		Monitor						
Component/	Fault		Malfunction	Threshold	Secondary	Enable	Time	MIL
System	Code	Description	Criteria	Value	Parameters	Conditions	Required	Illumination
uel Rail	P018B	This DTC	Absolute value of fuel	<= 30 kPa			Frequency:	DTC Type A
ressure (FRP)		detects a fuel	pressure change as				Continuous; 12.5	1 trip
ensor			sensed during intrusive				ms loop.	
erformance		response stuck	test.				60 seconds	
ationality)		within the normal					between intrusive	
		operating range				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	
					1. FRP Circuit Low DTC		pass	
					(P018C)	Not active		
					2. FRP Circuit High DTC			
					(P018D)	Not active		
					3. FuelPump Circuit Low DTC (P0231)		Duration of intrusive	:
					, , ,		test is fueling	
							related (5 to 12	
						Not active	seconds).	
					4. FuelPump Circuit High DTC	Not active	,	
					(P0232)			
					5. FuelPump Circuit Open DTC	Not active	Intrusive test is run	
					(P023F)		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	Not active		
				Over-temperature DTC (P064A)				

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Parameters	Enable Conditions	Time Required	MIL Illumination
<u>-</u>					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 13. Engine fuel flow 14. ECM fuel control system failure (PPEI \$1ED)	Not active >=5 seconds Not low Enabled Normal or FRP rationality control > 0.047 g/s Not failed		
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			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	P0231	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
					Ignition power mode OR Fuel Pump Control AND Ignition Run/Crank Voltage	Accessory enabled 9V < voltage < 32V	1 sample/12.5 ms	

		Monitor		1				
Component/ System	Fault Code	Strategy Description	Malfunction Criteria	Threshold Value	Secondary Parameters	Enable Conditions	Time Required	MIL Illumination
Fuel Pump Control Circuit High Voltage	P0232	This DTC detects if the fuel pump control circuit is shorted to high	Voltage measured at fuel	> 3.86 V	Commanded fuel pump output	0% duty cycle (off)		DTC Type A 1 trip
		to mgm			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
			AND		Ignition OR	Run or Crank		
			Fuel Pump Duty Cycle	>20%	Ignition power mode OR	Accessory		
					Fuel Pump Control AND	enabled		
					Ignition Run/Crank Voltage	9V < voltage < 32V		
Fuel System Control Module Enable Control	P025A		PPEI (PPEI (Powertrain Platform Electrical Interface) Fuel System	≠ Fuel Pump Control Module Enable Control Circuit			72 failures out of 80 samples	DTC Type A 1 trip
Circuit		pump control enable circuit	Request (\$1ED)				1 sample/12.5 ms	
					Ignition AND	Run or Crank		
					PPEI Fuel System Request (\$1ED)	valid		
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)			1 failure if it occurs during the first ROM test of the ignition cycle, otherwise 5 failures	DTC Type A 1 trip
					Ignition	Run or Crank		

		Monitor						
Component/	Fault	Strategy	Malfunction	Threshold	Secondary	Enable	Time	MIL
System	Code	Description	Criteria	Value	Parameters	Conditions	Required	Illumination
-,					OR			
					OK		Frequency:	
							Runs continuously	
							in the background	
					Ignition power mode	Accessory	in the background	
					OR	Accessory		
					Fuel Pump Control	enabled		
Control Module	P0602	Indicates that the	This DTC is set via		r der r ding deride.	01140104	Runs once at power	DTC Type A
Not Programmed	. 0002	FSCM needs to	calibration, when				up	1 trip
		be programmed	KeMEMD_b_NoStartCal	= TRUE			- F	p
		programmou			Ignition	Run or Crank		
					OR	Train or Oranic		
					Ignition power mode	Accessory		
					OR	, 1000000.		
					Fuel Pump Control	enabled		
Control Module	P0603	Non-volatile	Checksum at power-up	≠ checksum at	·			DTC Type A
Long Term		memory	· ·	power-down			1 failure	1 trip
Memory Reset		checksum error						
		at controller					Frequency:	
		power-up					Once at power-up	
					Ignition	Run or Crank		
					OR			
					Ignition power mode	Accessory		
					OR			
					Fuel Pump Control	enabled		
Control Module	P0604	Indicates that	Data read	≠ Data written			1 failure if it occurs	DTC Type A
Random Access		control module is					during the first RAM	1 trip
Memory (RAM)		unable to					test of the ignition	
		correctly write					cycle, otherwise 5	
		and read data to					failures	
		and from RAM						
					Ignition	Run or Crank	_	
					OR		Frequency:	
					Ignition power mode	Accessory	Runs continuously	
							in the background.	
					OR	l		
					Fuel Pump Control	enabled		

	1	Monitor						1
Component/	Fault	Strategy	Malfunction	Threshold	Secondary	Enable	Time	MIL
System	Code	Description	Criteria	Value	Parameters	Conditions	Required	Illumination
Control Module	P0606	This DTC					Tests 1 and 2	DTC Type A
Internal		indicates the					1 failure	1 trip
Performance		FSCM has					Frequency:	
		detected an					Continuously	
1. Main		internal	1. For all I/O configuration				(12.5ms)	
Processor		processor fault	register faults:					
Configuration		or external						
Register Test		watchdog fault						
		(PID 2032						
	sourc	discriminates the source of the	•Register contents	Incorrect value.	Ignition OR	Run or Crank		
		fault)			Ignition power mode OR	Accessory		
					Fuel Pump Control	enabled		
			2. For Processor Clock		1. For all I/O configuration register	01140104	Test 3	
			Fault: •EE		faults:		3 failures out of 15	
			latch flag in EEPROM.	0x5A5A	•KeMEMD_b_ProcFltCfgRegEnbl	TRUE	samples	
2. Processor			OR					
clock test							1 sample/12.5 ms	
			RAM latch flag.	0x5A	2. For Processor Clock Fault:			
					•KeMEMD_b_ProcFltCLKDiagEnbl	TRUE		
3. External			3. For External Watchdog		3. For External Watchdog Fault:			
watchdog test			Fault:		KeFRPD_b_FPExtWDogDiagEnbl			
			 Software control of fuel 	Control Lost				
			pump driver			TRUE		
					3. For External Watchdog Fault:			
					•Control Module ROM(P0601)			
						not active		
					3. For External Watchdog Fault:			
					•Control Module RAM(P0604)			
						not active		
Control Module	P062F		Last EEPROM write	Did not complete			1 test failure	DTC Type A
Long Term		NVM Error flag					Once on controller	1 trip
Memory (EEPROM)		has not been					power-up	
` '		cleared			Impition	Dun or Cronk		
Performance					Ignition	Run or Crank		
					OR	A coccoon		
					Ignition power mode OR	Accessory		
1	1	I	I	I	JOK	1	1	I

Component/	Fault	Monitor Strategy	Malfunction	Threshold	Secondary	Enable	Time	MIL
System	Code	Description	Criteria	Value	Parameters	Conditions	Required	Illumination
					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			Ignition	Run or Crank	15 failures out of 20 samples	DTC Type A 1 trip
	sensor reference circuit	Reference voltage AND Output	>= 0.5V inactive			1 sample/12.5 ms		
			OR Reference voltage AND	>= 5.5V				
			Output OR Reference voltage	active				_
			AND Output	active				
			OR Reference voltage	> 105% nominal (i.e., 5.25V) OR <95% nominal (i.e., 4.75V)				
Fuel Pump Control Module - Driver Over-	P064A	This DTC detects if an internal fuel					3 failures out of 15 samples	DTC Type B 2 trips
temperature 1		pump driver overtemperature condition exists under normal operating conditions	Pump Driver Temp	> 150C	Ignition OR Ignition power mode OR Fuel Pump Control KeFRPD_b_FPOverTempDiagEnbl Ignition Run/Crank	Run or Crank Accessory Enabled TRUE 9V <voltage<32v< td=""><td>1 sample/12.5 ms</td><td></td></voltage<32v<>	1 sample/12.5 ms	
Ignition 1 Switch Circuit Low Voltage	P2534	detects if the Ignition1 Switch circuit is shorted	Ignition 1 voltage	<= 6 V	Engine	Running	180 failures out of 200 samples	DTC Type A 1 trip
Voltage								200 samples 1 sample/25.0 ms

Component/	Fault	Monitor Strategy	Malfunction	Threshold	Secondary	Enable	Time	MIL
System	Code	Description	Criteria			Conditions	Required	Illumination
Ignition 1 Switch Circuit High Voltage		Detects if the Ignition1 Switch circuit is shorted to vehicle supply voltage	Ignition 1 voltage	> 11.7 V		Off	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 electronic return- less fuel system	Filtered fuel rail pressure error	<= Low Threshold (continuously calculated function of desired fuel rail pressure and actual fuel flow rate) OR >= High Threshold (continuosly calculated function of desired fuel rail pressure and actual fuel flow rate) (See Supporting Tables tab and Supporting Calculations tab)	1. FRP Circuit Low DTC (P018C)	Not active	Filtered fuel rail pressure error Time Constant = 12.5 seconds Frequency: Continuous 12.5 ms loop	DTC Type B 2 trips
					(P018D)	Not active Not active		
					4. FuelPump Circuit Low DTC (P0231)	Not active	1	
					(P0232)	Not active		
					(P023F)	Not active		
					7. Reference Voltage DTC (P0641)	Not active		

Component/ System	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Parameters	Enable Conditions	Time Required	MIL Illumination
				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 13. Emissions fuel level	>= 30 seconds Not low		
				(PPEI \$3FB) 14. Fuel pump control	Enabled		
				15. Fuel pump control state 16. Battery Voltage	Normal 11V<=voltage=<32V		
				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.		

Component/ System	1	0,	Malfunction Criteria	Threshold Value	1	Enable Conditions	Time Required	MIL Illumination
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		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

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria			Enable Conditions	Required	MIL Illumination
Fuel Rail Pressure (FRP) Sensor Performance (rationality)	sure (FRP) detects a fuel pressure closer pressure sensor sensed during response stuck test.		<= 30 kPa	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	
					3. FuelPump Circuit Low DTC (P0231)	Not active	Duration of intrusive test is fueling related (5 to 12 seconds).	
					4. FuelPump Circuit High DTC (P0232)	Not active	occinacy.	
				5. FuelPump Circuit Open DTC (P023F)	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)		
				Not active Not active				

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Parameters	Enable Conditions	Time Required	MIL Illumination
					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)	Not active >=5 seconds Not low Enabled Normal or FRP rationality control > 0.047 g/s Not failed		
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			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 Ignition OR Ignition power mode OR Fuel Pump Control AND Ignition Run/Crank Voltage	Run or Crank Run or Crank Accessory enabled 9V < voltage < 32V	72 test failures in 80 test samples if Fuel Pump Current <100A	DTC Type A 1 trip

Component/ System	II .		Malfunction Criteria	Threshold Value	Secondary Parameters	Enable Conditions		MIL Illumination
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
		to mgn			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
			AND		Ignition OR	Run or Crank		
			Fuel Pump Duty Cycle	>20%	Ignition power mode OR	Accessory		
					Fuel Pump Control AND	enabled		
					Ignition Run/Crank Voltage	9V < voltage < 32V		
Fuel System Control Module Enable Control	P025A	detects if there is	PPEI (PPEI (Powertrain Platform Electrical Interface) Fuel System	≠ Fuel Pump Control Module Enable Control Circuit			72 failures out of 80 samples	DTC Type A 1 trip
Circuit		pump control enable circuit	Request (\$1ED)				1 sample/12.5 ms	
					Ignition AND	Run or Crank		
					PPEI Fuel System Request (\$1ED)	valid		

Component/ System		Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Parameters	Enable Conditions		MIL Illumination
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		DTC Type B 2 trips
		position		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 120 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	Run or Crank	during the first ROM test of the ignition cycle, otherwise 5 failures Frequency:	DTC Type A 1 trip
					Ignition power mode OR Fuel Pump Control	Accessory	Runs continuously in the background	

System	Code	0,	Malfunction Criteria	Secondary Parameters	Enable Conditions	Required	MIL Illumination
Control Module Not Programmed	P0602	Indicates that the FSCM needs to be programmed	This DTC is set via calibration, when KeMEMD_b_NoStartCal	Institut	Run or Crank	Runs once at power up	DTC Type A 1 trip
				Ignition OR Ignition power mode OR Fuel Pump Control	Accessory enabled		
Control Module Long Term Memory Reset	P0603	Non-volatile memory checksum error at controller power-up	Checksum at power-up	Ignition OR Ignition power mode OR Fuel Pump Control	Run or Crank Accessory 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	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 Ignition power mode OR Fuel Pump Control	Accessory	Frequency: Runs continuously in the background.	

Component/ System		Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Parameters	Enable Conditions		MIL Illumination
Control Module Internal Performance	P0606	This DTC indicates the FSCM has detected an internal	For all I/O configuration				Tests 1 and 2 1 failure Frequency: Continuously (12.5ms)	DTC Type A 1 trip
Processor Configuration Register Test		processor fault or external watchdog fault (PID 2032	register faults:					
		discriminates the source of the fault)	•Register contents	Incorrect value.	Ignition OR Ignition power mode	Run or Crank Accessory		
		,	2. For Processor Clock		OR Fuel Pump Control 1. For all I/O configuration register	enabled	Test 3	
			Fault: •EE latch flag in EEPROM.	0x5A5A	faults: •KeMEMD_b_ProcFltCfgRegEnbl	TRUE	3 failures out of 15 samples	
2. Processor clock test			RAM latch flag.	0x5A	For Processor Clock Fault:		1 sample/12.5 ms	
3. External			3. For External Watchdog		KeMEMD_b_ProcFltCLKDiagEnbl Reference	TRUE		
watchdog test			Fault: • Software control of fuel pump driver	Control Lost	•KeFRPD_b_FPExtWDogDiagEnbl	TRUE		
			, and		For External Watchdog Fault: Control Module ROM(P0601)	not active		
					3. For External Watchdog Fault: •Control Module RAM(P0604)			
Control Module Long Term Memory	P062F	Indicates that the NVM Error flag has not been	Last EEPROM write	Did not complete		not active	1 test failure Once on controller power-up	DTC Type A 1 trip
(EEPROM) Performance		cleared			Ignition OR	Run or Crank		
					Ignition power mode	Accessory		

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Parameters	Enable Conditions	Time Required	MIL Illumination
					OR 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	P064A	This DTC detects if an internal fuel pump driver overtemperature condition exists under normal operating	Pump Driver Temp	> 150C	Ignition OR Ignition power mode OR Fuel Pump Control	Run or Crank Accessory Enabled	3 failures out of 15 samples 1 sample/12.5 ms	DTC Type B 2 trips

Component/ System	Fault Code	Description	Malfunction Criteria	Threshold Value	Secondary Parameters	Enable Conditions	Time Required	MIL Illumination
		conditions			KeFRPD_b_FPOverTempDiagEnbl	TRUE 9V <voltage<32v< td=""><td></td><td></td></voltage<32v<>		
Ignition 1 Switch Circuit Low Voltage	P2534	This DTC detects if the Ignition1 Switch circuit is shorted to low or open	Ignition 1 voltage	<= 6 V	Engine	Running	180 failures out of 200 samples 1 sample/25.0 ms	DTC Type A 1 trip
Ignition 1 Switch Circuit High Voltage	P2535	Detects if the Ignition1 Switch circuit is shorted to vehicle supply voltage	Ignition 1 voltage	> 11.7 V	Ignition Run_Crank terminal	Off	180 failures out of 200 samples 1 sample/25.0 ms	DTC Type A 1 trip

Component/ System		Monitor Strategy Description	Malfunction Criteria	Threshold Value		Enable Conditions		MIL Illumination
Fuel Pump Flow Performance (rationality)	P2635	This DTC detects degradation in the performance of the SIDI electronic return- less fuel system	Filtered fuel rail pressure error		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) 7. Reference Voltage DTC (P0641) 8. Fuel Pump Control Module Driver Over-temperature DTC's (P064A) 9. Control Module Internal Performance DTC (P0606)	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

		Monitor Strategy Description			Secondary Parameters	Enable Conditions	Time Required	MIL Illumination
Control Module	110073	Detects that a	Bus Status	Off	11. The Barometric pressure (PPEI \$4C1) signal 12. Engine run time 13. Emissions fuel level (PPEI \$3FB) 14. Fuel pump control 15. Fuel pump control state 16. Battery Voltage 17. Fuel flow rate (See Supporting Tables tab)	Valid (for absolute fuel pressure sensor) >= 30 seconds Not low Enabled Normal 11V<=voltage=<32V > 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-pressurization due to pressure build during DFCO or a decreasing desired pressure command. Run/Crank		DTC Type B
Control Module Communication Bus "A" Off		CAN serial data bus shorted condition has occurred to force the CAN device driver to enter a bus-off state	Dus Status		rowei mode	Ruirolalik		2 trips

Component/ System	Fault Code		Malfunction Criteria	Threshold Value	1	Enable Conditions		MIL Illumination
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		12 failures out of 12 samples (12 seconds)	DTC Type B 2 trips
					2. Ignition Run/Crank Voltage	11V <voltage<32v< td=""><td></td><td></td></voltage<32v<>		
					3. U0073	not active		
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	1. Power mode	Run/Crank		DTC Type B 2 trips
					2. Ignition Run/Crank Voltage	11V < voltage < 32V		

14 OBDG02 FSCM Supporting Tables (LUV)

Diagnostic Summary Table--Fuel System Control Module (FSCM)

X-axis= Desired Fuel Pressure (kiloPascals)

Y-axis= Battery voltage (volts

Y-axis=	Battery	voitage	(volts)					
	200 250			350	400	450	500	550	600
4.5	10.867	10.867	10.867	10.867	10.867	10.867	10.867	8.4375	6.0156
6	10.867	10.867	10.867	10.867	10.867	10.867	10.867	8.4375	6.0156
7.5	10.867	10.867	10.867	10.867	10.867	10.867	10.867	8.4375	6.0156
9	10.867	10.867	10.867	10.867	10.867	10.867	10.867	8.4375	6.0156
10.5	10.867	10.867	10.867	10.867	10.867	10.867	10.867	8.4375	6.0156
12	10.867	10.867	10.867	10.867	10.867	10.867	10.867	10.867	10.867
13.5	10.867	10.867	10.867	10.867	10.867	10.867	10.867	10.867	10.867
15	10.867	10.867	10.867	10.867	10.867	10.867	10.867	10.867	10.867
16.5	10.867	10.867	10.867	10.867	10.867	10.867	10.867	10.867	10.867
18	10.867	10.867	10.867	10.867	10.867	10.867	10.867	10.867	10.867
19.5	10.867	10.867	10.867	10.867	10.867	10.867	10.867	10.867	10.867
21	10.867	10.867	10.867	10.867	10.867	10.867	10.867	10.867	10.867
22.5	10.867	10.867	10.867	10.867	10.867	10.867	10.867	10.867	10.867
24	10.867	10.867	10.867	10.867	10.867	10.867	10.867	10.867	10.867
25.5	10.867	10.867	10.867	10.867	10.867	10.867	10.867	10.867	10.867
27	10.867	10.867	10.867	10.867	10.867	10.867	10.867	10.867	10.867
28.5	10.867	10.867	10.867	10.867	10.867	10.867	10.867	10.867	10.867

P2635 - Fuel Injector curve (grams/second)

X-axis= Fuel Pressure (kiloPascals)

	128	148	168	188	208	228	248	268	288	308	328	348	368	388	408	428	448	468	488	508	528	548	568	588	608	628	648	668	688	708	728	748	768
3.1	628 3.2	549	3.3467	3.4387	3.5305	3.6223	3.7144	3.8062	3.8982	3.99	4.0818	4.1738	4.2656	4.3577	4.4495	4.5415	4.6333	4.7251	4.8171	4.9089	5.001	5.0928	5.1848	5.2766	5.3684	5.4604	5.5522	5.6443	5.7361	5.8279	5.9199	6.0117	6.1038

P2635 - Maximum Engine Intake Boost curve (kiloPascals)

X-axis= barometric pressure (kiloPascals)

40	50	60	70	80	90	100	110	120
125	155	185	205	215	215	215	215	215

P2635 - Minimum Fuel Injector Pulse Width curve (seconds)

X-axis= engine speed (revolutions / minute)

[0	512	1024	1536	2048	2560	3072	3584	4096	4608	5120	5632	6144	6656	7168	7680	8192
I	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25

14 OBDG02 FSCM Supporting Tables (LUW/LUE)

Diagnostic Summary Table--Fuel System Control Module (FSCM)

X-axis= Desired Fuel Pressure (kiloPascals)

Y-axis= Battery voltage (volts)

i unio-	Dattery	voitage							
	200	250	300	350	400	450	500	550	600
4.5	11.7	11.7	11.7	11.7	11.7	11.66	8.758	6.078	3.602
6	11.7	11.7	11.7	11.7	11.7	11.66	8.758	6.078	3.602
7.5	11.7	11.7	11.7	11.7	11.7	11.66	8.758	6.078	3.602
9	11.7	11.7	11.7	11.7	11.7	11.66	8.758	6.078	3.602
10.5	11.7	11.7	11.7	11.7	11.7	11.66	8.758	6.078	3.602
12	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	9.063
13.5	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7
15	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7
16.5	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7
18	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7
19.5	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7
21	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7
22.5	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7
24	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7
25.5	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7
27	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7
28.5	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7

P2635 - Fuel Injector Flow curve (grams / second)

X-axis= Fuel Pressure (kiloPascals)

	128	148	168	188	208	228	248	268	288	308	328	348	368	388	408	428	448
	2.087	2.201	2.316	2.43	2.544	2.658	2.772	2.886	3	3.115	3.229	3.343	3.457	3.571	3.637	3.719	3.802
	468	488	508	528	548	568	588	608	628	648	668	688	708	728	748	768	
	3.852	3.953	4.087	4.189	4.291	4.393	4.495	4.597	4.699	4.801	4.903	5.006	5.108	5.21	5.312	5.414	
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14 OBDG02 FSCM Supporting Tables (LUW/LUE)

Diagnostic Summary Table--Fuel System Control Module (FSCM)

P2635 - Minimum Fuel Injector Pulse Width curve (seconds)

X-axis= engine speed (revolutions / minute)

0	512	1024	1536	2048	2560	3072	3584	4096	4608	5120	5632	6144	6656	7168	7680	8192
0.797	0.797	0.797	0.797	0.797	0.797	0.797	0.797	0.797	0.797	0.797	0.797	0.797	0.797	0.797	0.797	0.797