This document was prepared in the following main sections (worksheet tabs) for MY13 GM OBD Group 05C Diagnostics for Electronically Regulated Fuel Control System and Front Grille Active Aero Shutters

Section 1: C101_LUK &VRI

Contains information that is common to all C101 ERFS applications within 13OBDG05C featuring

RPOs VRI (Frt Lower Grille Active Aero Shutters) and XFE (Extra Fuel Econ)

with engine RPOs

1) LUK 2.4L BAS+ Hybrid Ecotec I-4 SIDI &HP6 Hybrid Propulsion Parallel Electric

with VPPCs 1) GMX351, GMX353

Section 2: C101_Common LUK -VRI

Contains information that is common to all C101 ERFS applications within 13OBDG05C not featuring RPOs VRI &XFE

with engine RPOs

1) LUK 2.4L BAS+ Hybrid Ecotec I-4 SIDI &HP6 Hybrid Propulsion Parallel Electric

with VPPCs 1) GMX350

Original submission _____ 1-Sep-11

Component/	Fault	Monitor Strategy	Malfunction	Threshold	Secondary	Enable	Time	MIL
System	Code	Description	Criteria	Value	Parameters	Conditions	Required	Illum.
Fuel Rail Pressure (FRP) Sensor Performance (rationality)	P018B	This DTC detects a fuel pressure sensor response stuck within the normal operating range	Absolute value of fuel pressure change as sensed during intrusive test.		1. FRP Circuit Low DTC (P018C)	Not active	Frequency: Continuous; 12.5 ms loop. 60 seconds between intrusive tests that pass Intrusive test requested if fuel system is clamped for >= 5 seconds or fuel pressure error variance <= typically (0.3 to 0.6) (calculated over a 2.5sec period); otherwise report pass	DTC Type A 1 trip
					 FRP Circuit High DTC (P018D) FuelPump Circuit Low DTC (P0231) FuelPump Circuit High DTC (P0232) 	Not active Not active Not active	Duration of intrusive test is fueling related (5 to 12 seconds).	
					5. FuelPump Circuit Open DTC (P023F) 6. Reference Voltage DTC (P0641)	Not active	Intrusive test is run when fuel flow is below Max allowed fuel flow rate (Typical values in the range of 11 to 50 g/s)	
				7. Fuel Pump Control Module Driver Over- temperature DTC (P064A)	Not active			

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Parameters	Enable Conditions	Time Required	MIL Illum.
					8. Control Module Internal Performance DTC (P0606) 9. Engine run time 10. Emissions fuel level (PPEI \$3FB) 11. Fuel pump control 12. Fuel pump control state 13. Engine fuel flow 14. ECM fuel control system failure (PPEI \$1ED)	>=5 seconds Not low Enabled Normal or FRP		
Fuel Rail Pressure (FRP) Sensor Circuit Low Voltage	P018C	This DTC detects if the fuel pressure sensor circuit is shorted low	FRP sensor voltage	< 0.14 V	Ignition	Run or Crank	72 failures out of 80 samples 1 sample/12.5 ms	DTC Type A 1 trip
Fuel Rail Pressure (FRP) Sensor Circuit High Voltage	P018D	This DTC detects if the fuel pressure sensor circuit is shorted high	FRP sensor voltage	> 4.86 V	Ignition	Run or Crank	72 failures out of 80 samples 1 sample/12.5 ms	DTC Type A 1 trip
Fuel Pump Control Circuit Low Voltage	P0231	This DTC detects if the fuel pump control circuit is shorted to low	Fuel Pump Current	> 14.48A	Ignition OR HS Comm OR	Run or Crank enabled	72 test failures in 80 test samples if Fuel Pump Current <100A	DTC Type A 1 trip

Component/ System	Fault Code	0,5	Malfunction Criteria	Threshold Value	Secondary Parameters	Enable Conditions	Time Required	MIL Illum.
					Fuel Pump Control	enabled		
					AND			
					Ignition Run/Crank Voltage	9V < voltage < 32V		
Fuel Pump Control Circuit High Voltage	P0232	This DTC detects if the fuel pump control circuit is shorted to high	Voltage measured at fuel pump circuit	> 3.86 V	Commanded fuel pump output	0% duty cycle (off)	36 test failures in 40 test samples; 1 sample/12.5ms	DTC Type A 1 trip
					Fuel pump control enable	False	Pass/Fail determination made only once per trip	
					Time that above conditions are met	>=4.0 seconds		
Fuel Pump Control Circuit (Open)	P023F	This DTC detects if the fuel pump control circuit is open	Fuel Pump Current	<=0.5A			72 test failures in 80 test samples; 1 sample/12.5ms	DTC Type A 1 trip
		Ореп	AND		Ignition OR	Run or Crank		
			Fuel Pump Duty Cycle	>20%	HS Comm	enabled		
					OR			
					Fuel Pump Control AND	enabled		
					Ignition Run/Crank Voltage	9V < voltage < 32V		
Fuel System Control Module Enable Contro Circuit	P025A	the fuel pump	(Powertrain Platform Electrical Interface)	≠ Fuel Pump Control Module Enable Control Circuit			80 samples	DTC Type A 1 trip
		control enable circuit	Fuel System Request (\$1ED)		Ignition AND	Run or Crank	1 sample/12.5 ms	
					PPEI Fuel System Request (\$1ED)	valid		

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Parameters	Enable Conditions	Time Required	MIL Illum.
Mechanical Actuator Performance (Functionality)	P059F	Compare commanded shutter position to sensed position	Failure to achieve commanded position	Two (2) consecutive intrusive tests fail to achieve commanded position.	1. Power mode	Run/Crank	Frequency: 1 sample after every shutter movement.	DTC Type B 2 trips
				Intrusive tests are triggered immediately following any failure to achieve a commanded position.			Intrusive test requested if shutter movement is commanded and position feedback differs after 19.5 seconds; otherwise report pass. Duration of intrusive test is shutter movement related (40 to 80 seconds).	
					Shutter Control Ignition Run/Crank Voltage	Enabled 11V < voltage < 32V		
Control Module Read Only Memory (ROM)	P0601	This DTC will be stored if any software or calibration check sum is incorrect	Calculated Checksum (CRC16)	≠ stored checksum for any of the parts (boot, software, application calibration, system calibration)	Ignition OR HS Comm OR Fuel Pump Control	Run or Crank enabled enabled	1 failure if it occurs during the first ROM test of the ignition cycle, otherwise 5 failures Frequency: Runs continuously in the background	A 1 trip

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Parameters	Enable Conditions	Time Required	MIL Illum.
Control Module Not Programmed	P0602	Indicates that the FSCM needs to be programmed	This DTC is set via calibration, when KeMEMD_b_NoStartC	= TRUE			Runs once at power up	DTC Type A 1 trip
			al		Ignition OR	Run or Crank		
					HS Comm	enabled		
					OR			
					Fuel Pump Control	enabled		
Control Module Long Term Memory Reset	P0603	Non-volatile memory checksum error at controller power-up	Checksum at power- up	≠ checksum at power-down			1 failure Frequency: Once at power-up	DTC Type A 1 trip
					Ignition OR	Run or Crank		
					HS Comm	enabled		
					OR			
					Fuel Pump Control	enabled		
Control Module Random Access Memory (RAM)	P0604	Indicates that control module is unable to correctly write and read data to and from RAM	Data read	≠ Data written			1 failure if it occurs during the first RAM test of the ignition cycle, otherwise 5 failures	DTC Type A 1 trip
					Ignition OR	Run or Crank	Frequency:	
					HS Comm	enabled	Runs continuously in the background.	
					OR			
					Fuel Pump Control	enabled		

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Parameters	Enable Conditions	Time Required	MIL Illum.
Control Module Internal Performance 1. Main Processor Configuration Register Test	P0606	This DTC indicates the FSCM has detected an internal processor fault or external watchdog fault (PID 2032 discriminates the	For all I/O configuration register faults:		r drumotoro	Containent	Tests 1 and 2 1 failure Frequency: Continuously (12.5ms)	DTC Type A 1 trip
		source of the fault)	•Register contents	Incorrect value.	Ignition OR	Run or Crank		
					HS Comm	enabled		
					OR			
						enabled		
			2. For Processor Clock Fault: •EE latch flag in EEPROM. OR	0x5A5A	For all I/O configuration register faults: *KeMEMD_b_ProcFltCfgR egEnbl	TRUE	Test 3 3 failures out of 15 samples	
2. Processor clock test			RAM latch flag.	0x5A	2. For Processor Clock Fault: •KeMEMD_b_ProcFltCLKD iagEnbl	TRUE	1 sample/12.5 ms	
3. External watchdog test			3. For External Watchdog Fault: • Software control of fuel pump driver	Control Lost	3. For External Watchdog Fault: •KeFRPD_b_FPExtWDog DiagEnbl 3. For External Watchdog Fault: •Control Module	TRUE		
					ROM(P0601) 3. For External Watchdog Fault: •Control Module RAM(P0604)	not active		

Component/ System	Fault Code	9,	Malfunction Criteria	Threshold Value	Secondary Parameters	Enable Conditions	Time Required	MIL Illum.
Control Module Long Term Memory (EEPROM) Performance	P062F	·	Last EEPROM write	Did not complete			1 test failure	DTC Type A 1 trip
Griormande					Ignition OR HS Comm OR Fuel Pump Control	Run or Crank enabled enabled		
5Volt Reference Circuit (Short High/Low/Out of Range)		Detects continuous short or out of range on the #1 5V sensor reference	Reference voltage	>= 0.5V	Ignition	Run or Crank	15 failures out of 20 samples	DTC Type A 1 trip
		circuit	AND Output	inactive			1 sample/12.5 ms	·
			OR Reference voltage AND	>= 5.5V				
			Output OR	active				
			Reference voltage AND Output	<= 4.5V active				
			OR Reference voltage	> 105% nominal (i.e., 5.25V) OR <95% nominal (i.e., 4.75V)				
Fuel Pump Control	P064A	This DTC detects if					3 failures out of 15	DTC Type
Module - Driver Over- temperature 1		an internal fuel pump driver overtemperature condition exists	Pump Driver Temp	> 150C	Ignition OR	Run or Crank	samples 1 sample/12.5 ms	B 2 trips
		under normal			HS Comm	Enabled		
		operating conditions			OR			
l					Fuel Pump Control	Enabled		

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Parameters	Enable Conditions	Time Required	MIL Illum.
					KeFRPD_b_FPOverTemp DiagEnbl	TRUE		
Ignition 1 Switch Circuit Low Voltage	P2534	This DTC detects if the Ignition1 Switch circuit is shorted to low or open		<= 6 V	Ignition Run/Crank Engine	9V <voltage<32v Running</voltage<32v 	180 failures out of 200 samples 1 sample/25.0 ms	DTC Type A 1 trip
Fuel Pump Flow Performance (rationality)	P2635	This DTC detects degradation in the performance of the SIDI electronically regulated fuel system	Filtered fuel rail pressure error	<= Low Threshold (tabulated function of desired fuel rail pressure and fuel flow rate 15% of requested Target Pressure) OR >= High Threshold (tabulated function of desired fuel rail pressure and fuel flow rate 15% of requested Target Pressure) (See Supporting Tables tab)	1. FRP Circuit Low DTC (P018C) 2. FRP Circuit High DTC (P018D) 3. Fuel Rail Pressure Sensor Performance DTC (P018B) 4. FuelPump Circuit Low DTC (P0231) 5. FuelPump Circuit High DTC (P0232) 6. FuelPump Circuit Open DTC (P023F)	Not active Not active Not active Not active Not active Not active	Filtered fuel rail pressure error Time Constant = 12.5 seconds Frequency: Continuous 12.5 ms loop	DTC Type B 2 trips

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Parameters	Enable Conditions	Time Required	MIL Illum.
					7. Reference Voltage DTC (P0641)	Not active		
					8. Fuel Pump Control Module Driver Over- temperature DTC's (P064A)	Not active		
					9. Control Module Internal Performance DTC (P0606)	Not active		
					10. An ECM fuel control system failure (PPEI \$1ED)	Not occurred		
					11. The Barometric pressure (PPEI \$4C1) signal	Valid (for absolute fuel pressure sensor)	-	
					12. Engine run time	>= 30 seconds	-	
					13. Emissions fuel level (PPEI \$3FB)	Not low	-	
					14. Fuel pump control	Enabled	1	
					15. Fuel pump control state	Normal	-	
					16. Battery Voltage	11V<=voltage=<32V		
					17. Fuel flow rate (See Supporting Tables tab) 18. Fuel Pressure Control System	> 0.047 g/s AND <= Max allowed fuel flow rate as a function of desired rail pressure & Vbatt (Typical values in the range of 11 to 50 g/s) Is not responding to an over-		
					Эуыспі	pressurization due to pressure build during DFCO or a decreasing desired pressure command.		

Component/ System	Fault Code	0,	Malfunction Criteria	Threshold Value	Secondary Parameters	Enable Conditions	Time Required	MIL Illum.
Control Module Communication Bus "A" Off	U0073	Detects that a CAN serial data bus shorted condition has occurred to force the CAN device driver to enter a bus-off state	Bus Status	Off	Power mode	Run/Crank	5 failures out of 5 samples (5 seconds)	DTC Type B 2 trips
Lost Communication With ECM/PCM "A"	U0100	Detects that CAN serial data communication has been lost with the ECM	Message \$0C9	Undetected	 Power mode Ignition Run/Crank Voltage U0073 	Run/Crank 11V <voltage<32v active<="" not="" td=""><td>12 failures out of 12 samples (12 seconds)</td><td>DTC Type B 2 trips</td></voltage<32v>	12 failures out of 12 samples (12 seconds)	DTC Type B 2 trips
Lost Communication With "Actuator"	U0284	Detects loss of communication condition has occurred between ECU and device Active Grill Air Shutter "A" actuator	PWM Message	Undetected	Power mode Ignition Run/Crank Voltage	Run/Crank 11V < voltage < 32V	Frequency: 100ms 150 failures out of 167 samples	DTC Type B 2 trips

Component/ System	0,	Malfunction Criteria	Threshold Value	Secondary Parameters	Enable Conditions	Time Required	MIL Illum.
Fuel Rail Pressure (FRP) Sensor Performance (rationality)		Absolute value of fuel pressure change as sensed during intrusive test.	<= 30 kPa			Frequency: Continuous; 12.5 ms loop. 60 seconds between intrusive tests that pass Intrusive test requested if fuel system is clamped for >= 5 seconds or fuel	DTC Type A 1 trip
				1. FRP Circuit Low DTC (P018C)	Not active	pressure error variance <= typically (0.3 to 0.6) (calculated over a 2.5sec period); otherwise report pass	
				2. FRP Circuit High DTC (P018D) 3. FuelPump Circuit Low DTC (P0231) 4. FuelPump Circuit High	Not active Not active Not active	Duration of intrusive test is fueling related (5 to 12 seconds).	
				DTC (P0232)	Not active	Intrusive test is run when fuel flow is below Max allowed fuel flow rate (Typical values in the range of 11 to 50 g/s)	
				6. Reference Voltage DTC (P0641)	Not active		
				7. Fuel Pump Control Module Driver Over- temperature DTC (P064A)	Not active		
				8. Control Module Internal Performance DTC (P0606)	Not active		
				9. Engine run time	>=5 seconds		

-	0,	Malfunction Criteria	Threshold Value	Secondary Parameters	Enable Conditions	Time Required	MIL Illum.
				10. Emissions fuel level (PPEI \$3FB)	Not low		
				11. Fuel pump control	Enabled		
				12. Fuel pump control state	Normal or FRP rationality control		
				13. Engine fuel flow	> 0.047 g/s		
				14. ECM fuel control system failure (PPEI \$1ED)	Not failed		
(FRP) Sensor	the fuel pressure	FRP sensor voltage	< 0.14 V			72 failures out of 80 samples	DTC Type A
Circuit Low Voltage	sensor circuit is shorted low			Ignition	Run or Crank	1 sample/12.5 ms	1 trip
Fuel Rail Pressure (FRP) Sensor Circuit High Voltage	This DTC detects if the fuel pressure sensor circuit is shorted high	FRP sensor voltage	> 4.86 V			72 failures out of 80 samples 1 sample/12.5 ms	DTC Type A 1 trip
				Ignition	Run or Crank		
Fuel Pump Control Circuit Low Voltage	This DTC detects if the fuel pump control circuit is shorted to low	Fuel Pump Current	> 14.48A	Ignition OR	Run or Crank	72 test failures in 80 test samples if Fuel Pump Current <100A	DTC Type A 1 trip
					anablad		
				HS Comm OR	enabled	1 sample/12.5 ms	
					enabled 9V < voltage < 32V	ι σαπιμισ/ 12.3 Πιδ	

Component/ System	0,	Malfunction Criteria	Threshold Value	Secondary Parameters	Enable Conditions	Time Required	MIL Illum.
Fuel Pump Control Circuit High Voltage	This DTC detects if the fuel pump control circuit is shorted to high	Voltage measured at fuel pump circuit	> 3.86 V	Commanded fuel pump output	0% duty cycle (off)	36 test failures in 40 test samples; 1 sample/12.5ms	DTC Type A 1 trip
				Fuel pump control enable	False	Pass/Fail determination made only once per trip	
				Time that above conditions are met	>=4.0 seconds		
Fuel Pump Control Circuit (Open)	This DTC detects if the fuel pump control circuit is open	Fuel Pump Current	<=0.5A			72 test failures in 80 test samples; 1 sample/12.5ms	DTC Type A 1 trip
		AND		Ignition OR	Run or Crank		
		Fuel Pump Duty Cycle	>20%	HS Comm OR	enabled		
				Fuel Pump Control AND	enabled		
				Ignition Run/Crank Voltage	9V < voltage < 32V		
Fuel System Control Module Enable Control Circuit	This DTC detects if there is a fault in the fuel pump control enable circuit	PPEI (PPEI (Powertrain Platform Electrical Interface) Fuel System Reguest (\$1ED)	≠ Fuel Pump Control Module Enable Control Circuit			72 failures out of 80 samples 1 sample/12.5 ms	DTC Type A 1 trip
Circuit	eriable circuit	Trequest (\$TED)	Gircuit	Ignition AND	Run or Crank	1 Sample/12.5 ms	
				PPEI Fuel System Request (\$1ED)	valid		
Control Module Read Only Memory (ROM)	This DTC will be stored if any software or calibration check sum is incorrect	Calculated Checksum (CRC16)	≠ stored checksum for any of the parts (boot, software, application calibration, system calibration)		Run or Crank	1 failure if it occurs during the first ROM test of the ignition cycle, otherwise 5 failures	DTC Type A 1 trip
				OR		Frequency: Runs continuously in the background	

Component/ System	Fault Code	0,	Malfunction Criteria	Threshold Value	Secondary Parameters	Enable Conditions	Time Required	MIL Illum.
					HS Comm OR Fuel Pump Control	enabled enabled		
Control Module Not Programmed	P0602	Indicates that the FSCM needs to be programmed	This DTC is set via calibration, when KeMEMD_b_NoStartCal		Ignition OR HS Comm OR Fuel Pump Control	Run or Crank enabled enabled	Runs once at power up	DTC Type A 1 trip
Control Module Long Term Memory Reset	P0603	Non-volatile memory checksum error at controller power-up	Checksum at power-up	≠ checksum at power-down	Ignition OR HS Comm OR Fuel Pump Control	Run or Crank enabled enabled	1 failure Frequency: Once at power-up	DTC Type A 1 trip
Control Module Random Access Memory (RAM)	P0604	Indicates that control module is unable to correctly write and read data to and from RAM	Data read	≠ Data written	Ignition	Run or Crank	1 failure if it occurs during the first RAM test of the ignition cycle, otherwise 5 failures	DTC Type A 1 trip
					OR HS Comm OR Fuel Pump Control	enabled enabled	Frequency: Runs continuously in the background.	

		Monitor Strategy Description		Threshold Value		Enable Conditions	Time Required	MIL Illum.
Control Module Internal Performance 1. Main Processor Configuration Register Test		This DTC indicates the FSCM has detected an internal processor fault or external watchdog fault (PID 2032 discriminates the source of the fault)	For all I/O configuration register faults:				Tests 1 and 2 1 failure Frequency: Continuously (12.5ms)	DTC Type A 1 trip
			•Register contents	Incorrect value.	Ignition OR	Run or Crank		
					HS Comm OR	enabled		
					Fuel Pump Control	enabled		
				0x5A5A	For all I/O configuration register faults: KeMEMD_b_ProcFltCfgR	TRUE	Test 3 3 failures out of 15 samples	
Processor clock test			OR		egEnbl		1 sample/12.5 ms	
			RAM latch flag.	0x5A	2. For Processor Clock Fault: •KeMEMD_b_ProcFltCLKD iagEnbl	TRUE		
3. External watchdog test			3. For External Watchdog Fault:Software control of fuel pump driver	Control Lost	3. For External Watchdog Fault: •KeFRPD_b_FPExtWDogD iagEnbl			
					3. For External Watchdog Fault: •Control Module ROM(P0601)	TRUE		
				3. For External Watchdog Fault: •Control Module RAM(P0604)	not active			

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Parameters	Enable Conditions	Time Required	MIL Illum.
Control Module Long Term Memory (EEPROM)		Indicates that the NVM Error flag has not been cleared	Last EEPROM write	Did not complete			1 test failure Once on controller power-up	DTC Type A 1 trip
Performance					Ignition OR	Run or Crank		
					HS Comm OR	enabled		
					Fuel Pump Control	enabled		
5Volt Reference Circuit (Short High/Low/Out of Range)	P0641	Detects continuous short or out of range on the #1 5V sensor reference circuit	Reference voltage AND Output OR Reference voltage	>= 0.5V inactive >= 5.5V active <= 4.5V active > 105% nominal (i.e., 5.25V) OR <95% nominal (i.e., 4.75V)	Ignition	Run or Crank	15 failures out of 20 samples 1 sample/12.5 ms	DTC Type A 1 trip
Fuel Pump Control Module - Driver Over-temperature 1		This DTC detects if an internal fuel pump driver overtemperature condition exists under normal operating conditions	Pump Driver Temp	> 150C	Ignition OR HS Comm OR Fuel Pump Control	Run or Crank Enabled Enabled	3 failures out of 15 samples 1 sample/12.5 ms	DTC Type B 2 trips

Component/ System		• • • • • • • • • • • • • • • • • • • •	Malfunction Criteria	Threshold Value	Secondary Parameters	Enable Conditions	Time Required	MIL Illum.
Ignition 1 Switch Circuit Low Voltage		This DTC detects if the Ignition1 Switch circuit is shorted to low or open	Ignition 1 voltage	<= 6 V		TRUE 9V <voltage<32v Running</voltage<32v 	180 failures out of 200 samples 1 sample/25.0 ms	DTC Type A 1 trip
Fuel Pump Flow Performance (rationality)	P2635	This DTC detects degradation in the performance of the SIDI electronically regulated fuel system		<= Low Threshold (tabulated function of desired fuel rail pressure and fuel flow rate 15% of requested Target Pressure) OR >= High Threshold (tabulated function of desired fuel rail pressure and fuel flow rate 15% of requested Target Pressure) (See Supporting Tables tab)	2. FRP Circuit High DTC (P018D) 2. FRP Circuit High DTC (P018D)	Not active Not active	Filtered fuel rail pressure error Time Constant = 12.5 seconds Frequency: Continuous 12.5 ms loop	DTC Type B 2 trips

Component/ System	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Parameters	Enable Conditions	Time Required	MIL Illum.
				3. Fuel Rail Pressure Sensor Performance DTC (P018B)	Not active		
				4. FuelPump Circuit Low DTC (P0231)	Not active		
				5. FuelPump Circuit High DTC (P0232)	Not active		
				6. FuelPump Circuit Open DTC (P023F)	Not active		
				7. Reference Voltage DTC (P0641)	Not active		
				8. Fuel Pump Control Module Driver Over- temperature DTC's (P064A)	Not active		
				9. Control Module Internal Performance DTC (P0606)	Not active		
				10. An ECM fuel control system failure (PPEI \$1ED)	Not occurred		
					Valid (for absolute fuel pressure sensor)		
				12. Engine run time	>= 30 seconds		
				13. Emissions fuel level (PPEI \$3FB)	Not low		
				14. Fuel pump control	Enabled		
				15. Fuel pump control state	Normal		
				16. Battery Voltage	11V<=voltage=<32V		

		Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Parameters	Enable Conditions	Time Required	MIL Illum.
					17. Fuel flow rate (See Supporting Tables tab)	> 0.047 g/s AND <= Max allowed fuel flow rate as a function of desired rail pressure & Vbatt (Typical values in the range of 11 to 50 g/s)		
					18. Fuel Pressure Control System	Is not responding to an over-pressurization due to pressure build during DFCO or a decreasing desired pressure command.		
Control Module Communication Bus "A" Off		Detects that a CAN serial data bus shorted condition has occurred to force the CAN device driver to enter a bus-off state	Bus Status	Off	Power mode	Run/Crank	5 failures out of 5 samples (5 seconds)	DTC Type B 2 trips
Lost Communication With ECM/PCM "A"	U0100	Detects that CAN serial data communication has been lost with the ECM	Message \$0C9	Undetected	1. Power mode	Run/Crank	12 failures out of 12 samples (12 seconds)	DTC Type B 2 trips
					2. Ignition Run/Crank Voltage 3. U0073	11V <voltage<32v not active</voltage<32v 		

Fuel Pump Performance Maximum Fuel Flow map (grams / s)

X-axis= Desired Fuel Pressure (kiloPascals)

Y-axis= Battery voltage (volts)

	200	250	300	350	400	450	500	550	600
4.5	13.89844	13.89844	13.89844	13.89844	13.89844	13.89844	13.89844	13.898438	13.89844
6	13.89844	13.89844	13.89844	13.89844	13.89844	13.89844	13.89844	13.898438	13.89844
7.5	13.89844	13.89844	13.89844	13.89844	13.89844	13.89844	13.89844	13.898438	13.89844
9	13.89844	13.89844	13.89844	13.89844	13.89844	13.89844	13.89844	13.898438	13.89844
10.5	13.89844	13.89844	13.89844	13.89844	13.89844	13.89844	13.89844	13.898438	13.89844
12	13.89844	13.89844	13.89844	13.89844	13.89844	13.89844	13.89844	13.898438	13.89844
13.5	13.89844	13.89844	13.89844	13.89844	13.89844	13.89844	13.89844	13.898438	13.47656
15	13.89844	13.89844	13.89844	13.89844	13.89844	13.89844	13.89844	13.898438	13.89844
16.5	13.89844	13.89844	13.89844	13.89844	13.89844	13.89844	13.89844	13.898438	13.89844
18	13.89844	13.89844	13.89844	13.89844	13.89844	13.89844	13.89844	13.898438	13.89844
19.5	13.89844	13.89844	13.89844	13.89844	13.89844	13.89844	13.89844	13.898438	13.89844
21	13.89844	13.89844	13.89844	13.89844	13.89844	13.89844	13.89844	13.898438	13.89844
22.5	13.89844	13.89844	13.89844	13.89844	13.89844	13.89844	13.89844	13.898438	13.89844
24	13.89844	13.89844	13.89844	13.89844	13.89844	13.89844	13.89844	13.898438	13.89844
25.5	13.89844	13.89844	13.89844	13.89844	13.89844	13.89844	13.89844	13.898438	13.89844
27	13.89844	13.89844	13.89844	13.89844	13.89844	13.89844	13.89844	13.898438	13.89844
28.5	13.89844	13.89844	13.89844	13.89844	13.89844	13.89844	13.89844	13.898438	13.89844

P2635 Fuel Pump Performance Filtered Pressure Error Fault Threshold High map (kiloPascals)

X-axis= Target Fuel Pressure (kiloPascals)

	200	250	300	350	400	450	500	550	600
0	30	37.5	45	52.5	60	67.5	75	82.5	90
1.5	30	37.5	45	52.5	60	67.5	75	82.5	90
3	30	37.5	45	52.5	60	67.5	75	82.5	90
4.5	30	37.5	45	52.5	60	67.5	75	82.5	90
6	30	37.5	45	52.5	60	67.5	75	82.5	90
7.5	30	37.5	45	52.5	60	67.5	75	82.5	90
9	30	37.5	45	52.5	60	67.5	75	82.5	90
10.5	30	37.5	45	52.5	60	67.5	75	82.5	90
12	30	37.5	45	52.5	60	67.5	75	82.5	90
13.5	30	37.5	45	52.5	60	67.5	75	82.5	90
15	30	37.5	45	52.5	60	67.5	75	82.5	90
16.5	30	37.5	45	52.5	60	67.5	75	82.5	90
18	30	37.5	45	52.5	60	67.5	75	82.5	90
19.5	30	37.5	45	52.5	60	67.5	75	82.5	90
21	30	37.5	45	52.5	60	67.5	75	82.5	90
22.5	30	37.5	45	52.5	60	67.5	75	82.5	90
24	30	37.5	45	52.5	60	67.5	75	82.5	90
25.5	30	37.5	45	52.5	60	67.5	75	82.5	90
27	30	37.5	45	52.5	60	67.5	75	82.5	90
28.5	30	37.5	45	52.5	60	67.5	75	82.5	90
30	30	37.5	45	52.5	60	67.5	75	82.5	90
31.5	30	37.5	45	52.5	60	67.5	75	82.5	90
33	30	37.5	45	52.5	60	67.5	75	82.5	90
34.5	30	37.5	45	52.5	60	67.5	75	82.5	90
36	30	37.5	45	52.5	60	67.5	75	82.5	90
37.5	30	37.5	45	52.5	60	67.5	75	82.5	90
39	30	37.5	45	52.5	60	67.5	75	82.5	90
40.5	30	37.5	45	52.5	60	67.5	75	82.5	90
42	30	37.5	45	52.5	60	67.5	75	82.5	90
43.5	30	37.5	45	52.5	60	67.5	75	82.5	90
45	30	37.5	45	52.5	60	67.5	75	82.5	90
46.5	30	37.5	45	52.5	60	67.5	75	82.5	90
48	30	37.5	45	52.5	60	67.5	75	82.5	90

P2635

Fuel Pump Performance Filtered Pressure Error Fault RePass Threshold High map (kiloPascals)

X-axis= Target Fuel Pressure (kiloPascals)

		iailis / 3 j							
Г	200	250	300	350	400	450	500	550	600
0	25.5	31.875	38.25	44.625	51	57.375	63.75	70.125	76.5
1.5	25.5	31.875	38.25	44.625	51	57.375	63.75	70.125	76.5
3	25.5	31.875	38.25	44.625	51	57.375	63.75	70.125	76.5
4.5	25.5	31.875	38.25	44.625	51	57.375	63.75	70.125	76.5
6	25.5	31.875	38.25	44.625	51	57.375	63.75	70.125	76.5
7.5	25.5	31.875	38.25	44.625	51	57.375	63.75	70.125	76.5
9	25.5	31.875	38.25	44.625	51	57.375	63.75	70.125	76.5
10.5	25.5	31.875	38.25	44.625	51	57.375	63.75	70.125	76.5
12	25.5	31.875	38.25	44.625	51	57.375	63.75	70.125	76.5
13.5	25.5	31.875	38.25	44.625	51	57.375	63.75	70.125	76.5
15	25.5	31.875	38.25	44.625	51	57.375	63.75	70.125	76.5
16.5	25.5	31.875	38.25	44.625	51	57.375	63.75	70.125	76.5
18	25.5	31.875	38.25	44.625	51	57.375	63.75	70.125	76.5
19.5	25.5	31.875	38.25	44.625	51	57.375	63.75	70.125	76.5
21	25.5	31.875	38.25	44.625	51	57.375	63.75	70.125	76.5
22.5	25.5	31.875	38.25	44.625	51	57.375	63.75	70.125	76.5
24	25.5	31.875	38.25	44.625	51	57.375	63.75	70.125	76.5
25.5	25.5	31.875	38.25	44.625	51	57.375	63.75	70.125	76.5
27	25.5	31.875	38.25	44.625	51	57.375	63.75	70.125	76.5
28.5	25.5	31.875	38.25	44.625	51	57.375	63.75	70.125	76.5
30	25.5	31.875	38.25	44.625	51	57.375	63.75	70.125	76.5
31.5	25.5	31.875	38.25	44.625	51	57.375	63.75	70.125	76.5
33	25.5	31.875	38.25	44.625	51	57.375	63.75	70.125	76.5
34.5	25.5	31.875	38.25	44.625	51	57.375	63.75	70.125	76.5
36	25.5	31.875	38.25	44.625	51	57.375	63.75	70.125	76.5
37.5	25.5	31.875	38.25	44.625	51	57.375	63.75	70.125	76.5
39	25.5	31.875	38.25	44.625	51	57.375	63.75	70.125	76.5
40.5	25.5	31.875	38.25	44.625	51	57.375	63.75	70.125	76.5
42	25.5	31.875	38.25	44.625	51	57.375	63.75	70.125	76.5
43.5	25.5	31.875	38.25	44.625	51	57.375	63.75	70.125	76.5
45	25.5	31.875	38.25	44.625	51	57.375	63.75	70.125	76.5
46.5	25.5	31.875	38.25	44.625	51	57.375	63.75	70.125	76.5
48	25.5	31.875	38.25	44.625	51	57.375	63.75	70.125	76.5

P2635

Fuel Pump Performance Filtered Pressure Error Fault Threshold Low map (kiloPascals)

X-axis= Target Fuel Pressure (kiloPascals)

1.5	1-4213-14	el Flow (g	manis / 3 /							
1.5 -1445 -125 -102.5 -81.25 -60 -67.5 -75 -82.5 -90 3 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 4.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 6 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 7.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 10.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 10.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 11.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 13.5 -30 -37.5 -45 -52.5 -60		200	250	300	350	400	450	500	550	600
3 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 4.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 6 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 7.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 9 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 10.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 11.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90	0	-260	-210	-160	-110	-60	-67.5	-75	-82.5	-90
4.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 6 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 7.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 10.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 10.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 12 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 13.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 15 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 18 -30 -37.5 -45 -52.5 -60 <td< td=""><td>1.5</td><td>-145</td><td>-125</td><td>-102.5</td><td>-81.25</td><td>-60</td><td>-67.5</td><td>-75</td><td>-82.5</td><td>-90</td></td<>	1.5	-145	-125	-102.5	-81.25	-60	-67.5	-75	-82.5	-90
6 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 7.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 9 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 10.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 12 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 13.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 15 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 16.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 19.5 -30 -37.5 -45 -52.5 -60 <td< td=""><td></td><td>-30</td><td>-37.5</td><td>-45</td><td>-52.5</td><td>-60</td><td>-67.5</td><td></td><td>-82.5</td><td>-90</td></td<>		-30	-37.5	-45	-52.5	-60	-67.5		-82.5	-90
7.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 9 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 10.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 13.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 15 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 16.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 16.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 18 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 19.5 -30 -37.5 -45 -52.5 -60	4.5	-30	-37.5	-45	-52.5	-60	-67.5	-75	-82.5	-90
9	6	-30	-37.5	-45	-52.5	-60	-67.5	-75	-82.5	-90
10.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 12 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 13.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 15 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 16.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 18 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 19.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 21 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 22.5 -30 -37.5 -45 -52.5 -60	7.5	-30	-37.5	-45	-52.5	-60	-67.5	-75	-82.5	-90
12 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 13.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 15 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 16.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 18 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 19.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 21 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 22.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 25.5 -30 -37.5 -45 -52.5 -60	9	-30	-37.5	-45	-52.5	-60	-67.5	-75	-82.5	-90
13.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 15 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 16.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 18 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 19.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 21 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 22.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 24 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 25.5 -30 -37.5 -45 -52.5 -60	10.5	-30	-37.5	-45	-52.5	-60	-67.5	-75	-82.5	-90
15 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 16.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 18 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 19.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 21 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 22.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 22.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 25.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 27 -30 -37.5 -45 -52.5 -60	12	-30	-37.5	-45	-52.5	-60	-67.5	-75	-82.5	-90
16.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 18 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 19.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 21 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 22.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 24 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 25.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 27 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 28.5 -30 -37.5 -45 -52.5 -60	13.5	-30	-37.5	-45	-52.5	-60	-67.5	-75	-82.5	-90
18 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 19.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 21 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 22.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 24 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 25.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 27 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 28.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 31.5 -30 -37.5 -45 -52.5 -60		-30		-45		-60	-67.5		-82.5	-90
19.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 21 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 22.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 24 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 25.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 27 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 28.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 30 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 31.5 -30 -37.5 -45 -52.5 -60	16.5	-30	-37.5	-45	-52.5	-60	-67.5	-75	-82.5	-90
21 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 22.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 24 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 25.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 27 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 28.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 30 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 31.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 33 -30 -37.5 -45 -52.5 -60 <t< td=""><td>18</td><td>-30</td><td>-37.5</td><td>-45</td><td>-52.5</td><td>-60</td><td>-67.5</td><td>-75</td><td>-82.5</td><td>-90</td></t<>	18	-30	-37.5	-45	-52.5	-60	-67.5	-75	-82.5	-90
22.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 24 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 25.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 27 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 28.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 30 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 31.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 33.1.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 34.5 -30 -37.5 -45 -52.5 -60	19.5	-30	-37.5	-45	-52.5	-60	-67.5	-75	-82.5	-90
24 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 25.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 27 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 28.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 30 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 31.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 33.1.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 34.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 37.5 -45 -52.5 -60 -67.5 -75	21	-30	-37.5	-45	-52.5	-60	-67.5	-75	-82.5	-90
25.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 27 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 28.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 30 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 31.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 33 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 34.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 36 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 37.5 -30 -37.5 -45 -52.5 -60	22.5	-30	-37.5	-45	-52.5	-60	-67.5	-75	-82.5	-90
27 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 28.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 30 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 31.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 33 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 34.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 36 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 37.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 39 -30 -37.5 -45 -52.5 -60 <t< td=""><td>24</td><td>-30</td><td>-37.5</td><td>-45</td><td>-52.5</td><td>-60</td><td>-67.5</td><td>-75</td><td>-82.5</td><td>-90</td></t<>	24	-30	-37.5	-45	-52.5	-60	-67.5	-75	-82.5	-90
28.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 30 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 31.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 33 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 34.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 36 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 37.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 39 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 40.5 -30 -37.5 -45 -52.5 -60	25.5	-30	-37.5	-45	-52.5	-60	-67.5	-75	-82.5	-90
30 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 31.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 33 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 34.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 36 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 37.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 39 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 40.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 42 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 43.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 45 -30 -37.5 -45 -52.5 -60	27	-30	-37.5	-45	-52.5	-60	-67.5	-75	-82.5	-90
31.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 33 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 34.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 36 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 37.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 39 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 40.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 42 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 43.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 45 -30 -37.5 -45	28.5	-30	-37.5	-45	-52.5	-60	-67.5	-75	-82.5	-90
33 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 34.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 36 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 37.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 39 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 40.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 42 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 43.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 45 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 46.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 46.5 -30 -37.5 -45 -52.5 -60	30	-30	-37.5	-45	-52.5	-60	-67.5	-75	-82.5	-90
34.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 36 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 37.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 39 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 40.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 42 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 43.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 45 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 46.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 46.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90	31.5	-30	-37.5	-45	-52.5	-60	-67.5	-75	-82.5	-90
36 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 37.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 39 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 40.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 42 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 43.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 45 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 46.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 46.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90	33	-30	-37.5	-45	-52.5	-60	-67.5	-75	-82.5	-90
37.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 39 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 40.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 42 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 43.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 45 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 46.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 46.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90		-30	-37.5	-45		-60	-67.5		-82.5	-90
39 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 40.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 42 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 43.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 45 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 46.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 46.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90										-90
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42 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 43.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 45 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 46.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90		-30	-37.5	-45		-60	-67.5		-82.5	-90
43.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 45 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 46.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90		-30	-37.5	-45	-52.5	-60	-67.5	-75	-82.5	-90
45 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90 46.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90	42	-30	-37.5	-45	-52.5	-60	-67.5		-82.5	-90
46.5 -30 -37.5 -45 -52.5 -60 -67.5 -75 -82.5 -90	43.5	-30	-37.5	-45	-52.5	-60	-67.5	-75	-82.5	-90
	45	-30		-45	-52.5	-60	-67.5		-82.5	-90
40 20 27 45 52 50 67 5 75 00 5										-90
40 -30 -37.5 -45 -32.5 -60 -67.5 -75 -82.5 -90	48	-30	-37.5	-45	-52.5	-60	-67.5	-75	-82.5	-90

P2635

Fuel Pump Performance Filtered Pressure Error Fault RePass Threshold Low map (kiloPascals)

X-axis= Target Fuel Pressure (kiloPascals)

200 250 300 0 -221 -178.5 -136 1.5 -123.25 -106.25 -87.125 -87.125 3 -25.5 -31.875 -38.25 4.5 -25.5 -31.875 -38.25 6 -25.5 -31.875 -38.25 7.5 -25.5 -31.875 -38.25	350 -93.5 -69.0625 -44.625 -44.625 -44.625	400 -51 -51 -51 -51	450 -57.375 -57.375 -57.375 -57.375	500 -63.75 -63.75 -63.75 -63.75	550 -70.125 -70.125 -70.125	600 -76.5 -76.5 -76.5
1.5 -123.25 -106.25 -87.125 -87.125 3 -25.5 -31.875 -38.25 4.5 -25.5 -31.875 -38.25 6 -25.5 -31.875 -38.25	-69.0625 -44.625 -44.625 -44.625	-51 -51 -51	-57.375 -57.375	-63.75 -63.75	-70.125 -70.125	-76.5
3 -25.5 -31.875 -38.25 4.5 -25.5 -31.875 -38.25 6 -25.5 -31.875 -38.25	-44.625 -44.625 -44.625	-51 -51	-57.375	-63.75	-70.125	
4.5 -25.5 -31.875 -38.25 6 -25.5 -31.875 -38.25	-44.625 -44.625	-51				76.5
6 -25.5 -31.875 -38.25	-44.625		-57.375	-63 75		-70.5
		-51		-03.73	-70.125	-76.5
7.5 -25.5 -31.875 -38.25	-44.625		-57.375	-63.75	-70.125	-76.5
		-51	-57.375	-63.75	-70.125	-76.5
9 -25.5 -31.875 -38.25	-44.625	-51	-57.375	-63.75	-70.125	-76.5
10.5 -25.5 -31.875 -38.25	-44.625	-51	-57.375	-63.75	-70.125	-76.5
12 -25.5 -31.875 -38.25	-44.625	-51	-57.375	-63.75	-70.125	-76.5
13.5 -25.5 -31.875 -38.25	-44.625	-51	-57.375	-63.75	-70.125	-76.5
15 -25.5 -31.875 -38.25	-44.625	-51	-57.375	-63.75	-70.125	-76.5
16.5 -25.5 -31.875 -38.25	-44.625	-51	-57.375	-63.75	-70.125	-76.5
18 -25.5 -31.875 -38.25	-44.625	-51	-57.375	-63.75	-70.125	-76.5
19.5 -25.5 -31.875 -38.25	-44.625	-51	-57.375	-63.75	-70.125	-76.5
21 -25.5 -31.875 -38.25	-44.625	-51	-57.375	-63.75	-70.125	-76.5
22.5 -25.5 -31.875 -38.25	-44.625	-51	-57.375	-63.75	-70.125	-76.5
24 -25.5 -31.875 -38.25	-44.625	-51	-57.375	-63.75	-70.125	-76.5
25.5 -25.5 -31.875 -38.25	-44.625	-51	-57.375	-63.75	-70.125	-76.5
27 -25.5 -31.875 -38.25	-44.625	-51	-57.375	-63.75	-70.125	-76.5
28.5 -25.5 -31.875 -38.25	-44.625	-51	-57.375	-63.75	-70.125	-76.5
30 -25.5 -31.875 -38.25	-44.625	-51	-57.375	-63.75	-70.125	-76.5
31.5 -25.5 -31.875 -38.25	-44.625	-51	-57.375	-63.75	-70.125	-76.5
33 -25.5 -31.875 -38.25	-44.625	-51	-57.375	-63.75	-70.125	-76.5
34.5 -25.5 -31.875 -38.25	-44.625	-51	-57.375	-63.75	-70.125	-76.5
36 -25.5 -31.875 -38.25	-44.625	-51	-57.375	-63.75	-70.125	-76.5
37.5 -25.5 -31.875 -38.25	-44.625	-51	-57.375	-63.75	-70.125	-76.5
39 -25.5 -31.875 -38.25	-44.625	-51	-57.375	-63.75	-70.125	-76.5
40.5 -25.5 -31.875 -38.25	-44.625	-51	-57.375	-63.75	-70.125	-76.5
42 -25.5 -31.875 -38.25	-44.625	-51	-57.375	-63.75	-70.125	-76.5
43.5 -25.5 -31.875 -38.25	-44.625	-51	-57.375	-63.75	-70.125	-76.5
45 -25.5 -31.875 -38.25	-44.625	-51	-57.375	-63.75	-70.125	-76.5
46.5 -25.5 -31.875 -38.25	-44.625	-51	-57.375	-63.75	-70.125	-76.5
48 -25.5 -31.875 -38.25	-44.625	-51	-57.375	-63.75	-70.125	-76.5