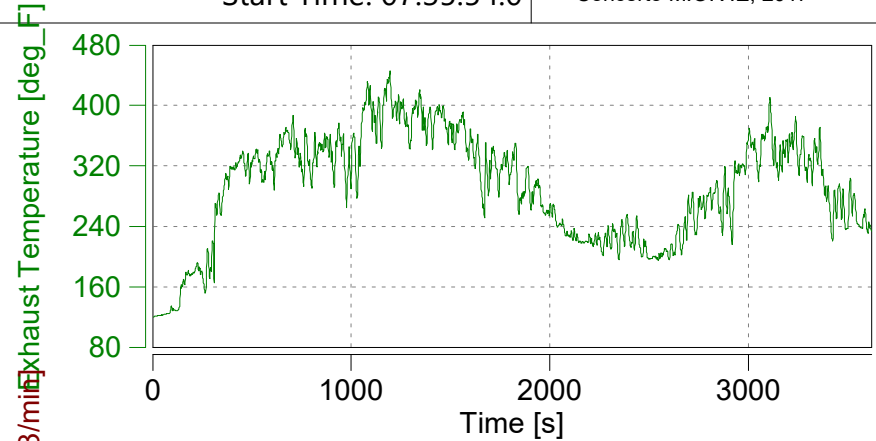
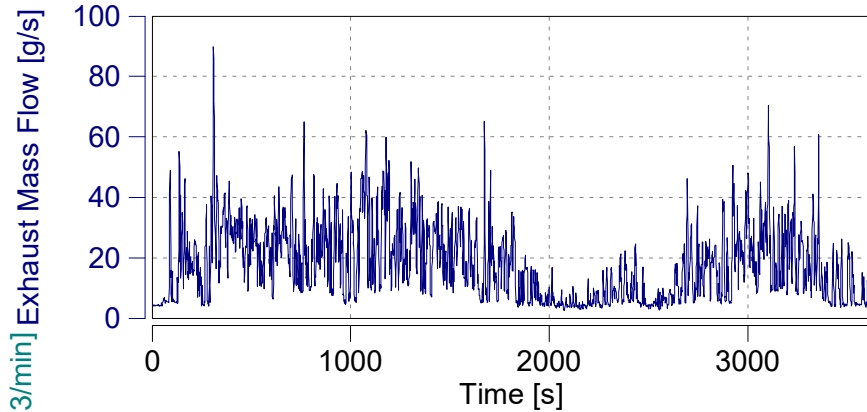


Case: Highway

Page: Exhaust Flow (1)

Start Date: 10/11/2017

Start Time: 07:35:54.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

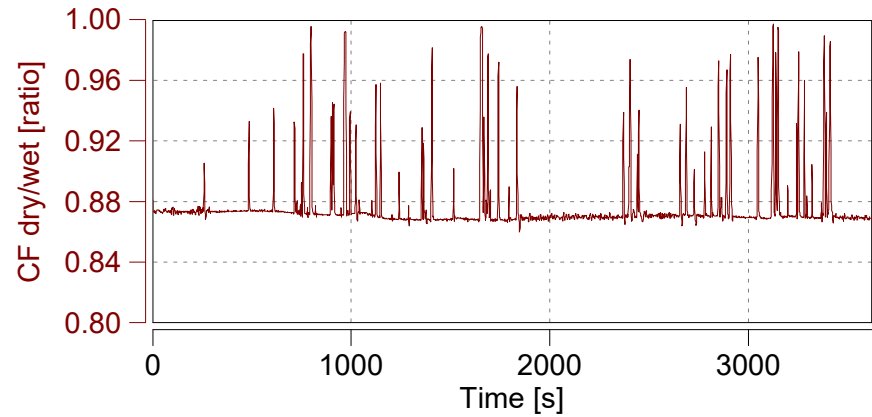
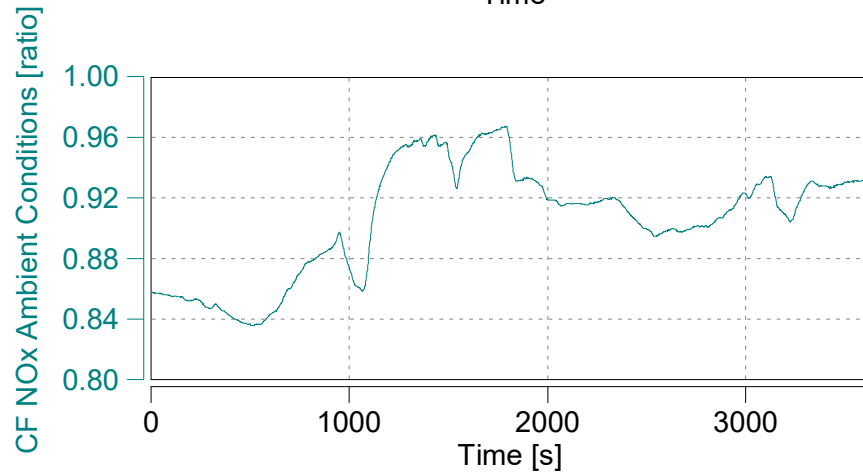
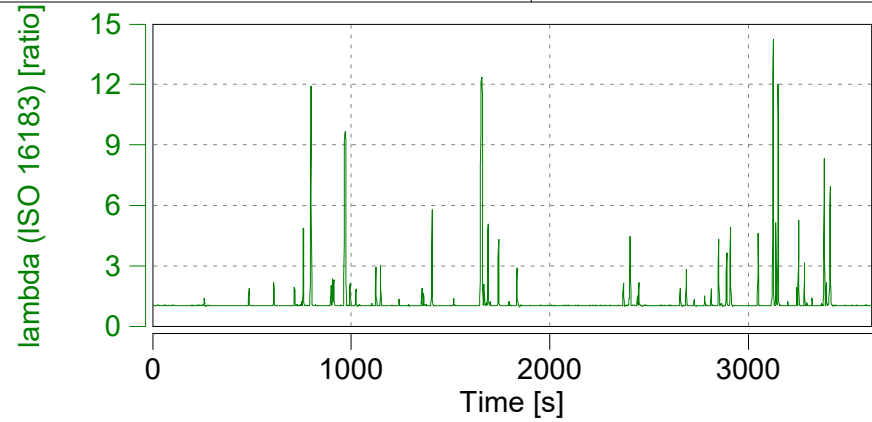
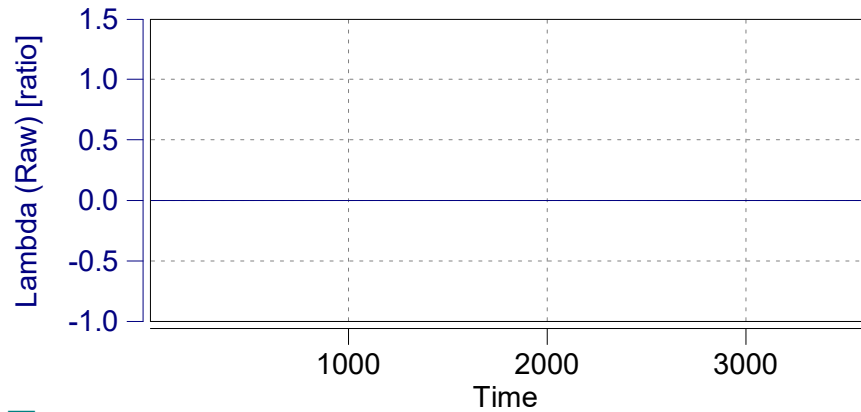
Vehicle: 2017 VW Passat / Model CC
Engine: Gasoline / 3.6L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

Page: Exhaust Flow (2)

Start Date: 10/11/2017

Start Time: 07:35:54.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

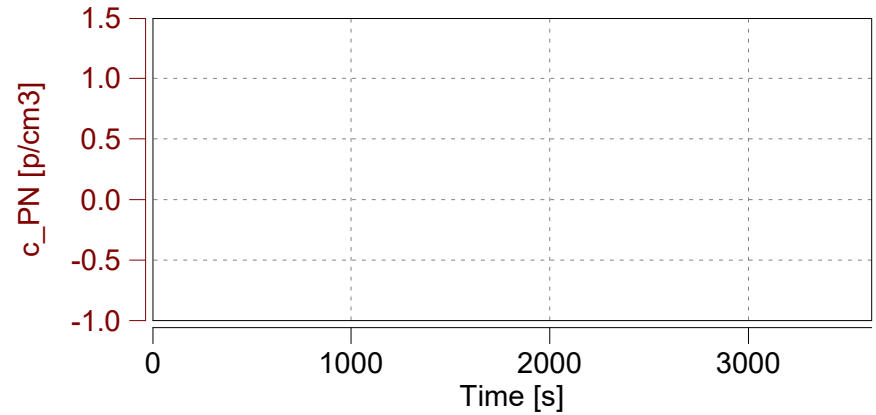
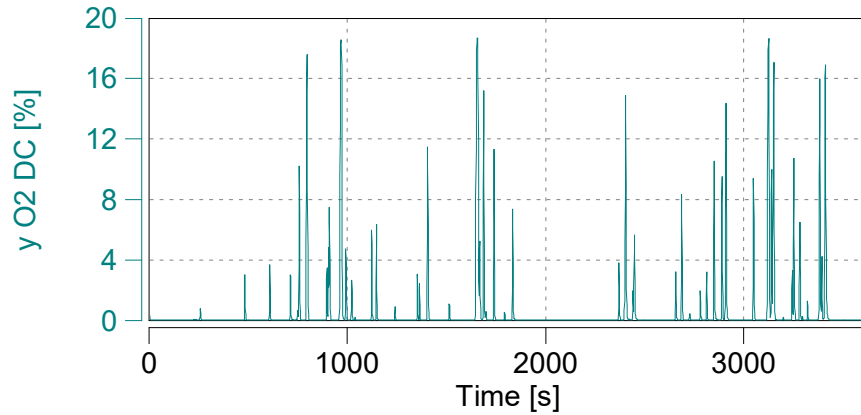
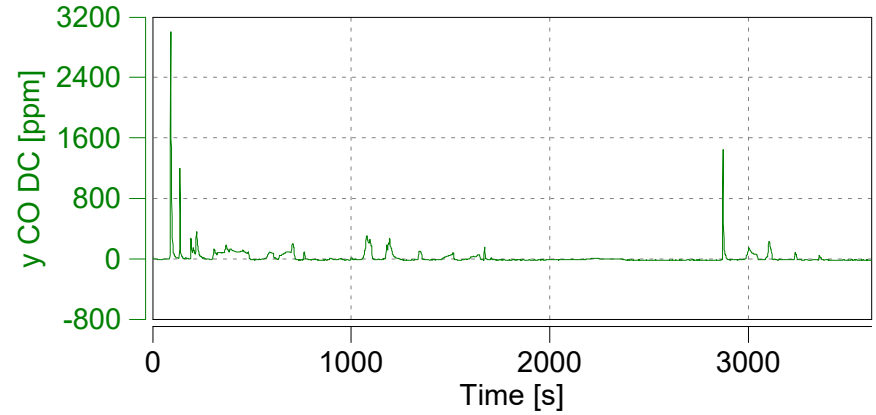
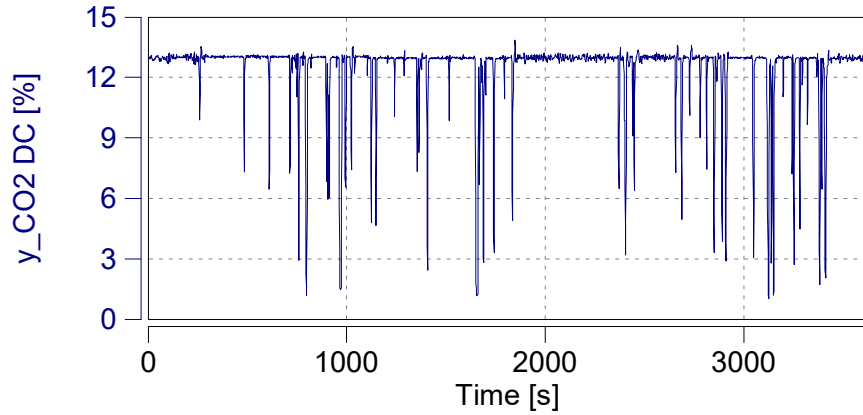
Vehicle: 2017 VW Passat / Model CC
Engine: Gasoline / 3.6L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

Page: Corrected Emissions (1)

Start Date: 10/11/2017

Start Time: 07:35:54.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

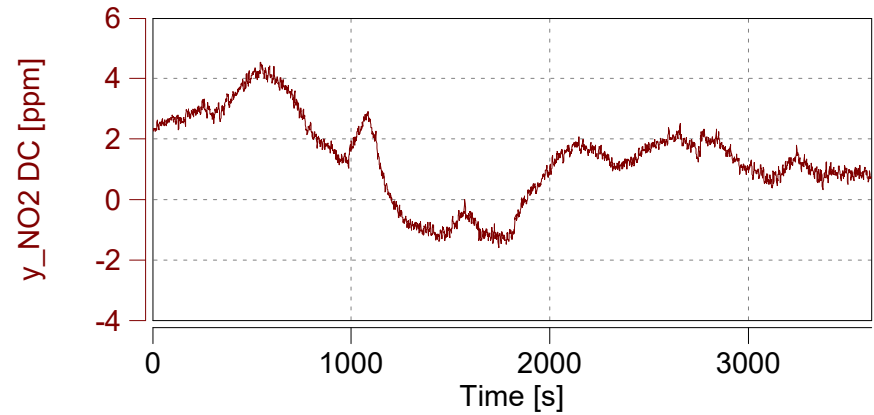
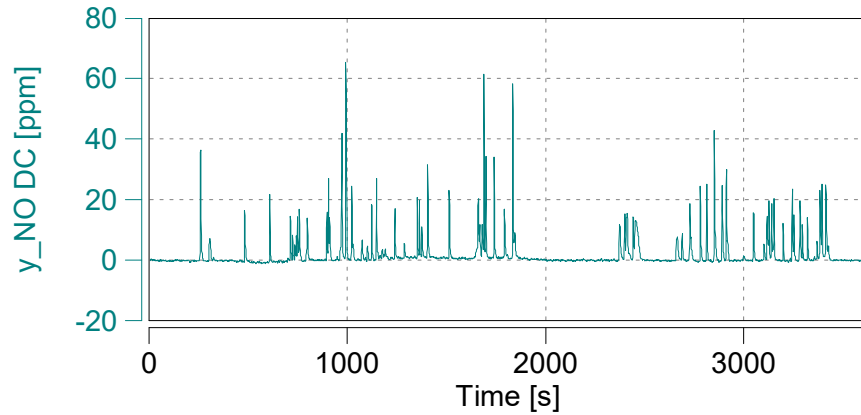
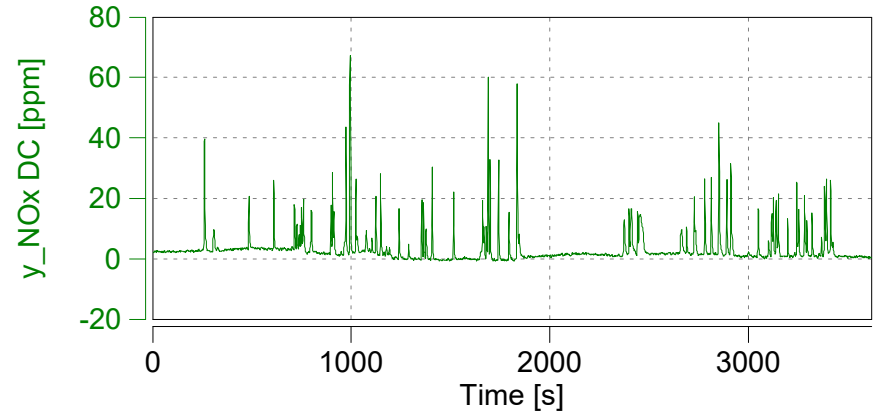
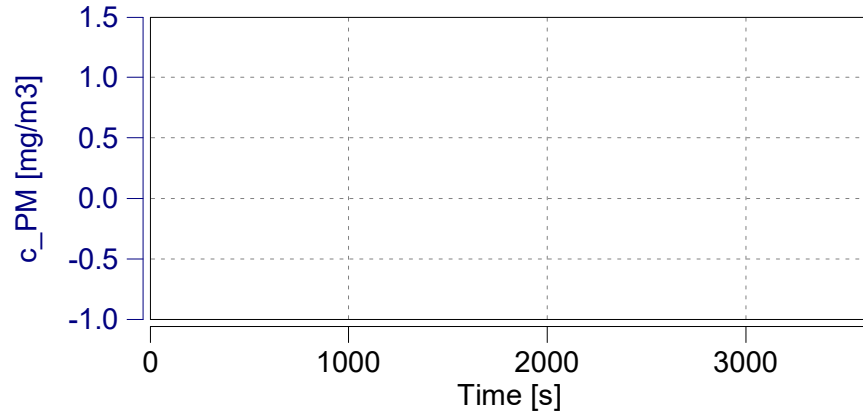
Vehicle: 2017 VW Passat / Model CC
Engine: Gasoline / 3.6L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

Page: Corrected Emissions (2)

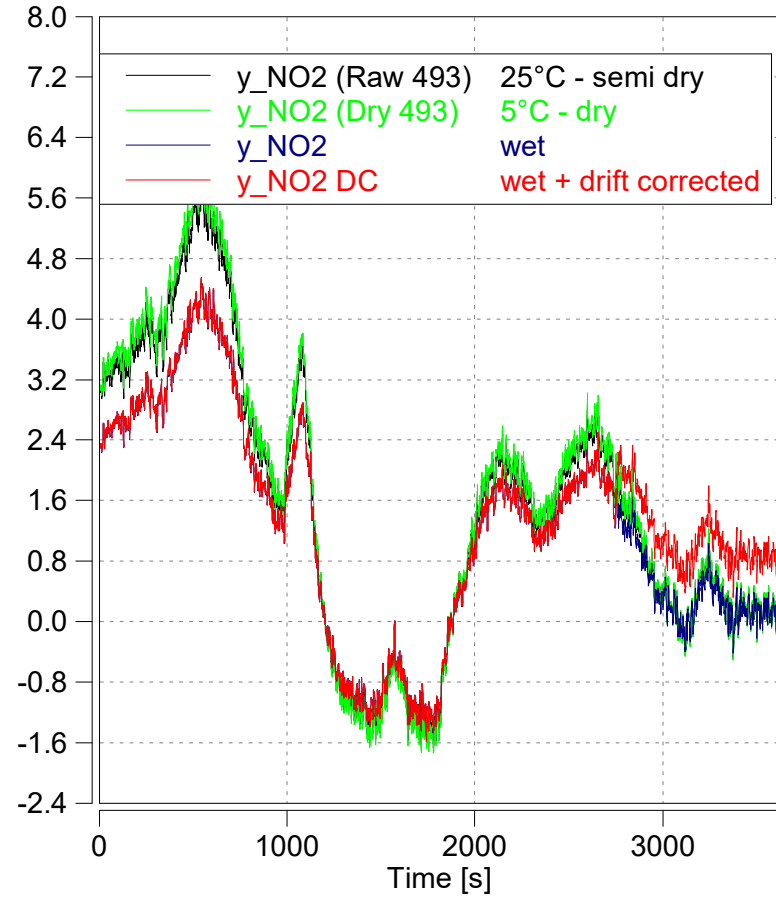
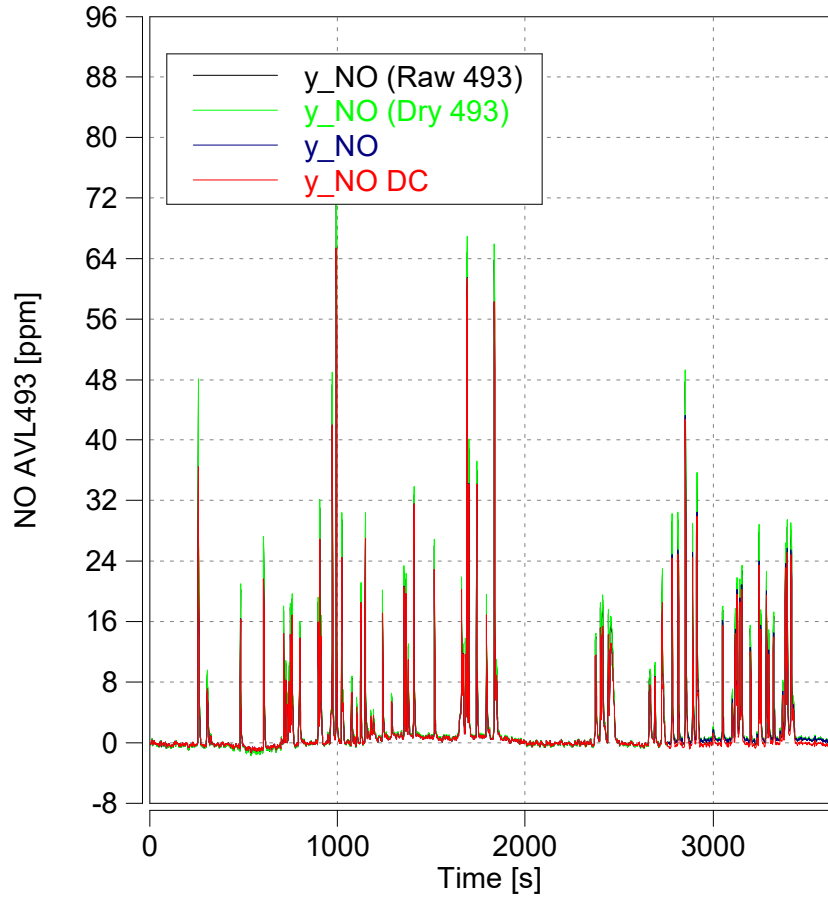
Start Date: 10/11/2017

Start Time: 07:35:54.0

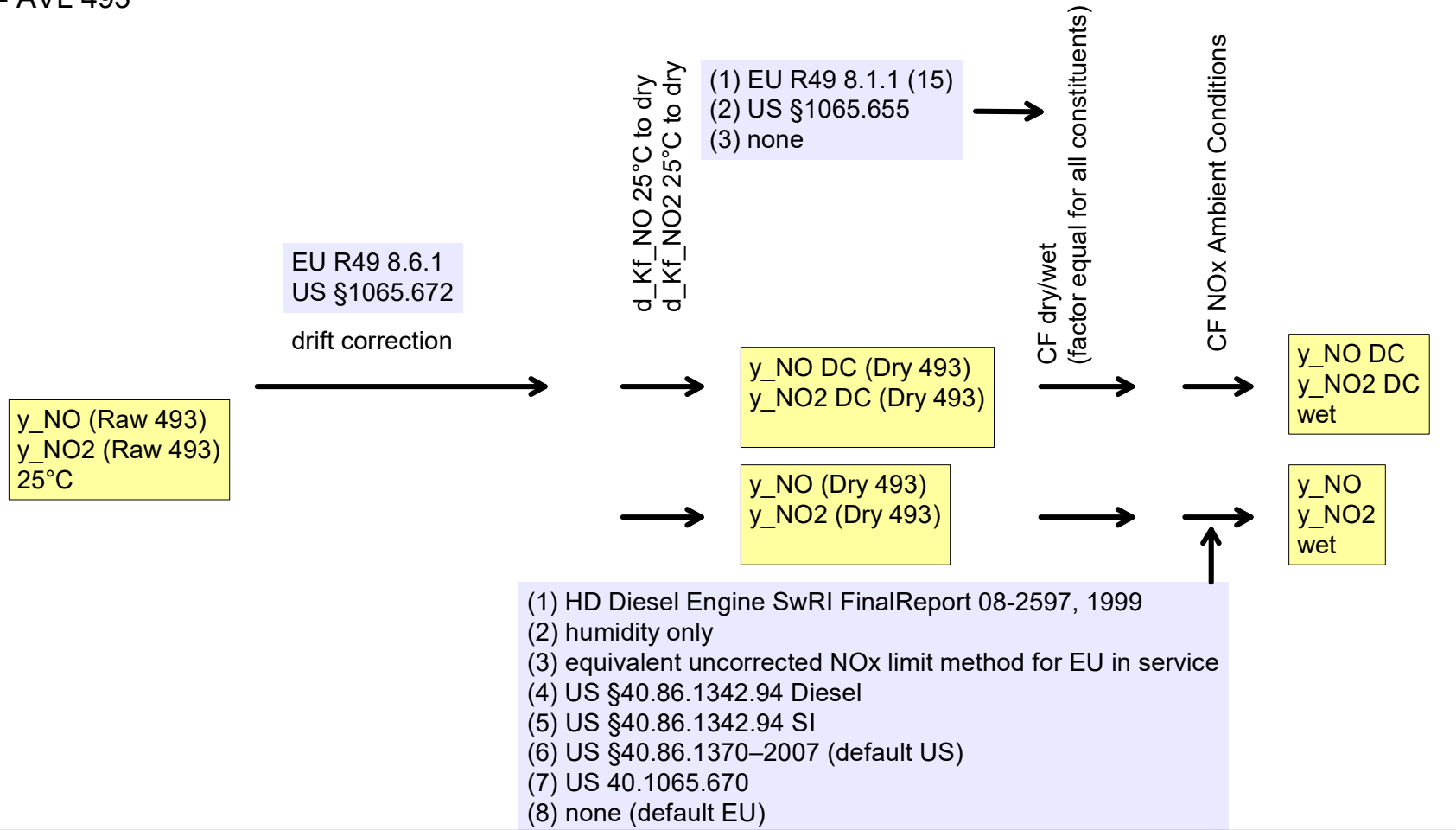


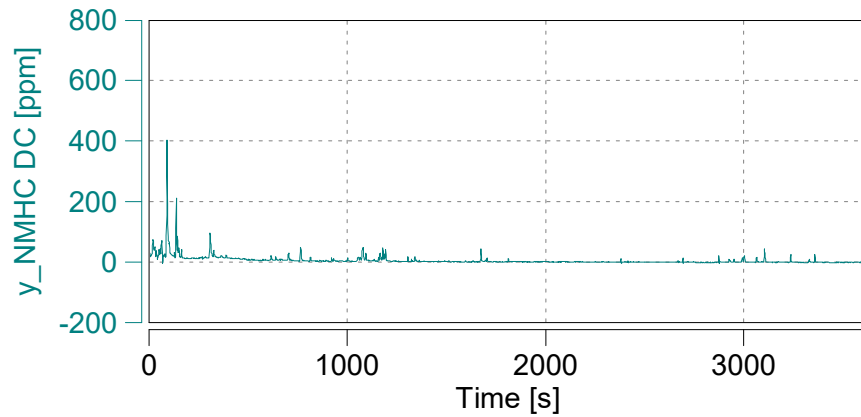
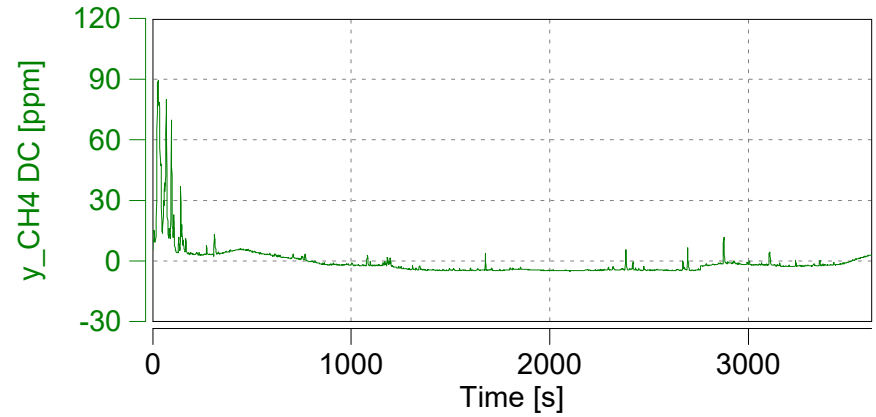
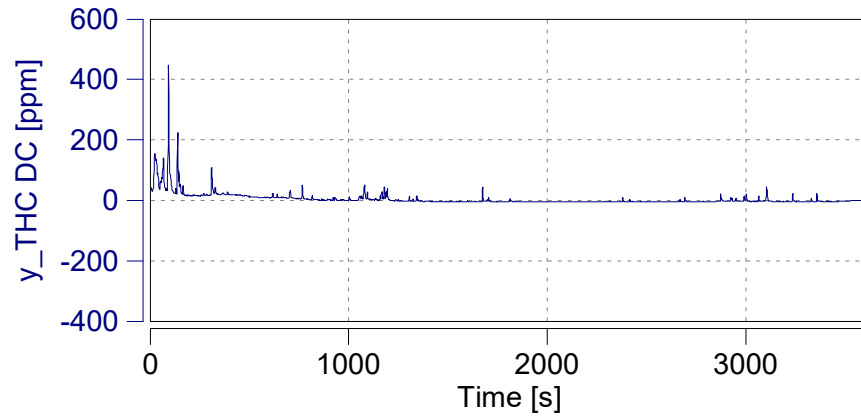
Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Passat / Model CC
Engine: Gasoline / 3.6L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90



NOx - AVL 493



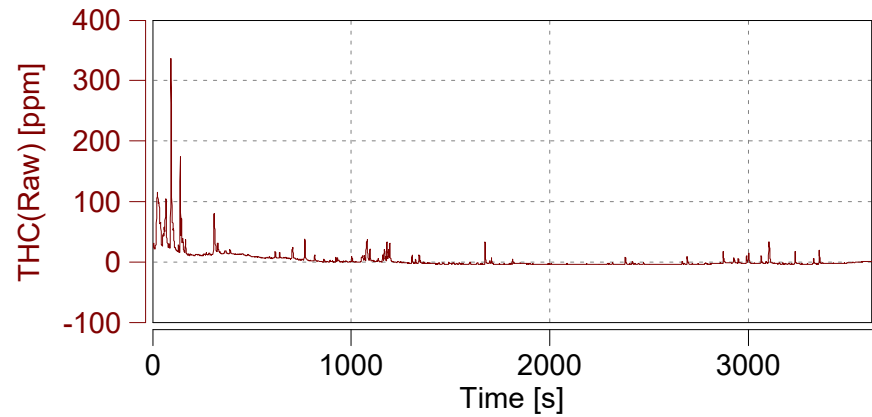
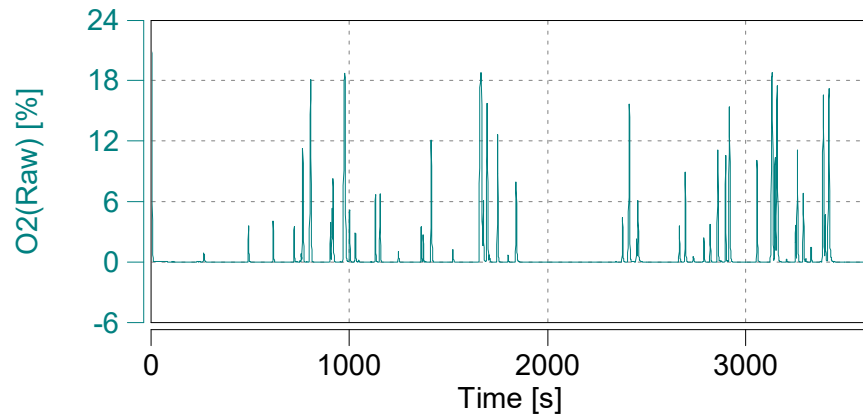
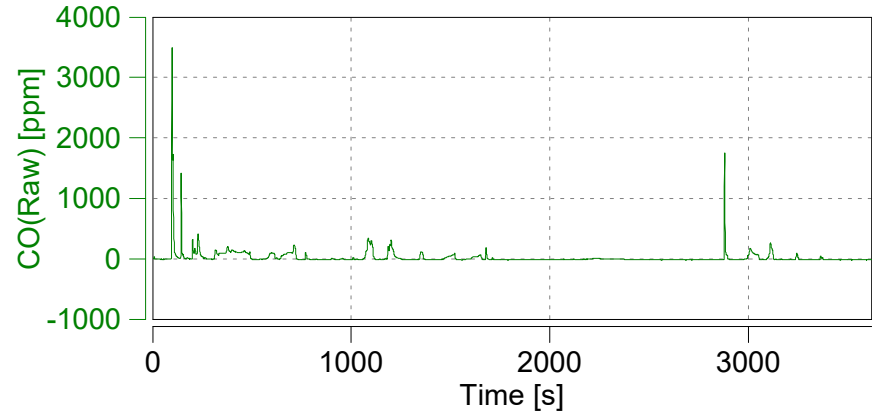
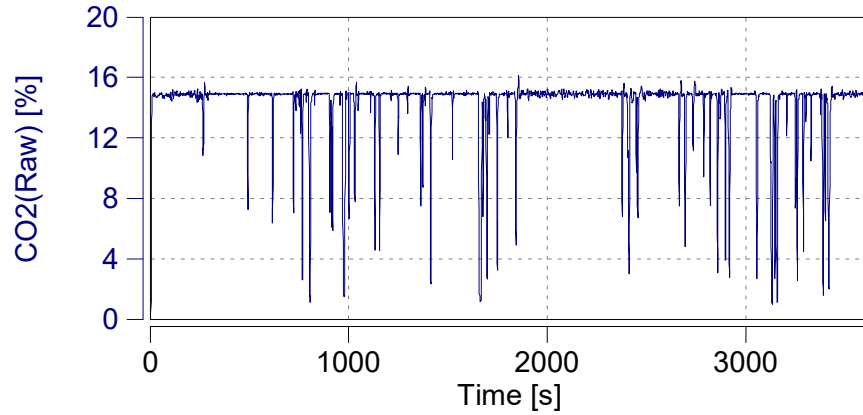


Case: Highway

Page: Emissions Raw Data (1)

Start Date: 10/11/2017

Start Time: 07:35:54.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

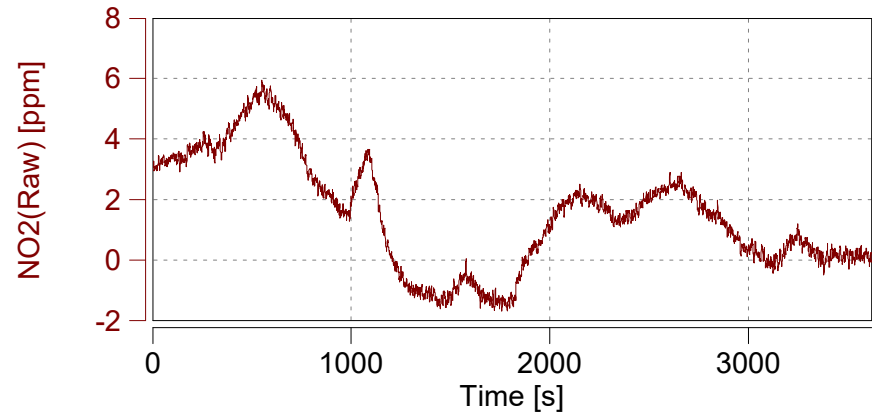
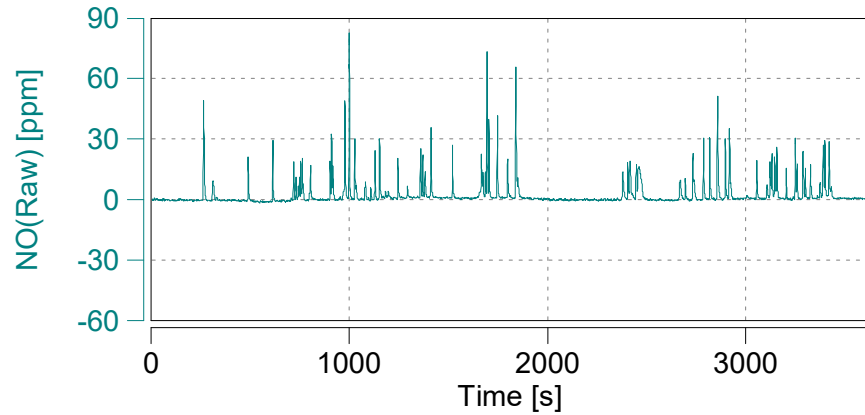
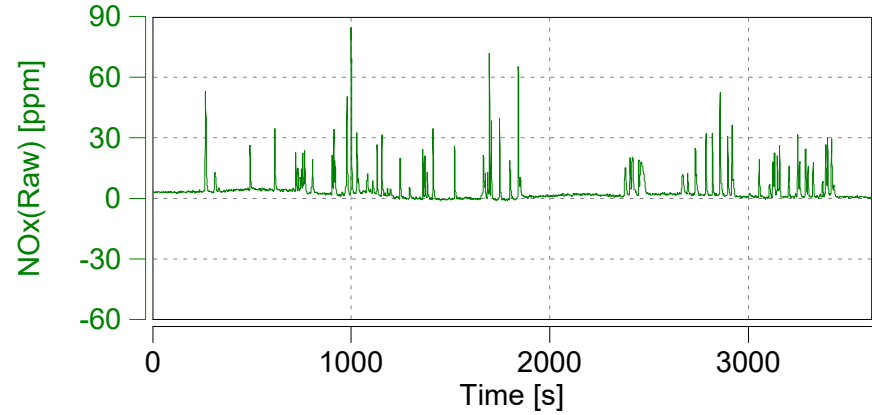
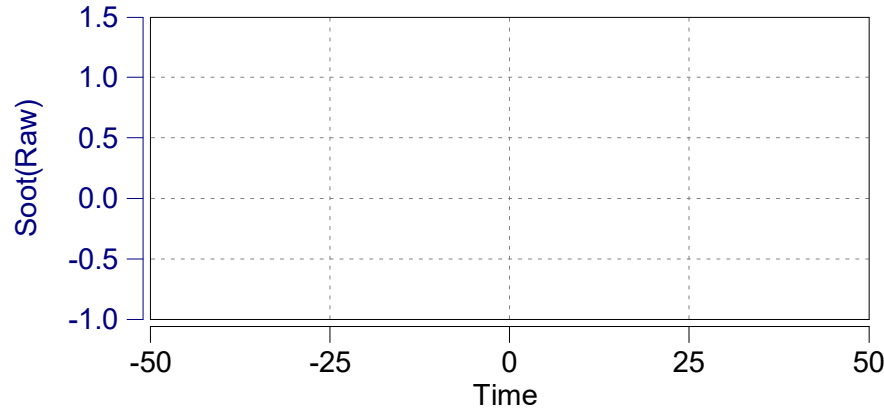
Vehicle: 2017 VW Passat / Model CC
Engine: Gasoline / 3.6L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

Page: Emissions Raw Data (2)

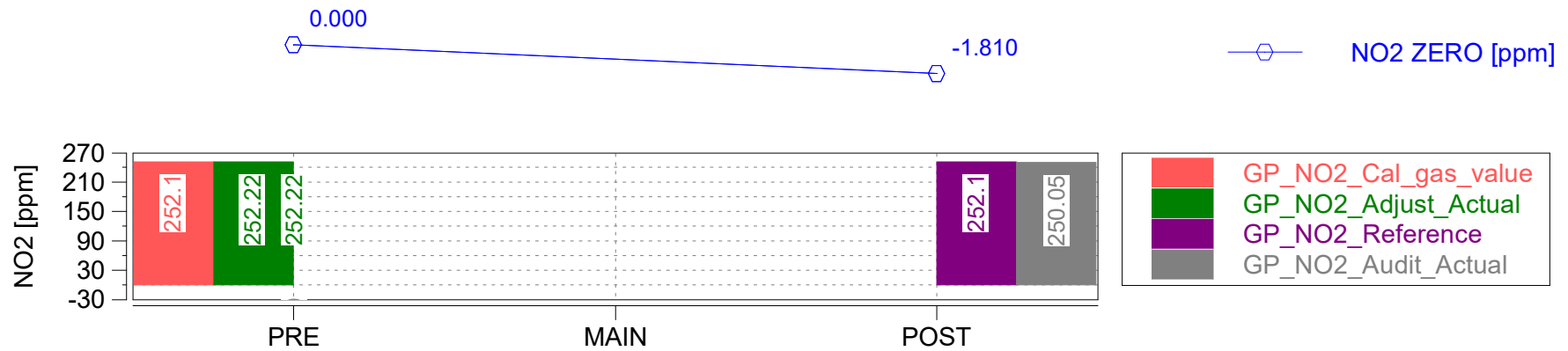
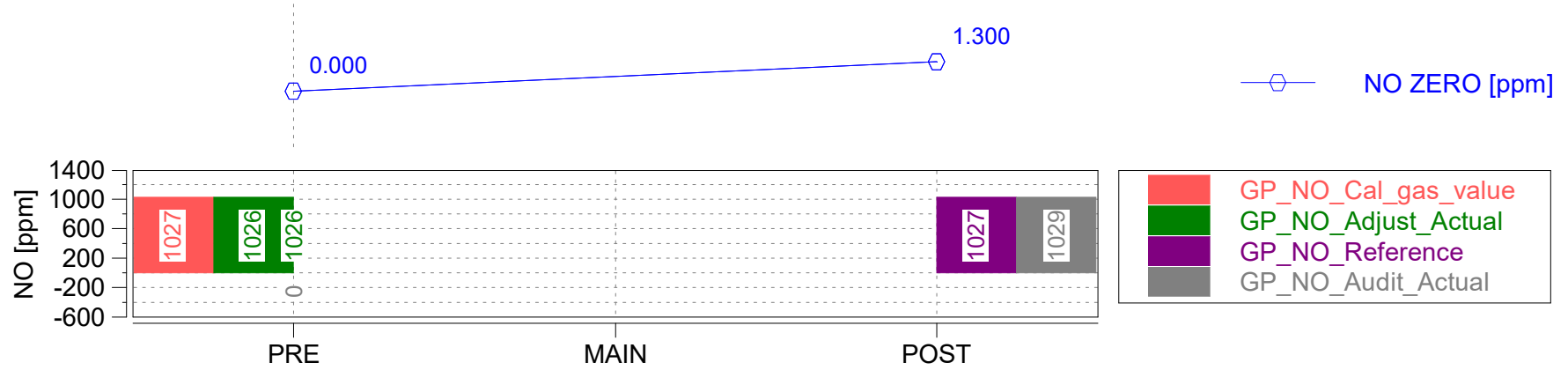
Start Date: 10/11/2017

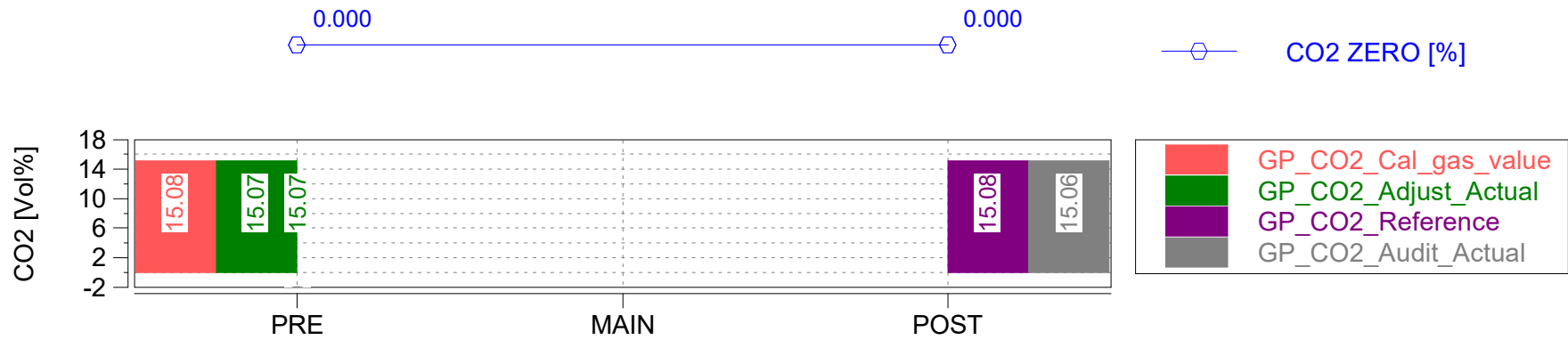
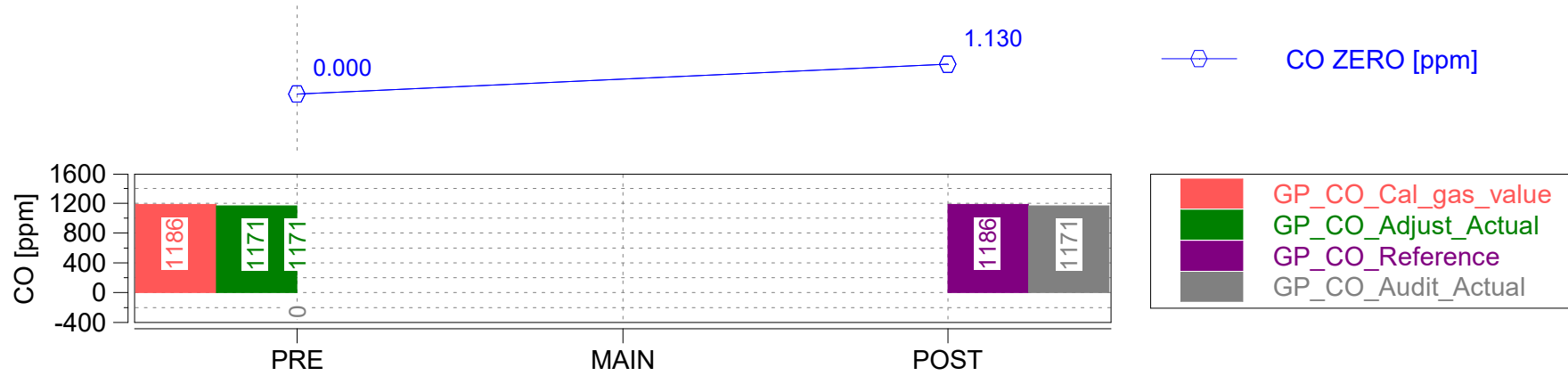
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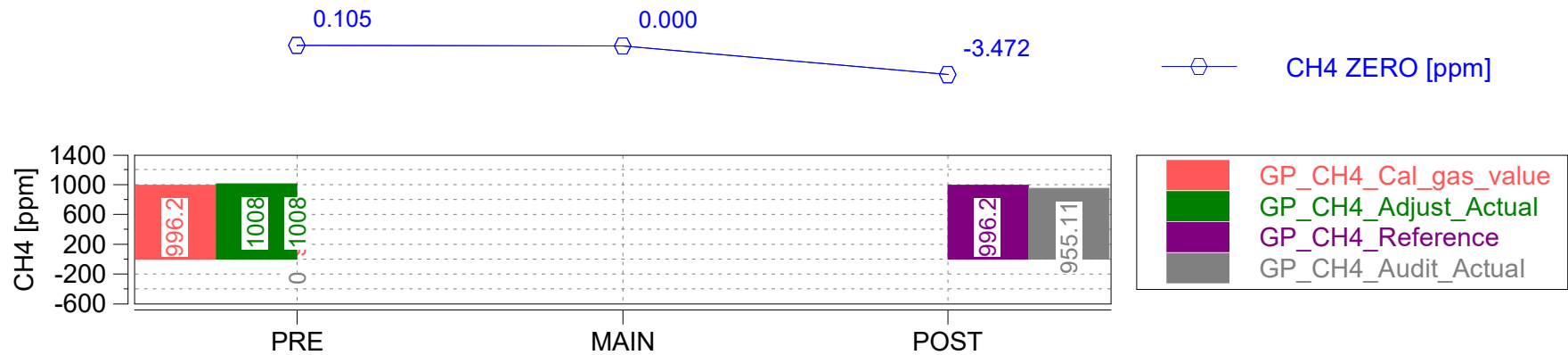
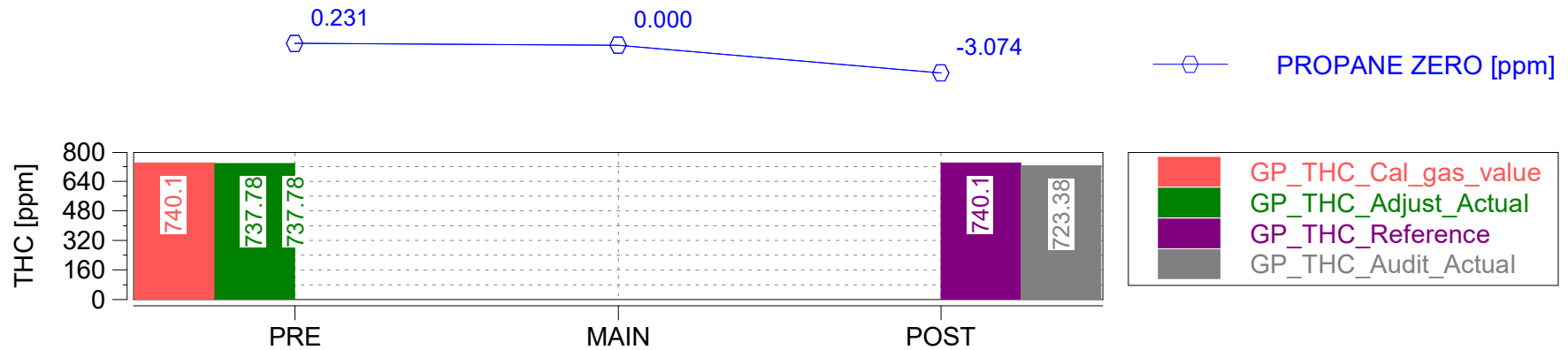


Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Passat / Model CC
Engine: Gasoline / 3.6L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90







#	Text	Value	Unit
-	----	----	----
1.0	Test Start: Date		-
2.0	Test Start: Time		-
3.0	Ambient Temperature	IFILE1:TM'Temperature	deg C
4.0	Ambient Temperature TS	0.00000	s
5.0	Ambient Pressure	IFILE1:TM'Pressure	kPa
6.0	Ambient Pressure TS	0.00000	s
7.0	Humidity Type	1.00000	-
8.0	Amb. Rel. Humidity	IFILE1:TM'Humidity	%
9.0	Amb. Rel. Humidity	0.00000	s
10.0	GPS Latitude		deg
11.0	GPS Latitude TS	0.00000	s
12.0	GPS Longitude		deg
13.0	GPS Longitude TS	0.00000	s
14.0	Altitude		m
15.0	Altitude TS	0.00000	s
16.0	GPS Quality		-
17.0	GPS Quality TS	0.00000	s
18.0	GroundSpeed		km/h
19.0	GroundSpeed TS	0.00000	s
20.0	Altitude from topographical map		m
21.0	Altitude TS of topographical map		s
22.0	TRIP_AMBIENT_GPS_AVL	YES	-
23.0	CALC_GPS_GROUNDSPEED	NO	-
24.0	EXHAUST_FLOW_AVL	NO	-
25.0	EXHAUST_FLOW_AVL_EFM	YES	-
26.0	Exhaust Flow Type	2.00000	-
27.0	Mass Flow	IFILE1:TM'PitotEFM_ExhaustG	various
28.0	Mass Flow TS	1.20000	s
29.0	Exhaust Pressure		kPa
30.0	Exhaust Pressure TS	1.20000	s

#	Text	Value	Unit
-	----	----	----
31.0	Exhaust Delta Pressure		kPa
32.0	Exhaust Pressure Delta TS	1.20000	s
33.0	Exhaust Temperature	IFILE1:TM'PitotEFM_ExhaustG	degC
34.0	Exhaust Temperature TS	1.20000	s
35.0	Lambda	N/A	-
36.0	Lambda TS		s
37.0	CO2_DIL		%
38.0	CO2_DIL TS		s
39.0	CVS Volume Flow		m3/min
40.0	TimeShift_CVS_VOL_FLOW		s
41.0	IN_CVS_PRESSURE		kPa
42.0	TimeShift_CVS_PRESSURE		s
43.0	IN_CVS_TEMP		degC
44.0	TimeShift_CVS_TEMP		s
45.0	Dry to Wet Conversion CO2	YES	-
46.0	Dry to Wet Conversion O2	YES	-
47.0	Dry to Wet Conversion NO	NO	-
48.0	Dry to Wet Conversion NO2	NO	-
49.0	Dry to Wet Conversion THC	NO	-
50.0	Dry to Wet Conversion CH4	NO	-
51.0	Dry to Wet Conversion O2	NO	-
52.0	CO2	IFILE1:TM'GPiS_CO2	%
53.0	CO2 TS	-7.70000	s
54.0	OS	IFILE1:TM'GPiS_O2	%
55.0	O2 TS	-8.20000	s
56.0	CO	IFILE1:TM'GPiS_CO	ppm
57.0	CO TS	-7.70000	s
58.0	NO	IFILE1:TM'GPiS_NO	ppm
59.0	NO TS	-5.90000	s
60.0	NO2	IFILE1:TM'GPiS_NO2	ppm

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#	Text	Value	Unit
-	----	----	----
61.0	NO2 TS	-5.90000	s
62.0	THC	IFILE1:TM'FIDiS_THC_C1	ppm
63.0	THC TS	0.00000	s
64.0	CH4	IFILE1:TM'FIDiS_CH4_C1	ppm
65.0	CH4 TS	0.00000	s
66.0	GAS_PEMS_Ethane_Efficiency	IFILE1:MOVE_AVL4925'GP_Et -	
67.0	GAS_PEMS_Methane_Efficiency	IFILE1:MOVE_AVL4925'GP_M -	
68.0	GAS_PEMS_Methane_Response	IFILE1:MOVE_AVL4925'GP_M -	
69.0	Zero Signal	IFILE1:TM'GPiS_STATE	0/1
70.0	Zero Signal TS	-5.90000	s
71.0	Zero Signal_FIDiS	IFILE1:TM'FIDiS_STATE	0/1
72.0	Zero Signal_FIDiS TS		s
73.0	Species Input Type	4.00000	-
74.0	GASPEMS=AVL493	NO	-
75.0	GASPEMS=AVL493_iX	NO	-
76.0	GASPEMS=AVL492	YES	-
77.0	GASPEMS=AVL4925	YES	-
78.0	PM: Type	4.00000	1=GFB+HC, 2=GFB, 3='PM=S
79.0	Filter ID from IFile	NO	-
80.0	Lab ID from IFile	NO	-
81.0	PM Filter: ID	N/A	ID
82.0	PM Filter: Lab	N/A	Name/ID
83.0	PM Filter: Weight before Test	N/A	mg
84.0	PM Filter: Weight after Test	N/A	mg
85.0	PM (HC Corr): Max. Exhaust Flow	N/A	scfm
86.0	Soot		mg/m3
87.0	Soot TS	-5.00000	s
88.0	Soot Sensor		mg/m3
89.0	Soot Sensor TS		s
90.0	PM Filter: Filter Flow Rate		l/min

#	Text	Value	Unit
-	----	----	----
91.0	PM Filter: Filter Flow Rate TS	-5.00000	s
92.0	PM Filter: Filter Dilution Ratio		-
93.0	PM Filter: Filter Dilution Ratio TS	-5.00000	s
94.0	PM Filter: Filter Trigger		-
95.0	PM Filter: Filter Trigger TS	-5.00000	s
96.0	PMPEMS=AVL494	YES	-
97.0	PMPEMS_AVL494_PROP_DIL	NO	-
98.0	PM dilution ratio min		-
99.0	PM_MaxExhaustFlowRate		-
100.0	PM_ExhaustFlow_Thresh		-
101.0	PM_total_flow_val		-
102.0	PM_total_flow_val_TS		-
103.0	PM_exh_mass_flow		-
104.0	PM_exh_mass_flow_TS		-
105.0	PN		#/cm3
106.0	TimeShift_PN		s
107.0	PN_STATE		-
108.0	PN TS STATE		s
109.0	PNPEMS_AVL496	NO	-
110.0	PN_CorrFactor	1.00000	
111.0	Time Alignment	1.00000	-
112.0	Time Alignment Dataset 1	N/A	0/1
113.0	Time Alignment Dataset 2	N/A	0/1
114.0	Time Alignment Thresh 1	N/A	-
115.0	Time Alignment Thresh 2	N/A	-
116.0			
117.0			
118.0			
119.0			
120.0			

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#	Text	Value	Unit
-	----	----	----
121.0			
122.0	Trigger		0/1
123.0	Trigger TS		s
124.0	FTIR_NAME_1		-
125.0	FTIR_MW_1		-
126.0	FTIR_CHANNEL_1		-
127.0	FTIR_CHANNEL_TS_1		-
128.0	FTIR_CHANNEL_DRY_1	NO	-
129.0	FTIR_NAME_2		-
130.0	FTIR_MW_2		-
131.0	FTIR_CHANNEL_2		-
132.0	FTIR_CHANNEL_TS_2		-
133.0	FTIR_CHANNEL_DRY_2	NO	-
134.0	FTIR_NAME_3		-
135.0	FTIR_MW_3		-
136.0	FTIR_CHANNEL_3		-
137.0	FTIR_CHANNEL_TS_3		-
138.0	FTIR_CHANNEL_DRY_3	NO	-
139.0	FTIR_NAME_4		-
140.0	FTIR_MW_4		-
141.0	FTIR_CHANNEL_4		-
142.0	FTIR_CHANNEL_TS_4		-
143.0	FTIR_CHANNEL_DRY_4	NO	-
144.0	FTIR_NAME_5		-
145.0	FTIR_MW_5		-
146.0	FTIR_CHANNEL_5		-
147.0	FTIR_CHANNEL_TS_5		-
148.0	FTIR_CHANNEL_DRY_5	NO	-
149.0	FTIR_NAME_6		-
150.0	FTIR_MW_6		-

#	Text	Value	Unit
-	----	----	----
151.0	FTIR_CHANNEL_6		-
152.0	FTIR_CHANNEL_TS_6		-
153.0	FTIR_CHANNEL_DRY_6	NO	-
154.0	FTIR_NAME_7		-
155.0	FTIR_MW_7		-
156.0	FTIR_CHANNEL_7		-
157.0	FTIR_CHANNEL_TS_7		-
158.0	FTIR_CHANNEL_DRY_7	NO	-
159.0	FTIR_NAME_8		-
160.0	FTIR_MW_8		-
161.0	FTIR_CHANNEL_8		-
162.0	FTIR_CHANNEL_TS_8		-
163.0	FTIR_CHANNEL_DRY_8	NO	-
164.0	FTIR_NAME_9		-
165.0	FTIR_MW_9		-
166.0	FTIR_CHANNEL_9		-
167.0	FTIR_CHANNEL_TS_9		-
168.0	FTIR_CHANNEL_DRY_9	NO	-
169.0	FTIR_NAME_10		-
170.0	FTIR_MW_10		-
171.0	FTIR_CHANNEL_10		-
172.0	FTIR_CHANNEL_TS_10		-
173.0	FTIR_CHANNEL_DRY_10	NO	-
174.0	FTIR_NAME_11		-
175.0	FTIR_MW_11		-
176.0	FTIR_CHANNEL_11		-
177.0	FTIR_CHANNEL_TS_11		-
178.0	FTIR_CHANNEL_DRY_11	NO	-
179.0	FTIR_NAME_12		-
180.0	FTIR_MW_12		-

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#	Text	Value	Unit
-	----	----	----
181.0	FTIR_CHANNEL_12		-
182.0	FTIR_CHANNEL_TS_12		-
183.0	FTIR_CHANNEL_DRY_12	NO	-
184.0	FTIR_NAME_13		-
185.0	FTIR_MW_13		-
186.0	FTIR_CHANNEL_13		-
187.0	FTIR_CHANNEL_TS_13		-
188.0	FTIR_CHANNEL_DRY_13	NO	-
189.0	FTIR_NAME_14		-
190.0	FTIR_MW_14		-
191.0	FTIR_CHANNEL_14		-
192.0	FTIR_CHANNEL_TS_14		-
193.0	FTIR_CHANNEL_DRY_14	NO	-
194.0	FTIR_NAME_15		-
195.0	FTIR_MW_15		-
196.0	FTIR_CHANNEL_15		-
197.0	FTIR_CHANNEL_TS_15		-
198.0	FTIR_CHANNEL_DRY_15	NO	-
199.0	FTIR_NAME_16		-
200.0	FTIR_MW_16		-
201.0	Vehicle Type	2017 VW Passat	-
202.0	Vehicle Info	Model CC	-
203.0	Engine Type	Gasoline	-
204.0	Engine Info	3.6L	-
205.0	Engine Torque		Nm
206.0	Curb Idle Load		%
207.0	Idle Speed		rpm
208.0	HYBRID_OVC_REF_CO2_gkm		g/km
209.0	Engine Concept	1.00000	-
210.0	Alpha	1.93000	-

#	Text	Value	Unit
-	----	----	----
211.0	Beta	1.00000	
212.0	Gamma	0.00000	
213.0	Delta	0.00000	
214.0	Epsilon	0.03200	
215.0	X_C	83.00000	
216.0	X_H	13.30000	
217.0	X_N	0.00000	
218.0	X_O	3.50000	
219.0	X_S	0.00000	
220.0	Fuel_Density	747.50000	
221.0	rho_exhaust	1.29310	
222.0	U_CO2	1.51800	
223.0	U_CO	0.96600	
224.0	U_NO	1.58700	
225.0	U_NO2	1.58700	
226.0	U_NOx	1.58700	
227.0	U_HC	0.49900	
228.0	U_NMHC	0.47100	
229.0	U_CH4	0.55300	
230.0	U_O2	1.10400	
231.0	Fuel Type	2.00000	-
232.0	exhaust mass flow type (YES/NO)	YES	-
233.0	Distance Calculation Type	1.00000	-
234.0	Velocity Statistics Calculation Type	2.00000	-
235.0	RDE vehicle class	1.00000	-
236.0	TM_CITY0		s
237.0	TM_CITY1		s
238.0	TM_RURAL0		s
239.0	TM_RURAL1		s
240.0	TM_RURAL2_0		s

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Vehicle: 2017 VW Passat / Model CC
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Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
241.0	TM_RURAL2_1		s
242.0	Second Rural Part for Time Marks (NO		-
243.0	TM_MW0		s
244.0	TM_MW1		s
245.0	VELOCITY_LIMIT_STOP	2.00000	km/h
246.0	VELOCITY_LIMIT_URBAN	50.00000	km/h
247.0	VELOCITY_LIMIT_RURAL	75.00000	km/h
248.0	Intake Manifold Pressure Type	1.00000	-
249.0	Velocity	IFILE1:TM'OBD_Vehicle_Spee	km/h
250.0	Velocity TS	1.30000	s
251.0	Velocity FACTOR	1.00000	-
252.0	Coolant Temperature	IFILE1:TM'OBD_Engine_Coola	degC
253.0	Coolant Temperature TS	1.30000	s
254.0	Oil Temperature		degC
255.0	Oil Temperature TS	1.30000	s
256.0	Intake Manifold Temperature		degC
257.0	Intake Manifold Temp TS	1.30000	s
258.0	Intake Manifold Pressure	IFILE1:TM'OBD_Intake_manifo	kPa
259.0	Intake Manifold Pressure TS	1.30000	s
260.0	Throttle Position		%
261.0	Throttle TS	1.30000	s
262.0	TYP_IDLE_MASS_FLOW		kg/h
263.0	Torque Type	1.00000	-
264.0	Speed	IFILE1:TM'OBD_Engine_RPM	rpm
265.0	Speed TS	1.30000	s
266.0	Torque		Nm
267.0	Torque TS	1.30000	s
268.0	Friction Torque	N/A	Nm
269.0	Friction Torque TS	N/A	s
270.0	Reference Torque	N/A	Nm

#	Text	Value	Unit
-	----	----	----
271.0	Reference Torque TS	N/A	s
272.0	k_VELINE		-
273.0	D_VELINE		-
274.0	Fuel Flow Type	2.00000	-
275.0	Air Flow Type	1.00000	-
276.0	Fuel Rate		various
277.0	Air Rate		various
278.0	Fuel Rate TS	1.30000	s
279.0	No_Cylinders		-
280.0	Air Rate TS	1.30000	s
281.0	FTIR_CHANNEL_32		-
282.0	FTIR_CHANNEL_TS_32		-
283.0	FTIR_CHANNEL_DRY_32	NO	-
284.0	FTIR_NAME_33		-
285.0	FTIR_MW_33		-
286.0	FTIR_CHANNEL_33		-
287.0	FTIR_CHANNEL_TS_33		-
288.0	FTIR_CHANNEL_DRY_33	NO	-
289.0	FTIR_NAME_34		-
290.0	FTIR_MW_34		-
291.0	FTIR_CHANNEL_34		-
292.0	FTIR_CHANNEL_TS_34		-
293.0	FTIR_CHANNEL_DRY_34	NO	-
294.0	FTIR_NAME_35		-
295.0	FTIR_MW_35		-
296.0	FTIR_CHANNEL_35		-
297.0	FTIR_CHANNEL_TS_35		-
298.0	FTIR_CHANNEL_DRY_35	NO	-
299.0	FTIR_NAME_36		-
300.0	FTIR_MW_36		-

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Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
301.0	FTIR_CHANNEL_36		-
302.0	FTIR_CHANNEL_TS_36		-
303.0	FTIR_CHANNEL_DRY_36	NO	-
304.0	FTIR_NAME_37		-
305.0	FTIR_MW_37		-
306.0	FTIR_CHANNEL_37		-
307.0	FTIR_CHANNEL_TS_37		-
308.0	FTIR_CHANNEL_DRY_37	NO	-
309.0	FTIR_NAME_38		-
310.0	FTIR_MW_38		-
311.0	FTIR_CHANNEL_38		-
312.0	FTIR_CHANNEL_TS_38		-
313.0	FTIR_CHANNEL_DRY_38	NO	-
314.0	FTIR_NAME_39		-
315.0	FTIR_MW_39		-
316.0	FTIR_CHANNEL_39		-
317.0	FTIR_CHANNEL_TS_39		-
318.0	FTIR_CHANNEL_DRY_39	NO	-
319.0	FTIR_NAME_40		-
320.0	FTIR_MW_40		-
321.0	FTIR_CHANNEL_40		-
322.0	FTIR_CHANNEL_TS_40		-
323.0	FTIR_CHANNEL_DRY_40	NO	-
324.0	Legislation Type (1=HDIUT 2=EU H	4.00000	-
325.0	WholeTest_NOx_corr	5.00000	-
326.0	WholeTest_Hum_corr	2.00000	-
327.0	CD_Distance	0.00000	km
328.0	CD_NOx	0.00000	mg/km
329.0	CD_CO	0.00000	mg/km
330.0	CD_CO2	0.00000	g/km

#	Text	Value	Unit
-	----	----	----
331.0	CD_NMHC	0.00000	mg/km
332.0	CD_CH4	0.00000	mg/km
333.0	CD_THC	0.00000	mg/km
334.0	CD_PN		#/km
335.0	WLTC_LOW_SPEED_gkm		g/km
336.0	WLTC_LOW_SPEED_FAC	1.20000	-
337.0	WLTC_MEDIUM_SPEED_gkm		g/km
338.0	WLTC_HIGH_SPEED_gkm		g/km
339.0	WLTC_HIGH_SPEED_FAC	1.10000	-
340.0	WLTC_EXTRA_HIGH_SPEED_gkm		g/km
341.0	WLTC_EXTRA_HIGH_SPEED_FA	1.05000	-
342.0	TOL_NORMAL_DRIVING	25.00000	%
343.0	TOL_SEVERE_DRIVING	50.00000	%
344.0	Increase Tolerance Nomral Driving	NO	-
345.0	Bin1_min		km/h
346.0	Bin2_min		km/h
347.0	Bin3_min		km/h
348.0	Bin1_max		km/h
349.0	Bin2_max		km/h
350.0	Bin3_max		km/h
351.0	Clear_R0	125.40000	N
352.0	Clear_R1	0.29300	Nh/km
353.0	Clear_R2	0.02795	N*(h/km) ²
354.0	Clear_SMK	1470.00000	kg
355.0	Clear_Rated_Power	140.00000	kW
356.0	Clear_Ref_Velocity	70.00000	km/h
357.0	Clear_Ref_Acc	0.45000	m/s ²
358.0	Clear_Smooth	3.00000	s
359.0	EXTC_From_High_Temp	30.00000	degC
360.0	EXTC_To_High_Temp	35.00000	degC

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#	Text	Value	Unit
-	----	----	----
361.0	EXTC_From_Low_Temp	-7.00000	degC
362.0	EXTC_To_Low_Temp	0.00000	degC
363.0	Euro 6d or Euro 6d temp	NO	-
364.0	EXTC_From_Altitude	700.00000	m
365.0	EXTC_To_Altitude	1300.00000	m
366.0	EXTC_CORR_FAC	1.60000	
367.0	weight cold start (YES/NO)	NO	-
368.0	precon and soak done (YES/NO)	NO	-
369.0	PATH_PRECON_FILE		
370.0	filter velocity (YES/NO)	NO	-
371.0	filter velocity auto(YES/NO)	NO	-
372.0	Ki_CO		
373.0	Ki_CO2		
374.0	Ki_NOx		
375.0	Ki_FACTOR_CO2 (YES/NO)	NO	-
376.0	Ki_OFFSET_CO2 (YES/NO)	NO	-
377.0	Ki_FACTOR_CO (YES/NO)	NO	-
378.0	Ki_OFFSET_CO (YES/NO)	NO	-
379.0	Ki_FACTOR_NOx (YES/NO)	NO	-
380.0	Ki_OFFSET_NOx (YES/NO)	NO	-
381.0	Ki_OFF (YES/NO)	NO	-
382.0	HD legislations	1.00000	-
383.0	RDE legislations	1.00000	-
384.0	Submission Documents (YES/NO)	NO	-
385.0	General Setup Parameters Text	Highway	-
386.0	Legislation Setup Parameters Text	Highway	-
387.0	Trip Info		-
388.0	IN_TIME_REF		-
389.0	Sub-Trip Start: Auto	YES	-
390.0	Sub-Trip Start: Seconds	N/A	s

#	Text	Value	Unit
-	----	----	----
391.0	Sub-Trip End: Auto	YES	-
392.0	Sub-Trip End: Seconds	N/A	s
393.0	Unit System	2.00000	-
394.0	Calculate: PM Emissions	NO	-
395.0	Calculate: PN Emissions	NO	-
396.0	Output: Summary	YES	-
397.0	Output: Emissions	YES	-
398.0	Output: Raw Data	YES	-
399.0	Output: Zero Span	YES	-
400.0	Output: Data Consistency	NO	-
401.0	Output: Window Plots	YES	-
402.0	Fuel Rate ECU vs. EU ISO16183	y = 10000000000.0000 x - 0.000 R ² =10000000000.000 SEE=	
403.0	PEMS post processing version	Rel_10_B192	
404.0	Concerto version	480.00000	
405.0	Concerto build	215.00000	
406.0	USERNAME	EFR	

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Passat / Model CC
Engine: Gasoline / 3.6L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Mountain
Page: Trip Summary

Start Date: 10/11/2017
Start Time: 07:35:54.0



Trip Duration	3387.00	s	ave THC	7.58530	ppm	BS CO2	n/a	g/hphr
Trip Duration (a)	3387.00	s	ave NMHC	8.38198	ppm	BS CO	n/a	g/hphr
Trip Distance	28.82	mi	ave CH4	-0.72425	ppm	BS THC	n/a	g/hphr
Trip Distance (a)	28.82	mi	ave CO	59.51098	ppm	BS NMHC	n/a	g/hphr
Trip Fuel Cons. (b)	n/a	kg	ave CO2	11.43020	%	BS CH4	n/a	g/hphr
Trip Fuel Cons. (ab)	n/a	kg	ave NOx	6.21525	ppm	BS NO (d)	n/a	g/hphr
Trip Fuel Cons. EU (ac)	3.57	kg	ave PM	n/a	mg/m3	BS NO2	n/a	g/hphr
Trip Fuel Cons. US (ac)	3.55	kg	ave Soot meas	n/a	mg/m3	BS NOx	n/a	g/hphr
Trip Fuel Cons. Volume (b)	n/a	gall	ave Soot	n/a	mg/m3	BS Soot	n/a	g/hphr
Trip Fuel Cons. Volume (ab)	n/a	gall	ave PN	n/a	#/cm3	BS Soot meas	n/a	g/hphr
Trip Fuel Cons. Volume EU (ac)	1.26	gall	tot THC	0.64879	g	BS PM	n/a	g/hphr
Trip Fuel Cons. Volume US (ac)	1.25	gall	tot NMHC	0.55843	g	BS PN	n/a	#/hpr
Trip Fuel Economy (b)	n/a	mpg_US	tot CH4	0.10676	g	DS CO2	373.91633	g/mi
Trip Fuel Economy (ab)	n/a	mpg_US	tot CO	10.81454	g	DS CO	0.37522	g/mi
Trip Fuel Economy EU (ac)	22.81	mpg_US	tot CO2	10777.06186	g	DS THC	0.02251	g/mi
Trip Fuel Economy US (ac)	22.97	mpg_US	tot NO (d)	0.66022	g	DS NMHC	0.01938	g/mi
Trip Av. Eng. Speed	1482.77	rpm	tot NO2	0.10290	g	DS CH4	0.00370	g/mi
Trip Av. Torque	n/a	lbft	tot NOx	0.73629	g	DS NO (d)	0.02291	g/mi
Trip Av. Power	n/a	hp	tot Soot	n/a	g	DS NO2	0.00357	g/mi
Trip Work	n/a	hphr	tot Soot meas	n/a	g	DS NOx	0.02555	g/mi
Trip Exhaust Mass	58.04	kg	tot PM	n/a	g	DS Soot	n/a	g/mi
Trip Exhaust Mass EU (ac)	n/a	kg	tot PN	n/a	#	DS Soot meas	n/a	g/mi
Trip Exhaust Mass US (ac)	n/a	kg	PM measurement type	0.00000	-	DS PM	n/a	g/mi
Trip Av. Amb. Temperature	61.19	deg_F	PM correction type	1.00000	alpha(HC)	DS PN	n/a	#/mi
Trip Av. Humidity	70.14	%	tot Soot on PM filter (estim.)	n/a	mg	FS CO2	n/a	g/kg
Fuel Type	Petrol (E10)		Soot --> PM simple scaling factor	1.00000	-	FS CO	n/a	g/kg
			Soot --> PM alpha scaling factor	0.00000	-	FS THC	n/a	g/kg
			Trip Av. Veh. Speed	30.63467	mi/hr	FS NMHC	n/a	g/kg
			Trip Velocity Zero	12.51845	%	FS CH4	n/a	g/kg
			Trip Velocity Urban	49.60142	%	FS NO (d)	n/a	g/kg
			Trip Velocity Rural	23.56067	%	FS NO2	n/a	g/kg
			Trip Velocity Motorway	26.83791	%	FS NOx	n/a	g/kg
						FS Soot	n/a	g/kg
						FS Soot meas	n/a	g/kg
						FS PM	n/a	g/kg
						FS PN	n/a	#/kg

(a) GAS PEMS measurement state only, (b) based on fuel rate input (ECU, Fuel Meter), (c) calculated from carbon balance
(d) NO calculated using molecular weight of NO2

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Passat / Model CC
Engine: Gasoline / 3.6L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Mountain

Page: Trip Summary Drift Corrected

Start Date: 10/11/2017

Start Time: 07:35:54.0

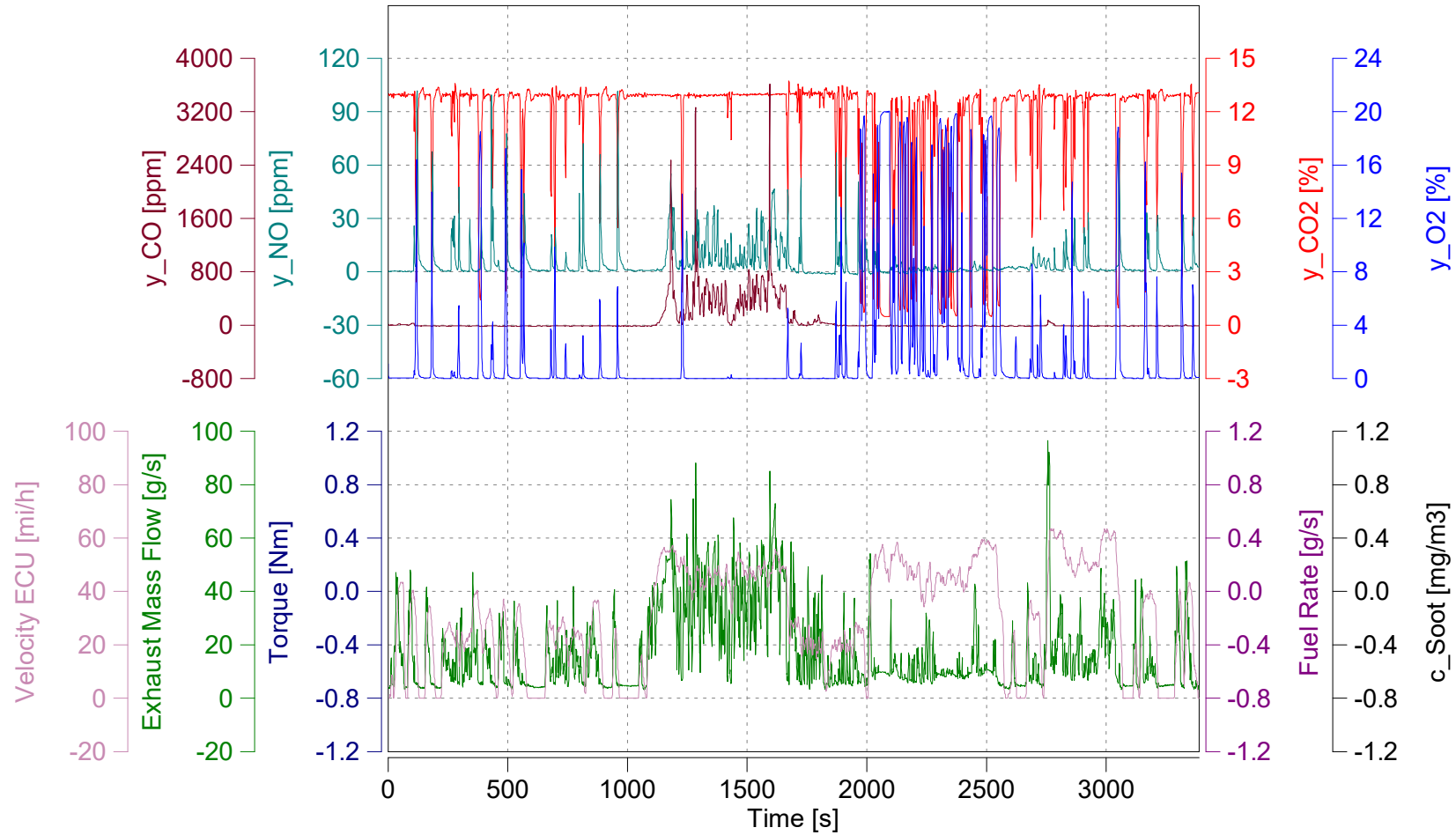


Trip Duration	3387.00	s	ave THC DC	10.34313	ppm	BS CO2 DC	n/a	g/hphr
Trip Duration (a)	3387.00	s	ave NMHC DC	11.33450	ppm	BS CO DC	n/a	g/hphr
Trip Distance	28.82	mi	ave CH4 DC	-0.90124	ppm	BS THC DC	n/a	g/hphr
Trip Distance (a)	28.82	mi	ave CO DC	60.24165	ppm	BS NMHC DC	n/a	g/hphr
Trip Fuel Cons. (b)	n/a	kg	ave CO2 DC	11.44158	%	BS CH4 DC	n/a	g/hphr
Trip Fuel Cons. (ab)	n/a	kg	ave NOx DC	6.21322	ppm	BS NO DC (d)	n/a	g/hphr
Trip Fuel Cons. EU (ac)	3.57	kg	ave PM	n/a	mg/m3	BS NO2 DC	n/a	g/hphr
Trip Fuel Cons. US (ac)	3.55	kg	ave Soot meas	n/a	mg/m3	BS NOx DC	n/a	g/hphr
Trip Fuel Cons. Volume (b)	n/a	gall	ave Soot	n/a	mg/m3	BS Soot	n/a	g/hphr
Trip Fuel Cons. Volume (ab)	n/a	gall	ave PN DC	n/a	#/cm3	BS Soot meas	n/a	g/hphr
Trip Fuel Cons. Volume EU (ac)	1.26	gall	tot THC DC	0.88468	g	BS PM	n/a	g/hphr
Trip Fuel Cons. Volume US (ac)	1.25	gall	tot NMHC DC	0.77773	g	BS PN DC	n/a	#/hpr
Trip Fuel Economy (b)	n/a	mpg_US	tot CH4 DC	0.10024	g	DS CO2 DC	374.28864	g/mi
Trip Fuel Economy (ab)	n/a	mpg_US	tot CO DC	10.94732	g	DS CO DC	0.37982	g/mi
Trip Fuel Economy EU (ac)	22.81	mpg_US	tot CO2 DC	10787.79242	g	DS THC DC	0.03069	g/mi
Trip Fuel Economy US (ac)	22.97	mpg_US	tot NO DC (d)	0.65949	g	DS NMHC DC	0.02698	g/mi
Trip Av. Eng. Speed	1482.77	rpm	tot NO2 DC	0.10330	g	DS CH4 DC	0.00348	g/mi
Trip Av. Torque	n/a	lbft	tot NOx DC	0.73589	g	DS NO DC (d)	0.02288	g/mi
Trip Av. Power	n/a	hp	tot Soot	n/a	g	DS NO2 DC	0.00358	g/mi
Trip Work	n/a	hphr	tot Soot meas	n/a	g	DS NOx DC	0.02553	g/mi
Trip Exhaust Mass	58.04	kg	tot PM	n/a	g	DS Soot	n/a	g/mi
Trip Exhaust Mass EU (ac)	n/a	kg	tot PN DC	n/a	#	DS Soot meas	n/a	g/mi
Trip Exhaust Mass US (ac)	n/a	kg	PM measurement type	0.00000	-	DS PM	n/a	g/mi
Trip Av. Amb. Temperature	61.19	deg_F	PM correction type	1.00000	alpha(HC)	DS PN DC	n/a	#/mi
Trip Av. Humidity	70.14	%	tot Soot on PM filter (estim.)	n/a	mg	FS CO2 DC	n/a	g/kg
Fuel Type	Petrol (E10)		Soot --> PM simple scaling factor	1.00000	-	FS CO DC	n/a	g/kg
			Soot --> PM alpha scaling factor	0.00000	-	FS THC DC	n/a	g/kg
			Trip Av. Veh. Speed	30.63467	mi/hr	FS NMHC DC	n/a	g/kg
			Trip Velocity Zero	12.51845	%	FS CH4 DC	n/a	g/kg
			Trip Velocity Urban	49.60142	%	FS NO DC (d)	n/a	g/kg
			Trip Velocity Rural	23.56067	%	FS NO2 DC	n/a	g/kg
			Trip Velocity Motorway	26.83791	%	FS NOx DC	n/a	g/kg
						FS Soot	n/a	g/kg
						FS Soot meas	n/a	g/kg
						FS PM	n/a	g/kg
						FS PN DC	n/a	#/kg

(a) GAS PEMS measurement state only, (b) based on fuel rate input (ECU, Fuel Meter), (c) calculated from carbon balance
 (d) NO calculated using molecular weight of NO2

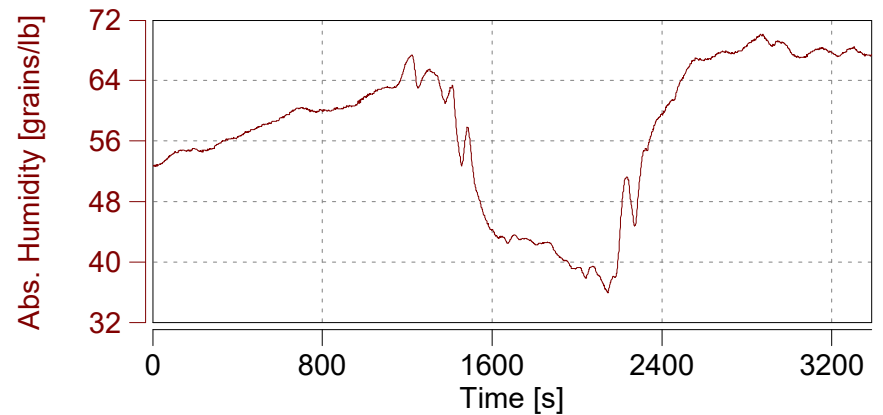
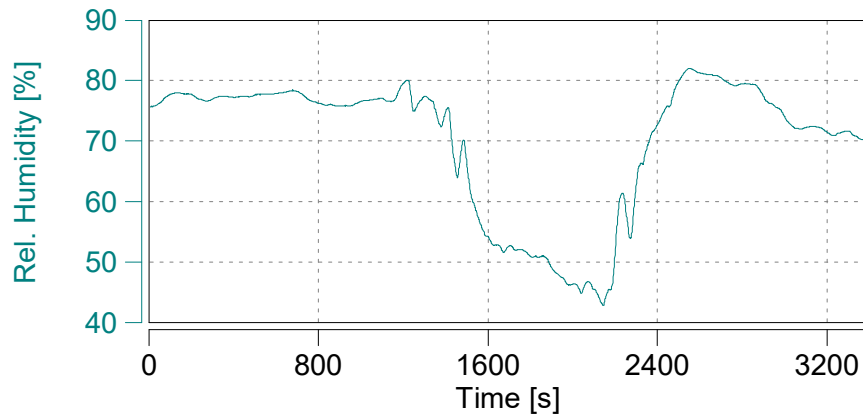
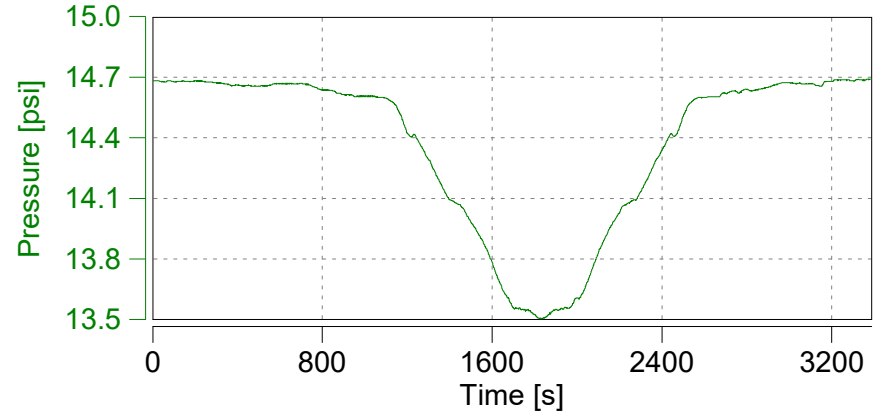
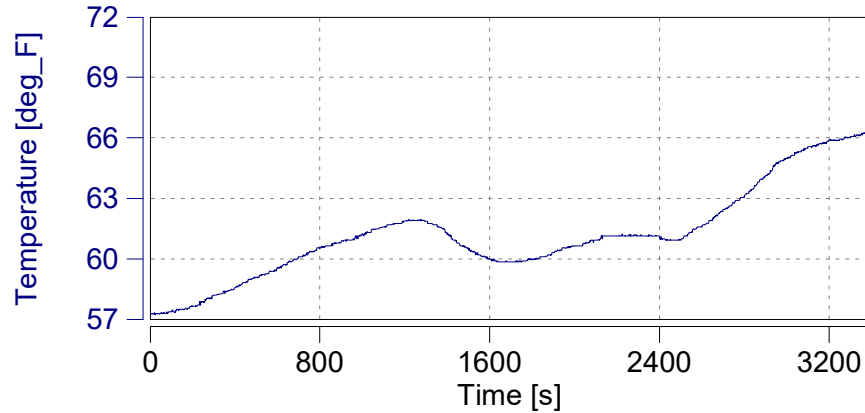
Concerto Version: 480 Build 215, Serial Number: 8468
 M.O.V.E Post-Processing: Rel_10_B192

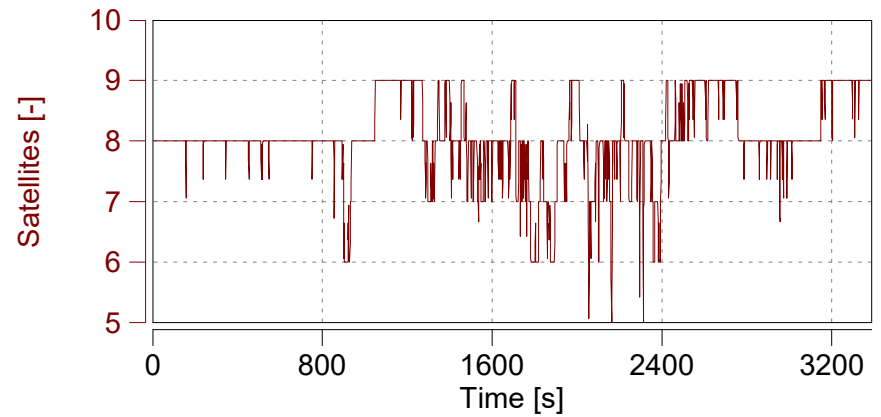
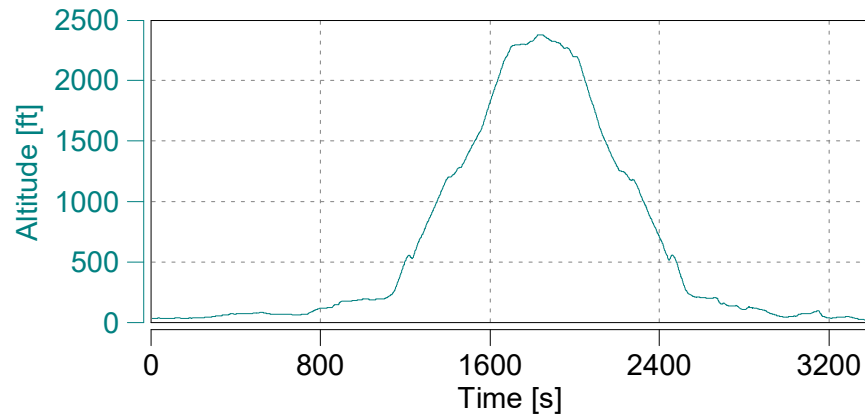
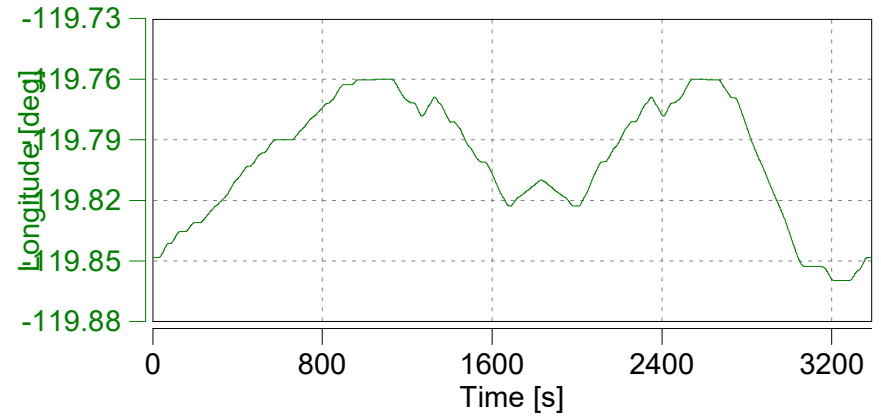
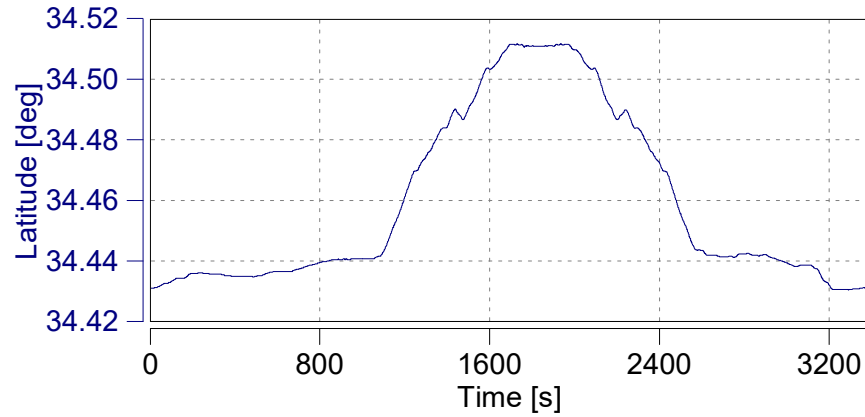
Vehicle: 2017 VW Passat / Model CC
 Engine: Gasoline / 3.6L
 NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
 Dry / Wet Corr.: 2 - CFR40 §86.1342-90

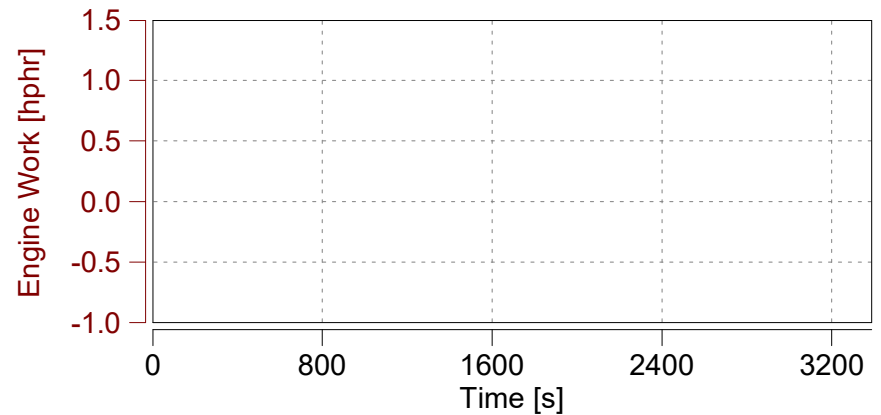
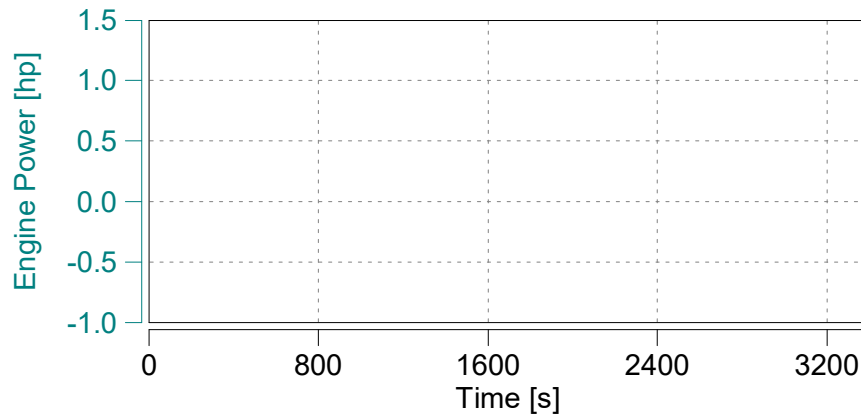
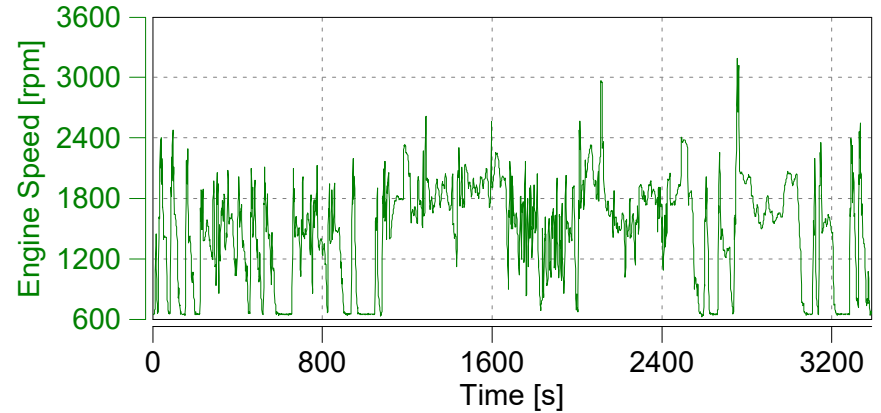
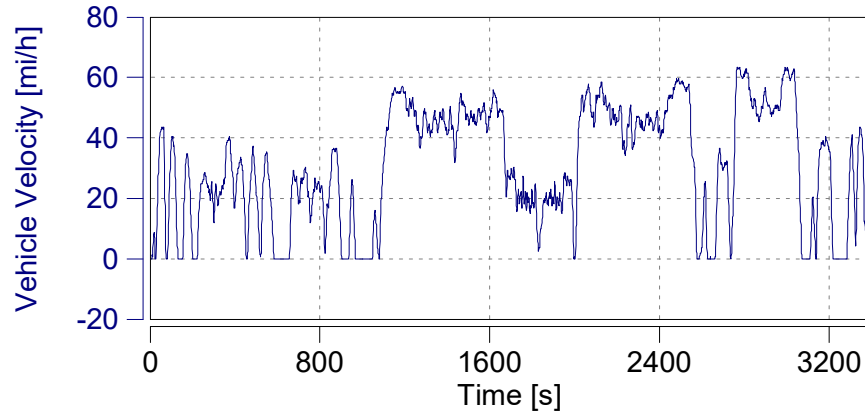


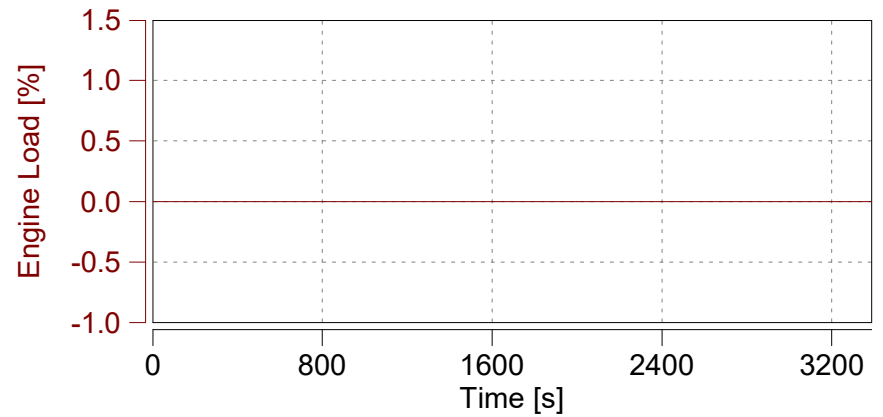
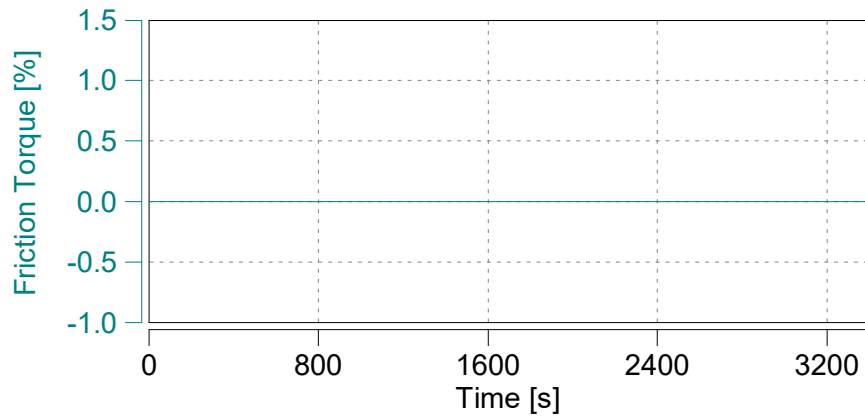
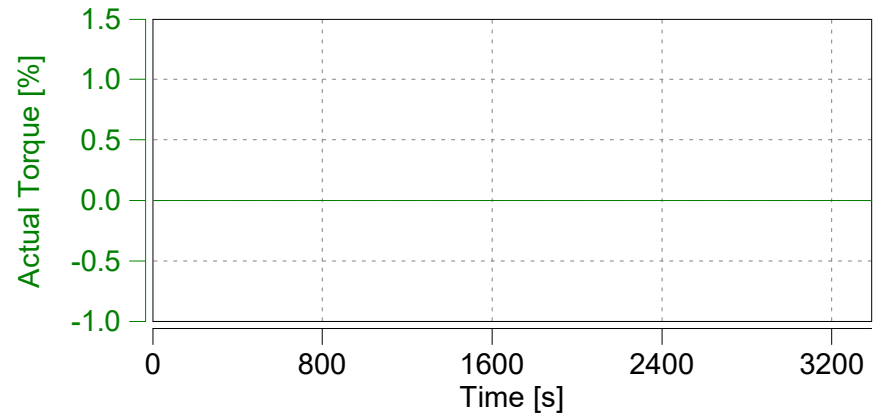
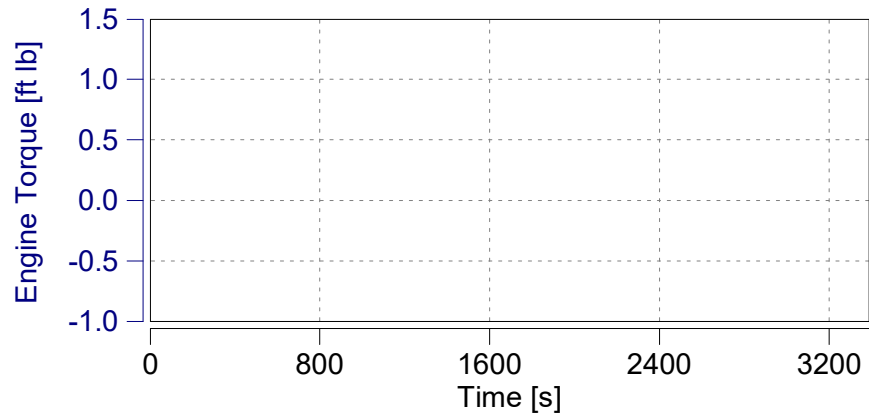
Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

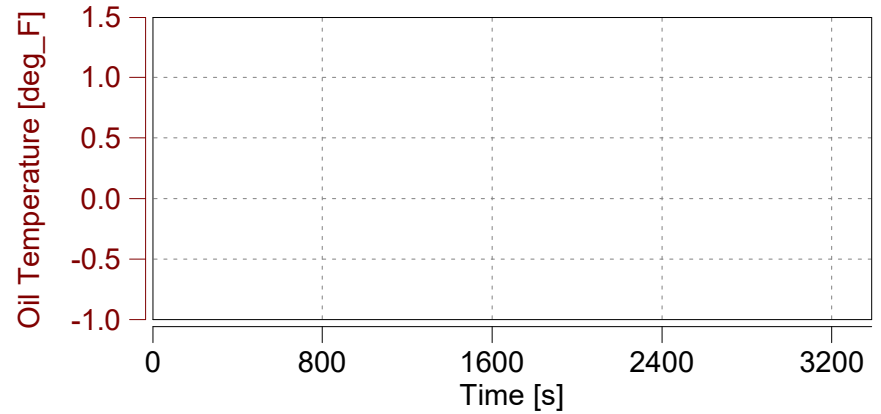
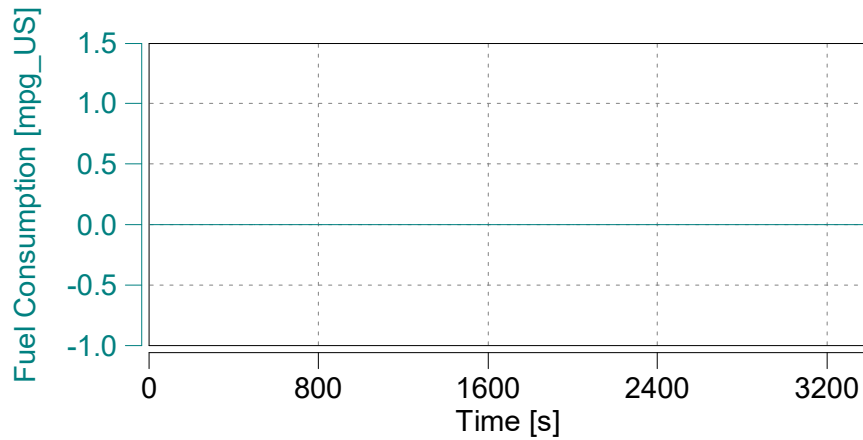
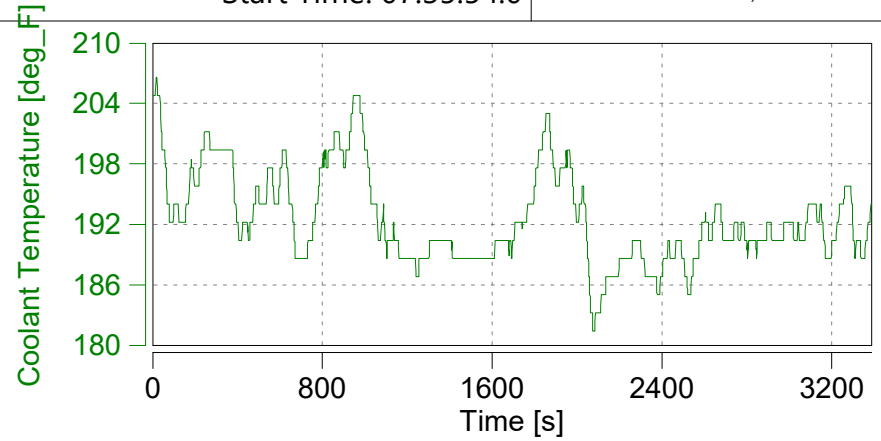
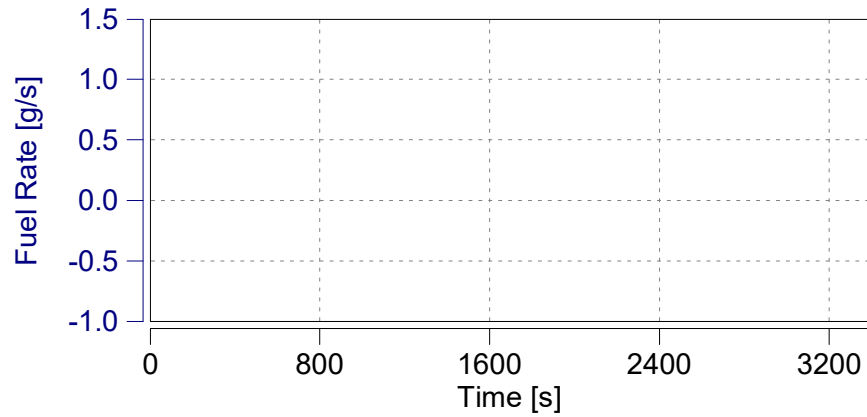
Vehicle: 2017 VW Passat / Model CC
Engine: Gasoline / 3.6L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

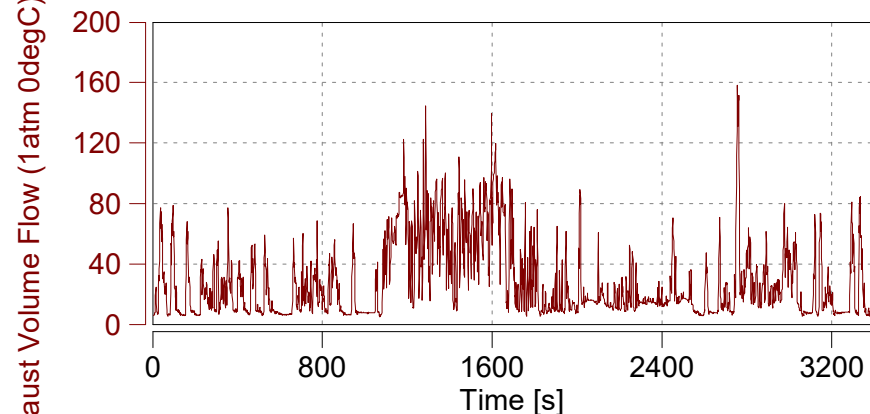
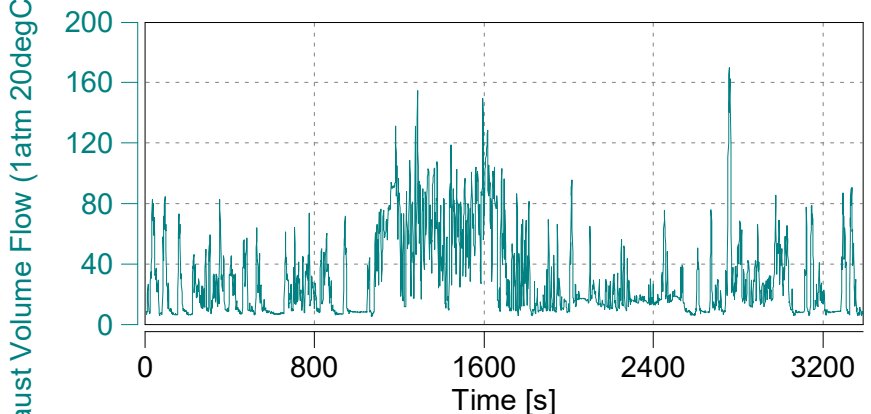
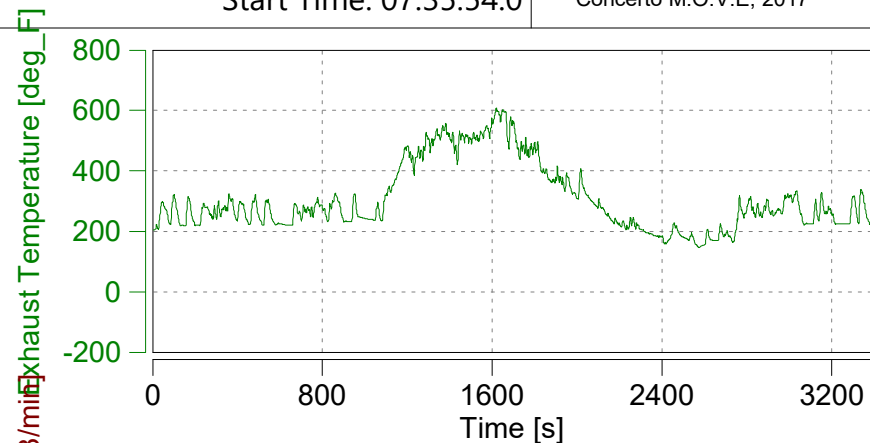
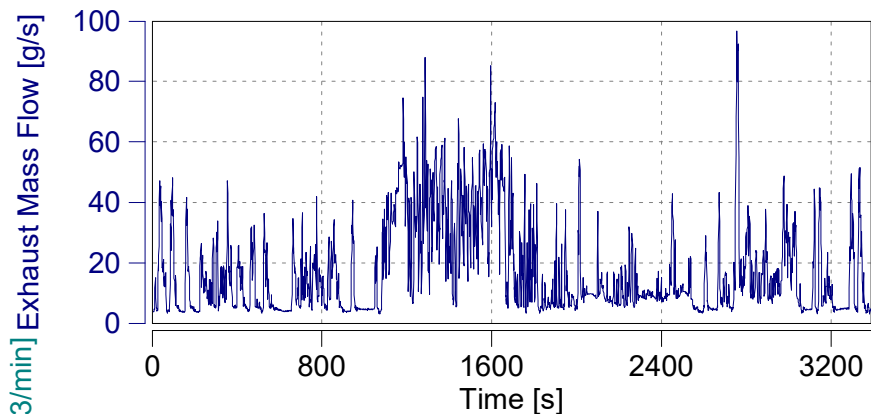


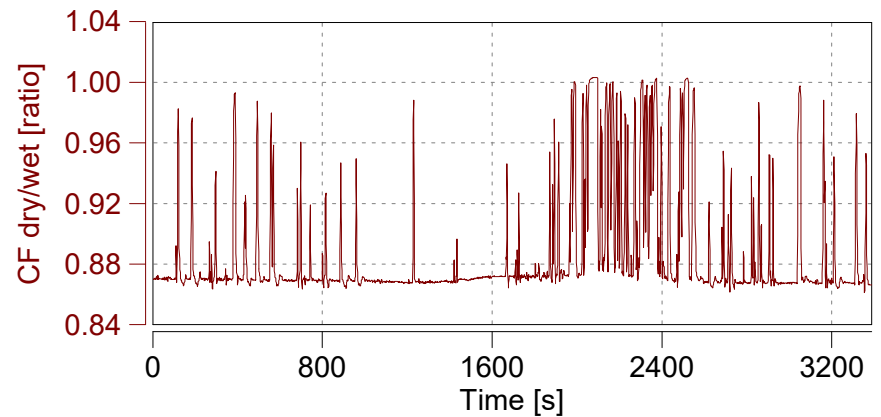
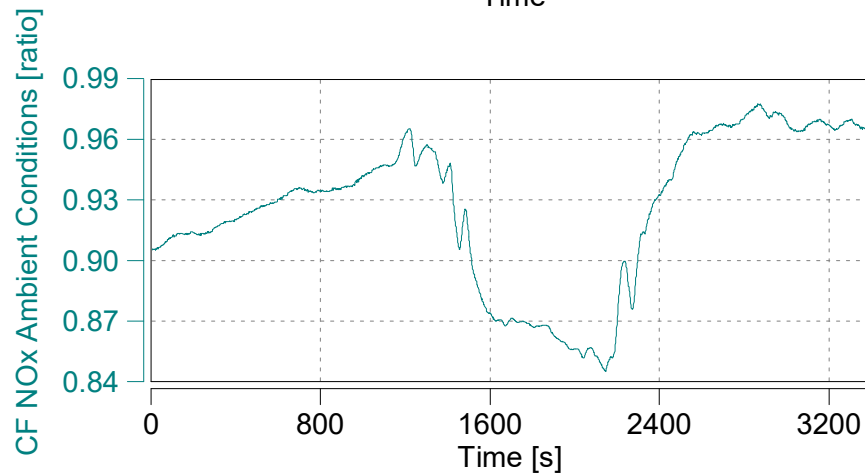
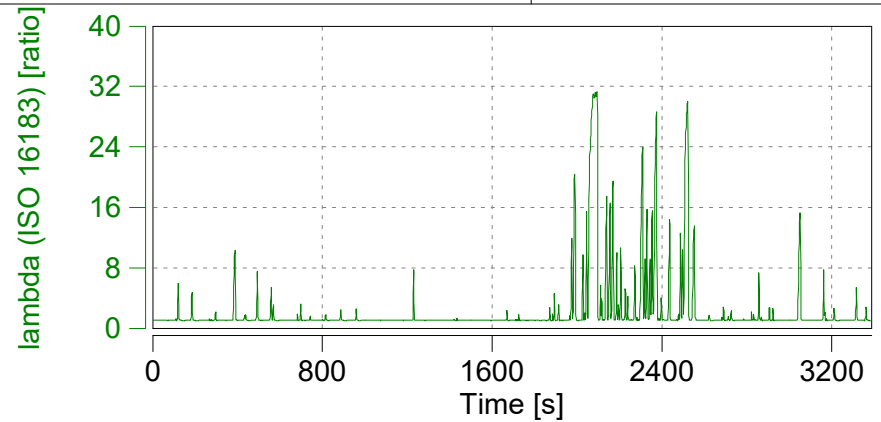
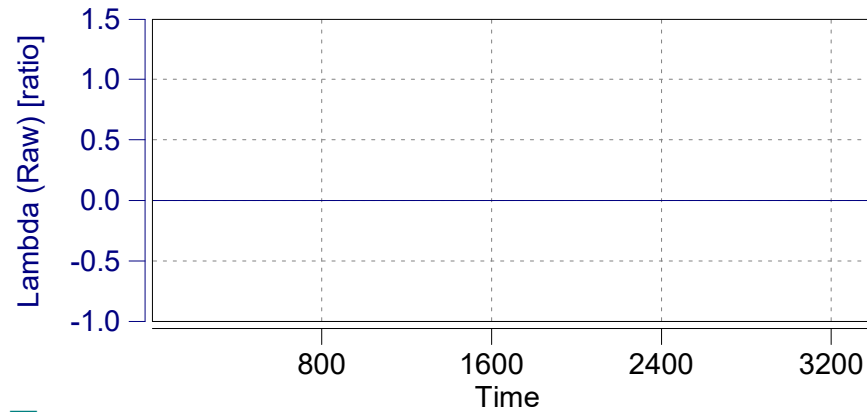










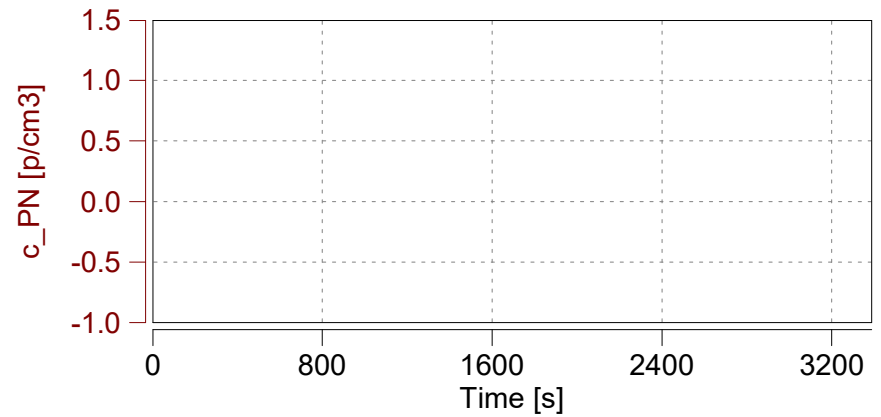
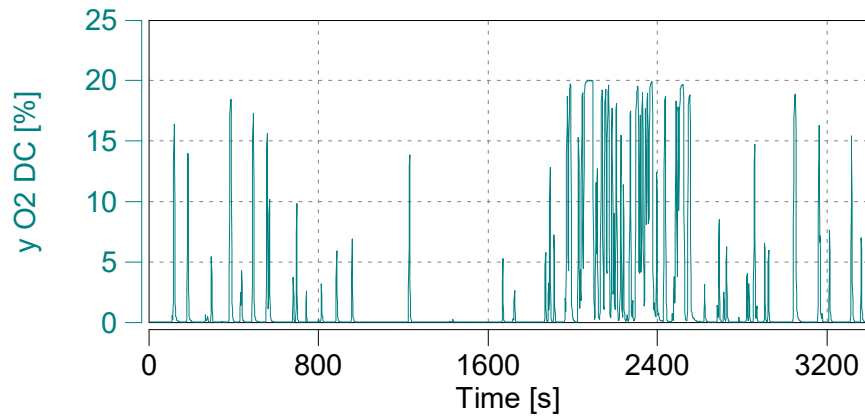
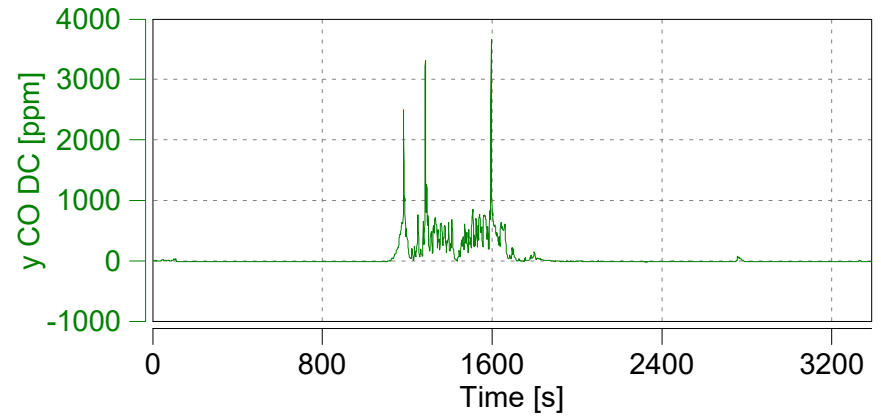
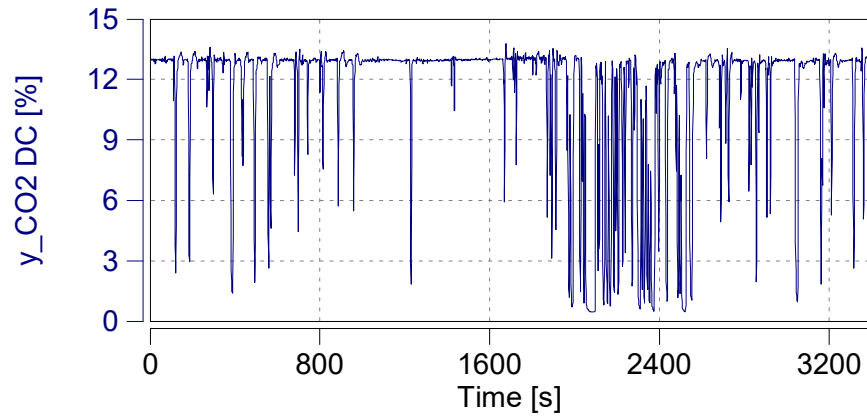


Case: Mountain

Page: Corrected Emissions (1)

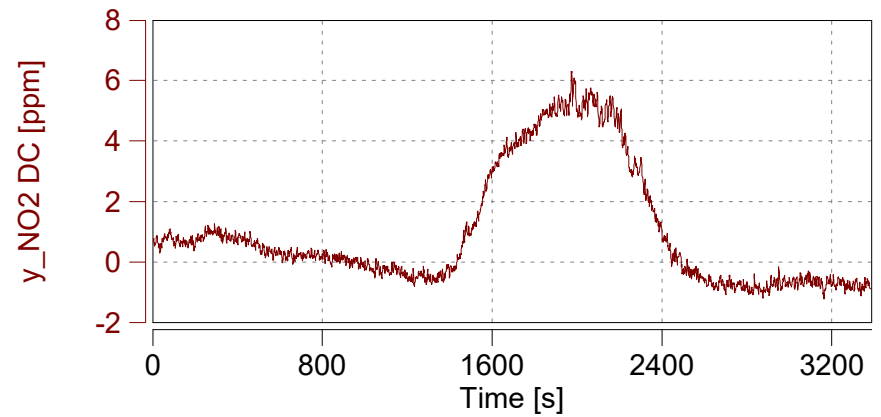
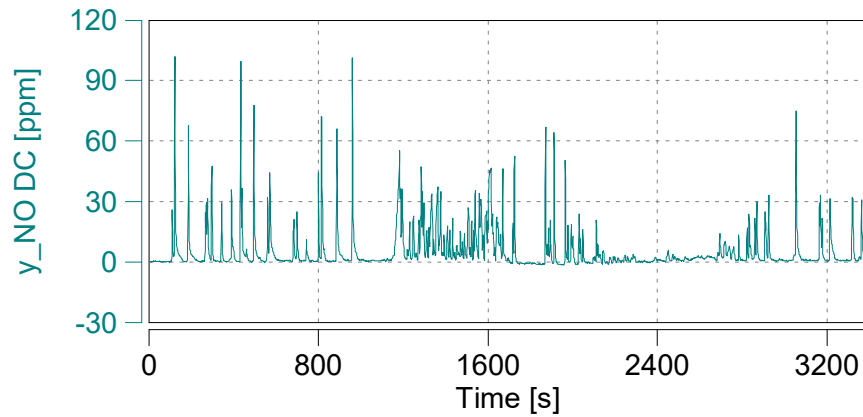
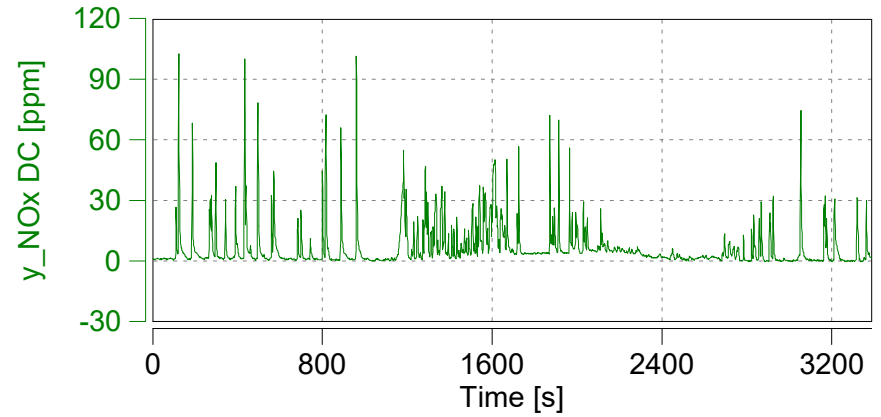
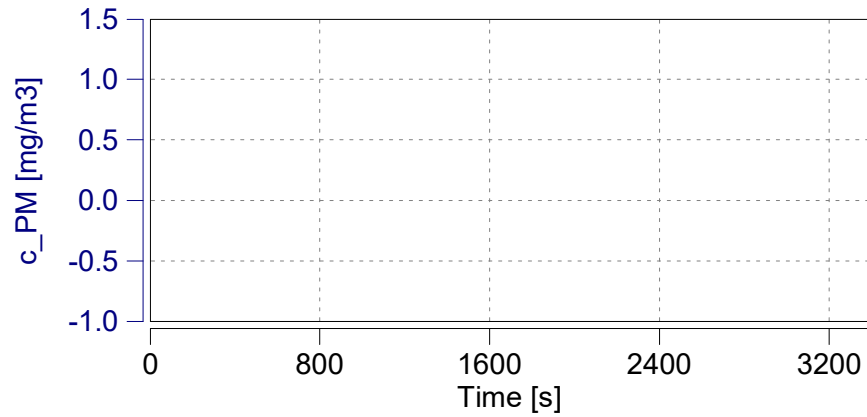
Start Date: 10/11/2017

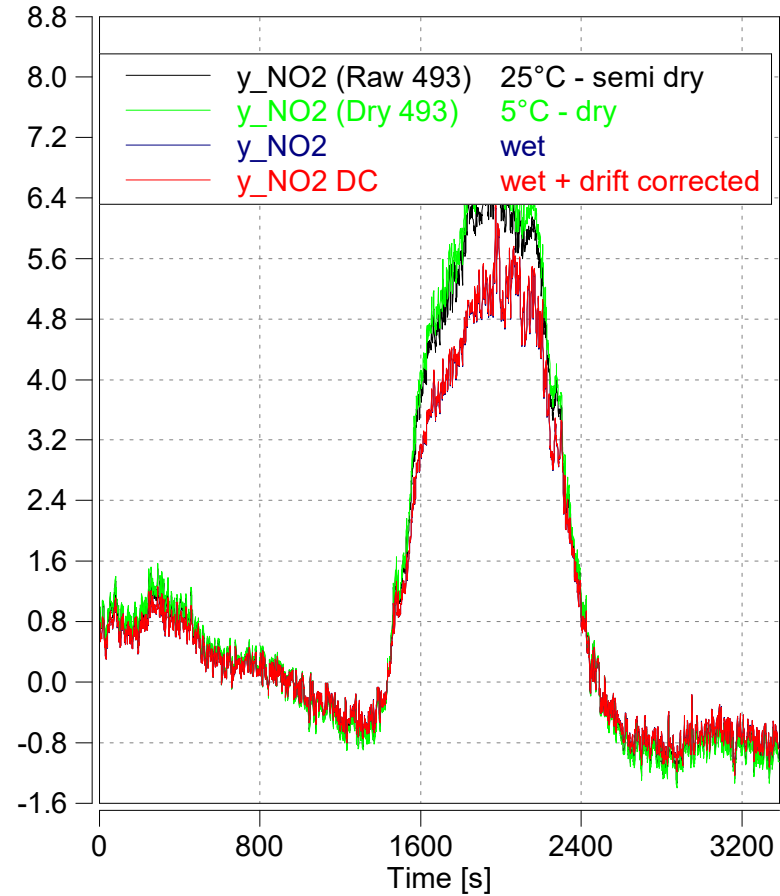
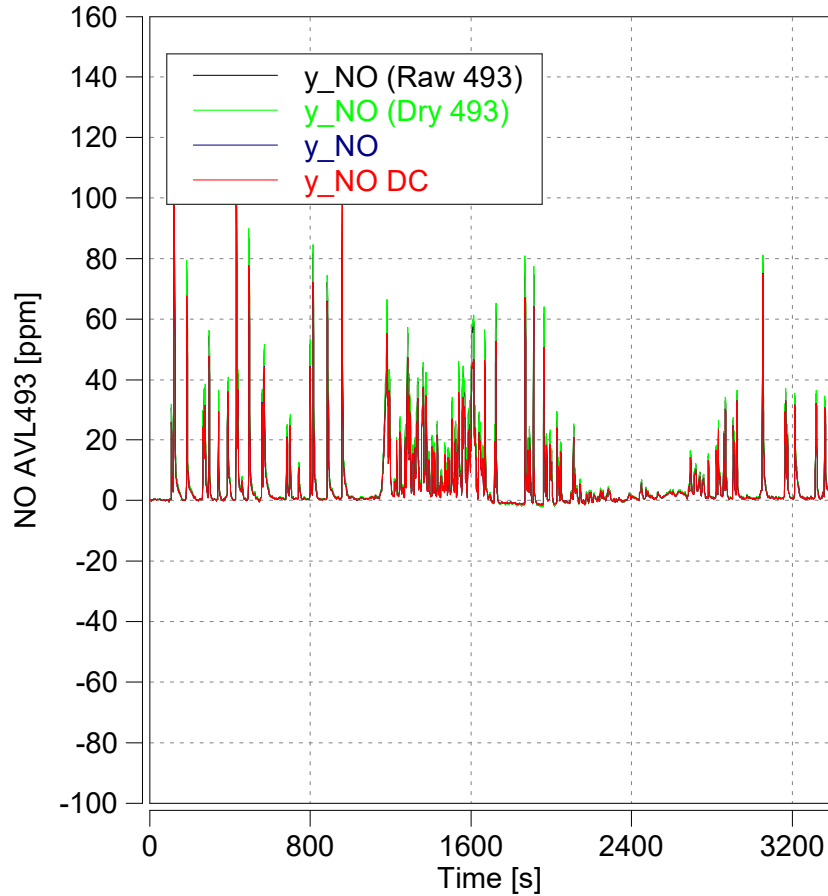
Start Time: 07:35:54.0



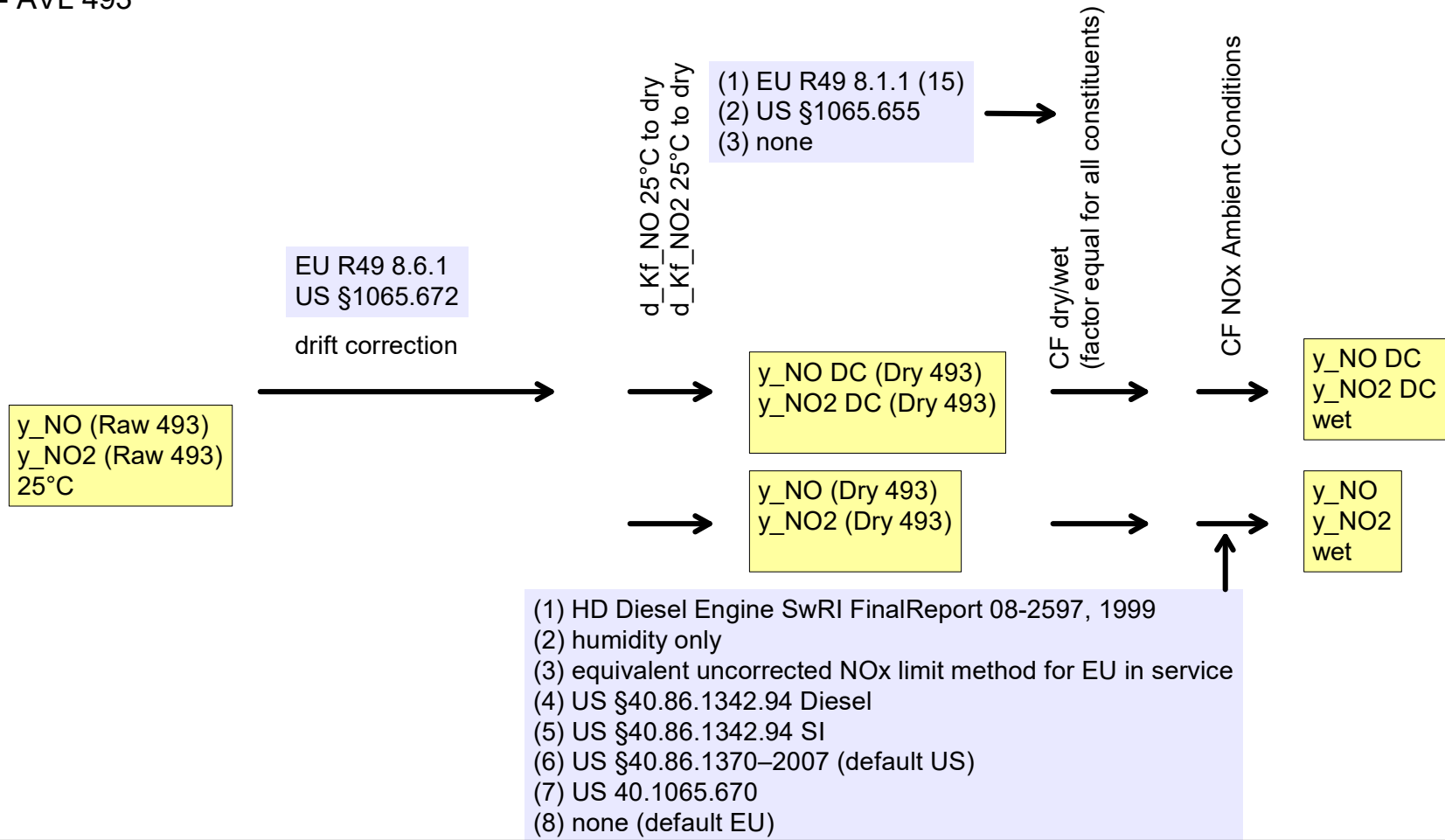
Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Passat / Model CC
Engine: Gasoline / 3.6L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90





NOx - AVL 493

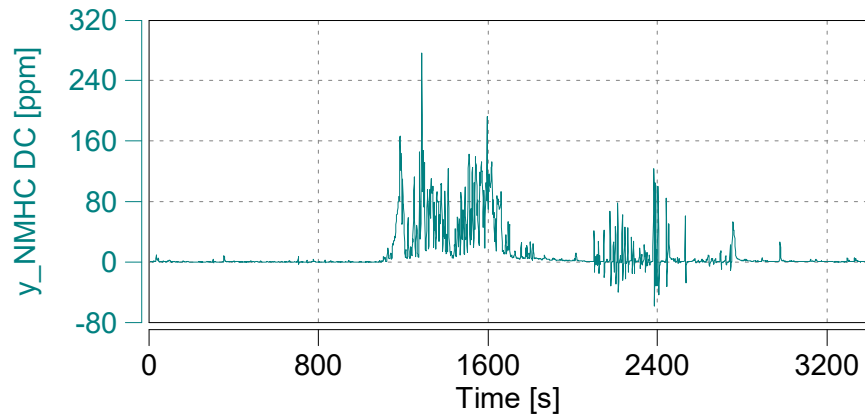
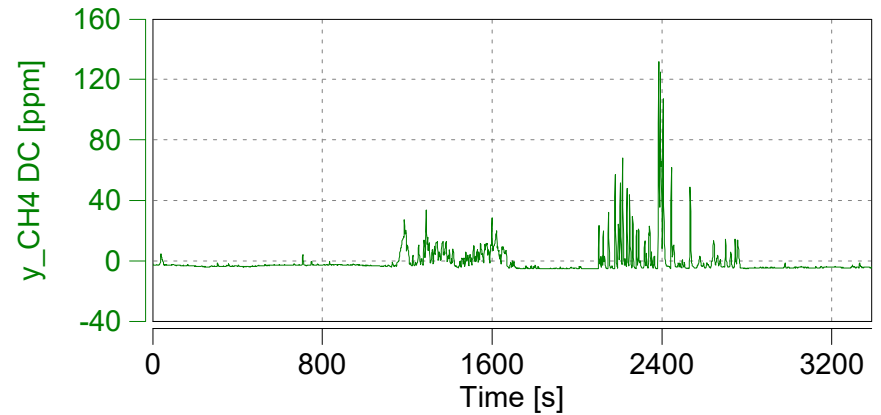
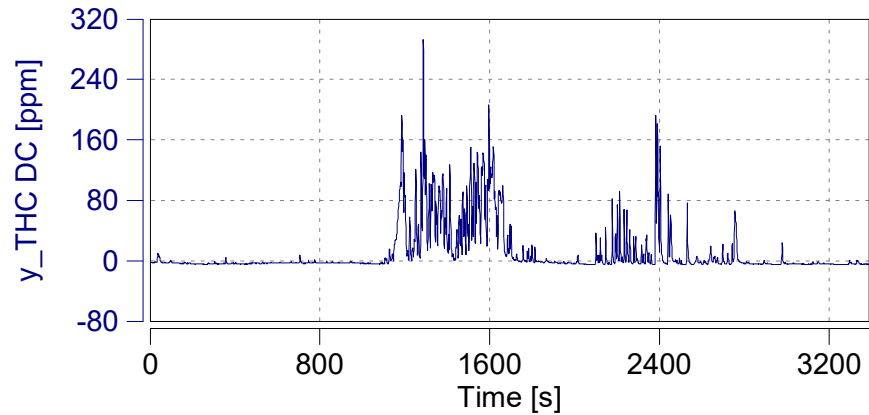


Case: Mountain

Page: Corrected Emissions (5)

Start Date: 10/11/2017

Start Time: 07:35:54.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

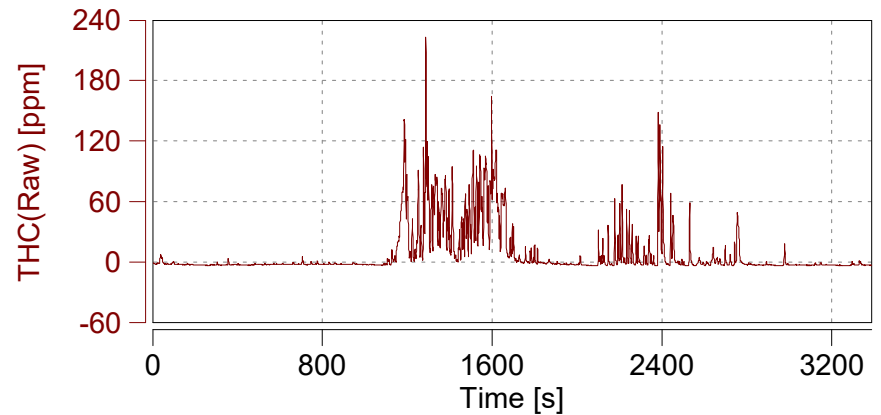
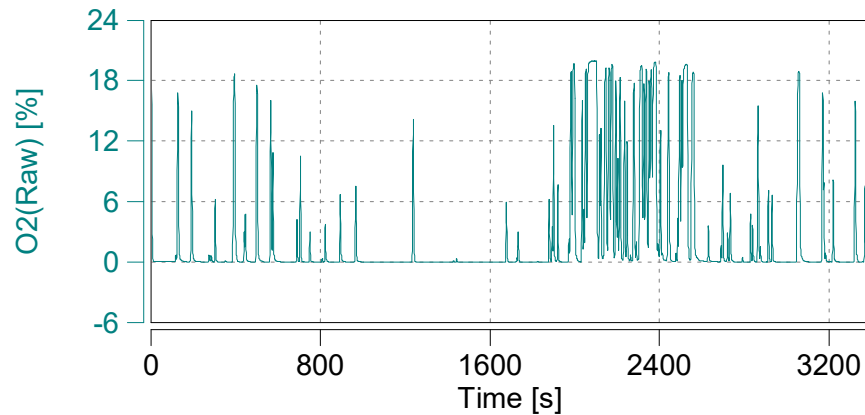
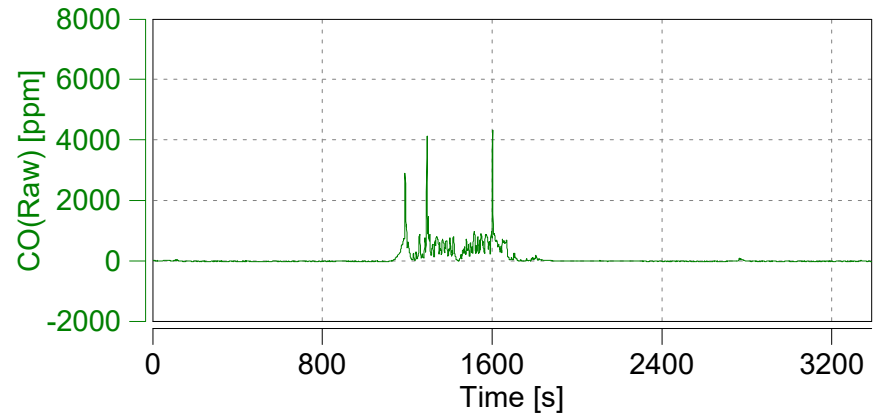
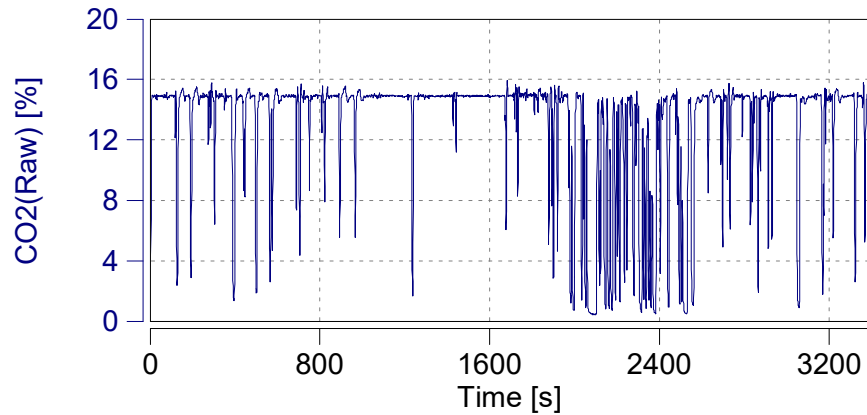
Vehicle: 2017 VW Passat / Model CC
Engine: Gasoline / 3.6L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Mountain

Page: Emissions Raw Data (1)

Start Date: 10/11/2017

Start Time: 07:35:54.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

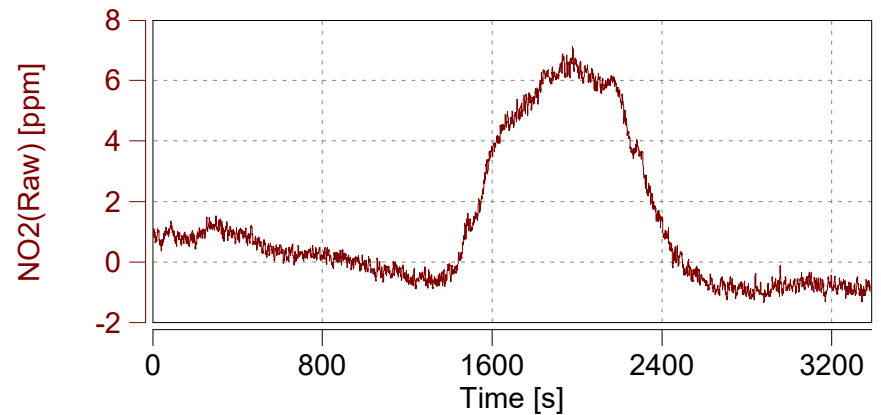
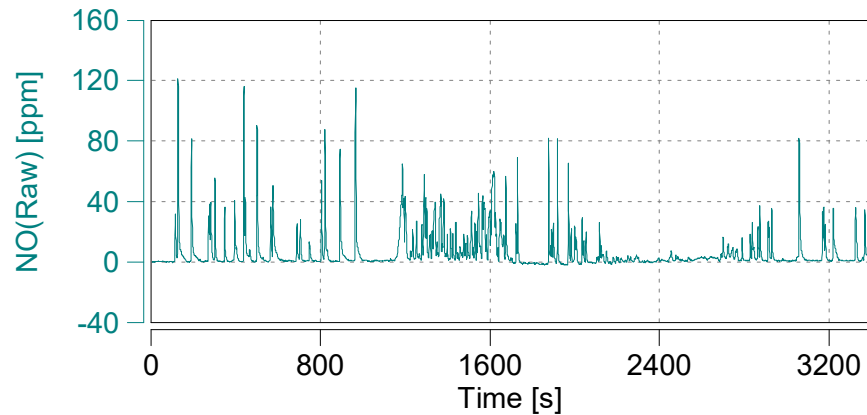
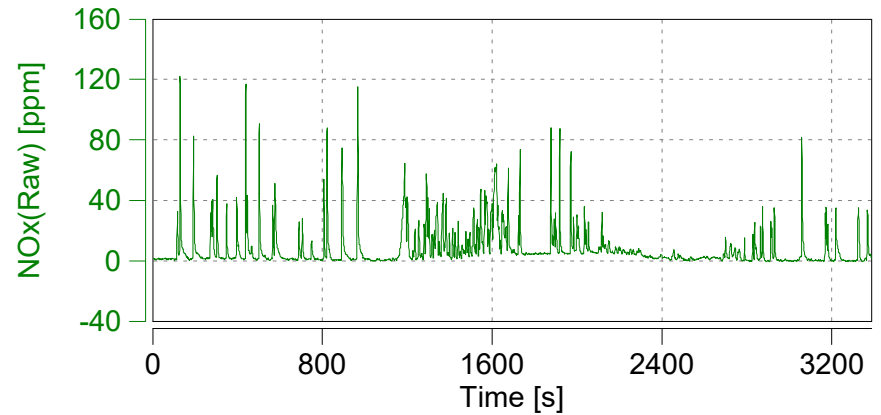
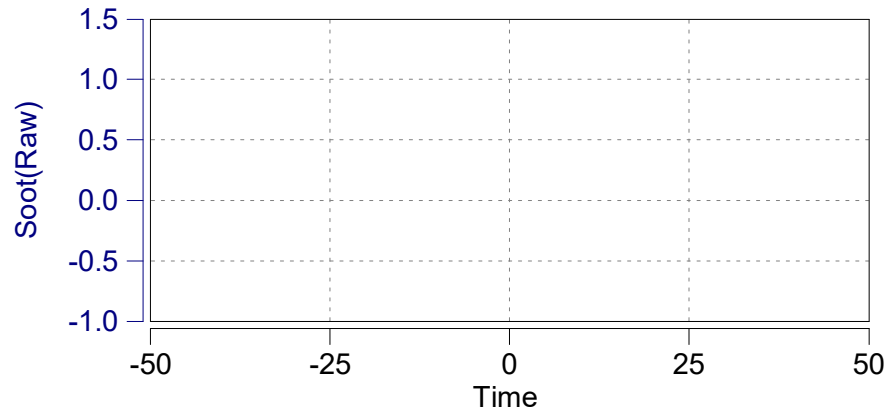
Vehicle: 2017 VW Passat / Model CC
Engine: Gasoline / 3.6L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Mountain

Page: Emissions Raw Data (2)

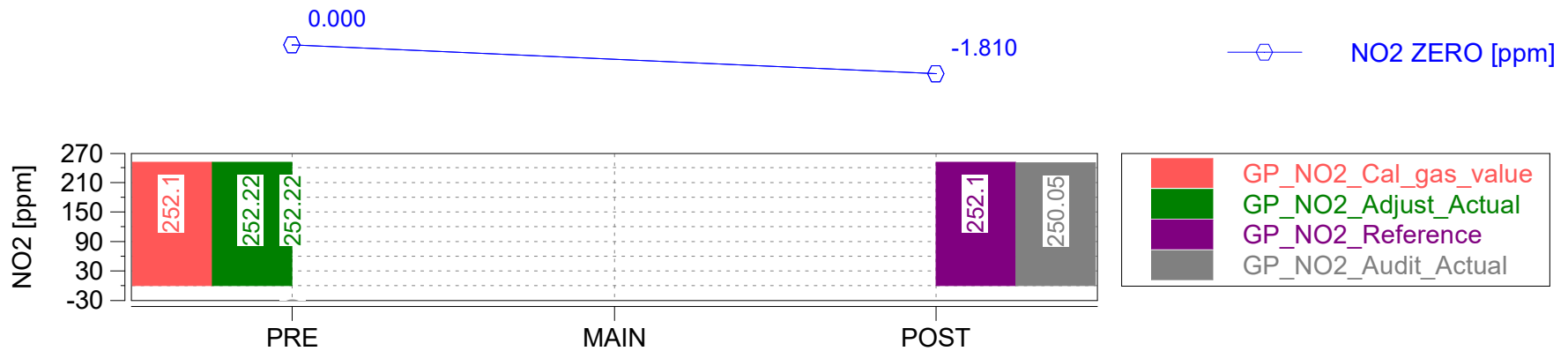
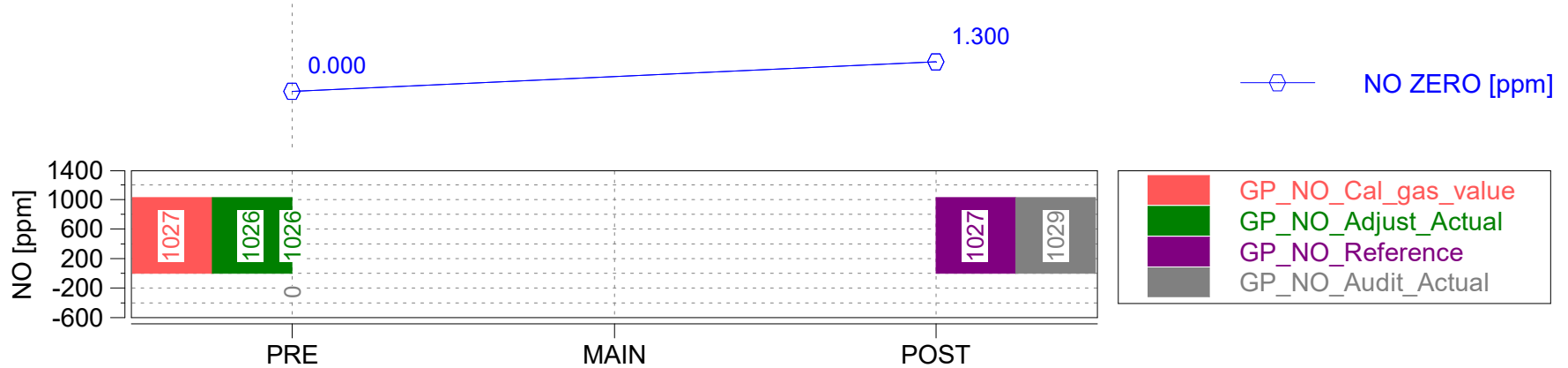
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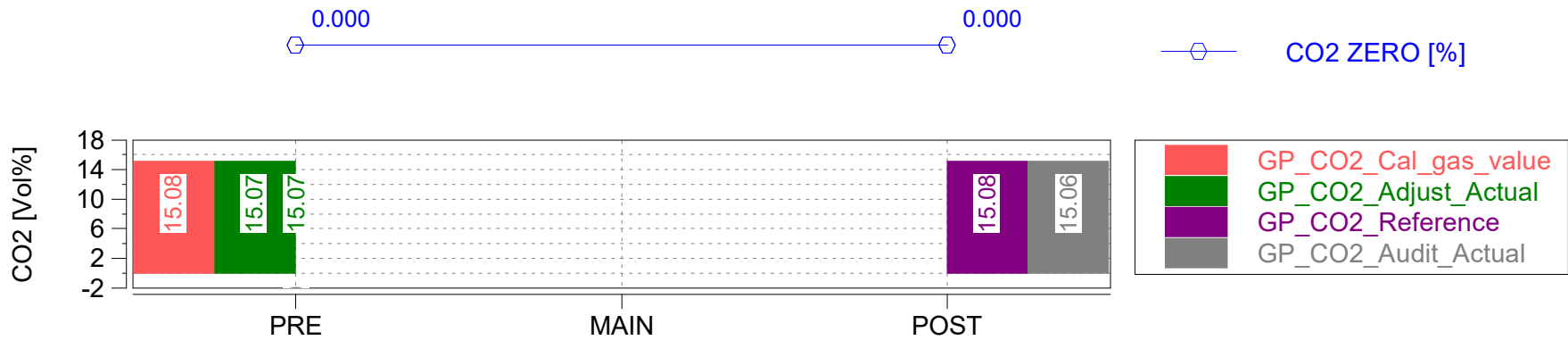
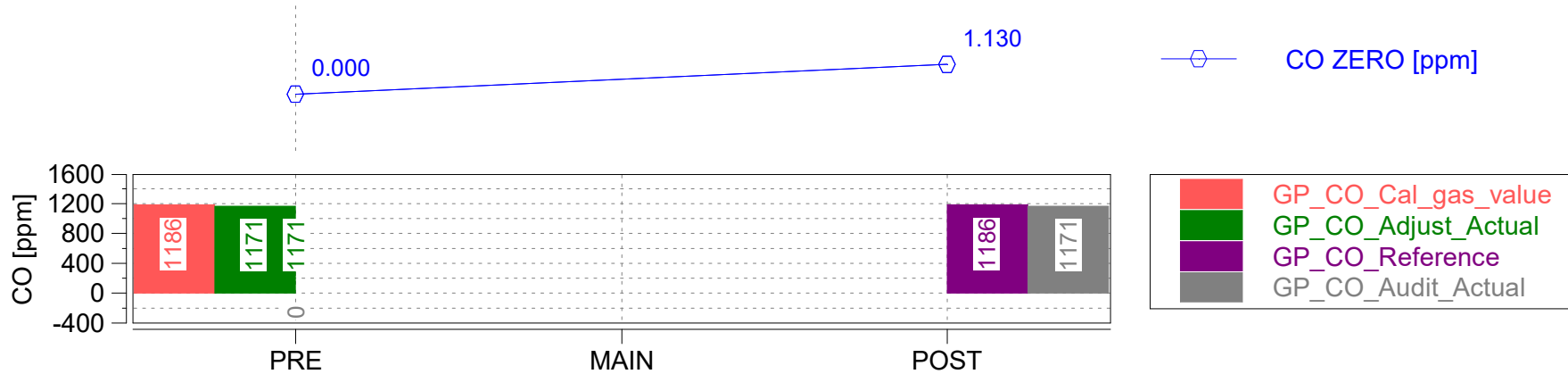
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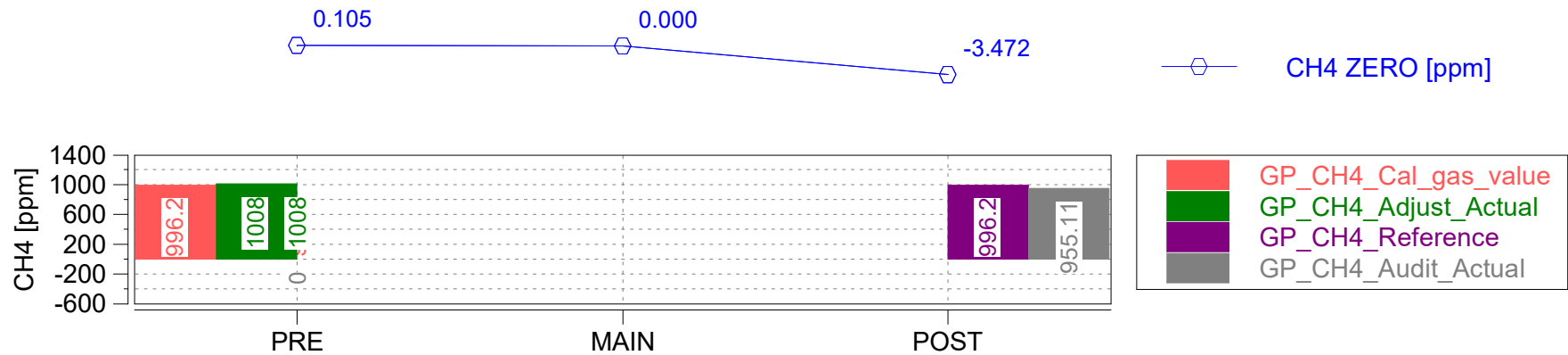
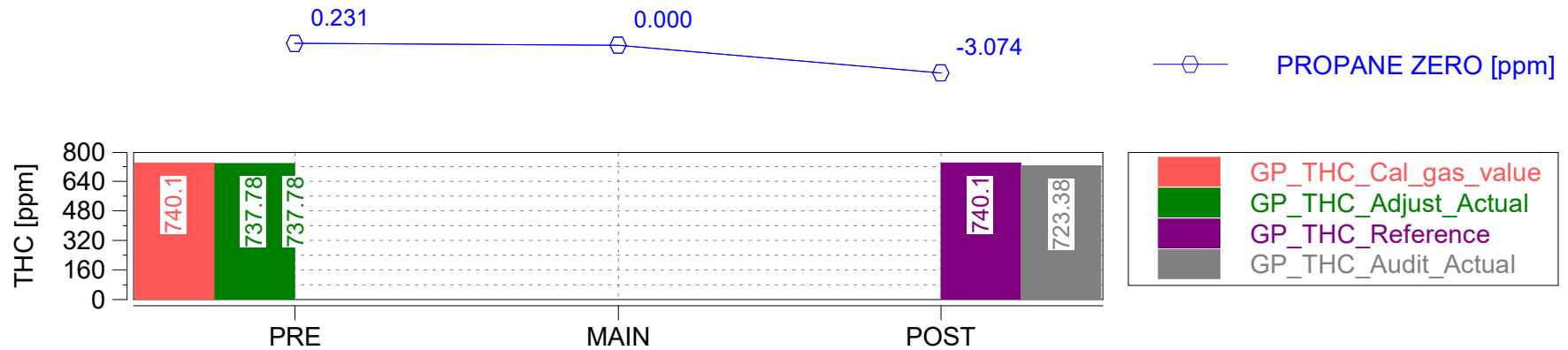


Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Passat / Model CC
Engine: Gasoline / 3.6L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90







#	Text	Value	Unit
-	----	----	----
1.0	Test Start: Date	-	-
2.0	Test Start: Time	-	-
3.0	Ambient Temperature	IFILE1:TM'Temperature	deg C
4.0	Ambient Temperature TS	0.00000	s
5.0	Ambient Pressure	IFILE1:TM'Pressure	kPa
6.0	Ambient Pressure TS	0.00000	s
7.0	Humidity Type	1.00000	-
8.0	Amb. Rel. Humidity	IFILE1:TM'Humidity	%
9.0	Amb. Rel. Humidity	0.00000	s
10.0	GPS Latitude		deg
11.0	GPS Latitude TS	0.00000	s
12.0	GPS Longitude		deg
13.0	GPS Longitude TS	0.00000	s
14.0	Altitude		m
15.0	Altitude TS	0.00000	s
16.0	GPS Quality		-
17.0	GPS Quality TS	0.00000	s
18.0	GroundSpeed		km/h
19.0	GroundSpeed TS	0.00000	s
20.0	Altitude from topographical map		m
21.0	Altitude TS of topographical map		s
22.0	TRIP_AMBIENT_GPS_AVL	YES	-
23.0	CALC_GPS_GROUNDSPEED	NO	-
24.0	EXHAUST_FLOW_AVL	NO	-
25.0	EXHAUST_FLOW_AVL_EFM	YES	-
26.0	Exhaust Flow Type	2.00000	-
27.0	Mass Flow	IFILE1:TM'PitotEFM_ExhaustG	various
28.0	Mass Flow TS	1.20000	s
29.0	Exhaust Pressure		kPa
30.0	Exhaust Pressure TS	1.20000	s

#	Text	Value	Unit
-	----	----	----
31.0	Exhaust Delta Pressure		kPa
32.0	Exhaust Pressure Delta TS	1.20000	s
33.0	Exhaust Temperature	IFILE1:TM'PitotEFM_ExhaustG	degC
34.0	Exhaust Temperature TS	1.20000	s
35.0	Lambda	N/A	-
36.0	Lambda TS		s
37.0	CO2_DIL		%
38.0	CO2_DIL TS		s
39.0	CVS Volume Flow		m3/min
40.0	TimeShift_CVS_VOL_FLOW		s
41.0	IN_CVS_PRESSURE		kPa
42.0	TimeShift_CVS_PRESSURE		s
43.0	IN_CVS_TEMP		degC
44.0	TimeShift_CVS_TEMP		s
45.0	Dry to Wet Conversion CO2	YES	-
46.0	Dry to Wet Conversion O2	YES	-
47.0	Dry to Wet Conversion NO	NO	-
48.0	Dry to Wet Conversion NO2	NO	-
49.0	Dry to Wet Conversion THC	NO	-
50.0	Dry to Wet Conversion CH4	NO	-
51.0	Dry to Wet Conversion O2	NO	-
52.0	CO2	IFILE1:TM'GPiS_CO2	%
53.0	CO2 TS	-7.70000	s
54.0	OS	IFILE1:TM'GPiS_O2	%
55.0	O2 TS	-8.20000	s
56.0	CO	IFILE1:TM'GPiS_CO	ppm
57.0	CO TS	-7.70000	s
58.0	NO	IFILE1:TM'GPiS_NO	ppm
59.0	NO TS	-5.90000	s
60.0	NO2	IFILE1:TM'GPiS_NO2	ppm

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Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
61.0	NO2 TS	-5.90000	s
62.0	THC	IFILE1:TM'FIDiS_THC_C1	ppm
63.0	THC TS	0.00000	s
64.0	CH4	IFILE1:TM'FIDiS_CH4_C1	ppm
65.0	CH4 TS	0.00000	s
66.0	GAS_PEMS_Ethane_Efficiency	IFILE1:MOVE_AVL4925'GP_Et -	
67.0	GAS_PEMS_Methane_Efficiency	IFILE1:MOVE_AVL4925'GP_M -	
68.0	GAS_PEMS_Methane_Response	IFILE1:MOVE_AVL4925'GP_M -	
69.0	Zero Signal	IFILE1:TM'GPiS_STATE	0/1
70.0	Zero Signal TS	-5.90000	s
71.0	Zero Signal_FIDiS	IFILE1:TM'FIDiS_STATE	0/1
72.0	Zero Signal_FIDiS TS		s
73.0	Species Input Type	4.00000	-
74.0	GASPEMS=AVL493	NO	-
75.0	GASPEMS=AVL493_iX	NO	-
76.0	GASPEMS=AVL492	YES	-
77.0	GASPEMS=AVL4925	YES	-
78.0	PM: Type	4.00000	1=GFB+HC, 2=GFB, 3='PM=S
79.0	Filter ID from IFile	NO	-
80.0	Lab ID from IFile	NO	-
81.0	PM Filter: ID	N/A	ID
82.0	PM Filter: Lab	N/A	Name/ID
83.0	PM Filter: Weight before Test	N/A	mg
84.0	PM Filter: Weight after Test	N/A	mg
85.0	PM (HC Corr): Max. Exhaust Flow	N/A	scfm
86.0	Soot		mg/m3
87.0	Soot TS	-5.00000	s
88.0	Soot Sensor		mg/m3
89.0	Soot Sensor TS		s
90.0	PM Filter: Filter Flow Rate		l/min

#	Text	Value	Unit
-	----	----	----
91.0	PM Filter: Filter Flow Rate TS	-5.00000	s
92.0	PM Filter: Filter Dilution Ratio		-
93.0	PM Filter: Filter Dilution Ratio TS	-5.00000	s
94.0	PM Filter: Filter Trigger		-
95.0	PM Filter: Filter Trigger TS	-5.00000	s
96.0	PMPEMS=AVL494	YES	-
97.0	PMPEMS_AVL494_PROP_DIL	NO	-
98.0	PM dilution ratio min		-
99.0	PM_MaxExhaustFlowRate		-
100.0	PM_ExhaustFlow_Thresh		-
101.0	PM_total_flow_val		-
102.0	PM_total_flow_val_TS		-
103.0	PM_exh_mass_flow		-
104.0	PM_exh_mass_flow_TS		-
105.0	PN		#/cm3
106.0	TimeShift_PN		s
107.0	PN_STATE		-
108.0	PN TS STATE		s
109.0	PNPEMS_AVL496	NO	-
110.0	PN_CorrFactor	1.00000	
111.0	Time Alignment	1.00000	-
112.0	Time Alignment Dataset 1	N/A	0/1
113.0	Time Alignment Dataset 2	N/A	0/1
114.0	Time Alignment Thresh 1	N/A	-
115.0	Time Alignment Thresh 2	N/A	-
116.0			
117.0			
118.0			
119.0			
120.0			

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#	Text	Value	Unit
-	----	----	----
121.0			
122.0	Trigger		0/1
123.0	Trigger TS		s
124.0	FTIR_NAME_1		-
125.0	FTIR_MW_1		-
126.0	FTIR_CHANNEL_1		-
127.0	FTIR_CHANNEL_TS_1		-
128.0	FTIR_CHANNEL_DRY_1	NO	-
129.0	FTIR_NAME_2		-
130.0	FTIR_MW_2		-
131.0	FTIR_CHANNEL_2		-
132.0	FTIR_CHANNEL_TS_2		-
133.0	FTIR_CHANNEL_DRY_2	NO	-
134.0	FTIR_NAME_3		-
135.0	FTIR_MW_3		-
136.0	FTIR_CHANNEL_3		-
137.0	FTIR_CHANNEL_TS_3		-
138.0	FTIR_CHANNEL_DRY_3	NO	-
139.0	FTIR_NAME_4		-
140.0	FTIR_MW_4		-
141.0	FTIR_CHANNEL_4		-
142.0	FTIR_CHANNEL_TS_4		-
143.0	FTIR_CHANNEL_DRY_4	NO	-
144.0	FTIR_NAME_5		-
145.0	FTIR_MW_5		-
146.0	FTIR_CHANNEL_5		-
147.0	FTIR_CHANNEL_TS_5		-
148.0	FTIR_CHANNEL_DRY_5	NO	-
149.0	FTIR_NAME_6		-
150.0	FTIR_MW_6		-

#	Text	Value	Unit
-	----	----	----
151.0	FTIR_CHANNEL_6		-
152.0	FTIR_CHANNEL_TS_6		-
153.0	FTIR_CHANNEL_DRY_6	NO	-
154.0	FTIR_NAME_7		-
155.0	FTIR_MW_7		-
156.0	FTIR_CHANNEL_7		-
157.0	FTIR_CHANNEL_TS_7		-
158.0	FTIR_CHANNEL_DRY_7	NO	-
159.0	FTIR_NAME_8		-
160.0	FTIR_MW_8		-
161.0	FTIR_CHANNEL_8		-
162.0	FTIR_CHANNEL_TS_8		-
163.0	FTIR_CHANNEL_DRY_8	NO	-
164.0	FTIR_NAME_9		-
165.0	FTIR_MW_9		-
166.0	FTIR_CHANNEL_9		-
167.0	FTIR_CHANNEL_TS_9		-
168.0	FTIR_CHANNEL_DRY_9	NO	-
169.0	FTIR_NAME_10		-
170.0	FTIR_MW_10		-
171.0	FTIR_CHANNEL_10		-
172.0	FTIR_CHANNEL_TS_10		-
173.0	FTIR_CHANNEL_DRY_10	NO	-
174.0	FTIR_NAME_11		-
175.0	FTIR_MW_11		-
176.0	FTIR_CHANNEL_11		-
177.0	FTIR_CHANNEL_TS_11		-
178.0	FTIR_CHANNEL_DRY_11	NO	-
179.0	FTIR_NAME_12		-
180.0	FTIR_MW_12		-

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#	Text	Value	Unit
-	----	----	----
181.0	FTIR_CHANNEL_12		-
182.0	FTIR_CHANNEL_TS_12		-
183.0	FTIR_CHANNEL_DRY_12	NO	-
184.0	FTIR_NAME_13		-
185.0	FTIR_MW_13		-
186.0	FTIR_CHANNEL_13		-
187.0	FTIR_CHANNEL_TS_13		-
188.0	FTIR_CHANNEL_DRY_13	NO	-
189.0	FTIR_NAME_14		-
190.0	FTIR_MW_14		-
191.0	FTIR_CHANNEL_14		-
192.0	FTIR_CHANNEL_TS_14		-
193.0	FTIR_CHANNEL_DRY_14	NO	-
194.0	FTIR_NAME_15		-
195.0	FTIR_MW_15		-
196.0	FTIR_CHANNEL_15		-
197.0	FTIR_CHANNEL_TS_15		-
198.0	FTIR_CHANNEL_DRY_15	NO	-
199.0	FTIR_NAME_16		-
200.0	FTIR_MW_16		-
201.0	Vehicle Type	2017 VW Passat	-
202.0	Vehicle Info	Model CC	-
203.0	Engine Type	Gasoline	-
204.0	Engine Info	3.6L	-
205.0	Engine Torque		Nm
206.0	Curb Idle Load		%
207.0	Idle Speed		rpm
208.0	HYBRID_OVC_REF_CO2_gkm		g/km
209.0	Engine Concept	1.00000	-
210.0	Alpha	1.93000	-

#	Text	Value	Unit
-	----	----	----
211.0	Beta	1.00000	
212.0	Gamma	0.00000	
213.0	Delta	0.00000	
214.0	Epsilon	0.03200	
215.0	X_C	83.00000	
216.0	X_H	13.30000	
217.0	X_N	0.00000	
218.0	X_O	3.50000	
219.0	X_S	0.00000	
220.0	Fuel_Density	747.50000	
221.0	rho_exhaust	1.29310	
222.0	U_CO2	1.51800	
223.0	U_CO	0.96600	
224.0	U_NO	1.58700	
225.0	U_NO2	1.58700	
226.0	U_NOx	1.58700	
227.0	U_HC	0.49900	
228.0	U_NMHC	0.47100	
229.0	U_CH4	0.55300	
230.0	U_O2	1.10400	
231.0	Fuel Type	2.00000	-
232.0	exhaust mass flow type (YES/NO)	YES	-
233.0	Distance Calculation Type	1.00000	-
234.0	Velocity Statistics Calculation Type	2.00000	-
235.0	RDE vehicle class	1.00000	-
236.0	TM_CITY0		s
237.0	TM_CITY1		s
238.0	TM_RURAL0		s
239.0	TM_RURAL1		s
240.0	TM_RURAL2_0		s

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Vehicle: 2017 VW Passat / Model CC
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NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
241.0	TM_RURAL2_1		s
242.0	Second Rural Part for Time Marks (NO		-
243.0	TM_MW0		s
244.0	TM_MW1		s
245.0	VELOCITY_LIMIT_STOP	2.00000	km/h
246.0	VELOCITY_LIMIT_URBAN	50.00000	km/h
247.0	VELOCITY_LIMIT_RURAL	75.00000	km/h
248.0	Intake Manifold Pressure Type	1.00000	-
249.0	Velocity	IFILE1:TM'OBD_Vehicle_Spee	km/h
250.0	Velocity TS	1.30000	s
251.0	Velocity FACTOR	1.00000	-
252.0	Coolant Temperature	IFILE1:TM'OBD_Engine_Coola	degC
253.0	Coolant Temperature TS	1.30000	s
254.0	Oil Temperature		degC
255.0	Oil Temperature TS	1.30000	s
256.0	Intake Manifold Temperature		degC
257.0	Intake Manifold Temp TS	1.30000	s
258.0	Intake Manifold Pressure	IFILE1:TM'OBD_Intake_manifo	kPa
259.0	Intake Manifold Pressure TS	1.30000	s
260.0	Throttle Position		%
261.0	Throttle TS	1.30000	s
262.0	TYP_IDLE_MASS_FLOW		kg/h
263.0	Torque Type	1.00000	-
264.0	Speed	IFILE1:TM'OBD_Engine_RPM	rpm
265.0	Speed TS	1.30000	s
266.0	Torque		Nm
267.0	Torque TS	1.30000	s
268.0	Friction Torque	N/A	Nm
269.0	Friction Torque TS	N/A	s
270.0	Reference Torque	N/A	Nm

#	Text	Value	Unit
-	----	----	----
271.0	Reference Torque TS	N/A	s
272.0	k_VELINE		-
273.0	D_VELINE		-
274.0	Fuel Flow Type	2.00000	-
275.0	Air Flow Type	1.00000	-
276.0	Fuel Rate		various
277.0	Air Rate		various
278.0	Fuel Rate TS	1.30000	s
279.0	No_Cylinders		-
280.0	Air Rate TS	1.30000	s
281.0	FTIR_CHANNEL_32		-
282.0	FTIR_CHANNEL_TS_32		-
283.0	FTIR_CHANNEL_DRY_32	NO	-
284.0	FTIR_NAME_33		-
285.0	FTIR_MW_33		-
286.0	FTIR_CHANNEL_33		-
287.0	FTIR_CHANNEL_TS_33		-
288.0	FTIR_CHANNEL_DRY_33	NO	-
289.0	FTIR_NAME_34		-
290.0	FTIR_MW_34		-
291.0	FTIR_CHANNEL_34		-
292.0	FTIR_CHANNEL_TS_34		-
293.0	FTIR_CHANNEL_DRY_34	NO	-
294.0	FTIR_NAME_35		-
295.0	FTIR_MW_35		-
296.0	FTIR_CHANNEL_35		-
297.0	FTIR_CHANNEL_TS_35		-
298.0	FTIR_CHANNEL_DRY_35	NO	-
299.0	FTIR_NAME_36		-
300.0	FTIR_MW_36		-

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Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
301.0	FTIR_CHANNEL_36	-	-
302.0	FTIR_CHANNEL_TS_36	-	-
303.0	FTIR_CHANNEL_DRY_36	NO	-
304.0	FTIR_NAME_37	-	-
305.0	FTIR_MW_37	-	-
306.0	FTIR_CHANNEL_37	-	-
307.0	FTIR_CHANNEL_TS_37	-	-
308.0	FTIR_CHANNEL_DRY_37	NO	-
309.0	FTIR_NAME_38	-	-
310.0	FTIR_MW_38	-	-
311.0	FTIR_CHANNEL_38	-	-
312.0	FTIR_CHANNEL_TS_38	-	-
313.0	FTIR_CHANNEL_DRY_38	NO	-
314.0	FTIR_NAME_39	-	-
315.0	FTIR_MW_39	-	-
316.0	FTIR_CHANNEL_39	-	-
317.0	FTIR_CHANNEL_TS_39	-	-
318.0	FTIR_CHANNEL_DRY_39	NO	-
319.0	FTIR_NAME_40	-	-
320.0	FTIR_MW_40	-	-
321.0	FTIR_CHANNEL_40	-	-
322.0	FTIR_CHANNEL_TS_40	-	-
323.0	FTIR_CHANNEL_DRY_40	NO	-
324.0	Legislation Type (1=HDIUT 2=EU H	4.00000	-
325.0	WholeTest_NOx_corr	5.00000	-
326.0	WholeTest_Hum_corr	2.00000	-
327.0	CD_Distance	0.00000	km
328.0	CD_NOx	0.00000	mg/km
329.0	CD_CO	0.00000	mg/km
330.0	CD_CO2	0.00000	g/km

#	Text	Value	Unit
-	----	----	----
331.0	CD_NMHC	0.00000	mg/km
332.0	CD_CH4	0.00000	mg/km
333.0	CD_THC	0.00000	mg/km
334.0	CD_PN	-	#/km
335.0	WLTC_LOW_SPEED_gkm	-	g/km
336.0	WLTC_LOW_SPEED_FAC	1.20000	-
337.0	WLTC_MEDIUM_SPEED_gkm	-	g/km
338.0	WLTC_HIGH_SPEED_gkm	-	g/km
339.0	WLTC_HIGH_SPEED_FAC	1.10000	-
340.0	WLTC_EXTRA_HIGH_SPEED_gkm	-	g/km
341.0	WLTC_EXTRA_HIGH_SPEED_FA	1.05000	-
342.0	TOL_NORMAL_DRIVING	25.00000	%
343.0	TOL_SEVERE_DRIVING	50.00000	%
344.0	Increase Tolerance Nomral Driving	NO	-
345.0	Bin1_min	-	km/h
346.0	Bin2_min	-	km/h
347.0	Bin3_min	-	km/h
348.0	Bin1_max	-	km/h
349.0	Bin2_max	-	km/h
350.0	Bin3_max	-	km/h
351.0	Clear_R0	125.40000	N
352.0	Clear_R1	0.29300	Nh/km
353.0	Clear_R2	0.02795	N*(h/km) ²
354.0	Clear_SMK	1470.00000	kg
355.0	Clear_Rated_Power	140.00000	kW
356.0	Clear_Ref_Velocity	70.00000	km/h
357.0	Clear_Ref_Acc	0.45000	m/s ²
358.0	Clear_Smooth	3.00000	s
359.0	EXTC_From_High_Temp	30.00000	degC
360.0	EXTC_To_High_Temp	35.00000	degC

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#	Text	Value	Unit
-	----	----	----
361.0	EXTC_From_Low_Temp	-7.00000	degC
362.0	EXTC_To_Low_Temp	0.00000	degC
363.0	Euro 6d or Euro 6d temp	NO	-
364.0	EXTC_From_Altitude	700.00000	m
365.0	EXTC_To_Altitude	1300.00000	m
366.0	EXTC_CORR_FAC	1.60000	
367.0	weight cold start (YES/NO)	NO	-
368.0	precon and soak done (YES/NO)	NO	-
369.0	PATH_PRECON_FILE		
370.0	filter velocity (YES/NO)	NO	-
371.0	filter velocity auto(YES/NO)	NO	-
372.0	Ki_CO		
373.0	Ki_CO2		
374.0	Ki_NOx		
375.0	Ki_FACTOR_CO2 (YES/NO)	NO	-
376.0	Ki_OFFSET_CO2 (YES/NO)	NO	-
377.0	Ki_FACTOR_CO (YES/NO)	NO	-
378.0	Ki_OFFSET_CO (YES/NO)	NO	-
379.0	Ki_FACTOR_NOx (YES/NO)	NO	-
380.0	Ki_OFFSET_NOx (YES/NO)	NO	-
381.0	Ki_OFF (YES/NO)	NO	-
382.0	HD legislations	1.00000	-
383.0	RDE legislations	1.00000	-
384.0	Submission Documents (YES/NO)	NO	-
385.0	General Setup Parameters Text	Mountain	-
386.0	Legislation Setup Parameters Text	Mountain	-
387.0	Trip Info		-
388.0	IN_TIME_REF		-
389.0	Sub-Trip Start: Auto	YES	-
390.0	Sub-Trip Start: Seconds	N/A	s

#	Text	Value	Unit
-	----	----	----
391.0	Sub-Trip End: Auto	YES	-
392.0	Sub-Trip End: Seconds	N/A	s
393.0	Unit System	2.00000	-
394.0	Calculate: PM Emissions	NO	-
395.0	Calculate: PN Emissions	NO	-
396.0	Output: Summary	YES	-
397.0	Output: Emissions	YES	-
398.0	Output: Raw Data	YES	-
399.0	Output: Zero Span	YES	-
400.0	Output: Data Consistency	NO	-
401.0	Output: Window Plots	YES	-
402.0	Fuel Rate ECU vs. EU ISO16183	y = 10000000000.0000 x - 0.000 R ² =10000000000.000 SEE=	
403.0	PEMS post processing version	Rel_10_B192	
404.0	Concerto version	480.00000	
405.0	Concerto build	215.00000	
406.0	USERNAME	EFR	

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Passat / Model CC
Engine: Gasoline / 3.6L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City
Page: Trip Summary

Start Date: 10/11/2017
Start Time: 07:35:54.0



Trip Duration	4024.00	s	ave THC	-1.86633	ppm	BS CO2	n/a	g/hphr
Trip Duration (a)	4024.00	s	ave NMHC	1.30599	ppm	BS CO	n/a	g/hphr
Trip Distance	15.76	mi	ave CH4	-2.88392	ppm	BS THC	n/a	g/hphr
Trip Distance (a)	15.76	mi	ave CO	-10.77760	ppm	BS NMHC	n/a	g/hphr
			ave CO2	12.51595	%	BS CH4	n/a	g/hphr
Trip Fuel Cons. (b)	n/a	kg	ave NOx	6.90865	ppm	BS NO (d)	n/a	g/hphr
Trip Fuel Cons. (ab)	n/a	kg	ave PM	n/a	mg/m3	BS NO2	n/a	g/hphr
Trip Fuel Cons. EU (ac)	3.00	kg	ave Soot meas	n/a	mg/m3	BS NOx	n/a	g/hphr
Trip Fuel Cons. US (ac)	2.97	kg	ave Soot	n/a	mg/m3	BS Soot	n/a	g/hphr
			ave PN	n/a	#/cm3	BS Soot meas	n/a	g/hphr
Trip Fuel Cons. Volume (b)	n/a	gall				BS PM	n/a	g/hphr
Trip Fuel Cons. Volume (ab)	n/a	gall	tot THC	0.00690	g	BS PN	n/a	#/hpr
Trip Fuel Cons. Volume EU (ac)	1.06	gall	tot NMHC	0.03416	g			
Trip Fuel Cons. Volume US (ac)	1.05	gall	tot CH4	0.00057	g	DS CO2	573.16353	g/mi
			tot CO	0.21472	g	DS CO	0.01362	g/mi
Trip Fuel Economy (b)	n/a	mpg_US	tot CO2	9033.17901	g	DS THC	0.00044	g/mi
Trip Fuel Economy (ab)	n/a	mpg_US	tot NO (d)	0.38721	g	DS NMHC	0.00217	g/mi
Trip Fuel Economy EU (ac)	14.86	mpg_US	tot NO2	0.00000	g	DS CH4	0.00004	g/mi
Trip Fuel Economy US (ac)	15.01	mpg_US	tot NOx	0.29302	g	DS NO (d)	0.02457	g/mi
			tot Soot	n/a	g	DS NO2	0.00000	g/mi
Trip Av. Eng. Speed	1146.59	rpm	tot Soot meas	n/a	g	DS NOx	0.01859	g/mi
Trip Av. Torque	n/a	lbft	tot PM	n/a	g	DS Soot	n/a	g/mi
Trip Av. Power	n/a	hp	tot PN	n/a	#	DS Soot meas	n/a	g/mi
Trip Work	n/a	hphr				DS PM	n/a	g/mi
			PM measurement type	0.00000	-	DS PN	n/a	#/mi
Trip Exhaust Mass	46.83	kg	PM correction type	1.00000	alpha(HC)			
Trip Exhaust Mass EU (ac)	n/a	kg	tot Soot on PM filter (estim.)	n/a	mg	FS CO2	n/a	g/kg
Trip Exhaust Mass US (ac)	n/a	kg	Soot --> PM simple scaling factor	1.00000	-	FS CO	n/a	g/kg
			Soot --> PM alpha scaling factor	0.00000	-	FS THC	n/a	g/kg
Trip Av. Amb. Temperature	81.49	deg_F				FS NMHC	n/a	g/kg
Trip Av. Humidity	45.42	%	Trip Av. Veh. Speed	14.09959	mi/hr	FS CH4	n/a	g/kg
			Trip Velocity Zero	25.29821	%	FS NO (d)	n/a	g/kg
Fuel Type	Petrol (E10)		Trip Velocity Urban	91.72465	%	FS NO2	n/a	g/kg
			Trip Velocity Rural	5.93936	%	FS NOx	n/a	g/kg
			Trip Velocity Motorway	2.33598	%	FS Soot	n/a	g/kg
						FS Soot meas	n/a	g/kg
						FS PM	n/a	g/kg
						FS PN	n/a	#/kg

(a) GAS PEMS measurement state only, (b) based on fuel rate input (ECU, Fuel Meter), (c) calculated from carbon balance
(d) NO calculated using molecular weight of NO2

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Passat / Model CC
Engine: Gasoline / 3.6L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Trip Summary Drift Corrected

Start Date: 10/11/2017

Start Time: 07:35:54.0

"



Concerto M.O.V.E, 2017

Trip Duration	4024.00	s	ave THC DC	-2.54488	ppm	BS CO2 DC	n/a	g/hphr
Trip Duration (a)	4024.00	s	ave NMHC DC	0.74047	ppm	BS CO DC	n/a	g/hphr
Trip Distance	15.76	mi	ave CH4 DC	-2.98668	ppm	BS THC DC	n/a	g/hphr
Trip Distance (a)	15.76	mi	ave CO DC	-10.90992	ppm	BS NMHC DC	n/a	g/hphr
Trip Fuel Cons. (b)	n/a	kg	ave CO2 DC	12.52841	%	BS CH4 DC	n/a	g/hphr
Trip Fuel Cons. (ab)	n/a	kg	ave NOx DC	6.89426	ppm	BS NO DC (d)	n/a	g/hphr
Trip Fuel Cons. EU (ac)	3.00	kg	ave PM	n/a	mg/m3	BS NO2 DC	n/a	g/hphr
Trip Fuel Cons. US (ac)	2.97	kg	ave Soot meas	n/a	mg/m3	BS NOx DC	n/a	g/hphr
Trip Fuel Cons. Volume (b)	n/a	gall	ave Soot	n/a	mg/m3	BS Soot	n/a	g/hphr
Trip Fuel Cons. Volume (ab)	n/a	gall	ave PN DC	n/a	#/cm3	BS Soot meas	n/a	g/hphr
Trip Fuel Cons. Volume EU (ac)	1.06	gall	tot THC DC	0.00941	g	BS PM	n/a	g/hphr
Trip Fuel Cons. Volume US (ac)	1.05	gall	tot NMHC DC	0.02495	g	BS PN DC	n/a	#/hpr
Trip Fuel Economy (b)	n/a	mpg_US	tot CH4 DC	0.00054	g	DS CO2 DC	573.73422	g/mi
Trip Fuel Economy (ab)	n/a	mpg_US	tot CO DC	0.21735	g	DS CO DC	0.01379	g/mi
Trip Fuel Economy EU (ac)	14.86	mpg_US	tot CO2 DC	9042.17322	g	DS THC DC	0.00060	g/mi
Trip Fuel Economy US (ac)	15.01	mpg_US	tot NO DC (d)	0.38678	g	DS NMHC DC	0.00158	g/mi
Trip Av. Eng. Speed	1146.59	rpm	tot NO2 DC	0.00000	g	DS CH4 DC	0.00003	g/mi
Trip Av. Torque	n/a	lbft	tot NOx DC	0.29241	g	DS NO DC (d)	0.02454	g/mi
Trip Av. Power	n/a	hp	tot Soot	n/a	g	DS NO2 DC	0.00000	g/mi
Trip Work	n/a	hphr	tot Soot meas	n/a	g	DS NOx DC	0.01855	g/mi
Trip Exhaust Mass	46.83	kg	tot PM	n/a	g	DS Soot	n/a	g/mi
Trip Exhaust Mass EU (ac)	n/a	kg	tot PN DC	n/a	#	DS Soot meas	n/a	g/mi
Trip Exhaust Mass US (ac)	n/a	kg	PM measurement type	0.00000	-	DS PM	n/a	g/mi
Trip Av. Amb. Temperature	81.49	deg_F	PM correction type	1.00000	alpha(HC)	DS PN DC	n/a	#/mi
Trip Av. Humidity	45.42	%	tot Soot on PM filter (estim.)	n/a	mg	FS CO2 DC	n/a	g/kg
Fuel Type	Petrol (E10)		Soot --> PM simple scaling factor	1.00000	-	FS CO DC	n/a	g/kg
			Soot --> PM alpha scaling factor	0.00000	-	FS THC DC	n/a	g/kg
			Trip Av. Veh. Speed	14.09959	mi/hr	FS NMHC DC	n/a	g/kg
			Trip Velocity Zero	25.29821	%	FS CH4 DC	n/a	g/kg
			Trip Velocity Urban	91.72465	%	FS NO DC (d)	n/a	g/kg
			Trip Velocity Rural	5.93936	%	FS NO2 DC	n/a	g/kg
			Trip Velocity Motorway	2.33598	%	FS NOx DC	n/a	g/kg
						FS Soot	n/a	g/kg
						FS Soot meas	n/a	g/kg
						FS PM	n/a	g/kg
						FS PN DC	n/a	#/kg

(a) GAS PEMS measurement state only, (b) based on fuel rate input (ECU, Fuel Meter), (c) calculated from carbon balance
 (d) NO calculated using molecular weight of NO2

Concerto Version: 480 Build 215, Serial Number: 8468
 M.O.V.E Post-Processing: Rel_10_B192

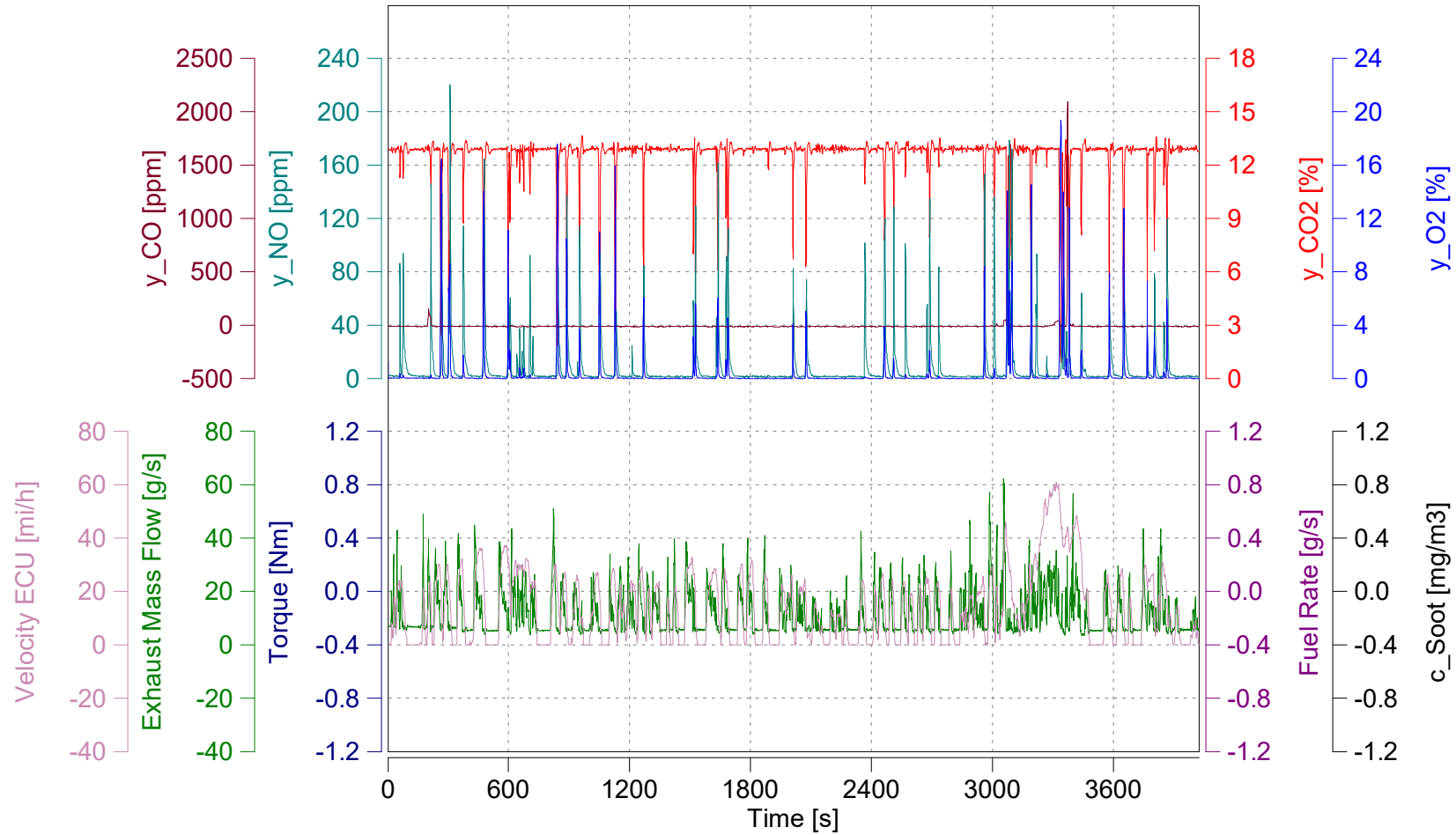
Vehicle: 2017 VW Passat / Model CC
 Engine: Gasoline / 3.6L
 NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
 Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Time Alignment Check

Start Date: 10/11/2017

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Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

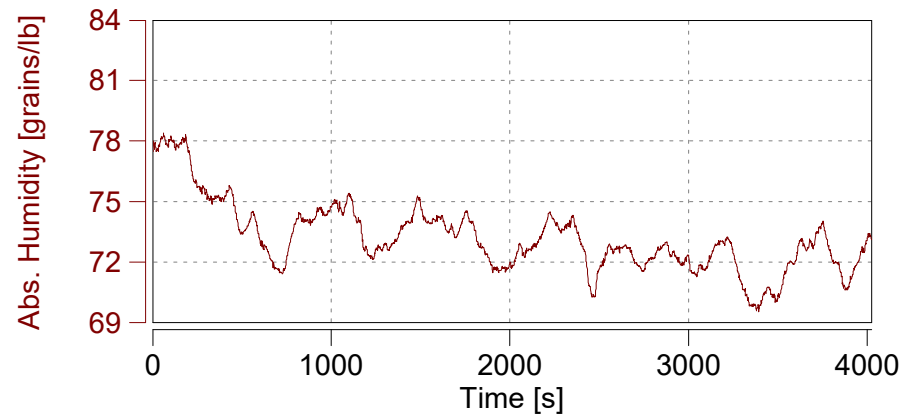
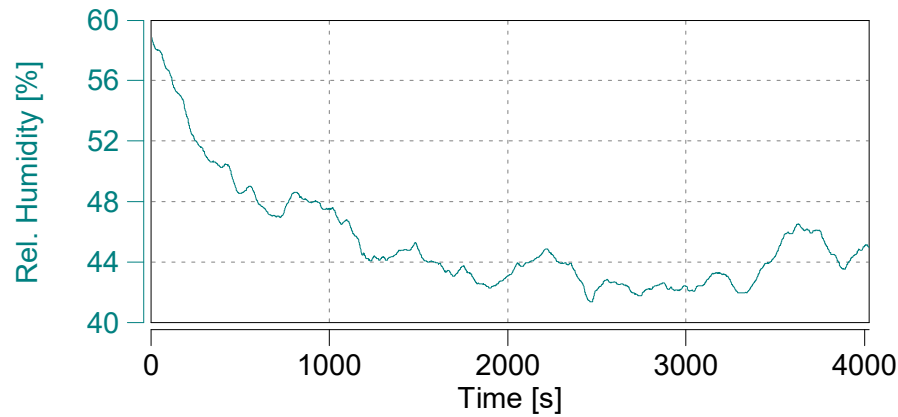
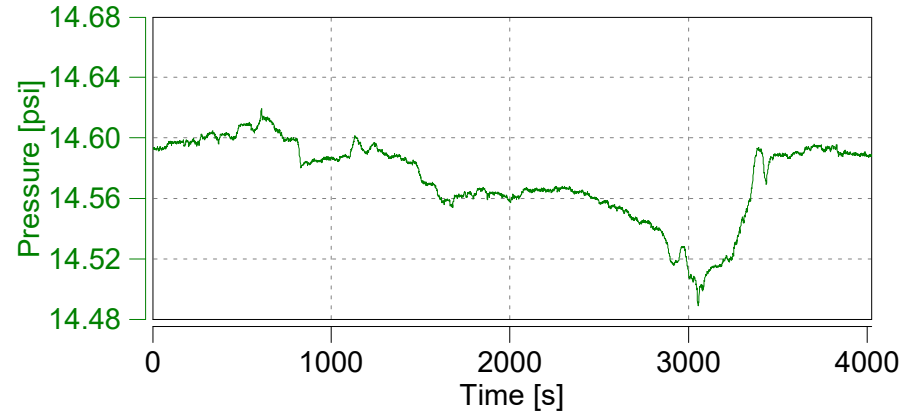
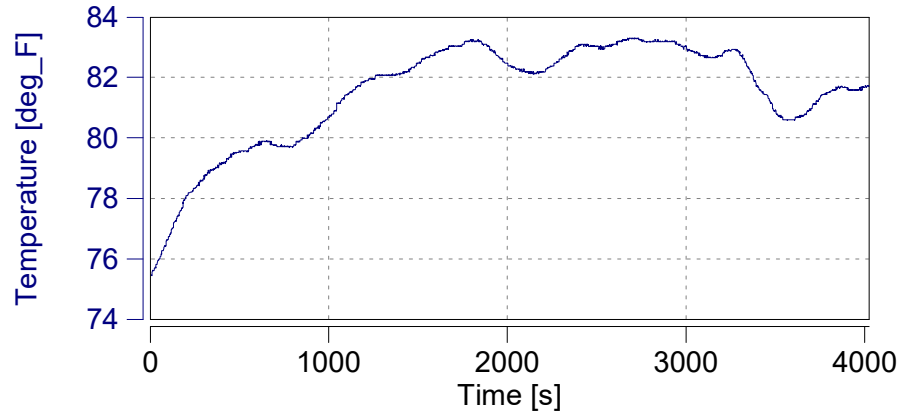
Vehicle: 2017 VW Passat / Model CC
Engine: Gasoline / 3.6L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Ambient Conditions

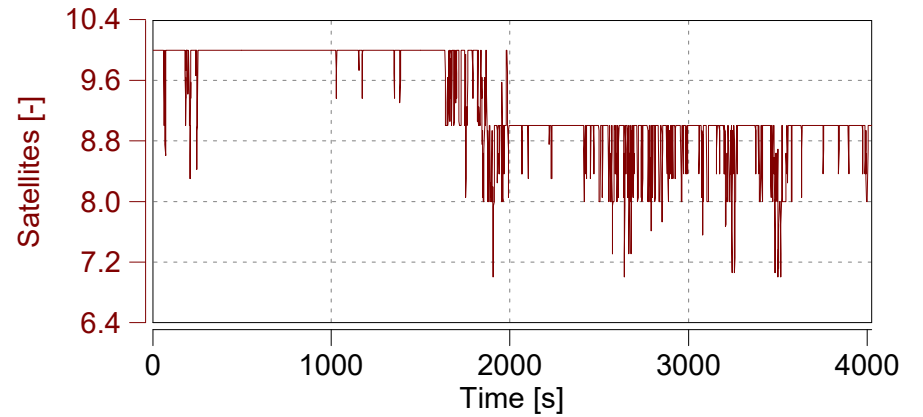
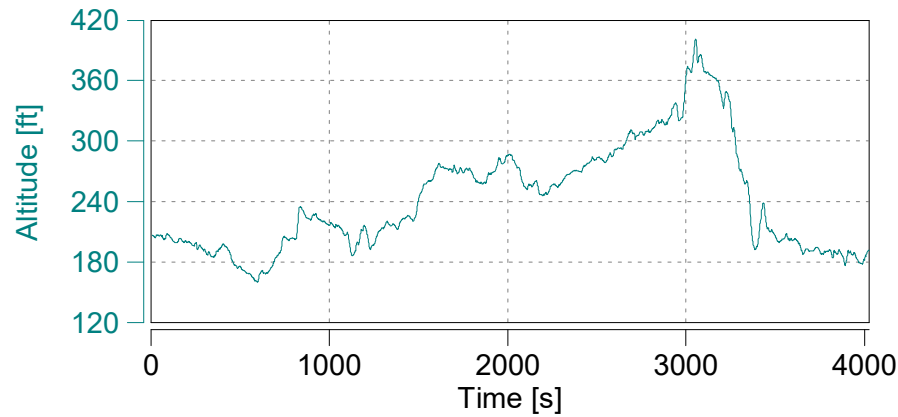
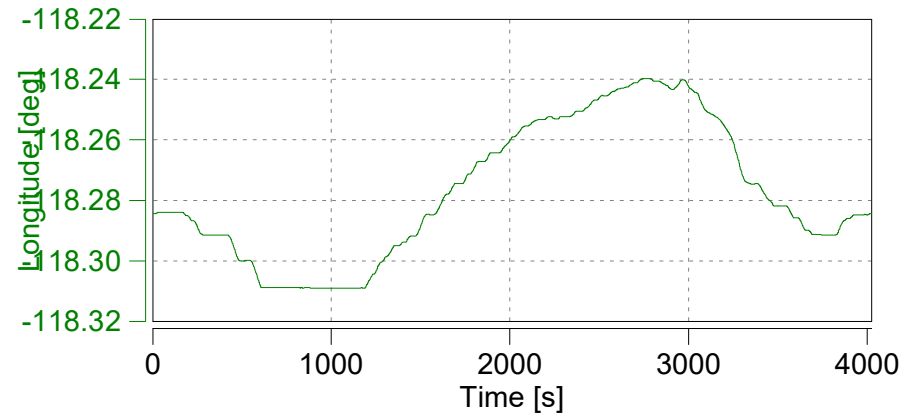
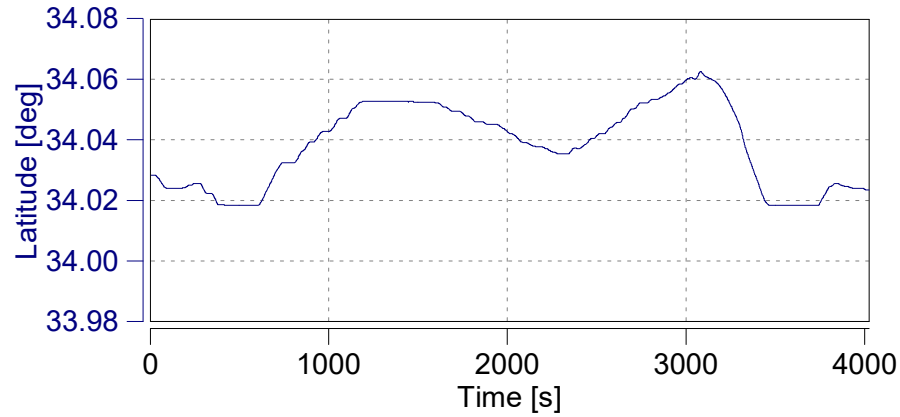
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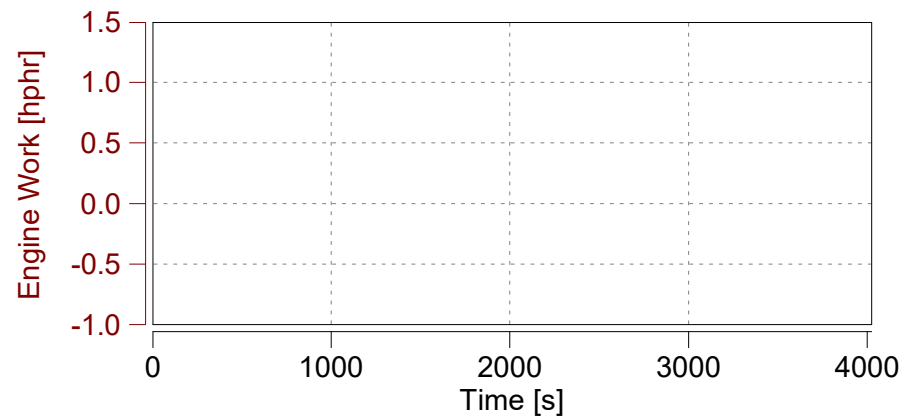
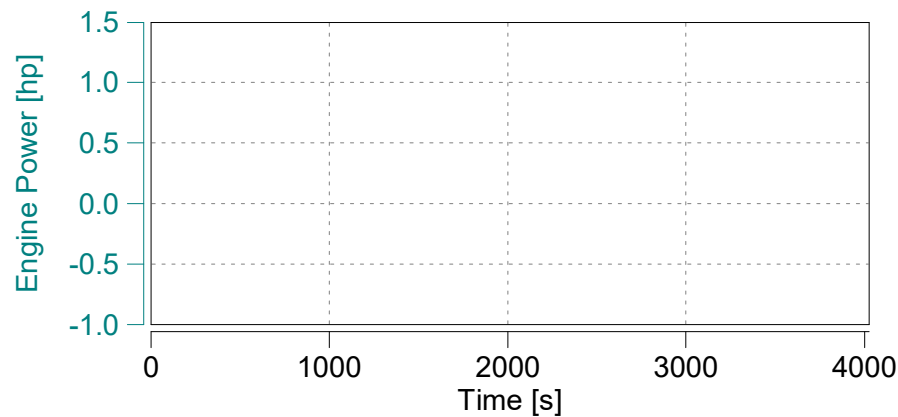
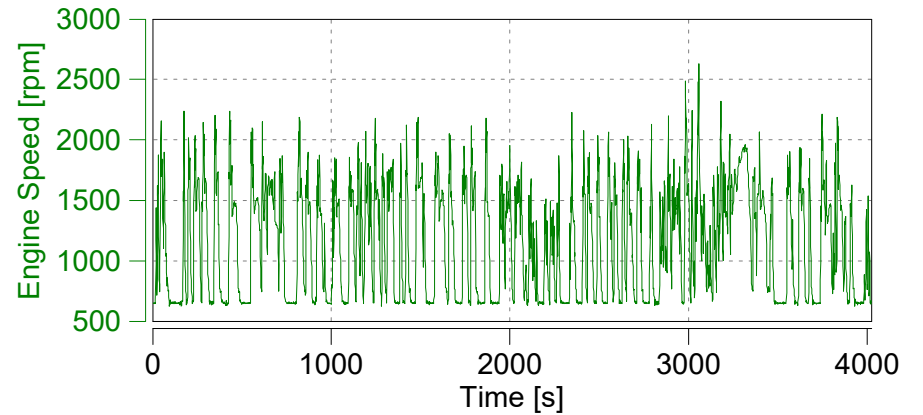
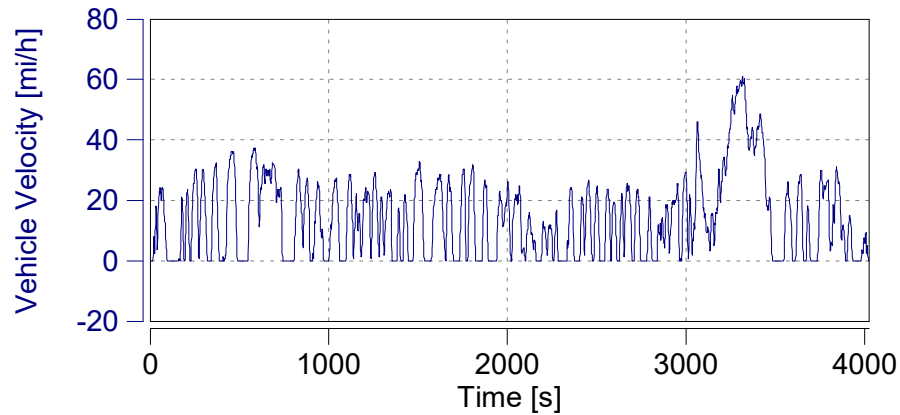
Start Time: 07:35:54.0

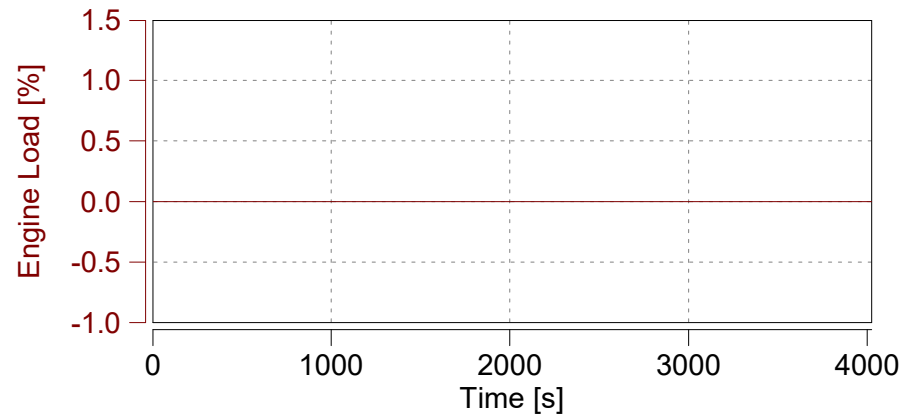
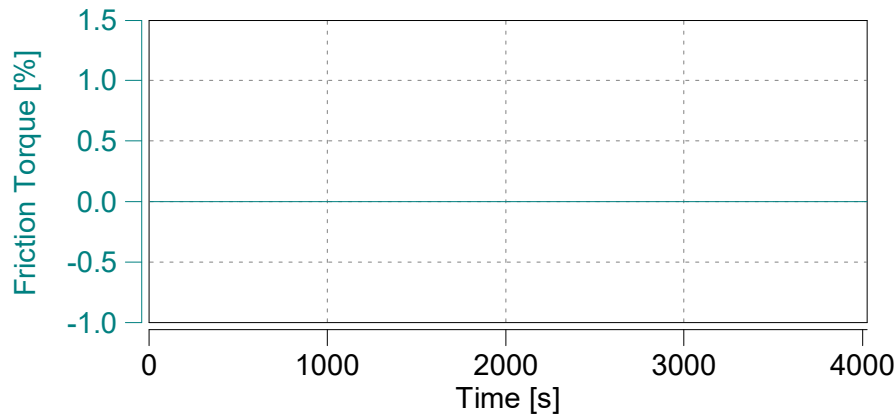
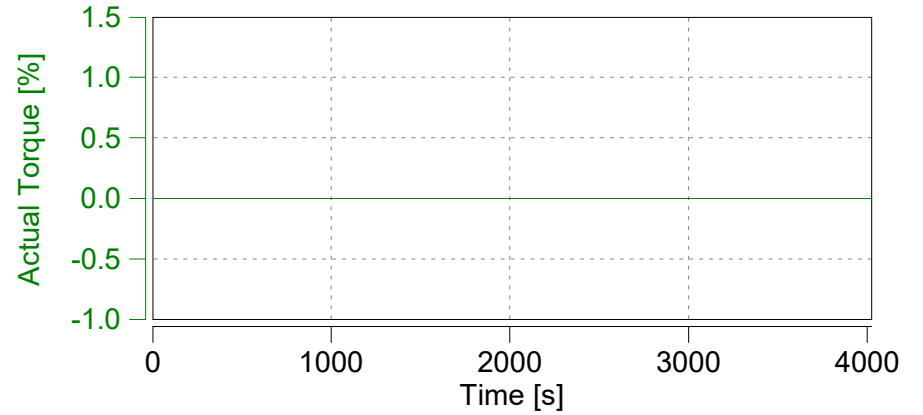
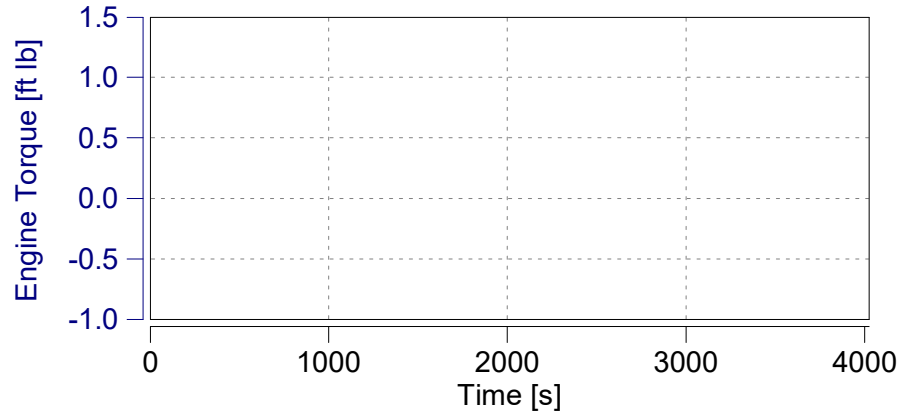


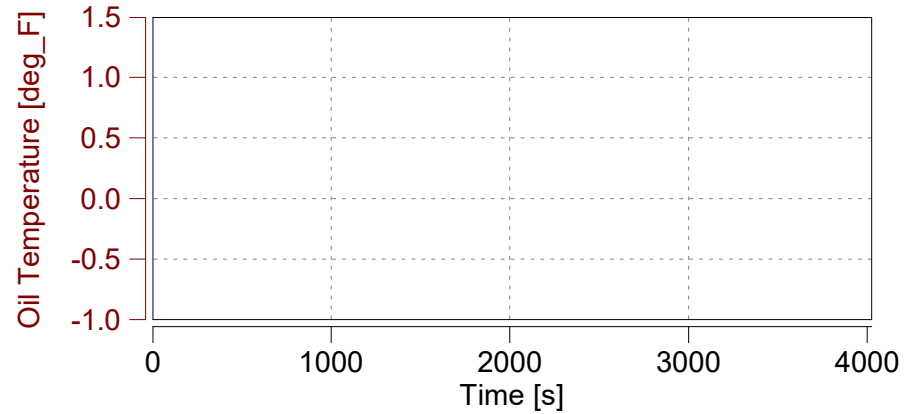
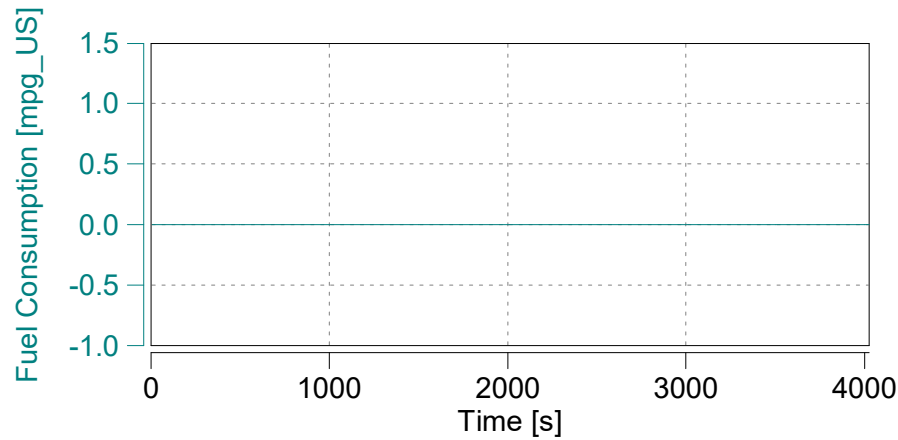
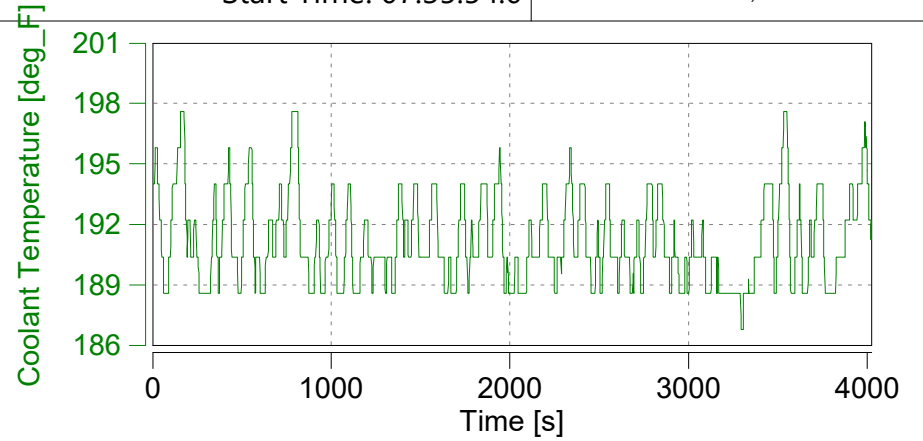
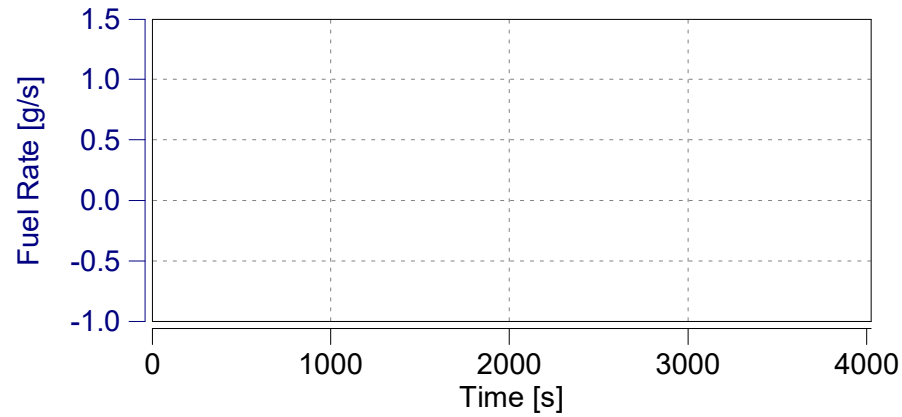
Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Passat / Model CC
Engine: Gasoline / 3.6L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90







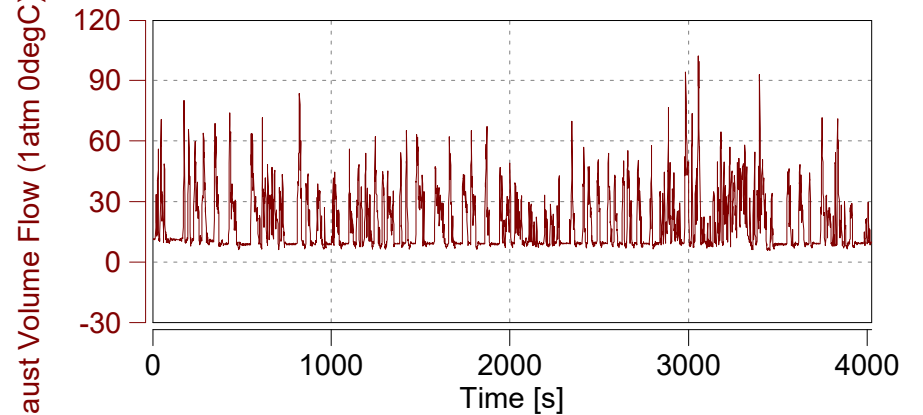
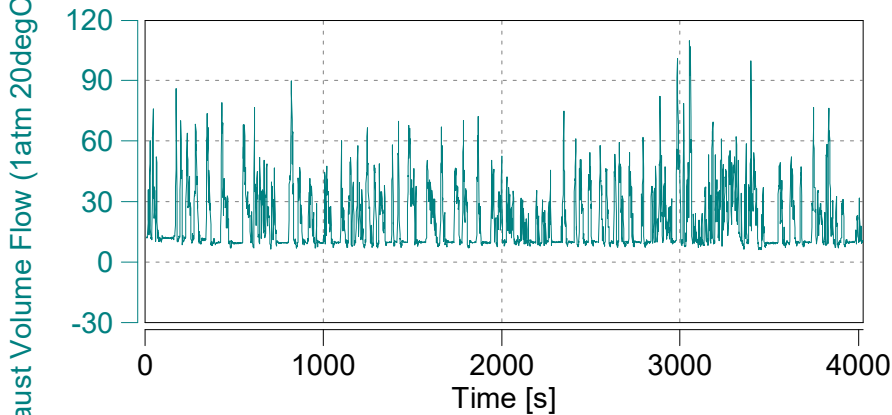
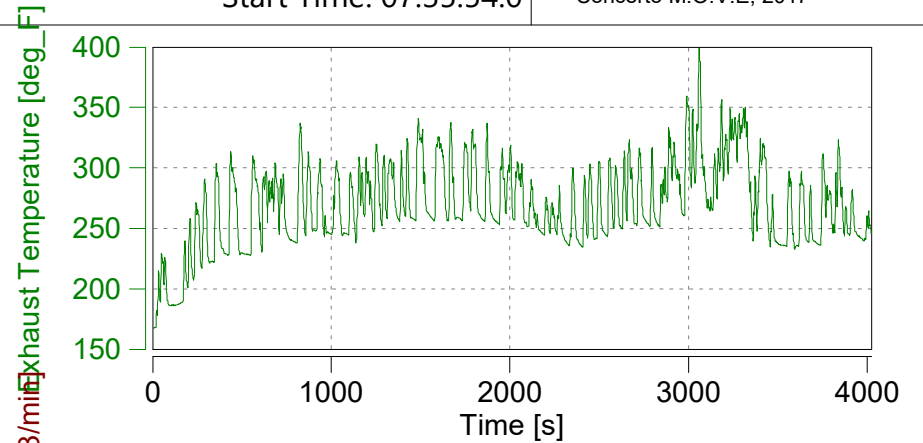
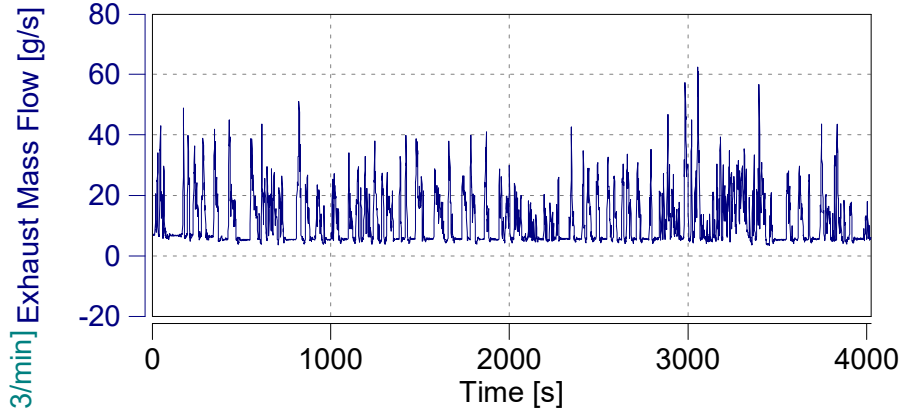


Case: City

Page: Exhaust Flow (1)

Start Date: 10/11/2017

Start Time: 07:35:54.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

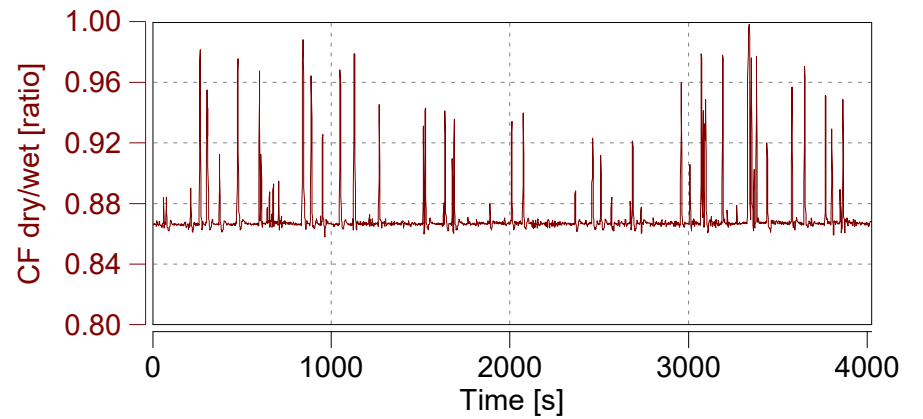
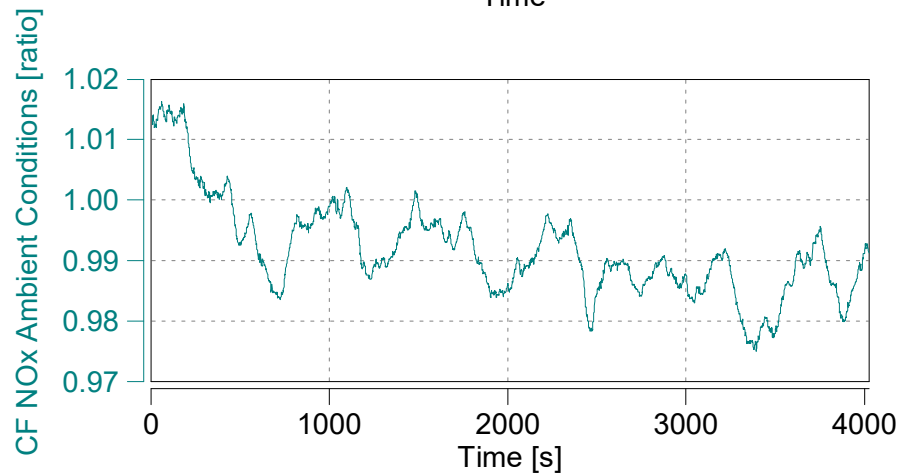
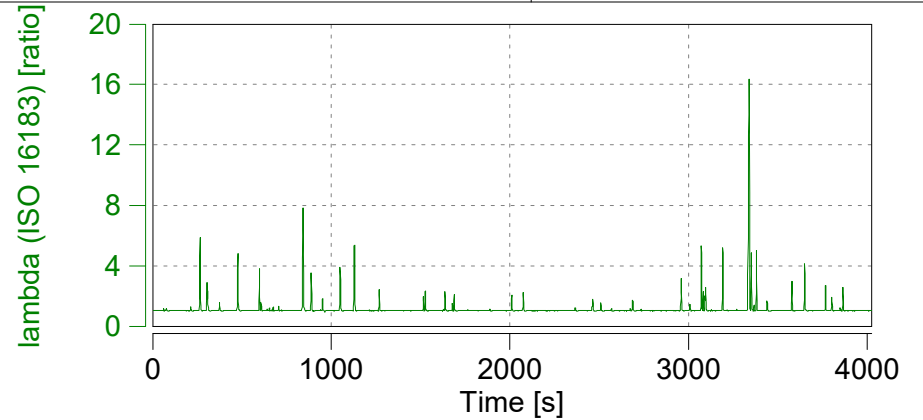
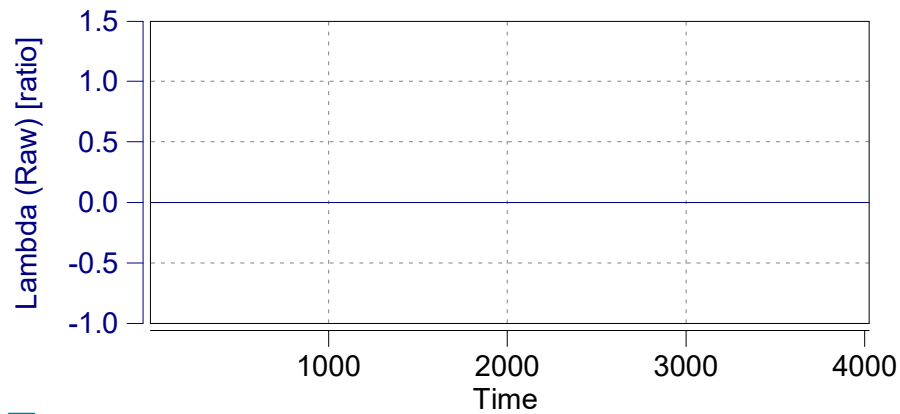
Vehicle: 2017 VW Passat / Model CC
Engine: Gasoline / 3.6L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Exhaust Flow (2)

Start Date: 10/11/2017

Start Time: 07:35:54.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

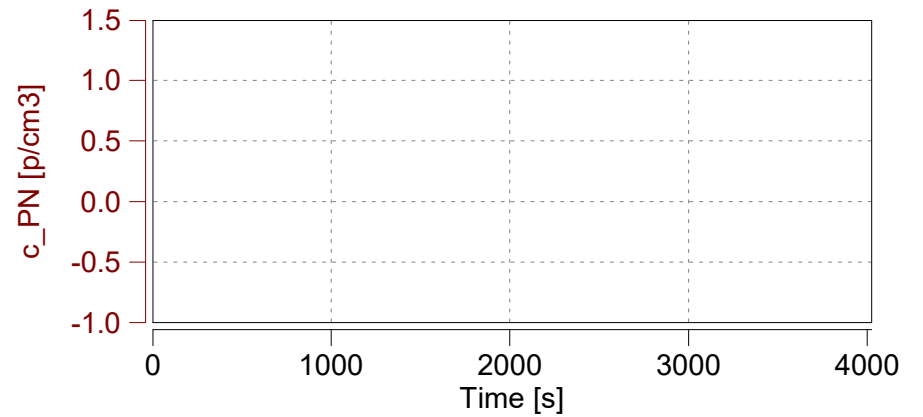
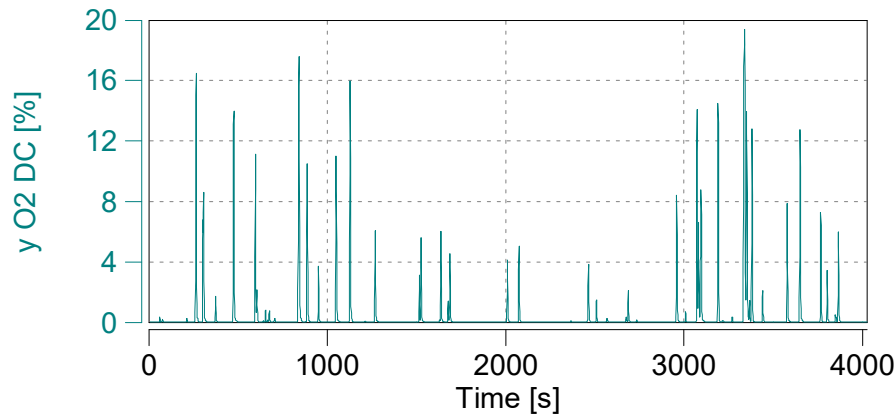
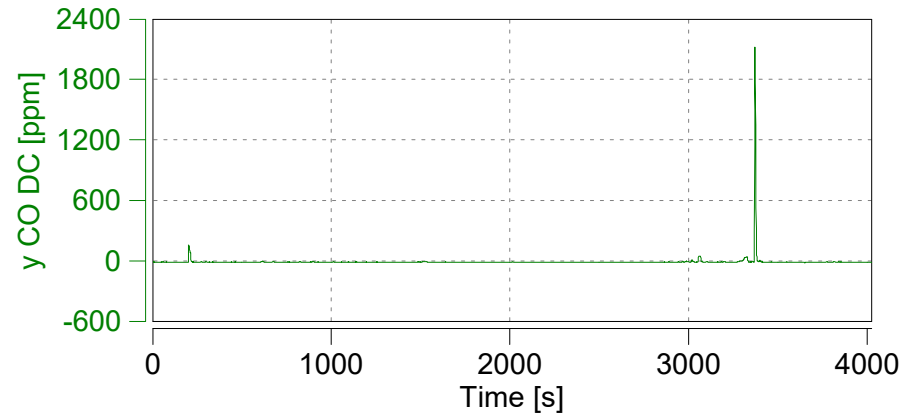
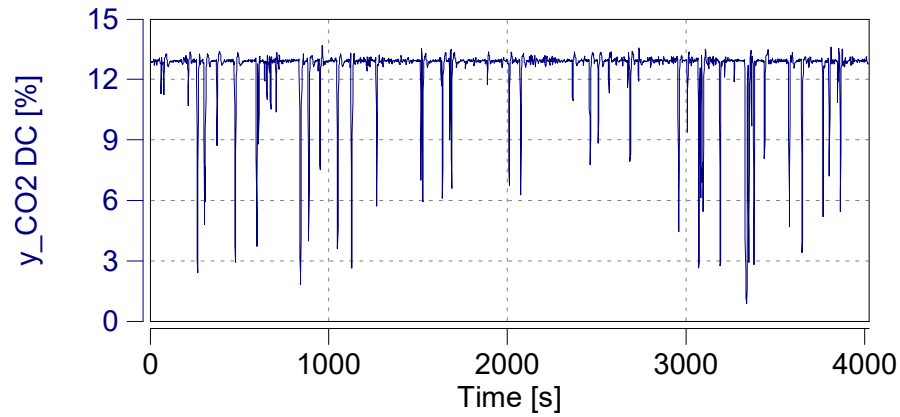
Vehicle: 2017 VW Passat / Model CC
Engine: Gasoline / 3.6L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Corrected Emissions (1)

Start Date: 10/11/2017

Start Time: 07:35:54.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

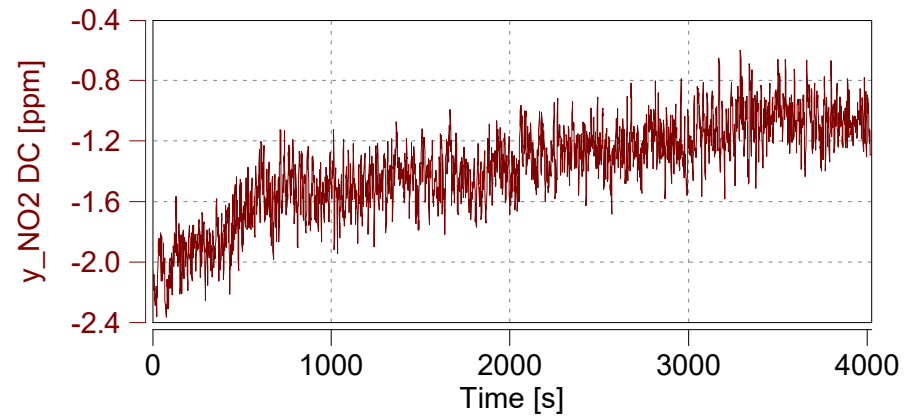
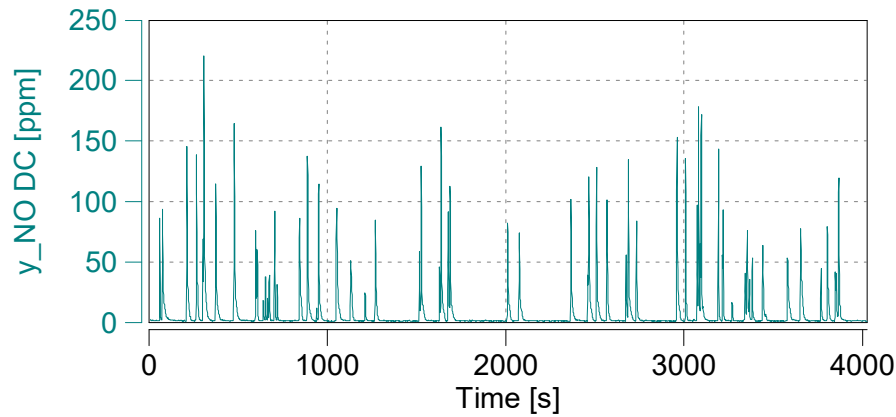
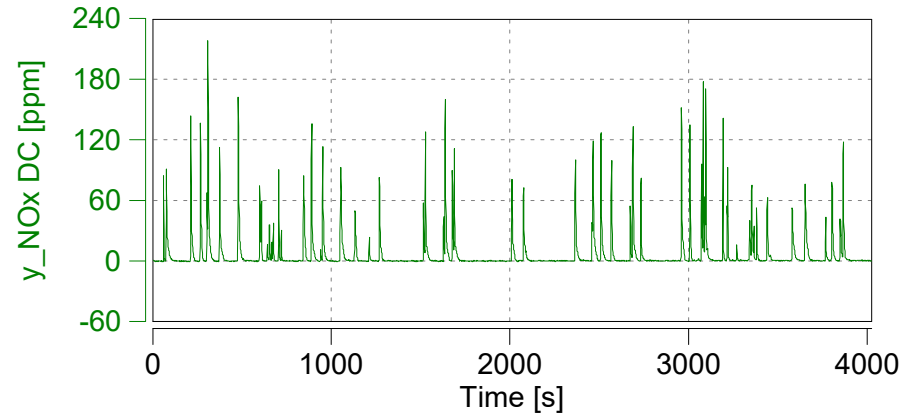
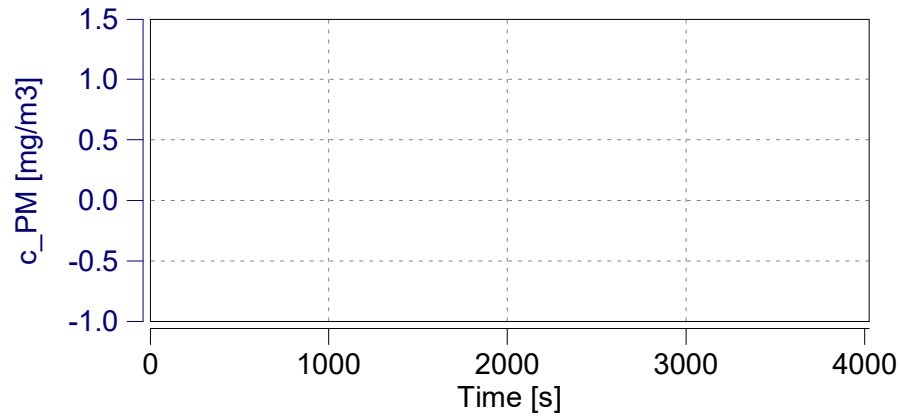
Vehicle: 2017 VW Passat / Model CC
Engine: Gasoline / 3.6L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Corrected Emissions (2)

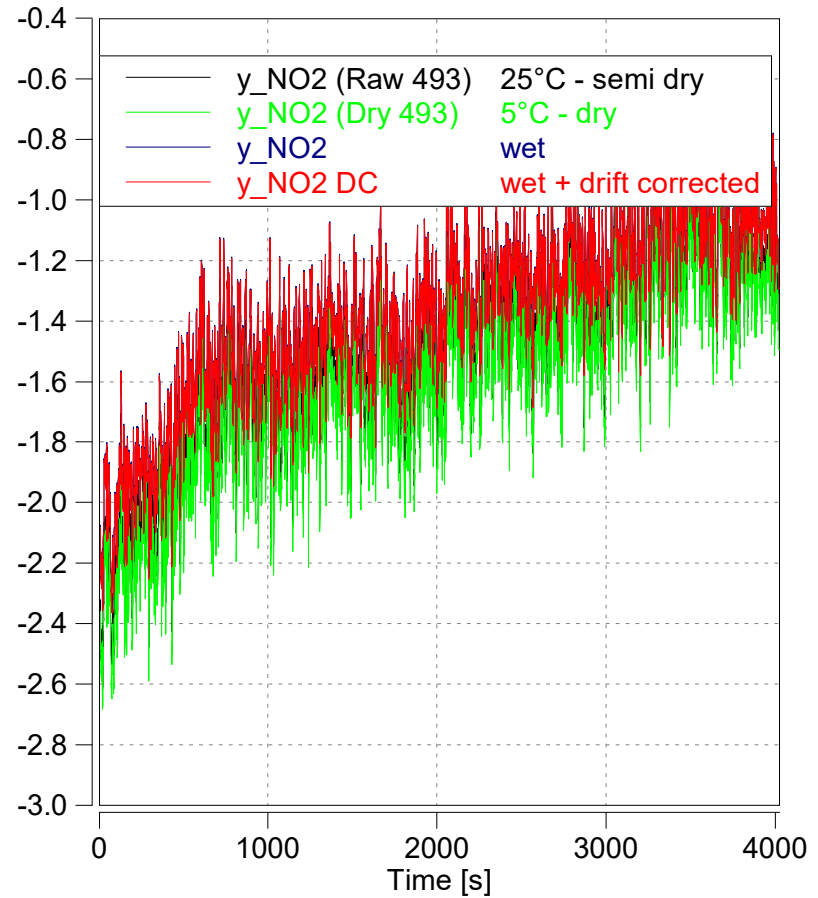
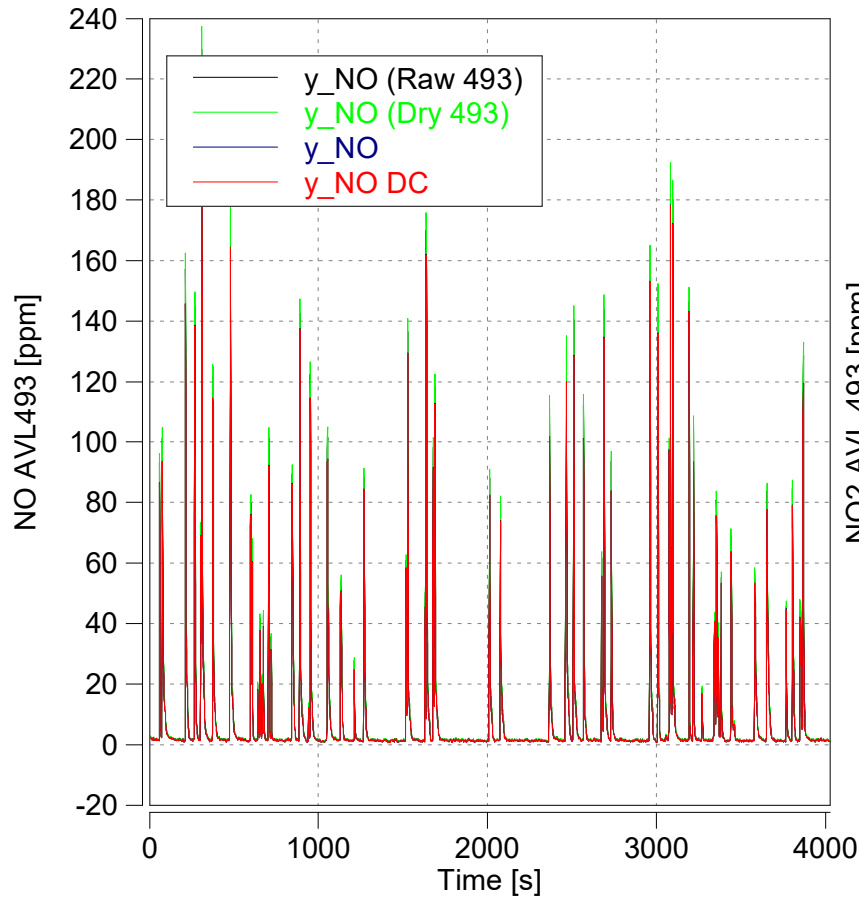
Start Date: 10/11/2017

Start Time: 07:35:54.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Passat / Model CC
Engine: Gasoline / 3.6L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90





NOx - AVL 493

y_NO (Raw 493)
y_NO2 (Raw 493)
25°C

EU R49 8.6.1
US §1065.672
drift correction

d_Kf_NO 25°C to dry
d_Kf_NO2 25°C to dry

- (1) EU R49 8.1.1 (15)
- (2) US §1065.655
- (3) none

y_NO DC (Dry 493)
y_NO2 DC (Dry 493)

y_NO (Dry 493)
y_NO2 (Dry 493)

CF dry/wet
(factor equal for all constituents)

CF NOx Ambient Conditions

y_NO DC
y_NO2 DC
wet

y_NO
y_NO2
wet

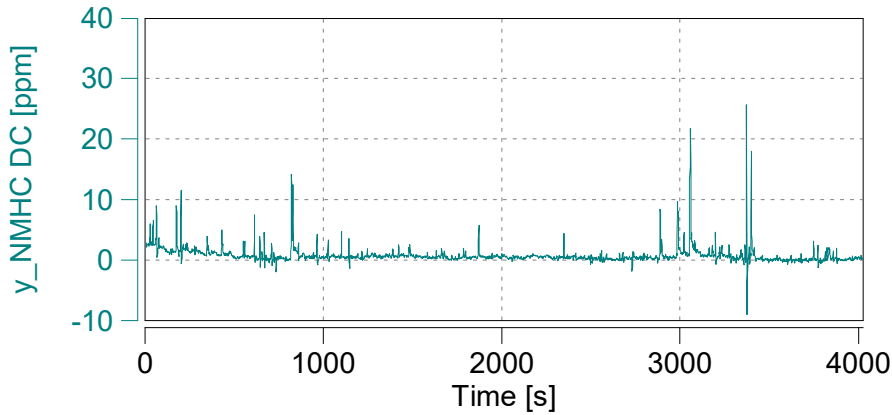
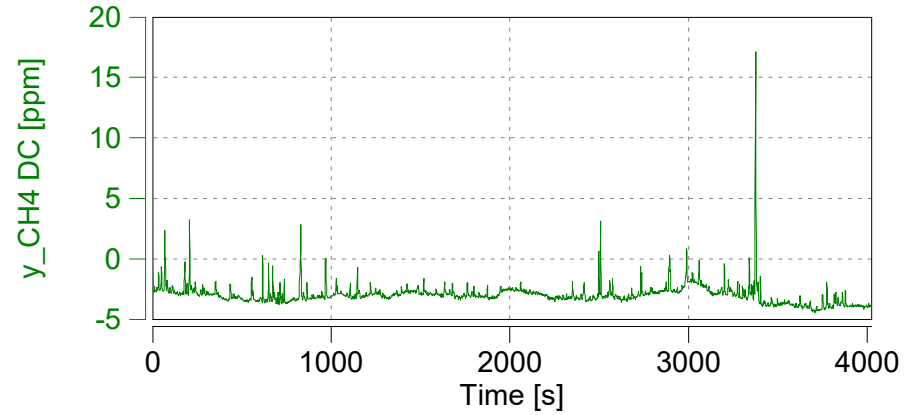
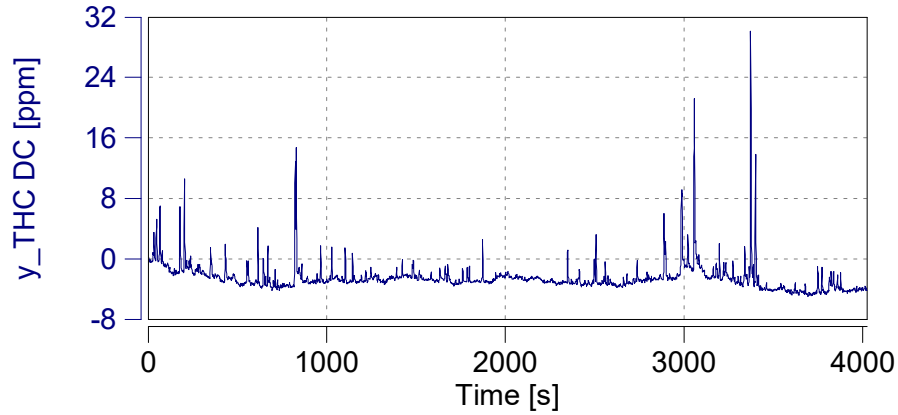
- (1) HD Diesel Engine SwRI FinalReport 08-2597, 1999
- (2) humidity only
- (3) equivalent uncorrected NOx limit method for EU in service
- (4) US §40.86.1342.94 Diesel
- (5) US §40.86.1342.94 SI
- (6) US §40.86.1370-2007 (default US)
- (7) US 40.1065.670
- (8) none (default EU)

Case: City

Page: Corrected Emissions (5)

Start Date: 10/11/2017

Start Time: 07:35:54.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

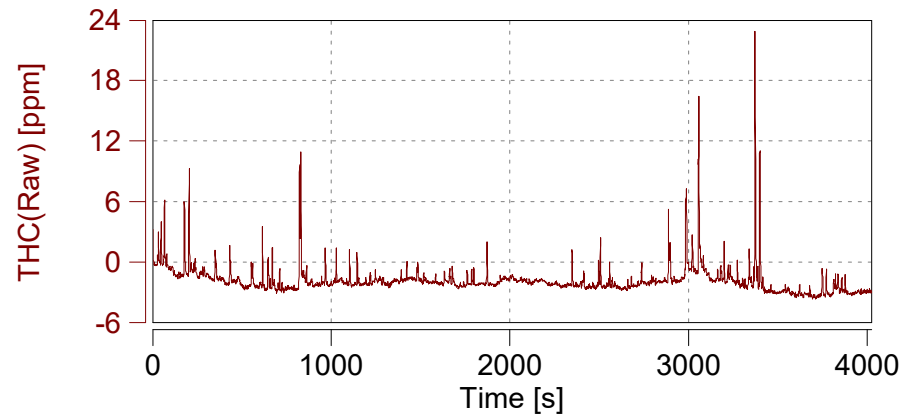
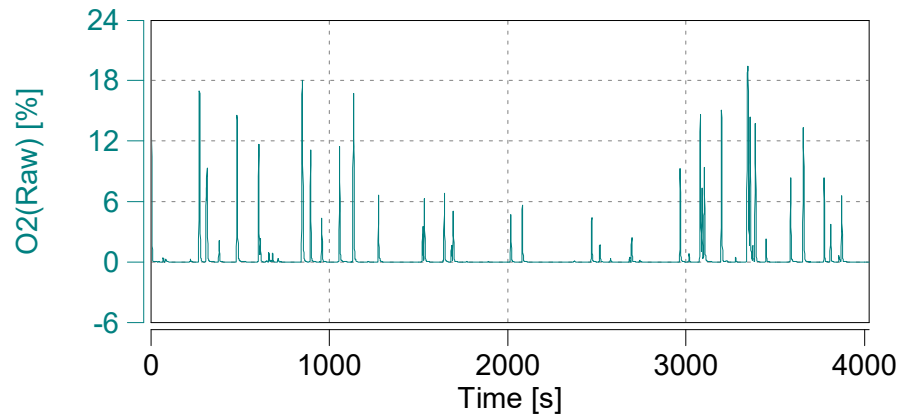
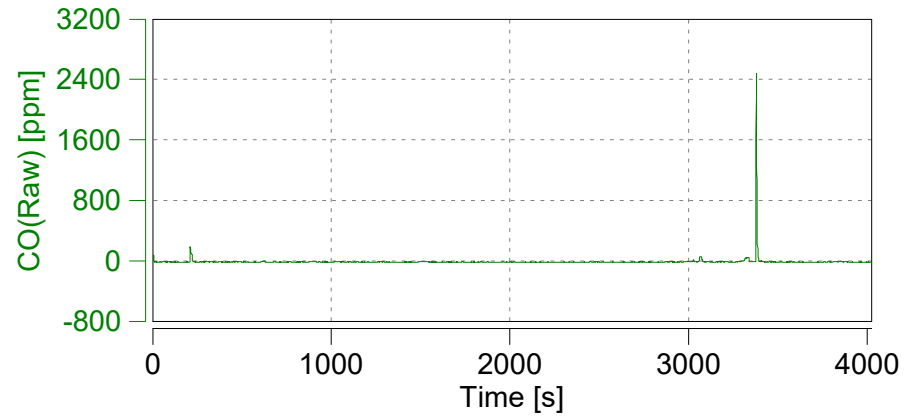
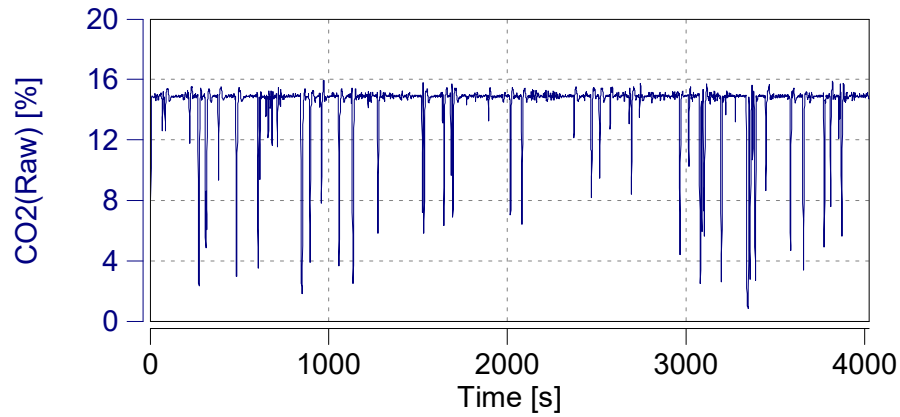
Vehicle: 2017 VW Passat / Model CC
Engine: Gasoline / 3.6L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Emissions Raw Data (1)

Start Date: 10/11/2017

Start Time: 07:35:54.0



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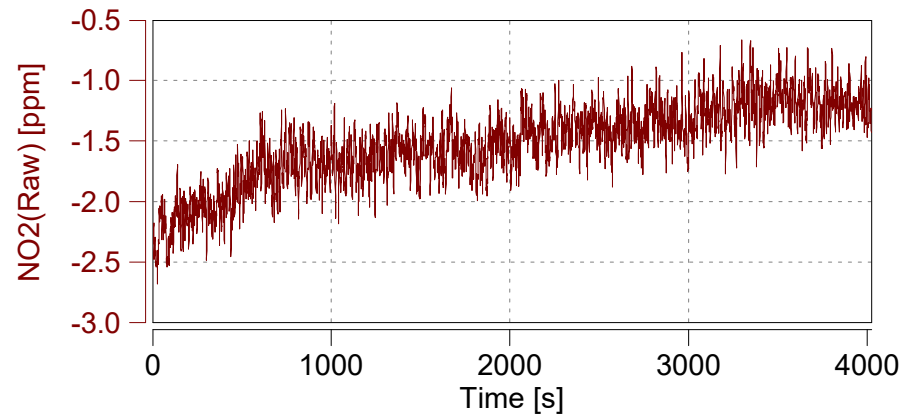
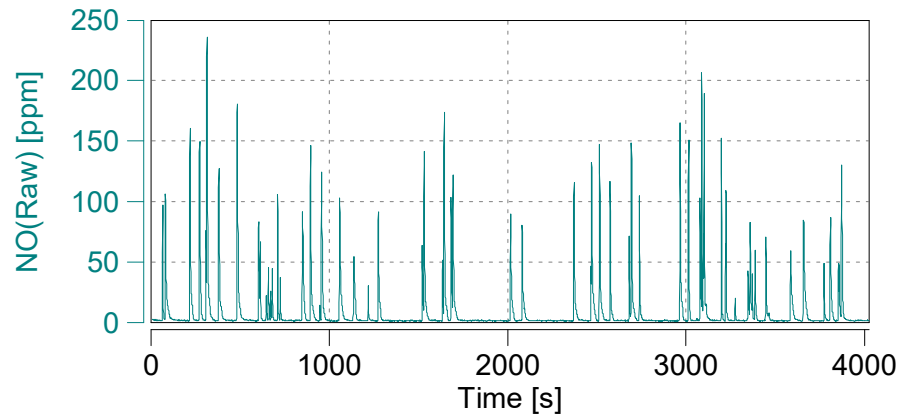
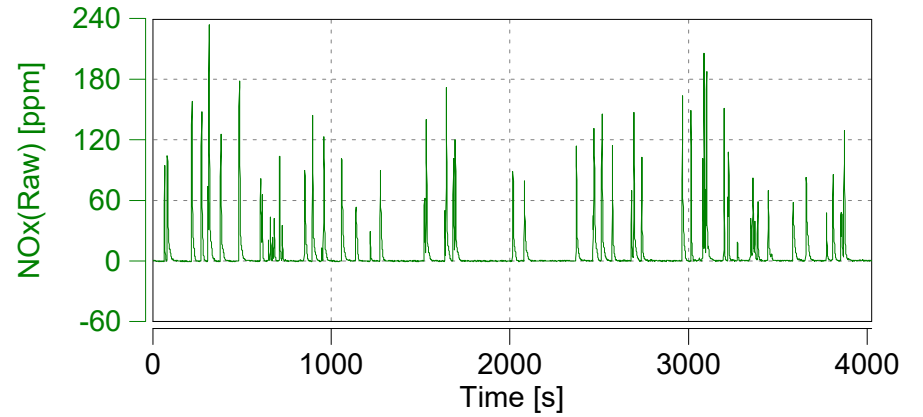
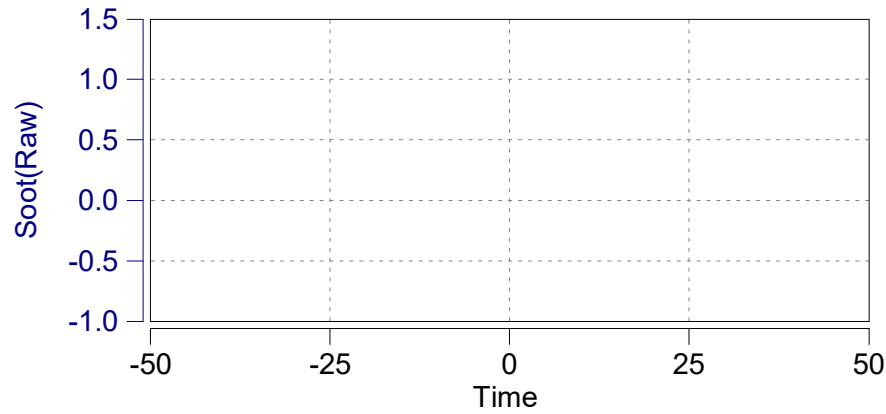
Vehicle: 2017 VW Passat / Model CC
Engine: Gasoline / 3.6L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

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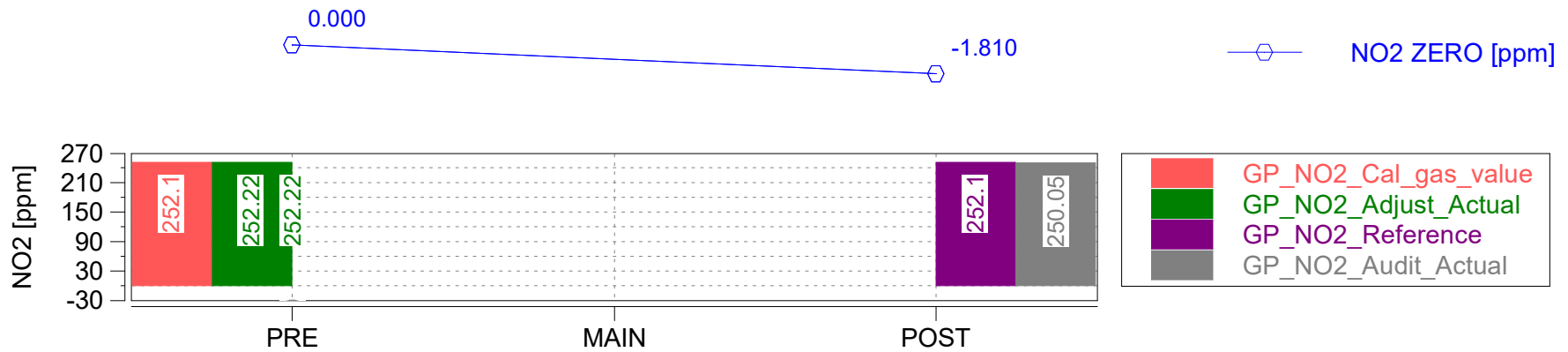
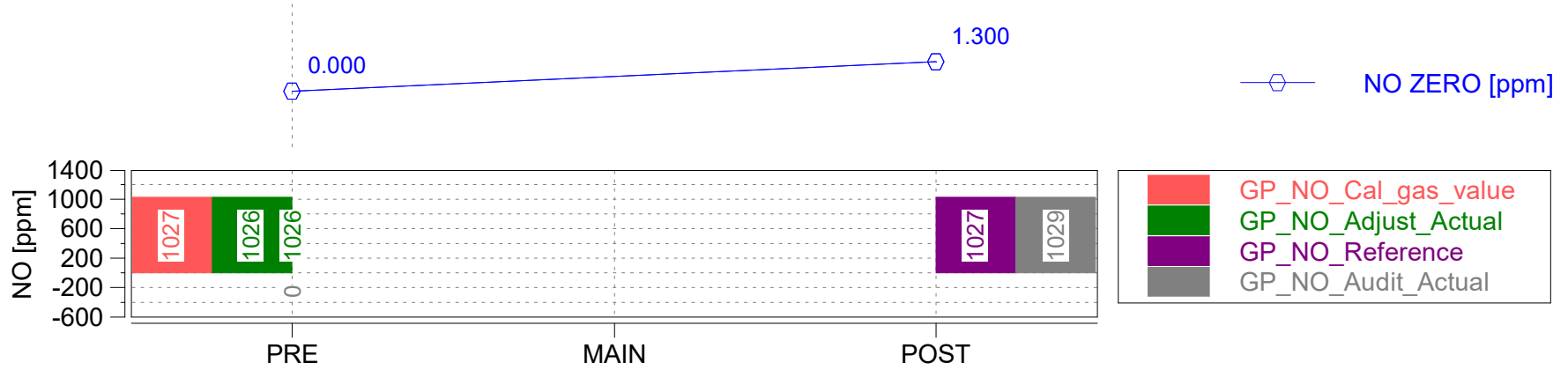
Start Date: 10/11/2017

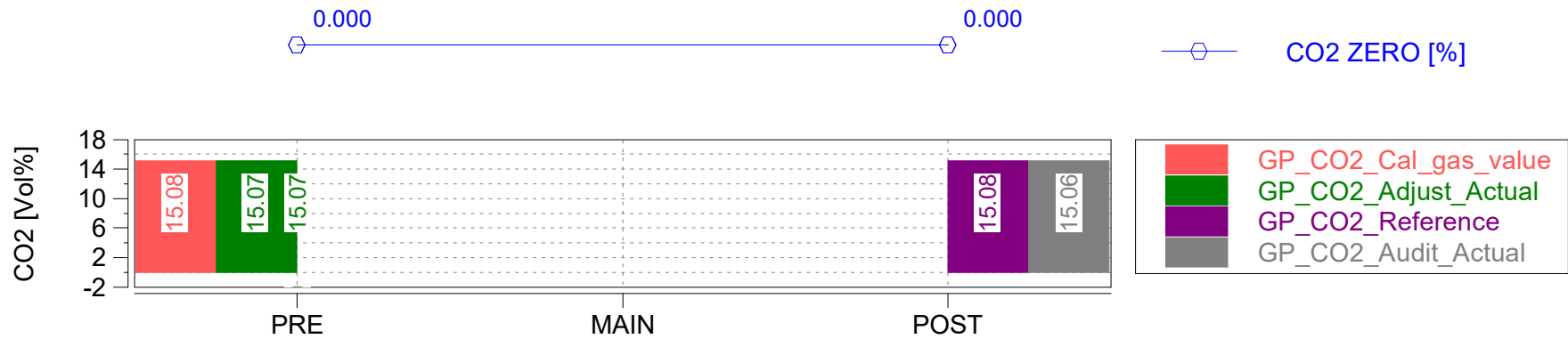
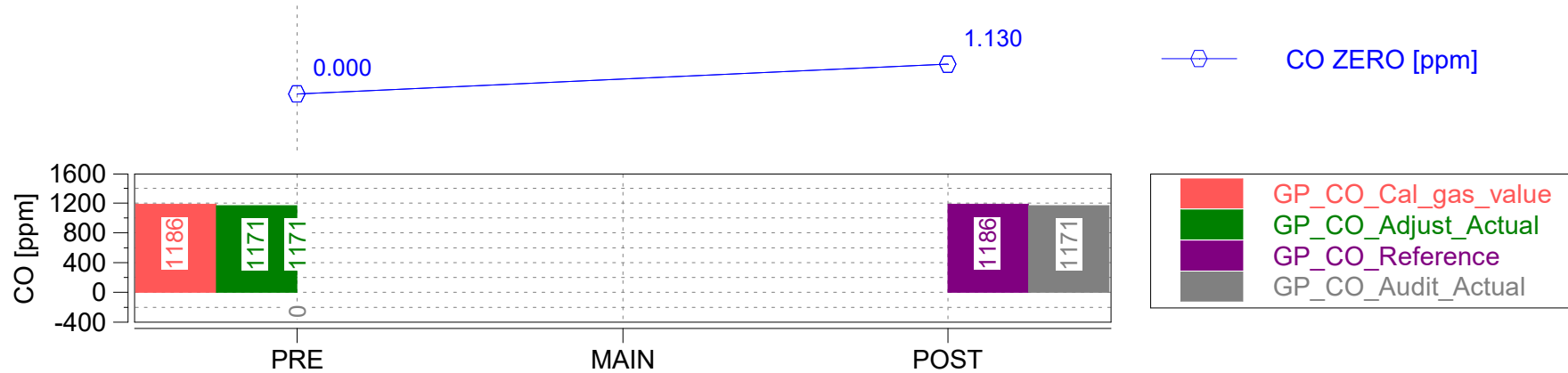
Start Time: 07:35:54.0

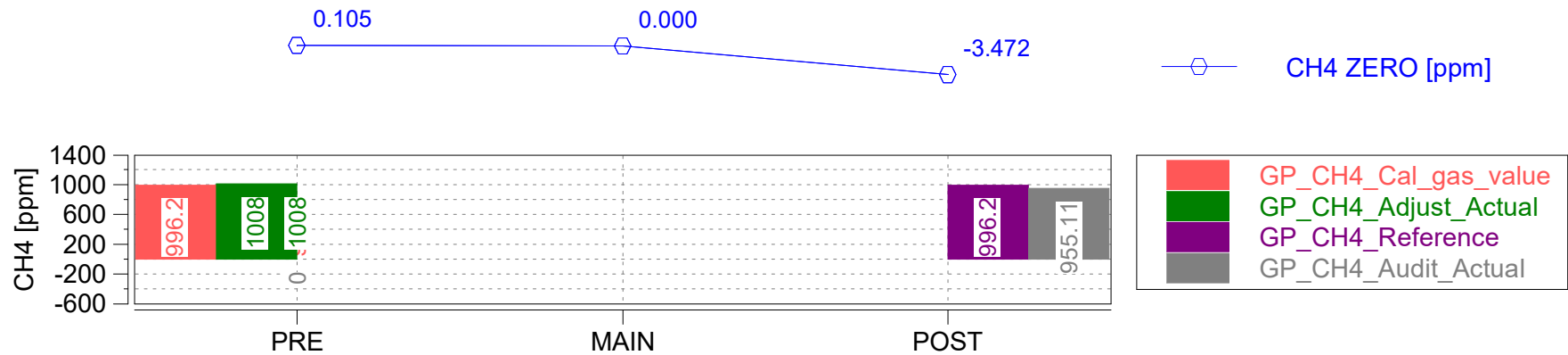
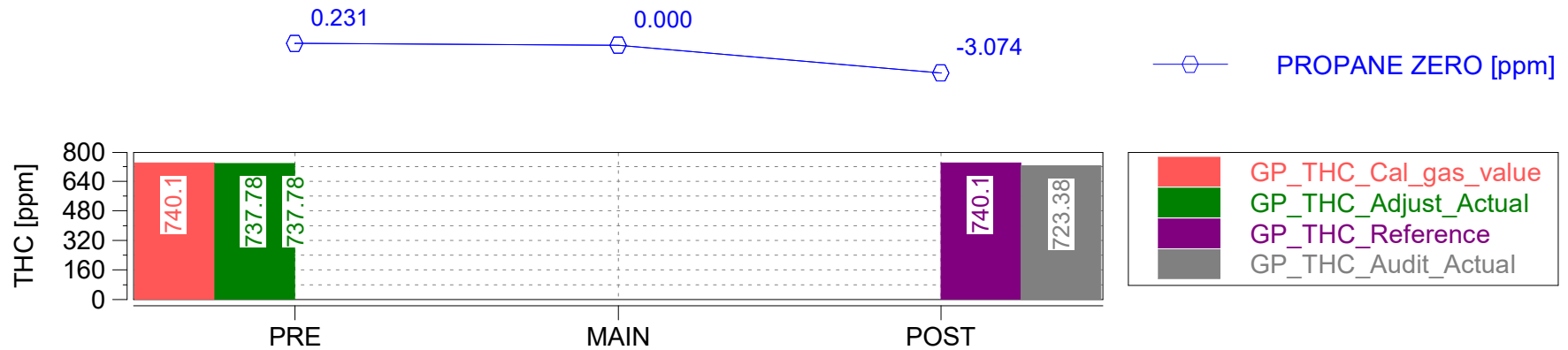


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Vehicle: 2017 VW Passat / Model CC
Engine: Gasoline / 3.6L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
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#	Text	Value	Unit
-	----	----	----
1.0	Test Start: Date		-
2.0	Test Start: Time		-
3.0	Ambient Temperature	IFILE1:TM'Temperature	deg C
4.0	Ambient Temperature TS	0.00000	s
5.0	Ambient Pressure	IFILE1:TM'Pressure	kPa
6.0	Ambient Pressure TS	0.00000	s
7.0	Humidity Type	1.00000	-
8.0	Amb. Rel. Humidity	IFILE1:TM'Humidity	%
9.0	Amb. Rel. Humidity	0.00000	s
10.0	GPS Latitude		deg
11.0	GPS Latitude TS	0.00000	s
12.0	GPS Longitude		deg
13.0	GPS Longitude TS	0.00000	s
14.0	Altitude		m
15.0	Altitude TS	0.00000	s
16.0	GPS Quality		-
17.0	GPS Quality TS	0.00000	s
18.0	GroundSpeed		km/h
19.0	GroundSpeed TS	0.00000	s
20.0	Altitude from topographical map		m
21.0	Altitude TS of topographical map		s
22.0	TRIP_AMBIENT_GPS_AVL	YES	-
23.0	CALC_GPS_GROUNDSPEED	NO	-
24.0	EXHAUST_FLOW_AVL	NO	-
25.0	EXHAUST_FLOW_AVL_EFM	YES	-
26.0	Exhaust Flow Type	2.00000	-
27.0	Mass Flow	IFILE1:TM'PitotEFM_ExhaustG	various
28.0	Mass Flow TS	1.20000	s
29.0	Exhaust Pressure		kPa
30.0	Exhaust Pressure TS	1.20000	s

#	Text	Value	Unit
-	----	----	----
31.0	Exhaust Delta Pressure		kPa
32.0	Exhaust Pressure Delta TS	1.20000	s
33.0	Exhaust Temperature	IFILE1:TM'PitotEFM_ExhaustG	degC
34.0	Exhaust Temperature TS	1.20000	s
35.0	Lambda	N/A	-
36.0	Lambda TS		s
37.0	CO2_DIL		%
38.0	CO2_DIL TS		s
39.0	CVS Volume Flow		m3/min
40.0	TimeShift_CVS_VOL_FLOW		s
41.0	IN_CVS_PRESSURE		kPa
42.0	TimeShift_CVS_PRESSURE		s
43.0	IN_CVS_TEMP		degC
44.0	TimeShift_CVS_TEMP		s
45.0	Dry to Wet Conversion CO2	YES	-
46.0	Dry to Wet Conversion O2	YES	-
47.0	Dry to Wet Conversion NO	NO	-
48.0	Dry to Wet Conversion NO2	NO	-
49.0	Dry to Wet Conversion THC	NO	-
50.0	Dry to Wet Conversion CH4	NO	-
51.0	Dry to Wet Conversion O2	NO	-
52.0	CO2	IFILE1:TM'GPiS_CO2	%
53.0	CO2 TS	-7.70000	s
54.0	OS	IFILE1:TM'GPiS_O2	%
55.0	O2 TS	-8.20000	s
56.0	CO	IFILE1:TM'GPiS_CO	ppm
57.0	CO TS	-7.70000	s
58.0	NO	IFILE1:TM'GPiS_NO	ppm
59.0	NO TS	-5.90000	s
60.0	NO2	IFILE1:TM'GPiS_NO2	ppm

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#	Text	Value	Unit
-	----	----	----
61.0	NO2 TS	-5.90000	s
62.0	THC	IFILE1:TM'FIDiS_THC_C1	ppm
63.0	THC TS	0.00000	s
64.0	CH4	IFILE1:TM'FIDiS_CH4_C1	ppm
65.0	CH4 TS	0.00000	s
66.0	GAS_PEMS_Ethane_Efficiency	IFILE1:MOVE_AVL4925'GP_Et -	
67.0	GAS_PEMS_Methane_Efficiency	IFILE1:MOVE_AVL4925'GP_M -	
68.0	GAS_PEMS_Methane_Response	IFILE1:MOVE_AVL4925'GP_M -	
69.0	Zero Signal	IFILE1:TM'GPiS_STATE	0/1
70.0	Zero Signal TS	-5.90000	s
71.0	Zero Signal_FIDiS	IFILE1:TM'FIDiS_STATE	0/1
72.0	Zero Signal_FIDiS TS		s
73.0	Species Input Type	4.00000	-
74.0	GASPEMS=AVL493	NO	-
75.0	GASPEMS=AVL493_iX	NO	-
76.0	GASPEMS=AVL492	YES	-
77.0	GASPEMS=AVL4925	YES	-
78.0	PM: Type	4.00000	1=GFB+HC, 2=GFB, 3='PM=S
79.0	Filter ID from IFile	NO	-
80.0	Lab ID from IFile	NO	-
81.0	PM Filter: ID	N/A	ID
82.0	PM Filter: Lab	N/A	Name/ID
83.0	PM Filter: Weight before Test	N/A	mg
84.0	PM Filter: Weight after Test	N/A	mg
85.0	PM (HC Corr): Max. Exhaust Flow	N/A	scfm
86.0	Soot		mg/m3
87.0	Soot TS	-5.00000	s
88.0	Soot Sensor		mg/m3
89.0	Soot Sensor TS		s
90.0	PM Filter: Filter Flow Rate		l/min

#	Text	Value	Unit
-	----	----	----
91.0	PM Filter: Filter Flow Rate TS	-5.00000	s
92.0	PM Filter: Filter Dilution Ratio		-
93.0	PM Filter: Filter Dilution Ratio TS	-5.00000	s
94.0	PM Filter: Filter Trigger		-
95.0	PM Filter: Filter Trigger TS	-5.00000	s
96.0	PMPEMS=AVL494	YES	-
97.0	PMPEMS_AVL494_PROP_DIL	NO	-
98.0	PM dilution ratio min		-
99.0	PM_MaxExhaustFlowRate		-
100.0	PM_ExhaustFlow_Thresh		-
101.0	PM_total_flow_val		-
102.0	PM_total_flow_val_TS		-
103.0	PM_exh_mass_flow		-
104.0	PM_exh_mass_flow_TS		-
105.0	PN		#/cm3
106.0	TimeShift_PN		s
107.0	PN_STATE		-
108.0	PN TS STATE		s
109.0	PNPEMS_AVL496	NO	-
110.0	PN_CorrFactor	1.00000	
111.0	Time Alignment	1.00000	-
112.0	Time Alignment Dataset 1	N/A	0/1
113.0	Time Alignment Dataset 2	N/A	0/1
114.0	Time Alignment Thresh 1	N/A	-
115.0	Time Alignment Thresh 2	N/A	-
116.0			
117.0			
118.0			
119.0			
120.0			

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#	Text	Value	Unit
-	----	----	----
121.0			
122.0	Trigger		0/1
123.0	Trigger TS		s
124.0	FTIR_NAME_1		-
125.0	FTIR_MW_1		-
126.0	FTIR_CHANNEL_1		-
127.0	FTIR_CHANNEL_TS_1		-
128.0	FTIR_CHANNEL_DRY_1	NO	-
129.0	FTIR_NAME_2		-
130.0	FTIR_MW_2		-
131.0	FTIR_CHANNEL_2		-
132.0	FTIR_CHANNEL_TS_2		-
133.0	FTIR_CHANNEL_DRY_2	NO	-
134.0	FTIR_NAME_3		-
135.0	FTIR_MW_3		-
136.0	FTIR_CHANNEL_3		-
137.0	FTIR_CHANNEL_TS_3		-
138.0	FTIR_CHANNEL_DRY_3	NO	-
139.0	FTIR_NAME_4		-
140.0	FTIR_MW_4		-
141.0	FTIR_CHANNEL_4		-
142.0	FTIR_CHANNEL_TS_4		-
143.0	FTIR_CHANNEL_DRY_4	NO	-
144.0	FTIR_NAME_5		-
145.0	FTIR_MW_5		-
146.0	FTIR_CHANNEL_5		-
147.0	FTIR_CHANNEL_TS_5		-
148.0	FTIR_CHANNEL_DRY_5	NO	-
149.0	FTIR_NAME_6		-
150.0	FTIR_MW_6		-

#	Text	Value	Unit
-	----	----	----
151.0	FTIR_CHANNEL_6		-
152.0	FTIR_CHANNEL_TS_6		-
153.0	FTIR_CHANNEL_DRY_6	NO	-
154.0	FTIR_NAME_7		-
155.0	FTIR_MW_7		-
156.0	FTIR_CHANNEL_7		-
157.0	FTIR_CHANNEL_TS_7		-
158.0	FTIR_CHANNEL_DRY_7	NO	-
159.0	FTIR_NAME_8		-
160.0	FTIR_MW_8		-
161.0	FTIR_CHANNEL_8		-
162.0	FTIR_CHANNEL_TS_8		-
163.0	FTIR_CHANNEL_DRY_8	NO	-
164.0	FTIR_NAME_9		-
165.0	FTIR_MW_9		-
166.0	FTIR_CHANNEL_9		-
167.0	FTIR_CHANNEL_TS_9		-
168.0	FTIR_CHANNEL_DRY_9	NO	-
169.0	FTIR_NAME_10		-
170.0	FTIR_MW_10		-
171.0	FTIR_CHANNEL_10		-
172.0	FTIR_CHANNEL_TS_10		-
173.0	FTIR_CHANNEL_DRY_10	NO	-
174.0	FTIR_NAME_11		-
175.0	FTIR_MW_11		-
176.0	FTIR_CHANNEL_11		-
177.0	FTIR_CHANNEL_TS_11		-
178.0	FTIR_CHANNEL_DRY_11	NO	-
179.0	FTIR_NAME_12		-
180.0	FTIR_MW_12		-

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#	Text	Value	Unit
-	----	----	----
181.0	FTIR_CHANNEL_12		-
182.0	FTIR_CHANNEL_TS_12		-
183.0	FTIR_CHANNEL_DRY_12	NO	-
184.0	FTIR_NAME_13		-
185.0	FTIR_MW_13		-
186.0	FTIR_CHANNEL_13		-
187.0	FTIR_CHANNEL_TS_13		-
188.0	FTIR_CHANNEL_DRY_13	NO	-
189.0	FTIR_NAME_14		-
190.0	FTIR_MW_14		-
191.0	FTIR_CHANNEL_14		-
192.0	FTIR_CHANNEL_TS_14		-
193.0	FTIR_CHANNEL_DRY_14	NO	-
194.0	FTIR_NAME_15		-
195.0	FTIR_MW_15		-
196.0	FTIR_CHANNEL_15		-
197.0	FTIR_CHANNEL_TS_15		-
198.0	FTIR_CHANNEL_DRY_15	NO	-
199.0	FTIR_NAME_16		-
200.0	FTIR_MW_16		-
201.0	Vehicle Type	2017 VW Passat	-
202.0	Vehicle Info	Model CC	-
203.0	Engine Type	Gasoline	-
204.0	Engine Info	3.6L	-
205.0	Engine Torque		Nm
206.0	Curb Idle Load		%
207.0	Idle Speed		rpm
208.0	HYBRID_OVC_REF_CO2_gkm		g/km
209.0	Engine Concept	1.00000	-
210.0	Alpha	1.93000	-

#	Text	Value	Unit
-	----	----	----
211.0	Beta	1.00000	
212.0	Gamma	0.00000	
213.0	Delta	0.00000	
214.0	Epsilon	0.03200	
215.0	X_C	83.00000	
216.0	X_H	13.30000	
217.0	X_N	0.00000	
218.0	X_O	3.50000	
219.0	X_S	0.00000	
220.0	Fuel_Density	747.50000	
221.0	rho_exhaust	1.29310	
222.0	U_CO2	1.51800	
223.0	U_CO	0.96600	
224.0	U_NO	1.58700	
225.0	U_NO2	1.58700	
226.0	U_NOx	1.58700	
227.0	U_HC	0.49900	
228.0	U_NMHC	0.47100	
229.0	U_CH4	0.55300	
230.0	U_O2	1.10400	
231.0	Fuel Type	2.00000	-
232.0	exhaust mass flow type (YES/NO)	YES	-
233.0	Distance Calculation Type	1.00000	-
234.0	Velocity Statistics Calculation Type	2.00000	-
235.0	RDE vehicle class	1.00000	-
236.0	TM_CITY0		s
237.0	TM_CITY1		s
238.0	TM_RURAL0		s
239.0	TM_RURAL1		s
240.0	TM_RURAL2_0		s

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#	Text	Value	Unit
-	----	----	----
241.0	TM_RURAL2_1		s
242.0	Second Rural Part for Time Marks (NO		-
243.0	TM_MW0		s
244.0	TM_MW1		s
245.0	VELOCITY_LIMIT_STOP	2.00000	km/h
246.0	VELOCITY_LIMIT_URBAN	50.00000	km/h
247.0	VELOCITY_LIMIT_RURAL	75.00000	km/h
248.0	Intake Manifold Pressure Type	1.00000	-
249.0	Velocity	IFILE1:TM'OBD_Vehicle_Spee	km/h
250.0	Velocity TS	1.30000	s
251.0	Velocity FACTOR	1.00000	-
252.0	Coolant Temperature	IFILE1:TM'OBD_Engine_Coola	degC
253.0	Coolant Temperature TS	1.30000	s
254.0	Oil Temperature		degC
255.0	Oil Temperature TS	1.30000	s
256.0	Intake Manifold Temperature		degC
257.0	Intake Manifold Temp TS	1.30000	s
258.0	Intake Manifold Pressure	IFILE1:TM'OBD_Intake_manifo	kPa
259.0	Intake Manifold Pressure TS	1.30000	s
260.0	Throttle Position		%
261.0	Throttle TS	1.30000	s
262.0	TYP_IDLE_MASS_FLOW		kg/h
263.0	Torque Type	1.00000	-
264.0	Speed	IFILE1:TM'OBD_Engine_RPM	rpm
265.0	Speed TS	1.30000	s
266.0	Torque		Nm
267.0	Torque TS	1.30000	s
268.0	Friction Torque	N/A	Nm
269.0	Friction Torque TS	N/A	s
270.0	Reference Torque	N/A	Nm

#	Text	Value	Unit
-	----	----	----
271.0	Reference Torque TS	N/A	s
272.0	k_VELINE		-
273.0	D_VELINE		-
274.0	Fuel Flow Type	2.00000	-
275.0	Air Flow Type	1.00000	-
276.0	Fuel Rate		various
277.0	Air Rate		various
278.0	Fuel Rate TS	1.30000	s
279.0	No_Cylinders		-
280.0	Air Rate TS	1.30000	s
281.0	FTIR_CHANNEL_32		-
282.0	FTIR_CHANNEL_TS_32		-
283.0	FTIR_CHANNEL_DRY_32	NO	-
284.0	FTIR_NAME_33		-
285.0	FTIR_MW_33		-
286.0	FTIR_CHANNEL_33		-
287.0	FTIR_CHANNEL_TS_33		-
288.0	FTIR_CHANNEL_DRY_33	NO	-
289.0	FTIR_NAME_34		-
290.0	FTIR_MW_34		-
291.0	FTIR_CHANNEL_34		-
292.0	FTIR_CHANNEL_TS_34		-
293.0	FTIR_CHANNEL_DRY_34	NO	-
294.0	FTIR_NAME_35		-
295.0	FTIR_MW_35		-
296.0	FTIR_CHANNEL_35		-
297.0	FTIR_CHANNEL_TS_35		-
298.0	FTIR_CHANNEL_DRY_35	NO	-
299.0	FTIR_NAME_36		-
300.0	FTIR_MW_36		-

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#	Text	Value	Unit
-	----	----	----
301.0	FTIR_CHANNEL_36	-	-
302.0	FTIR_CHANNEL_TS_36	-	-
303.0	FTIR_CHANNEL_DRY_36	NO	-
304.0	FTIR_NAME_37	-	-
305.0	FTIR_MW_37	-	-
306.0	FTIR_CHANNEL_37	-	-
307.0	FTIR_CHANNEL_TS_37	-	-
308.0	FTIR_CHANNEL_DRY_37	NO	-
309.0	FTIR_NAME_38	-	-
310.0	FTIR_MW_38	-	-
311.0	FTIR_CHANNEL_38	-	-
312.0	FTIR_CHANNEL_TS_38	-	-
313.0	FTIR_CHANNEL_DRY_38	NO	-
314.0	FTIR_NAME_39	-	-
315.0	FTIR_MW_39	-	-
316.0	FTIR_CHANNEL_39	-	-
317.0	FTIR_CHANNEL_TS_39	-	-
318.0	FTIR_CHANNEL_DRY_39	NO	-
319.0	FTIR_NAME_40	-	-
320.0	FTIR_MW_40	-	-
321.0	FTIR_CHANNEL_40	-	-
322.0	FTIR_CHANNEL_TS_40	-	-
323.0	FTIR_CHANNEL_DRY_40	NO	-
324.0	Legislation Type (1=HDIUT 2=EU H	4.00000	-
325.0	WholeTest_NOx_corr	5.00000	-
326.0	WholeTest_Hum_corr	2.00000	-
327.0	CD_Distance	0.00000	km
328.0	CD_NOx	0.00000	mg/km
329.0	CD_CO	0.00000	mg/km
330.0	CD_CO2	0.00000	g/km

#	Text	Value	Unit
-	----	----	----
331.0	CD_NMHC	0.00000	mg/km
332.0	CD_CH4	0.00000	mg/km
333.0	CD_THC	0.00000	mg/km
334.0	CD_PN	-	#/km
335.0	WLTC_LOW_SPEED_gkm	-	g/km
336.0	WLTC_LOW_SPEED_FAC	1.20000	-
337.0	WLTC_MEDIUM_SPEED_gkm	-	g/km
338.0	WLTC_HIGH_SPEED_gkm	-	g/km
339.0	WLTC_HIGH_SPEED_FAC	1.10000	-
340.0	WLTC_EXTRA_HIGH_SPEED_gkm	-	g/km
341.0	WLTC_EXTRA_HIGH_SPEED_FA	1.05000	-
342.0	TOL_NORMAL_DRIVING	25.00000	%
343.0	TOL_SEVERE_DRIVING	50.00000	%
344.0	Increase Tolerance Nomral Driving	NO	-
345.0	Bin1_min	-	km/h
346.0	Bin2_min	-	km/h
347.0	Bin3_min	-	km/h
348.0	Bin1_max	-	km/h
349.0	Bin2_max	-	km/h
350.0	Bin3_max	-	km/h
351.0	Clear_R0	125.40000	N
352.0	Clear_R1	0.29300	Nh/km
353.0	Clear_R2	0.02795	N*(h/km) ²
354.0	Clear_SMK	1470.00000	kg
355.0	Clear_Rated_Power	140.00000	kW
356.0	Clear_Ref_Velocity	70.00000	km/h
357.0	Clear_Ref_Acc	0.45000	m/s ²
358.0	Clear_Smooth	3.00000	s
359.0	EXTC_From_High_Temp	30.00000	degC
360.0	EXTC_To_High_Temp	35.00000	degC

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Passat / Model CC
Engine: Gasoline / 3.6L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
361.0	EXTC_From_Low_Temp	-7.00000	degC
362.0	EXTC_To_Low_Temp	0.00000	degC
363.0	Euro 6d or Euro 6d temp	NO	-
364.0	EXTC_From_Altitude	700.00000	m
365.0	EXTC_To_Altitude	1300.00000	m
366.0	EXTC_CORR_FAC	1.60000	
367.0	weight cold start (YES/NO)	NO	-
368.0	precon and soak done (YES/NO)	NO	-
369.0	PATH_PRECON_FILE		
370.0	filter velocity (YES/NO)	NO	-
371.0	filter velocity auto(YES/NO)	NO	-
372.0	Ki_CO		
373.0	Ki_CO2		
374.0	Ki_NOx		
375.0	Ki_FACTOR_CO2 (YES/NO)	NO	-
376.0	Ki_OFFSET_CO2 (YES/NO)	NO	-
377.0	Ki_FACTOR_CO (YES/NO)	NO	-
378.0	Ki_OFFSET_CO (YES/NO)	NO	-
379.0	Ki_FACTOR_NOx (YES/NO)	NO	-
380.0	Ki_OFFSET_NOx (YES/NO)	NO	-
381.0	Ki_OFF (YES/NO)	NO	-
382.0	HD legislations	1.00000	-
383.0	RDE legislations	1.00000	-
384.0	Submission Documents (YES/NO)	NO	-
385.0	General Setup Parameters Text	City	-
386.0	Legislation Setup Parameters Text	City	-
387.0	Trip Info		-
388.0	IN_TIME_REF		-
389.0	Sub-Trip Start: Auto	YES	-
390.0	Sub-Trip Start: Seconds	N/A	s

#	Text	Value	Unit
-	----	----	----
391.0	Sub-Trip End: Auto	YES	-
392.0	Sub-Trip End: Seconds	N/A	s
393.0	Unit System	2.00000	-
394.0	Calculate: PM Emissions	NO	-
395.0	Calculate: PN Emissions	NO	-
396.0	Output: Summary	YES	-
397.0	Output: Emissions	YES	-
398.0	Output: Raw Data	YES	-
399.0	Output: Zero Span	YES	-
400.0	Output: Data Consistency	NO	-
401.0	Output: Window Plots	YES	-
402.0	Fuel Rate ECU vs. EU ISO16183	y = 10000000000.0000 x - 0.000 R ² =10000000000.000 SEE=	
403.0	PEMS post processing version	Rel_10_B192	
404.0	Concerto version	480.00000	
405.0	Concerto build	215.00000	
406.0	USERNAME	EFR	

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 VW Passat / Model CC
Engine: Gasoline / 3.6L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway
Page: Trip Summary

Start Date: 10/13/2017
Start Time: 07:33:08.0



Trip Duration	3439.00	s	ave THC	1.74086	ppm	BS CO2	n/a	g/hphr
Trip Duration (a)	3439.00	s	ave NMHC	3.26490	ppm	BS CO	n/a	g/hphr
Trip Distance	38.73	mi	ave CH4	-1.38550	ppm	BS THC	n/a	g/hphr
Trip Distance (a)	38.73	mi	ave CO	66.56920	ppm	BS NMHC	n/a	g/hphr
Trip Fuel Cons. (b)	n/a	kg	ave CO2	12.13800	%	BS CH4	n/a	g/hphr
Trip Fuel Cons. (ab)	n/a	kg	ave NOx	5.26922	ppm	BS NO (d)	n/a	g/hphr
Trip Fuel Cons. EU (ac)	3.51	kg	ave PM	n/a	mg/m3	BS NO2	n/a	g/hphr
Trip Fuel Cons. US (ac)	3.50	kg	ave Soot meas	n/a	mg/m3	BS NOx	n/a	g/hphr
Trip Fuel Cons. Volume (b)	n/a	gall	ave Soot	n/a	mg/m3	BS Soot	n/a	g/hphr
Trip Fuel Cons. Volume (ab)	n/a	gall	ave PN	n/a	#/cm3	BS Soot meas	n/a	g/hphr
Trip Fuel Cons. Volume EU (ac)	1.24	gall	tot THC	0.10033	g	BS PM	n/a	g/hphr
Trip Fuel Cons. Volume US (ac)	1.24	gall	tot NMHC	0.10353	g	BS PN	n/a	#/hpr
Trip Fuel Economy (b)	n/a	mpg_US	tot CH4	0.02699	g	DS CO2	274.77501	g/mi
Trip Fuel Economy (ab)	n/a	mpg_US	tot CO	5.05295	g	DS CO	0.13046	g/mi
Trip Fuel Economy EU (ac)	31.20	mpg_US	tot CO2	10642.66751	g	DS THC	0.00259	g/mi
Trip Fuel Economy US (ac)	31.32	mpg_US	tot NO (d)	0.21001	g	DS NMHC	0.00267	g/mi
Trip Av. Eng. Speed	1862.01	rpm	tot NO2	0.14608	g	DS CH4	0.00070	g/mi
Trip Av. Torque	n/a	lbft	tot NOx	0.33925	g	DS NO (d)	0.00542	g/mi
Trip Av. Power	n/a	hp	tot Soot	n/a	g	DS NO2	0.00377	g/mi
Trip Work	n/a	hphr	tot Soot meas	n/a	g	DS NOx	0.00876	g/mi
Trip Exhaust Mass	55.46	kg	tot PM	n/a	g	DS Soot	n/a	g/mi
Trip Exhaust Mass EU (ac)	n/a	kg	tot PN	n/a	#	DS Soot meas	n/a	g/mi
Trip Exhaust Mass US (ac)	n/a	kg	PM measurement type	0.00000	-	DS PM	n/a	g/mi
Trip Av. Amb. Temperature	58.26	deg_F	PM correction type	1.00000	alpha(HC)	DS PN	n/a	#/mi
Trip Av. Humidity	59.46	%	tot Soot on PM filter (estim.)	n/a	mg	FS CO2	n/a	g/kg
Fuel Type	Petrol (E10)		Soot --> PM simple scaling factor	1.00000	-	FS CO	n/a	g/kg
			Soot --> PM alpha scaling factor	0.00000	-	FS THC	n/a	g/kg
			Trip Av. Veh. Speed	40.54559	mi/hr	FS NMHC	n/a	g/kg
			Trip Velocity Zero	6.13550	%	FS CH4	n/a	g/kg
			Trip Velocity Urban	39.11021	%	FS NO (d)	n/a	g/kg
			Trip Velocity Rural	6.51352	%	FS NO2	n/a	g/kg
			Trip Velocity Motorway	54.37627	%	FS NOx	n/a	g/kg
						FS Soot	n/a	g/kg
						FS Soot meas	n/a	g/kg
						FS PM	n/a	g/kg
						FS PN	n/a	#/kg

(a) GAS PEMS measurement state only, (b) based on fuel rate input (ECU, Fuel Meter), (c) calculated from carbon balance
(d) NO calculated using molecular weight of NO2

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi A5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

Page: Trip Summary Drift Corrected

Start Date: 10/13/2017

Start Time: 07:33:08.0

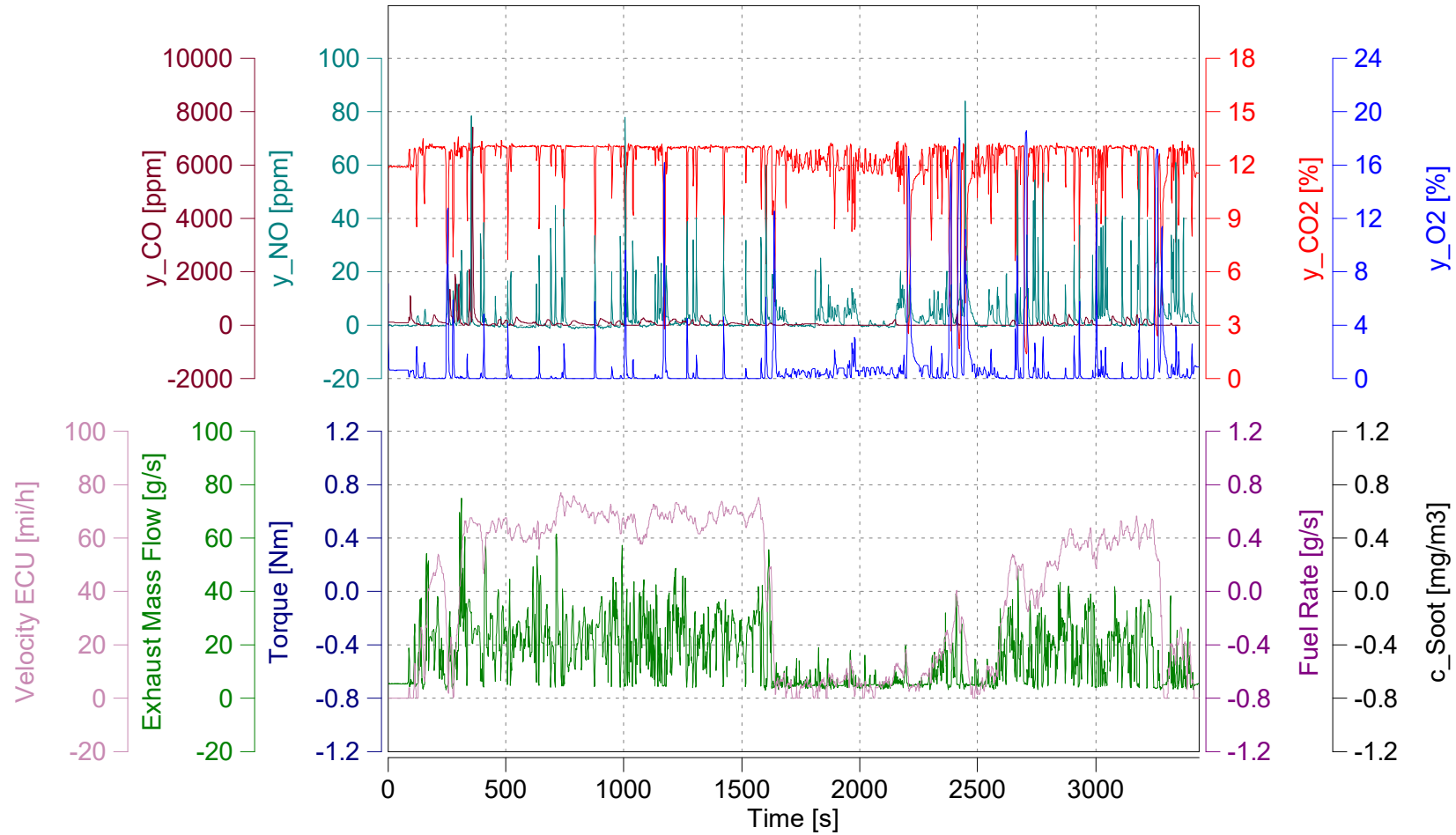


Trip Duration	3439.00	s	ave THC DC	2.37617	ppm	BS CO2 DC	n/a	g/hphr
Trip Duration (a)	3439.00	s	ave NMHC DC	3.81754	ppm	BS CO DC	n/a	g/hphr
Trip Distance	38.73	mi	ave CH4 DC	-1.31034	ppm	BS THC DC	n/a	g/hphr
Trip Distance (a)	38.73	mi	ave CO DC	66.76462	ppm	BS NMHC DC	n/a	g/hphr
Trip Fuel Cons. (b)	n/a	kg	ave CO2 DC	12.13800	%	BS CH4 DC	n/a	g/hphr
Trip Fuel Cons. (ab)	n/a	kg	ave NOx DC	5.43535	ppm	BS NO DC (d)	n/a	g/hphr
Trip Fuel Cons. EU (ac)	3.51	kg	ave PM	n/a	mg/m3	BS NO2 DC	n/a	g/hphr
Trip Fuel Cons. US (ac)	3.50	kg	ave Soot meas	n/a	mg/m3	BS NOx DC	n/a	g/hphr
Trip Fuel Cons. Volume (b)	n/a	gall	ave Soot	n/a	mg/m3	BS Soot	n/a	g/hphr
Trip Fuel Cons. Volume (ab)	n/a	gall	ave PN DC	n/a	#/cm3	BS Soot meas	n/a	g/hphr
Trip Fuel Cons. Volume EU (ac)	1.24	gall	tot THC DC	0.13695	g	BS PM	n/a	g/hphr
Trip Fuel Cons. Volume US (ac)	1.24	gall	tot NMHC DC	0.12841	g	BS PN DC	n/a	#/hpr
Trip Fuel Economy (b)	n/a	mpg_US	tot CH4 DC	0.02775	g	DS CO2 DC	274.77501	g/mi
Trip Fuel Economy (ab)	n/a	mpg_US	tot CO DC	5.08231	g	DS CO DC	0.13122	g/mi
Trip Fuel Economy EU (ac)	31.20	mpg_US	tot CO2 DC	10642.66751	g	DS THC DC	0.00354	g/mi
Trip Fuel Economy US (ac)	31.32	mpg_US	tot NO DC (d)	0.20813	g	DS NMHC DC	0.00332	g/mi
Trip Av. Eng. Speed	1862.01	rpm	tot NO2 DC	0.15957	g	DS CH4 DC	0.00072	g/mi
Trip Av. Torque	n/a	lbft	tot NOx DC	0.35097	g	DS NO DC (d)	0.00537	g/mi
Trip Av. Power	n/a	hp	tot Soot	n/a	g	DS NO2 DC	0.00412	g/mi
Trip Work	n/a	hphr	tot Soot meas	n/a	g	DS NOx DC	0.00906	g/mi
Trip Exhaust Mass	55.46	kg	tot PM	n/a	g	DS Soot	n/a	g/mi
Trip Exhaust Mass EU (ac)	n/a	kg	tot PN DC	n/a	#	DS Soot meas	n/a	g/mi
Trip Exhaust Mass US (ac)	n/a	kg	PM measurement type	0.00000	-	DS PM	n/a	g/mi
Trip Av. Amb. Temperature	58.26	deg_F	PM correction type	1.00000	alpha(HC)	DS PN DC	n/a	#/mi
Trip Av. Humidity	59.46	%	tot Soot on PM filter (estim.)	n/a	mg	FS CO2 DC	n/a	g/kg
Fuel Type	Petrol (E10)		Soot --> PM simple scaling factor	1.00000	-	FS CO DC	n/a	g/kg
			Soot --> PM alpha scaling factor	0.00000	-	FS THC DC	n/a	g/kg
			Trip Av. Veh. Speed	40.54559	mi/hr	FS NMHC DC	n/a	g/kg
			Trip Velocity Zero	6.13550	%	FS CH4 DC	n/a	g/kg
			Trip Velocity Urban	39.11021	%	FS NO DC (d)	n/a	g/kg
			Trip Velocity Rural	6.51352	%	FS NO2 DC	n/a	g/kg
			Trip Velocity Motorway	54.37627	%	FS NOx DC	n/a	g/kg
						FS Soot	n/a	g/kg
						FS Soot meas	n/a	g/kg
						FS PM	n/a	g/kg
						FS PN DC	n/a	#/kg

(a) GAS PEMS measurement state only, (b) based on fuel rate input (ECU, Fuel Meter), (c) calculated from carbon balance
 (d) NO calculated using molecular weight of NO2

Concerto Version: 480 Build 215, Serial Number: 8468
 M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi A5 /
 Engine: Gasoline / 2.0L
 NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
 Dry / Wet Corr.: 2 - CFR40 §86.1342-90



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

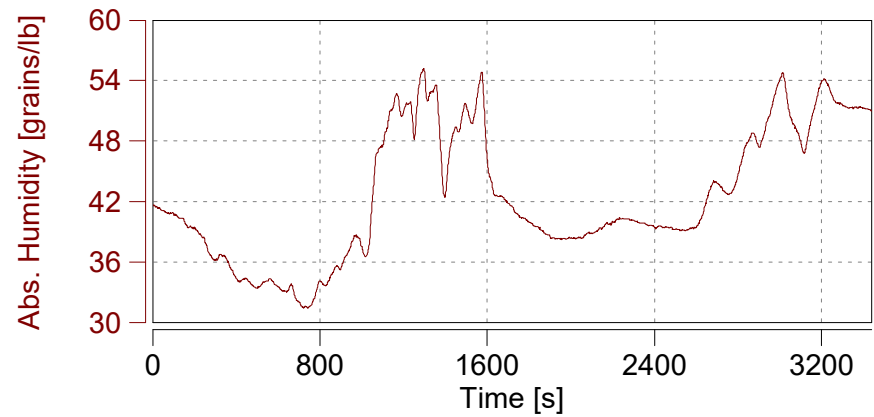
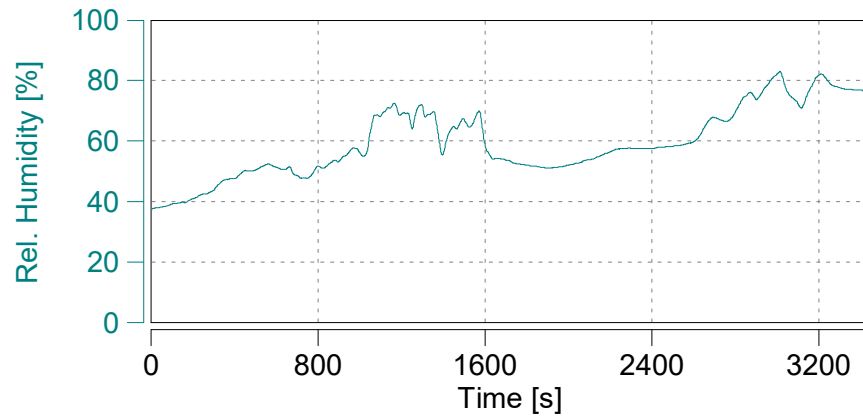
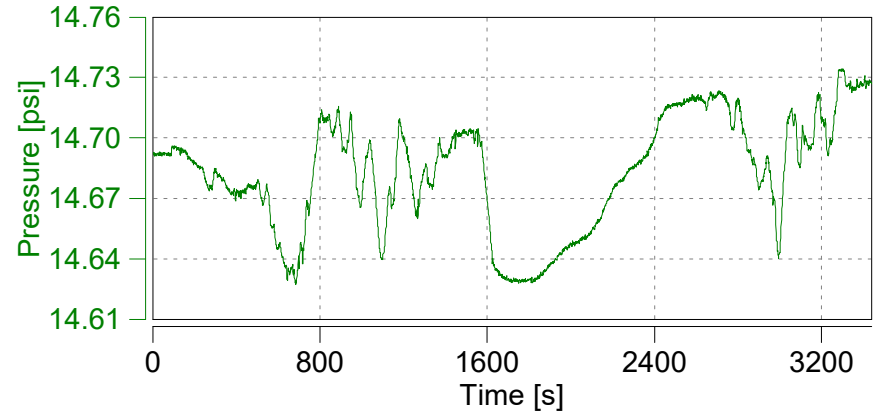
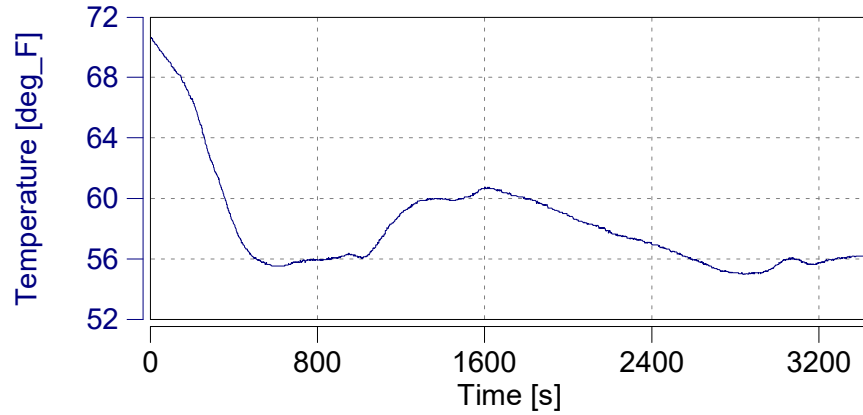
Vehicle: 2017 Audi A5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

Page: Ambient Conditions

Start Date: 10/13/2017

Start Time: 07:33:08.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

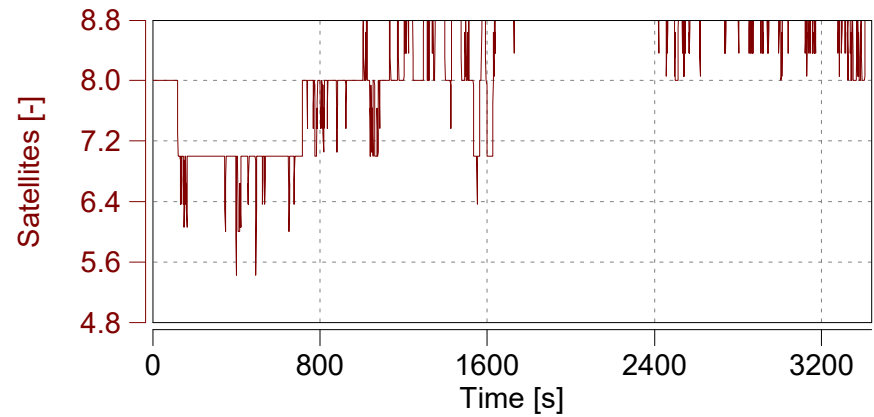
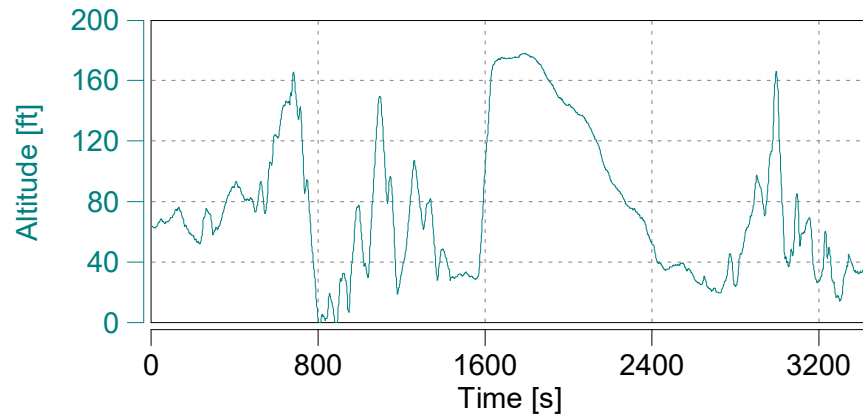
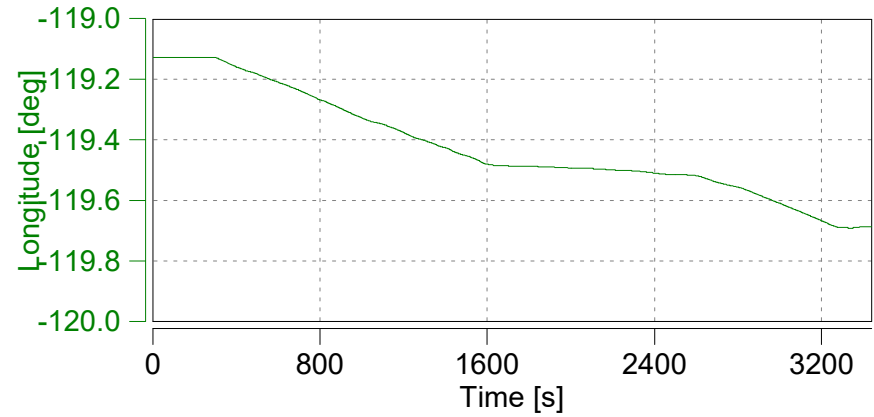
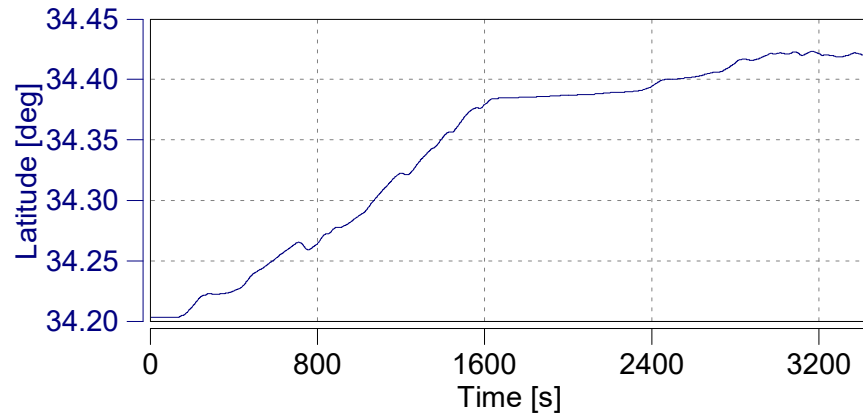
Vehicle: 2017 Audi A5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

Page: GPS

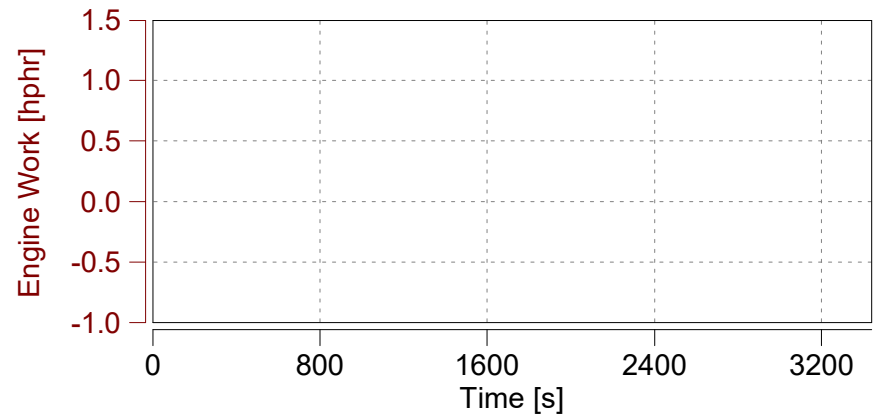
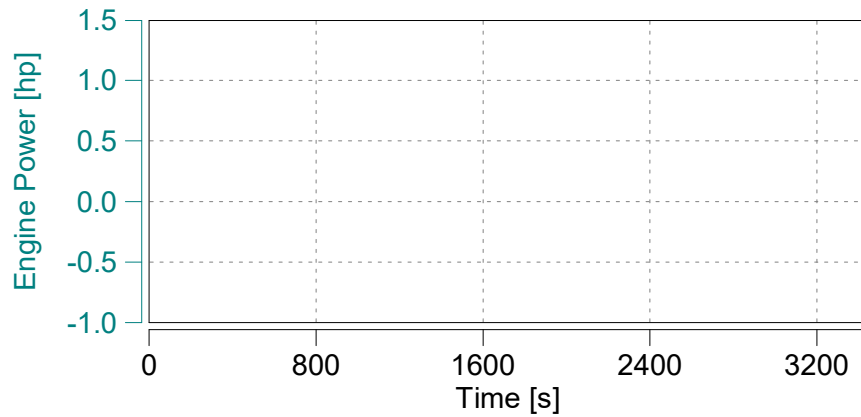
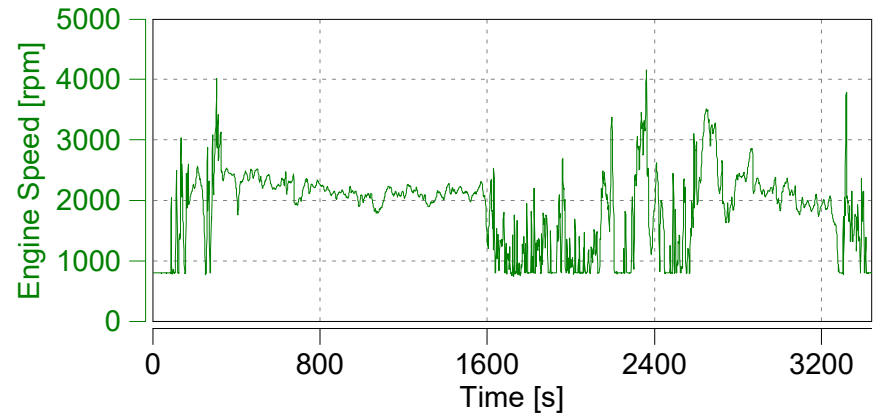
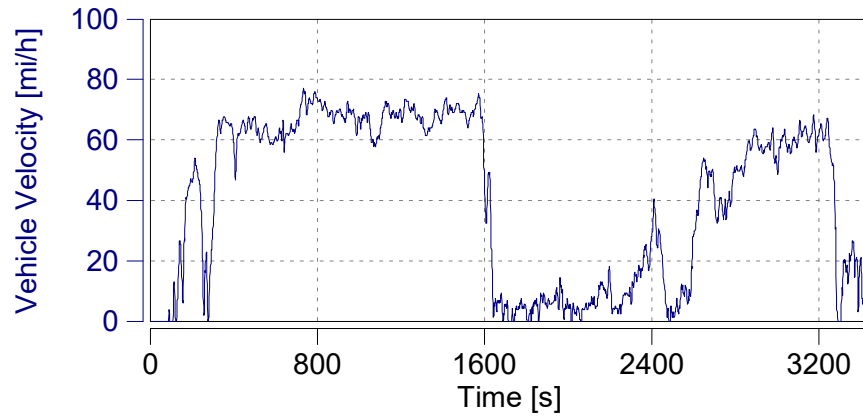
Start Date: 10/13/2017

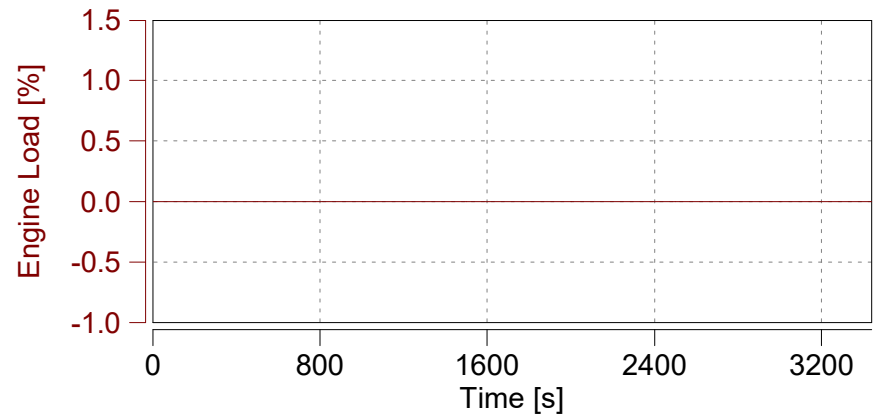
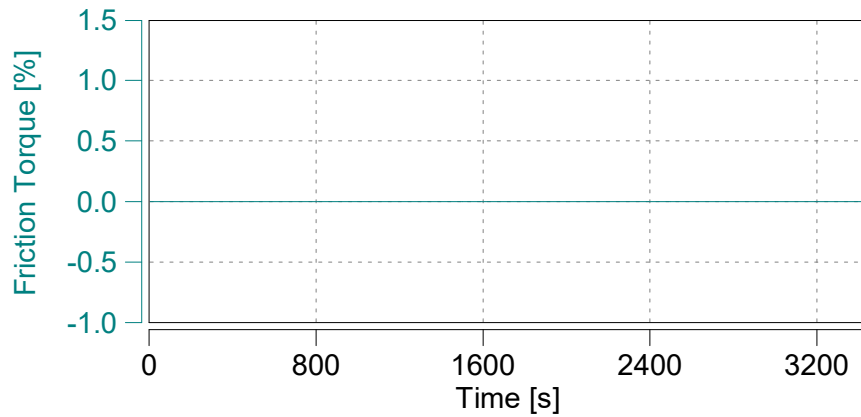
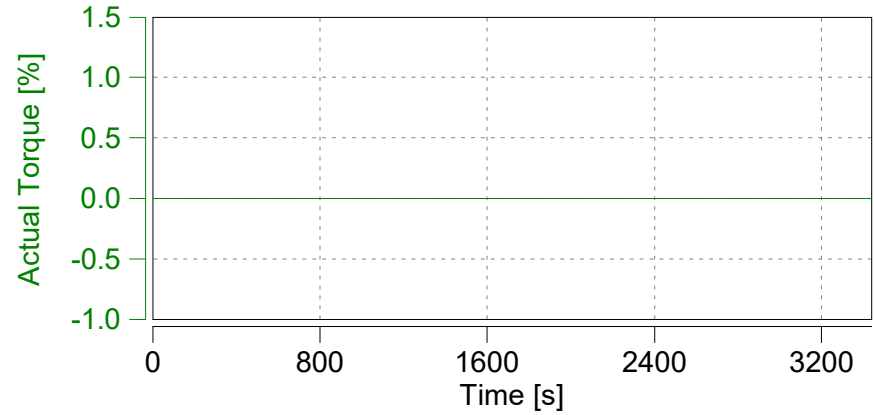
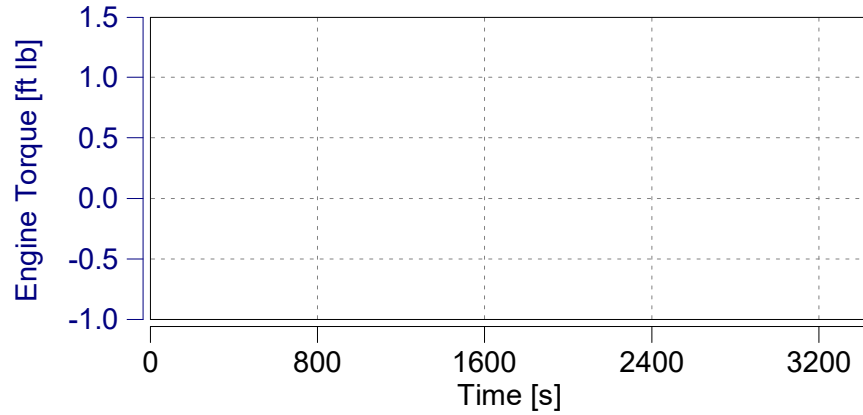
Start Time: 07:33:08.0

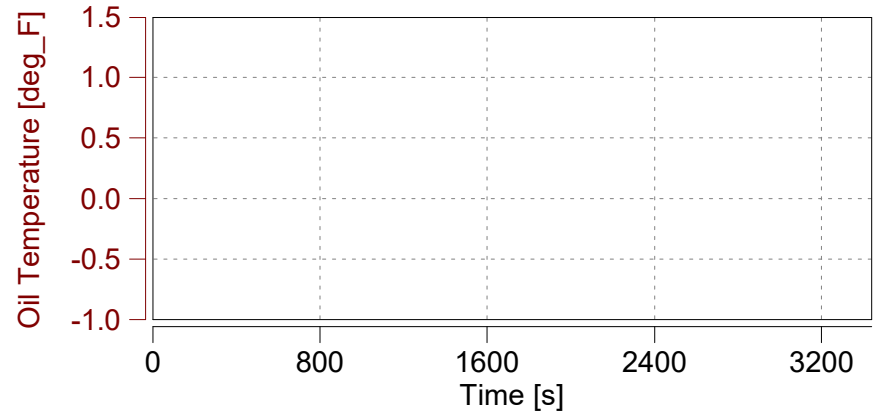
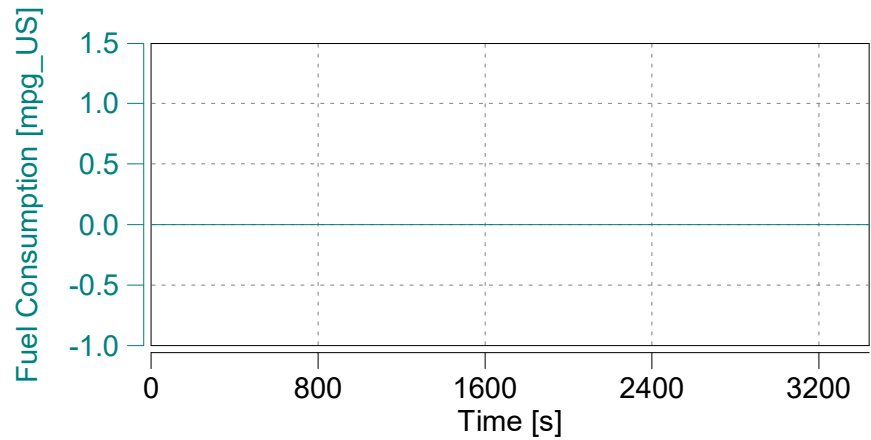
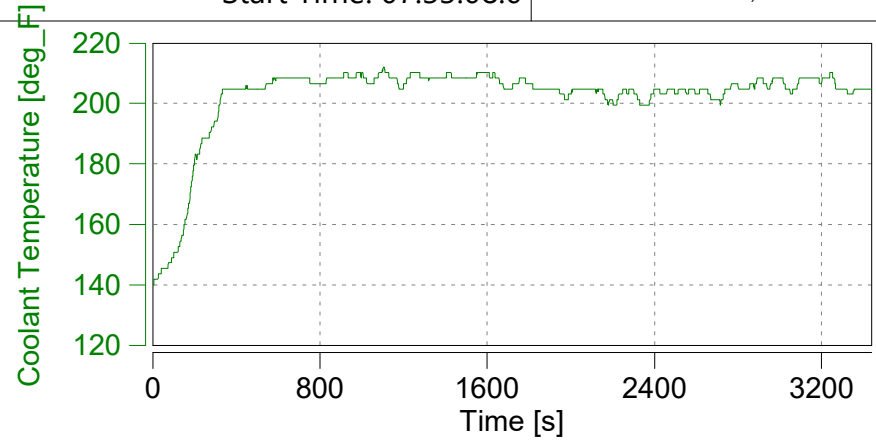
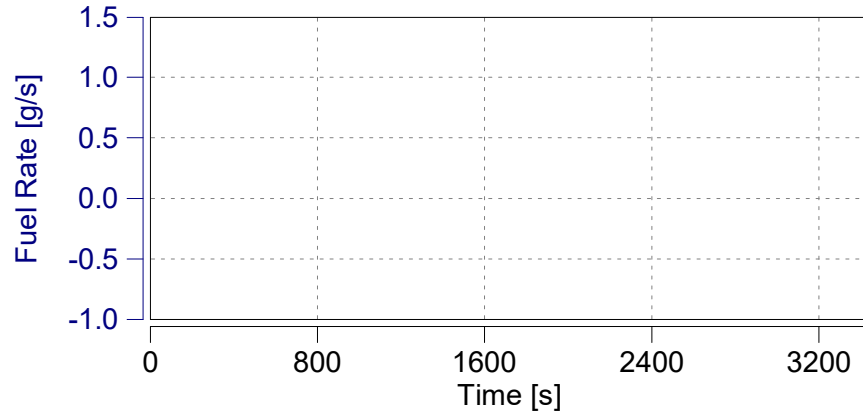


Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi A5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90





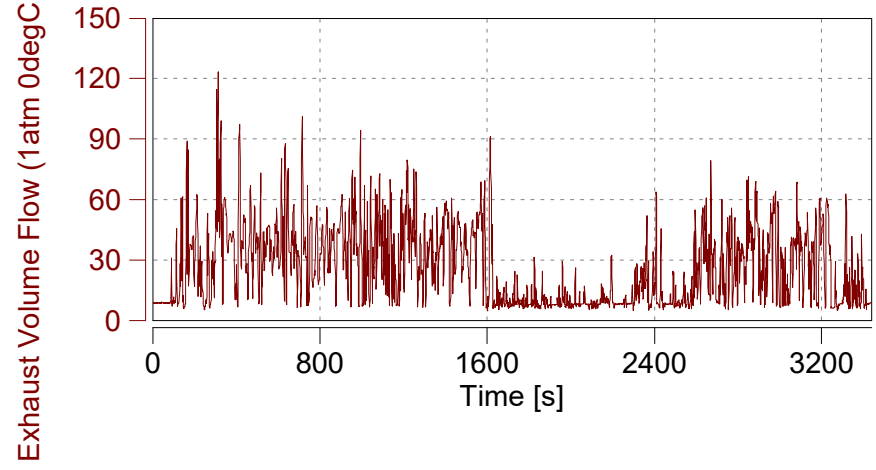
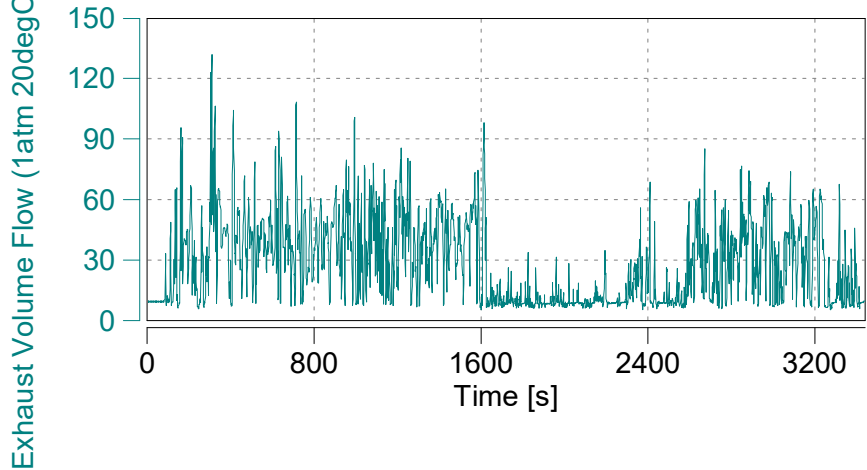
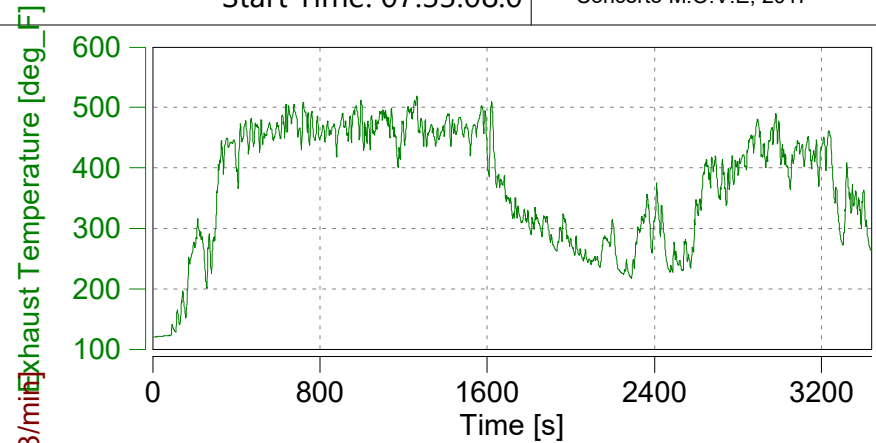
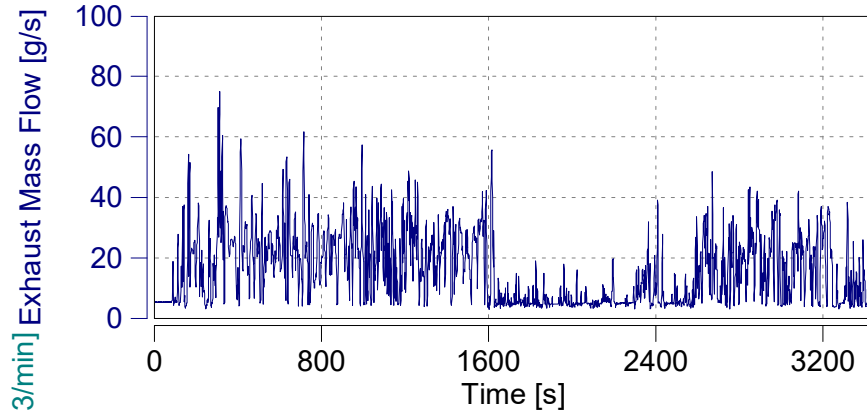


Case: Highway

Page: Exhaust Flow (1)

Start Date: 10/13/2017

Start Time: 07:33:08.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

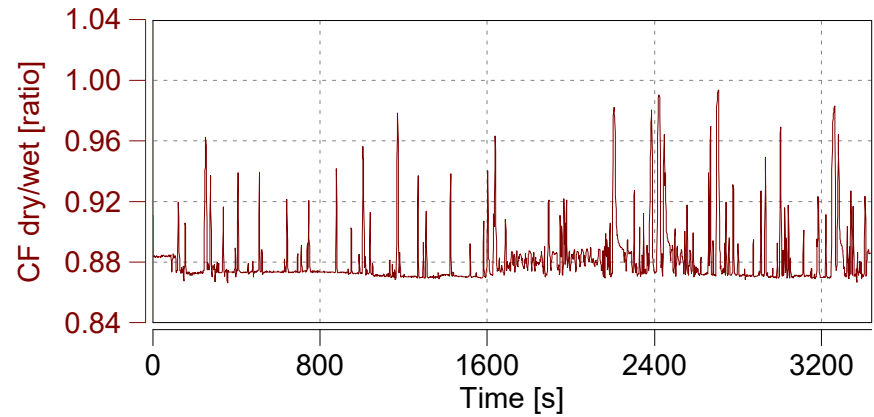
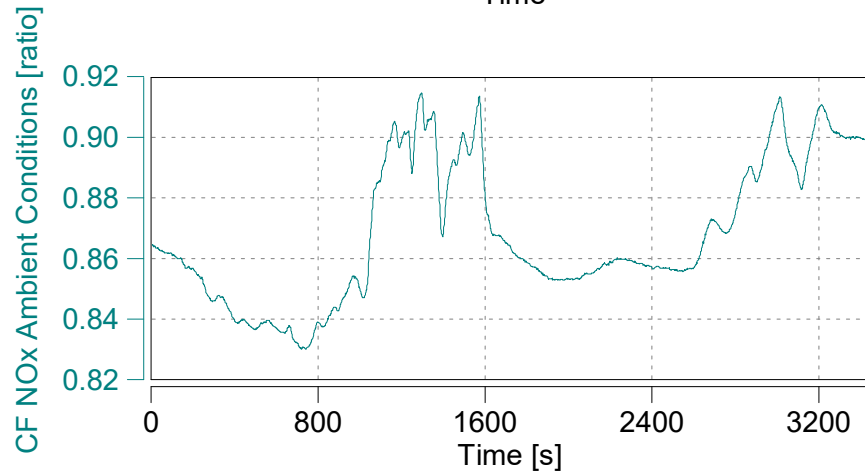
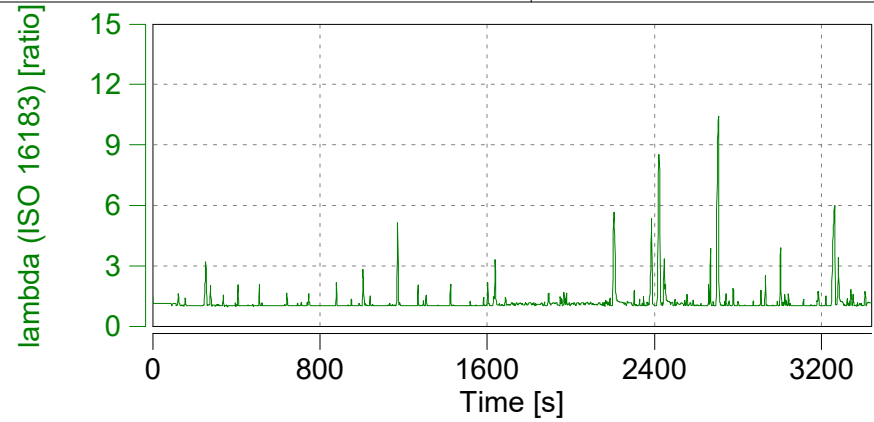
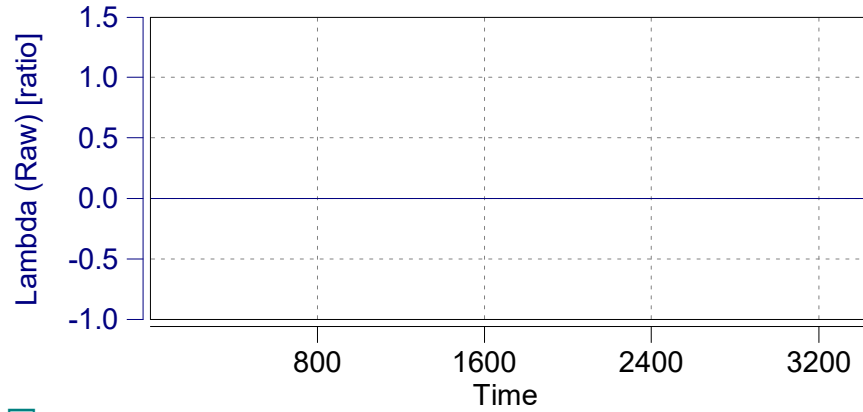
Vehicle: 2017 Audi A5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

Page: Exhaust Flow (2)

Start Date: 10/13/2017

Start Time: 07:33:08.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

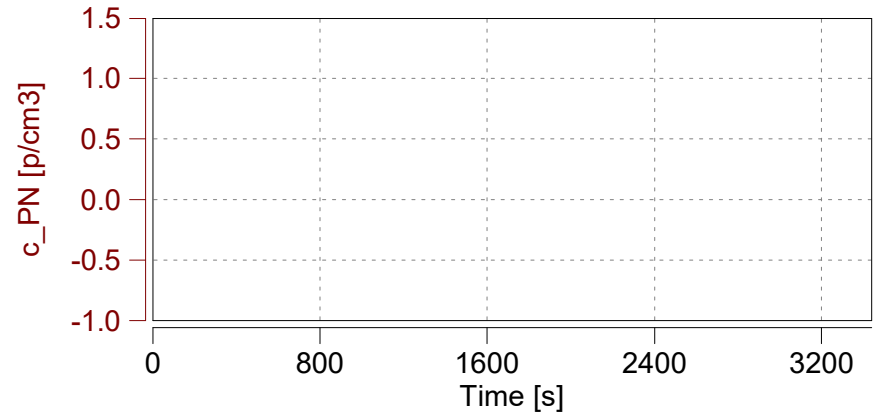
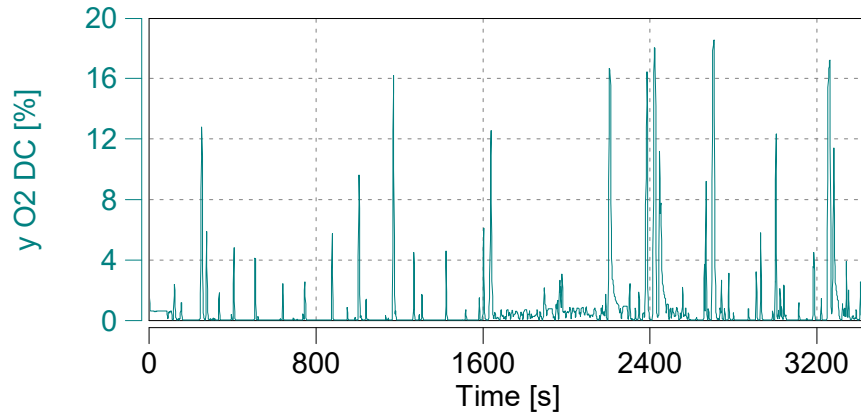
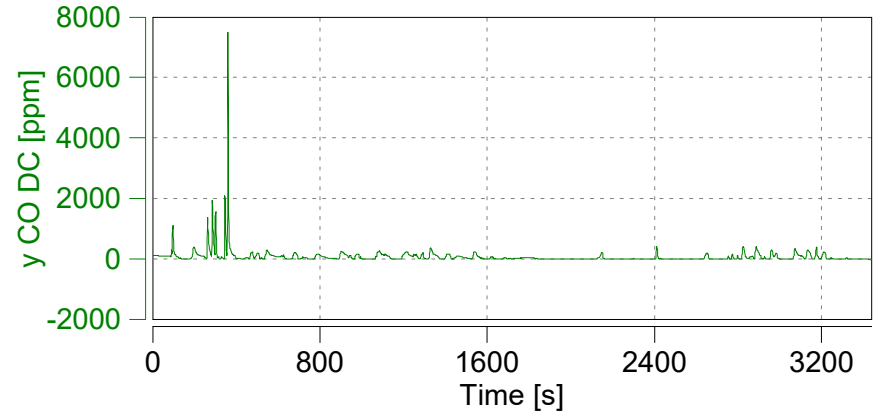
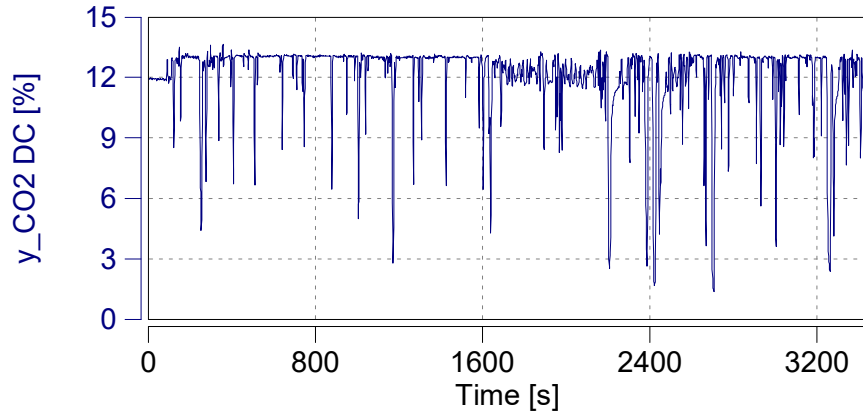
Vehicle: 2017 Audi A5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

Page: Corrected Emissions (1)

Start Date: 10/13/2017

Start Time: 07:33:08.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

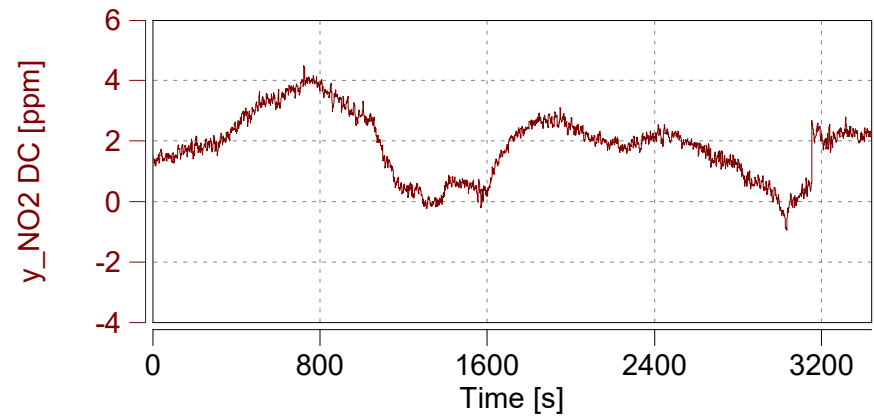
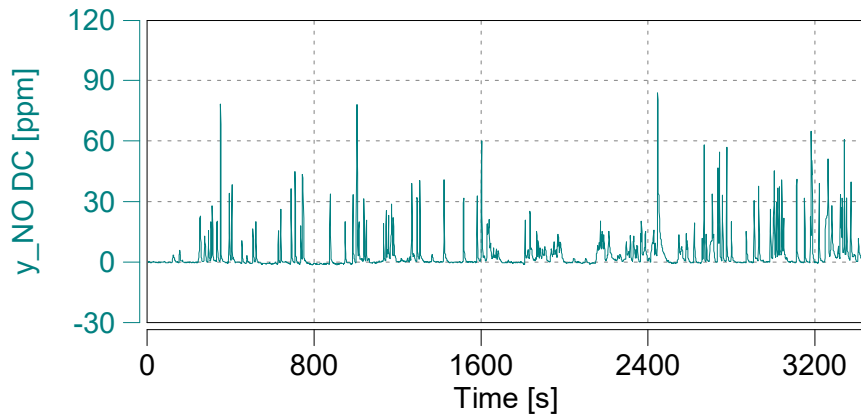
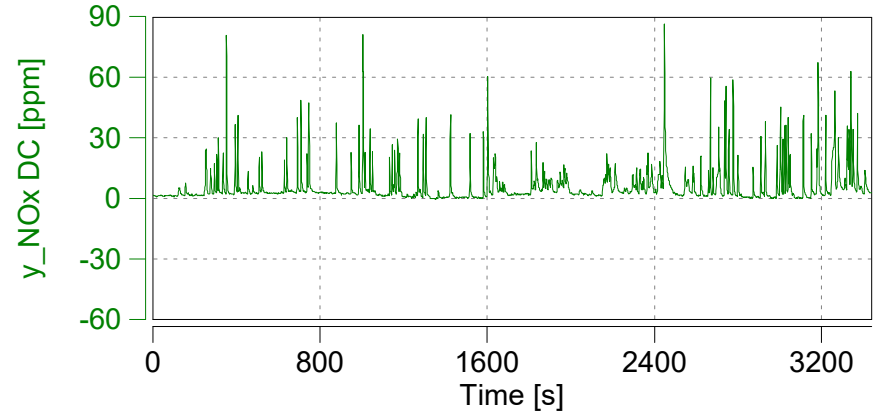
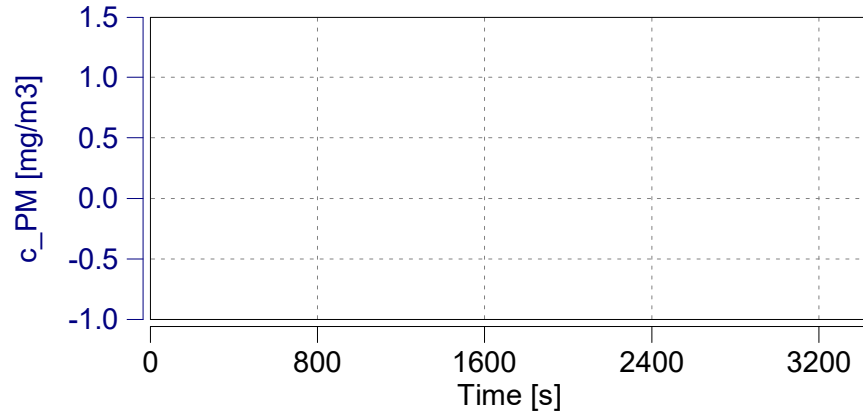
Vehicle: 2017 Audi A5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

Page: Corrected Emissions (2)

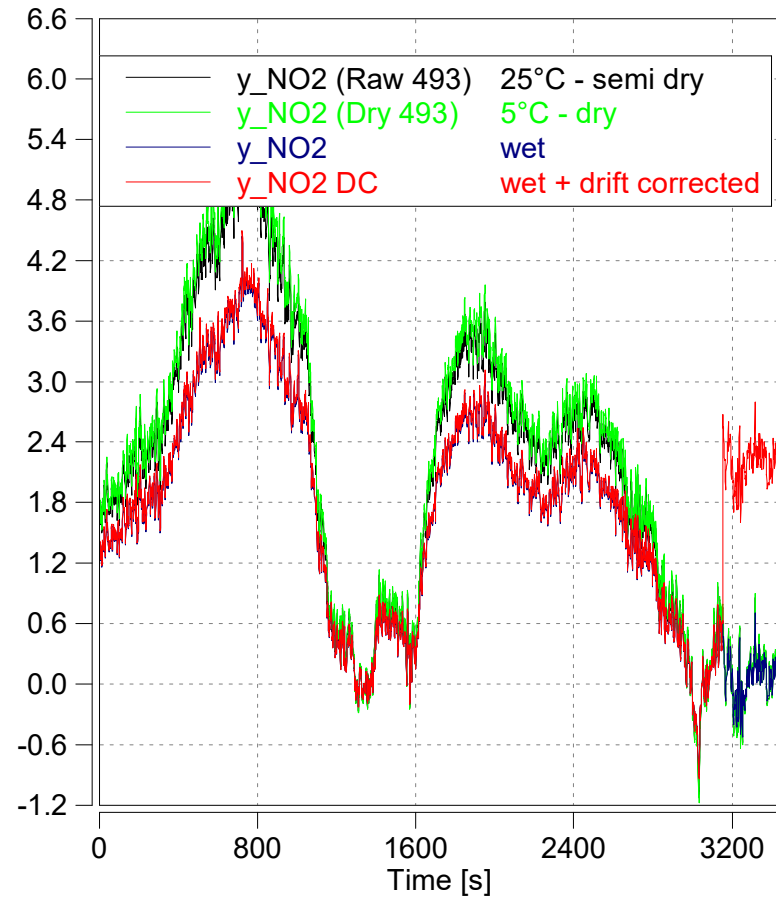
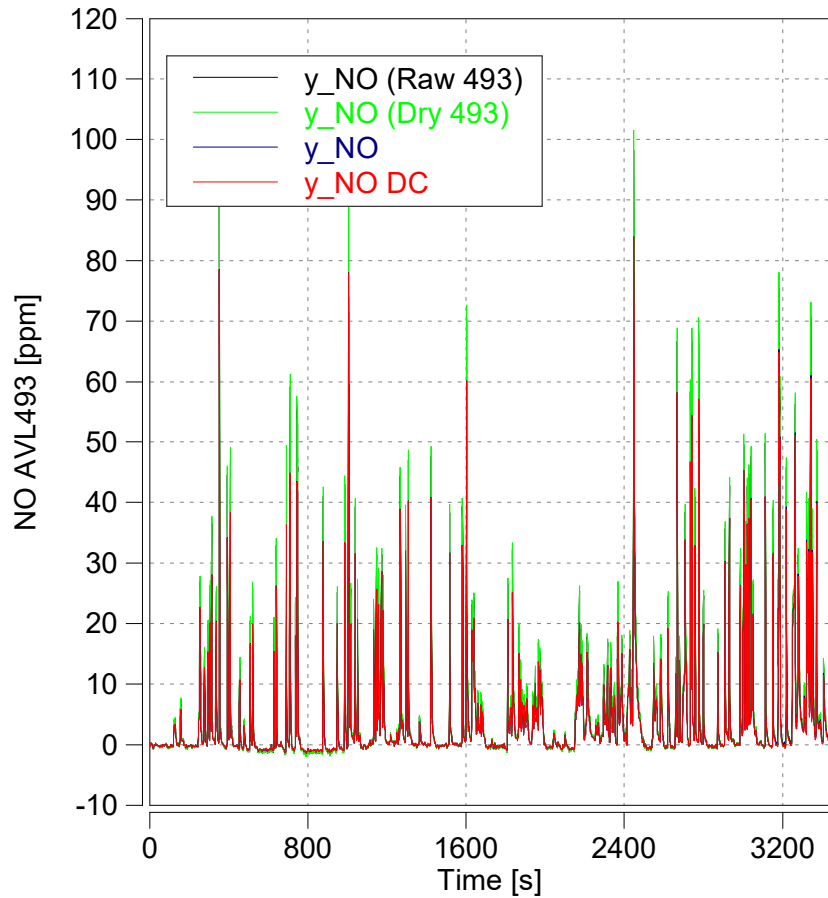
Start Date: 10/13/2017

Start Time: 07:33:08.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi A5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90



NOx - AVL 493

y_NO (Raw 493)
y_NO2 (Raw 493)
25°C

EU R49 8.6.1
US §1065.672
drift correction

d_Kf_NO 25°C to dry
d_Kf_NO2 25°C to dry

- (1) EU R49 8.1.1 (15)
- (2) US §1065.655
- (3) none

y_NO DC (Dry 493)
y_NO2 DC (Dry 493)

y_NO (Dry 493)
y_NO2 (Dry 493)

CF dry/wet
(factor equal for all constituents)

CF NOx Ambient Conditions

y_NO DC
y_NO2 DC
wet

y_NO
y_NO2
wet

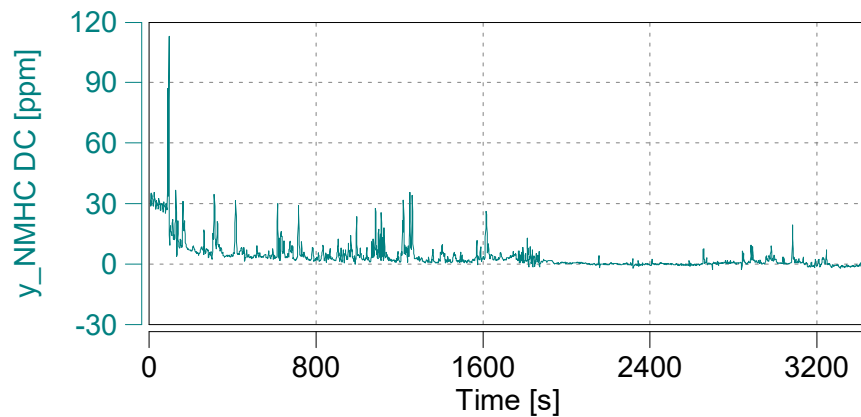
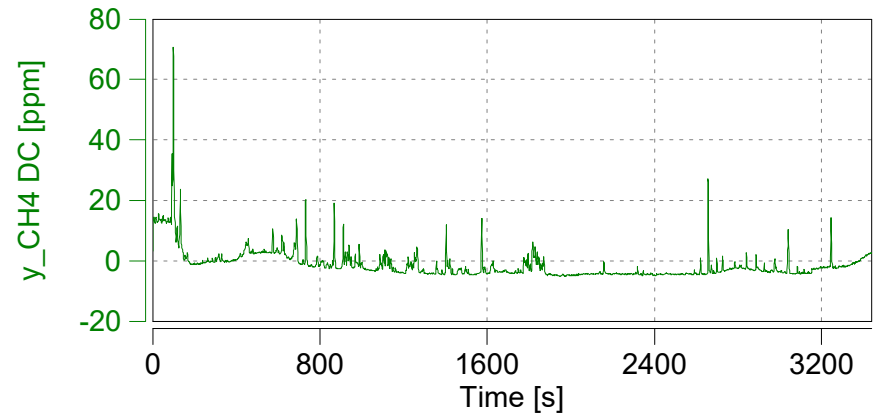
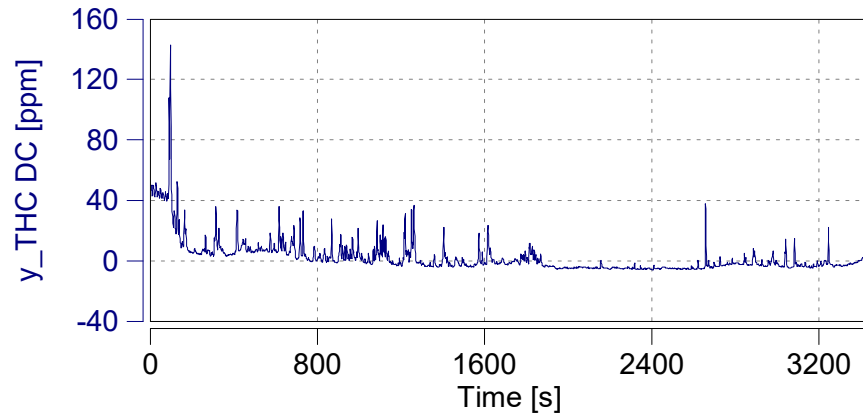
- (1) HD Diesel Engine SwRI FinalReport 08-2597, 1999
- (2) humidity only
- (3) equivalent uncorrected NOx limit method for EU in service
- (4) US §40.86.1342.94 Diesel
- (5) US §40.86.1342.94 SI
- (6) US §40.86.1370-2007 (default US)
- (7) US 40.1065.670
- (8) none (default EU)

Case: Highway

Page: Corrected Emissions (5)

Start Date: 10/13/2017

Start Time: 07:33:08.0



Concerto Version: 480 Build 215, Serial Number: 8468
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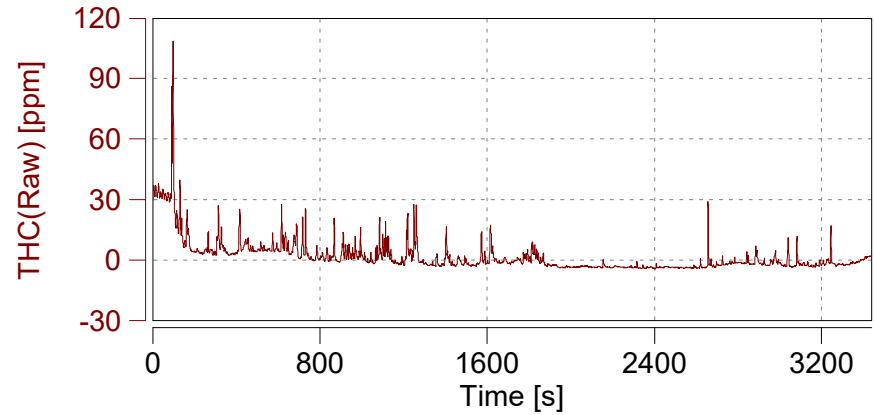
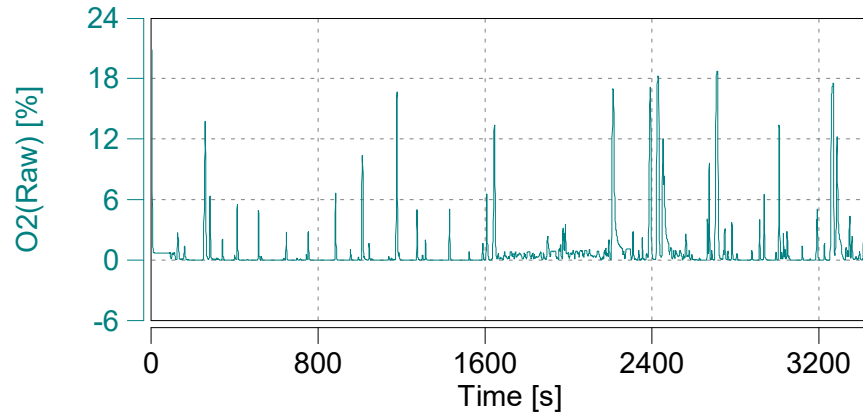
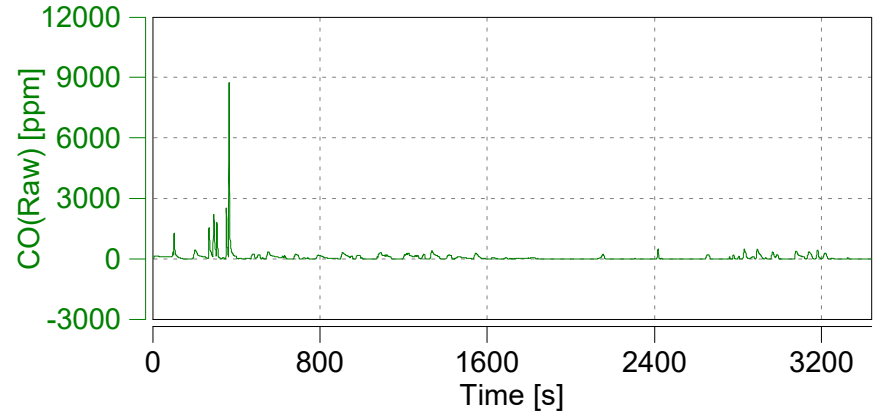
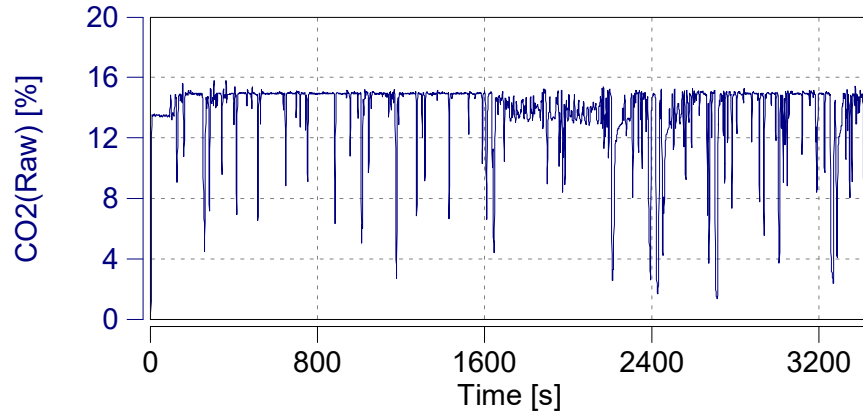
Vehicle: 2017 Audi A5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

Page: Emissions Raw Data (1)

Start Date: 10/13/2017

Start Time: 07:33:08.0



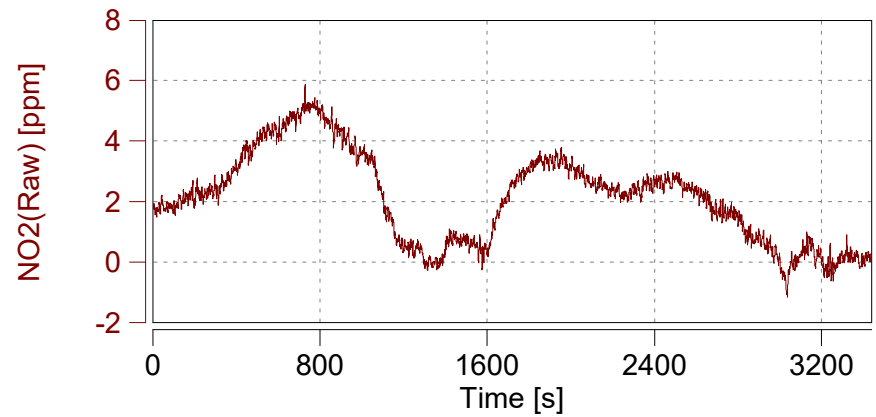
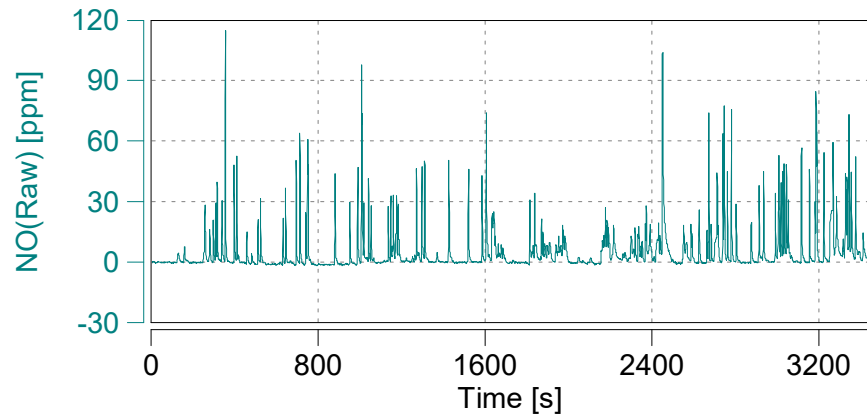
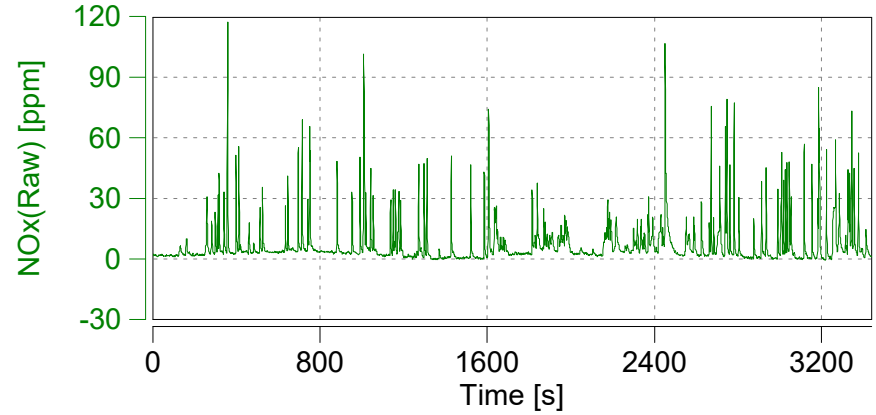
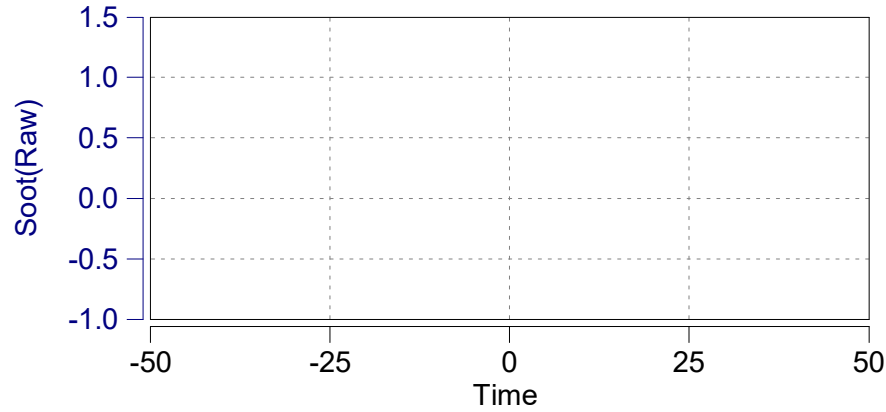
Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi A5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Highway

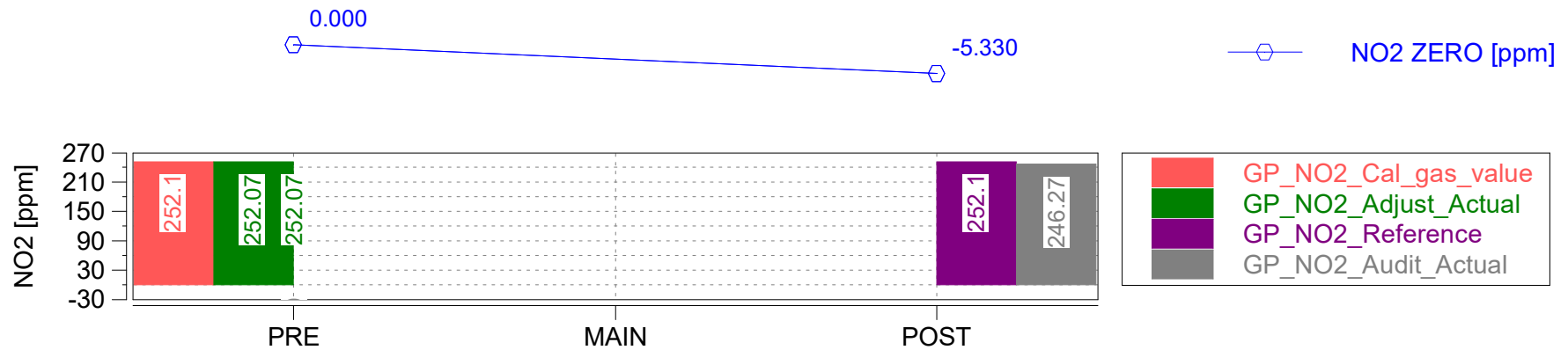
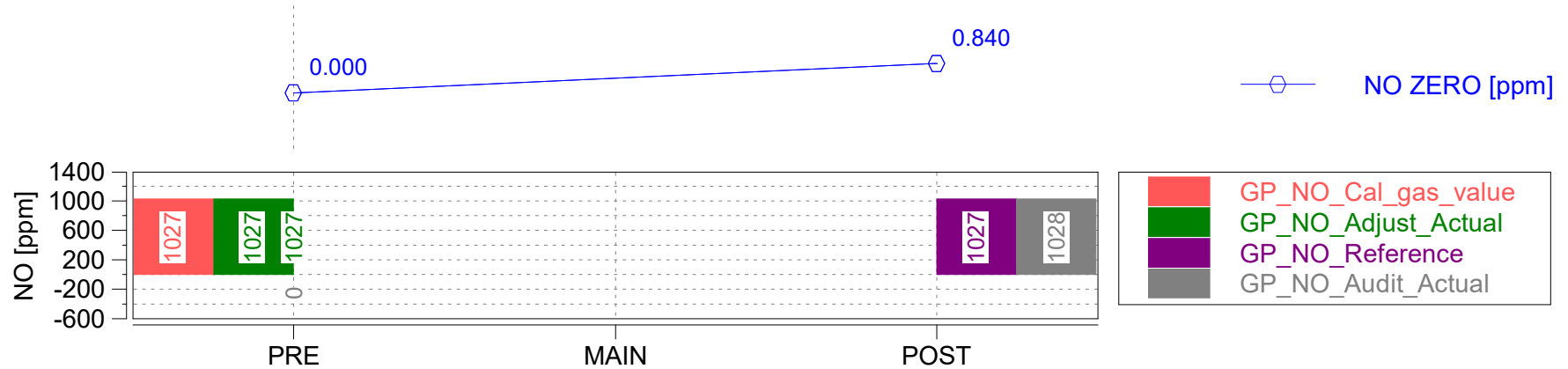
Page: Emissions Raw Data (2)

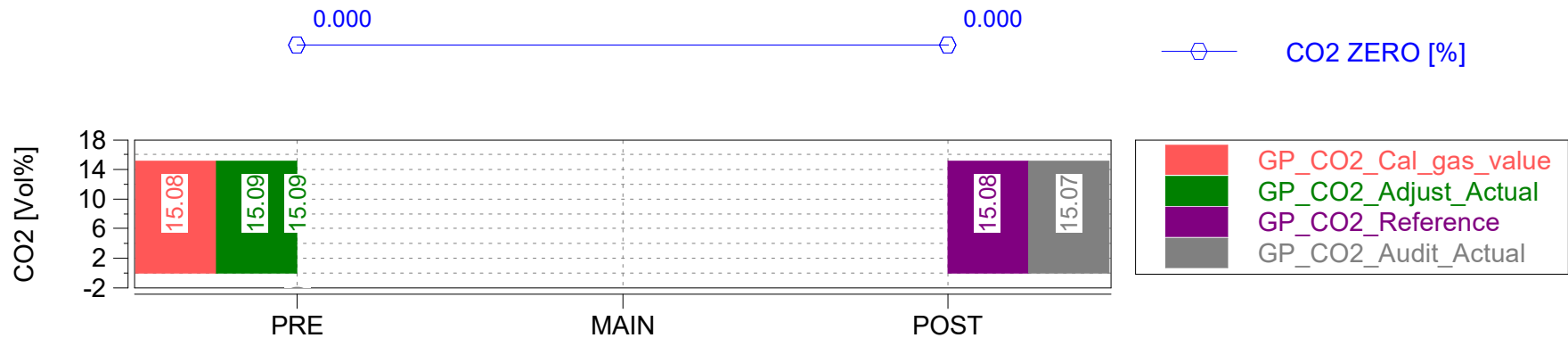
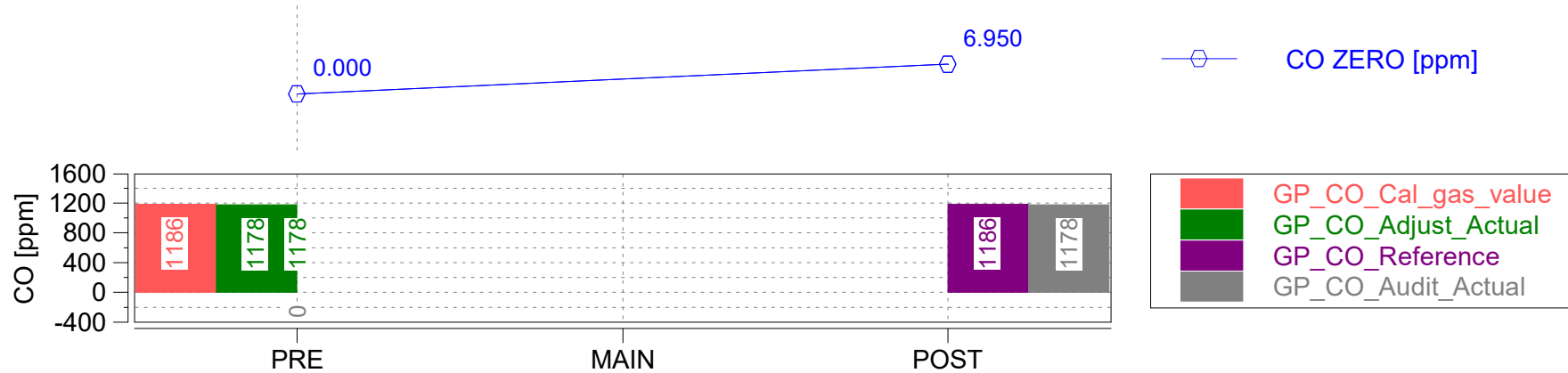
Start Date: 10/13/2017
Start Time: 07:33:08.0

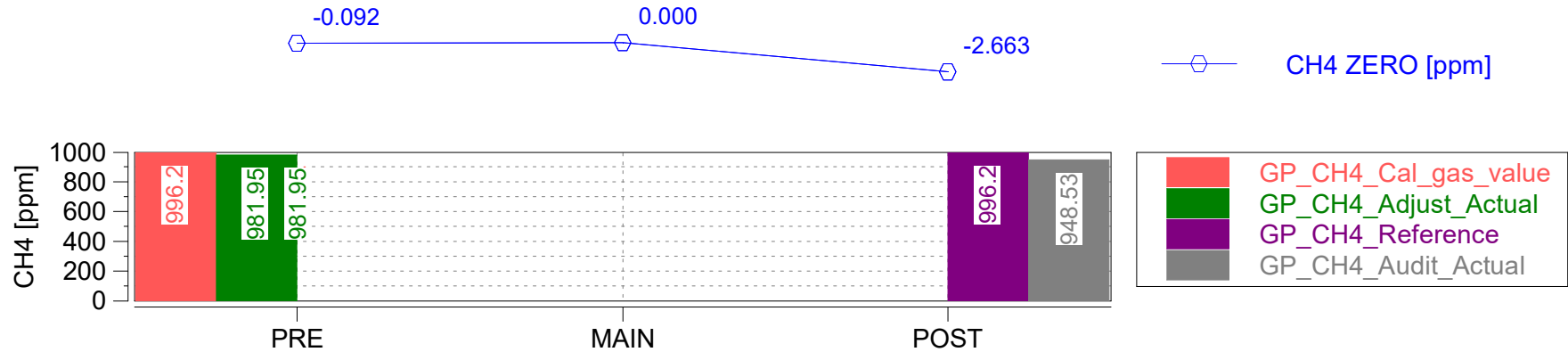
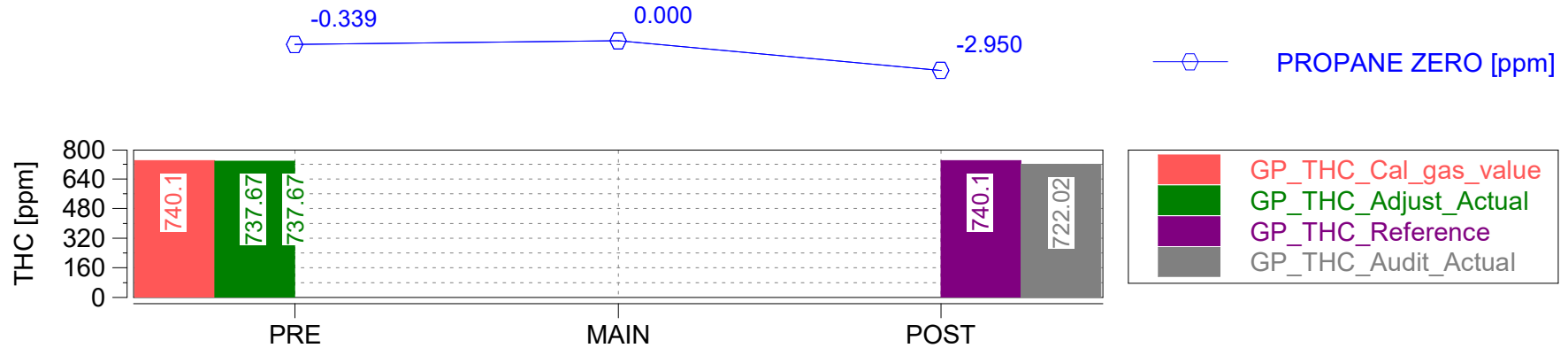


Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi A5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90







#	Text	Value	Unit
-	----	----	----
1.0	Test Start: Date	-	-
2.0	Test Start: Time	-	-
3.0	Ambient Temperature	IFILE1:TM'Temperature	deg C
4.0	Ambient Temperature TS	0.00000	s
5.0	Ambient Pressure	IFILE1:TM'Pressure	kPa
6.0	Ambient Pressure TS	0.00000	s
7.0	Humidity Type	1.00000	-
8.0	Amb. Rel. Humidity	IFILE1:TM'Humidity	%
9.0	Amb. Rel. Humidity	0.00000	s
10.0	GPS Latitude		deg
11.0	GPS Latitude TS	0.00000	s
12.0	GPS Longitude		deg
13.0	GPS Longitude TS	0.00000	s
14.0	Altitude		m
15.0	Altitude TS	0.00000	s
16.0	GPS Quality		-
17.0	GPS Quality TS	0.00000	s
18.0	GroundSpeed		km/h
19.0	GroundSpeed TS	0.00000	s
20.0	Altitude from topographical map		m
21.0	Altitude TS of topographical map		s
22.0	TRIP_AMBIENT_GPS_AVL	YES	-
23.0	CALC_GPS_GROUNDSPEED	NO	-
24.0	EXHAUST_FLOW_AVL	NO	-
25.0	EXHAUST_FLOW_AVL_EFM	YES	-
26.0	Exhaust Flow Type	2.00000	-
27.0	Mass Flow	IFILE1:TM'PitotEFM_ExhaustG	various
28.0	Mass Flow TS	1.70000	s
29.0	Exhaust Pressure		kPa
30.0	Exhaust Pressure TS	1.70000	s

#	Text	Value	Unit
-	----	----	----
31.0	Exhaust Delta Pressure		kPa
32.0	Exhaust Pressure Delta TS	1.70000	s
33.0	Exhaust Temperature	IFILE1:TM'PitotEFM_ExhaustG	degC
34.0	Exhaust Temperature TS	1.70000	s
35.0	Lambda	N/A	-
36.0	Lambda TS		s
37.0	CO2_DIL		%
38.0	CO2_DIL TS		s
39.0	CVS Volume Flow		m3/min
40.0	TimeShift_CVS_VOL_FLOW		s
41.0	IN_CVS_PRESSURE		kPa
42.0	TimeShift_CVS_PRESSURE		s
43.0	IN_CVS_TEMP		degC
44.0	TimeShift_CVS_TEMP		s
45.0	Dry to Wet Conversion CO2	YES	-
46.0	Dry to Wet Conversion O2	YES	-
47.0	Dry to Wet Conversion NO	NO	-
48.0	Dry to Wet Conversion NO2	NO	-
49.0	Dry to Wet Conversion THC	NO	-
50.0	Dry to Wet Conversion CH4	NO	-
51.0	Dry to Wet Conversion O2	NO	-
52.0	CO2	IFILE1:TM'GPiS_CO2	%
53.0	CO2 TS	-6.20000	s
54.0	OS	IFILE1:TM'GPiS_O2	%
55.0	O2 TS	-6.70000	s
56.0	CO	IFILE1:TM'GPiS_CO	ppm
57.0	CO TS	-6.20000	s
58.0	NO	IFILE1:TM'GPiS_NO	ppm
59.0	NO TS	-4.40000	s
60.0	NO2	IFILE1:TM'GPiS_NO2	ppm

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Vehicle: 2017 Audi A5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
61.0	NO2 TS	-4.40000	s
62.0	THC	IFILE1:TM'FIDiS_THC_C1	ppm
63.0	THC TS	0.00000	s
64.0	CH4	IFILE1:TM'FIDiS_CH4_C1	ppm
65.0	CH4 TS	0.00000	s
66.0	GAS_PEMS_Ethane_Efficiency	IFILE1:MOVE_AVL4925'GP_Et -	
67.0	GAS_PEMS_Methane_Efficiency	IFILE1:MOVE_AVL4925'GP_M -	
68.0	GAS_PEMS_Methane_Response	IFILE1:MOVE_AVL4925'GP_M -	
69.0	Zero Signal	IFILE1:TM'GPiS_STATE	0/1
70.0	Zero Signal TS	-4.40000	s
71.0	Zero Signal_FIDiS	IFILE1:TM'FIDiS_STATE	0/1
72.0	Zero Signal_FIDiS TS		s
73.0	Species Input Type	4.00000	-
74.0	GASPEMS=AVL493	NO	-
75.0	GASPEMS=AVL493_iX	NO	-
76.0	GASPEMS=AVL492	YES	-
77.0	GASPEMS=AVL4925	YES	-
78.0	PM: Type	4.00000	1=GFB+HC, 2=GFB, 3='PM=S
79.0	Filter ID from IFile	NO	-
80.0	Lab ID from IFile	NO	-
81.0	PM Filter: ID	N/A	ID
82.0	PM Filter: Lab	N/A	Name/ID
83.0	PM Filter: Weight before Test	N/A	mg
84.0	PM Filter: Weight after Test	N/A	mg
85.0	PM (HC Corr): Max. Exhaust Flow	N/A	scfm
86.0	Soot		mg/m3
87.0	Soot TS	-5.00000	s
88.0	Soot Sensor		mg/m3
89.0	Soot Sensor TS		s
90.0	PM Filter: Filter Flow Rate		l/min

#	Text	Value	Unit
-	----	----	----
91.0	PM Filter: Filter Flow Rate TS	-5.00000	s
92.0	PM Filter: Filter Dilution Ratio		-
93.0	PM Filter: Filter Dilution Ratio TS	-5.00000	s
94.0	PM Filter: Filter Trigger		-
95.0	PM Filter: Filter Trigger TS	-5.00000	s
96.0	PMPEMS=AVL494	YES	-
97.0	PMPEMS_AVL494_PROP_DIL	NO	-
98.0	PM dilution ratio min		-
99.0	PM_MaxExhaustFlowRate		-
100.0	PM_ExhaustFlow_Thresh		-
101.0	PM_total_flow_val		-
102.0	PM_total_flow_val_TS		-
103.0	PM_exh_mass_flow		-
104.0	PM_exh_mass_flow_TS		-
105.0	PN		#/cm3
106.0	TimeShift_PN		s
107.0	PN_STATE		-
108.0	PN TS STATE		s
109.0	PNPEMS_AVL496	NO	-
110.0	PN_CorrFactor	1.00000	
111.0	Time Alignment	1.00000	-
112.0	Time Alignment Dataset 1	N/A	0/1
113.0	Time Alignment Dataset 2	N/A	0/1
114.0	Time Alignment Thresh 1	N/A	-
115.0	Time Alignment Thresh 2	N/A	-
116.0			
117.0			
118.0			
119.0			
120.0			

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Vehicle: 2017 Audi A5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
121.0			
122.0	Trigger		0/1
123.0	Trigger TS		s
124.0	FTIR_NAME_1		-
125.0	FTIR_MW_1		-
126.0	FTIR_CHANNEL_1		-
127.0	FTIR_CHANNEL_TS_1		-
128.0	FTIR_CHANNEL_DRY_1	NO	-
129.0	FTIR_NAME_2		-
130.0	FTIR_MW_2		-
131.0	FTIR_CHANNEL_2		-
132.0	FTIR_CHANNEL_TS_2		-
133.0	FTIR_CHANNEL_DRY_2	NO	-
134.0	FTIR_NAME_3		-
135.0	FTIR_MW_3		-
136.0	FTIR_CHANNEL_3		-
137.0	FTIR_CHANNEL_TS_3		-
138.0	FTIR_CHANNEL_DRY_3	NO	-
139.0	FTIR_NAME_4		-
140.0	FTIR_MW_4		-
141.0	FTIR_CHANNEL_4		-
142.0	FTIR_CHANNEL_TS_4		-
143.0	FTIR_CHANNEL_DRY_4	NO	-
144.0	FTIR_NAME_5		-
145.0	FTIR_MW_5		-
146.0	FTIR_CHANNEL_5		-
147.0	FTIR_CHANNEL_TS_5		-
148.0	FTIR_CHANNEL_DRY_5	NO	-
149.0	FTIR_NAME_6		-
150.0	FTIR_MW_6		-

#	Text	Value	Unit
-	----	----	----
151.0	FTIR_CHANNEL_6		-
152.0	FTIR_CHANNEL_TS_6		-
153.0	FTIR_CHANNEL_DRY_6	NO	-
154.0	FTIR_NAME_7		-
155.0	FTIR_MW_7		-
156.0	FTIR_CHANNEL_7		-
157.0	FTIR_CHANNEL_TS_7		-
158.0	FTIR_CHANNEL_DRY_7	NO	-
159.0	FTIR_NAME_8		-
160.0	FTIR_MW_8		-
161.0	FTIR_CHANNEL_8		-
162.0	FTIR_CHANNEL_TS_8		-
163.0	FTIR_CHANNEL_DRY_8	NO	-
164.0	FTIR_NAME_9		-
165.0	FTIR_MW_9		-
166.0	FTIR_CHANNEL_9		-
167.0	FTIR_CHANNEL_TS_9		-
168.0	FTIR_CHANNEL_DRY_9	NO	-
169.0	FTIR_NAME_10		-
170.0	FTIR_MW_10		-
171.0	FTIR_CHANNEL_10		-
172.0	FTIR_CHANNEL_TS_10		-
173.0	FTIR_CHANNEL_DRY_10	NO	-
174.0	FTIR_NAME_11		-
175.0	FTIR_MW_11		-
176.0	FTIR_CHANNEL_11		-
177.0	FTIR_CHANNEL_TS_11		-
178.0	FTIR_CHANNEL_DRY_11	NO	-
179.0	FTIR_NAME_12		-
180.0	FTIR_MW_12		-

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M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi A5 /
Engine: Gasoline / 2.0L
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#	Text	Value	Unit
-	----	----	----
181.0	FTIR_CHANNEL_12		-
182.0	FTIR_CHANNEL_TS_12		-
183.0	FTIR_CHANNEL_DRY_12	NO	-
184.0	FTIR_NAME_13		-
185.0	FTIR_MW_13		-
186.0	FTIR_CHANNEL_13		-
187.0	FTIR_CHANNEL_TS_13		-
188.0	FTIR_CHANNEL_DRY_13	NO	-
189.0	FTIR_NAME_14		-
190.0	FTIR_MW_14		-
191.0	FTIR_CHANNEL_14		-
192.0	FTIR_CHANNEL_TS_14		-
193.0	FTIR_CHANNEL_DRY_14	NO	-
194.0	FTIR_NAME_15		-
195.0	FTIR_MW_15		-
196.0	FTIR_CHANNEL_15		-
197.0	FTIR_CHANNEL_TS_15		-
198.0	FTIR_CHANNEL_DRY_15	NO	-
199.0	FTIR_NAME_16		-
200.0	FTIR_MW_16		-
201.0	Vehicle Type	2017 Audi A5	-
202.0	Vehicle Info		-
203.0	Engine Type	Gasoline	-
204.0	Engine Info	2.0L	-
205.0	Engine Torque		Nm
206.0	Curb Idle Load		%
207.0	Idle Speed		rpm
208.0	HYBRID_OVC_REF_CO2_gkm		g/km
209.0	Engine Concept	1.00000	-
210.0	Alpha	1.93000	-

#	Text	Value	Unit
-	----	----	----
211.0	Beta	1.00000	
212.0	Gamma	0.00000	
213.0	Delta	0.00000	
214.0	Epsilon	0.03200	
215.0	X_C	83.00000	
216.0	X_H	13.30000	
217.0	X_N	0.00000	
218.0	X_O	3.50000	
219.0	X_S	0.00000	
220.0	Fuel_Density	747.50000	
221.0	rho_exhaust	1.29310	
222.0	U_CO2	1.51800	
223.0	U_CO	0.96600	
224.0	U_NO	1.58700	
225.0	U_NO2	1.58700	
226.0	U_NOx	1.58700	
227.0	U_HC	0.49900	
228.0	U_NMHC	0.47100	
229.0	U_CH4	0.55300	
230.0	U_O2	1.10400	
231.0	Fuel Type	2.00000	-
232.0	exhaust mass flow type (YES/NO)	YES	-
233.0	Distance Calculation Type	1.00000	-
234.0	Velocity Statistics Calculation Type	2.00000	-
235.0	RDE vehicle class	1.00000	-
236.0	TM_CITY0		s
237.0	TM_CITY1		s
238.0	TM_RURAL0		s
239.0	TM_RURAL1		s
240.0	TM_RURAL2_0		s

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Vehicle: 2017 Audi A5 /
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#	Text	Value	Unit
-	----	----	----
241.0	TM_RURAL2_1		s
242.0	Second Rural Part for Time Marks (NO		-
243.0	TM_MW0		s
244.0	TM_MW1		s
245.0	VELOCITY_LIMIT_STOP	2.00000	km/h
246.0	VELOCITY_LIMIT_URBAN	50.00000	km/h
247.0	VELOCITY_LIMIT_RURAL	75.00000	km/h
248.0	Intake Manifold Pressure Type	1.00000	-
249.0	Velocity	IFILE1:TM'OBD_Vehicle_Spee	km/h
250.0	Velocity TS	1.20000	s
251.0	Velocity FACTOR	1.00000	-
252.0	Coolant Temperature	IFILE1:TM'OBD_Engine_Coola	degC
253.0	Coolant Temperature TS	1.20000	s
254.0	Oil Temperature		degC
255.0	Oil Temperature TS	1.20000	s
256.0	Intake Manifold Temperature		degC
257.0	Intake Manifold Temp TS	1.20000	s
258.0	Intake Manifold Pressure	IFILE1:TM'OBD_Intake_manifo	kPa
259.0	Intake Manifold Pressure TS	1.20000	s
260.0	Throttle Position		%
261.0	Throttle TS	1.20000	s
262.0	TYP_IDLE_MASS_FLOW		kg/h
263.0	Torque Type	1.00000	-
264.0	Speed	IFILE1:TM'OBD_Engine_RPM	rpm
265.0	Speed TS	1.20000	s
266.0	Torque		Nm
267.0	Torque TS	1.20000	s
268.0	Friction Torque	N/A	Nm
269.0	Friction Torque TS	N/A	s
270.0	Reference Torque	N/A	Nm

#	Text	Value	Unit
-	----	----	----
271.0	Reference Torque TS	N/A	s
272.0	k_VELINE		-
273.0	D_VELINE		-
274.0	Fuel Flow Type	2.00000	-
275.0	Air Flow Type	1.00000	-
276.0	Fuel Rate		various
277.0	Air Rate		various
278.0	Fuel Rate TS	1.20000	s
279.0	No_Cylinders		-
280.0	Air Rate TS	1.20000	s
281.0	FTIR_CHANNEL_32		-
282.0	FTIR_CHANNEL_TS_32		-
283.0	FTIR_CHANNEL_DRY_32	NO	-
284.0	FTIR_NAME_33		-
285.0	FTIR_MW_33		-
286.0	FTIR_CHANNEL_33		-
287.0	FTIR_CHANNEL_TS_33		-
288.0	FTIR_CHANNEL_DRY_33	NO	-
289.0	FTIR_NAME_34		-
290.0	FTIR_MW_34		-
291.0	FTIR_CHANNEL_34		-
292.0	FTIR_CHANNEL_TS_34		-
293.0	FTIR_CHANNEL_DRY_34	NO	-
294.0	FTIR_NAME_35		-
295.0	FTIR_MW_35		-
296.0	FTIR_CHANNEL_35		-
297.0	FTIR_CHANNEL_TS_35		-
298.0	FTIR_CHANNEL_DRY_35	NO	-
299.0	FTIR_NAME_36		-
300.0	FTIR_MW_36		-

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Vehicle: 2017 Audi A5 /
Engine: Gasoline / 2.0L
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Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
301.0	FTIR_CHANNEL_36		-
302.0	FTIR_CHANNEL_TS_36		-
303.0	FTIR_CHANNEL_DRY_36	NO	-
304.0	FTIR_NAME_37		-
305.0	FTIR_MW_37		-
306.0	FTIR_CHANNEL_37		-
307.0	FTIR_CHANNEL_TS_37		-
308.0	FTIR_CHANNEL_DRY_37	NO	-
309.0	FTIR_NAME_38		-
310.0	FTIR_MW_38		-
311.0	FTIR_CHANNEL_38		-
312.0	FTIR_CHANNEL_TS_38		-
313.0	FTIR_CHANNEL_DRY_38	NO	-
314.0	FTIR_NAME_39		-
315.0	FTIR_MW_39		-
316.0	FTIR_CHANNEL_39		-
317.0	FTIR_CHANNEL_TS_39		-
318.0	FTIR_CHANNEL_DRY_39	NO	-
319.0	FTIR_NAME_40		-
320.0	FTIR_MW_40		-
321.0	FTIR_CHANNEL_40		-
322.0	FTIR_CHANNEL_TS_40		-
323.0	FTIR_CHANNEL_DRY_40	NO	-
324.0	Legislation Type (1=HDIUT 2=EU H	4.00000	-
325.0	WholeTest_NOx_corr	5.00000	-
326.0	WholeTest_Hum_corr	2.00000	-
327.0	CD_Distance	0.00000	km
328.0	CD_NOx	0.00000	mg/km
329.0	CD_CO	0.00000	mg/km
330.0	CD_CO2	0.00000	g/km

#	Text	Value	Unit
-	----	----	----
331.0	CD_NMHC	0.00000	mg/km
332.0	CD_CH4	0.00000	mg/km
333.0	CD_THC	0.00000	mg/km
334.0	CD_PN		#/km
335.0	WLTC_LOW_SPEED_gkm		g/km
336.0	WLTC_LOW_SPEED_FAC	1.20000	-
337.0	WLTC_MEDIUM_SPEED_gkm		g/km
338.0	WLTC_HIGH_SPEED_gkm		g/km
339.0	WLTC_HIGH_SPEED_FAC	1.10000	-
340.0	WLTC_EXTRA_HIGH_SPEED_gkm		g/km
341.0	WLTC_EXTRA_HIGH_SPEED_FA	1.05000	-
342.0	TOL_NORMAL_DRIVING	25.00000	%
343.0	TOL_SEVERE_DRIVING	50.00000	%
344.0	Increase Tolerance Nomral Driving	NO	-
345.0	Bin1_min		km/h
346.0	Bin2_min		km/h
347.0	Bin3_min		km/h
348.0	Bin1_max		km/h
349.0	Bin2_max		km/h
350.0	Bin3_max		km/h
351.0	Clear_R0	125.40000	N
352.0	Clear_R1	0.29300	Nh/km
353.0	Clear_R2	0.02795	N*(h/km) ²
354.0	Clear_SMK	1470.00000	kg
355.0	Clear_Rated_Power	140.00000	kW
356.0	Clear_Ref_Velocity	70.00000	km/h
357.0	Clear_Ref_Acc	0.45000	m/s ²
358.0	Clear_Smooth	3.00000	s
359.0	EXTC_From_High_Temp	30.00000	degC
360.0	EXTC_To_High_Temp	35.00000	degC

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi A5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
361.0	EXTC_From_Low_Temp	-7.00000	degC
362.0	EXTC_To_Low_Temp	0.00000	degC
363.0	Euro 6d or Euro 6d temp	NO	-
364.0	EXTC_From_Altitude	700.00000	m
365.0	EXTC_To_Altitude	1300.00000	m
366.0	EXTC_CORR_FAC	1.60000	
367.0	weight cold start (YES/NO)	NO	-
368.0	precon and soak done (YES/NO)	NO	-
369.0	PATH_PRECON_FILE		
370.0	filter velocity (YES/NO)	NO	-
371.0	filter velocity auto(YES/NO)	NO	-
372.0	Ki_CO		
373.0	Ki_CO2		
374.0	Ki_NOx		
375.0	Ki_FACTOR_CO2 (YES/NO)	NO	-
376.0	Ki_OFFSET_CO2 (YES/NO)	NO	-
377.0	Ki_FACTOR_CO (YES/NO)	NO	-
378.0	Ki_OFFSET_CO (YES/NO)	NO	-
379.0	Ki_FACTOR_NOx (YES/NO)	NO	-
380.0	Ki_OFFSET_NOx (YES/NO)	NO	-
381.0	Ki_OFF (YES/NO)	NO	-
382.0	HD legislations	1.00000	-
383.0	RDE legislations	1.00000	-
384.0	Submission Documents (YES/NO)	NO	-
385.0	General Setup Parameters Text	Highway	-
386.0	Legislation Setup Parameters Text	Highway	-
387.0	Trip Info		-
388.0	IN_TIME_REF		-
389.0	Sub-Trip Start: Auto	YES	-
390.0	Sub-Trip Start: Seconds	N/A	s

#	Text	Value	Unit
-	----	----	----
391.0	Sub-Trip End: Auto	YES	-
392.0	Sub-Trip End: Seconds	N/A	s
393.0	Unit System	2.00000	-
394.0	Calculate: PM Emissions	NO	-
395.0	Calculate: PN Emissions	NO	-
396.0	Output: Summary	YES	-
397.0	Output: Emissions	YES	-
398.0	Output: Raw Data	YES	-
399.0	Output: Zero Span	YES	-
400.0	Output: Data Consistency	NO	-
401.0	Output: Window Plots	YES	-
402.0	Fuel Rate ECU vs. EU ISO16183	y = 10000000000.0000 x - 0.000 R ² =10000000000.000 SEE=	
403.0	PEMS post processing version	Rel_10_B192	
404.0	Concerto version	480.00000	
405.0	Concerto build	215.00000	
406.0	USERNAME	EFR	

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi A5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Mountain
Page: Trip Summary

Start Date: 10/13/2017
Start Time: 07:33:08.0



Trip Duration	3350.00	s	ave THC	1.94172	ppm	BS CO2	n/a	g/hphr
Trip Duration (a)	3350.00	s	ave NMHC	3.65667	ppm	BS CO	n/a	g/hphr
Trip Distance	28.79	mi	ave CH4	-1.55905	ppm	BS THC	n/a	g/hphr
Trip Distance (a)	28.79	mi	ave CO	33.75903	ppm	BS NMHC	n/a	g/hphr
Trip Fuel Cons. (b)	n/a	kg	ave CO2	10.38607	%	BS CH4	n/a	g/hphr
Trip Fuel Cons. (ab)	n/a	kg	ave NOx	9.08590	ppm	BS NO (d)	n/a	g/hphr
Trip Fuel Cons. EU (ac)	3.07	kg	ave PM	n/a	mg/m3	BS NO2	n/a	g/hphr
Trip Fuel Cons. US (ac)	3.06	kg	ave Soot meas	n/a	mg/m3	BS NOx	n/a	g/hphr
Trip Fuel Cons. Volume (b)	n/a	gall	ave Soot	n/a	mg/m3	BS Soot	n/a	g/hphr
Trip Fuel Cons. Volume (ab)	n/a	gall	ave PN	n/a	#/cm3	BS Soot meas	n/a	g/hphr
Trip Fuel Cons. Volume EU (ac)	1.08	gall	tot THC	0.12493	g	BS PM	n/a	g/hphr
Trip Fuel Cons. Volume US (ac)	1.08	gall	tot NMHC	0.14262	g	BS PN	n/a	#/hpr
Trip Fuel Economy (b)	n/a	mpg_US	tot CH4	0.02576	g	DS CO2	322.83308	g/mi
Trip Fuel Economy (ab)	n/a	mpg_US	tot CO	3.50198	g	DS CO	0.12165	g/mi
Trip Fuel Economy EU (ac)	26.56	mpg_US	tot CO2	9293.14406	g	DS THC	0.00434	g/mi
Trip Fuel Economy US (ac)	26.66	mpg_US	tot NO (d)	0.52782	g	DS NMHC	0.00495	g/mi
Trip Av. Eng. Speed	1943.09	rpm	tot NO2	0.19362	g	DS CH4	0.00089	g/mi
Trip Av. Torque	n/a	lbft	tot NOx	0.70832	g	DS NO (d)	0.01834	g/mi
Trip Av. Power	n/a	hp	tot Soot	n/a	g	DS NO2	0.00673	g/mi
Trip Work	n/a	hphr	tot Soot meas	n/a	g	DS NOx	0.02461	g/mi
Trip Exhaust Mass	51.20	kg	tot PM	n/a	g	DS Soot	n/a	g/mi
Trip Exhaust Mass EU (ac)	n/a	kg	tot PN	n/a	#	DS Soot meas	n/a	g/mi
Trip Exhaust Mass US (ac)	n/a	kg	PM measurement type	0.00000	-	DS PM	n/a	g/mi
Trip Av. Amb. Temperature	59.66	deg_F	PM correction type	1.00000	alpha(HC)	DS PN	n/a	#/mi
Trip Av. Humidity	57.74	%	tot Soot on PM filter (estim.)	n/a	mg	FS CO2	n/a	g/kg
Fuel Type	Petrol (E10)		Soot --> PM simple scaling factor	1.00000	-	FS CO	n/a	g/kg
			Soot --> PM alpha scaling factor	0.00000	-	FS THC	n/a	g/kg
			Trip Av. Veh. Speed	30.93445	mi/hr	FS NMHC	n/a	g/kg
			Trip Velocity Zero	17.19403	%	FS CH4	n/a	g/kg
			Trip Velocity Urban	48.74627	%	FS NO (d)	n/a	g/kg
			Trip Velocity Rural	21.28358	%	FS NO2	n/a	g/kg
			Trip Velocity Motorway	29.97015	%	FS NOx	n/a	g/kg
						FS Soot	n/a	g/kg
						FS Soot meas	n/a	g/kg
						FS PM	n/a	g/kg
						FS PN	n/a	#/kg

(a) GAS PEMS measurement state only, (b) based on fuel rate input (ECU, Fuel Meter), (c) calculated from carbon balance
(d) NO calculated using molecular weight of NO2

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi A5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Mountain

Page: Trip Summary Drift Corrected

Start Date: 10/13/2017

Start Time: 07:33:08.0

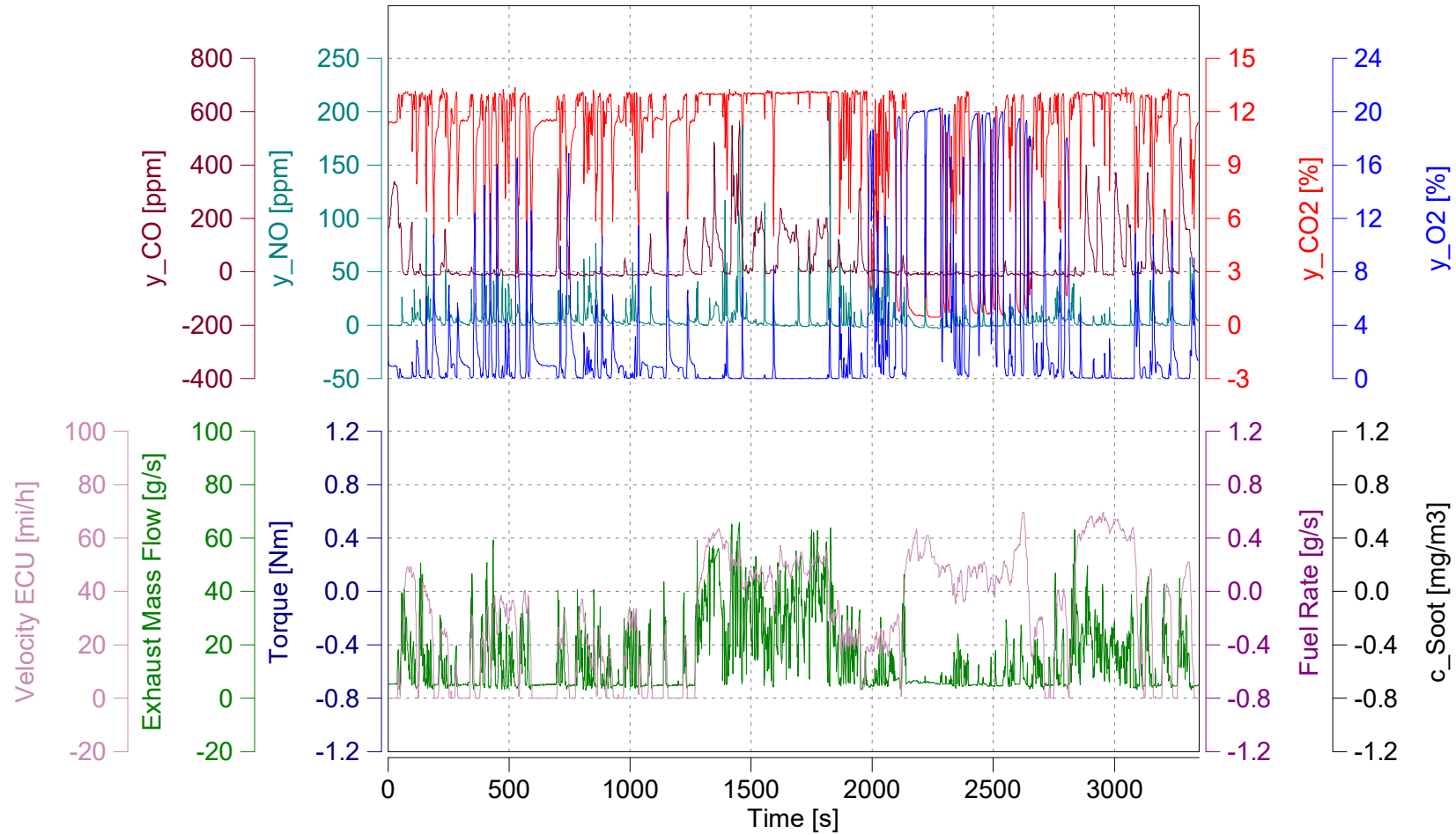


Trip Duration	3350.00	s	ave THC DC	2.65033	ppm	BS CO2 DC	n/a	g/hphr
Trip Duration (a)	3350.00	s	ave NMHC DC	4.41684	ppm	BS CO DC	n/a	g/hphr
Trip Distance	28.79	mi	ave CH4 DC	-1.60591	ppm	BS THC DC	n/a	g/hphr
Trip Distance (a)	28.79	mi	ave CO DC	33.98670	ppm	BS NMHC DC	n/a	g/hphr
Trip Fuel Cons. (b)	n/a	kg	ave CO2 DC	10.38607	%	BS CH4 DC	n/a	g/hphr
Trip Fuel Cons. (ab)	n/a	kg	ave NOx DC	9.11049	ppm	BS NO DC (d)	n/a	g/hphr
Trip Fuel Cons. EU (ac)	3.07	kg	ave PM	n/a	mg/m3	BS NO2 DC	n/a	g/hphr
Trip Fuel Cons. US (ac)	3.06	kg	ave Soot meas	n/a	mg/m3	BS NOx DC	n/a	g/hphr
Trip Fuel Cons. Volume (b)	n/a	gall	ave Soot	n/a	mg/m3	BS Soot	n/a	g/hphr
Trip Fuel Cons. Volume (ab)	n/a	gall	ave PN DC	n/a	#/cm3	BS Soot meas	n/a	g/hphr
Trip Fuel Cons. Volume EU (ac)	1.08	gall	tot THC DC	0.17052	g	BS PM	n/a	g/hphr
Trip Fuel Cons. Volume US (ac)	1.08	gall	tot NMHC DC	0.17962	g	BS PN DC	n/a	#/hpr
Trip Fuel Economy (b)	n/a	mpg_US	tot CH4 DC	0.02614	g	DS CO2 DC	322.83308	g/mi
Trip Fuel Economy (ab)	n/a	mpg_US	tot CO DC	3.52560	g	DS CO DC	0.12248	g/mi
Trip Fuel Economy EU (ac)	26.56	mpg_US	tot CO2 DC	9293.14406	g	DS THC DC	0.00592	g/mi
Trip Fuel Economy US (ac)	26.66	mpg_US	tot NO DC (d)	0.52736	g	DS NMHC DC	0.00624	g/mi
Trip Av. Eng. Speed	1943.09	rpm	tot NO2 DC	0.19590	g	DS CH4 DC	0.00091	g/mi
Trip Av. Torque	n/a	lbft	tot NOx DC	0.71015	g	DS NO DC (d)	0.01832	g/mi
Trip Av. Power	n/a	hp	tot Soot	n/a	g	DS NO2 DC	0.00681	g/mi
Trip Work	n/a	hphr	tot Soot meas	n/a	g	DS NOx DC	0.02467	g/mi
Trip Exhaust Mass	51.20	kg	tot PM	n/a	g	DS Soot	n/a	g/mi
Trip Exhaust Mass EU (ac)	n/a	kg	tot PN DC	n/a	#	DS Soot meas	n/a	g/mi
Trip Exhaust Mass US (ac)	n/a	kg	PM measurement type	0.00000	-	DS PM	n/a	g/mi
Trip Av. Amb. Temperature	59.66	deg_F	PM correction type	1.00000	alpha(HC)	DS PN DC	n/a	#/mi
Trip Av. Humidity	57.74	%	tot Soot on PM filter (estim.)	n/a	mg	FS CO2 DC	n/a	g/kg
Fuel Type	Petrol (E10)		Soot --> PM simple scaling factor	1.00000	-	FS CO DC	n/a	g/kg
			Soot --> PM alpha scaling factor	0.00000	-	FS THC DC	n/a	g/kg
			Trip Av. Veh. Speed	30.93445	mi/hr	FS NMHC DC	n/a	g/kg
			Trip Velocity Zero	17.19403	%	FS CH4 DC	n/a	g/kg
			Trip Velocity Urban	48.74627	%	FS NO DC (d)	n/a	g/kg
			Trip Velocity Rural	21.28358	%	FS NO2 DC	n/a	g/kg
			Trip Velocity Motorway	29.97015	%	FS NOx DC	n/a	g/kg
						FS Soot	n/a	g/kg
						FS Soot meas	n/a	g/kg
						FS PM	n/a	g/kg
						FS PN DC	n/a	#/kg

(a) GAS PEMS measurement state only, (b) based on fuel rate input (ECU, Fuel Meter), (c) calculated from carbon balance
 (d) NO calculated using molecular weight of NO2

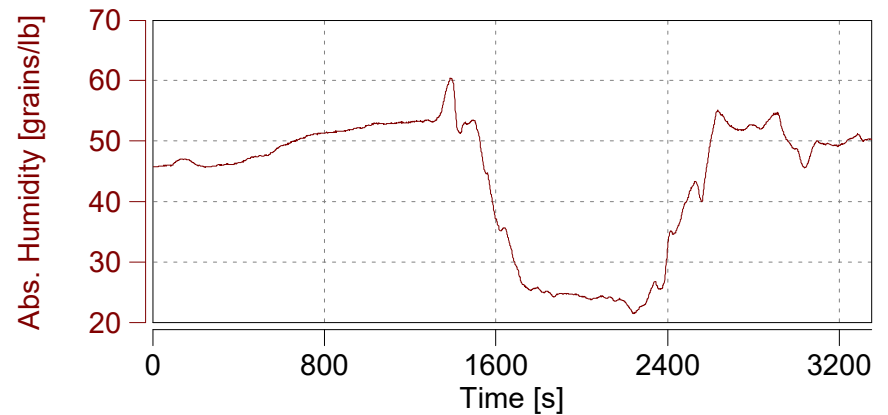
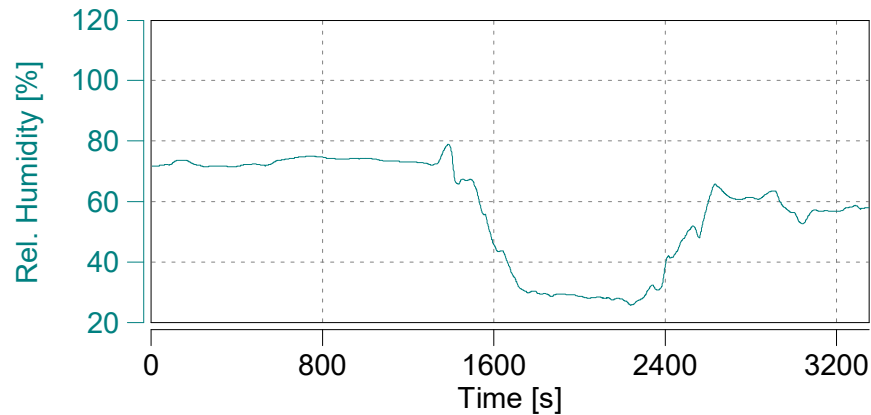
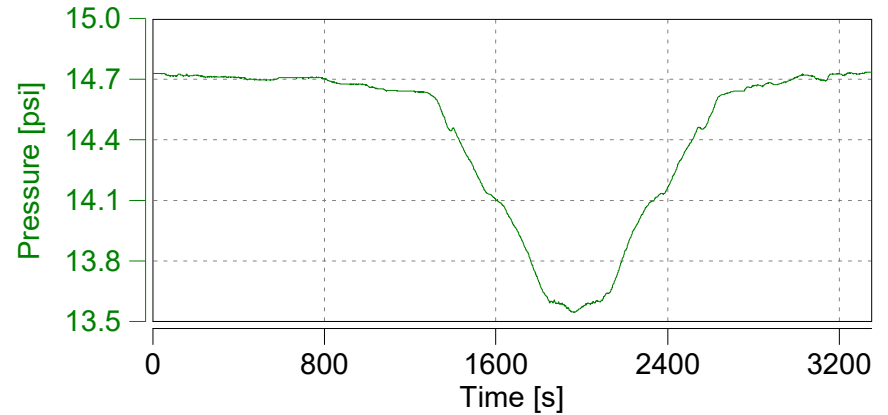
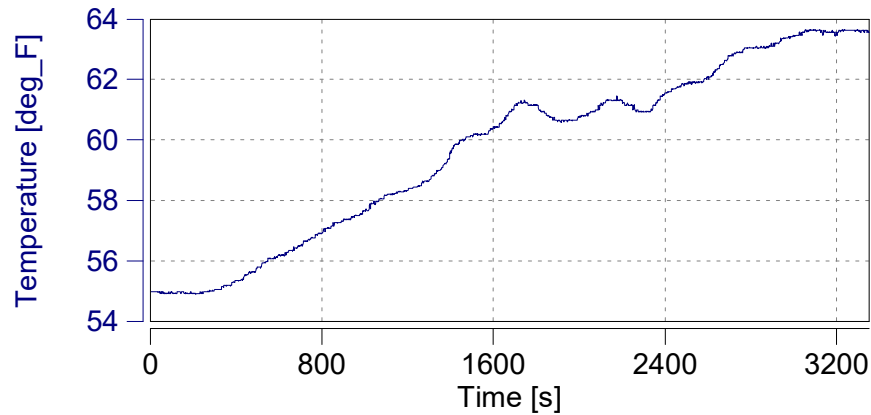
Concerto Version: 480 Build 215, Serial Number: 8468
 M.O.V.E Post-Processing: Rel_10_B192

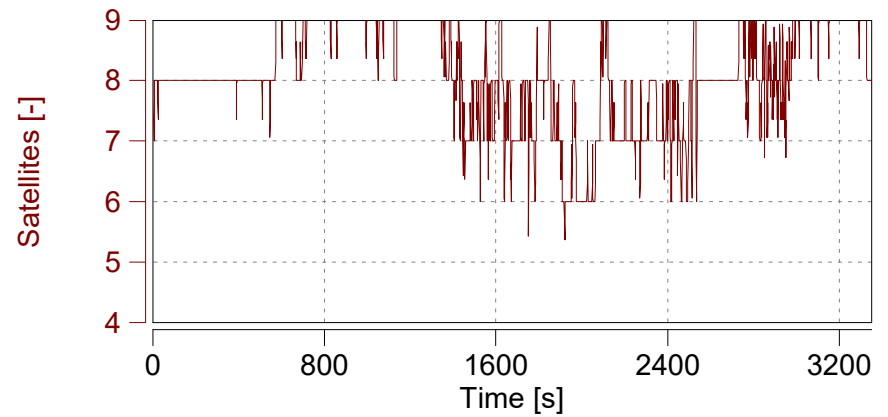
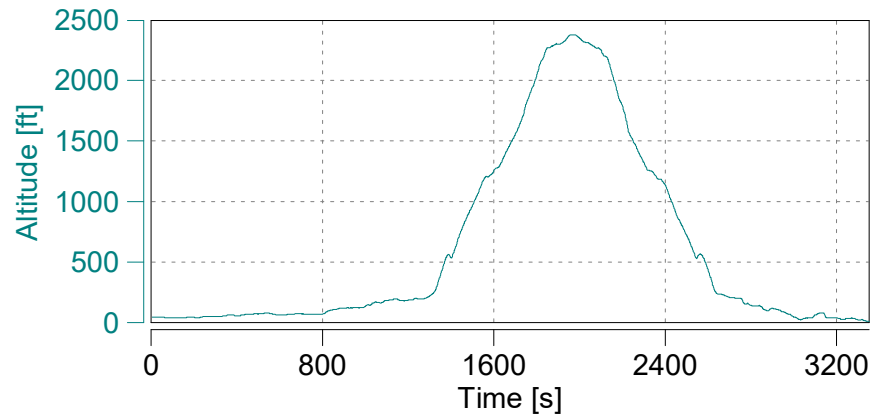
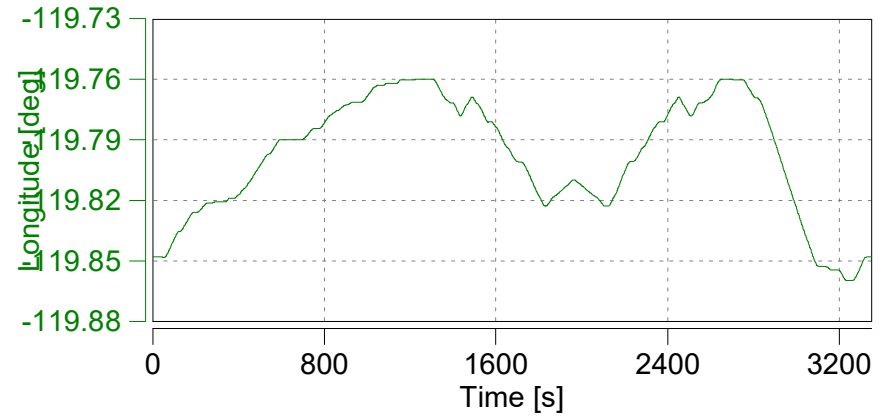
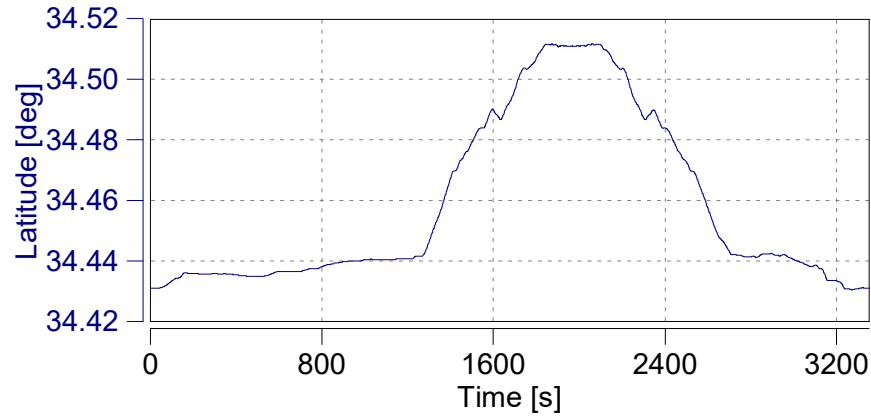
Vehicle: 2017 Audi A5 /
 Engine: Gasoline / 2.0L
 NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
 Dry / Wet Corr.: 2 - CFR40 §86.1342-90

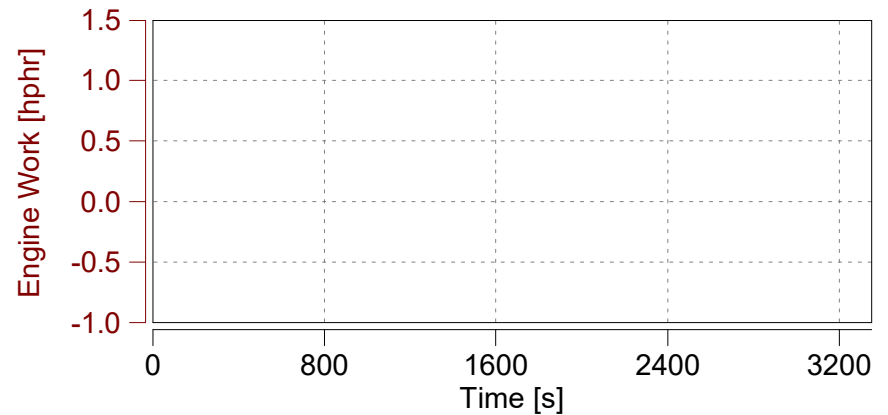
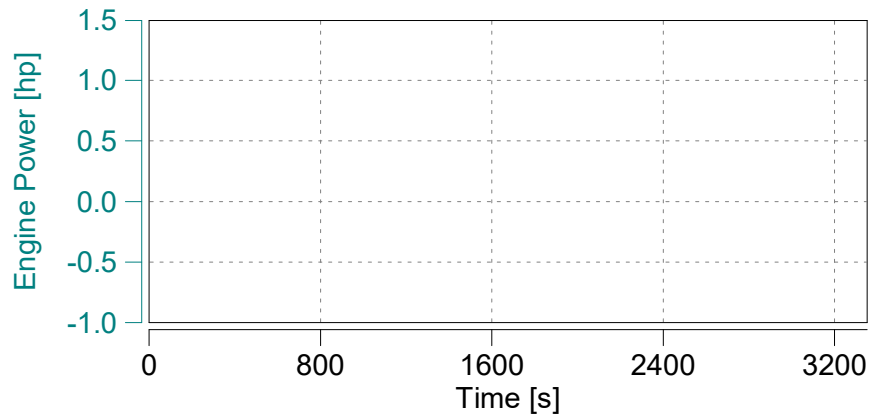
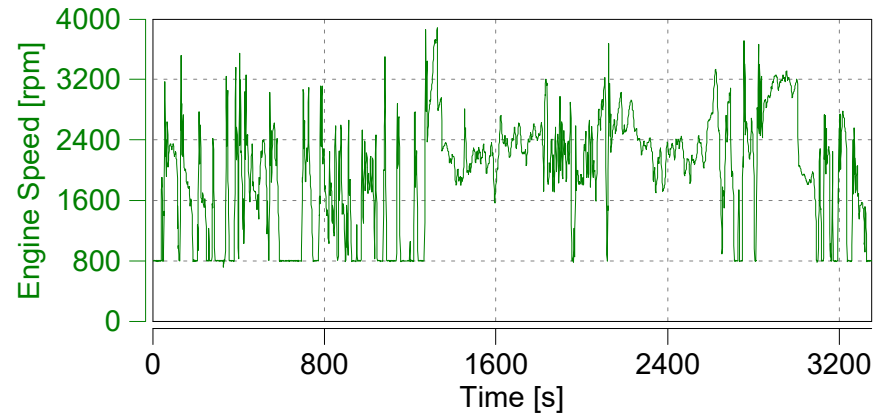
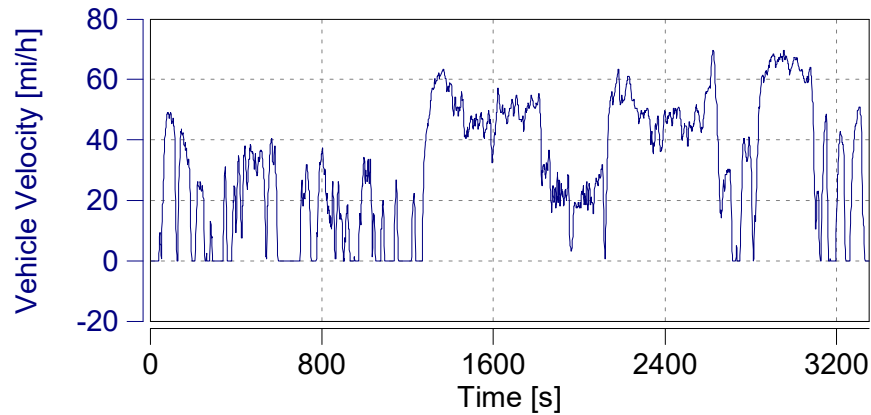


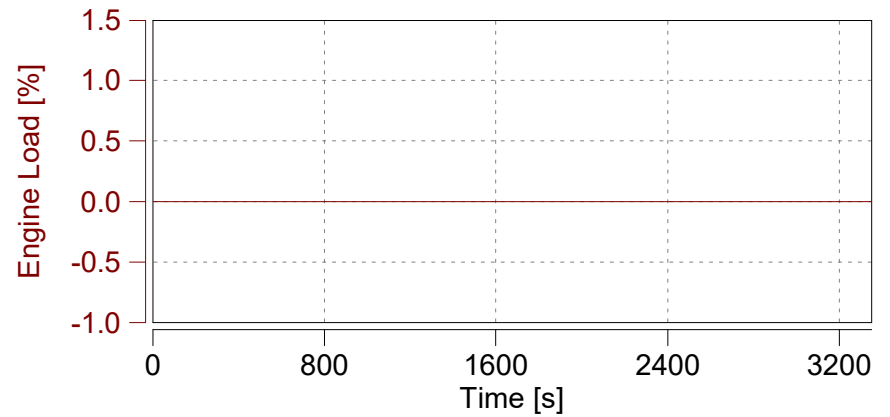
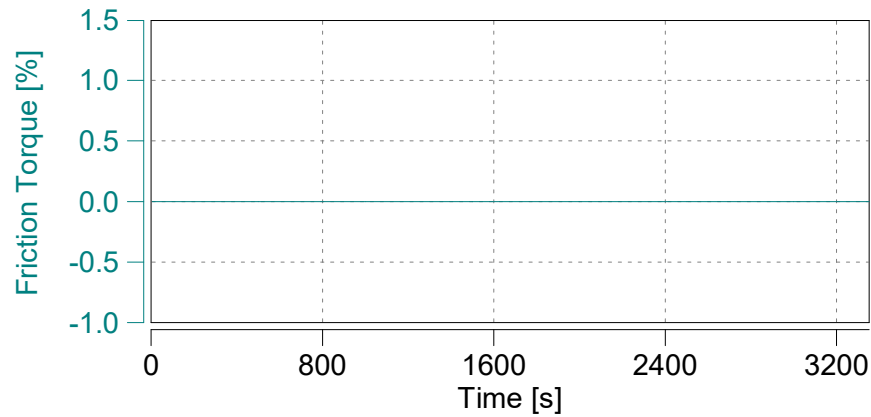
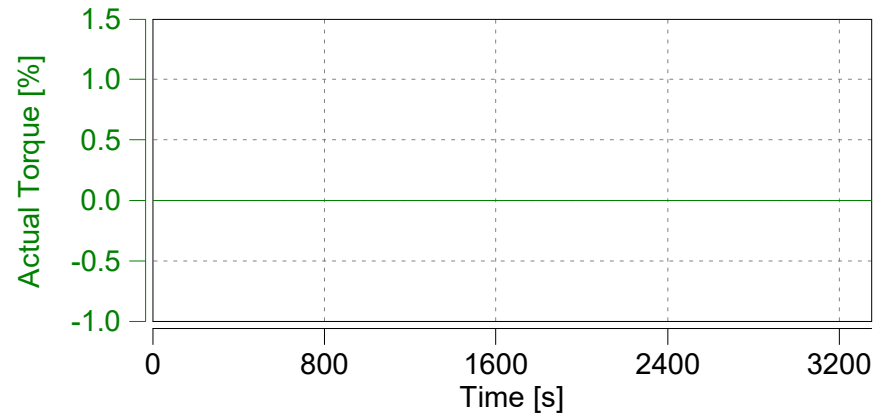
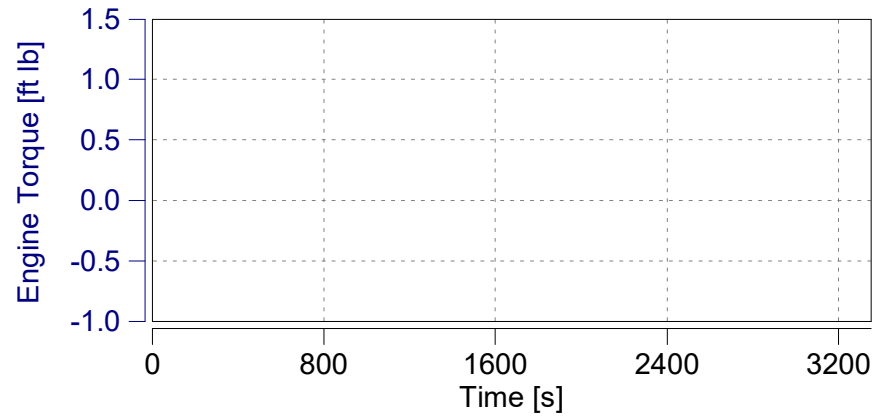
Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

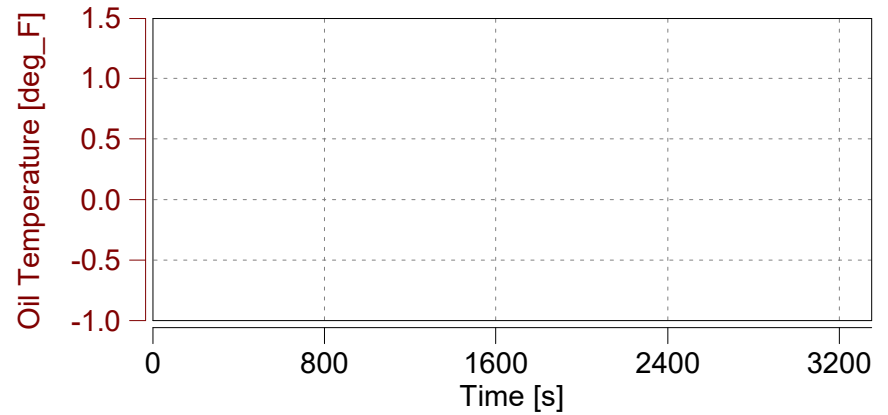
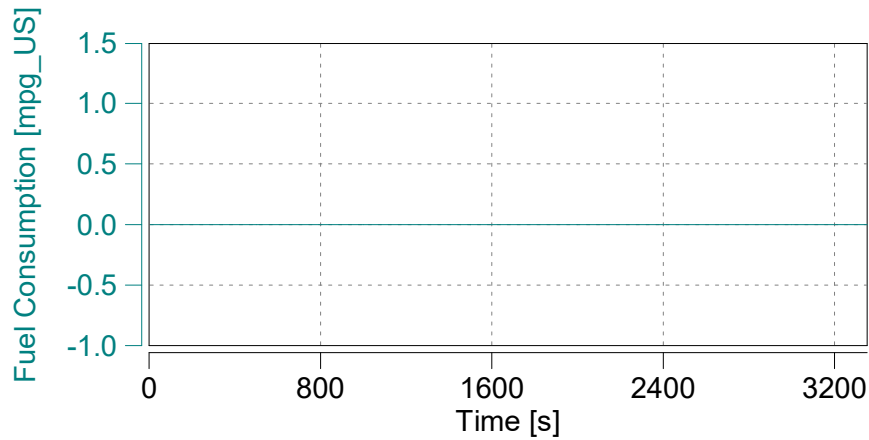
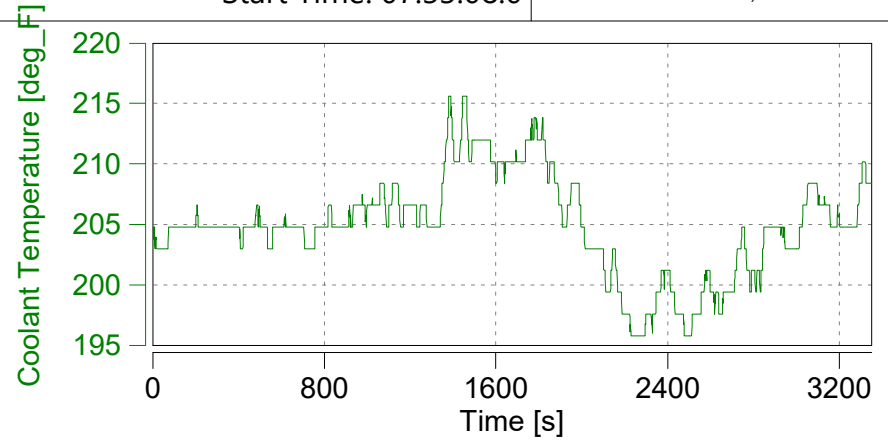
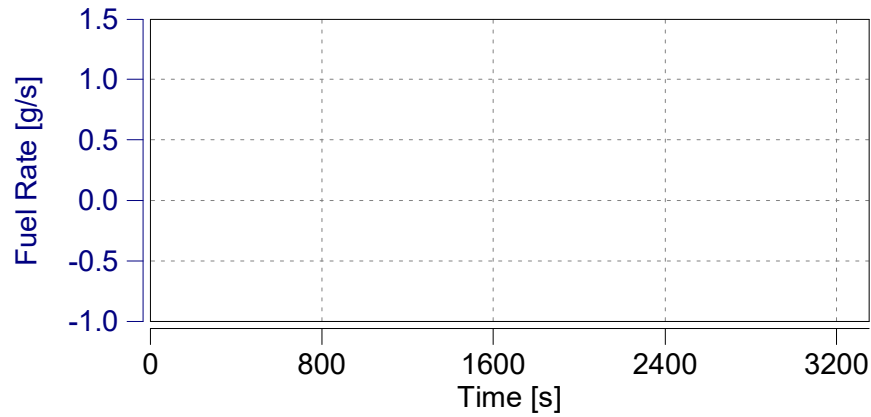
Vehicle: 2017 Audi A5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

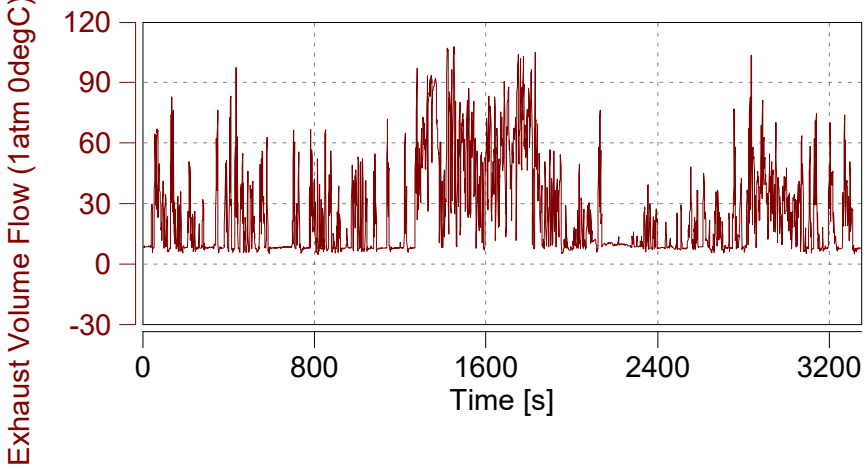
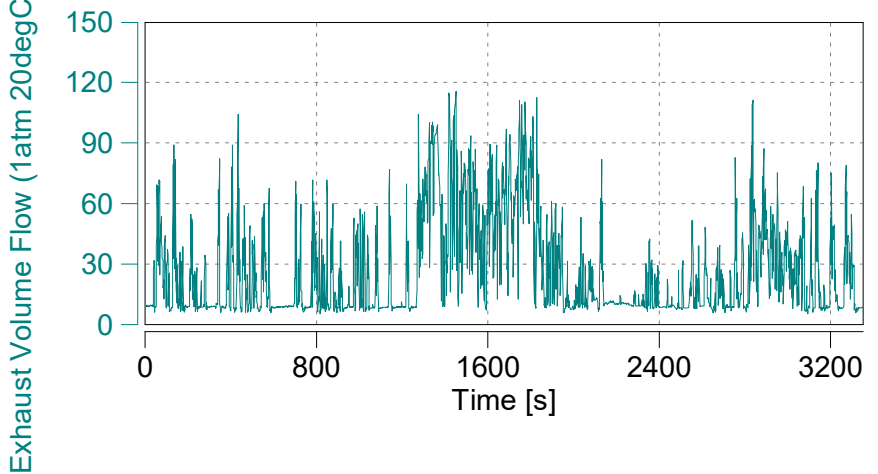
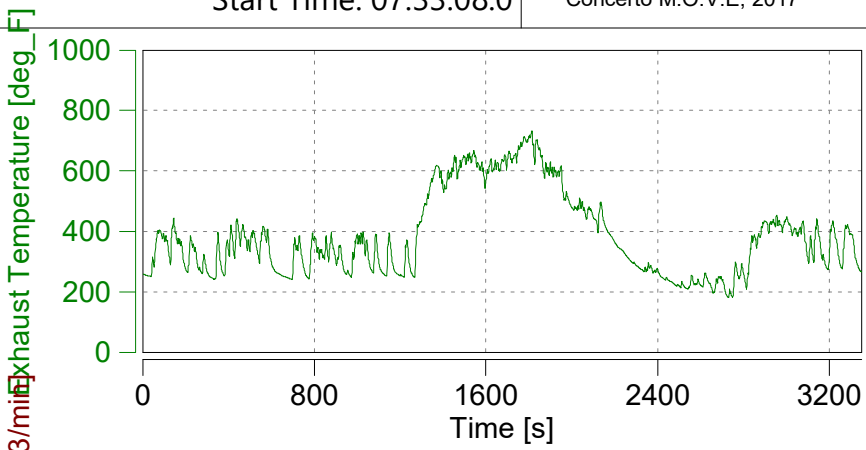
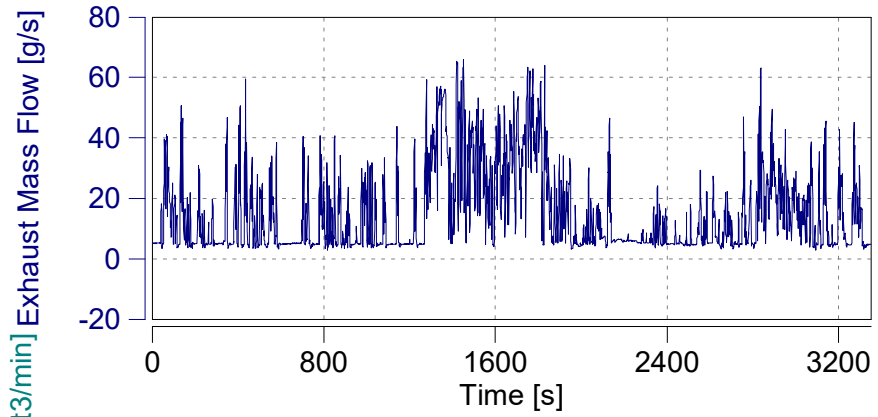






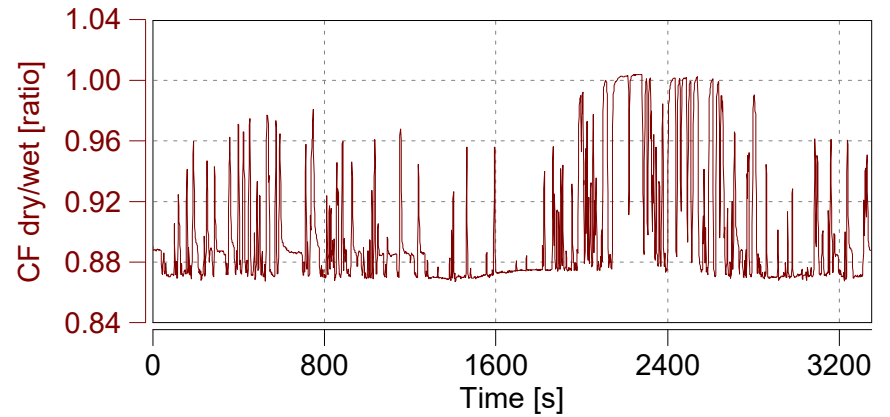
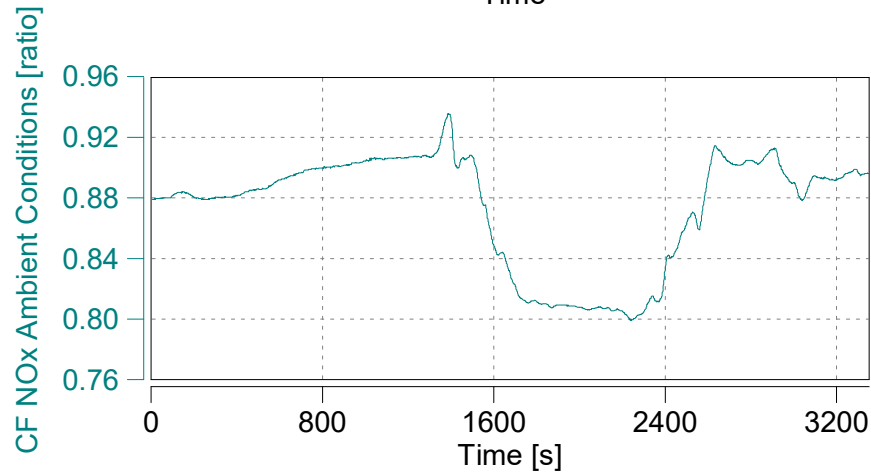
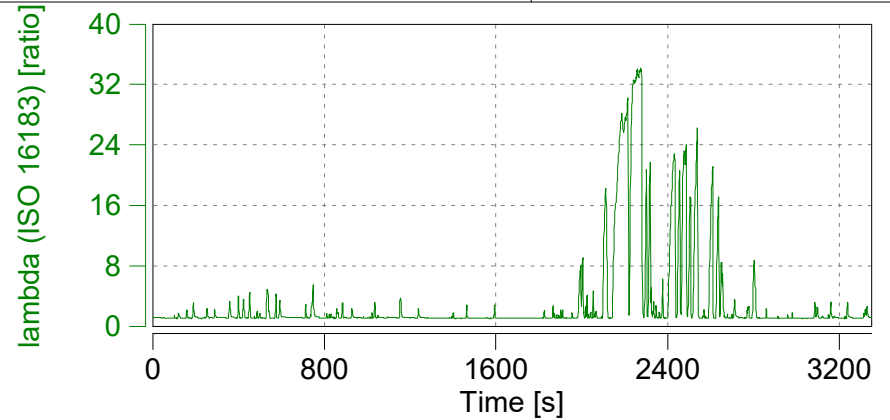
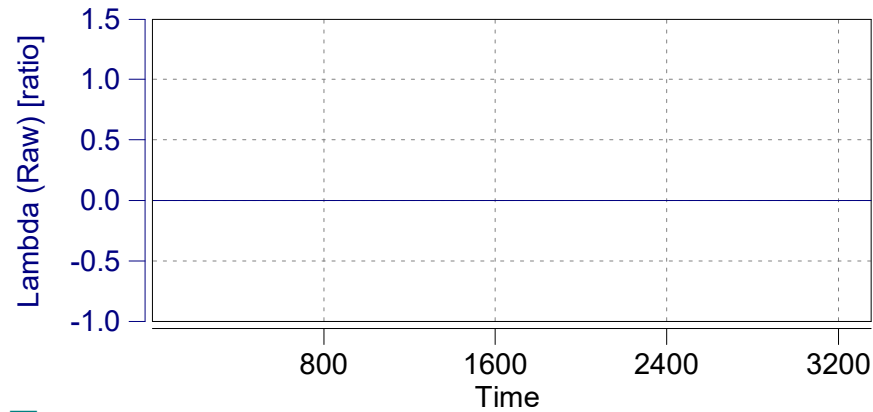






Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi A5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

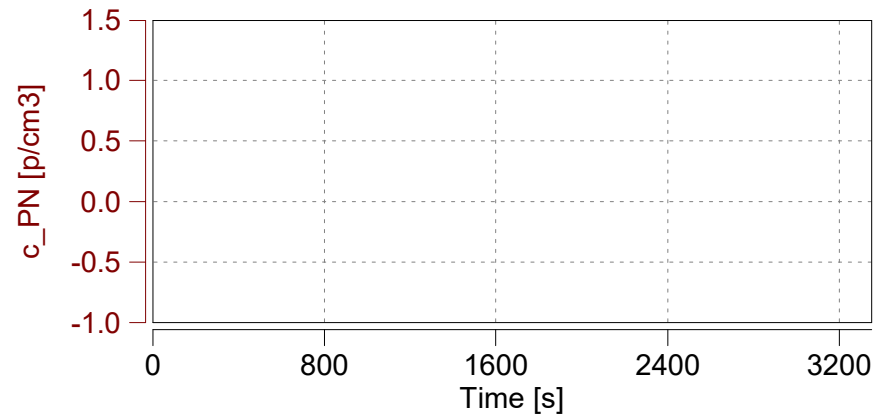
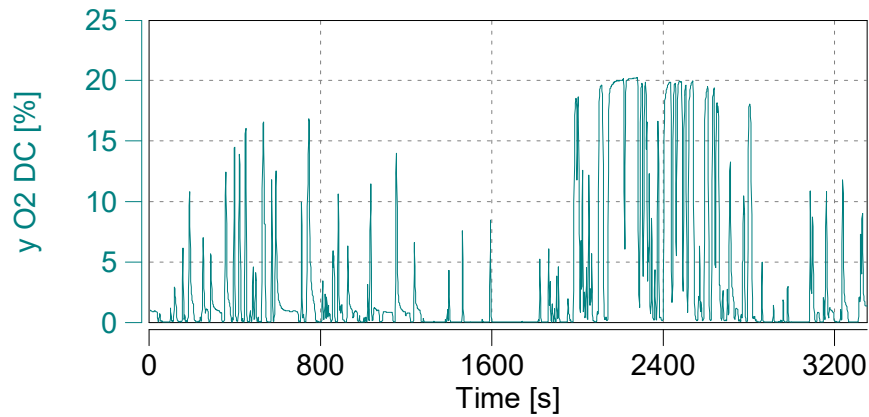
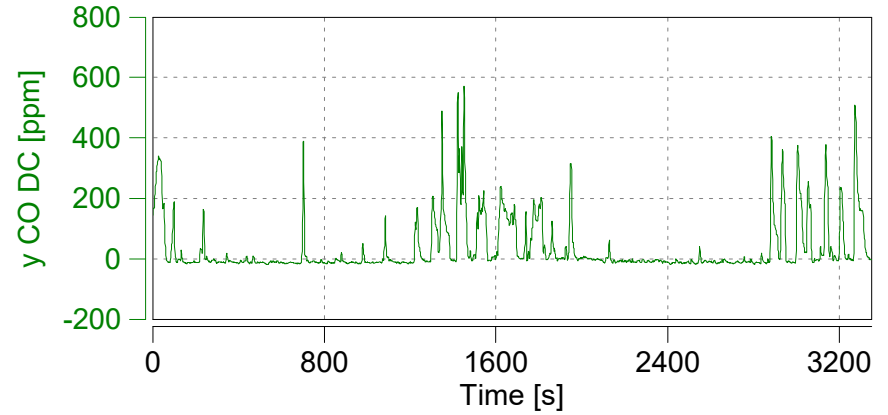
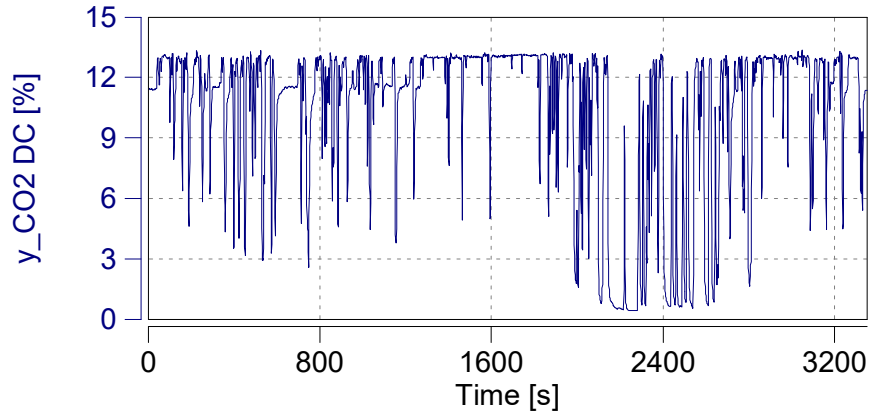


Case: Mountain

Page: Corrected Emissions (1)

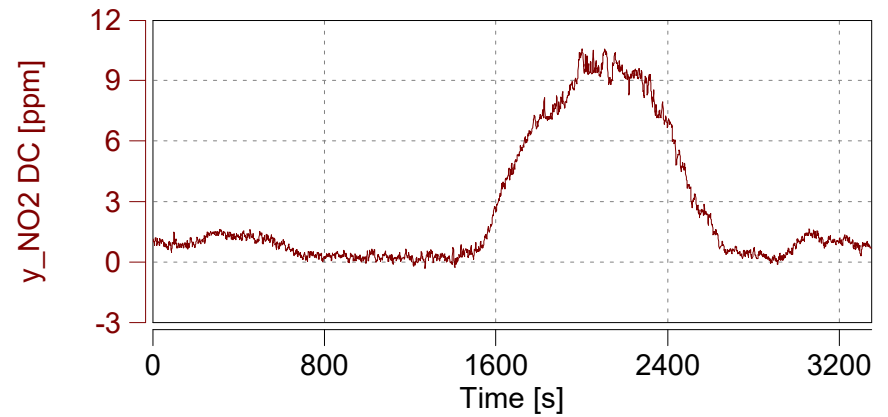
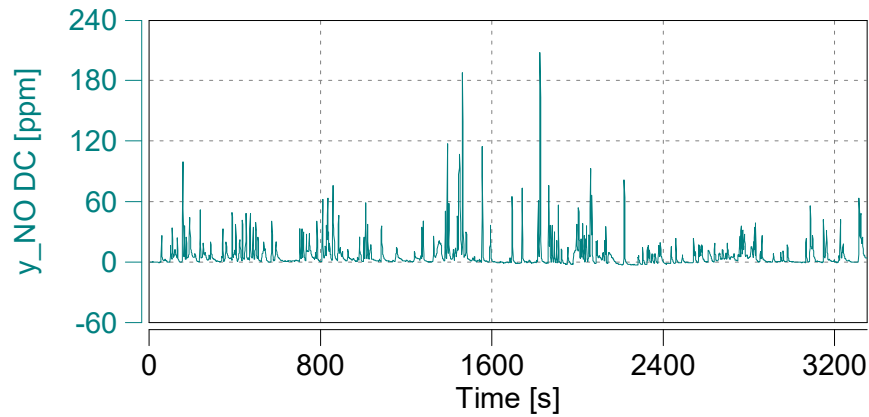
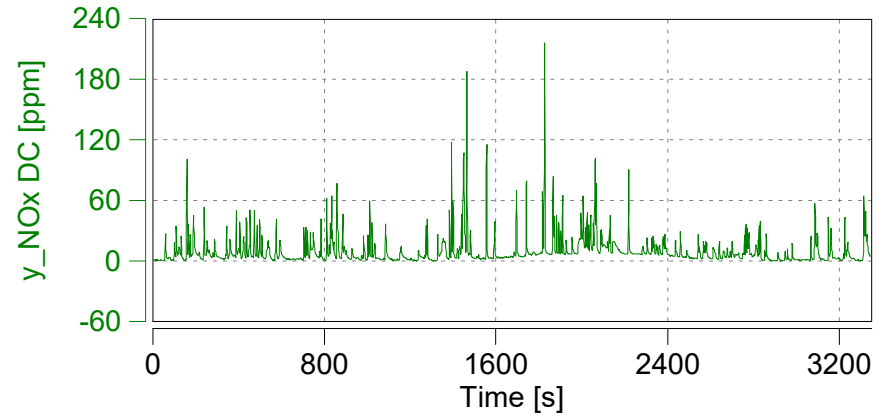
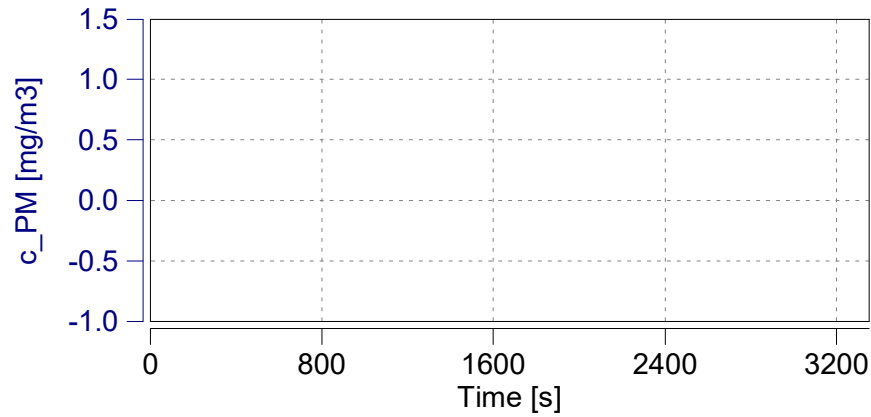
Start Date: 10/13/2017

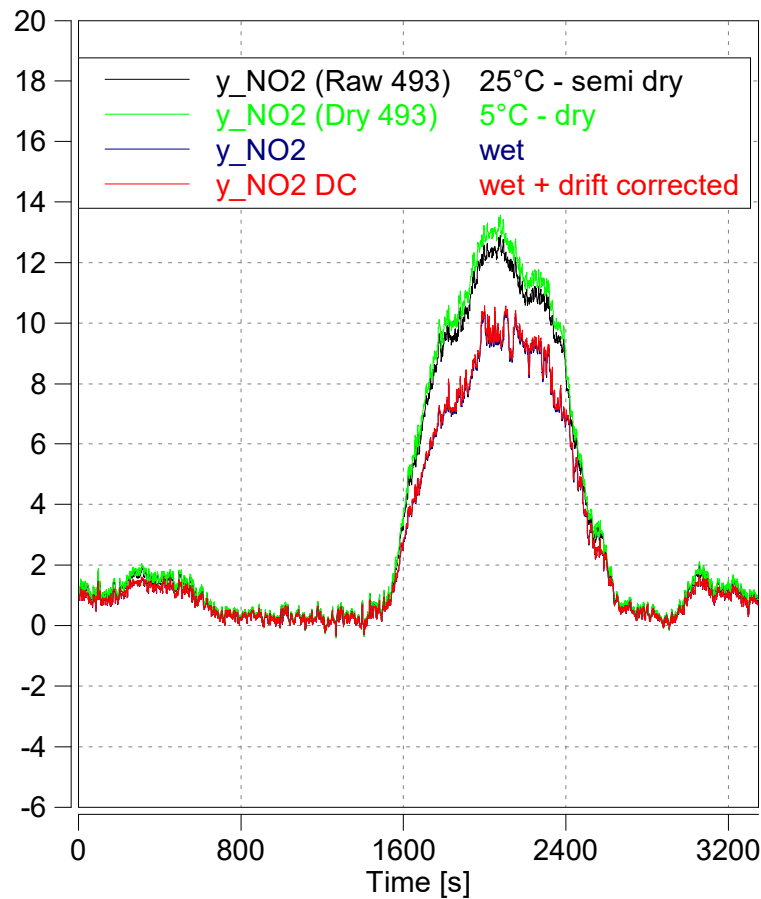
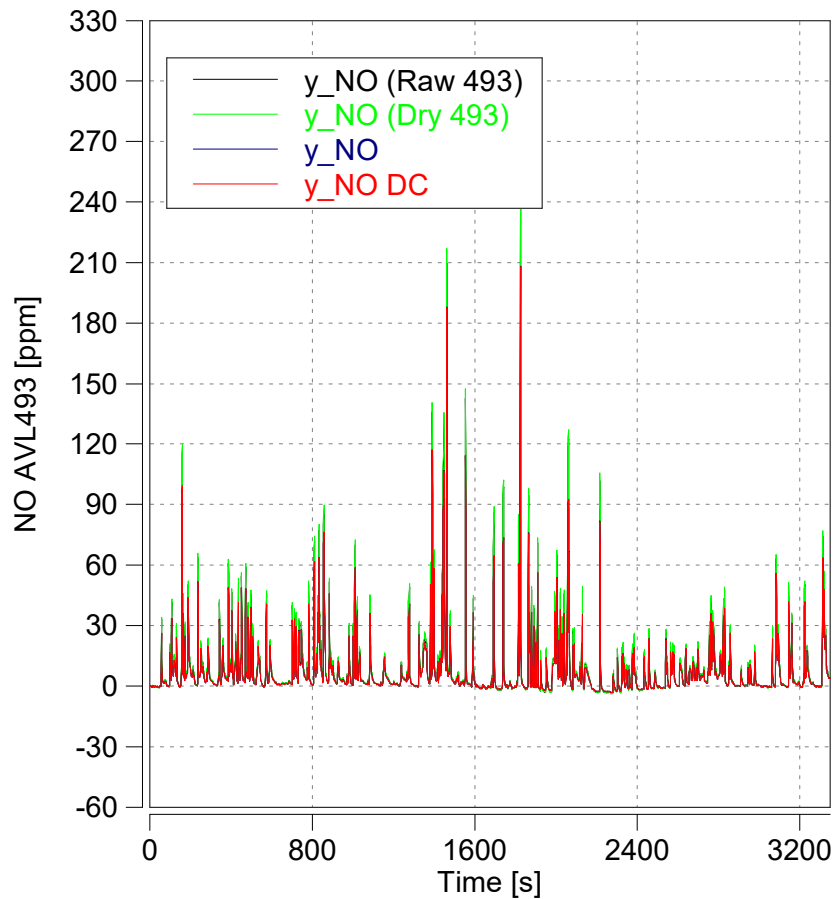
Start Time: 07:33:08.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi A5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90





Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi A5 /
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NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

NOx - AVL 493

y_NO (Raw 493)
y_NO2 (Raw 493)
25°C

EU R49 8.6.1
US §1065.672
drift correction

d_Kf_NO 25°C to dry
d_Kf_NO2 25°C to dry

- (1) EU R49 8.1.1 (15)
- (2) US §1065.655
- (3) none

y_NO DC (Dry 493)
y_NO2 DC (Dry 493)

y_NO (Dry 493)
y_NO2 (Dry 493)

CF dry/wet
(factor equal for all constituents)

CF NOx Ambient Conditions

y_NO DC
y_NO2 DC
wet

y_NO
y_NO2
wet

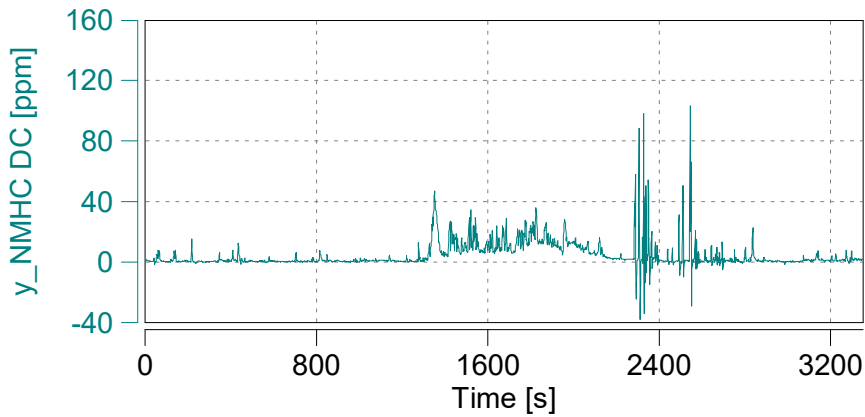
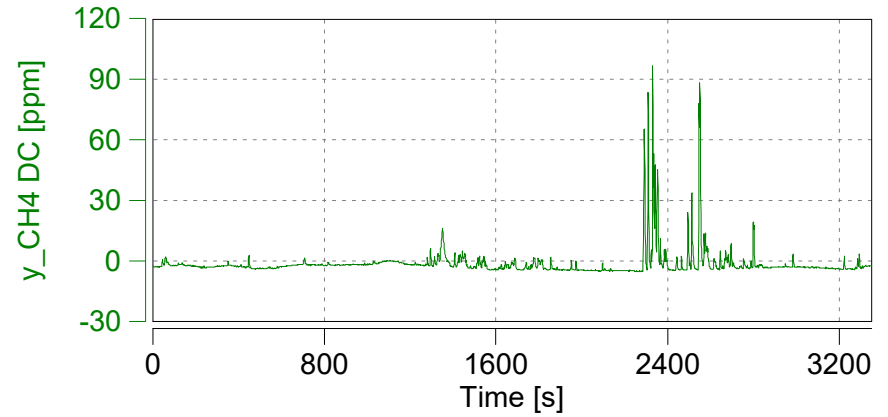
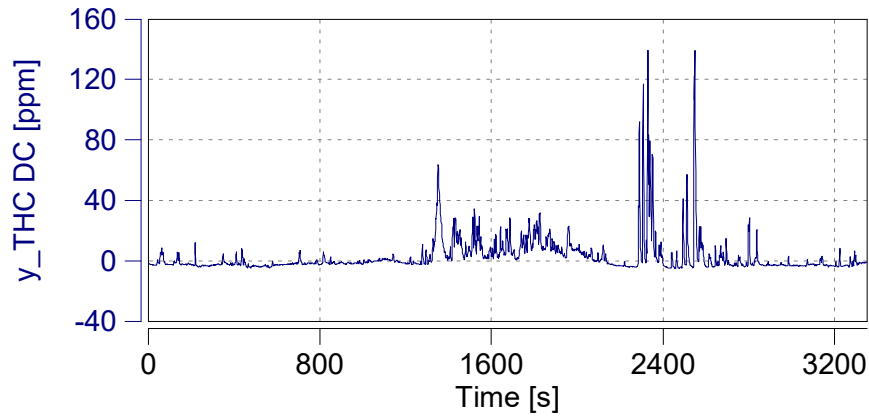
- (1) HD Diesel Engine SwRI FinalReport 08-2597, 1999
- (2) humidity only
- (3) equivalent uncorrected NOx limit method for EU in service
- (4) US §40.86.1342.94 Diesel
- (5) US §40.86.1342.94 SI
- (6) US §40.86.1370-2007 (default US)
- (7) US 40.1065.670
- (8) none (default EU)

Case: Mountain

Page: Corrected Emissions (5)

Start Date: 10/13/2017

Start Time: 07:33:08.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

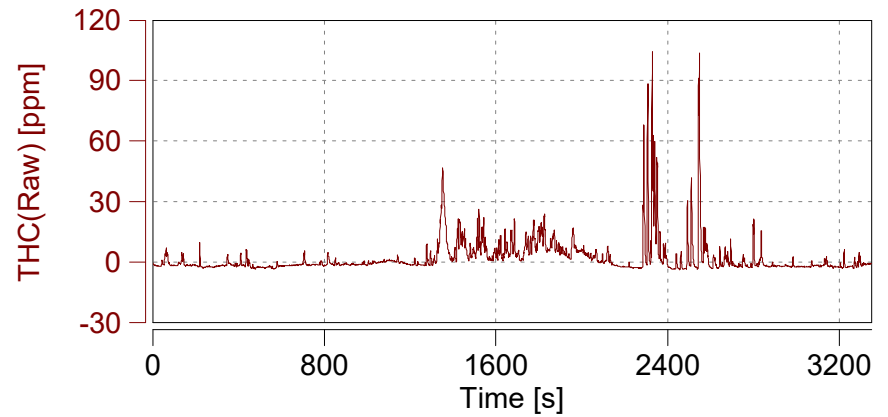
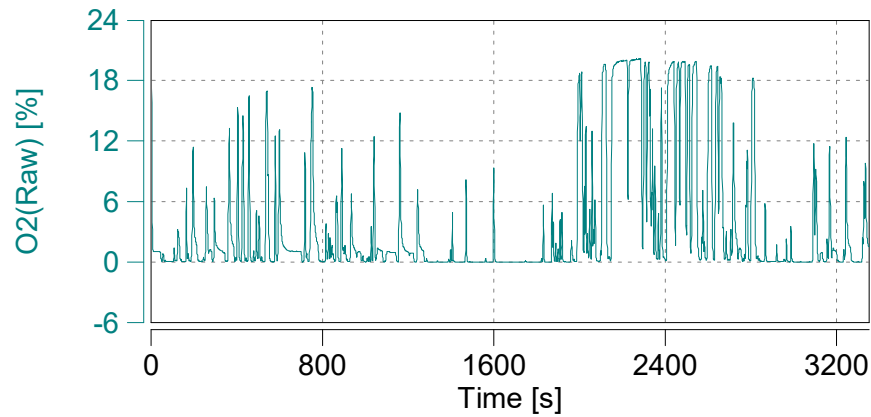
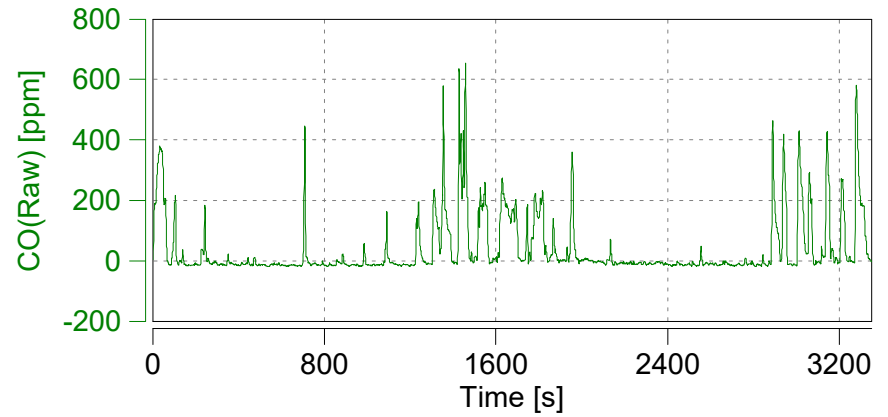
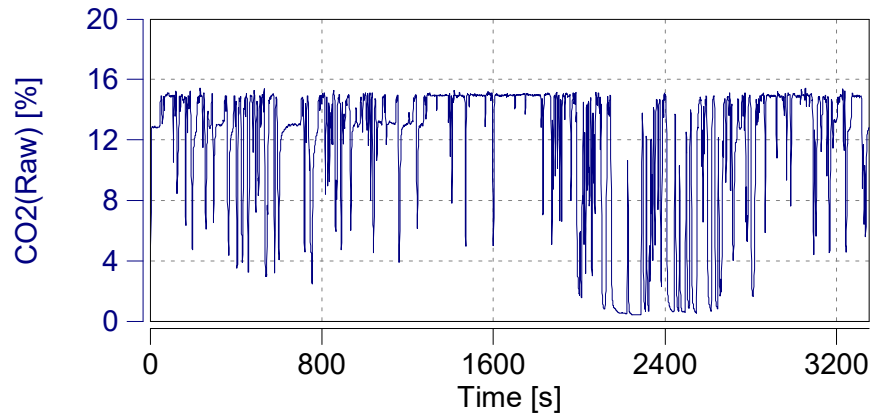
Vehicle: 2017 Audi A5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Mountain

Page: Emissions Raw Data (1)

Start Date: 10/13/2017

Start Time: 07:33:08.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

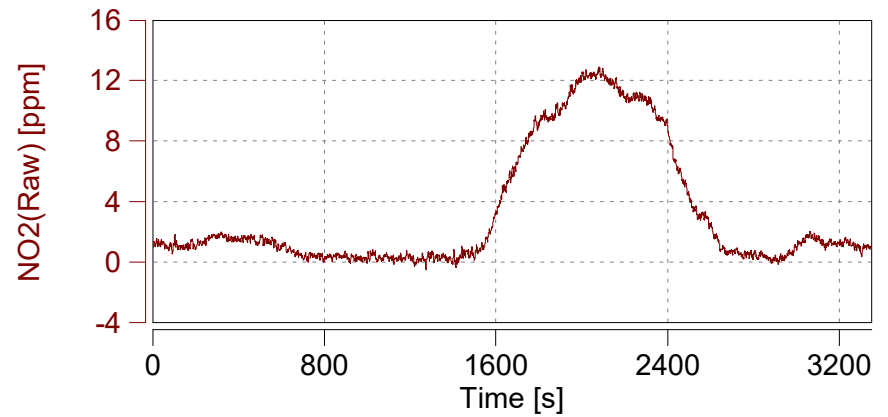
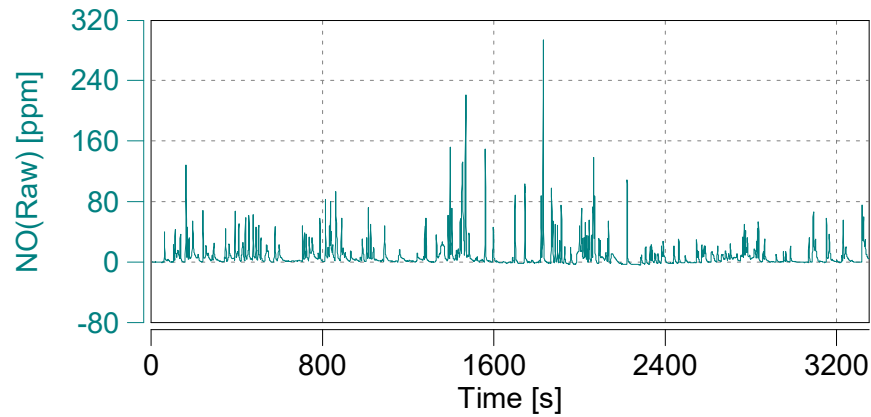
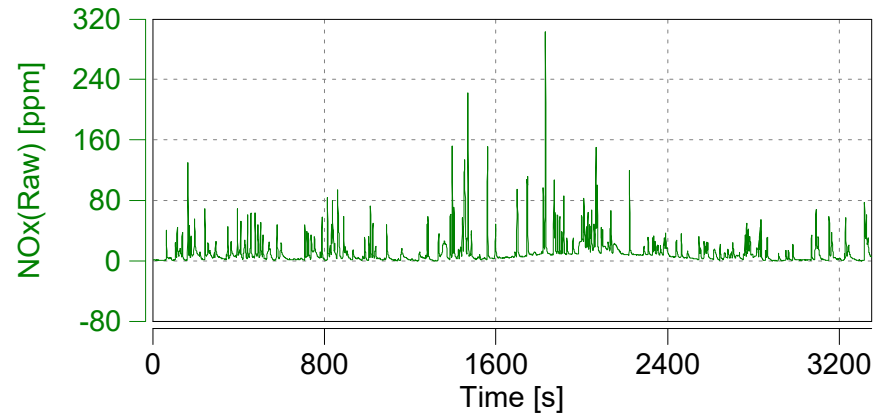
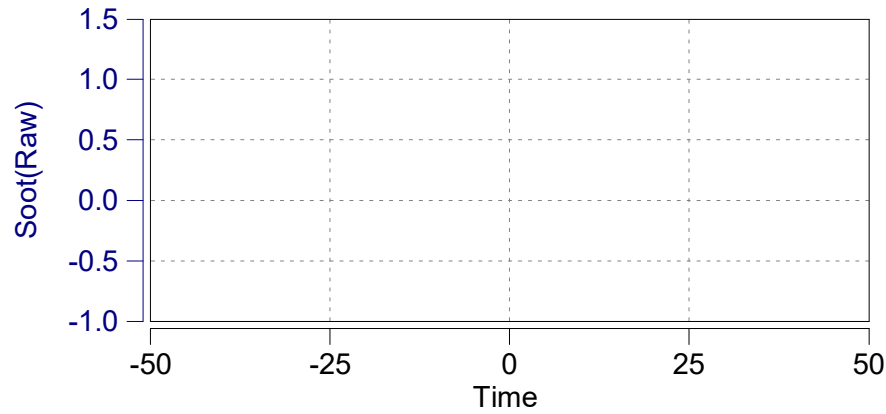
Vehicle: 2017 Audi A5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: Mountain

Page: Emissions Raw Data (2)

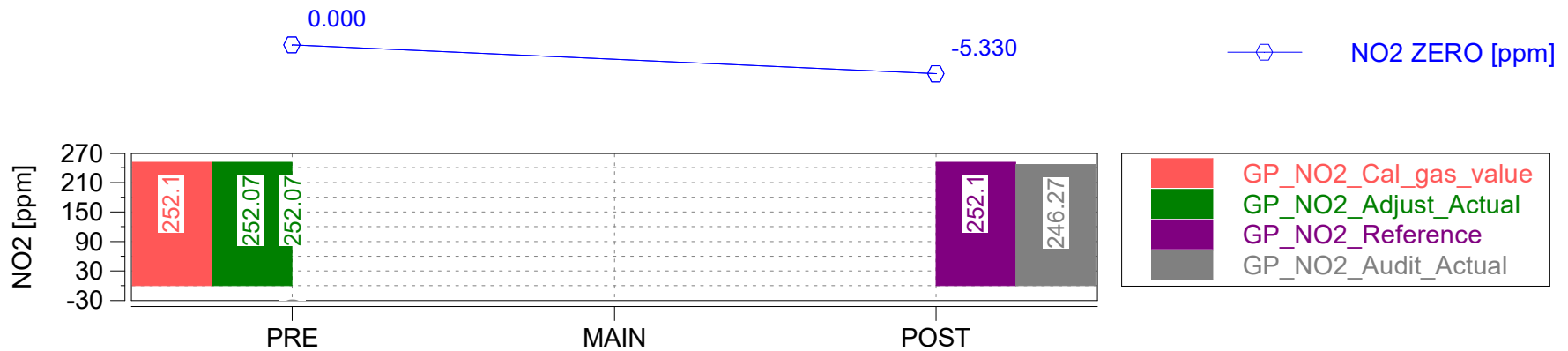
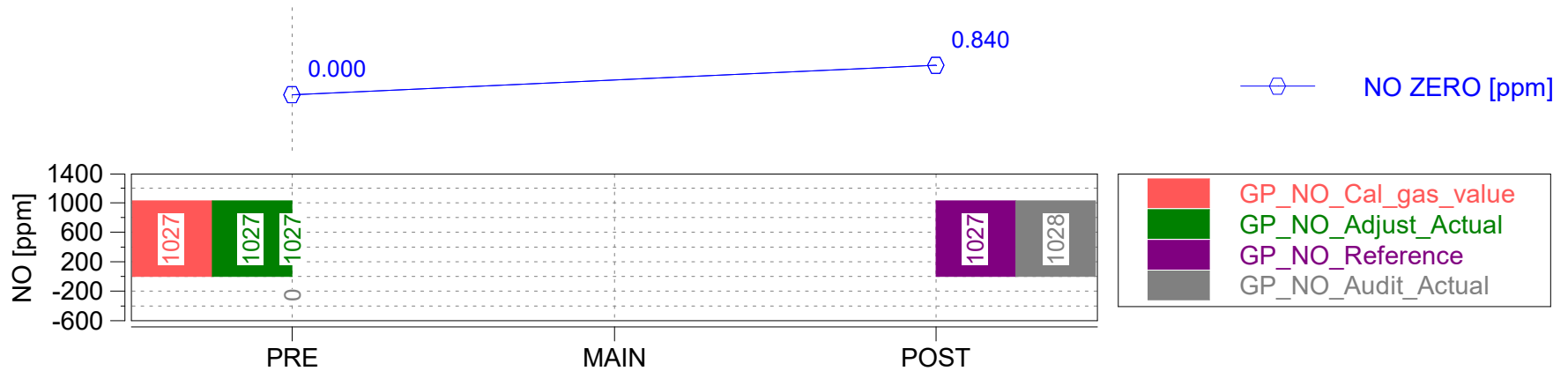
Start Date: 10/13/2017

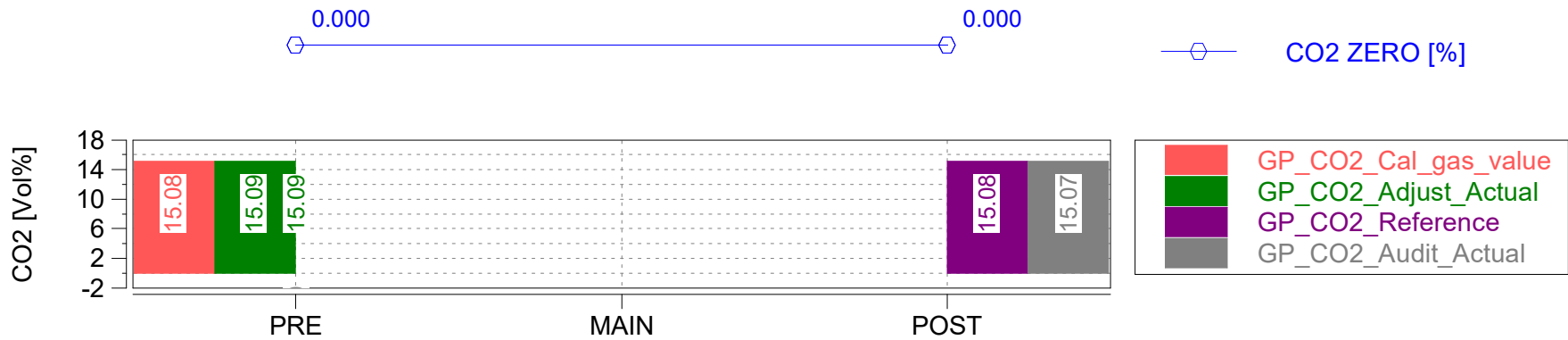
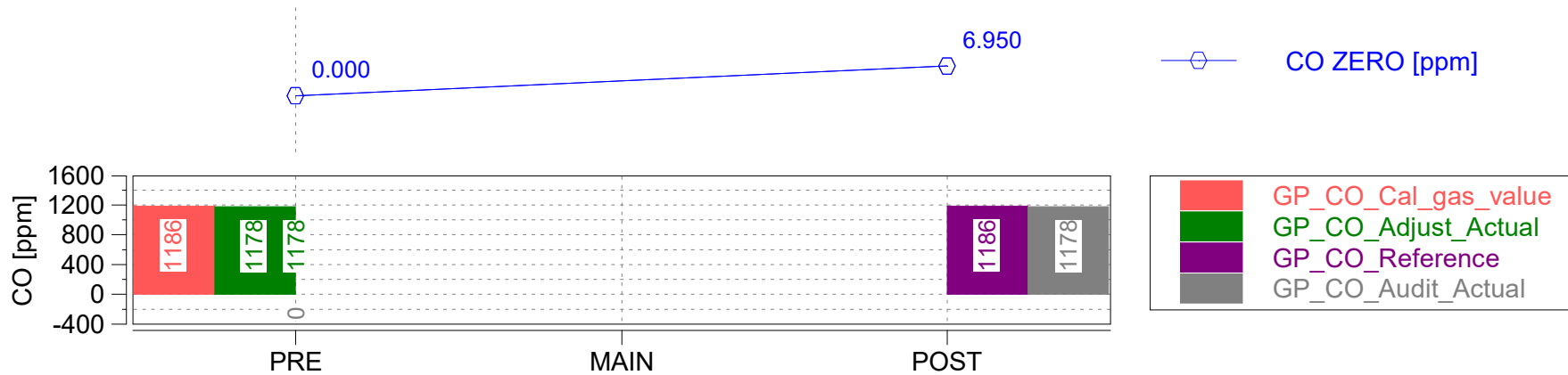
Start Time: 07:33:08.0

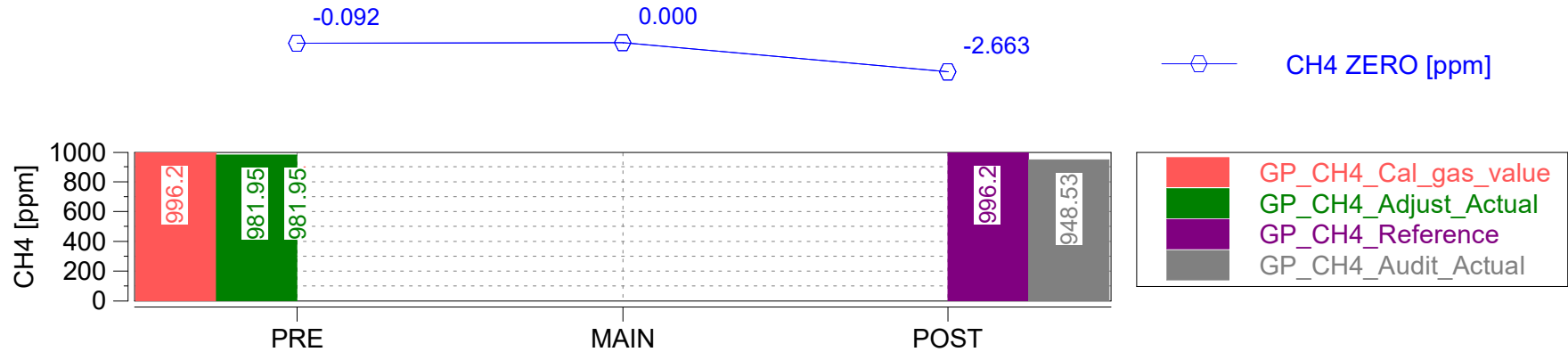
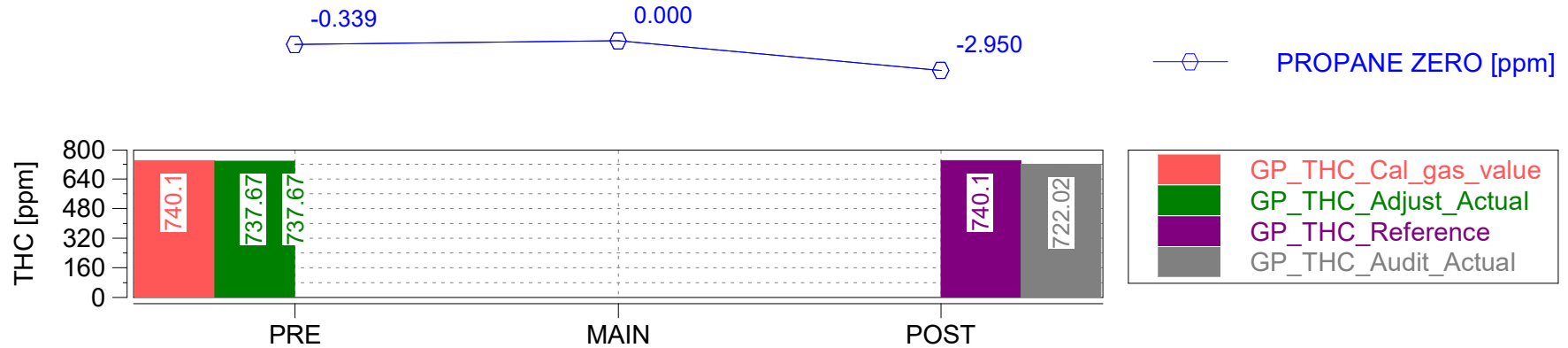


Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi A5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90







#	Text	Value	Unit
-	----	----	----
1.0	Test Start: Date	-	-
2.0	Test Start: Time	-	-
3.0	Ambient Temperature	IFILE1:TM'Temperature	deg C
4.0	Ambient Temperature TS	0.00000	s
5.0	Ambient Pressure	IFILE1:TM'Pressure	kPa
6.0	Ambient Pressure TS	0.00000	s
7.0	Humidity Type	1.00000	-
8.0	Amb. Rel. Humidity	IFILE1:TM'Humidity	%
9.0	Amb. Rel. Humidity	0.00000	s
10.0	GPS Latitude		deg
11.0	GPS Latitude TS	0.00000	s
12.0	GPS Longitude		deg
13.0	GPS Longitude TS	0.00000	s
14.0	Altitude		m
15.0	Altitude TS	0.00000	s
16.0	GPS Quality		-
17.0	GPS Quality TS	0.00000	s
18.0	GroundSpeed		km/h
19.0	GroundSpeed TS	0.00000	s
20.0	Altitude from topographical map		m
21.0	Altitude TS of topographical map		s
22.0	TRIP_AMBIENT_GPS_AVL	YES	-
23.0	CALC_GPS_GROUNDSPEED	NO	-
24.0	EXHAUST_FLOW_AVL	NO	-
25.0	EXHAUST_FLOW_AVL_EFM	YES	-
26.0	Exhaust Flow Type	2.00000	-
27.0	Mass Flow	IFILE1:TM'PitotEFM_ExhaustG	various
28.0	Mass Flow TS	1.70000	s
29.0	Exhaust Pressure		kPa
30.0	Exhaust Pressure TS	1.70000	s

#	Text	Value	Unit
-	----	----	----
31.0	Exhaust Delta Pressure		kPa
32.0	Exhaust Pressure Delta TS	1.70000	s
33.0	Exhaust Temperature	IFILE1:TM'PitotEFM_ExhaustG	degC
34.0	Exhaust Temperature TS	1.70000	s
35.0	Lambda	N/A	-
36.0	Lambda TS		s
37.0	CO2_DIL		%
38.0	CO2_DIL TS		s
39.0	CVS Volume Flow		m3/min
40.0	TimeShift_CVS_VOL_FLOW		s
41.0	IN_CVS_PRESSURE		kPa
42.0	TimeShift_CVS_PRESSURE		s
43.0	IN_CVS_TEMP		degC
44.0	TimeShift_CVS_TEMP		s
45.0	Dry to Wet Conversion CO2	YES	-
46.0	Dry to Wet Conversion O2	YES	-
47.0	Dry to Wet Conversion NO	NO	-
48.0	Dry to Wet Conversion NO2	NO	-
49.0	Dry to Wet Conversion THC	NO	-
50.0	Dry to Wet Conversion CH4	NO	-
51.0	Dry to Wet Conversion O2	NO	-
52.0	CO2	IFILE1:TM'GPiS_CO2	%
53.0	CO2 TS	-6.20000	s
54.0	OS	IFILE1:TM'GPiS_O2	%
55.0	O2 TS	-6.70000	s
56.0	CO	IFILE1:TM'GPiS_CO	ppm
57.0	CO TS	-6.20000	s
58.0	NO	IFILE1:TM'GPiS_NO	ppm
59.0	NO TS	-4.40000	s
60.0	NO2	IFILE1:TM'GPiS_NO2	ppm

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi A5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
61.0	NO2 TS	-4.40000	s
62.0	THC	IFILE1:TM'FIDiS_THC_C1	ppm
63.0	THC TS	0.00000	s
64.0	CH4	IFILE1:TM'FIDiS_CH4_C1	ppm
65.0	CH4 TS	0.00000	s
66.0	GAS_PEMS_Ethane_Efficiency	IFILE1:MOVE_AVL4925'GP_Et -	
67.0	GAS_PEMS_Methane_Efficiency	IFILE1:MOVE_AVL4925'GP_M -	
68.0	GAS_PEMS_Methane_Response	IFILE1:MOVE_AVL4925'GP_M -	
69.0	Zero Signal	IFILE1:TM'GPiS_STATE	0/1
70.0	Zero Signal TS	-4.40000	s
71.0	Zero Signal_FIDiS	IFILE1:TM'FIDiS_STATE	0/1
72.0	Zero Signal_FIDiS TS		s
73.0	Species Input Type	4.00000	-
74.0	GASPEMS=AVL493	NO	-
75.0	GASPEMS=AVL493_iX	NO	-
76.0	GASPEMS=AVL492	YES	-
77.0	GASPEMS=AVL4925	YES	-
78.0	PM: Type	4.00000	1=GFB+HC, 2=GFB, 3='PM=S
79.0	Filter ID from IFile	NO	-
80.0	Lab ID from IFile	NO	-
81.0	PM Filter: ID	N/A	ID
82.0	PM Filter: Lab	N/A	Name/ID
83.0	PM Filter: Weight before Test	N/A	mg
84.0	PM Filter: Weight after Test	N/A	mg
85.0	PM (HC Corr): Max. Exhaust Flow	N/A	scfm
86.0	Soot		mg/m3
87.0	Soot TS	-5.00000	s
88.0	Soot Sensor		mg/m3
89.0	Soot Sensor TS		s
90.0	PM Filter: Filter Flow Rate		l/min

#	Text	Value	Unit
-	----	----	----
91.0	PM Filter: Filter Flow Rate TS	-5.00000	s
92.0	PM Filter: Filter Dilution Ratio		-
93.0	PM Filter: Filter Dilution Ratio TS	-5.00000	s
94.0	PM Filter: Filter Trigger		-
95.0	PM Filter: Filter Trigger TS	-5.00000	s
96.0	PMPEMS=AVL494	YES	-
97.0	PMPEMS_AVL494_PROP_DIL	NO	-
98.0	PM dilution ratio min		-
99.0	PM_MaxExhaustFlowRate		-
100.0	PM_ExhaustFlow_Thresh		-
101.0	PM_total_flow_val		-
102.0	PM_total_flow_val_TS		-
103.0	PM_exh_mass_flow		-
104.0	PM_exh_mass_flow_TS		-
105.0	PN		#/cm3
106.0	TimeShift_PN		s
107.0	PN_STATE		-
108.0	PN TS STATE		s
109.0	PNPEMS_AVL496	NO	-
110.0	PN_CorrFactor	1.00000	
111.0	Time Alignment	1.00000	-
112.0	Time Alignment Dataset 1	N/A	0/1
113.0	Time Alignment Dataset 2	N/A	0/1
114.0	Time Alignment Thresh 1	N/A	-
115.0	Time Alignment Thresh 2	N/A	-
116.0			
117.0			
118.0			
119.0			
120.0			

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi A5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
121.0			
122.0	Trigger		0/1
123.0	Trigger TS		s
124.0	FTIR_NAME_1		-
125.0	FTIR_MW_1		-
126.0	FTIR_CHANNEL_1		-
127.0	FTIR_CHANNEL_TS_1		-
128.0	FTIR_CHANNEL_DRY_1	NO	-
129.0	FTIR_NAME_2		-
130.0	FTIR_MW_2		-
131.0	FTIR_CHANNEL_2		-
132.0	FTIR_CHANNEL_TS_2		-
133.0	FTIR_CHANNEL_DRY_2	NO	-
134.0	FTIR_NAME_3		-
135.0	FTIR_MW_3		-
136.0	FTIR_CHANNEL_3		-
137.0	FTIR_CHANNEL_TS_3		-
138.0	FTIR_CHANNEL_DRY_3	NO	-
139.0	FTIR_NAME_4		-
140.0	FTIR_MW_4		-
141.0	FTIR_CHANNEL_4		-
142.0	FTIR_CHANNEL_TS_4		-
143.0	FTIR_CHANNEL_DRY_4	NO	-
144.0	FTIR_NAME_5		-
145.0	FTIR_MW_5		-
146.0	FTIR_CHANNEL_5		-
147.0	FTIR_CHANNEL_TS_5		-
148.0	FTIR_CHANNEL_DRY_5	NO	-
149.0	FTIR_NAME_6		-
150.0	FTIR_MW_6		-

#	Text	Value	Unit
-	----	----	----
151.0	FTIR_CHANNEL_6		-
152.0	FTIR_CHANNEL_TS_6		-
153.0	FTIR_CHANNEL_DRY_6	NO	-
154.0	FTIR_NAME_7		-
155.0	FTIR_MW_7		-
156.0	FTIR_CHANNEL_7		-
157.0	FTIR_CHANNEL_TS_7		-
158.0	FTIR_CHANNEL_DRY_7	NO	-
159.0	FTIR_NAME_8		-
160.0	FTIR_MW_8		-
161.0	FTIR_CHANNEL_8		-
162.0	FTIR_CHANNEL_TS_8		-
163.0	FTIR_CHANNEL_DRY_8	NO	-
164.0	FTIR_NAME_9		-
165.0	FTIR_MW_9		-
166.0	FTIR_CHANNEL_9		-
167.0	FTIR_CHANNEL_TS_9		-
168.0	FTIR_CHANNEL_DRY_9	NO	-
169.0	FTIR_NAME_10		-
170.0	FTIR_MW_10		-
171.0	FTIR_CHANNEL_10		-
172.0	FTIR_CHANNEL_TS_10		-
173.0	FTIR_CHANNEL_DRY_10	NO	-
174.0	FTIR_NAME_11		-
175.0	FTIR_MW_11		-
176.0	FTIR_CHANNEL_11		-
177.0	FTIR_CHANNEL_TS_11		-
178.0	FTIR_CHANNEL_DRY_11	NO	-
179.0	FTIR_NAME_12		-
180.0	FTIR_MW_12		-

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi A5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
181.0	FTIR_CHANNEL_12		-
182.0	FTIR_CHANNEL_TS_12		-
183.0	FTIR_CHANNEL_DRY_12	NO	-
184.0	FTIR_NAME_13		-
185.0	FTIR_MW_13		-
186.0	FTIR_CHANNEL_13		-
187.0	FTIR_CHANNEL_TS_13		-
188.0	FTIR_CHANNEL_DRY_13	NO	-
189.0	FTIR_NAME_14		-
190.0	FTIR_MW_14		-
191.0	FTIR_CHANNEL_14		-
192.0	FTIR_CHANNEL_TS_14		-
193.0	FTIR_CHANNEL_DRY_14	NO	-
194.0	FTIR_NAME_15		-
195.0	FTIR_MW_15		-
196.0	FTIR_CHANNEL_15		-
197.0	FTIR_CHANNEL_TS_15		-
198.0	FTIR_CHANNEL_DRY_15	NO	-
199.0	FTIR_NAME_16		-
200.0	FTIR_MW_16		-
201.0	Vehicle Type	2017 Audi A5	-
202.0	Vehicle Info		-
203.0	Engine Type	Gasoline	-
204.0	Engine Info	2.0L	-
205.0	Engine Torque		Nm
206.0	Curb Idle Load		%
207.0	Idle Speed		rpm
208.0	HYBRID_OVC_REF_CO2_gkm		g/km
209.0	Engine Concept	1.00000	-
210.0	Alpha	1.93000	-

#	Text	Value	Unit
-	----	----	----
211.0	Beta	1.00000	
212.0	Gamma	0.00000	
213.0	Delta	0.00000	
214.0	Epsilon	0.03200	
215.0	X_C	83.00000	
216.0	X_H	13.30000	
217.0	X_N	0.00000	
218.0	X_O	3.50000	
219.0	X_S	0.00000	
220.0	Fuel_Density	747.50000	
221.0	rho_exhaust	1.29310	
222.0	U_CO2	1.51800	
223.0	U_CO	0.96600	
224.0	U_NO	1.58700	
225.0	U_NO2	1.58700	
226.0	U_NOx	1.58700	
227.0	U_HC	0.49900	
228.0	U_NMHC	0.47100	
229.0	U_CH4	0.55300	
230.0	U_O2	1.10400	
231.0	Fuel Type	2.00000	-
232.0	exhaust mass flow type (YES/NO)	YES	-
233.0	Distance Calculation Type	1.00000	-
234.0	Velocity Statistics Calculation Type	2.00000	-
235.0	RDE vehicle class	1.00000	-
236.0	TM_CITY0		s
237.0	TM_CITY1		s
238.0	TM_RURAL0		s
239.0	TM_RURAL1		s
240.0	TM_RURAL2_0		s

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi A5 /
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NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
241.0	TM_RURAL2_1		s
242.0	Second Rural Part for Time Marks (NO		-
243.0	TM_MW0		s
244.0	TM_MW1		s
245.0	VELOCITY_LIMIT_STOP	2.00000	km/h
246.0	VELOCITY_LIMIT_URBAN	50.00000	km/h
247.0	VELOCITY_LIMIT_RURAL	75.00000	km/h
248.0	Intake Manifold Pressure Type	1.00000	-
249.0	Velocity	IFILE1:TM'OBD_Vehicle_Spee	km/h
250.0	Velocity TS	1.20000	s
251.0	Velocity FACTOR	1.00000	-
252.0	Coolant Temperature	IFILE1:TM'OBD_Engine_Coola	degC
253.0	Coolant Temperature TS	1.20000	s
254.0	Oil Temperature		degC
255.0	Oil Temperature TS	1.20000	s
256.0	Intake Manifold Temperature		degC
257.0	Intake Manifold Temp TS	1.20000	s
258.0	Intake Manifold Pressure	IFILE1:TM'OBD_Intake_manifo	kPa
259.0	Intake Manifold Pressure TS	1.20000	s
260.0	Throttle Position		%
261.0	Throttle TS	1.20000	s
262.0	TYP_IDLE_MASS_FLOW		kg/h
263.0	Torque Type	1.00000	-
264.0	Speed	IFILE1:TM'OBD_Engine_RPM	rpm
265.0	Speed TS	1.20000	s
266.0	Torque		Nm
267.0	Torque TS	1.20000	s
268.0	Friction Torque	N/A	Nm
269.0	Friction Torque TS	N/A	s
270.0	Reference Torque	N/A	Nm

#	Text	Value	Unit
-	----	----	----
271.0	Reference Torque TS	N/A	s
272.0	k_VELINE		-
273.0	D_VELINE		-
274.0	Fuel Flow Type	2.00000	-
275.0	Air Flow Type	1.00000	-
276.0	Fuel Rate		various
277.0	Air Rate		various
278.0	Fuel Rate TS	1.20000	s
279.0	No_Cylinders		-
280.0	Air Rate TS	1.20000	s
281.0	FTIR_CHANNEL_32		-
282.0	FTIR_CHANNEL_TS_32		-
283.0	FTIR_CHANNEL_DRY_32	NO	-
284.0	FTIR_NAME_33		-
285.0	FTIR_MW_33		-
286.0	FTIR_CHANNEL_33		-
287.0	FTIR_CHANNEL_TS_33		-
288.0	FTIR_CHANNEL_DRY_33	NO	-
289.0	FTIR_NAME_34		-
290.0	FTIR_MW_34		-
291.0	FTIR_CHANNEL_34		-
292.0	FTIR_CHANNEL_TS_34		-
293.0	FTIR_CHANNEL_DRY_34	NO	-
294.0	FTIR_NAME_35		-
295.0	FTIR_MW_35		-
296.0	FTIR_CHANNEL_35		-
297.0	FTIR_CHANNEL_TS_35		-
298.0	FTIR_CHANNEL_DRY_35	NO	-
299.0	FTIR_NAME_36		-
300.0	FTIR_MW_36		-

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi A5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
301.0	FTIR_CHANNEL_36	-	-
302.0	FTIR_CHANNEL_TS_36	-	-
303.0	FTIR_CHANNEL_DRY_36	NO	-
304.0	FTIR_NAME_37	-	-
305.0	FTIR_MW_37	-	-
306.0	FTIR_CHANNEL_37	-	-
307.0	FTIR_CHANNEL_TS_37	-	-
308.0	FTIR_CHANNEL_DRY_37	NO	-
309.0	FTIR_NAME_38	-	-
310.0	FTIR_MW_38	-	-
311.0	FTIR_CHANNEL_38	-	-
312.0	FTIR_CHANNEL_TS_38	-	-
313.0	FTIR_CHANNEL_DRY_38	NO	-
314.0	FTIR_NAME_39	-	-
315.0	FTIR_MW_39	-	-
316.0	FTIR_CHANNEL_39	-	-
317.0	FTIR_CHANNEL_TS_39	-	-
318.0	FTIR_CHANNEL_DRY_39	NO	-
319.0	FTIR_NAME_40	-	-
320.0	FTIR_MW_40	-	-
321.0	FTIR_CHANNEL_40	-	-
322.0	FTIR_CHANNEL_TS_40	-	-
323.0	FTIR_CHANNEL_DRY_40	NO	-
324.0	Legislation Type (1=HDIUT 2=EU H	4.00000	-
325.0	WholeTest_NOx_corr	5.00000	-
326.0	WholeTest_Hum_corr	2.00000	-
327.0	CD_Distance	0.00000	km
328.0	CD_NOx	0.00000	mg/km
329.0	CD_CO	0.00000	mg/km
330.0	CD_CO2	0.00000	g/km

#	Text	Value	Unit
-	----	----	----
331.0	CD_NMHC	0.00000	mg/km
332.0	CD_CH4	0.00000	mg/km
333.0	CD_THC	0.00000	mg/km
334.0	CD_PN	-	#/km
335.0	WLTC_LOW_SPEED_gkm	-	g/km
336.0	WLTC_LOW_SPEED_FAC	1.20000	-
337.0	WLTC_MEDIUM_SPEED_gkm	-	g/km
338.0	WLTC_HIGH_SPEED_gkm	-	g/km
339.0	WLTC_HIGH_SPEED_FAC	1.10000	-
340.0	WLTC_EXTRA_HIGH_SPEED_gkm	-	g/km
341.0	WLTC_EXTRA_HIGH_SPEED_FA	1.05000	-
342.0	TOL_NORMAL_DRIVING	25.00000	%
343.0	TOL_SEVERE_DRIVING	50.00000	%
344.0	Increase Tolerance Nomral Driving	NO	-
345.0	Bin1_min	-	km/h
346.0	Bin2_min	-	km/h
347.0	Bin3_min	-	km/h
348.0	Bin1_max	-	km/h
349.0	Bin2_max	-	km/h
350.0	Bin3_max	-	km/h
351.0	Clear_R0	125.40000	N
352.0	Clear_R1	0.29300	Nh/km
353.0	Clear_R2	0.02795	N*(h/km) ²
354.0	Clear_SMK	1470.00000	kg
355.0	Clear_Rated_Power	140.00000	kW
356.0	Clear_Ref_Velocity	70.00000	km/h
357.0	Clear_Ref_Acc	0.45000	m/s ²
358.0	Clear_Smooth	3.00000	s
359.0	EXTC_From_High_Temp	30.00000	degC
360.0	EXTC_To_High_Temp	35.00000	degC

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi A5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
361.0	EXTC_From_Low_Temp	-7.00000	degC
362.0	EXTC_To_Low_Temp	0.00000	degC
363.0	Euro 6d or Euro 6d temp	NO	-
364.0	EXTC_From_Altitude	700.00000	m
365.0	EXTC_To_Altitude	1300.00000	m
366.0	EXTC_CORR_FAC	1.60000	
367.0	weight cold start (YES/NO)	NO	-
368.0	precon and soak done (YES/NO)	NO	-
369.0	PATH_PRECON_FILE		
370.0	filter velocity (YES/NO)	NO	-
371.0	filter velocity auto(YES/NO)	NO	-
372.0	Ki_CO		
373.0	Ki_CO2		
374.0	Ki_NOx		
375.0	Ki_FACTOR_CO2 (YES/NO)	NO	-
376.0	Ki_OFFSET_CO2 (YES/NO)	NO	-
377.0	Ki_FACTOR_CO (YES/NO)	NO	-
378.0	Ki_OFFSET_CO (YES/NO)	NO	-
379.0	Ki_FACTOR_NOx (YES/NO)	NO	-
380.0	Ki_OFFSET_NOx (YES/NO)	NO	-
381.0	Ki_OFF (YES/NO)	NO	-
382.0	HD legislations	1.00000	-
383.0	RDE legislations	1.00000	-
384.0	Submission Documents (YES/NO)	NO	-
385.0	General Setup Parameters Text	Mountain	-
386.0	Legislation Setup Parameters Text	Mountain	-
387.0	Trip Info		-
388.0	IN_TIME_REF		-
389.0	Sub-Trip Start: Auto	YES	-
390.0	Sub-Trip Start: Seconds	N/A	s

#	Text	Value	Unit
-	----	----	----
391.0	Sub-Trip End: Auto	YES	-
392.0	Sub-Trip End: Seconds	N/A	s
393.0	Unit System	2.00000	-
394.0	Calculate: PM Emissions	NO	-
395.0	Calculate: PN Emissions	NO	-
396.0	Output: Summary	YES	-
397.0	Output: Emissions	YES	-
398.0	Output: Raw Data	YES	-
399.0	Output: Zero Span	YES	-
400.0	Output: Data Consistency	NO	-
401.0	Output: Window Plots	YES	-
402.0	Fuel Rate ECU vs. EU ISO16183	$y = 10000000000.0000 x - 0.000$ $R^2=10000000000.000$ SEE=	
403.0	PEMS post processing version	Rel_10_B192	
404.0	Concerto version	480.00000	
405.0	Concerto build	215.00000	
406.0	USERNAME	EFR	

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi A5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City
Page: Trip Summary

Start Date: 10/13/2017
Start Time: 07:33:08.0



Trip Duration	3807.00	s	ave THC	0.91738	ppm	BS CO2	n/a	g/hphr
Trip Duration (a)	3807.00	s	ave NMHC	1.27427	ppm	BS CO	n/a	g/hphr
Trip Distance	15.77	mi	ave CH4	-0.32445	ppm	BS THC	n/a	g/hphr
Trip Distance (a)	15.77	mi	ave CO	72.07184	ppm	BS NMHC	n/a	g/hphr
Trip Fuel Cons. (b)	n/a	kg	ave CO2	10.87874	%	BS CH4	n/a	g/hphr
Trip Fuel Cons. (ab)	n/a	kg	ave NOx	4.40762	ppm	BS NO (d)	n/a	g/hphr
Trip Fuel Cons. EU (ac)	2.28	kg	ave PM	n/a	mg/m3	BS NO2	n/a	g/hphr
Trip Fuel Cons. US (ac)	2.25	kg	ave Soot meas	n/a	mg/m3	BS NOx	n/a	g/hphr
Trip Fuel Cons. Volume (b)	n/a	gall	ave Soot	n/a	mg/m3	BS Soot	n/a	g/hphr
Trip Fuel Cons. Volume (ab)	n/a	gall	ave PN	n/a	#/cm3	BS Soot meas	n/a	g/hphr
Trip Fuel Cons. Volume EU (ac)	0.80	gall	tot THC	0.02699	g	BS PM	n/a	g/hphr
Trip Fuel Cons. Volume US (ac)	0.80	gall	tot NMHC	0.02631	g	BS PN	n/a	#/hpr
Trip Fuel Economy (b)	n/a	mpg_US	tot CH4	0.01368	g	DS CO2	434.71551	g/mi
Trip Fuel Economy (ab)	n/a	mpg_US	tot CO	3.15765	g	DS CO	0.20019	g/mi
Trip Fuel Economy EU (ac)	19.62	mpg_US	tot CO2	6856.91135	g	DS THC	0.00171	g/mi
Trip Fuel Economy US (ac)	19.80	mpg_US	tot NO (d)	0.47451	g	DS NMHC	0.00167	g/mi
Trip Av. Eng. Speed	1412.01	rpm	tot NO2	0.00000	g	DS CH4	0.00087	g/mi
Trip Av. Torque	n/a	lbft	tot NOx	0.29833	g	DS NO (d)	0.03008	g/mi
Trip Av. Power	n/a	hp	tot Soot	n/a	g	DS NO2	0.00000	g/mi
Trip Work	n/a	hphr	tot Soot meas	n/a	g	DS NOx	0.01891	g/mi
Trip Exhaust Mass	37.40	kg	tot PM	n/a	g	DS Soot	n/a	g/mi
Trip Exhaust Mass EU (ac)	n/a	kg	tot PN	n/a	#	DS Soot meas	n/a	g/mi
Trip Exhaust Mass US (ac)	n/a	kg	PM measurement type	0.00000	-	DS PM	n/a	g/mi
Trip Av. Amb. Temperature	81.47	deg_F	PM correction type	1.00000	alpha(HC)	DS PN	n/a	#/mi
Trip Av. Humidity	44.58	%	tot Soot on PM filter (estim.)	n/a	mg	FS CO2	n/a	g/kg
Fuel Type	Petrol (E10)		Soot --> PM simple scaling factor	1.00000	-	FS CO	n/a	g/kg
			Soot --> PM alpha scaling factor	0.00000	-	FS THC	n/a	g/kg
			Trip Av. Veh. Speed	14.91568	mi/hr	FS NMHC	n/a	g/kg
			Trip Velocity Zero	29.89230	%	FS CH4	n/a	g/kg
			Trip Velocity Urban	87.26031	%	FS NO (d)	n/a	g/kg
			Trip Velocity Rural	9.53507	%	FS NO2	n/a	g/kg
			Trip Velocity Motorway	3.20462	%	FS NOx	n/a	g/kg
						FS Soot	n/a	g/kg
						FS Soot meas	n/a	g/kg
						FS PM	n/a	g/kg
						FS PN	n/a	#/kg

(a) GAS PEMS measurement state only, (b) based on fuel rate input (ECU, Fuel Meter), (c) calculated from carbon balance
(d) NO calculated using molecular weight of NO2

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi A5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Trip Summary Drift Corrected

Start Date: 10/13/2017

Start Time: 07:33:08.0

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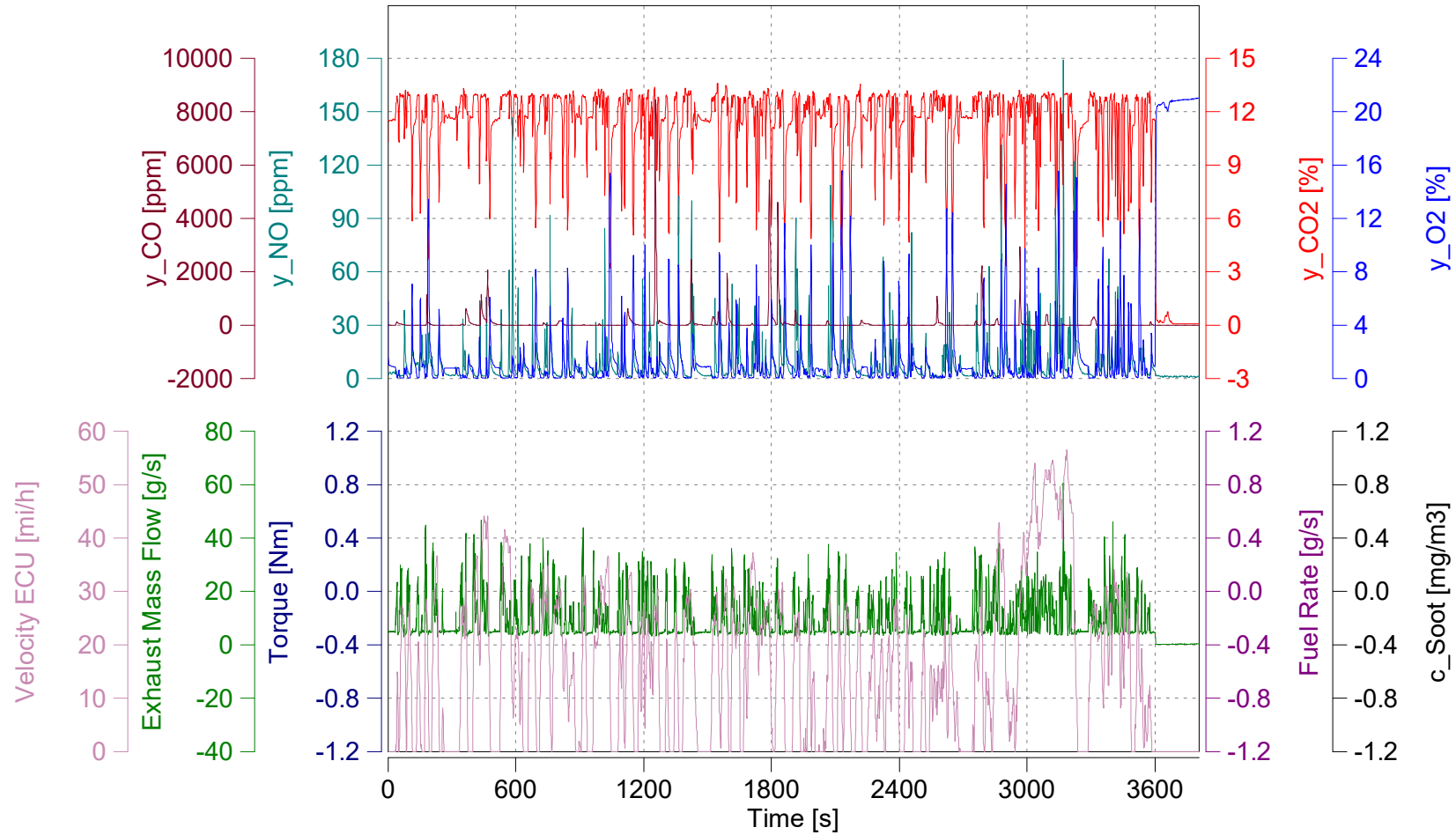
Concerto M.O.V.E, 2017

Trip Duration	3807.00	s	ave THC DC	1.25217	ppm	BS CO2 DC	n/a	g/hphr
Trip Duration (a)	3807.00	s	ave NMHC DC	1.58598	ppm	BS CO DC	n/a	g/hphr
Trip Distance	15.77	mi	ave CH4 DC	-0.30347	ppm	BS THC DC	n/a	g/hphr
Trip Distance (a)	15.77	mi	ave CO DC	72.55790	ppm	BS NMHC DC	n/a	g/hphr
			ave CO2 DC	10.87874	%	BS CH4 DC	n/a	g/hphr
Trip Fuel Cons. (b)	n/a	kg	ave NOx DC	4.35448	ppm	BS NO DC (d)	n/a	g/hphr
Trip Fuel Cons. (ab)	n/a	kg	ave PM	n/a	mg/m3	BS NO2 DC	n/a	g/hphr
Trip Fuel Cons. EU (ac)	2.28	kg	ave Soot meas	n/a	mg/m3	BS NOx DC	n/a	g/hphr
Trip Fuel Cons. US (ac)	2.25	kg	ave Soot	n/a	mg/m3	BS Soot	n/a	g/hphr
			ave PN DC	n/a	#/cm3	BS Soot meas	n/a	g/hphr
						BS PM	n/a	g/hphr
Trip Fuel Cons. Volume (b)	n/a	gall	tot THC DC	0.03684	g	BS PN DC	n/a	#/hpr
Trip Fuel Cons. Volume (ab)	n/a	gall	tot NMHC DC	0.03323	g			
Trip Fuel Cons. Volume EU (ac)	0.80	gall	tot CH4 DC	0.01422	g	DS CO2 DC	434.71551	g/mi
Trip Fuel Cons. Volume US (ac)	0.80	gall	tot CO DC	3.17894	g	DS CO DC	0.20154	g/mi
			tot CO2 DC	6856.91135	g	DS THC DC	0.00234	g/mi
Trip Fuel Economy (b)	n/a	mpg_US	tot NO DC (d)	0.47410	g	DS NMHC DC	0.00211	g/mi
Trip Fuel Economy (ab)	n/a	mpg_US	tot NO2 DC	0.00000	g	DS CH4 DC	0.00090	g/mi
Trip Fuel Economy EU (ac)	19.62	mpg_US	tot NOx DC	0.29663	g	DS NO DC (d)	0.03006	g/mi
Trip Fuel Economy US (ac)	19.80	mpg_US	tot Soot	n/a	g	DS NO2 DC	0.00000	g/mi
			tot Soot meas	n/a	g	DS NOx DC	0.01881	g/mi
Trip Av. Eng. Speed	1412.01	rpm	tot PM	n/a	g	DS Soot	n/a	g/mi
Trip Av. Torque	n/a	lbft	tot PN DC	n/a	#	DS Soot meas	n/a	g/mi
Trip Av. Power	n/a	hp				DS PM	n/a	g/mi
Trip Work	n/a	hphr				DS PN DC	n/a	#/mi
			PM measurement type	0.00000	-			
Trip Exhaust Mass	37.40	kg	PM correction type	1.00000	alpha(HC)	FS CO2 DC	n/a	g/kg
Trip Exhaust Mass EU (ac)	n/a	kg	tot Soot on PM filter (estim.)	n/a	mg	FS CO DC	n/a	g/kg
Trip Exhaust Mass US (ac)	n/a	kg	Soot --> PM simple scaling factor	1.00000	-	FS THC DC	n/a	g/kg
			Soot --> PM alpha scaling factor	0.00000	-	FS NMHC DC	n/a	g/kg
						FS CH4 DC	n/a	g/kg
Trip Av. Amb. Temperature	81.47	deg_F	Trip Av. Veh. Speed	14.91568	mi/hr	FS NO DC (d)	n/a	g/kg
Trip Av. Humidity	44.58	%	Trip Velocity Zero	29.89230	%	FS NO2 DC	n/a	g/kg
			Trip Velocity Urban	87.26031	%	FS NOx DC	n/a	g/kg
			Trip Velocity Rural	9.53507	%	FS Soot	n/a	g/kg
Fuel Type	Petrol (E10)		Trip Velocity Motorway	3.20462	%	FS Soot meas	n/a	g/kg
						FS PM	n/a	g/kg
						FS PN DC	n/a	#/kg

(a) GAS PEMS measurement state only, (b) based on fuel rate input (ECU, Fuel Meter), (c) calculated from carbon balance
 (d) NO calculated using molecular weight of NO2

Concerto Version: 480 Build 215, Serial Number: 8468
 M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi A5 /
 Engine: Gasoline / 2.0L
 NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
 Dry / Wet Corr.: 2 - CFR40 §86.1342-90



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

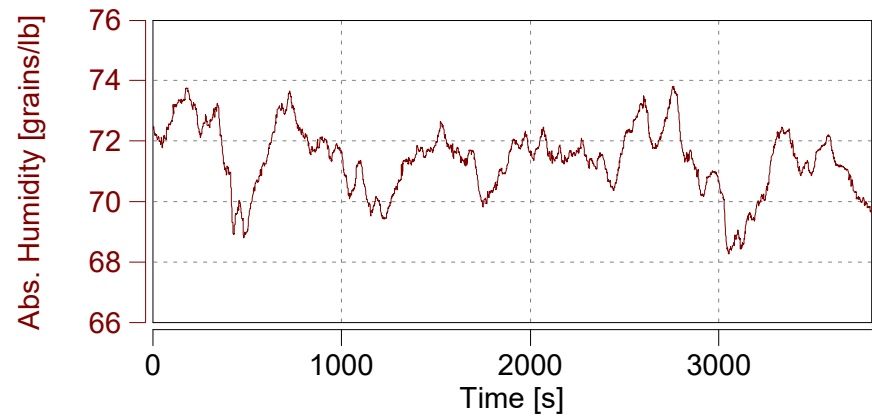
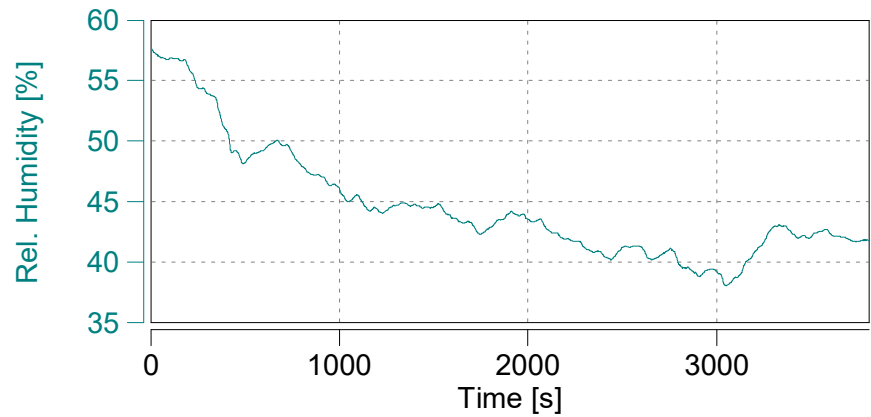
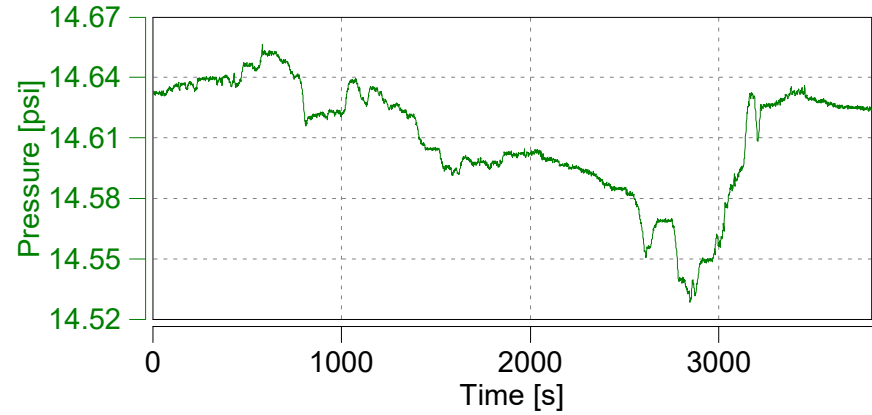
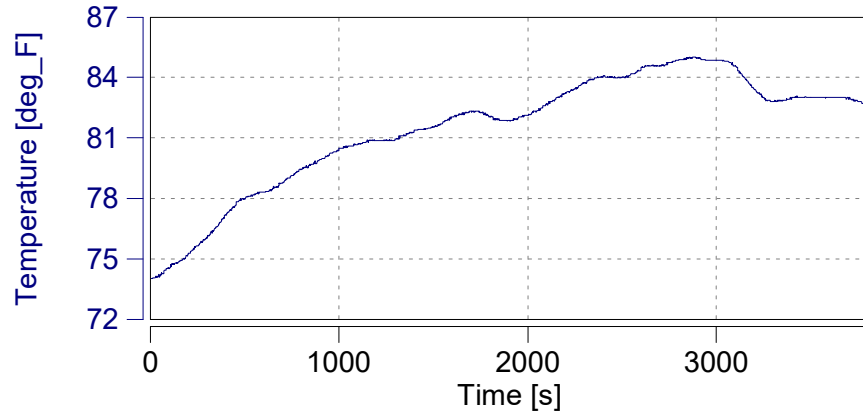
Vehicle: 2017 Audi A5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Ambient Conditions

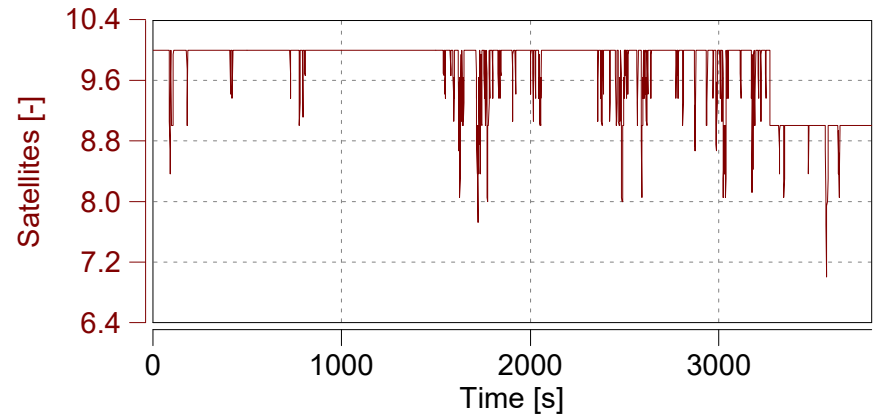
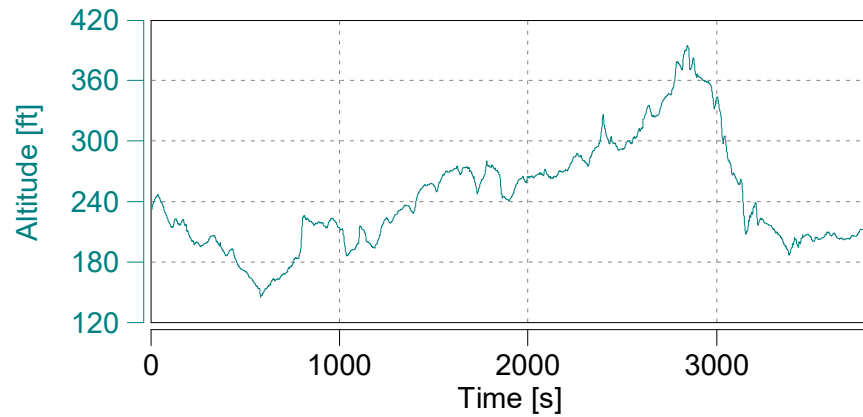
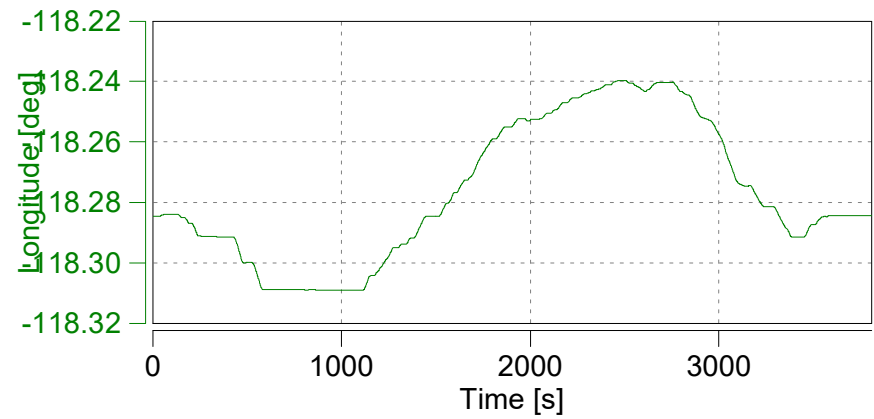
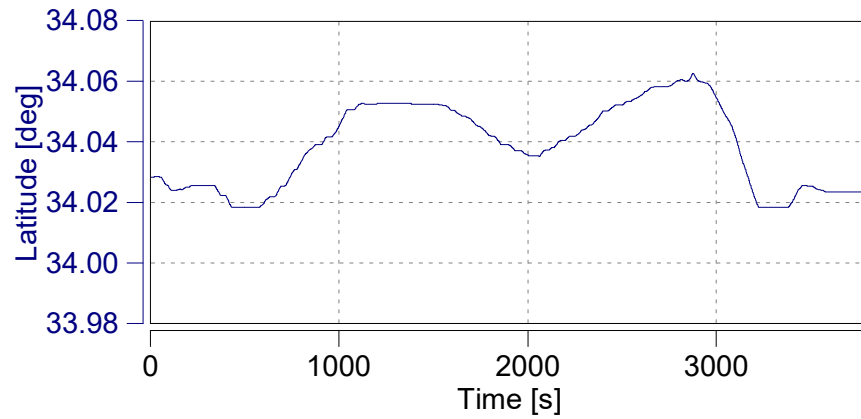
Start Date: 10/13/2017

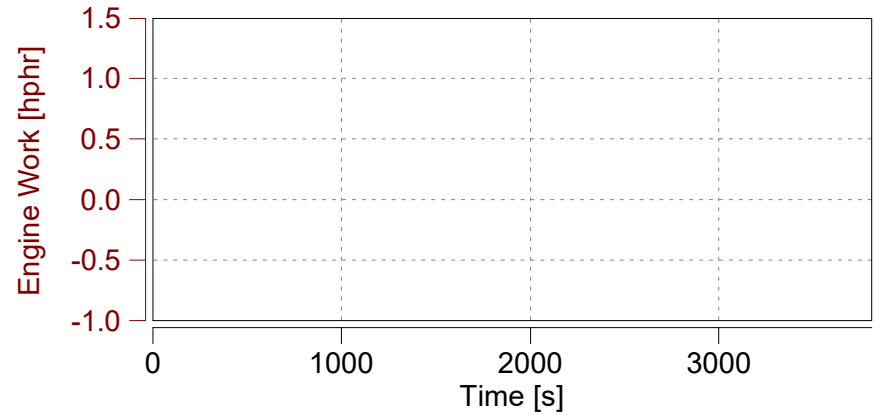
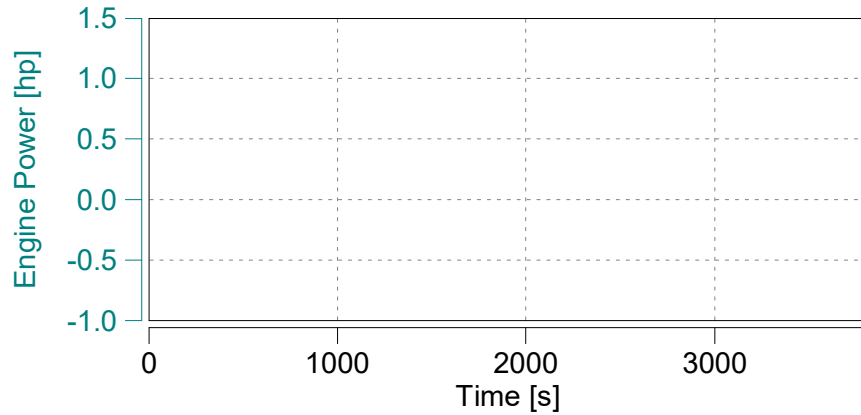
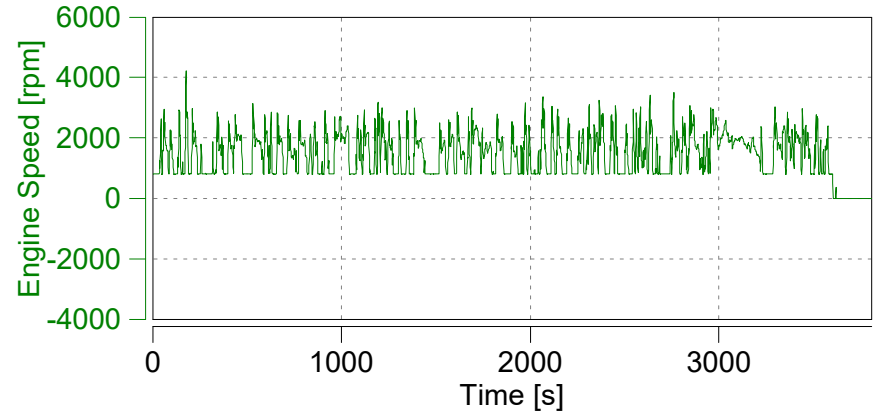
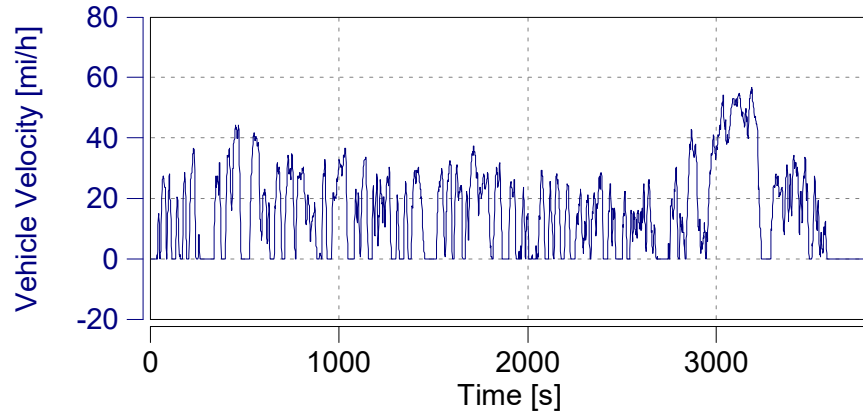
Start Time: 07:33:08.0

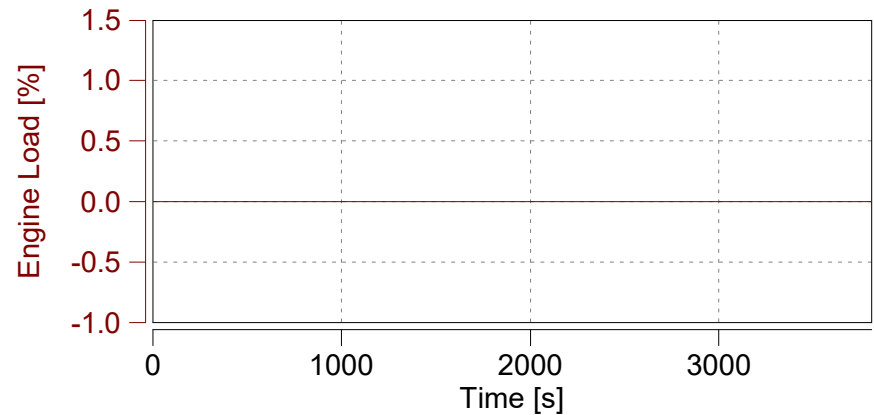
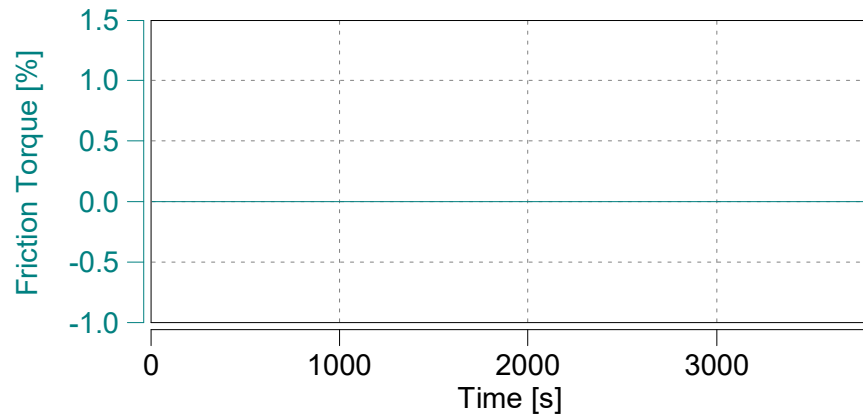
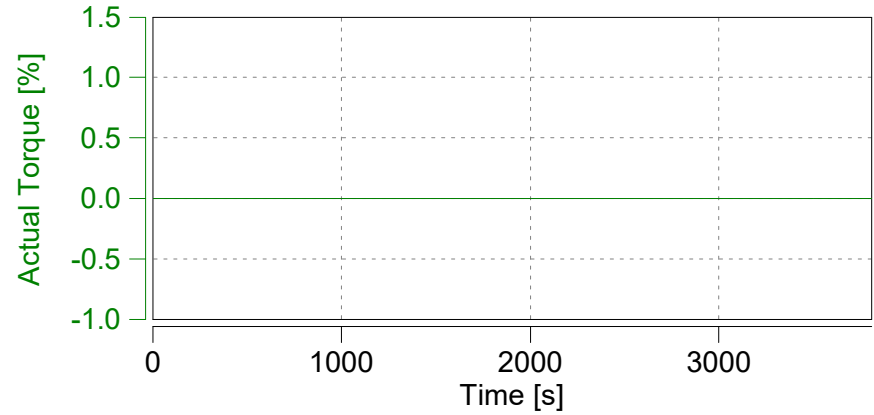
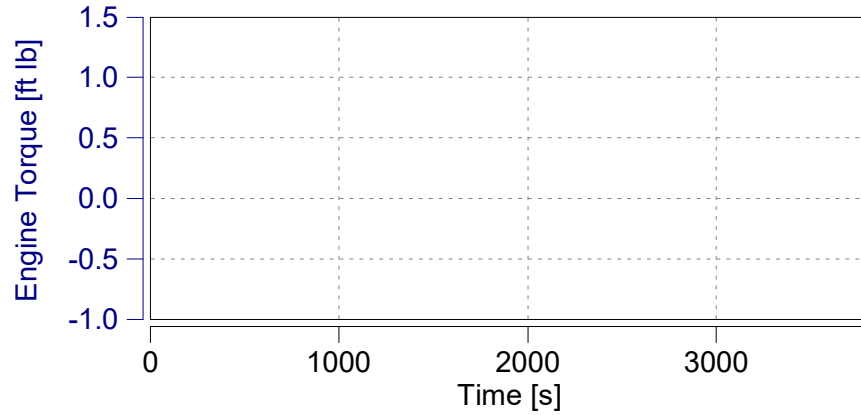


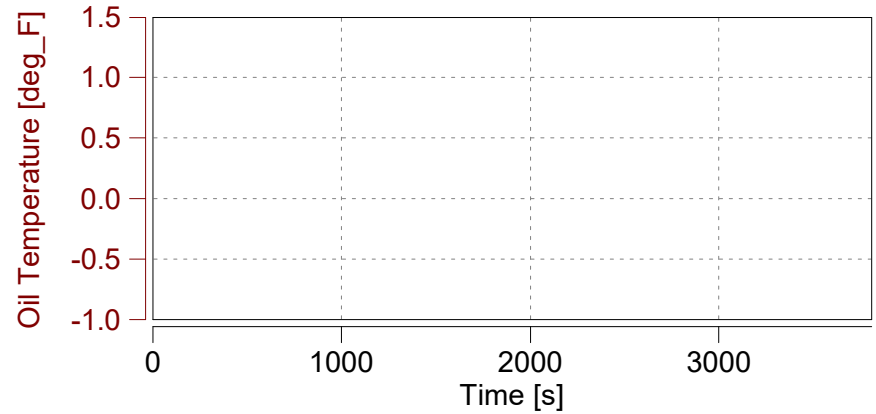
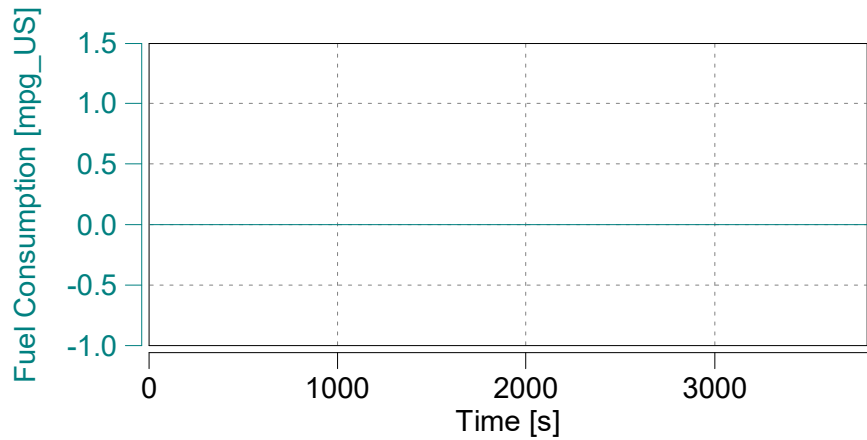
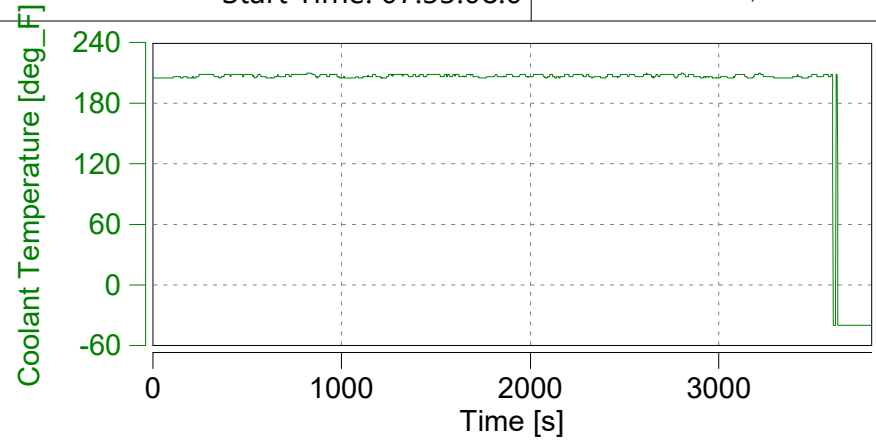
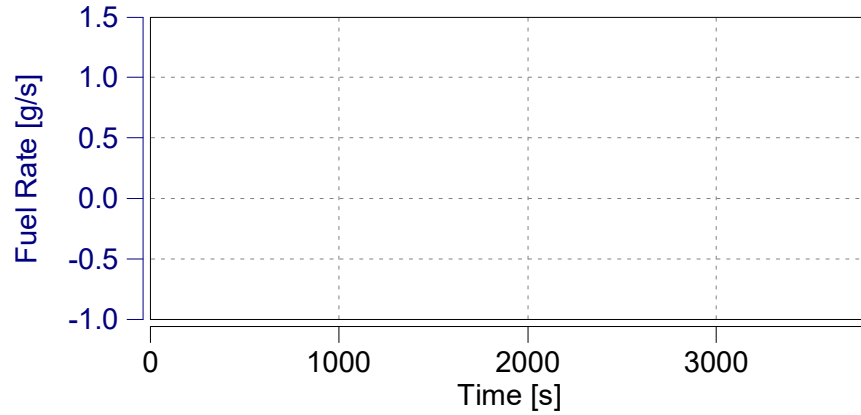
Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi A5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90







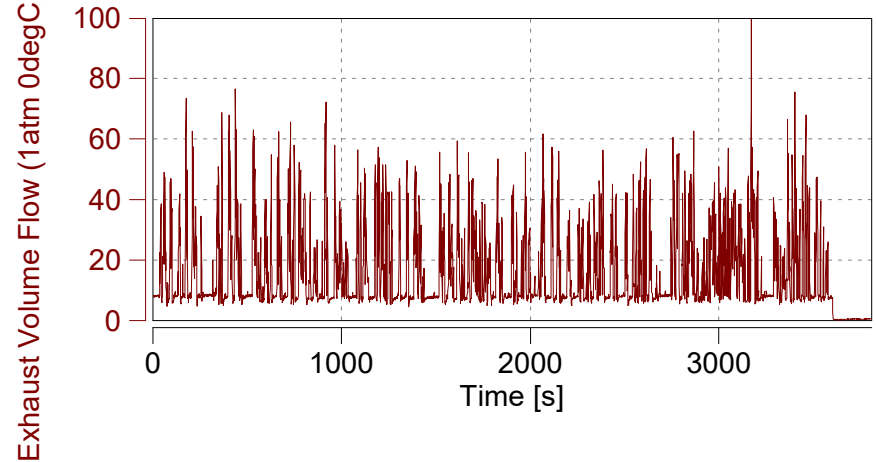
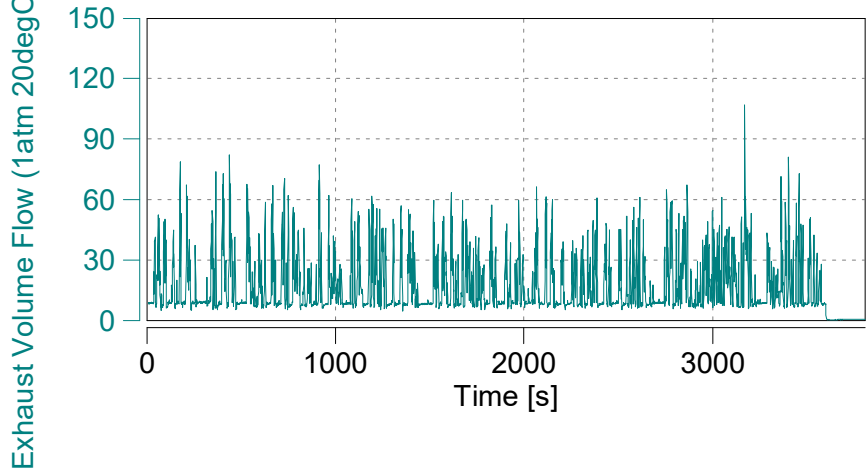
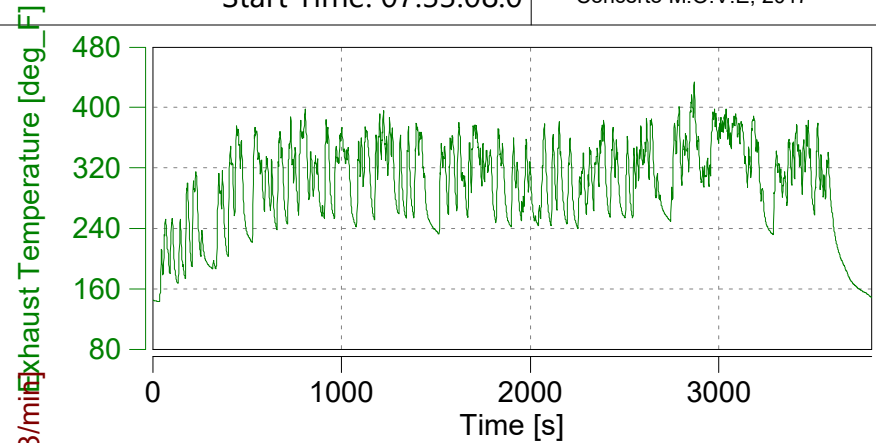
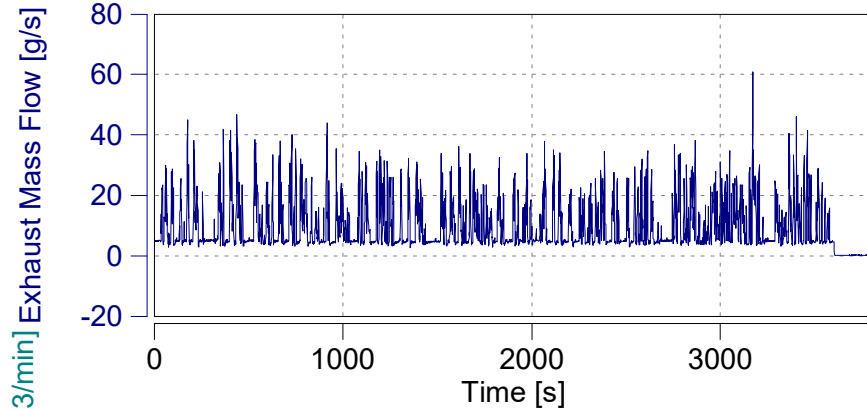


Case: City

Page: Exhaust Flow (1)

Start Date: 10/13/2017

Start Time: 07:33:08.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

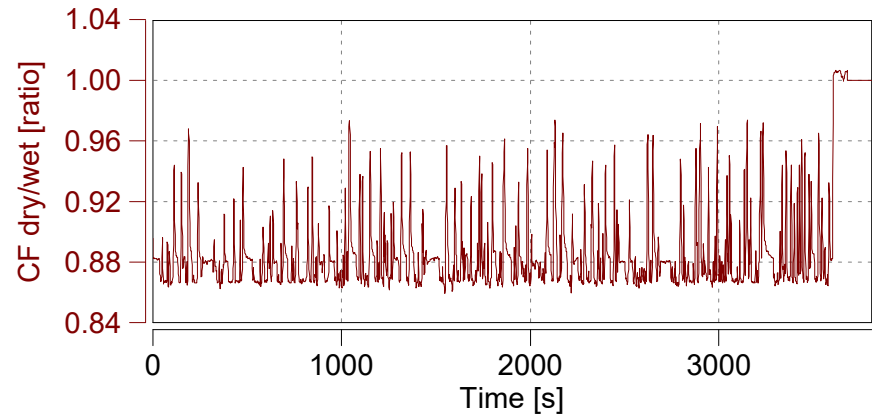
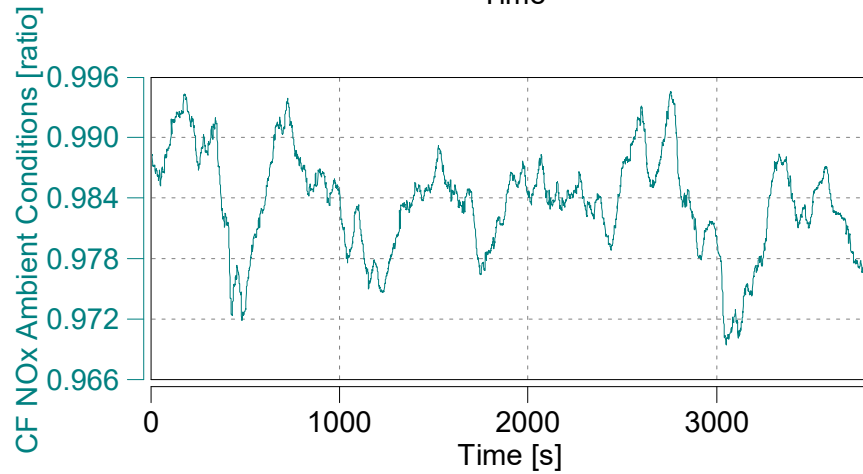
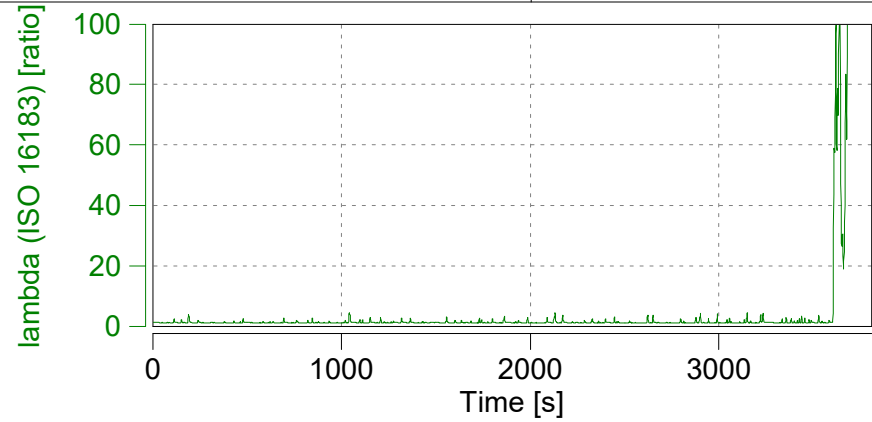
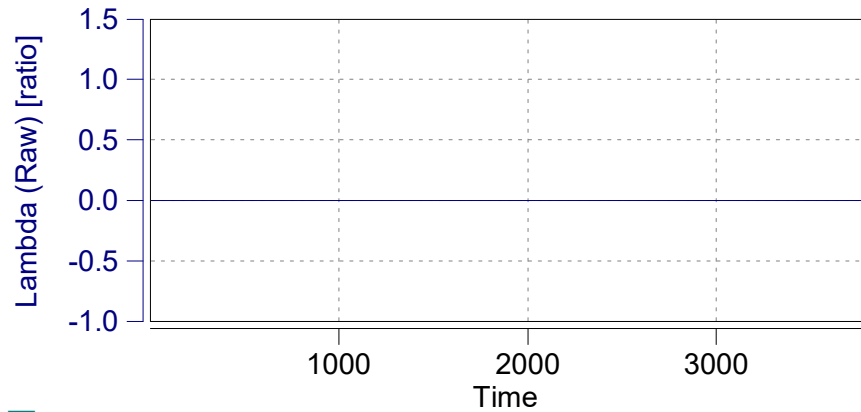
Vehicle: 2017 Audi A5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Exhaust Flow (2)

Start Date: 10/13/2017

Start Time: 07:33:08.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

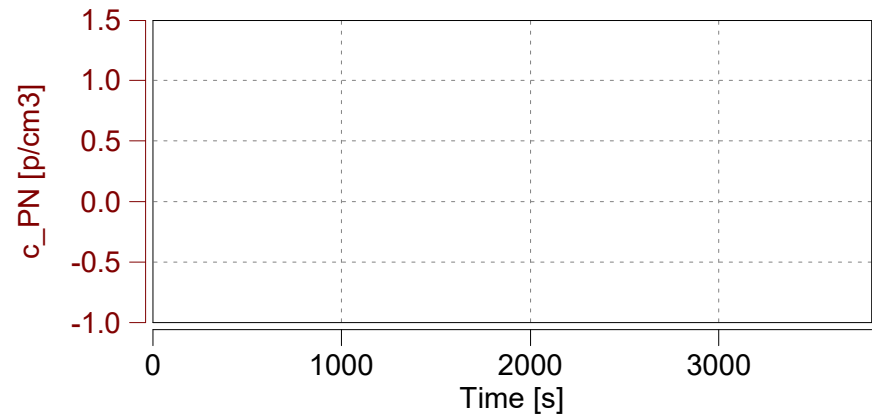
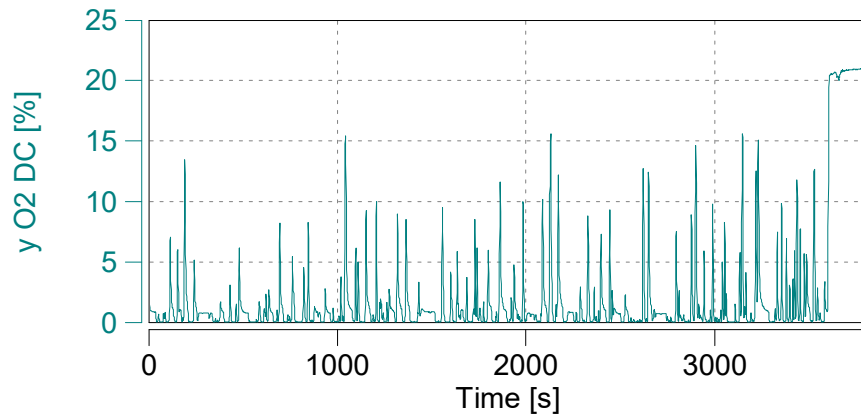
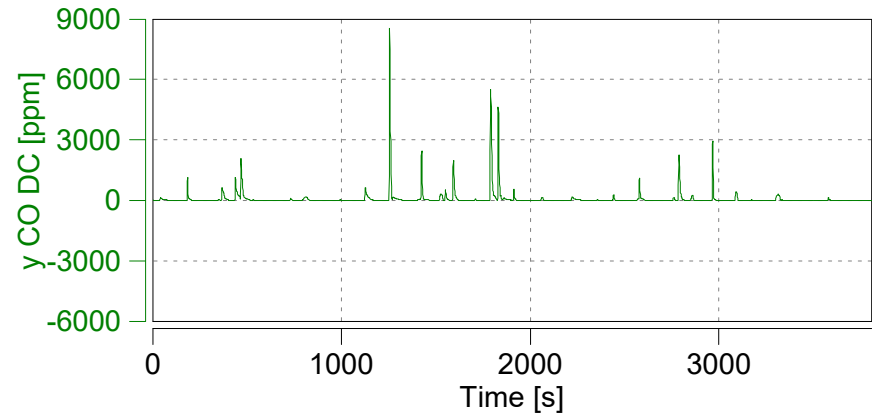
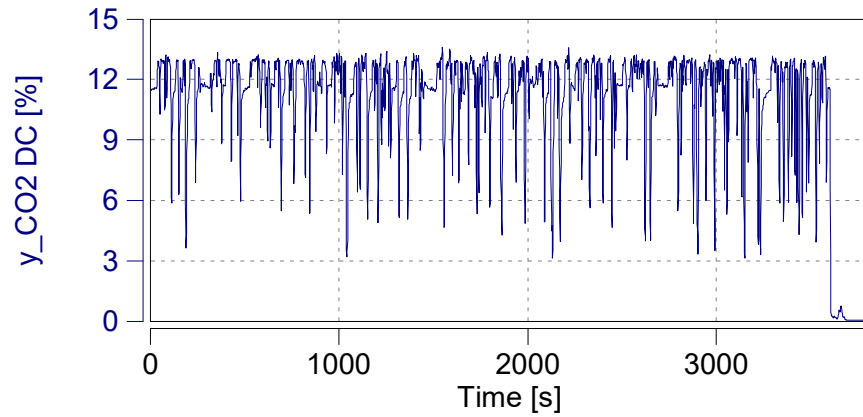
Vehicle: 2017 Audi A5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Corrected Emissions (1)

Start Date: 10/13/2017

Start Time: 07:33:08.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

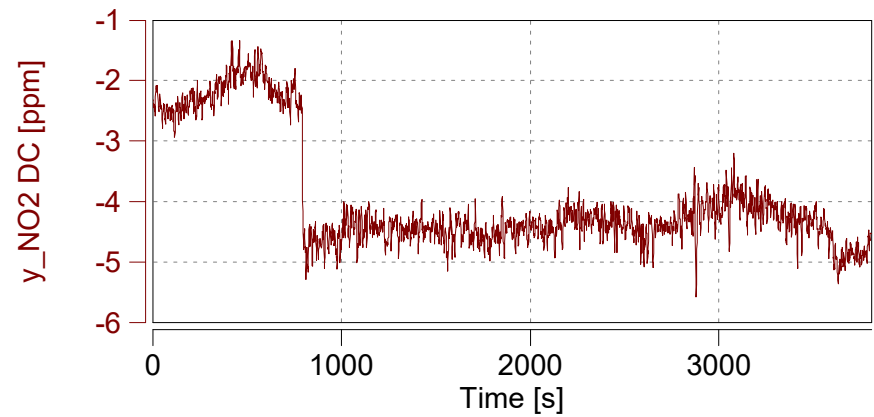
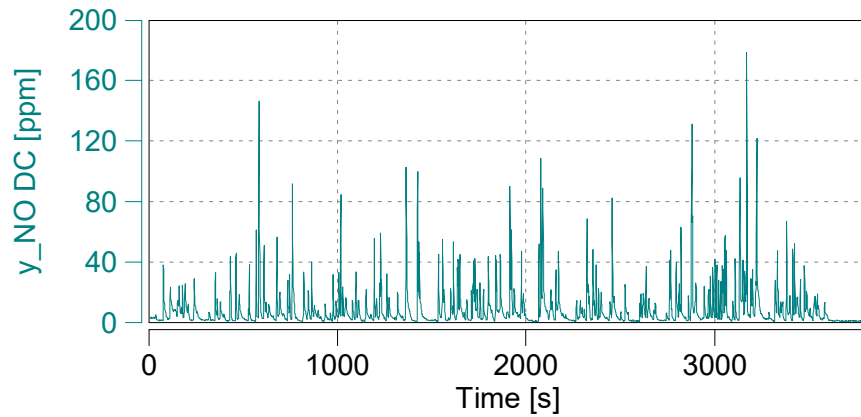
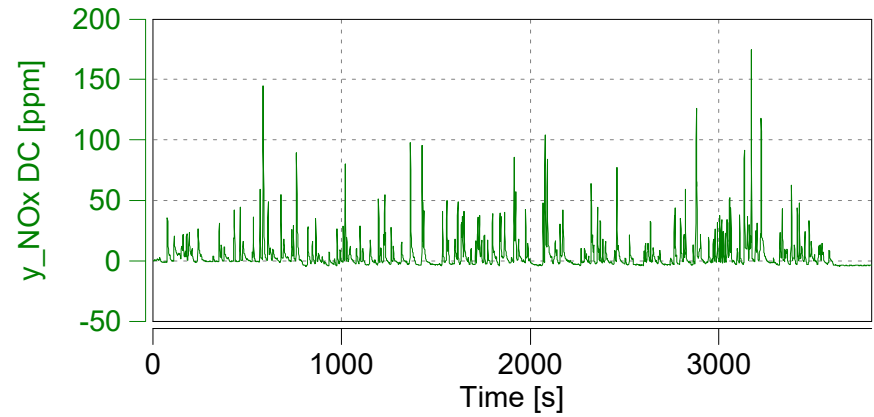
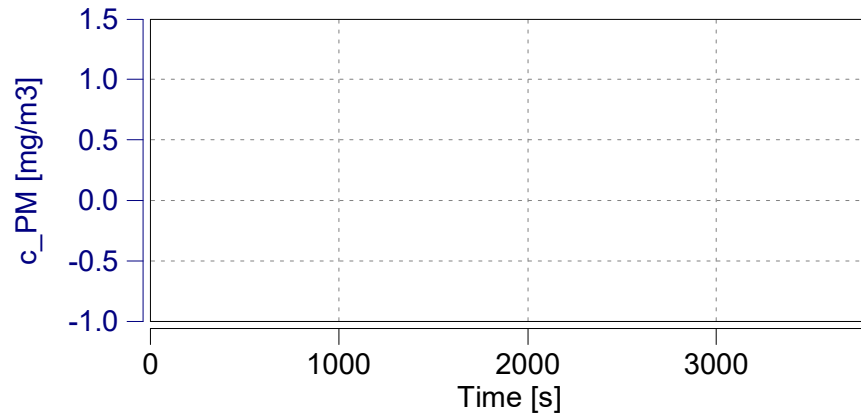
Vehicle: 2017 Audi A5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Corrected Emissions (2)

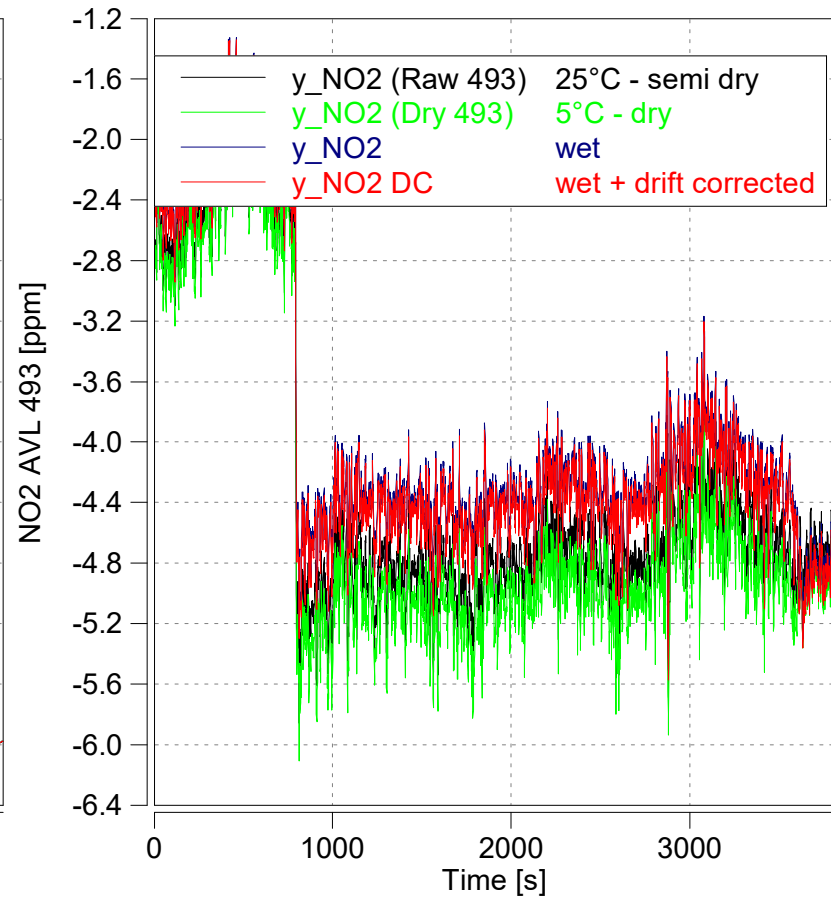
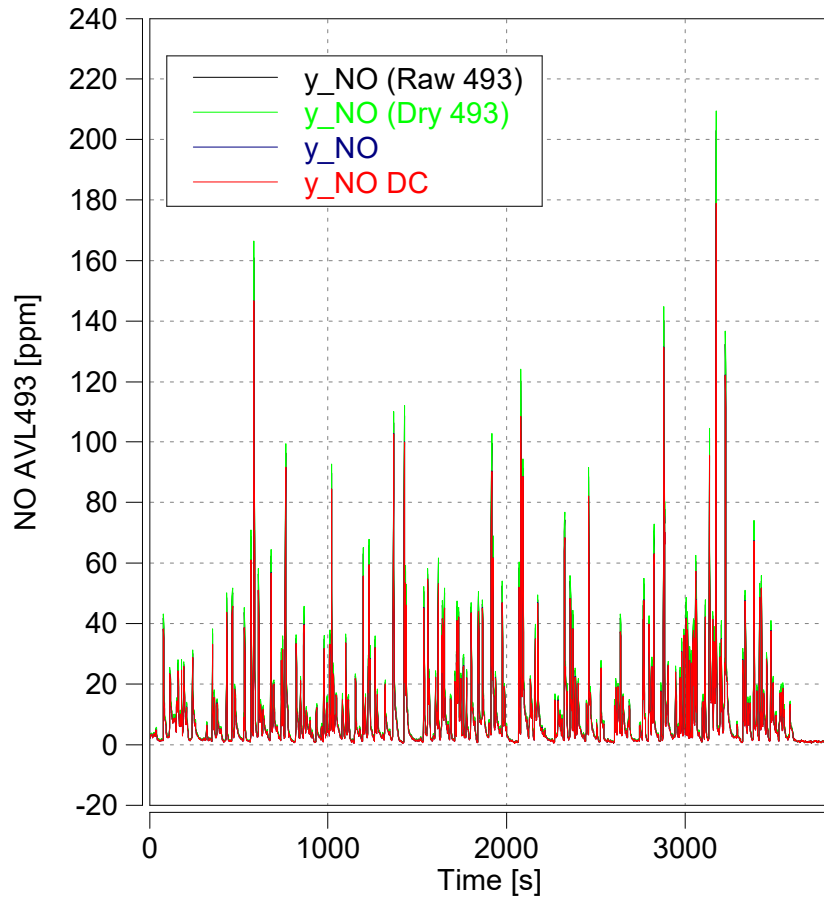
Start Date: 10/13/2017

Start Time: 07:33:08.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi A5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi A5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

NOx - AVL 493

y_NO (Raw 493)
y_NO2 (Raw 493)
25°C

EU R49 8.6.1
US §1065.672
drift correction

d_Kf_NO 25°C to dry
d_Kf_NO2 25°C to dry

- (1) EU R49 8.1.1 (15)
- (2) US §1065.655
- (3) none

y_NO DC (Dry 493)
y_NO2 DC (Dry 493)

y_NO (Dry 493)
y_NO2 (Dry 493)

CF dry/wet
(factor equal for all constituents)

CF NOx Ambient Conditions

y_NO DC
y_NO2 DC
wet

y_NO
y_NO2
wet

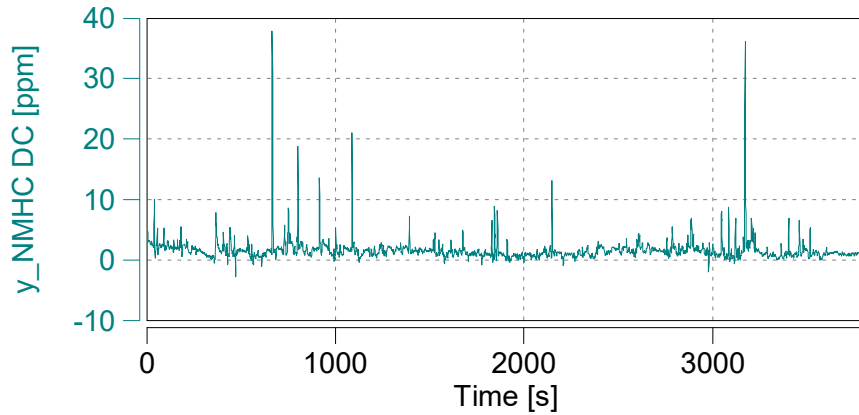
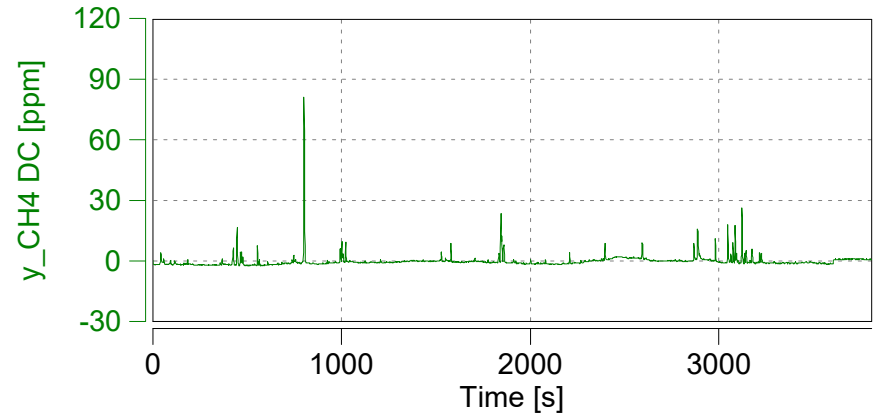
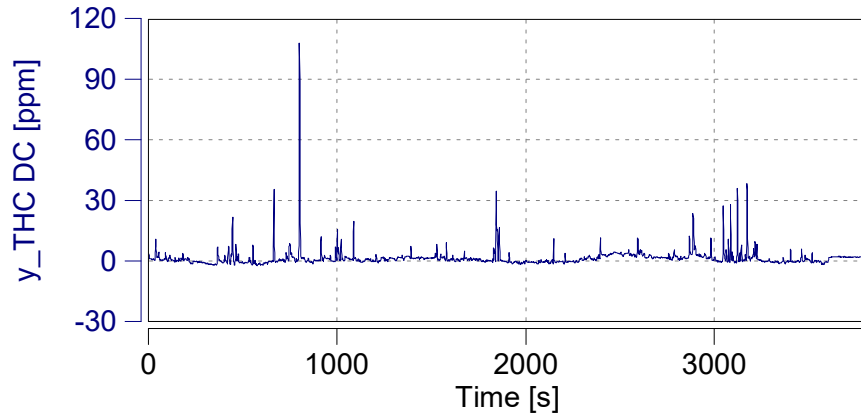
- (1) HD Diesel Engine SwRI FinalReport 08-2597, 1999
- (2) humidity only
- (3) equivalent uncorrected NOx limit method for EU in service
- (4) US §40.86.1342.94 Diesel
- (5) US §40.86.1342.94 SI
- (6) US §40.86.1370-2007 (default US)
- (7) US 40.1065.670
- (8) none (default EU)

Case: City

Page: Corrected Emissions (5)

Start Date: 10/13/2017

Start Time: 07:33:08.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

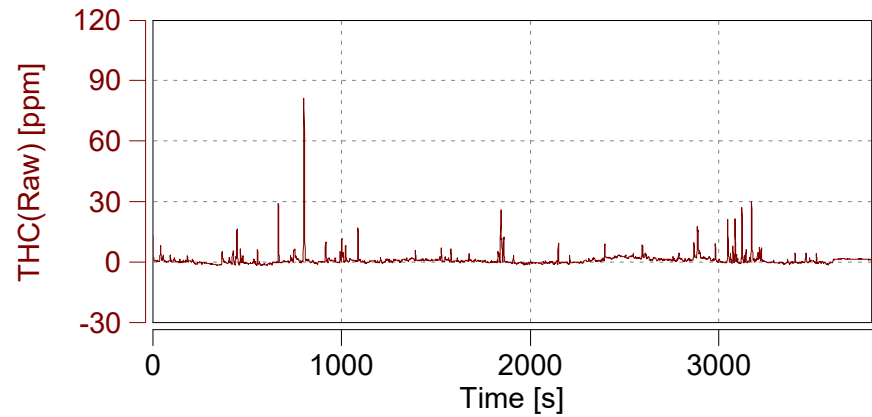
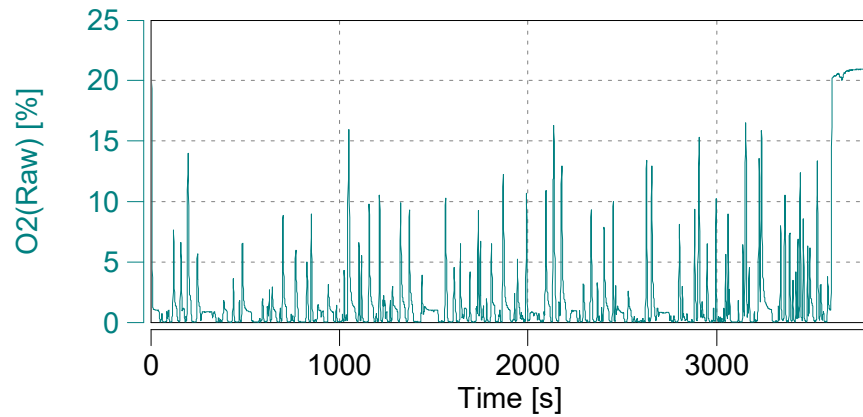
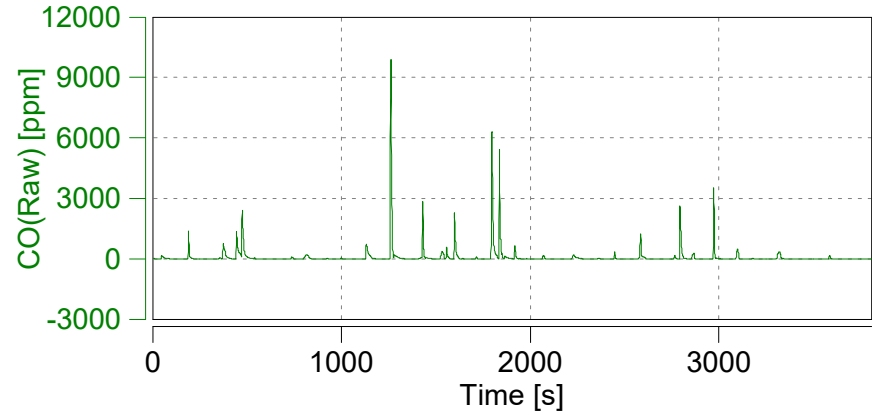
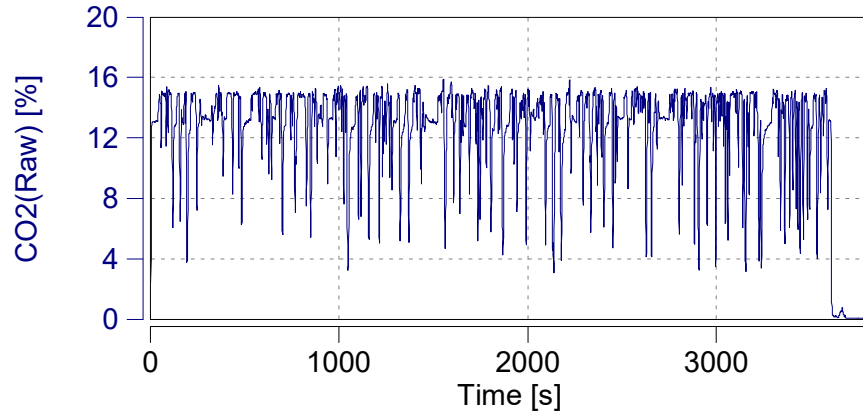
Vehicle: 2017 Audi A5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Emissions Raw Data (1)

Start Date: 10/13/2017

Start Time: 07:33:08.0



Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

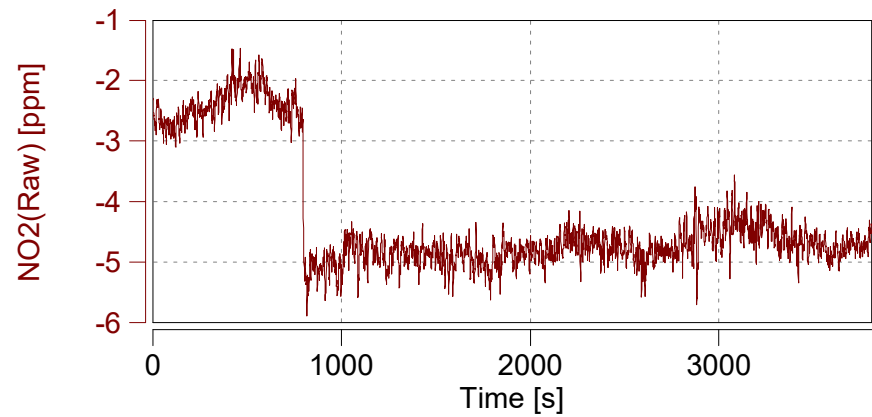
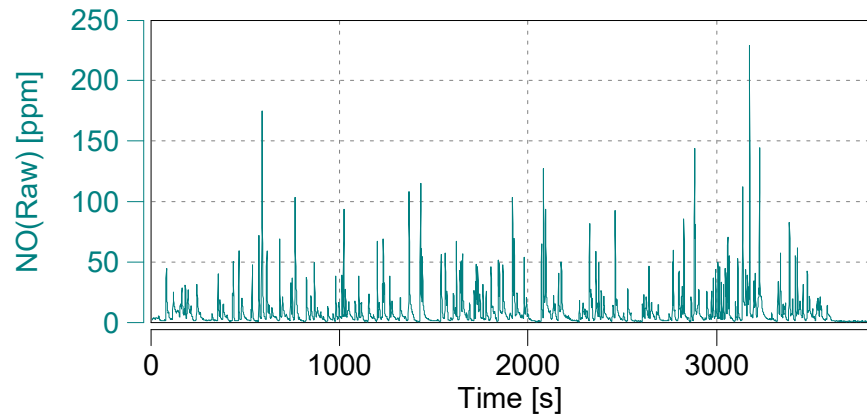
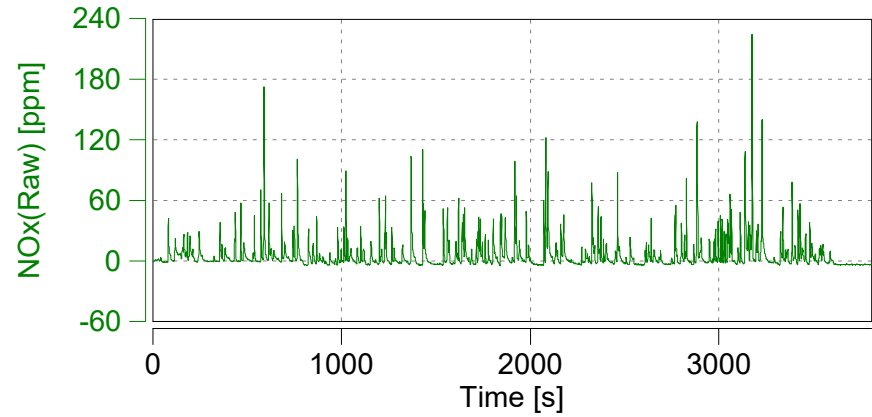
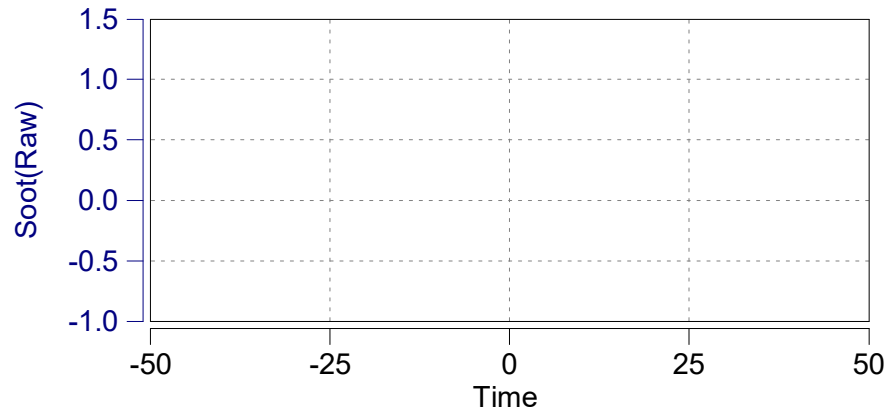
Vehicle: 2017 Audi A5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Case: City

Page: Emissions Raw Data (2)

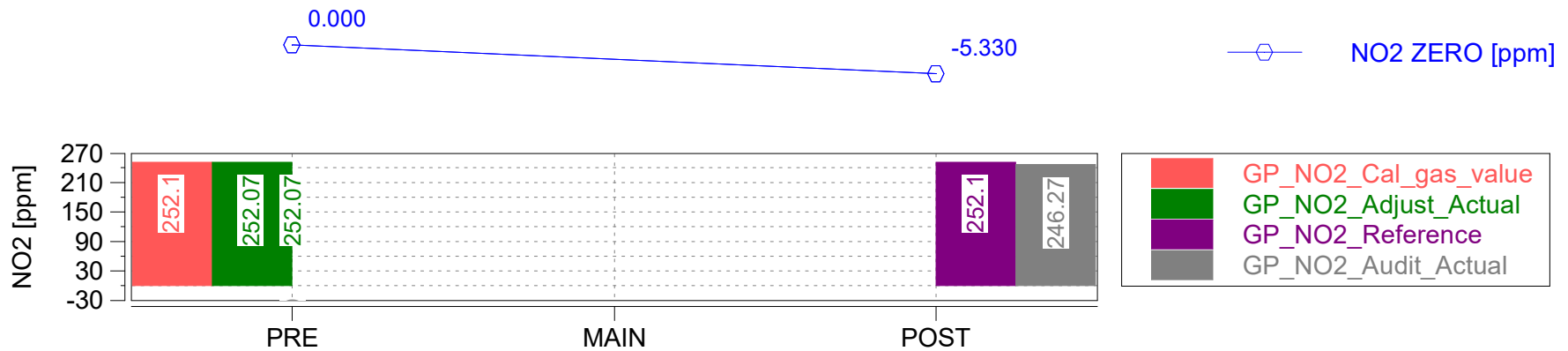
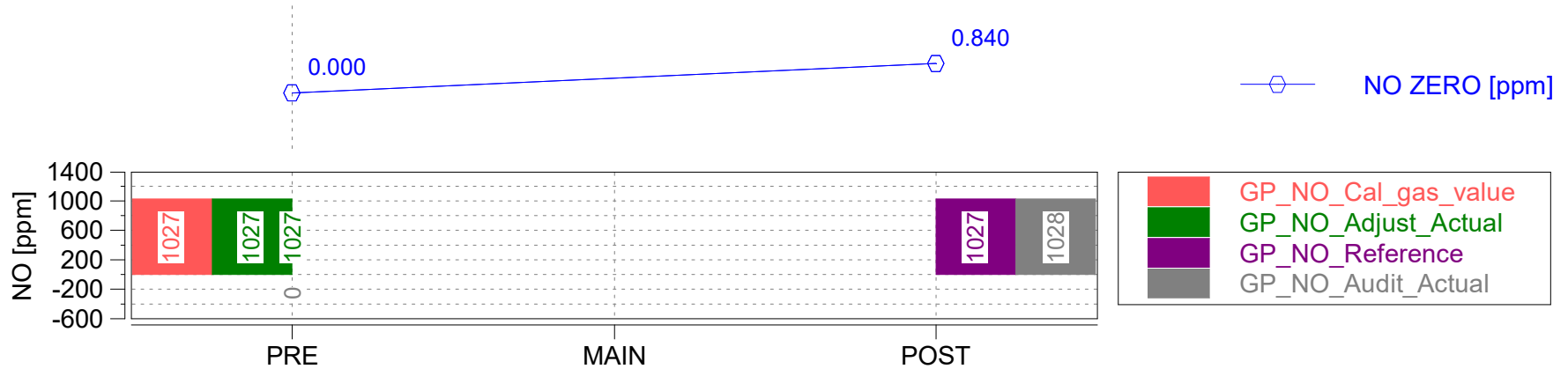
Start Date: 10/13/2017

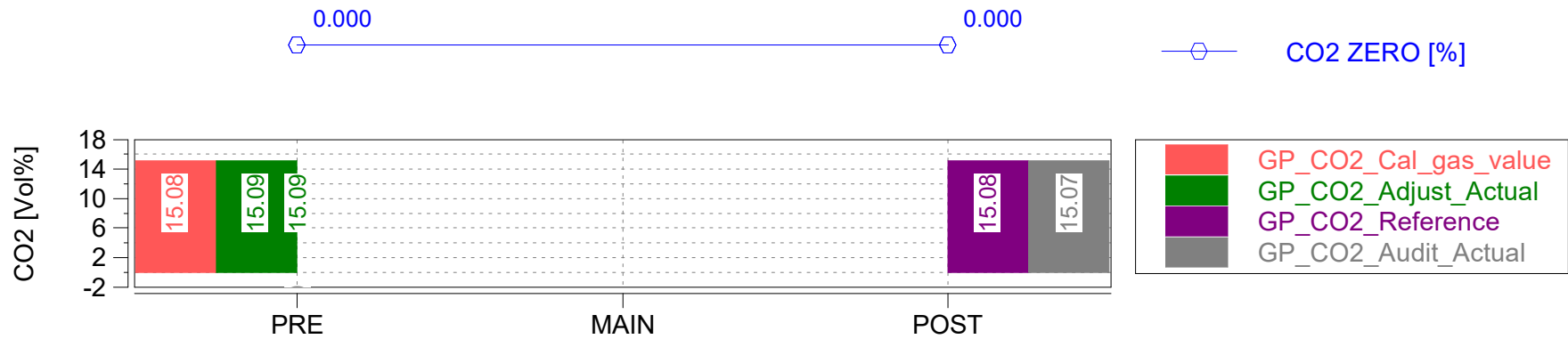
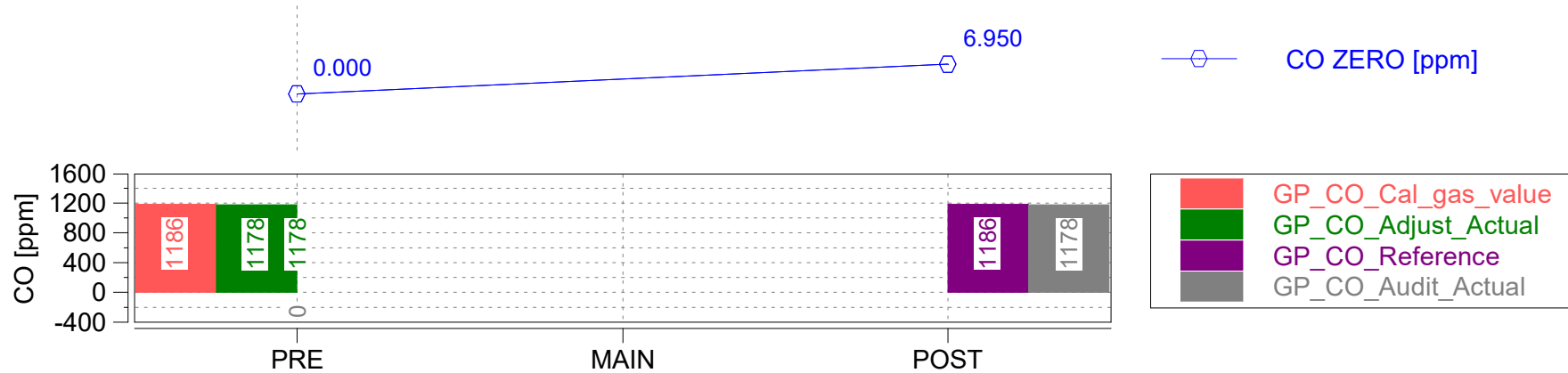
Start Time: 07:33:08.0

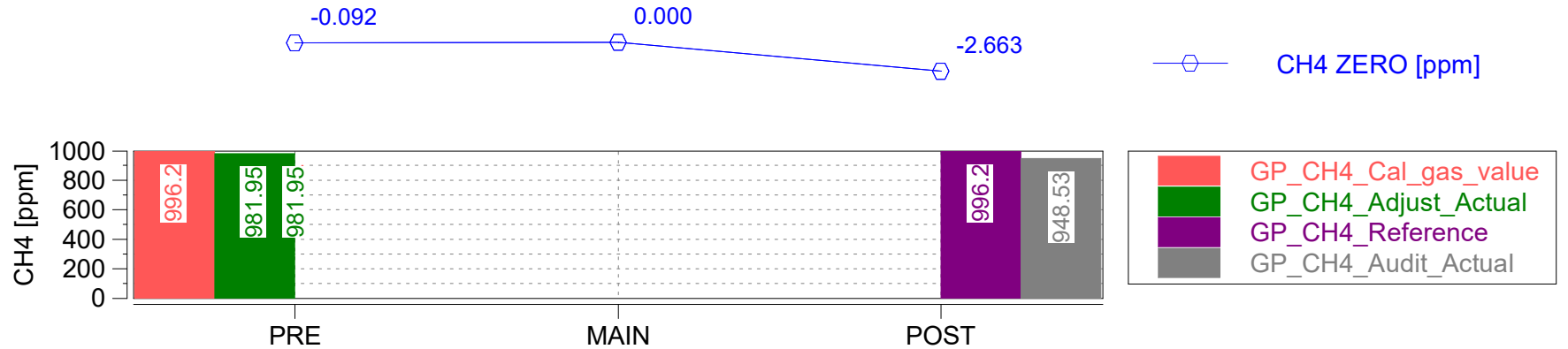
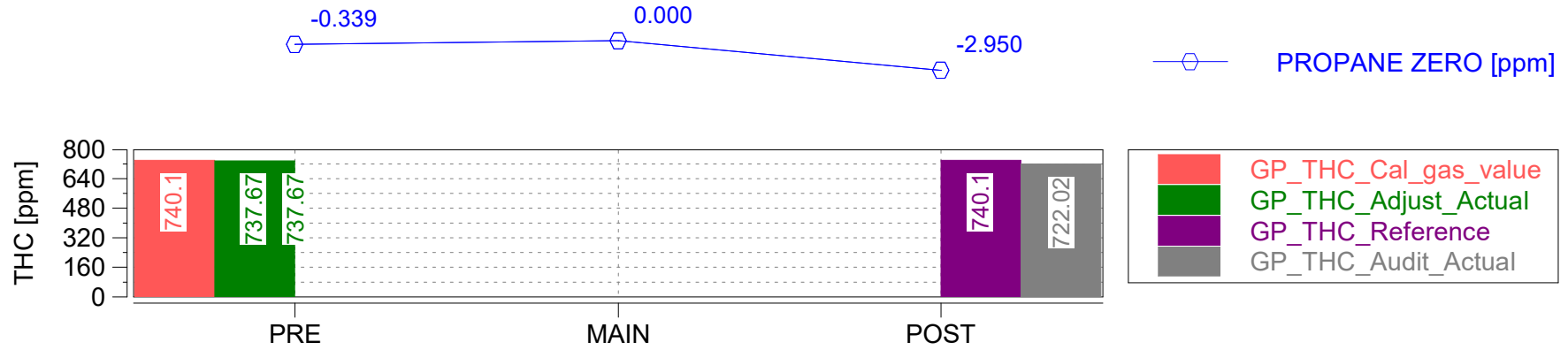


Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi A5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90







#	Text	Value	Unit
-	----	----	----
1.0	Test Start: Date	-	-
2.0	Test Start: Time	-	-
3.0	Ambient Temperature	IFILE1:TM'Temperature	deg C
4.0	Ambient Temperature TS	0.00000	s
5.0	Ambient Pressure	IFILE1:TM'Pressure	kPa
6.0	Ambient Pressure TS	0.00000	s
7.0	Humidity Type	1.00000	-
8.0	Amb. Rel. Humidity	IFILE1:TM'Humidity	%
9.0	Amb. Rel. Humidity	0.00000	s
10.0	GPS Latitude		deg
11.0	GPS Latitude TS	0.00000	s
12.0	GPS Longitude		deg
13.0	GPS Longitude TS	0.00000	s
14.0	Altitude		m
15.0	Altitude TS	0.00000	s
16.0	GPS Quality		-
17.0	GPS Quality TS	0.00000	s
18.0	GroundSpeed		km/h
19.0	GroundSpeed TS	0.00000	s
20.0	Altitude from topographical map		m
21.0	Altitude TS of topographical map		s
22.0	TRIP_AMBIENT_GPS_AVL	YES	-
23.0	CALC_GPS_GROUNDSPEED	NO	-
24.0	EXHAUST_FLOW_AVL	NO	-
25.0	EXHAUST_FLOW_AVL_EFM	YES	-
26.0	Exhaust Flow Type	2.00000	-
27.0	Mass Flow	IFILE1:TM'PitotEFM_ExhaustG	various
28.0	Mass Flow TS	1.70000	s
29.0	Exhaust Pressure		kPa
30.0	Exhaust Pressure TS	1.70000	s

#	Text	Value	Unit
-	----	----	----
31.0	Exhaust Delta Pressure		kPa
32.0	Exhaust Pressure Delta TS	1.70000	s
33.0	Exhaust Temperature	IFILE1:TM'PitotEFM_ExhaustG	degC
34.0	Exhaust Temperature TS	1.70000	s
35.0	Lambda	N/A	-
36.0	Lambda TS		s
37.0	CO2_DIL		%
38.0	CO2_DIL TS		s
39.0	CVS Volume Flow		m3/min
40.0	TimeShift_CVS_VOL_FLOW		s
41.0	IN_CVS_PRESSURE		kPa
42.0	TimeShift_CVS_PRESSURE		s
43.0	IN_CVS_TEMP		degC
44.0	TimeShift_CVS_TEMP		s
45.0	Dry to Wet Conversion CO2	YES	-
46.0	Dry to Wet Conversion O2	YES	-
47.0	Dry to Wet Conversion NO	NO	-
48.0	Dry to Wet Conversion NO2	NO	-
49.0	Dry to Wet Conversion THC	NO	-
50.0	Dry to Wet Conversion CH4	NO	-
51.0	Dry to Wet Conversion O2	NO	-
52.0	CO2	IFILE1:TM'GPiS_CO2	%
53.0	CO2 TS	-6.20000	s
54.0	OS	IFILE1:TM'GPiS_O2	%
55.0	O2 TS	-6.70000	s
56.0	CO	IFILE1:TM'GPiS_CO	ppm
57.0	CO TS	-6.20000	s
58.0	NO	IFILE1:TM'GPiS_NO	ppm
59.0	NO TS	-4.40000	s
60.0	NO2	IFILE1:TM'GPiS_NO2	ppm

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi A5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
61.0	NO2 TS	-4.40000	s
62.0	THC	IFILE1:TM'FIDiS_THC_C1	ppm
63.0	THC TS	0.00000	s
64.0	CH4	IFILE1:TM'FIDiS_CH4_C1	ppm
65.0	CH4 TS	0.00000	s
66.0	GAS_PEMS_Ethane_Efficiency	IFILE1:MOVE_AVL4925'GP_Et -	
67.0	GAS_PEMS_Methane_Efficiency	IFILE1:MOVE_AVL4925'GP_M -	
68.0	GAS_PEMS_Methane_Response	IFILE1:MOVE_AVL4925'GP_M -	
69.0	Zero Signal	IFILE1:TM'GPiS_STATE	0/1
70.0	Zero Signal TS	-4.40000	s
71.0	Zero Signal_FIDiS	IFILE1:TM'FIDiS_STATE	0/1
72.0	Zero Signal_FIDiS TS		s
73.0	Species Input Type	4.00000	-
74.0	GASPEMS=AVL493	NO	-
75.0	GASPEMS=AVL493_iX	NO	-
76.0	GASPEMS=AVL492	YES	-
77.0	GASPEMS=AVL4925	YES	-
78.0	PM: Type	4.00000	1=GFB+HC, 2=GFB, 3=PM=S
79.0	Filter ID from IFile	NO	-
80.0	Lab ID from IFile	NO	-
81.0	PM Filter: ID	N/A	ID
82.0	PM Filter: Lab	N/A	Name/ID
83.0	PM Filter: Weight before Test	N/A	mg
84.0	PM Filter: Weight after Test	N/A	mg
85.0	PM (HC Corr): Max. Exhaust Flow	N/A	scfm
86.0	Soot		mg/m3
87.0	Soot TS	-5.00000	s
88.0	Soot Sensor		mg/m3
89.0	Soot Sensor TS		s
90.0	PM Filter: Filter Flow Rate		l/min

#	Text	Value	Unit
-	----	----	----
91.0	PM Filter: Filter Flow Rate TS	-5.00000	s
92.0	PM Filter: Filter Dilution Ratio		-
93.0	PM Filter: Filter Dilution Ratio TS	-5.00000	s
94.0	PM Filter: Filter Trigger		-
95.0	PM Filter: Filter Trigger TS	-5.00000	s
96.0	PMPEMS=AVL494	YES	-
97.0	PMPEMS_AVL494_PROP_DIL	NO	-
98.0	PM dilution ratio min		-
99.0	PM_MaxExhaustFlowRate		-
100.0	PM_ExhaustFlow_Thresh		-
101.0	PM_total_flow_val		-
102.0	PM_total_flow_val_TS		-
103.0	PM_exh_mass_flow		-
104.0	PM_exh_mass_flow_TS		-
105.0	PN		#/cm3
106.0	TimeShift_PN		s
107.0	PN_STATE		-
108.0	PN TS STATE		s
109.0	PNPEMS_AVL496	NO	-
110.0	PN_CorrFactor	1.00000	
111.0	Time Alignment	1.00000	-
112.0	Time Alignment Dataset 1	N/A	0/1
113.0	Time Alignment Dataset 2	N/A	0/1
114.0	Time Alignment Thresh 1	N/A	-
115.0	Time Alignment Thresh 2	N/A	-
116.0			
117.0			
118.0			
119.0			
120.0			

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi A5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
121.0			
122.0	Trigger		0/1
123.0	Trigger TS		s
124.0	FTIR_NAME_1		-
125.0	FTIR_MW_1		-
126.0	FTIR_CHANNEL_1		-
127.0	FTIR_CHANNEL_TS_1		-
128.0	FTIR_CHANNEL_DRY_1	NO	-
129.0	FTIR_NAME_2		-
130.0	FTIR_MW_2		-
131.0	FTIR_CHANNEL_2		-
132.0	FTIR_CHANNEL_TS_2		-
133.0	FTIR_CHANNEL_DRY_2	NO	-
134.0	FTIR_NAME_3		-
135.0	FTIR_MW_3		-
136.0	FTIR_CHANNEL_3		-
137.0	FTIR_CHANNEL_TS_3		-
138.0	FTIR_CHANNEL_DRY_3	NO	-
139.0	FTIR_NAME_4		-
140.0	FTIR_MW_4		-
141.0	FTIR_CHANNEL_4		-
142.0	FTIR_CHANNEL_TS_4		-
143.0	FTIR_CHANNEL_DRY_4	NO	-
144.0	FTIR_NAME_5		-
145.0	FTIR_MW_5		-
146.0	FTIR_CHANNEL_5		-
147.0	FTIR_CHANNEL_TS_5		-
148.0	FTIR_CHANNEL_DRY_5	NO	-
149.0	FTIR_NAME_6		-
150.0	FTIR_MW_6		-

#	Text	Value	Unit
-	----	----	----
151.0	FTIR_CHANNEL_6		-
152.0	FTIR_CHANNEL_TS_6		-
153.0	FTIR_CHANNEL_DRY_6	NO	-
154.0	FTIR_NAME_7		-
155.0	FTIR_MW_7		-
156.0	FTIR_CHANNEL_7		-
157.0	FTIR_CHANNEL_TS_7		-
158.0	FTIR_CHANNEL_DRY_7	NO	-
159.0	FTIR_NAME_8		-
160.0	FTIR_MW_8		-
161.0	FTIR_CHANNEL_8		-
162.0	FTIR_CHANNEL_TS_8		-
163.0	FTIR_CHANNEL_DRY_8	NO	-
164.0	FTIR_NAME_9		-
165.0	FTIR_MW_9		-
166.0	FTIR_CHANNEL_9		-
167.0	FTIR_CHANNEL_TS_9		-
168.0	FTIR_CHANNEL_DRY_9	NO	-
169.0	FTIR_NAME_10		-
170.0	FTIR_MW_10		-
171.0	FTIR_CHANNEL_10		-
172.0	FTIR_CHANNEL_TS_10		-
173.0	FTIR_CHANNEL_DRY_10	NO	-
174.0	FTIR_NAME_11		-
175.0	FTIR_MW_11		-
176.0	FTIR_CHANNEL_11		-
177.0	FTIR_CHANNEL_TS_11		-
178.0	FTIR_CHANNEL_DRY_11	NO	-
179.0	FTIR_NAME_12		-
180.0	FTIR_MW_12		-

Concerto Version: 480 Build 215, Serial Number: 8468
M.O.V.E Post-Processing: Rel_10_B192

Vehicle: 2017 Audi A5 /
Engine: Gasoline / 2.0L
NOx Ambient Condition Corr.: 5 - CFR40 §86.1342-94 SI
Dry / Wet Corr.: 2 - CFR40 §86.1342-90

#	Text	Value	Unit
-	----	----	----
181.0	FTIR_CHANNEL_12		-
182.0	FTIR_CHANNEL_TS_12		-
183.0	FTIR_CHANNEL_DRY_12	NO	-
184.0	FTIR_NAME_13		-
185.0	FTIR_MW_13		-
186.0	FTIR_CHANNEL_13		-
187.0	FTIR_CHANNEL_TS_13		-
188.0	FTIR_CHANNEL_DRY_13	NO	-
189.0	FTIR_NAME_14		-
190.0	FTIR_MW_14		-
191.0	FTIR_CHANNEL_14		-
192.0	FTIR_CHANNEL_TS_14		-
193.0	FTIR_CHANNEL_DRY_14	NO	-
194.0	FTIR_NAME_15		-
195.0	FTIR_MW_15		-
196.0	FTIR_CHANNEL_15		-
197.0	FTIR_CHANNEL_TS_15		-
198.0	FTIR_CHANNEL_DRY_15	NO	-
199.0	FTIR_NAME_16		-
200.0	FTIR_MW_16		-
201.0	Vehicle Type	2017 Audi A5	-
202.0	Vehicle Info		-
203.0	Engine Type	Gasoline	-
204.0	Engine Info	2.0L	-
205.0	Engine Torque		Nm
206.0	Curb Idle Load		%
207.0	Idle Speed		rpm
208.0	HYBRID_OVC_REF_CO2_gkm		g/km
209.0	Engine Concept	1.00000	-
210.0	Alpha	1.93000	-

#	Text	Value	Unit
-	----	----	----
211.0	Beta	1.00000	
212.0	Gamma	0.00000	
213.0	Delta	0.00000	
214.0	Epsilon	0.03200	
215.0	X_C	83.00000	
216.0	X_H	13.30000	
217.0	X_N	0.00000	
218.0	X_O	3.50000	
219.0	X_S	0.00000	
220.0	Fuel_Density	747.50000	
221.0	rho_exhaust	1.29310	
222.0	U_CO2	1.51800	
223.0	U_CO	0.96600	
224.0	U_NO	1.58700	
225.0	U_NO2	1.58700	
226.0	U_NOx	1.58700	
227.0	U_HC	0.49900	
228.0	U_NMHC	0.47100	
229.0	U_CH4	0.55300	
230.0	U_O2	1.10400	
231.0	Fuel Type	2.00000	-
232.0	exhaust mass flow type (YES/NO)	YES	-
233.0	Distance Calculation Type	1.00000	-
234.0	Velocity Statistics Calculation Type	2.00000	-
235.0	RDE vehicle class	1.00000	-
236.0	TM_CITY0		s
237.0	TM_CITY1		s
238.0	TM_RURAL0		s
239.0	TM_RURAL1		s
240.0	TM_RURAL2_0		s

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#	Text	Value	Unit
-	----	----	----
241.0	TM_RURAL2_1		s
242.0	Second Rural Part for Time Marks (NO		-
243.0	TM_MW0		s
244.0	TM_MW1		s
245.0	VELOCITY_LIMIT_STOP	2.00000	km/h
246.0	VELOCITY_LIMIT_URBAN	50.00000	km/h
247.0	VELOCITY_LIMIT_RURAL	75.00000	km/h
248.0	Intake Manifold Pressure Type	1.00000	-
249.0	Velocity	IFILE1:TM'OBD_Vehicle_Spee	km/h
250.0	Velocity TS	1.20000	s
251.0	Velocity FACTOR	1.00000	-
252.0	Coolant Temperature	IFILE1:TM'OBD_Engine_Coola	degC
253.0	Coolant Temperature TS	1.20000	s
254.0	Oil Temperature		degC
255.0	Oil Temperature TS	1.20000	s
256.0	Intake Manifold Temperature		degC
257.0	Intake Manifold Temp TS	1.20000	s
258.0	Intake Manifold Pressure	IFILE1:TM'OBD_Intake_manifo	kPa
259.0	Intake Manifold Pressure TS	1.20000	s
260.0	Throttle Position		%
261.0	Throttle TS	1.20000	s
262.0	TYP_IDLE_MASS_FLOW		kg/h
263.0	Torque Type	1.00000	-
264.0	Speed	IFILE1:TM'OBD_Engine_RPM	rpm
265.0	Speed TS	1.20000	s
266.0	Torque		Nm
267.0	Torque TS	1.20000	s
268.0	Friction Torque	N/A	Nm
269.0	Friction Torque TS	N/A	s
270.0	Reference Torque	N/A	Nm

#	Text	Value	Unit
-	----	----	----
271.0	Reference Torque TS	N/A	s
272.0	k_VELINE		-
273.0	D_VELINE		-
274.0	Fuel Flow Type	2.00000	-
275.0	Air Flow Type	1.00000	-
276.0	Fuel Rate		various
277.0	Air Rate		various
278.0	Fuel Rate TS	1.20000	s
279.0	No_Cylinders		-
280.0	Air Rate TS	1.20000	s
281.0	FTIR_CHANNEL_32		-
282.0	FTIR_CHANNEL_TS_32		-
283.0	FTIR_CHANNEL_DRY_32	NO	-
284.0	FTIR_NAME_33		-
285.0	FTIR_MW_33		-
286.0	FTIR_CHANNEL_33		-
287.0	FTIR_CHANNEL_TS_33		-
288.0	FTIR_CHANNEL_DRY_33	NO	-
289.0	FTIR_NAME_34		-
290.0	FTIR_MW_34		-
291.0	FTIR_CHANNEL_34		-
292.0	FTIR_CHANNEL_TS_34		-
293.0	FTIR_CHANNEL_DRY_34	NO	-
294.0	FTIR_NAME_35		-
295.0	FTIR_MW_35		-
296.0	FTIR_CHANNEL_35		-
297.0	FTIR_CHANNEL_TS_35		-
298.0	FTIR_CHANNEL_DRY_35	NO	-
299.0	FTIR_NAME_36		-
300.0	FTIR_MW_36		-

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#	Text	Value	Unit
-	----	----	----
301.0	FTIR_CHANNEL_36		-
302.0	FTIR_CHANNEL_TS_36		-
303.0	FTIR_CHANNEL_DRY_36	NO	-
304.0	FTIR_NAME_37		-
305.0	FTIR_MW_37		-
306.0	FTIR_CHANNEL_37		-
307.0	FTIR_CHANNEL_TS_37		-
308.0	FTIR_CHANNEL_DRY_37	NO	-
309.0	FTIR_NAME_38		-
310.0	FTIR_MW_38		-
311.0	FTIR_CHANNEL_38		-
312.0	FTIR_CHANNEL_TS_38		-
313.0	FTIR_CHANNEL_DRY_38	NO	-
314.0	FTIR_NAME_39		-
315.0	FTIR_MW_39		-
316.0	FTIR_CHANNEL_39		-
317.0	FTIR_CHANNEL_TS_39		-
318.0	FTIR_CHANNEL_DRY_39	NO	-
319.0	FTIR_NAME_40		-
320.0	FTIR_MW_40		-
321.0	FTIR_CHANNEL_40		-
322.0	FTIR_CHANNEL_TS_40		-
323.0	FTIR_CHANNEL_DRY_40	NO	-
324.0	Legislation Type (1=HDIUT 2=EU H	4.00000	-
325.0	WholeTest_NOx_corr	5.00000	-
326.0	WholeTest_Hum_corr	2.00000	-
327.0	CD_Distance	0.00000	km
328.0	CD_NOx	0.00000	mg/km
329.0	CD_CO	0.00000	mg/km
330.0	CD_CO2	0.00000	g/km

#	Text	Value	Unit
-	----	----	----
331.0	CD_NMHC	0.00000	mg/km
332.0	CD_CH4	0.00000	mg/km
333.0	CD_THC	0.00000	mg/km
334.0	CD_PN		#/km
335.0	WLTC_LOW_SPEED_gkm		g/km
336.0	WLTC_LOW_SPEED_FAC	1.20000	-
337.0	WLTC_MEDIUM_SPEED_gkm		g/km
338.0	WLTC_HIGH_SPEED_gkm		g/km
339.0	WLTC_HIGH_SPEED_FAC	1.10000	-
340.0	WLTC_EXTRA_HIGH_SPEED_gkm		g/km
341.0	WLTC_EXTRA_HIGH_SPEED_FA	1.05000	-
342.0	TOL_NORMAL_DRIVING	25.00000	%
343.0	TOL_SEVERE_DRIVING	50.00000	%
344.0	Increase Tolerance Nomral Driving	NO	-
345.0	Bin1_min		km/h
346.0	Bin2_min		km/h
347.0	Bin3_min		km/h
348.0	Bin1_max		km/h
349.0	Bin2_max		km/h
350.0	Bin3_max		km/h
351.0	Clear_R0	125.40000	N
352.0	Clear_R1	0.29300	Nh/km
353.0	Clear_R2	0.02795	N*(h/km) ²
354.0	Clear_SMK	1470.00000	kg
355.0	Clear_Rated_Power	140.00000	kW
356.0	Clear_Ref_Velocity	70.00000	km/h
357.0	Clear_Ref_Acc	0.45000	m/s ²
358.0	Clear_Smooth	3.00000	s
359.0	EXTC_From_High_Temp	30.00000	degC
360.0	EXTC_To_High_Temp	35.00000	degC

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#	Text	Value	Unit
-	----	----	----
361.0	EXTC_From_Low_Temp	-7.00000	degC
362.0	EXTC_To_Low_Temp	0.00000	degC
363.0	Euro 6d or Euro 6d temp	NO	-
364.0	EXTC_From_Altitude	700.00000	m
365.0	EXTC_To_Altitude	1300.00000	m
366.0	EXTC_CORR_FAC	1.60000	
367.0	weight cold start (YES/NO)	NO	-
368.0	precon and soak done (YES/NO)	NO	-
369.0	PATH_PRECON_FILE		
370.0	filter velocity (YES/NO)	NO	-
371.0	filter velocity auto(YES/NO)	NO	-
372.0	Ki_CO		
373.0	Ki_CO2		
374.0	Ki_NOx		
375.0	Ki_FACTOR_CO2 (YES/NO)	NO	-
376.0	Ki_OFFSET_CO2 (YES/NO)	NO	-
377.0	Ki_FACTOR_CO (YES/NO)	NO	-
378.0	Ki_OFFSET_CO (YES/NO)	NO	-
379.0	Ki_FACTOR_NOx (YES/NO)	NO	-
380.0	Ki_OFFSET_NOx (YES/NO)	NO	-
381.0	Ki_OFF (YES/NO)	NO	-
382.0	HD legislations	1.00000	-
383.0	RDE legislations	1.00000	-
384.0	Submission Documents (YES/NO)	NO	-
385.0	General Setup Parameters Text	City	-
386.0	Legislation Setup Parameters Text	City	-
387.0	Trip Info		-
388.0	IN_TIME_REF		-
389.0	Sub-Trip Start: Auto	YES	-
390.0	Sub-Trip Start: Seconds	N/A	s

#	Text	Value	Unit
-	----	----	----
391.0	Sub-Trip End: Auto	YES	-
392.0	Sub-Trip End: Seconds	N/A	s
393.0	Unit System	2.00000	-
394.0	Calculate: PM Emissions	NO	-
395.0	Calculate: PN Emissions	NO	-
396.0	Output: Summary	YES	-
397.0	Output: Emissions	YES	-
398.0	Output: Raw Data	YES	-
399.0	Output: Zero Span	YES	-
400.0	Output: Data Consistency	NO	-
401.0	Output: Window Plots	YES	-
402.0	Fuel Rate ECU vs. EU ISO16183	$y = 10000000000.0000 x - 0.000$ $R^2=10000000000.000$ SEE=	
403.0	PEMS post processing version	Rel_10_B192	
404.0	Concerto version	480.00000	
405.0	Concerto build	215.00000	
406.0	USERNAME	EFR	

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Dry / Wet Corr.: 2 - CFR40 §86.1342-90

Appendix C - Experimental

Emissions for each pollutant of interest were compared on a grams/test basis. UCR post processed the data from the PEMS measurements and obtained the necessary data from the CVS emissions measurements for the comparisons, see Figure 1. The criteria for acceptable correlations for the grams/test emissions depend on the pollutant being measured and how close the measurements are to the detection limits. Typical criteria for these comparisons were developed based on similar testing that is done in Europe. These criteria are provided below in Table 1. UCR also verified the measured emissions and other data (including any data logging, consistency checks, and plausibility checks) following the completion of the correlation emissions test on each vehicle.

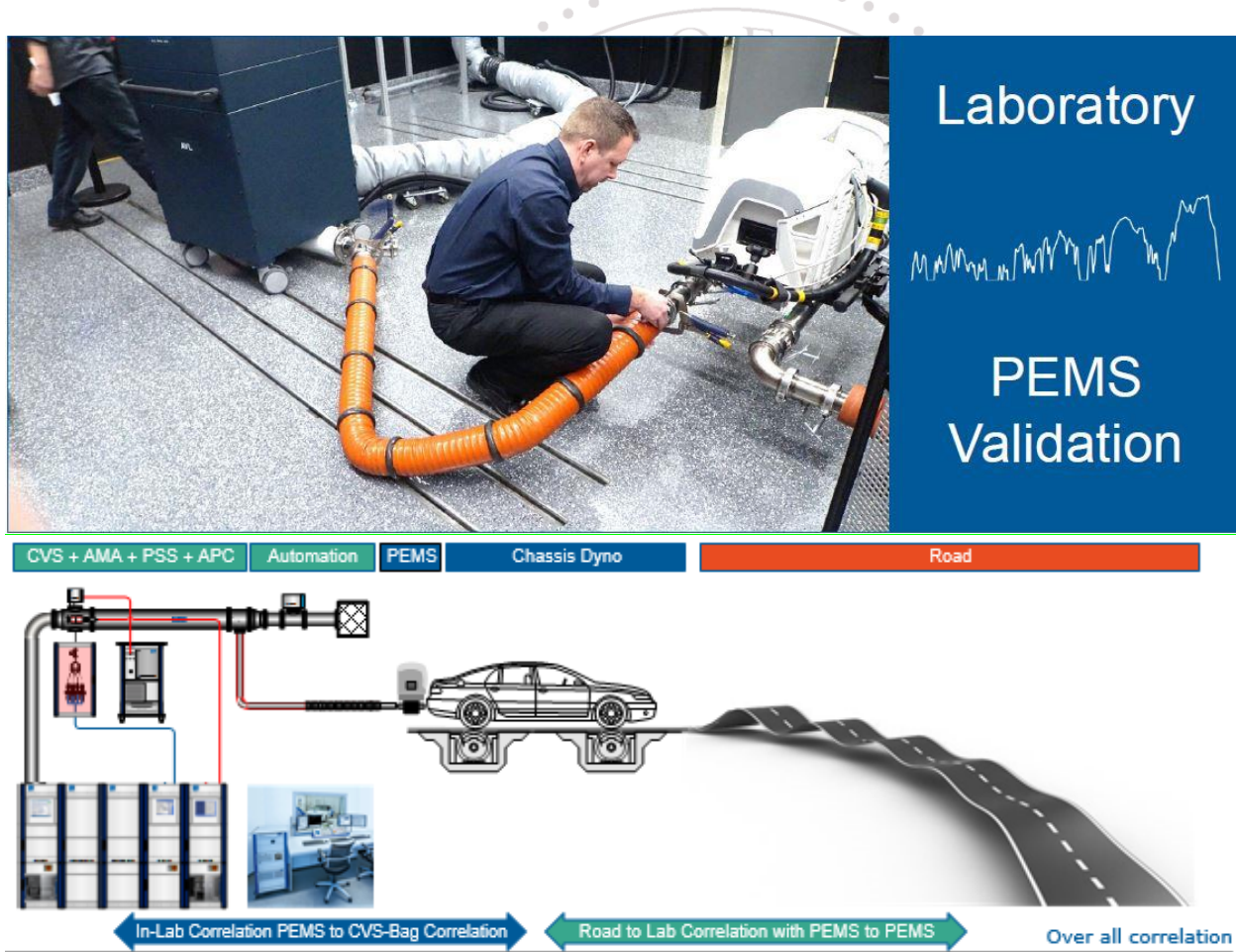


Figure 1. Validation of PEMS with stationary laboratories

Table 1. Typical Specifications for PEMS/CVS Intercomparisons based on European Criteria

Pollutant	Absolute Zero response drift	Absolute Span response drift ⁽¹⁾
CO ₂	≤ 2 000 ppm per test	≤ 2 % of reading or ≤ 2 000 ppm per test, whichever is larger
CO	≤ 75 ppm per test	≤ 2 % of reading or ≤ 75 ppm per test, whichever is larger
NO _x	≤ 5 ppm per test	≤ 2 % of reading or ≤ 5 ppm per test, whichever is larger
CH ₄	≤ 10 ppm C ₁ per test	≤ 2 % of reading or ≤ 10 ppm C ₁ per test, whichever is larger
THC	≤ 10 ppm C ₁ per test	≤ 2 % of reading or ≤ 10 ppm C ₁ per test, whichever is larger

⁽¹⁾ If the zero drift is within the permissible range, it is permissible to zero the analyser prior to verifying the span drift.;

As will be discussed below, the AVL PEMS already also does a data consistency check that includes a correlation between the measured fuel flow from the engine control unit (ECU) and the fuel flow calculated using the formula in section 8.4.1.6 of Annex 4B to UN/ECE Regulation No 49, or using procedures consistent with U.S. regulations. For this test, a minimum coefficient of determination of 0.90 and a slope between 0.9 and 1.1 is required.

Evaluations also included evaluations of real-time data for different pollutants. The PEMS and CVS data sets were combined and time aligned as part of a post processing step. The real-time data were time-aligned using either a standard signal that can be utilized to sync up the PEMS and CVS measurements, by visually graphing the results to evaluate the alignment of peaks seen throughout the test duration, or by minimizing the error between the real-time emissions for the PEMS and the dyno. It should be noted that the time-alignment issues were addressed more extensively on the first vehicle, with the idea that subsequent vehicles would use similar time alignment procedures, and that the procedure would be simple enough that the correlation testing and the measurement evaluation could be typically done within the timespan of an afternoon.

Portable Emissions Measurement System (PEMS) Sampling

This subsection describes the PEMS equipment that was used for the testing, the operating procedures for the PEMS, and the data processing.

Port Emissions Measurement System (PEMS)

UCR worked directly with AVL to obtain the systems that were used for the PEMS testing. The PEMS used for this work was an AVL M.O.V.E Gas PEMS iS. The PEMS units were provided by AVL fully 1065 verified and ready for operation. UCR was provided two units of each of the PEMS components, so that one PEMS was available for testing while the other served as a back-up. UCR will maintain possession of both PEMS units throughout the full course of the three year test program, such that UCR will not have to deal with the system being loaned out to other clients. This system is described below.

The AVL M.O.V.E GAS PEMS iS is a compact and robust portable device for measuring the NO/NO₂, CO/CO₂, and THC concentrations within the exhaust gas of diesel and gasoline vehicles and engines. This state-of-the art system maintains the high measurement accuracy and analytical performance of the current AVL M.O.V.E GAS PEMS 493 version with a heated FID for THC measurement. In conjunction with the emissions measurements, the AVL M.O.V.E Gas PEMS iS system provides GPS data (route, vehicle speed, altitude, acceleration) on a second by second basis from the vehicle's engine control module (ECM) and associated parameters via an OBD connection. The GAS PEMS iS was especially developed for the RDE (Real Driving Emissions) and other regulatory compliance applications, and therefore offers high flexibility and easy use for on-road compliance testing, where energy, space, and weight are extremely important considerations.

The AVL PEMS uses an UV Analyzer for NO/NO₂ measurements. This analyzer measures NO and NO₂ simultaneously and directly without the need of a converter. The analyzer provides very good performance in terms of stability, with drift of just a few ppm over several hours. For CO/CO₂ measurements, a NDIR analyzer is used. This NDIR analyzer is especially optimized for the low drift and high accuracy of the CO channel, even at very low measurement ranges.

An "external" Cutter FID Module allows the AVL M.O.V.E GAS PEMS iS to measure total hydrocarbon (THC) and methane (CH₄) exhaust gas concentrations of diesel, gasoline, and gas engines and vehicles. The Module is especially optimized for an easy installation and operation in combination with the GAS PEMS iS system or as a standalone device. It can be flexibly mounted either outside the vehicle or in the trunk. The exhaust gas is passed through to the GAS PEMS iS via a heated transfer line. The Cutter FID module is fully integrated into the AVL M.O.V.E iS system. This system has been approved as meeting all DOT requirements relating to the carrying of FID fuel during on-road testing.

The AVL M.O.V.E EFM Exhaust Flow Meter (EFM) measures the exhaust gas flow of vehicles with diesel or gasoline engines, as shown in Figure 2. It is based on the differential pressure measurement principle and consists of two main components: A "pitot" tube (EFM Measuring Tube) and an EFM Control Box including the pressure transducers and the calculation unit. The EFM measuring tube is directly mounted at the tailpipe of the vehicle under the enclosure case, as shown below. The exhaust flow is needed to calculate the mass emissions from the measured exhaust gas emission concentrations. Depending on the engine size and type, different sizes of EFM measuring tubes are available. Typically a 2.5" EFM is sufficient to cover the exhaust flow range for a typical passenger vehicle, with 3" EFM tubes available if needed for a larger displacement engine-equipped vehicle.

The AVL M.O.V.E EFM Control Box measures the static and dynamic pressures as well as the exhaust gas temperature and calculates the exhaust flow based on "Pitot" principle. For accurate measurements, even in highly dynamic flow conditions in the exhaust duct, pressure transducers with a very high data rate (5 kHz) are used. The internal temperature of the Control Box is controlled at ~50°C to avoid condensate and to ensure stable flow measurements even at changing ambient temperatures. The EFM Control Box is fully integrated into the AVL M.O.V.E system and can either be operated via the AVL M.O.V.E System Control or with a Standard Notebook PC. For a flexible and easy installation outside the car or inside the car, the EFM Control Box is separated from the EFM tube. This reduces the weight of the EFM tube itself and makes the installation on the tailpipe much more convenient.

For the connection of the EFM Control Box to the EFM, a combined pneumatic and electrical “Hybrid” cable is used to minimize the number of cables used for the installation.



Figure 2. Exhaust Flow Meter Utilized with the AVL System

All analyzers are mounted inside temperature controlled enclosures, as shown in Figure 3, to ensure stable conditions and a high accuracy even in changing ambient conditions. A service door makes the access to consumables very easy. Optimized components extend the service intervals and reduce the maintenance effort. The Module can be easily installed outside, e.g., on a trailer hook carrier or inside the trunk of a passenger car. An internal temperature conditioning system that is specially designed for the mobile operation ensures reliable operation over wide ambient operating temperatures ranging from $-10\text{ }^{\circ}\text{C}$ to $+45\text{ }^{\circ}\text{C}$ without any additional external heating or cooling device. The device features internal dampers, so there is no need for an additional external damping plate for passenger car applications. This supports a quick and easy installation. The power distribution (eBox), including the batteries, can be mounted on top of the GAS PEMS iS and is inside in the illustrated protection cover. In the case of “Dual Exhaust Pipe” configurations, a new Y-type heated line is available to reduce the installation effort. In order to avoid any type of vehicle damage/scratches, a special sampling probe was designed. It can be easily inserted into the exhaust pipe, and therefore no modifications need to be done on the vehicle undergoing testing.



Figure 3. Typical Trailer Hitch Installations of AVL System with Enclosure

The specifications for the AVL M.O.V.E. system are provided in the following Table 2.

Table 2 Specifications for AVL PEMS System

Operating temperature (ambient)	-10°C to 45°C
Storage temperature	-40 to +70°C (Oxygen sensor needs to be removed below 0°C and above 50°C)
Dimensions (w*h*d)	Measuring module: ~ 500*350*374mm with protection cover: ~ 590*480*447mm
Weight	< 30kg (NO _x Module)
Warm-up time	Typical 45 min ... depending on ambient temperature conditions
Power demand	22 to 28V DC, appr. 250W @ 20°C ambient temperature (with 1.25m sample line and after warm up)
Sample flow rate	< 3.5l/min
Sampling conditions	End of tail pipe, +50mbar relative pressure
Inputs/Outputs electrical	1xHeated line connectors 1x Ethernet (TCP/IP)
Measurement range	NO/ NO ₂ : 0 - 5,000 ppm (NO) 0 - 2,500 ppm (NO ₂) CO/ CO ₂ : 0 - 5 vol% (CO), 0 - 20 vol% (CO ₂)
Accuracy	CO: 0 - 1,499 ppm: +-30 ppm abs., 1,500 ppm - 49,999 ppm: +-2% rel.; CO ₂ : 0 - 9.99 vol.%: +- 0.1 vol.% abs., 10 - 20 vol.%: +-2% rel. NO: 0 - 5,000 ppm: +-0.2% FS or +-2% rel. NO ₂ : 0 - 2,500 ppm: +-0.2% FS or +-2% rel.
Zero drift	CO: 20 ppm/8h, CO ₂ : 0.1 vol%/8h, NO: 2 ppm/ 8h NO ₂ : 4 ppm/8h
Span drift	CO: ≤ 20 ppm abs./8h or 2% rel./8h CO ₂ : ≤ 0.1 vol% abs./8h or 2% rel./ 8h NO/ NO ₂ : ≤ 1% rel./ week
Linearity	slope : 0,99 ≤ Slope ≤ 1,01, intercept ≤ 0,5 %, SEE: ≤ 1% of range and R2: ≥ 0,999

*Device fully warmed up, 24 V supply, laboratory conditions and using dry calibration gases

For the on-road testing, a chase vehicle was used in conjunction with the actual test vehicle. The chase car was driven immediately behind the vehicle being PEMS tested to provide protection for the PEMS system from surrounding vehicles. This helped ensure that the PEMS system would not be damaged during any on-road testing and associated driving. A picture of a typical on-road test from a chase vehicle is provided in Figure 4.

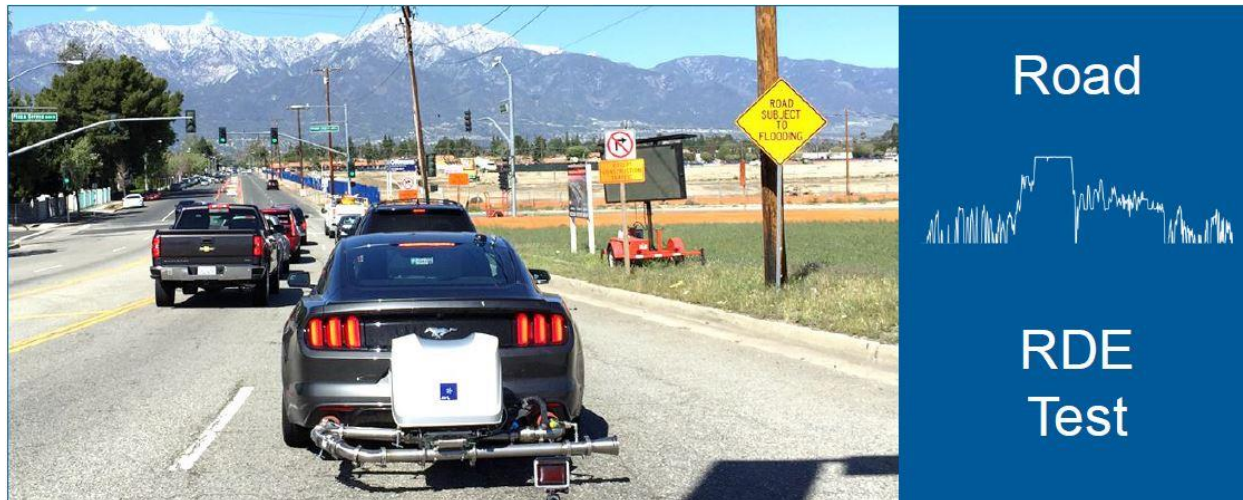


Figure 4. Typical On-road Testing as viewed from the Chase Vehicle

UCR worked directly with AVL for any maintenance or calibration needed on these units. AVL also provided special priority for these units in the case that maintenance or calibration was needed. In this regard, it should be noted that AVL put a maintenance, calibration, and repair facility for their PEMS system directly at the UCR CE-CERT facility, which facilitated timely resolution of any PEMS related issues. AVL also provided one week of initial training on the PEMS prior to beginning the testing of the 2017 model year vehicles.

Data Processing and Reporting

The evaluation and processing of testing data was done with the AVL CONCERTO M.O.V.E. software, which provides all features for user guided, easy and fast RDE-LDV legislative data evaluation. The software has a graphical user interface with the ability to parametrize data via drag and drop operation. The software also includes user guided test sequences (Pre-, Main-, Posttest) to make operation as easy as possible and to avoid invalid test runs. The software supports all calculations and complete test validation for in-use testing applications. It also offers functions like Google Maps integration for a quick trip evaluation, video integration and synchronization, and many other features. The GUI of *AVL M.O.V.E Data Post-processing* offers the ability to link test data to Google Maps or external video files. Additional information (e.g., GPS data, ambient conditions, engine lug curve, engine performance data, test trip, fuel consumption...) can be displayed as well. This can be a key feature for evaluating real-life test data under varying test conditions. *AVL M.O.V.E Data Post-processing* provides valuable insight into the data and how “real life conditions” on the road are linked to them. The Concerto program also has features to deal with hybrid vehicles where there are periods of time without exhaust flow.

For this program, the CONCERTO program was customized for the on-road testing. The individual data reports for each vehicle and each test route were formatted to include data reporting and plots for each of the pollutants of interest and information about the QA/QC checks. The format is based on formats that are utilized in reporting for RDE regulatory requirements and includes similar levels of detail. Data were exported to an *AVL CONCERTO* Transport File (CTF File) or a csv file.

Quality Assurance and Quality Control (QA/QC)

An important element of this work is that the instrumentation was maintained at the highest possible level in terms of QA/QC. UCR worked directly with AVL to ensure all QA/QC metrics were met. The two PEMS systems provided by AVL came fully calibrated in keeping with the 1065 calibration criteria. This included all annual, bi-annual, and monthly checks per the CFR 1065 subpart J. AVL performed additional calibrations, as required during the course of testing, and will perform annual calibrations in between the testing campaigns for the 2017, 2018, and 2019 model year vehicles. QA/QC checks were also performed as part of the daily, monthly, as well as test-to-test routines. The QA/QC were largely done as part of automated processes within the Concerto software. This included a series of pre- and post-test checks, as well as linearity and other checks.

