

Test = HWFET with Warmup

Options = CVS Bag Sec ShowToI Methane MethaneRF

Test Init Start = 17 June 2020 09:42:41 Test Start = 17 June 2020 09:46:47
 Posttest Completed At = 17 June 2020 10:22:00 Test Finish = 17 June 2020 10:12:32
 Hot Soak Start Time = 16 June 2020 15:30:00

Personnel Information::

Driver = **REDACTED** Operator = **REDACTED**
 Requestor = Supervisor =

Vehicle Information:

VIN = XXXXXXXXXX Cert Tracking ID = 2964-ECRXT03.05PV-217
 Vehicle Model = FCA RAM Model Year = 2014
 Engine Family = ECRXT03.05PV Eng. Disp. = 3.0L
 Ignition Status = No Transmission =
 Automatic = 1 Idle RPM =
 Sample Delay =

Vehicle Conditions:

Soak Start Time: = JUNE 16, 2020 15:30 Ambient Limit Type = OTHER7

Test Specifications:

TO-Number = W0110 CVS BulkStream Flow : = 3) 625 scfm
 TestNet Number = 2964

Dynamometer:

Inertia = 6000 (1b) Road Load A = 5.75 (1bs)
 Road Load B = 0.3209 Road Load C = 0.03152

Fuel Information:

Fuel = DIE-DJ1621HW10 Specific gravity = 0.8520
 NHV = 18083.00 Fuel R-Factor = 0.60
 CWF = 0.8710 OWF = 0.0000
 HWF = 0.1290 Fuel Calculation Type = Diesel/EPA Calcs

Phase Information:

Shift Tables
 Phase 1 N/A
 Phase 2 N/A

Response Factors:

Bag Methane = 1.05

Pre Test Remarks:

TEST #1 AS RECEIVED

Post Test Remarks:

Non-Critical Information:

Begin Odo = 99610 Idle RPM =
 Test end Odometer = 99631 Driveability = Good
 Engine performance = No Problem Brakes = No Problem
 Transmission = No Problem Vehicle stalls = None

SUMMARY REPORT

Test = HWFET with Warmup Test Id = ONT50892 TestNet Number = 2964
 Options = CVS Bag Sec ShowTol Methane MethaneRF
 Test Init Start = 17 June 2020 09:42:41 Fuel Calculation Type = Diesel/EPA Calcs Idle RPM = Driver = **REDACTED**

MASS calculated by DF method

Phase 1	Bag 2	THC (ppmC)	CO (ppm)	NOX (ppm)	CO2 (%)	CH4 (ppmC)	NM-HC (wRF)	FE (mpg)
Range		10.0	50.0	30.0	1.00	10.0		
Sample		3.519	0.600	-0.005	0.8078	2.628		
Range		10.0	50.0	30.0	1.00	10.0		
Ambient		3.441	0.735	0.051	0.0571	2.352		
Net Conc.		0.286	0.000	0.000	0.7542	0.418	0.0000	
Grams/ph.		0.0322	0.0000	0.0000	2699.7483	0.0545	0.0000	38.6899
Grams/mi		0.0031	0.0000	0.0000	263.3269	0.0053	0.0000	

----- Dyno Information -----

Inertia = 6000
 Inertia Units = 1b
 Dynamometer will be set manually = False
 Dyno Coefficient Units = 2
 Road Load A = 5.75
 Road Load B = 0.3209
 Road Load C = 0.03152
 Use Augmented Braking System? = True

CVS Bag report
 MASS calculated by DF method

Phase 1	Bag 2	THC (ppmC)	CO (ppm)	NOX (ppm)	CO2 (%)	CH4 (ppmC)	NM-HC (wRF)	FE (mpg)	Test Info	Times Info
Range		10.0	50.0	30.0	1.00	10.0			Baro(inHg) = 28.94	Phase Start = 09:59:47
Sample		3.519	0.600	-0.005	0.8078	2.628			Temp(F) = 75.9	Phase Finish = 10:12:32
Range		10.0	50.0	30.0	1.00	10.0			Tdew(F) = 50.0	Analysis End = 10:18:02
Ambient		3.441	0.735	0.051	0.0571	2.352			Rhum(%) = 40.3	
Net Conc.		0.286	0.000	0.000	0.7542	0.418	0.0000		Ahum(gr/lb) = 55.4	Elapsed (sec) = 765.0
Grams/ph.		0.0322	0.0000	0.0000	2699.7483	0.0545	0.0000	38.6899	NOX Factor = 0.9156	Bag Fill (sec)= 765.0
Grams/mi		0.0031	0.0000	0.0000	263.3269	0.0053	0.0000		Vmix(ft3 20 C) = 6907.94	Bag An1 (sec) = 329.8
									Dilu. Factor = 16.5796	Drv Err (sec) = 0.0
									Dist(mi) = 10.2525	

Legend
 * denotes Unstable Reading
 (wRF) denotes with Response Factor
 (woRF) denotes without Response Factor

DATA VALIDATION

PARAMETER DESCRIPTION	VALUE OF PARAMETER	LIMIT OF PARAMETER
Temperature	VALID	68 - 86 (degF)
Barometer	VALID	26.99 - 33.0001 (inHg)
Dew Point	VALID	-20 - 200 (degF)
Absolute Humidity	VALID	0 - 150 (gr/lb)
Pretest Soak Time	VALID	12 - 36 (hr)
Phase Length	VALID	2 (%)
Distance	VALID	2 (%)
Test Hold Conditions	VALID	60 (sec)
Leak Check	VALID	1
Bag Analysis Time	VALID	1200 (sec)
Bag Fill Time	VALID	5 (sec)
Ambient Bag Readings	VALID	THC -0.55 - 10 (ppm) CO -0.55 - 15 (ppm) NOX -0.55 - 2 (ppm) CO2 350 - 850 (ppm) CH4 -0.55 - 10 (ppm)
Sample Bag Readings	VALID	THC -0.55 (ppm) CO -0.55 (ppm) NOX -0.55 (ppm) CO2 350 (ppm) CH4 -0.55 (ppm)
Bag Read Sequence	VALID	Stabilization Time (T2) 10 (sec) Integration Time (T3) 3 (sec) Stability Time Out (T4) 30 (sec) Stability Chk Tolerance 2 (%)
Bag Zero/Span Sequence	VALID	Pre-Bag Z/S Offset 25 (%) Pre-Bag Zero Drift 1 (%) Post-Bag Z/S Drift 2 (%) Stabilization Time (T2) 10 (sec) Integration Time (T3) 3 (sec) Stability Time Out (T4) 30 (sec) Stability Chk Tolerance 2 (%)
Analyzer Overscale	VALID	10 (sec)
Venturi Inlet Temperature	VALID	32 - 300 (degF)

BAG Zero/Span Results
 * Single Roll Dyno Configuration *

Bag Pair 2 Zero/Span Concentrations (Offset Limit = 25.0% ReZero Limit = 1.0%)

Samp	Gas	Range	Fullscale	Zero	Offset	Std Dev	Spec	Span	Offset	Std Dev	Rezero	Drift	Std Dev	Status
BAG	LCO	(1)	50.0ppm	0.439	0.88	0.05417	46.352	46.400	0.10	0.08504	0.020	0.04	0.02780	PASS
BAG	CO2	(1)	1.00%	0.0037	0.37	0.01934	0.9303	0.9318	0.15	0.05930	0.0009	0.09	0.01548	PASS
BAG	THC	(1)	10.0ppm	0.025	0.25	0.05479	9.382	9.403	0.21	0.03955	0.032	0.32	0.02212	PASS
BAG	NOX	(2)	30.0ppm	0.159	0.53	0.21312	28.000	28.138	0.46	0.36140	0.046	0.15	0.18403	PASS
BAG	CH4	(1)	10.0ppm	0.169	1.69	0.22999	9.368	9.353	-0.15	0.14158	0.004	0.04	0.31768	PASS

Bag Pair 2 Post Bag Check (Drift Limit = 2.0%)

Samp	Gas	Range	Fullscale	Zero	Drift	Std Dev	Spec	Span	Drift	Std Dev	Status
BAG	LCO	(1)	50.0ppm	-0.001	0.00	0.06505	46.352	46.258	-0.19	0.03071	PASS
BAG	CO2	(1)	1.00%	0.0009	0.09	0.01542	0.9303	0.9331	0.28	0.06620	PASS
BAG	THC	(1)	10.0ppm	0.002	0.02	0.81058	9.382	9.339	-0.44	0.04271	PASS
BAG	NOX	(2)	30.0ppm	-0.062	-0.21	0.17643	28.000	27.908	-0.31	0.21173	PASS
BAG	CH4	(1)	10.0ppm	0.005	0.05	0.48065	9.368	9.390	0.21	0.10559	PASS