SEMA Emission Lab Test Report

for Exhaust Emission Test Procedures according

Date:	6/18/2020	**Time:**	8:00:56
Test Legislation:	EPA		
Test Cycle:	FTP75		
Test Purpose:	Certification		
Test Name:	FTP75		
Test Cell:	iGEMV_TC1		
Remark:	FTP, With Derive Tune Installed		

CONFIDENTIAL

Date: 6/22/20

Accept_____ Reject_____

Signature:

General Data

Test Number	*FTP75_20200618_01_TC1*		
Test Name	*FTP75*		
Test Cell	*iGEMV_TC1*		
Test Type	*FTP75*		
Legislation	*EPA*		
Requirements (Bag)	*CERTIFICATION*		
Date	*6/18/2020*	CH_4 Response Factor	
Test Start	*8:00:56*	Odometer Start[mile]	*83369*
Start Time Cycle	*2020-06-18 08|12-09-(000)*	Delay Time Method	*Default*
Test End	*9:15:00*		
Operator	*Dan Ogden*	Air Condition	*YES*
Driver	*Mario Michel*	Particle Measurement	OFF
Shifttable	Auto		
Flow Stream	*Bag Only Diesel*		
Calibrated Ranges	*autorange*		
Remark :	*FTP, With Derive Tune Installed*		

Vehicle Data

Test Group	*Derive F-250*	Transmission	*Automatic*
Manufacturer	*Ford*	Drive Axle Weight[lb]	*0*
Model	*F-250*	Tank Position	
Model Year	*2011*	Tank Material	*Plastic*
VIN	*1FT7W2BT9BEA15523*	Tank Volume[gal]	*26.00*
License Plate	*HJHU73*	Evaporative Family	*N/A*
Order Number		Canister Volume[l]	*0.00*
Engine Family	*BFMXD06.761A*	Canister Working Capacity[g]	*0*
Engine Trim Level	*trimEng*	Tire Manufacturer	*CONTINENTAL*
Engine Code	*codeEng*	Tire Model	*CONTITRAC TR*
Displacement [l]	*6.700*	Tire Size	*275/70/18*
Number of Cylinders	*6*	Tire Pressure [psi]	*65*

Dyno Data

Dyno Type	*SREV*	A [lbf]	*61.4690*
Inertia [lb]	*9500.00*	B [lbf/mph]	*0.14073*
Simulation Coefficient N	*2*	C [lbf/mph2]	*0.049012*

Fuel Data *2007 Certification Diesel HD0521GP10*

Fuel Type	*DIESEL*	Fuel Temperature [°C]	*15.56*
Fuel Analyze Date		Fuel Density [kg/l]	*0.8542*
Fuel Manufacturer		Net Heat. Val. [BTU/lb]	*18325*
Fuel Tank Number		Carb. Weight Frac.	*0.8670*
Fuel Charge		HC Ratio	*1.8282*
Remarks:	*2007 Certification Diesel HD0521GP10*	OC Ratio	*0.0000*

Weather Limit Data

Test Data	FTP75	Operator	Dan Ogden	Speed Table		Date:	
Test Number	FTP75_20200618_01_TC1	Driver	Mario Michel	Shift Table	Auto	Cold Start	

Vehicle		**Dyno**		**Fuel**		**Test Timing**	
VIN	*1FT7W2BT9BEA15523*	Inertia [lb]	*9500.00*	2007 Certification Diesel HD0521GP10		Start Time	*8:00.56*
		A [lbf]	*61.469*	Fuel type	DIESEL	End Time	*9:15:00*
Model	F-250	B [lbf/mph]	*0.14073*	Density	*0.8542*		
Model Year	*2011*	C [lbf/mph2]	*0.049012*	NHV	18325	Soak Time	570.6
Engine Family	BFMXD06.761A			CWF	*0.8670*		
Displacement [l]	*6.700*						
Transmission	*Automatic*						
Odometer Start [mile]	*83369*	Flow Stream	Bag Only Diesel				
Odometer End [mile]	*83380*	Remark	FTP, With Derive Tune Installed				

Bag Analysis

PHASE 1	THC [ppmC]	CO [ppm]	CO_2 [%]	NO_x [ppm]	CH_4 [ppm]	NMHC [ppm]				
Range	*200*	*250*	*2.000*	*30*	*60*		Temp. [°F]	73.09	Volume [scf]	6785
Zero Value	*-0.01*	*0.3*	*0.0*	*0.0*	*0.0*		Press. [in-Hg]	29.14	D.F.	*17.15*
Span Value	*189.96*	*243.07*	*1.901*	*25.214*	*57.400*		RH [%]	*49.27*	Ph. Start [s]	0.0
Sample	*7.40*	*37.64*	*0.724*	*3.189*	*1.439*	*5.769*	AH [g/kg]	*8.739*	Ph. End [s]	505.8
Mass.	*0.822*	*8.447*	*2555.219*	*1.105*	*0.185*	*0.642*	Dist. [mi]	*3.53*	Ph. Length [s]	505.6
Mass per Dist.	*0.2328*	*2.3917*	*723.476*	*0.3128*	*0.0524*	*0.1816*	NO_x Corr. F	*0.94*	Bag An. Del	*481*
							Dr. Viola.	*0*	Vio. Durat. [s]	0.0
							Crank [s]	*0.8*	FE [mile/gal]	14.0
SPC Mass Particles [g]	0.0023		SPC Mass per Dist. [g/mile]		0.0006					

PHASE 2	THC [ppmC1]	CO [ppm]	CO_2 [%]	NO_x [ppm]	CH_4 [ppm]	NMHC [ppm]				
Range	*200*	*250*	*2.000*	*30*	*60*		Temp. [°F]	75.42	Volume [scf]	10685
Zero Value	*-0.01*	*-0.1*	*0.0*	*0.0*	*0.0*		Press. [in-Hg]	29.14	D.F.	*26.89*
Span Value	*189.96*	*242.93*	*1.903*	*25.208*	*57.400*		RH [%]	*46.00*	Ph. Start [s]	505.8
Sample	*0.66*	*-0.20*	*0.445*	*0.734*	*0.223*	*0.411*	AH [g/kg]	*8.824*	Ph. End [s]	1375.5
Mass.	*0.116*	*0.000*	*2474.702*	*0.402*	*0.045*	*0.072*	Dist. [mi]	*3.79*	Ph. Length [s]	869.6
Mass per Dist.	*0.0307*	*0.0000*	*653.752*	*0.1061*	*0.0119*	*0.0190*	NO_x Corr. F	*0.94*	Bag An. Del	*478*
							Dr. Viola.	*0*	Vio. Durat. [s]	0.0
									FE [mile/gal]	15.6
SPC Mass Particles [g]	0.0007		SPC Mass per Dist. [g/mile]		0.0002					

PHASE 3	THC [ppmC1]	CO [ppm]	CO_2 [%]	NO_x [ppm]	CH_4 [ppm]	NMHC [ppm]				
Range	*200*	*250*	*2.000*	*30*	*60*		Temp. [°F]	75.75	Volume [scf]	6210
Zero Value	*0*	*0.1*	*0.0*	*0.0*	*0.0*		Press. [in-Hg]	29.14	D.F.	*19.05*
Span Value	*189.96*	*243.17*	*1.901*	*25.197*	*57.400*		RH [%]	*46.87*	Ph. Start [s]	1502.7
Sample	*1.33*	*2.05*	*0.650*	*1.355*	*0.424*	*0.847*	AH [g/kg]	*9.093*	Ph. End [s]	2008.5
Mass.	*0.135*	*0.422*	*2100.009*	*0.434*	*0.050*	*0.086*	Dist. [mi]	*3.54*	Ph. Length [s]	505.8
Mass per Dist.	*0.0381*	*0.1190*	*592.712*	*0.1226*	*0.0141*	*0.0243*	NO_x Corr. F	*0.95*	Bag An. Del	*484*
							Dr. Viola.	*0*	Vio. Durat. [s]	0.0
							Crank [s]	*0.0*	FE [mile/gal]	17.2
SPC Mass Particles [g]	0.0009		SPC Mass per Dist. [g/mile]		0.0003					

SPC Mass Particles [g]	SPC Mass per Dist. [g/mile]

Total Result (weighted)

Weighted	THC [g/mile]	CO [g/mile]	CO_2 [g/mile]	NO_x [g/mile]	CH_4 [g/mile]	NMOG [g/mile]	NMHC [g/mile]	NMHC+NO_x [g/mile]	HCHO [g/mile]	*Fuel Economy*	
Mass per Dist.	0.0747	*0.5292*	*651.40*	*0.1535*	*0.0209*	*0.0597*	*0.0542*	0.208	*0.0011*	mile/gal	*15.60*
Mass per Dist. - Particulate SPC	0.0003										

Total Result

actual	THC [g/mile]	CO [g/mile]	CO2 [g/mile]	NOX [g/mile]	CH4 [g/mile]	NMOG [g/mile]	NMHC [g/mile]	NMHC+NO_x [g/mile]	*Fuel Economy*	
Mass per Dist.	0.0989	*0.8166*	*656.51*	*0.1787*	*0.0258*	*0.0810*	*0.0736*	0.252	mile/gal	*15.46*
Mass per Dist. (rounded)	0.0989	*0.8166*	*656.5*	*0.1787*	*0.0258*	*0.081*	*0.0736*	0.252	Dist. [mi]	*10.86*
Mass per Dist. - Parti SPC [mg/mile]	0.3601									

CONFIDENTIAL

Date: 6/26/20

Accept _____ Reject _____

Signature: _____

Test Summary

CVS Data		Cycle data		Environmental Data	
Dilution Factor (Bag)	17.15	Vio. Dur.[s]	0.0	Rel. Hum.[%]	49.27
Dilution Factor (Modal)		Number	0	Ab. Hum.[g/lbs]	8.74
CVS Volume[scf]	6785.33	Act. Dist.[mi]	3.53	Pressure[inHg]	29.14
CVS Flow[scfm]	805.31			Temp.[°F]	73.09
CVS Inlet Pressure	28.65			Temp. Min.[°F]	71.06
CVS Inlet Temp.[°F]	105.04			Temp. Max.[°F]	74.30
CVS Inlet Temp. Min.[°F]	101.37			NO_X Corr. F	0.94
CVS Inlet Temp. Max.[°F]	108.99				

Particulate

SPC Particulate Results			Avg	Max	Min
Primary Filter Particle Mass [ug]	5.984375	Temp Air Particlulate Dil [deg F]	91.8652		
Mass Particles [g]	0.00	Temp Gas Particulate [deg F]	112.7779	118.3466	109.9513
Massflow Particles [g/h]	1652474.38	Pressure Gas Particulate	0.1780	0.3100	0.0000
Mass per Dist. [g/mile]	0.0006	Dilution Ratio	1.0000		
Particulate Sampling Time [s]	505.80	Pressure Drop Pri Filter [mbar]	0.2181		
Primary Filter ID	A1				
Filter Diameter [mm]	47				

Bag

Concentrations	THC[ppmC]	CO[ppm]	CO_2[%]	NO_X[ppm]	CH_4[ppm]	NMHC[ppm]
Range	200	250	2.000	30	60	
Sniff	0.000	37.814	0.776	3.303	4.823	
Zero Value	-0.006	0.252	0.000	0.001	0.000	
Zero Offset[%]	0.053	0.013	0.000	0.011	-0.033	
Span Value	189.956	243.069	1.901	25.214	57.400	
Span Offset[%]	-0.124	-0.008	-0.038	-0.163	-0.739	
Sample	11.229	38.086	0.777	3.314	3.425	7.359
Std. Dev.	0.000	0.004	0.005	0.041	0.000	
Ambient	4.071	0.471	0.056	0.132	2.108	
Std. Dev.	0.003	0.004	0.002	0.011	0.000	
Corrected	7.396	37.643	0.724	3.189	1.439	5.769
Mass	**THC[g]**	**CO[g]**	**CO_2[g]**	**NO_X[g]**	**CH_4[g]**	**NMHC[g]**
Uncorrected	0.8224	8.4471	2555.219	1.1046	0.1851	0.6416
Corrected	0.8224	8.4471	2555.219	1.1046	0.1851	0.6416
Mass per distance	**THC[g/mile]**	**CO[g/mile]**	**CO_2[g/mile]**	**NO_X[g/mile]**	**CH_4[g/mile]**	**NMHC[g/mile]**
Corrected for Lost Sample Mass	0.2328	2.3917	723.476	0.3128	0.0524	0.1816

Fuel Consumption

Fuel Consumption[g]	816.960	Fuel Consumption[l/100km]	16.827
Fuel Consumption[l]	0.956	**Fuel Economy[mile/gal]**	13.978

CVS Data		Cycle data		Environmental Data	
Dilution Factor (Bag)	26.89	Vio. Dur.[s]	0.0	Rel. Hum.[%]	46.00
Dilution Factor (Modal)		Number	0	Ab. Hum.[g/lbs]	8.82
CVS Volume[scf]	10684.90	Act. Dist.[mi]	3.79	Pressure[inHg]	29.14
CVS Flow[scfm]	737.31			Temp.[°F]	75.42
CVS Inlet Pressure	28.70			Temp. Min.[°F]	74.30
CVS Inlet Temp.[°F]	108.57			Temp. Max.[°F]	77.36
CVS Inlet Temp. Min.[°F]	106.19			NO_X Corr. F	0.94
CVS Inlet Temp. Max.[°F]	110.85				

Particulate

SPC Particulate Results			Avg	Max	Min
Primary Filter Particle Mass [ug]	1.984375	Temp Air Particlulate Dil [deg F]	90.4101		
Mass Particles [g]	0.00	Temp Gas Particulate [deg F]	112.2923	117.1935	110.4040
Massflow Particles [g/h]	1513058.00	Pressure Gas Particulate	0.0002	0.2361	0.0000
Mass per Dist. [g/mile]	0.0002	Dilution Ratio	1.0000		
Particulate Sampling Time [s]	869.60	Pressure Drop Pri Filter [mbar]	0.0390		
Primary Filter ID					
Filter Diameter [mm]					

Bag

Concentrations	THC[ppmC]	CO[ppm]	CO_2[%]	NO_X[ppm]	CH_4[ppm]	NMHC[ppm]
Range	200	250	2.000	30	60	
Sniff	0.000	0.863	0.500	0.887	2.743	
Zero Value	-0.006	-0.112	0.001	0.001	0.000	
Zero Offset[%]	0.053	0.013	-0.002	-0.002	-0.010	
Span Value	189.956	242.931	1.903	25.208	57.400	
Span Offset[%]	-0.124	-0.012	-0.039	-0.119	-0.405	
Sample	4.387	-0.001	0.498	0.867	2.284	1.806
Std. Dev.	0.000	0.005	0.002	0.020	0.000	
Ambient	3.868	0.203	0.054	0.138	2.141	
Std. Dev.	0.004	0.006	0.001	0.012	0.000	
Corrected	0.663	-0.196	0.445	0.734	0.223	0.411
Mass	**THC[g]**	**CO[g]**	**CO_2[g]**	**NO_X[g]**	**CH_4[g]**	**NMHC[g]**
Uncorrected	0.1161	0.0000	2474.702	0.4015	0.0452	0.0720
Corrected	0.8224	0.0000	2474.702	0.4015	0.0452	0.0720
Mass per distance	**THC[g/mile]**	**CO[g/mile]**	**CO_2[g/mile]**	**NO_X[g/mile]**	**CH_4[g/mile]**	**NMHC[g/mile]**
Corrected for Lost Sample Mass	0.0307	0.0000	653.752	0.1061	0.0119	0.0190

Fuel Consumption

Fuel Consumption[g]	786.446	Fuel Consumption[l/100km]	15.114
Fuel Consumption[l]	0.921	**Fuel Economy[mile/gal]**	15.562

CVS Data		Cycle data		Environmental Data	
Dilution Factor (Bag)	19.05	Vio. Dur.[s]	0.0	Rel. Hum.[%]	46.87
Dilution Factor (Modal)		Number	0	Ab. Hum.[g/lbs]	9.09
CVS Volume[scf]	6209.66	Act. Dist.[mi]	3.54	Pressure[inHg]	29.14
CVS Flow[scfm]	736.69			Temp.[°F]	75.75
CVS Inlet Pressure	28.71			Temp. Min.[°F]	72.32
CVS Inlet Temp.[°F]	109.40			Temp. Max.[°F]	78.26
CVS Inlet Temp. Min.[°F]	107.28			NO_X Corr. F	0.95
CVS Inlet Temp. Max.[°F]	111.94				

Particulate

SPC Particulate Results			Avg	Max	Min
Primary Filter Particle Mass [ug]	2.578125	Temp Air Particlulate Dil [deg F]	91.7053		
Mass Particles [g]	0.00	Temp Gas Particulate [deg F]	113.5464	120.8287	112.0639
Massflow Particles [g/h]	1512126.75	Pressure Gas Particulate	0.2813	0.4664	0.0000
Mass per Dist. [g/mile]	0.0003	Dilution Ratio	1.0000		
Particulate Sampling Time [s]	505.80	Pressure Drop Pri Filter [mbar]	0.3616		
Primary Filter ID					
Filter Diameter [mm]					

Bag

Concentrations	THC[ppmC]	CO[ppm]	CO_2[%]	NO_X[ppm]	CH_4[ppm]	NMHC[ppm]
Range	200	250	2.000	30	60	
Sniff	0.000	3.039	0.704	1.495	2.962	
Zero Value	-0.006	0.139	-0.001	0.002	0.000	
Zero Offset[%]	0.053	0.019	-0.001	-0.007	0.003	
Span Value	189.956	243.166	1.901	25.197	57.400	
Span Offset[%]	-0.124	-0.003	-0.037	-0.134	-0.667	
Sample	4.811	2.222	0.703	1.480	2.432	2.063
Std. Dev.	0.000	0.007	0.005	0.017	0.000	
Ambient	3.677	0.179	0.055	0.132	2.119	
Std. Dev.	0.005	0.008	0.001	0.013	0.000	
Corrected	1.327	2.053	0.650	1.355	0.424	0.847
Mass	**THC[g]**	**CO[g]**	**CO_2[g]**	**NO_X[g]**	**CH_4[g]**	**NMHC[g]**
Uncorrected	0.1351	0.4217	2100.009	0.4344	0.0499	0.0863
Corrected	0.1351	0.4217	2100.009	0.4344	0.0499	0.0863
Mass per distance	**THC[g/mile]**	**CO[g/mile]**	**CO_2[g/mile]**	**NO_X[g/mile]**	**CH_4[g/mile]**	**NMHC[g/mile]**
Corrected for Lost Sample Mass	0.0381	0.1190	592.712	0.1226	0.0141	0.0243

Fuel Consumption

Fuel Consumption[g]	667.618	Fuel Consumption[l/100km]	13.708
Fuel Consumption[l]	0.782	**Fuel Economy[mile/gal]**	17.158

Test Data: FTP75 Operator: Dan Ogden Date: 6/18/2020
Test Number: FTP75_20200618_01_TC1 Driver: Mario Michel

Driver Violations

		Phase 1	Phase 2	Phase 3
Number of Violations	-	0	0	0
Duration of Violations	(s)	0.0	0.0	0.0

Number	Phase	Violation Begin (s)	Violation End (s)	Violation Duration (s)	Scheduled Speed (mph)	Max Speed Deviation (mph)
No Violations In This Test				0.0		

Test Record #: FTP75_20200618_01_TC1

Phase 1

Analyzer Adjust

	Range Number	Range	Zero Value	Zero Set Value	Zero Offset	Span Value	Span Set Value	Span Offset	ReZero Value
		ppm	ppm	ppm	%	ppm	ppm	%	ppm
CO_2	1	20000	1.22	0.00	0.01	19006.40	19010.00	-0.02	0.01
CO	1	250	0.25	0.00	0.10	243.07	243.00	0.03	-0.08
NO_x	1	30	0.00	0.00	0.00	25.21	25.20	0.05	0.00
THC (ppmC	2	200	-0.01	0.00	0.00	189.96	189.90	0.03	0.29
CH_4	1	60	0.00	0.00	0.00	57.40	57.40	0.00	0.13
N2O				0.00					

Analyzer Check

	Range Number	Range	Zero Value	Zero Set Value	Zero Drift	Span Value	Span Set Value	Span Drift	2% Drift Validation
		ppm	ppm	ppm	%	ppm	ppm	%	
CO_2	1	20000	0.06	0.00	0.00	19002.47	19010.00	-0.02	
CO	1	250	0.03	0.00	0.04	242.98	243.00	-0.04	
NO_x	1	30	0.00	0.00	0.00	25.15	25.20	-0.21	
THC (ppmC	2	200	0.11	0.00	-0.09	189.65	189.90	-0.15	
CH_4	1	60	-0.02	0.00	-0.25	56.96	57.40	-0.74	
N2O				0.00					

Phase 2

Analyzer Adjust

	Range Number	Range	Zero Value	Zero Set Value	Zero Offset	Span Value	Span Set Value	Span Offset	ReZero Value
		ppm	ppm	ppm	%	ppm	ppm	%	ppm
CO_2	1	20000	9.26	0.00	0.05	19032.80	19010.00	0.11	-0.45
CO	1	250	-0.11	0.00	-0.04	242.93	243.00	-0.03	-0.07
NO_x	1	30	0.00	0.00	0.00	25.21	25.20	0.03	0.00
THC (ppmC	2	200	-0.01	0.00	0.00	189.96	189.90	0.03	0.29
CH_4	1	60	0.00	0.00	0.00	57.40	57.40	0.00	0.12
N2O				0.00					

Analyzer Check

	Range Number	Range	Zero Value	Zero Set Value	Zero Drift	Span Value	Span Set Value	Span Drift	2% Drift Validation
		ppm	ppm	ppm	%	ppm	ppm	%	
CO_2	1	20000	-0.48	0.00	0.00	19002.12	19010.00	-0.15	
CO	1	250	0.03	0.00	0.04	242.97	243.00	0.02	
NO_x	1	30	0.00	0.00	-0.01	25.16	25.20	-0.15	
THC (ppmC	2	200	0.11	0.00	-0.09	189.65	189.90	-0.15	
CH_4	1	60	-0.01	0.00	-0.22	57.16	57.40	-0.41	
N2O				0.00					

Phase 3

Analyzer Adjust

	Range Number	Range	Zero Value	Zero Set Value	Zero Offset	Span Value	Span Set Value	Span Offset	ReZero Value
		ppm	ppm	ppm	%	ppm	ppm	%	ppm
CO_2	1	20000	-10.23	0.00	-0.05	19006.50	19010.00	-0.02	-0.40
CO	1	250	0.14	0.00	0.06	243.17	243.00	0.07	-0.06
NO_x	1	30	0.00	0.00	0.01	25.20	25.20	-0.01	0.00
THC (ppmC	2	200	-0.01	0.00	0.00	189.96	189.90	0.03	0.29
CH_4	1	60	0.00	0.00	0.00	57.40	57.40	0.00	0.13
N2O				0.00					

Analyzer Check

	Range Number	Range	Zero Value	Zero Set Value	Zero Drift	Span Value	Span Set Value	Span Drift	2% Drift Validation
		ppm	ppm	ppm	%	ppm	ppm	%	
CO_2	1	20000	-0.29	0.00	0.00	19002.62	19010.00	-0.02	
CO	1	250	0.05	0.00	0.04	242.99	243.00	-0.07	
NO_x	1	30	0.00	0.00	-0.01	25.16	25.20	-0.12	
THC (ppmC	2	200	0.11	0.00	-0.09	189.65	189.90	-0.15	
CH_4	1	60	0.00	0.00	-0.21	57.00	57.40	-0.67	
N2O				0.00					

Emission Lab Test Report

Drive Cycle Energy Summary

Test Record #: FTP75_20200618_01_TC1

Test Cycle FTP75
Test Legislation EPA

Vehicle ID 1FT7W2BT9BEA15523

DYNO Data

	Road Load	Street Load
Inertia [lb]	*9500.00*	
A [lbf]	*61.469*	*80.650*
B [lbf/mph]	*0.14073*	*1.58910*
C [lbf/mph2]	*0.049012*	*0.038900*

	Phase1	Phase2	Phase3	Weighted
Distance				
Target	5779.17	6210.96	5779.17	
Driven	5684.60	6091.86	5702.05	
Distance Rating (%)	-1.6363	-1.9175	-1.3344	
Cycle Energy (MJ)				
Target	8.07	7.35	8.07	
Driven	7.62	6.74	7.68	
Distance per Energy Cycle (m/MJ)				
Target	715.91	845.04	715.91	777.45
Driven	746.25	904.39	742.82	819.25
Road Load Work Fraction				
Target	0.4674	0.3467	0.4674	
Driven	0.5160	0.3990	0.5110	
Inertial Work (MJ)				
Target	4.30	4.80	4.30	9.10
Driven	3.69	4.05	3.75	7.77
Inertial Work Fraction				
Target	0.5326	0.6533	0.5326	
Driven	0.4840	0.6010	0.4890	
Inertial Work Rating	-14.2376	-15.6807	-12.6803	-14.5796
Absolute Speed Change (m/s2)				
Target	204.83	340.96	204.83	545.79
Driven	186.13	304.57	186.25	490.77
Absolute Speed Change Rating (%)	-9.1304	-10.6724	-9.0695	-10.0807
Energy Rating	-4.2381	-7.0226	-3.7579	
Energy Economy Rating	-4.2381	-7.0226	-3.7579	-5.3757