

17 OBDG06 TCM Summary Tables

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
Transmission Control Module (TCM)	P0601	Transmission Electro-Hydraulic Control Module Read Only Memory	Incorrect program/calibrations checksum	= TRUE Boolean		MIL not Illuminated for DTC's: TCM: P0601 ECM: None	>= 5 Fail Counts	One Trip
Transmission Control Module (TCM)	P0603	Transmission Electro-Hydraulic Control Module Long-Term Memory Reset	Non-volatile memory (static or dynamic) checksum failure at Powerup	= TRUE Boolean		MIL not Illuminated for DTC's: TCM: P0603 ECM: None	Runs Continuously	One Trip
Transmission Control Module (TCM)	P0604	Transmission Electro-Hydraulic Control Module Random Access Memory	RAM Read/Write Failure (Single Word)	= TRUE Boolean		MIL not Illuminated for DTC's: TCM: P0604 ECM: None	>= 5 Fail Counts = 16 Sample Counts	One Trip
Transmission Control Module (TCM)	P062F	Transmission Electro-Hydraulic Control Module Long Term Memory Performance	TCM Non-Volatile Memory bit Incorrect flag at Powerdown	= TRUE Boolean		MIL not Illuminated for DTC's: TCM: P062F ECM: None	Runs Continuously	One Trip
Transmission Control Module (TCM)	P0634	Transmission Electro-Hydraulic Control Module Internal Temperature Too High	<u>Fail Case 1</u>	Substrate Temperature	>= 142.1015625 °C		>= 5 Fail Time (Sec)	One Trip
			<u>Fail Case 2</u>	Substrate Temperature	>= 50 °C		>= 2 Fail Time (Sec)	
				Ignition Voltage	>= 18 Volts			
				Note: either fail case can set the DTC				
				Ignition Voltage Lo	>= 8.5996094 Volts			
				Ignition Voltage Hi	<= 31.999023 Volts			
				Substrate Temp Lo	>= 0 °C			
				Substrate Temp Hi	<= 170 °C			
				Substrate Temp Between Temp Range for Time	>= 0.25 Sec			

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Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
					P0634 Status is	Test Failed This Key On or Fault Active ≠		
				Disable Conditions:	MIL not Illuminated for DTC's:	TCM: None ECM: None		
High Side Driver 1	P0658	Actuator Supply Voltage Circuit Low	The HWIO reports a low voltage (open or ground short) error flag	= TRUE Boolean			>= 4 Fail Counts out of 6 Sample Counts	One Trip
					P0658 Status is not	Test Failed This Key On or Fault Active =		
				Disable Conditions:	High Side Driver 1 On MIL not Illuminated for DTC's:	= True Boolean TCM: None ECM: None		
Transmission Control Module (TCM)	P0667	TCM Internal Temp (substrate) Sensor Circuit Range/Performance	If transmission oil temp to substrate temp Δ >	Refer to Table 19 in °C supporting documents				Two Trips
			If TCM substrate temp to power up temp Δ >	Refer to Table 20 in °C supporting documents				
			Both conditions above required to increment fail counter Note: table reference temp = to the median temp of trans oil temp, substrate temp and power up temp.				>= 3000 Fail Counts Out of 3750 Sample Counts (100ms loop)	
			Non-continuous (intermittent) fail conditions will delay resetting fail counter until				>= 700 Pass Counts Out of 875 Sample Counts (100ms loop)	
					Engine Torque Signal Valid Accelerator Position Signal Valid	= TRUE Boolean = TRUE Boolean		
					Ignition Voltage Lo Ignition Voltage Hi Engine Speed Lo Engine Speed Hi	>= 8.5996094 Volts <= 31.999023 Volts >= 400 RPM <= 7500 RPM		

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Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
					Engine Speed is within the allowable limits for Brake torque active	>= 5 Sec = FALSE		
					Below describes the brake torque entry criteria Engine Torque Throttle Transmission Input Speed Vehicle Speed Transmission Range Transmission Range PTO Set Brake Torque Active TRUE if above conditions are met for:	>= 90 N*m >= 30.000305 Pct <= 200 RPM <= 8 Kph ≠ Park ≠ Neutral = Not Active >= 7 sec		
					Below describes the brake torque exit criteria Brake torque entry criteria Clutch hydraulic pressure Clutch used to exit brake torque active The above clutch pressure is greater than this value for one loop Set Brake Torque Active FALSE if above conditions are met for: P0667 Status is	= Not Met Clutch Hydraulic Air Purge Event CeTFTD_e_C3_RatlE_nbl >= 600 kpa >= 20 Sec ≠ Test Failed This Key On or Fault Active		
				Disable Conditions:	MIL not Illuminated for DTC's:	TCM: P0658, P0668, P0669, P06AD, P06AE, P0716, P0712, P0713, P0717, P0722, P0723, P0962, P0963, P0966, P0967, P0970, P0971, P215C, P2720, P2721, P2729, P2730 ECM: P0101, P0102, P0103, P0106, P0107, P0108, P0171, P0172, P0174, P0175, P0201, P0202, P0203, P0204, P0205, P0206, P0207, P0208, P0300, P0301, P0302, P0303, P0304, P0305, P0306, P0307, P0308, P0401, P042E		
Transmission Control Module (TCM)	P0668	TCM internal temperature (substrate) thermistor failed at a low volge	Type of Sensor Used	CeTFTL_e_Vo = ItageDirectPro p				Two Trips

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Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
			If TCM Substrate Temperature Sensor = Direct Proportional and Temp If TCM Substrate Temperature Sensor = Indirect Proportional and Temp Either condition above will satisfy the fail conditions	<= -249 °C >= -249 °C			>= 60 Fail Timer (Sec)	
					Ignition Voltage Lo Ignition Voltage Hi Engine Speed Lo Engine Speed Hi Engine Speed is within the allowable limits for P0668 Status is Disable Conditions:	>= 8.5996094 Volts <= 31.999023 Volts >= 400 RPM <= 7500 RPM >= 5 Sec Test Failed This Key On or Fault Active MIL not Illuminated for DTC's: TCM: None ECM: None		
Transmission Control Module (TCM)	P0669	TCM internal temperature (substrate) thermistor failed at a high voltage	Type of Sensor Used If TCM Substrate Temperature Sensor = Direct Proportional and Temp If TCM Substrate Temperature Sensor = Indirect Proportional and Temp Either condition above will satisfy the fail conditions	CeTFTLe_Vo = ItageDirectPro p >= 249 °C <= 249 °C			>= 60 Fail Timer (Sec)	Two Trips
					Ignition Voltage Lo Ignition Voltage Hi Engine Speed Lo Engine Speed Hi Engine Speed is within the allowable limits for P0669 Status is For Hybrids, below conditions must also be met Estimated Motor Power Loss Estimated Motor Power Loss greater than limit for time Lost Communication with Hybrid Processor Control Module Estimated Motor Power Loss Fault	>= 8.5996094 Volts <= 31.999023 Volts >= 400 RPM <= 7500 RPM >= 5 Sec Test Failed This Key On or Fault Active >= 0 kW >= 0 Sec = FALSE = FALSE		

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Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.	
				Disable Conditions:	MIL not Illuminated for DTC's:	TCM: P0716, P0717, P0722, P0723 ECM: None			
Transmission Control Module (TCM)	P06AC	TCM Power-up Temp Sensor Circuit Range/Performance	If TCM power-up temp to substrate temp Δ	> 20 in °C supporting documents					Two Trips
			If transmission oil temp to power up temp Δ	> 18 in °C supporting documents					
			Both conditions above required to increment fail counter Note: table reference temp = to the median temp of trans oil temp, substrate temp and power up temp.				>= 3000 Out of 3750	Fail Counts (100ms loop) Sample Counts (100ms loop)	
			Non-continuous (intermittent) fail conditions will delay resetting fail counter until				>= 700 Out of 875	Pass Counts (100ms loop) Sample Counts (100ms loop)	
							Engine Torque Signal Valid = TRUE Boolean Accelerator Position Signal = TRUE Boolean Valid Ignition Voltage Lo >= 8.5996094 Volts Ignition Voltage Hi <= 31.999023 Volts Engine Speed Lo >= 400 RPM Engine Speed Hi <= 7500 RPM Engine Speed is within the allowable limits for >= 5 Sec Brake torque active = FALSE		
							Below describes the brake torque entry criteria Engine Torque >= 90 N*m Throttle >= 30.000305 Pct Transmission Input Speed <= 200 RPM Vehicle Speed <= 8 Kph Transmission Range ≠ Park Transmission Range ≠ Neutral PTO = Not Active Set Brake Torque Active >= 7 sec TRUE if above conditions are met for:		
							Below describes the brake torque exit criteria Brake torque entry criteria = Not Met		

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Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
					Clutch hydraulic pressure Clutch used to exit brake torque active The above clutch pressure is greater than this value for one loop Set Brake Torque Active FALSE if above conditions are met for: P06AC Status is Disable Conditions: MIL not illuminated for DTC's:	≠ Clutch Hydraulic Air Purge Event = CeTFTD_e_C3_RatlE nbl >= 600 kpa >= 20 Sec ≠ Test Failed This Key On or Fault Active TCM: P0658, P0668, P0669, P06AD, P06AE, P0716, P0712, P0713, P0717, P0722, P0723, P0962, P0963, P0966, P0967, P0970, P0971, P215C, P2720, P2721, P2729, P2730 ECM: P0101, P0102, P0103, P0106, P0107, P0108, P0171, P0172, P0174, P0175, P0201, P0202, P0203, P0204, P0205, P0206, P0207, P0208, P0300, P0301, P0302, P0303, P0304, P0305, P0306, P0307, P0308, P0401, P042E		
Transmission Control Module (TCM)	P06AD	TCM power-up thermistor circuit voltage low	Power Up Temp	<= -59 °C			>= 60 Fail Time (Sec)	Two Trips
					Ignition Voltage Lo Ignition Voltage Hi Engine Speed Lo Engine Speed Hi Engine Speed is within the allowable limits for P06AD Status is For Hybrids, below conditions must also be met Estimated Motor Power Loss Estimated Motor Power Loss greater than limit for time Lost Communication with Hybrid Processor Control Module Estimated Motor Power Loss Fault	>= 8.5996094 Volts <= 31.999023 Volts >= 400 RPM <= 7500 RPM >= 5 Sec ≠ Test Failed This Key On or Fault Active >= 0 kW >= 0 Sec = FALSE = FALSE		

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Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
				Disable Conditions:	MIL not Illuminated for DTC's:	TCM: P0716, P0717, P0722, P0723 ECM: None		
Transmission Control Module (TCM)	P06AE	TCM power-up thermistor circuit voltage high	Power Up Temp	>= 164 °C			>= 60 Fail Time (Sec)	Two Trips
					Disable Conditions:	MIL not Illuminated for DTC's:	TCM: None ECM: None	
Transmission Fluid Temperature Sensor (TFT)	P0711	Trans Fluid Temp Sensor Circuit Range/Performance	If transmission oil temp to substrate temp Δ	>	Refer to Table 19 in supporting documents °C			Two Trips
			If transmission oil temp to power up temp Δ	>	Refer to Table 18 in supporting documents °C			
			Both conditions above required to increment fail counter Note: table reference temp = to the median temp of trans oil temp, substrate temp and power up temp.				>= 3000 Fail Counts (100ms loop)	
			Non-continuous (intermittent) fail conditions will delay resetting fail counter until				Out of 3750 Sample Counts (100ms loop)	
							>= 700 Pass Counts (100ms loop) Out of 875 Sample Counts (100ms loop)	
					Engine Torque Signal Valid Accelerator Position Signal Valid	= TRUE Boolean = TRUE Boolean		
					Ignition Voltage Lo Ignition Voltage Hi Engine Speed Lo Engine Speed Hi Engine Speed is within the allowable limits for Brake torque active	>= 8.5996094 Volts <= 31.999023 Volts >= 400 RPM <= 7500 RPM >= 5 Sec = FALSE		

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Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
					Below describes the brake torque entry criteria Engine Torque >= 90 N*m Throttle >= 30.000305 Pct Transmission Input Speed <= 200 RPM Vehicle Speed <= 8 Kph Transmission Range ≠ Park Transmission Range ≠ Neutral PTO = Not Active Set Brake Torque Active TRUE if above conditions are met for: >= 7 sec			
					Below describes the brake torque exit criteria Brake torque entry criteria = Not Met Clutch hydraulic pressure ≠ Hydraulic Clutch used to exit brake torque active = CeTFTD_e_C3_RatlE nbl The above clutch pressure is greater than this value for one loop >= 600 kpa Set Brake Torque Active FALSE if above conditions are met for: >= 20 Sec P0711 Status is ≠ Test Failed This Key On or Fault Active			
			Disable Conditions:		MIL not Illuminated for DTC's: TCM: P0658, P0668, P0669, P06AD, P06AE, P0716, P0712, P0713, P0717, P0722, P0723, P0962, P0963, P0966, P0967, P0970, P0971, P215C, P2720, P2721, P2729, P2730 ECM: P0101, P0102, P0103, P0106, P0107, P0108, P0171, P0172, P0174, P0175, P0201, P0202, P0203, P0204, P0205, P0206, P0207, P0208, P0300, P0301, P0302, P0303, P0304, P0305, P0306, P0307, P0308, P0401, P042E			
Transmission Fluid Temperature Sensor (TFT)	P0712	Transmission fluid temperature thermistor failed at a low voltage	Type of Sensor Used = If Transmission Fluid Temperature Sensor = Direct Proportional and Temp <= -74 °C If Transmission Fluid Temperature Sensor = Indirect Proportional and Temp >= -74 °C	CeTFTLe_Vo = ltageDirectPro p <= -74 °C >= -74 °C				Two Trips

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Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
			Either condition above will satisfy the fail conditions				>= 60 Fail Time (Sec)	
					Ignition Voltage Lo Ignition Voltage Hi Engine Speed Lo Engine Speed Hi Engine Speed is within the allowable limits for P0712 Status is For Hybrids, below conditions must also be met Estimated Motor Power Loss Estimated Motor Power Loss greater than limit for time Lost Communication with Hybrid Processor Control Module Estimated Motor Power Loss Fault	>= 8.5996094 Volts <= 31.999023 Volts >= 400 RPM <= 7500 RPM >= 5 Sec ≠ Test Failed This Key On or Fault Active >= 0 kW >= 0 Sec = FALSE = FALSE		
				Disable Conditions:	MIL not Illuminated for DTC's:	TCM: P0716, P0717, P0722, P0723 ECM: None		
Transmission Fluid Temperature Sensor (TFT)	P0713	Transmission fluid temperature thermistor failed at a high voltage	Type of Sensor Used If Transmission Fluid Temperature Sensor = Direct Proportional and Temp If Transmission Fluid Temperature Sensor = Indirect Proportional and Temp	CeTFTI_e_Vo = ItageDirectPro p >= 174 °C <= 174 °C				Two Trips
			Either condition above will satisfy the fail conditions				>= 60 Fail Time (Sec)	
					Ignition Voltage Lo Ignition Voltage Hi Engine Speed Lo Engine Speed Hi Engine Speed is within the allowable limits for P0713 Status is	>= 8.5996094 Volts <= 31.999023 Volts >= 400 RPM <= 7500 RPM >= 5 Sec ≠ Test Failed This Key On or Fault Active		
				Disable Conditions:	MIL not Illuminated for DTC's:	TCM: P0713, P0716, P0717, P0722, P0723 ECM: None		

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Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
Transmission Input Speed Sensor (TISS)	P0716	Input Speed Sensor Performance	Transmission Input Speed Sensor Drops	>= 900 RPM			>= 0.8 Fail Time (Sec)	One Trip
						Engine Torque is >= 0 N*m Engine Torque is <= 8191.875 N*m Engine Speed >= 400 RPM Engine Speed <= 7500 RPM Engine Speed is within the allowable limits for >= 5 Sec Vehicle Speed is >= 10 Kph Throttle Position is >= 0 Pct ----- Transmission Input Speed is >= 0 RPM The previous requirement has been satisfied for >= 0 Sec ----- The change (loop to loop) in transmission input speed is < 8191.875 RPM/Loop The previous requirement has been satisfied for >= 0 Sec Throttle Position Signal Valid = TRUE Boolean Engine Torque Signal Valid = TRUE Boolean Ignition Voltage >= 8.5996094 Volts Ignition Voltage <= 31.999023 Volts ----- Test Failed This Key P0716 Status is not = On or Fault Active ----- Disable Conditions: MIL not Illuminated for DTC's: TCM: P0717, P0752, P0973, P0974 ECM: P0101, P0102, P0103, P0121, P0122, P0123		
Transmission Input Speed Sensor (TISS)	P0717	Input Speed Sensor Circuit Low Voltage	<u>Fail Case 1</u> Transmission Input Speed is	< 33 RPM			>= 4.5 Fail Time (Sec)	One Trip
			<u>Fail Case 2</u> When P0722 DTC Status equal to Test Failed and Transmission Input Speed is	< 653.125 RPM	Controller uses a single power supply for the speed sensors	= 1 Boolean		
					Engine Torque is >= 120 N*m Engine Torque is <= 8191.875 N*m Vehicle Speed >= 12 Kph Engine Torque Signal Valid = TRUE Boolean Ignition Voltage >= 8.5996094 Volts Ignition Voltage <= 31.999023 Volts Engine Speed >= 400 RPM Engine Speed <= 7500 RPM Engine Speed is within the allowable limits for >= 5 Sec			

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Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
					P0717 Status is not Disable Conditions: MIL not Illuminated for DTC's:	Test Failed This Key On or Fault Active = TCM: P0722, P0723 ECM: P0101, P0102, P0103		
Transmission Output Speed Sensor (TOSS)	P0722	Output Speed Sensor Circuit Low Voltage	Transmission Output Speed Sensor Raw Speed	<= 35 RPM			>= 4.5 Fail Time (Sec)	One Trip
					P0722 Status is not Transmission Input Speed Check Engine Torque Check Throttle Position Transmission Fluid Temperature Disable this DTC if the PTO is active Engine Torque Signal Valid Throttle Position Signal Valid Ignition Voltage is Ignition Voltage is Engine Speed is Engine Speed is Engine Speed is within the allowable limits for	Test Failed This Key On or Fault Active = = TRUE Boolean = TRUE Boolean >= 8.0001831 Pct >= -40 °C = 1 Boolean = TRUE Boolean = TRUE Boolean >= 8.5996094 Volts <= 31.999023 Volts >= 400 RPM <= 7500 RPM >= 5 Sec		
					Enable_Flags Defined Below The Engine Torque Check is TRUE, if either of the two following conditions are TRUE Engine Torque Condition 1 Range Shift Status OR Transmission Range is Engine Torque is Engine Torque is Engine Torque Condition 2 Engine Torque is Engine Torque is	Range shift completed ≠ ENUM = Park or Neutral >= 8191.75 N*m <= 8191.75 N*m >= 54 N*m <= 8191.75 N*m		

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Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
					The Transmission Input Speed (TIS) Check is TRUE, if either of the two following conditions are TRUE TIS Check Condition 1 Transmission Input Speed is Transmission Input Speed is TIS Check Condition 2 Engine Speed without the brake applied is Engine Speed with the brake applied is Engine Speed is Controller uses a single power supply for the speed sensors Powertrain Brake Pedal is Valid	>= 653.125 RPM <= 5350 RPM >= 3200 RPM >= 3200 RPM <= 8191.875 RPM = 1 Boolean = TRUE Boolean		
				Disable Conditions:	MIL not Illuminated for DTC's:	TCM: P0716, P0717, P0723 ECM: P0101, P0102, P0103, P0121, P0122, P0123		
Transmission Output Speed Sensor (TOSS)	P0723	Output Speed Sensor Circuit Intermittent	Transmission Output Speed Sensor Raw Speed Output Speed Delta Output Speed Drop AND Transmission Range Is	>= 105 RPM <= 8192 RPM > 650 RPM = Driven range (R,D)			>= 0 Enable Time (Sec) >= 0 Enable Time (Sec) >= 1.5 Output Speed Drop Recovery Fail Time (Sec)	One Trip
					----- Range_Disable OR ----- Neutral_Range_Enable And Neutral_Speed_Enable are TRUE concurrently -----	= FALSE See Below = TRUE See Below = TRUE See Below		
					Transmission_Range_Enable Transmission_Input_Speed_Enabled No Change in Transfer Case Range (High <-> Low) for P0723 Status is not	= TRUE See Below = TRUE See Below >= 5 Seconds = Test Failed This Key On or Fault Active		

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Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
					Disable this DTC if the PTO is active	= 1 Boolean		
					Ignition Voltage is	>= 8.5996094 Volts		
					Ignition Voltage is	<= 31.999023 Volts		
					Engine Speed is	>= 400 RPM		
					Engine Speed is	<= 7500 RPM		
					Engine Speed is within the allowable limits for	>= 5 Sec		
					Enable_Flags Defined Below			
					Transmission_Input_Speed_Enable is TRUE when either TIS Condition 1 or TIS Condition 2 is TRUE:			
					TIS Condition 1 is TRUE when both of the following conditions are satisfied for	>= 0 Enable Time (Sec)		
					Input Speed Delta	<= 4095.875 RPM		
					Raw Input Speed	>= 500 RPM		
					TIS Condition 2 is TRUE when ALL of the next two conditions are satisfied			
					Input Speed	= 0 RPM		
					A Single Power Supply is used for all speed sensors	= TRUE Boolean		
					Neutral_Range_Enable is TRUE when any of the next 3 conditions are TRUE			
					Transmission Range is	= Neutral ENUM		
					Transmission Range is	= Reverse/Neutral/Transitional ENUM		
					Transmission Range is	= Neutral/Drive/Transitional ENUM		
					And when a drop occurs			
					Loop to Loop Drop of Transmission Output Speed is	> 650 RPM		
					Range_Disable is TRUE when any of the next three conditions are TRUE			
					Transmission Range is	= Park ENUM		
					Transmission Range is	= Park/Reverse/Transitional ENUM		
					Input Clutch is not	= ON (Fully Applied) ENUM		

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Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
					Neutral_Speed_Enable is TRUE when All of the next three conditions are satisfied for Transmission Output Speed The loop to loop change of the Transmission Output Speed is The loop to loop change of the Transmission Output Speed is	> 1.5 Seconds > 130 RPM < 20 RPM > -10 RPM		
					Transmission_Range_Enable is TRUE when one of the next six conditions is TRUE Transmission Range is Transmission Range is Transmission Range is Time since a driven range (R,D) has been selected Transmission Output Speed Sensor Raw Speed Output Speed when a fault was detected	= Neutral Reverse/Neutral Transition I = Neutral/Drive Transition I >= Table Based Time Please Refer to Table 21 in supporting documents >= 500 RPM >= 500 RPM		
				Disable Conditions:	MIL not Illuminated for DTC's:	TCM: P0973, P0974, P0976, P0977 ECM: P0101, P0102, P0103, P0121, P0122, P0123		
Torque Converter Clutch (TCC)	P0741	TCC System Stuck OFF	TCC Pressure Either Condition (A) or (B) Must be Met (A) TCC Slip Error @ TCC On Mode (B) TCC Slip @ Lock On Mode	>= 750 Kpa >= 1 in Supporting Documents RPM >= 130 RPM			>= 2 Enable Time (Sec) >= 5 Fail Time (Sec) >= 5 Fail Time (Sec)	Two Trips

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Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
			If Above Conditions Have been Met, and Fail Timer Expired, Increment Fail Counter				>= 2 TCC Stuck Off Fail Counter	
					TCC Mode	= On or Lock		
					Ignition Voltage Lo	>= 8.5996094 Volts		
					Ignition Voltage Hi	<= 31.999023 Volts		
					Engine Speed	>= 400 RPM		
					Engine Speed	<= 7500 RPM		
					Engine Speed is within the allowable limits for	>= 5 Sec		
					Engine Torque Lo	>= 50 N*m		
					Engine Torque Hi	<= 8191.875 N*m		
					Throttle Position Lo	>= 8.0001831 Pct		
					Throttle Position Hi	<= 99.998474 Pct		
					2nd Gear Ratio Lo	>= 2.1948242 Ratio		
					2nd Gear Ratio High	<= 2.5251465 Ratio		
					3rd Gear Ratio Lo	>= 1.4228516 Ratio		
					3rd Gear Ratio High	<= 1.637085 Ratio		
					4th Gear Ratio Lo	>= 1.069458 Ratio		
					4th Gear Ratio High	<= 1.2304688 Ratio		
					5th Gear Ratio Lo	>= 0.7905273 Ratio		
					5th Gear Ratio Hi	<= 0.9095459 Ratio		
					6th Gear Ratio Lo	>= 0.6230469 Ratio		
					6th Gear Ratio High	<= 0.7169189 Ratio		
					Transmission Fluid Temperature Lo	>= -6.65625 °C		
					Transmission Fluid Temperature Hi	<= 130 °C		
					PTO Not Active	= TRUE Boolean		
					Engine Torque Signal Valid	= TRUE Boolean		
					Throttle Position Signal Valid	= TRUE Boolean		
					Dynamic Mode	= FALSE Boolean		
						Test Failed This Key		
					P0741 Status is	≠ On or Fault Active		
				Disable Conditions:	MIL not Illuminated for DTC's:	TCM: P0716, P0717, P0722, P0723, P0742, P2763, P2764 ECM: P0101, P0102, P0103, P0106, P0107, P0108, P0171, P0172, P0174, P0175, P0201, P0202, P0203, P0204, P0205, P0206, P0207, P0208, P0300, P0301, P0302, P0303, P0304, P0305, P0306, P0307, P0308, P0401, P042E		
Torque Converter Clutch (TCC)	P0742	TCC System Stuck ON	TCC Slip Speed	>= -50 RPM				One Trip
			TCC Slip Speed	<= 13 RPM			>= 1.5 Fail Time (Sec)	
			If Above Conditions Have been Met, and Fail Timer Expired, Increment Fail Counter				>= 6 Fail Counter	

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Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
					TCC Mode	= Off		
					Enable test if Cmdnd Gear = 1stFW and value true	= 1 Boolean		
					Enable test if Cmdnd Gear = 2nd and value true	= 0 Boolean		
					Engine Speed Hi	<= 6000 RPM		
					Engine Speed Lo	>= 500 RPM		
					Vehicle Speed Hi	<= 511 KPH		
					Vehicle Speed Lo	>= 1 KPH		
					Engine Torque Hi	<= 8191.875 Nm		
					Engine Torque Lo	>= 80 Nm		
					Current Range	≠ Neutral Range		
					Current Range	≠ Reverse Range		
					Transmission Sump Temperature	<= 130 °C		
					Transmission Sump Temperature	>= 18 °C		
					Throttle Position Hyst High	>= 5.0003052 Pct		
					AND			
					Max Vehicle Speed to Meet Throttle Enable	<= 8 KPH		
					Once Hyst High has been met, the enable will remain while Throttle Position	>= 2.0004272 Pct		
					Disable for Throttle Position	>= 75 Pct		
					Disable if PTO active and value true	= 1 Boolean		
					Disable if in D1 and value true	= 1 Boolean		
					Disable if in D2 and value true	= 1 Boolean		
					Disable if in D3 and value true	= 1 Boolean		
					Disable if in D4 and value true	= 1 Boolean		
					Disable if in D5 and value true	= 1 Boolean		
					Disable if in MUMD and value true	= 1 Boolean		
					Disable if in TUTD and value true	= 1 Boolean		
					4 Wheel Drive Low Active	= FALSE Boolean		
					Disable if Air Purge active and value false	= 0 Boolean		
					RVT Diagnostic Active	= FALSE Boolean		
					Ignition Voltage	>= 8.5996094 V		
					Ignition Voltage	<= 31.999023 V		
					Vehicle Speed	<= 511 KPH		
					Engine Speed	>= 400 RPM		
					Engine Speed	<= 7500 RPM		
					Engine Speed is within the allowable limits for	>= 5 Sec		
					Engine Torque Signal Valid	= TRUE Boolean		
					Throttle Position Signal Valid	= TRUE Boolean		
						Test Failed This Key		
					P0742 Status is	≠ On or Fault Active		

17 OBDG06 TCM Summary Tables

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
				Disable Conditions:	MIL not Illuminated for DTC's:	TCM: P0716, P0717, P0722, P0723, P0741, P2763, P2764 ECM: P0101, P0102, P0103, P0106, P0107, P0108, P0171, P0172, P0174, P0175, P0201, P0202, P0203, P0204, P0205, P0206, P0207, P0208, P0300, P0301, P0302, P0303, P0304, P0305, P0306, P0307, P0308, P0401, P042E		
Mode 2 Multiplex Valve	P0751	Shift Solenoid Valve A Stuck Off	Commaned Gear Slip Commaned Gear Gear Ratio Gear Ratio If the above parameters are true	>= 400 RPM = 1st Lock rpm <= 1.209594727 >= 1.094360352			>= 0.2 Fail Tmr = 5 Fail Counts ≠ 0 Neutral Timer (Sec) >= 0.3 Fail Timer (Sec) >= 8 Counts	Two Trips
					Ignition Voltage Lo Ignition Voltage Hi Engine Speed Lo Engine Speed Hi Engine Speed is within the allowable limits for Transmission Fluid Temperature Range Shift State TPS OR Output Speed Throttle Position Signal Valid from ECM Engine Torque Signal Valid from ECM, High side driver is enabled High-Side Driver is Enabled Input Speed Sensor fault Output Speed Sensor fault Default Gear Option is not present	>= 8.5996094 Volts <= 31.999023 Volts >= 400 RPM <= 7500 RPM >= 5 Sec >= -6.65625 °C = Range Shift Completed >= 0.5004883 % >= 67 RPM = TRUE Boolean = TRUE Boolean = TRUE Boolean = FALSE Boolean = FALSE Boolean = TRUE		

17 OBDG06 TCM Summary Tables

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
				Disable Conditions:	MIL not Illuminated for DTC's:	TCM: P0716, P0717, P0722, P0723, P182E ECM: P0101, P0102, P0103, P0106, P0107, P0108, P0171, P0172, P0174, P0175, P0201, P0202, P0203, P0204, P0205, P0206, P0207, P0208, P0300, P0301, P0302, P0303, P0304, P0305, P0306, P0307, P0308, P0401, P042E		
Mode 2 Multiplex Valve	P0756	Shift Solenoid Valve B Stuck Off	Fail Case 1 Commanded Gear = 1st Locked Gear Box Slip >= 400 RPM Intrusive Shift to 2nd Commanded Gear Previous = 1st Locked Gear Gear Ratio <= 2.482177734 Gear Ratio >= 2.245849609 If the above parameters are true				Please Refer to Table 5 in Neutral Timer Supporting Documents (Sec) >= 1 sec >= 3 counts	One Trip
					Ignition Voltage Lo >= 8.5996094 Volts Ignition Voltage Hi <= 31.999023 Volts Engine Speed Lo >= 400 RPM Engine Speed Hi <= 7500 RPM Engine Speed is within the allowable limits for >= 5 Sec Output Speed >= 67 RPM OR TPS >= 0.5004883 % Range Shift State = Range Shift Completed ENUM Transmission Fluid Temperature >= -6.65625 °C High-Side Driver is Enabled = TRUE Boolean Throttle Position Signal Valid from ECM = TRUE Boolean Input Speed Sensor fault = FALSE Boolean Output Speed Sensor fault = FALSE Boolean Default Gear Option is not present = TRUE			

17 OBDG06 TCM Summary Tables

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
				Disable Conditions:	MIL not Illuminated for DTC's:	TCM: P0716, P0717, P0722, P0723, P182E ECM: P0101, P0102, P0103, P0106, P0107, P0108, P0171, P0172, P0174, P0175, P0201, P0202, P0203, P0204, P0205, P0206, P0207, P0208, P0300, P0301, P0302, P0303, P0304, P0305, P0306, P0307, P0308, P0401, P042E		
Variable Bleed Solenoid (VBS)	P0776	Pressure Control (PC) Solenoid B Stuck Off [C35R]	<u>Fail Case 1</u>	Case: Steady State 3rd Gear Commanded Gear = 3rd Gear Gearbox Slip >= 400 RPM			Please Refer to Table 16 in Supporting Documents >= 3 Fail Timer (Sec) >= 3 3rd Gear Fail Counts or >= 14 3-5R Clutch Fail Counts	One Trip
				Command 4th Gear once Output Shaft Speed <= 400 RPM If Gear Ratio >= 1.094360352 And Gear Ratio <= 1.209594727 If the above condiaions are true, Increment 3rd gear fail counter and C35R Fail counter				
			<u>Fail Case 2</u>	Case: Steady State 5th Gear Commanded Gear = 5th Gear Gearbox Slip >= 400 Rpm Intrusive Test: Command 6th Gear If attained Gear=6th gear Time >= Please refer to Table 3 in supporting documents Shift Time (Sec) If the above condiaions are true, Increment 5th gear fail counter and C35R Fail counter				
	PRNDL State defaulted inhibit RVT = FALSE Boolean IMS fault pending indication = FALSE Boolean TPS validity flag = TRUE Boolean Hydraulic System Pressurized = TRUE Boolean Minimum output speed for RVT >= 67 RPM A OR B (A) Output speed enable >= 67 RPM							

17 OBDG06 TCM Summary Tables

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
					(B) Accelerator Pedal enable Common Enable Criteria Ignition Voltage Lo Ignition Voltage Hi Engine Speed Lo Engine Speed Hi Engine Speed is within the allowable limits for Throttle Position Signal valid HSD Enabled Transmission Fluid Temperature Input Speed Sensor fault Output Speed Sensor fault Default Gear Option is not present	>= 0.5004883 Pct >= 8.5996094 Volts <= 31.999023 Volts >= 400 RPM <= 7500 RPM >= 5 Sec = TRUE Boolean = TRUE Boolean >= -6.65625 °C = FALSE Boolean = FALSE Boolean = TRUE		
				Disable Conditions:	MIL not Illuminated for DTC's:	TCM: P0716, P0717, P0722, P0723, P182E ECM: P0101, P0102, P0103, P0106, P0107, P0108, P0171, P0172, P0174, P0175, P0201, P0202, P0203, P0204, P0205, P0206, P0207, P0208, P0300, P0301, P0302, P0303, P0304, P0305, P0306, P0307, P0308, P0401, P042E		
Variable Bleed Solenoid (VBS)	P0777	Pressure Control (PC) Solinoid B Stuck On [C35R] (Steady State)	<u>Fail Case 1</u> Case: Steady State 1st Attained Gear slip If the Above is True for Time Intrusive test: (CBR1 clutch exhausted) Gear Ratio Gear Ratio If the above parameters are true	>= 400 RPM Table Based Time Please Refer to Table Enable Time >= 4 in (Sec) supporting documents <= 1.608642578 >= 1.455444336			>= 1.1 Fail Timer (Sec) >= 2 Fail Count in 1st Gear or >= 3 Total Fail Counts	One Trip
			<u>Fail Case 2</u> Case: Steady State 2nd gear Max Delta Output Speed Hysteresis	>= Table Based value Please Refer to 3D Table 1 in supporting documents rpm/sec				

17 OBDG06 TCM Summary Tables

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
			Min Delta Output Speed Hysteresis If the Above is True for Time Intrusive test: (CB26 clutch exhausted) Gear Ratio Gear Ratio If the above parameters are true	Table Based value Please Refer to 3D Table 2 in rpm/sec supporting documents Table Based Time Please Refer to Table 17 in Sec supporting documents <= 1.608642578 >= 1.455444336			>= 1.1 Fail Timer (Sec) >= 3 Fail Count in 2nd Gear or >= 3 Total Fail Counts	
		<u>Fail Case 3</u>	Case: Steady State 4th gear	Table Based value Please Refer to 3D Table 1 in rpm/sec supporting documents Table Based value Please Refer to 3D Table 2 in rpm/sec supporting documents Table Based Time Please Refer to Table 17 in Sec supporting documents Intrusive test: (C1234 clutch exhausted) Gear Ratio Gear Ratio If the above parameters are true			>= 1.1 Fail Timer (Sec) >= 3 Fail Count in 4th Gear or >= 3 Total Fail Counts	
		<u>Fail Case 4</u>	Case: Steady State 6th gear					

17 OBDG06 TCM Summary Tables

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
			Max Delta Output Speed Hysteresis	>= Table Based value Please Refer to 3D Table 1 in supporting documents rpm/sec				
			Min Delta Output Speed Hysteresis	>= Table Based value Please Refer to 3D Table 2 in supporting documents rpm/sec				
			If the Above is True for Time	>= Refer to Table 17 in supporting documents Sec				
			Intrusive test: (CB26 clutch exhausted)					
			Gear Ratio	<= 0.89465332			>= 1.1	Fail Timer (Sec)
			Gear Ratio	>= 0.809448242			>= 3	counts
			If the above parameters are true				>= 1.1	Fail Timer (Sec)
							>= 3	Fail Count in 6th Gear or Total Fail Counts
					PRNDL State defaulted	= FALSE		Boolean
					inhibit RVT	= FALSE		Boolean
					IMS fault pending indication	= FALSE		Boolean
					output speed	>= 0		RPM
					TPS validity flag	= TRUE		Boolean
					HSD Enabled	= TRUE		Boolean
					Hydraulic_System_Pressurized	= TRUE		Boolean
					A OR B			
					(A) Output speed enable	>= 67		Nm
					(B) Accelerator Pedal enable	>= 0.5004883		Nm
					Ignition Voltage Lo	>= 8.5996094		Volts
					Ignition Voltage Hi	<= 31.999023		Volts
					Engine Speed Lo	>= 400		RPM
					Engine Speed Hi	<= 7500		RPM
					Engine Speed is within the allowable limits for	>= 5		Sec
					if Attained Gear=1st FW			
					Accelerator Pedal enable	>= 5.0003052		Pct
					if Attained Gear=1st FW			
					Engine Torque Enable	>= 5		Nm
					if Attained Gear=1st FW			
					Engine Torque Enable	<= 8191.875		Nm
					Transmission Fluid Temperature	>= -6.65625		°C
					Input Speed Sensor fault	= FALSE		Boolean

17 OBDG06 TCM Summary Tables

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
					Output Speed Sensor fault	= FALSE Boolean		
				Disable Conditions:	MIL not Illuminated for DTC's:	TCM: P0716, P0717, P0722, P0723, P182E ECM: P0101, P0102, P0103, P0106, P0107, P0108, P0171, P0172, P0174, P0175, P0201, P0202, P0203, P0204, P0205, P0206, P0207, P0208, P0300, P0301, P0302, P0303, P0304, P0305, P0306, P0307, P0308, P0401, P042E		
Variable Bleed Solenoid (VBS)	P0777	Pressure Control (PC) Solenoid B StuckOn [C35R] (Dyamic)	<p>Primary Offgoing Clutch is exhausted (See Table 12 in Supporting Documents for Exhaust Delay Timers)</p> <p>Primary Oncoming Clutch Pressure Command Status = Maximum pressurized Clutch exhaust command</p> <p>Primary Offgoing Clutch Pressure Command Status = Initial Clutch Control</p> <p>Range Shift Status ≠ 40 RPM</p> <p>Attained Gear Slip ≤ 40 RPM</p> <p>If the above conditions are true run appropriate Fail 1 Timers Below:</p> <p>fail timer 1 (3-1 shifting with Closed Throttle) ≥ 0.5 Fail Time (Sec)</p> <p>fail timer 1 (3-2 shifting with Throttle) ≥ 0.299804688 Fail Time (Sec)</p> <p>fail timer 1 (3-2 shifting with Closed Throttle) ≥ 0.5 Fail Time (Sec)</p> <p>fail timer 1 (3-4 shifting with Throttle) ≥ 0.299804688 Fail Time (Sec)</p> <p>fail timer 1 (3-4shifting with Closed Throttle) ≥ 0.5 Fail Time (Sec)</p> <p>fail timer 1 (3-5 shifting with Throttle) ≥ 0.299804688 Fail Time (Sec)</p> <p>fail timer 1 (3-5 shifting with Closed Throttle) ≥ 0.5 Fail Time (Sec)</p> <p>fail timer 1 (5-3 shifting with Throttle) ≥ 0.299804688 Fail Time (Sec)</p> <p>fail timer 1 (5-3 shifting with Closed Throttle) ≥ 0.5 Fail Time (Sec)</p> <p>fail timer 1 (5-4 shifting with Throttle) ≥ 0.299804688 Fail Time (Sec)</p> <p>fail timer 1 (5-4 shifting with Closed Throttle) ≥ 0.5 Fail Time (Sec)</p> <p>fail timer 1 (5-6 shifting with Throttle) ≥ 0.299804688 Fail Time (Sec)</p> <p>fail timer 1 (5-6 shifting with Closed Throttle) ≥ 0.5 Fail Time (Sec)</p>					One Trip

17 OBDG06 TCM Summary Tables

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
			<p>If Attained Gear Slip is Less than Above Cal Increment Fail Timers</p> <p>If fail timer is greater than threshold increment corresponding gear fail counter and total fail counter</p> <p>3rd gear fail counter</p> <p>5th gear fail counter</p> <p>Total fail counter</p>				<p>Total Fail Time = (Fail 1 + Fail 2) See Enable Timers for Fail Timer 1, and Reference Supporting Table 15 for Fail Timer 2</p> <p>>= 3 3rd gear fail counts OR</p> <p>>= 3 5th gear fail counts OR</p> <p>>= 5 total fail counts</p>	
					<p>TUT Enable temperature >= -6.65625 °C</p> <p>Input Speed Sensor fault = FALSE Boolean</p> <p>Output Speed Sensor fault = FALSE Boolean</p> <p>Command / Attained Gear ≠ 1st Boolean</p> <p>High Side Driver ON = TRUE Boolean</p> <p>output speed limit for TUT >= 100 RPM</p> <p>input speed limit for TUT >= 150 RPM</p> <p>PRNDL state defaulted = FALSE Boolean</p> <p>IMS Fault Pending = FALSE Boolean</p> <p>Service Fast Learn Mode = FALSE Boolean</p> <p>HSD Enabled = TRUE Boolean</p> <p>Default Gear Option is not present = TRUE</p>	<p>Disable Conditions:</p> <p>MIL not Illuminated for DTC's: TCM: P0716, P0717, P0722, P0723, P182E</p> <p>ECM: P0101, P0102, P0103, P0106, P0107, P0108, P0171, P0172, P0174, P0175, P0201, P0202, P0203, P0204, P0205, P0206, P0207, P0208, P0300, P0301, P0302, P0303, P0304, P0305, P0306, P0307, P0308, P0401, P042E</p>		
Variable Bleed Solenoid (VBS)	P0796	Pressure Control (PC) Solenoid C Stuck Off [C456] (Steady State)	<p><u>Fail Case 1</u></p> <p>Case: Steady State 4th Gear</p> <p>Gear slip >= 400 RPM</p> <p>Intrusive test: commanded 5th gear</p>				<p>Please See Table 5 For Neutral Time Cal</p> <p>>= Neutral Timer (Sec)</p>	One Trip

17 OBDG06 TCM Summary Tables

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
			<p>If attained Gear ≠ 5th for time</p> <p>If the above conditions have been met</p> <p>Increment 4th Gear Fail Counter</p> <p>and C456 Fail Counters</p>	<p>≥</p> <p>Please refer to Table 3 in Supporting Documents</p> <p>Shift Time (Sec)</p>			<p>≥ 3 4th Gear Fail Count OR</p> <p>≥ 14 C456 Fail Counts</p>	
		<u>Fail Case 2</u>	<p>Case: Steady State 5th Gear</p> <p>Gear slip</p> <p>Intrusive test: commanded 6th gear</p> <p>If attained Gear ≠ 6th for time</p> <p>if the above conditions have been met</p> <p>Increment 5th Gear Fail Counter</p> <p>and C456 Fail Counters</p>	<p>≥ 400 RPM</p> <p>≥</p> <p>Please Refer to Table 3 in Supporting Documents</p> <p>Shift Time (Sec)</p>			<p>≥ Please See Table 5 For Neutral Time Cal Neutral Timer (Sec)</p> <p>≥ 3 5th Gear Fail Count OR</p> <p>≥ 14 C456 Fail Counts</p>	
		<u>Fail Case 3</u>	<p>Case: Steady State 6th Gear</p> <p>Gear slip</p> <p>Intrusive test: commanded 5th gear</p> <p>If attained Gear ≠ 5th for time</p> <p>if the above conditions have been met</p> <p>Increment 6th Gear Fail Counter and C456 Fail Counter</p> <p>and C456 Fail Counter</p>	<p>≥ 400 RPM</p> <p>≥</p> <p>Please refer to Table 3 in Supporting Documents</p> <p>Shift Time (Sec)</p>			<p>≥ Please See Table 5 For Neutral Time Cal Neutral Timer (Sec)</p> <p>≥ 3 6th Gear Fail Count OR</p> <p>≥ 14 C456 Fail Counts</p>	
						<p>PRNDL State defaulted = FALSE Boolean</p> <p>inhibit RVT = FALSE Boolean</p> <p>IMS fault pending indication = FALSE Boolean</p> <p>TPS validity flag = TRUE Boolean</p> <p>Hydraulic System Pressurized = TRUE Boolean</p> <p>Minimum output speed for RVT ≥ 67 RPM</p> <p>A OR B</p> <p>(A) Output speed enable ≥ 67 RPM</p> <p>(B) Accelerator Pedal enable ≥ 0.5004883 Pct</p>		

17 OBDG06 TCM Summary Tables

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.	
					Common Enable Criteria Ignition Voltage Lo >= 8.5996094 Volts Ignition Voltage Hi <= 31.999023 Volts Engine Speed Lo >= 400 RPM Engine Speed Hi <= 7500 RPM Engine Speed is within the allowable limits for >= 5 Sec Throttle Position Signal valid = TRUE Boolean HSD Enabled = TRUE Boolean Transmission Fluid Temperature >= -6.65625 °C Input Speed Sensor fault = FALSE Boolean OutputSpeed Sensor fault = FALSE Boolean Default Gear Option is not present = TRUE				
				Disable Conditions:	MIL not Illuminated for DTC's: TCM: P0716, P0717, P0722, P0723, P182E ECM: P0101, P0102, P0103, P0106, P0107, P0108, P0171, P0172, P0174, P0175, P0201, P0202, P0203, P0204, P0205, P0206, P0207, P0208, P0300, P0301, P0302, P0303, P0304, P0305, P0306, P0307, P0308, P0401, P042E				
Variable Bleed Solenoid (VBS)	P0797	Pressure Control (PC) Solenoid C Stuck On [C456] (Steady State)	<u>Fail Case 1</u> Case: Steady State 1st Attained Gear slip >= 400 RPM Table Based Time Please Refer to Table Enable Time If the Above is True for Time >= 4 in (Sec) supporting documents Intrusive test: (CBR1 clutch exhausted) Gear Ratio <= 1.209594727 Gear Ratio >= 1.094360352 If the above parameters are true				>= 1.1 Fail Timer (Sec) >= 2 Fail Count in 1st Gear or >= 3 Total Fail Counts	One Trip	
			<u>Fail Case 2</u> Case Steady State 2nd Max Delta Output Speed Hysteresis >= Table Based value Please Refer to 3D Table 1 in supporting documents rpm/sec						

17 OBDG06 TCM Summary Tables

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
			Min Delta Output Speed Hysteresis If the Above is True for Time Intrusive test: (CB26 clutch exhausted) Gear Ratio Gear Ratio If the above parameters are true	Table Based value Please Refer to 3D rpm/sec Table 2 in supporting documents Table Based Time Please Refer to Table 17 in Sec supporting documents <= 1.209594727 >= 1.094360352			>= 1.1 Fail Timer (Sec) >= 3 Fail Count in 2nd Gear or >= 3 Total fail counts	
		<u>Fail Case 3</u>	Case Steady State 3rd Max Delta Output Speed Hysteresis Min Delta Output Speed Hysteresis If the Above is True for Time Intrusive test: (C35R clutch exhausted) Gear Ratio Gear Ratio If the above parameters are true	Table Based value Please Refer to 3D rpm/sec Table 1 in supporting documents Table Based value Please Refer to 3D rpm/sec Table 2 in supporting documents Table Based Time Please Refer to Table 17 in Sec supporting documents <= 1.209594727 >= 1.094360352			>= 1.1 Fail Timer (Sec) >= 3 Fail Count in 3rd Gear OR >= 3 Total Fail Counts	
					PRNDL State defaulted	= FALSE Boolean		

17 OBDG06 TCM Summary Tables

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.	
					inhibit RVT IMS fault pending indication output speed TPS validity flag HSD Enabled Hydraulic_System_Pressurize d A OR B (A) Output speed enable (B) Accelerator Pedal enable Ignition Voltage Lo Ignition Voltage Hi Engine Speed Lo Engine Speed Hi Engine Speed is within the allowable limits for if Attained Gear=1st FW Accelerator Pedal enable if Attained Gear=1st FW Engine Torque Enable if Attained Gear=1st FW Engine Torque Enable Transmission Fluid Temperature Input Speed Sensor fault Output Speed Sensor fault Default Gear Option is not present	= FALSE Boolean = FALSE Boolean >= 0 RPM = TRUE Boolean = TRUE Boolean = TRUE Boolean >= 67 Nm >= 0.5004883 Nm >= 8.5996094 Volts <= 31.999023 Volts >= 400 RPM <= 7500 RPM >= 5 Sec >= 5.0003052 Pct >= 5 Nm <= 8191.875 Nm >= -6.65625 °C = FALSE Boolean = FALSE Boolean = TRUE			
					Disable Conditions:	MIL not Illuminated for DTC's:	TCM: P0716, P0717, P0722, P0723, P182E ECM: P0101, P0102, P0103, P0106, P0107, P0108, P0171, P0172, P0174, P0175, P0201, P0202, P0203, P0204, P0205, P0206, P0207, P0208, P0300, P0301, P0302, P0303, P0304, P0305, P0306, P0307, P0308, P0401, P042E		
Variable Bleed Solenoid (VBS)	P0797	Pressure Control (PC) Solenoid C Stuck On [C456] (Dynamic)	Primary Offgoing Clutch is exhausted (See Table 11 in Supporting Documents for Exhaust Delay Timers) Primary Oncoming Clutch Pressure Command Status Primary Offgoing Clutch Pressure Command Status Range Shift Status Attained Gear Slip If the above conditions are true increment appropriate Fail 1 Timers Below:	= TRUE Boolean = Maximum pressurized Clutch = exhaust command ≠ Initial Clutch Control <= 40 RPM				One Trip	

17 OBDG06 TCM Summary Tables

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
			fail timer 1 (4-1 shifting with throttle)	>= 0.299804688 Fail Time (Sec)				
			fail timer 1 (4-1 shifting without throttle)	>= 0.5 Fail Time (Sec)				
			fail timer 1 (4-2 shifting with throttle)	>= 0.299804688 Fail Time (Sec)				
			fail timer 1 (4-2 shifting without throttle)	>= 0.5 Fail Time (Sec)				
			fail timer 1 (4-3 shifting with throttle)	>= 0.299804688 Fail Time (Sec)				
			fail timer 1 (4-3 shifting without throttle)	>= 0.5 Fail Time (Sec)				
			fail timer 1 (5-3 shifting with throttle)	>= 0.299804688 Fail Time (Sec)				
			fail timer 1 (5-3 shifting without throttle)	>= 0.5 Fail Time (Sec)				
			fail timer 1 (6-2 shifting with throttle)	>= 0.299804688 Fail Time (Sec)				
			fail timer 1 (6-2 shifting without throttle)	>= 0.5 Fail Time (Sec)				
			If Attained Gear Slip is Less than Above Cal Increment Fail Timers				>= Total Fail Time = (Fail 1 + Fail 2) See Enable Timers for Fail Timer 1, and Reference Supporting Table 15 for Fail Timer 2	sec
			If fail timer is greater than threshold increment corresponding gear fail counter and total fail counter					
			4th gear fail counter				>= 3	Fail Counter From 4th Gear OR
			5th gear fail counter				>= 3	Fail Counter From 5th Gear OR
			6th gear fail counter				>= 3	Fail Counter From 6th Gear OR
			Total fail counter				>= 5	Total Fail Counter
					TUT Enable temperature	>= -6.65625 °C		
					Input Speed Sensor fault	= FALSE Boolean		
					Output Speed Sensor fault	= FALSE Boolean		
					Command / Attained Gear	≠ 1st Boolean		
					High Side Driver ON	= TRUE Boolean		
					output speed limit for TUT	>= 100 RPM		
					input speed limit for TUT	>= 150 RPM		
					PRNDL state defaulted	= FALSE Boolean		
					IMS Fault Pending	= FALSE Boolean		
					Service Fast Learn Mode	= FALSE Boolean		
					HSD Enabled	= TRUE Boolean		

17 OBDG06 TCM Summary Tables

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
					Disable Conditions: MIL not Illuminated for DTC's:	TCM: P0716, P0717, P0722, P0723, P182E ECM: P0101, P0102, P0103, P0106, P0107, P0108, P0171, P0172, P0174, P0175, P0201, P0202, P0203, P0204, P0205, P0206, P0207, P0208, P0300, P0301, P0302, P0303, P0304, P0305, P0306, P0307, P0308, P0401, P042E		
Variable Bleed Solenoid (VBS)	P0961	Pressure Control (PC) Solenoid A Control Circuit Rationality Test (Line Pressure VBS)	The HWIO reports an invalid voltage (out of range) error flag	= TRUE Boolean			>= 4.4 Fail Time (Sec)	Two Trips
							out of 5 Sample Time (Sec)	
Variable Bleed Solenoid (VBS)	P0962	Pressure Control (PC) Solenoid A Control Circuit Low Voltage (Line Pressure VBS)	The HWIO reports a low voltage (ground short) error flag	= TRUE Boolean		Disable Conditions: MIL not Illuminated for DTC's:	>= 8.5996094 Volts	One Trip
							<= 31.999023 Volts	
Variable Bleed Solenoid (VBS)	P0963	Pressure Control (PC) Solenoid A Control Circuit High Voltage (Line Pressure VBS)	The HWIO reports a high voltage (open or power short) error flag	= TRUE Boolean		Disable Conditions: MIL not Illuminated for DTC's:	>= 4.4 Fail Time (Sec)	Two Trips
							out of 5 Sample Time (Sec)	
					Ignition Voltage	>= 8.5996094 Volts		

17 OBDG06 TCM Summary Tables

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
					Ignition Voltage Engine Speed Engine Speed Engine Speed is within the allowable limits for	<= 31.999023 Volts >= 400 RPM <= 7500 RPM >= 5 Sec		
				Disable Conditions:	MIL not Illuminated for DTC's:	TCM: None ECM: None		
Variable Bleed Solenoid (VBS)	P0966	Pressure Control (PC) Solenoid B Control Circuit Low Voltage (C35R VBS)	The HWIO reports a low voltage (ground short) error flag	= TRUE Boolean			>= 0.3 Fail Time (Sec) out of 0.375 Sample Time (Sec)	One Trip
					Ignition Voltage Ignition Voltage Engine Speed Engine Speed Engine Speed is within the allowable limits for	>= 8.5996094 Volts <= 31.999023 Volts >= 400 RPM <= 7500 RPM >= 5 Sec		
				Disable Conditions:	P0966 Status is not = On or Fault Active	Test Failed This Key On or Fault Active TCM: None ECM: None		
Variable Bleed Solenoid (VBS)	P0967	Pressure Control (PC) Solenoid B Control Circuit High Voltage (C35R VBS)	The HWIO reports a high voltage (open or power short) error flag	= TRUE Boolean			>= 0.3 Fail Time (Sec) out of 0.375 Sample Time (Sec)	One Trip
					Ignition Voltage Ignition Voltage Engine Speed Engine Speed Engine Speed is within the allowable limits for	>= 8.5996094 Volts <= 31.999023 Volts >= 400 RPM <= 7500 RPM >= 5 Sec		
				Disable Conditions:	P0967 Status is not = On or Fault Active	Test Failed This Key On or Fault Active TCM: None ECM: None		

17 OBDG06 TCM Summary Tables

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
Variable Bleed Solenoid (VBS)	P0970	Pressure Control (PC) Solenoid C Control Circuit Low Voltage (C456/CBR1 VBS)	The HWIO reports a low voltage (ground short) error flag	= TRUE Boolean			>= 0.3 Fail Time (Sec) out of 0.375 Sample Time (Sec)	One Trip
Variable Bleed Solenoid (VBS)	P0971	Pressure Control (PC) Solenoid C Control Circuit High Voltage (C456/CBR1 VBS)	The HWIO reports a high voltage (open or power short) error flag	= TRUE Boolean			>= 0.3 Fail Time (Sec) out of 0.375 Sample Time (Sec)	One Trip
Shift Solenoid	P0973	Shift Solenoid A Control Circuit Low (Mode 2 Solenoid)	The HWIO reports a low voltage (ground short) error flag	= TRUE Boolean			>= 1.2 Fail Time (Sec) out of 1.5 Sample Time (Sec)	One Trip

17 OBDG06 TCM Summary Tables

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
					Engine Speed is within the allowable limits for Disable Conditions: MIL not Illuminated for DTC's:	>= 5 Sec TCM: None ECM: None		
Shift Solenoid	P0974	Shift Solenoid A Control Circuit High (Mode 2 Solenoid)	The HWIO reports a high voltage (open or power short) error flag	= TRUE Boolean			>= 1.2 Fail Time (Sec) out of 1.5 Sample Time (Sec)	Two Trips
					P0974 Status is not Ignition Voltage Ignition Voltage Engine Speed Engine Speed Engine Speed is within the allowable limits for	= >= 8.5996094 Volts <= 31.999023 Volts >= 400 RPM <= 7500 RPM >= 5 Sec	Test Failed This Key On or Fault Active	
Mode 3 Multiplex Valve	P0977	Shift Solenoid B Control Circuit High (Mode 3 Solenoid)	The HWIO reports a high voltage (open or power short) error flag	= TRUE Boolean			>= 1.2 Sec out of 1.5 Sec	One Trip
					P0977 Status is not Ignition Voltage Ignition Voltage Engine Speed Engine Speed Engine Speed is within the allowable limits for	= >= 8.5996094 Volts <= 31.999023 Volts >= 400 RPM <= 7500 RPM >= 5 Sec	Test Failed This Key On or Fault Active	
Internal Mode Switch (IMS)	P182E	Internal Mode Switch - Invalid Range	Fail Case 1 Current range	= Transition 1 (bit state Range 1110)				One Trip

17 OBDG06 TCM Summary Tables

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
			Previous range	CeTRGR_e_ PRNDL_Drive Range ≠ 6				
			Previous range	CeTRGR_e_ PRNDL_Drive Range ≠ 4				
			Range Shift State	= Range Shift Completed ENUM				
			Absolute Attained Gear Slip	<= 50 rpm				
			Attained Gear	<= Sixth				
			Attained Gear	>= First				
			Throttle Position Available	= TRUE				
			Throttle Position	>= 8.000183105 pct				
			Output Speed	>= 200 rpm				
			Engine Torque	>= 50 Nm				
			Engine Torque	<= 8191.75 Nm				
			If the above conditions are met then Increment Fail Timer				>= 1	Fail Seconds
			If Fail Timer has Expired then Increment Fail Counter				>= 5	Fail Counts
		<u>Fail Case 2</u>	Output Speed	<= 70 rpm				
			The following PRNDL sequence events occur in this exact order:					
			PRNDL state	= Drive 6 (bit state 0110) Range				
			PRNDL state = Drive 6 for	>= 1 Sec				
			PRNDL state	= Transition 8 (bit state 0111) Range				
			PRNDL state	= Drive 6 (bit state 0110) Range				
			PRNDL state	= Transition 1 (bit state 1110) Range				
			Above sequencing occurs in Neutral Idle Mode	<= 1 Sec				
			If all conditions above are met Increment delay Timer	= Inactive				
			If the below two conditions are met Increment Fail Timer				>= 3	Fail Seconds
			delay timer	>= 1 Sec				
			Input Speed	>= 400 Sec				
			If Fail Timer has Expired then Increment Fail Counter				>= 2	Fail Counts
		<u>Fail Case 3</u>	Current range	= Transition 13 (bit state 0010) Range	Previous range	≠ CeTRGR_e_PRNDL_Drive2		
			Engine Torque	>= -8192 Nm	Previous range	≠ CeTRGR_e_PRNDL_Drive1		
			Engine Torque	<= 8191.75 Nm	IMS is 7 position configuration	= 1 Boolean		

17 OBDG06 TCM Summary Tables

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
			<p>If the above conditions are met then, Increment Fail Timer</p> <p>If Fail Timer has Expired then Increment Fail Counter</p>		<p>If the "MIS 7 Position Count" = 1 then the "previous range" criteria above must also be satisfied when the "current range" = "Transition 12"</p>		<p>>= 0.225 Seconds</p> <p>>= 15 Fail Counts</p>	
			<p><u>Fail Case 4</u></p> <p>Current range = Transition 8 (bit state 0111) Range</p> <p>Inhibit bit (see definition) = FALSE</p> <p>Steady State Engine Torque >= 100 Nm</p> <p>Steady State Engine Torque <= 8191.75 Nm</p> <p>If the above conditions are met then Increment Fail Timer</p> <p>If the above Conditions have been met, Increment Fail Counter</p>		<p>Disable Fail Case 4 if last positive range was Drive 6 and current range is transition 8</p> <p>Set inhibit bit true if PRNDL = 1100 (rev) or 0100 (Rev-Neu transition 11)</p> <p>Set inhibit bit false if PRNDL = 1001 (park)</p>		<p>>= 0.225 Seconds</p> <p>>= 15 Fail Counts</p>	
			<p><u>Fail Case 5</u></p> <p>Throttle Position Available = TRUE Boolean</p> <p>The following PRNDL sequence events occur in this exact order:</p> <p>PRNDL State = Reverse (bit state 1100) Range</p> <p>Transition 11</p> <p>PRNDL State = (bit state 0100) Range</p> <p>PRNDL State = Neutral (bit state 0101) Range</p> <p>Transition 11</p> <p>PRNDL State = (bit state 0100) Range</p> <p>Above sequencing occurs in <= 1 Sec</p> <p>Then delay timer increments</p> <p>Delay timer >= 5 sec</p> <p>Range Shift State = Range Shift Complete</p> <p>Absolute Attained Gear Slip <= 50 rpm</p> <p>Attained Gear <= Sixth</p> <p>Attained Gear >= First</p> <p>Throttle Position >= 8.000183105 pct</p> <p>Output Speed >= 200 rpm</p> <p>If the above conditions are met Increment Fail Timer</p>				<p>>= 20 Seconds</p>	
			<p><u>Fail Case 6</u></p> <p>Current range = Illegal (bit state 0000 or 1000 or 0001)</p> <p>and</p> <p>A Open Circuit (See Definition) = FALSE Boolean</p>		<p>A Open Circuit Definition (flag set false if the following conditions are met):</p> <p>Current Range</p>	<p>≠ Transition 11 (bit state 0100)</p>		

17 OBDG06 TCM Summary Tables

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
			<p>If the above Conditions are met then, Increment Fail timer</p> <p><u>Fail Case 7</u></p> <p>Current PRNDL State = PRNDL circuit Range and ABCP = 1101</p> <p>Previous PRNDL state = PRNDL circuit Range and ABCP = 1111</p> <p>Input Speed >= 150 RPM</p> <p>Reverse Trans Ratio <= 2.845825195 ratio</p> <p>Reverse Trans Ratio >= 3.274169922 ratio</p> <p>If the above Conditions are met then, Increment Fail timer</p>		<p>Last positive state</p> <p>or</p> <p>Previous transition state</p> <p>Fail case 5 delay timer</p>	<p>≠ Neutral (bit state 0101)</p> <p>≠ Transition 8 (bit state 0111)</p> <p>= 0 sec</p>	>= 6.25 Seconds	
							>= 6.25 Seconds	
			P182E will report test fail when any of the above 7 fail cases are met			<p>Ignition Voltage Lo >= 8.5996094 Volts</p> <p>Ignition Voltage Hi <= 31.999023 Volts</p> <p>Engine Speed Lo >= 400 RPM</p> <p>Engine Speed Hi <= 7500 RPM</p> <p>Engine Speed is within the allowable limits for >= 5 Sec</p> <p>Engine Torque Signal Valid = TRUE Boolean</p>		
				Disable Conditions:	MIL not Illuminated for DTC's:	<p>TCM: P0716, P0717, P0722, P0723, P07C0, P07BF, P077C, P077D</p> <p>ECM: P0101, P0102, P0103, P0106, P0107, P0108, P0171, P0172, P0174, P0175, P0201, P0202, P0203, P0204, P0205, P0206, P0207, P0208, P0300, P0301, P0302, P0303, P0304, P0305, P0306, P0307, P0308, P0401, P042E</p>		
Internal Mode Switch (IMS)	P1915	Internal Mode Switch Does Not Indicate Park/Neutral (P/N) During Start	<p>PRNDL State is ≠ Park or Neutral Enumeration</p> <p>The following events must occur Sequentially</p> <p>Initial Engine speed <= 50 RPM</p> <p>Then</p> <p>Engine Speed Between Following Cals</p> <p>Engine Speed Lo Hist >= 50 RPM</p>				>= 0.25 Enable Time (Sec)	One Trip

17 OBDG06 TCM Summary Tables

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
			Engine Speed Hi Hist	<= 480 RPM			>= 0.06875 Enable Time (Sec)	
			Then Final Engine Speed	>= 525 RPM				
			Final Transmission Input Speed	>= 100 RPM			>= 1.25 Fail Time (Sec)	
					DTC has Ran this Key Cycle?	= FALSE Boolean		
					Ignition Voltage Lo	>= 6 V		
					Ignition Voltage Hi	<= 31.999023 V		
					Ignition Voltage Hyst High (enables above this value)	>= 5 V		
					Ignition Voltage Hyst Low (disabled below this value)	<= 2 V		
					Transmission Output Speed	<= 90 rpm		
					P1915 Status is	≠ Test Failed This Key On or Fault Active		
				Disable Conditions:	MIL not Illuminated for DTC's:	TCM: P0722, P0723 ECM: None		
Transmission Control Module (TCM)	P2534	Ignition Switch Run/Start Position Circuit Low	TCM Run crank active (based on voltage thresholds below)	= FALSE Boolean			>= 280 Fail Counts (25ms loop)	One Trip
			Ignition Voltage High Hyst (run crank goes true when above this value)	5 Volts			Out of 280 Sample Counts (25ms loop)	
			Ignition Voltage Low Hyst (run crank goes false when below this value)	2 Volts				
					ECM run/crank active status available	= TRUE Boolean		
					ECM run/crank active status	= TRUE Boolean		
				Disable Conditions:	MIL not Illuminated for DTC's:	TCM: None ECM: None		
Transmission Control Module (TCM)	P2535	Ignition Switch Run/Start Position Circuit High	TCM Run crank active (based on voltage thresholds below)	= TRUE Boolean			>= 280 Fail Counts (25ms loop)	One Trip
			Ignition Voltage High Hyst (run crank goes true when above this value)	5 Volts			Out of 280 Sample Counts (25ms loop)	
			Ignition Voltage Low Hyst (run crank goes false when below this value)	2 Volts				
					ECM run/crank active status available	= TRUE Boolean		
					ECM run/crank active status	= FALSE Boolean		

17 OBDG06 TCM Summary Tables

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.	
				Disable Conditions:	MIL not Illuminated for DTC's:	TCM: None ECM: None			
Variable Bleed Solenoid (VBS)	P2714	Pressure Control (PC) Solenoid D Stuck Off [CB26]	<u>Fail Case 1</u> Case: Steady State 2nd Gear					One Trip	
			Gear slip	>= 400 RPM			Please See Table 5 For Neutral Time Cal		Neutral Timer (Sec)
			Intrusive test: commanded 3rd gear						
If attained Gear = 3rd for Time	>=	Table Based Time Please see Table 2 in Supporting Documents	Enable Time (Sec)						
			If Above Conditions have been met				>= 3	2nd Gear Fail Count or CB26 Fail Count	
			Increment 2nd gear fail count				>= 14	CB26 Fail Count	
			<u>Fail Case 2</u> Case: Steady State 6th Gear						
			Gear slip	>= 400 RPM			Please See Table 5 For Neutral Time Cal	Neutral Timer (Sec)	
			Intrusive test: commanded 5th gear						
			If attained Gear = 5th For Time	>=	Table Based Time Please see Table 2 in Supporting Documents	Enable Time (Sec)			
			If Above Conditions have been met, Increment 5th gear fail counter				>= 3	5th Gear Fail Count	
			and CB26 Fail Count				>= 14	or CB26 Fail Count	
					PRNDL State defaulted	= FALSE Boolean			
					inhibit RVT	= FALSE Boolean			
					IMS fault pending indication	= FALSE Boolean			
					TPS validity flag	= TRUE Boolean			
					Hydraulic System Pressurized	= TRUE Boolean			
					Minimum output speed for RVT	>= 0 RPM			
					A OR B				
					(A) Output speed enable	>= 67 RPM			
					(B) Accelerator Pedal enable	>= 0.5004883 Pct			
					Common Enable Criteria				
					Ignition Voltage Lo	>= 8.5996094 Volts			
					Ignition Voltage Hi	<= 31.999023 Volts			
					Engine Speed Lo	>= 400 RPM			

17 OBDG06 TCM Summary Tables

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
					Engine Speed Hi Engine Speed is within the allowable limits for Throttle Position Signal valid HSD Enabled Transmission Fluid Temperature Input Speed Sensor fault Output Speed Sensor fault Default Gear Option is not present	<= 7500 RPM >= 5 Sec = TRUE Boolean = TRUE Boolean >= -6.65625 °C = FALSE Boolean = FALSE Boolean = TRUE		
				Disable Conditions:	MIL not Illuminated for DTC's:	TCM: P0716, P0717, P0722, P0723, P182E ECM: P0101, P0102, P0103, P0106, P0107, P0108, P0171, P0172, P0174, P0175, P0201, P0202, P0203, P0204, P0205, P0206, P0207, P0208, P0300, P0301, P0302, P0303, P0304, P0305, P0306, P0307, P0308, P0401, P042E		
Variable Bleed Solenoid (VBS)	P2715	Pressure Control (PC) Solenoid D Stuck On [CB26] (Dynamic)	Primary Offgoing Clutch is exhausted (See Table 13 in Supporting Documents for Exhaust Delay Timers) Primary Oncoming Clutch Pressure Command Status Primary Offgoing Clutch Pressure Command Status Range Shift Status Attained Gear Slip If above coditons are true, increment appropriate Fail 1 Timers Below: fail timer 1 (2-1 shifting with throttle) fail timer 1 (2-1 shifting without throttle) fail timer 1 (2-3 shifting with throttle) fail timer 1 (2-3 shifting without throttle) fail timer 1 (2-4 shifting with throttle) fail timer 1 (2-4 shifting without throttle) fail timer 1 (6-4 shifting with throttle) fail timer 1 (6-4 shifting without throttle)	= TRUE Boolean = Maximum pressurized Clutch exhaust command = Initial Clutch Control <= 40 RPM >= 0.299804688 Fail Time (Sec) >= 0.5 Fail Time (Sec) >= 0.299804688 Fail Time (Sec) >= 0.5 Fail Time (Sec) >= 0.299804688 Fail Time (Sec) >= 0.5 Fail Time (Sec) >= 0.299804688 Fail Time (Sec) >= 0.5 Fail Time (Sec)				One Trip

17 OBDG06 TCM Summary Tables

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
			fail timer 1 (6-5 shifting with throttle) fail timer 1 (6-5 shifting without throttle)	>= 0.299804688 Fail Time (Sec) >= 0.5 Fail Time (Sec)			Total Fail Time = (Fail 1 + Fail 2) See Enable Timers for Fail Timer 1, and Reference Supporting Table 15 for Fail Timer 2	
			If Attained Gear Slip is Less than Above Cal Increment Fail Timers				=	
			If fail timer is greater than threshold increment corresponding gear fail counter and total fail counter					
			2nd gear fail counter				>= 3	Fail Counter From 2nd Gear OR
			6th gear fail counter				>= 3	Fail Counter From 6th Gear OR
			total fail counter				>= 5	Total Fail Counter
						TUT Enable temperature >= -6.65625 °C Input Speed Sensor fault = FALSE Boolean Output Speed Sensor fault = FALSE Boolean Command / Attained Gear ≠ 1st Boolean High Side Driver ON = TRUE Boolean output speed limit for TUT >= 100 RPM input speed limit for TUT >= 150 RPM PRNDL state defaulted = FALSE Boolean IMS Fault Pending = FALSE Boolean Service Fast Learn Mode = FALSE Boolean HSD Enabled = TRUE Boolean		
					Disable Conditions:	MIL not Illuminated for DTC's:	TCM: P0716, P0717, P0722, P0723, P182E ECM: P0101, P0102, P0103, P0106, P0107, P0108, P0171, P0172, P0174, P0175, P0201, P0202, P0203, P0204, P0205, P0206, P0207, P0208, P0300, P0301, P0302, P0303, P0304, P0305, P0306, P0307, P0308, P0401, P042E	
Variable Bleed Solenoid (VBS)	P2715	Pressure Control (PC) Solenoid D Stuck On [CB26] (Steady State)	<u>Fail Case 1</u> Case: Steady State 1st Attained Gear slip	>= 400 RPM				One Trip

17 OBDG06 TCM Summary Tables

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.	
			If the Above is True for Time Intrusive test: (CBR1 clutch exhausted) Gear Ratio Gear Ratio If the above parameters are true	Table Based Time Please Refer to Table Enable Time >= 4 in (Sec) supporting documents <= 2.482177734 >= 2.245849609			>= 1.1 Fail Timer (Sec) >= 5 Fail Count in 1st Gear or Total Fail Counts >= 5		
		<u>Fail Case 2</u>	Case: Steady State 3rd Gear	Max Delta Output Speed Hysteresis Min Delta Output Speed Hysteresis If the Above is True for Time Intrusive test: (C35R clutch exhausted) Gear Ratio Gear Ratio If the above parameters are true	Table Based value Please Refer to 3D Table 1 in rpm/sec supporting documents Table Based value Please Refer to 3D Table 2 in rpm/sec supporting documents Table Based Time Please Refer to Table 17 in Sec supporting documents <= 2.482177734 >= 2.245849609			>= 1.1 Fail Timer (Sec) >= 3 Fail Count in 3rd Gear or Total Fail Counts >= 5	
		<u>Fail Case 3</u>	Case: Steady State 4rd Gear	Max Delta Output Speed Hysteresis	Table Based value Please Refer to 3D Table 1 in rpm/sec supporting documents				

17 OBDG06 TCM Summary Tables

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
			Min Delta Output Speed Hysteresis If the Above is True for Time Intrusive test: (C1234 clutch exhausted) Gear Ratio Gear Ratio If the above parameters are true	Table Based value Please Refer to 3D Table 2 in rpm/sec Table Based Time Please Refer to Table 17 in Sec >= 0.700317383 >= 0.633666992			>= 1.1 Fail Timer (Sec) >= 3 Fail Count in 4th Gear or >= 5 Total Fail Counts	
		<u>Fail Case 4</u>	Case: Steady State 5th Gear	Table Based value Please Refer to 3D Table 1 in rpm/sec Table Based value Please Refer to 3D Table 2 in rpm/sec Table Based Time Please Refer to Table 17 in Sec <= 0.700317383 >= 0.633666992			>= 1.1 Fail Timer (Sec) >= 3 Fail Count in 5th Gear or >= 5 Total Fail Counts	
					PRNDL State defaulted inhibit RVT	= FALSE Boolean = FALSE Boolean		

17 OBDG06 TCM Summary Tables

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.	
					IMS fault pending indication output speed TPS validity flag HSD Enabled Hydraulic_System_Pressurize d A OR B (A) Output speed enable (B) Accelerator Pedal enable Ignition Voltage Lo Ignition Voltage Hi Engine Speed Lo Engine Speed Hi Engine Speed is within the allowable limits for if Attained Gear=1st FW Accelerator Pedal enable if Attained Gear=1st FW Engine Torque Enable if Attained Gear=1st FW Engine Torque Enable Transmission Fluid Temperature Input Speed Sensor fault Output Speed Sensor fault Default Gear Option is not present	= FALSE Boolean >= 0 RPM = TRUE Boolean = TRUE Boolean = TRUE Boolean >= 67 Nm >= 0.5004883 Nm >= 8.5996094 Volts <= 31.999023 Volts >= 400 RPM <= 7500 RPM >= 5 Sec >= 5.0003052 Pct >= 5 Nm <= 8191.875 Nm >= -6.65625 °C = FALSE Boolean = FALSE Boolean = TRUE			
				Disable Conditions:	MIL not Illuminated for DTC's:	TCM: P0716, P0717, P0722, P0723, P182E ECM: P0101, P0102, P0103, P0106, P0107, P0108, P0171, P0172, P0174, P0175, P0201, P0202, P0203, P0204, P0205, P0206, P0207, P0208, P0300, P0301, P0302, P0303, P0304, P0305, P0306, P0307, P0308, P0401, P042E			
Variable Bleed Solenoid (VBS)	P2720	Pressure Control (PC) Solenoid D Control Circuit Low (CB26 VBS)	The HWIO reports a low voltage (ground short) error flag	= TRUE Boolean			>= 0.3 Fail Time (Sec) out of 0.375 Sample Time (Sec)	One Trip	
					P2770 Status is not	= On or Fault Active			
					Ignition Voltage	>= 8.5996094 Volts			
					Ignition Voltage	<= 31.999023 Volts			
					Engine Speed	>= 400 RPM			
					Engine Speed	<= 7500 RPM			
					Engine Speed is within the allowable limits for	>= 5 Sec			

17 OBDG06 TCM Summary Tables

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
				Disable Conditions:	MIL not Illuminated for DTC's:	TCM: None ECM: None		
Variable Bleed Solenoid (VBS)	P2721	Pressure Control (PC) Solenoid D Control Circuit High (CB26 VBS)	The HWIO reports a high voltage (open or power short) error flag	= TRUE Boolean			>= 0.3 Fail Time (Sec) out of 0.375 Sample Time (Sec)	One Trip
					P2721 Status is not	=	Test Failed This Key On or Fault Active	
					Ignition Voltage >= 8.5996094 Volts Ignition Voltage <= 31.999023 Volts Engine Speed >= 400 RPM Engine Speed <= 7500 RPM Engine Speed is within the allowable limits for >= 5 Sec			
				Disable Conditions:	MIL not Illuminated for DTC's:	TCM: None ECM: None		
Variable Bleed Solenoid (VBS)	P2723	Pressure Control (PC) Solenoid E Stuck Off	<u>Fail Case 1</u>	Case: Steady State 1st Gear				One Trip
			Gear slip >= 400 RPM			Please See Table 5 For Neutral Time Cal		
			Intrusive test: commanded 2nd gear					
			If attained Gear ≠ 2nd for Time >=	Please refer to Table 3 in Supporting Documents	Shift Time (Sec)	>= 3 1st Gear Fail Count or >= 14 C1234 Clutch Fail Count		
			and C1234 fail counter					
			<u>Fail Case 2</u>	Case: Steady State 2nd Gear				
			Gear slip >= 400 RPM			Please See Table 5 For Neutral Time Cal		
			Intrusive test: commanded 3rd gear					
			If attained Gear ≠ 3rd for Time >=	Please refer to Table 3 in Supporting Documents	Shift Time (Sec)			

17 OBDG06 TCM Summary Tables

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
			If Above Conditions have been met, Increment 2nd gear fail counter and C1234 fail counter				>= 3 2nd Gear Fail Count or >= 14 C1234 Clutch Fail Count	
			<u>Fail Case 3</u> Case: Steady State 3rd Gear Gear slip Intrusive test: commanded 4th gear If attained Gear ≠ 4th for time If Above Conditions have been met, Increment 3rd gear fail counter and C1234 fail counter	>= 400 RPM Please refer to Table 3 in Supporting Documents Shift Time (Sec)			>= Neutral Time Cal Neutral Timer (Sec) >= 3 3rd Gear Fail Count or >= 14 C1234 Clutch Fail Count	
			<u>Fail Case 4</u> Case: Steady State 4th Gear Gear slip Intrusive test: commanded 5th gear If attained Gear = 5th For Time If Above Conditions have been met, Increment 4th gear fail counter and C1234 fail counter	>= 400 RPM Please refer to Table 3 in Supporting Documents Shift Time (Sec)			>= Neutral Time Cal Neutral Timer (Sec) >= 3 4th Gear Fail Count or >= 14 C1234 Clutch Fail Count	
						PRNDL State defaulted = FALSE Boolean inhibit RVT = FALSE Boolean IMS fault pending indication = FALSE Boolean TPS validity flag = TRUE Boolean Hydraulic System Pressurized = TRUE Boolean Minimum output speed for RVT A OR B >= 0 RPM (A) Output speed enable >= 67 RPM (B) Accelerator Pedal enable >= 0.5004883 Pct Common Enable Criteria Ignition Voltage Lo >= 8.5996094 Volts Ignition Voltage Hi <= 31.999023 Volts Engine Speed Lo >= 400 RPM Engine Speed Hi <= 7500 RPM Engine Speed is within the allowable limits for >= 5 Sec		

17 OBDG06 TCM Summary Tables

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
					Throttle Position Signal valid HSD Enabled Transmission Fluid Temperature Input Speed Sensor fault Output Speed Sensor fault Default Gear Option is not present	= TRUE Boolean = TRUE Boolean >= -6.65625 °C = FALSE Boolean = FALSE Boolean = TRUE		
				Disable Conditions:	MIL not Illuminated for DTC's:	TCM: P0716, P0717, P0722, P0723, P182E ECM: P0101, P0102, P0103, P0106, P0107, P0108, P0171, P0172, P0174, P0175, P0201, P0202, P0203, P0204, P0205, P0206, P0207, P0208, P0300, P0301, P0302, P0303, P0304, P0305, P0306, P0307, P0308, P0401, P042E		
Variable Bleed Solenoid (VBS)	P2724	Pressure Control (PC) Solenoid E Stuck On (Dynamic)	Primary Offgoing Clutch is exhausted (See Table 10 in Supporting Documents for Exhaust Delay Timers) Primary Oncoming Clutch Pressure Command Status Primary Offgoing Clutch Pressure Command Status Range Shift Status Attained Gear Slip If the above conditions are true increment appropriate Fail 1 Timers Below: fail timer 1 (2-6 shifting with throttle) fail timer 1 (2-6 shifting without throttle) fail timer 1 (3-5 shifting with throttle) fail timer 1 (3-5 shifting without throttle) fail timer 1 (4-5 shifting with throttle) fail timer 1 (4-5 shifting without throttle) fail timer 1 (4-6 shifting with throttle) fail timer 1 (4-6 shifting without throttle)	= TRUE Boolean = Maximum pressurized Clutch exhaust command Initial Clutch Control RPM <= 40 RPM >= 0.299804688 sec => 0.5 sec => 0.299804688 sec => 0.5 sec => 0.299804688 sec => 0.5 sec => 0.299804688 sec => 0.5 sec				One Trip

17 OBDG06 TCM Summary Tables

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
			<p>If Attained Gear Slip is Less than Above Cal Increment Fail Timers</p> <p>If fail timer is greater than threshold increment corresponding gear fail counter and total fail counter</p> <p>2nd gear fail counter</p> <p>3rd gear fail counter</p> <p>4th gear fail counter</p> <p>total fail counter</p>				<p>Total Fail Time = (Fail 1 + Fail 2) See Enable Timers for Fail Timer 1, and Reference Supporting Table 15 for Fail Timer 2</p> <p>>= 3 sec</p> <p>Fail Counter From 2nd Gear</p> <p>Fail Counter From 3rd Gear</p> <p>Fail Counter From 4th Gear</p> <p>Total Fail Counter</p>	
					<p>TUT Enable temperature</p> <p>Input Speed Sensor fault</p> <p>Output Speed Sensor fault</p> <p>Command / Attained Gear</p> <p>High Side Driver ON</p> <p>output speed limit for TUT</p> <p>input speed limit for TUT</p> <p>PRNDL state defaulted</p> <p>IMS Fault Pending</p> <p>Service Fast Learn Mode</p> <p>HSD Enabled</p>	<p>>= -6.65625 °C</p> <p>= FALSE Boolean</p> <p>= FALSE Boolean</p> <p>≠ 1st Boolean</p> <p>= TRUE Boolean</p> <p>>= 100 RPM</p> <p>>= 150 RPM</p> <p>= FALSE Boolean</p> <p>= FALSE Boolean</p> <p>= FALSE Boolean</p> <p>= TRUE Boolean</p>	<p>Disable Conditions:</p> <p>MIL not Illuminated for DTC's:</p> <p>TCM: P0716, P0717, P0722, P0723, P182E</p> <p>ECM: P0101, P0102, P0103, P0106, P0107, P0108, P0171, P0172, P0174, P0175, P0201, P0202, P0203, P0204, P0205, P0206, P0207, P0208, P0300, P0301, P0302, P0303, P0304, P0305, P0306, P0307, P0308, P0401, P042E</p>	
Variable Bleed Solenoid (VBS)	P2724	Pressure Control (PC) Solenoid E Stuck On (Steady State)	Fail Case 1	Case: 5th Gear				One Trip

17 OBDG06 TCM Summary Tables

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
			Max Delta Output Speed Hysteresis	>=	Table Based value Please Refer to 3D Table 1 in supporting documents rpm/sec			
			Min Delta Output Speed Hysteresis	>=	Table Based value Please Refer to 3D Table 2 in supporting documents rpm/sec			
			If the Above is True for Time	>=	Refer to Table 17 in supporting documents Sec			
			Intrusive test: (C35R clutch exhausted) Gear Ratio	<=	1.209594727			
			Gear Ratio	>=	1.094360352			
			If the above parameters are true				>= 1.1	Fail Timer (Sec)
							>= 3	Fail Count in 5th Gear OR
							>= 3	Total Fail Counts
			<u>Fail Case 2</u> Case: 6th Gear					
			Max Delta Output Speed Hysteresis	>=	Table Based value Please Refer to 3D Table 1 in supporting documents rpm/sec			
			Min Delta Output Speed Hysteresis	>=	Table Based value Please Refer to 3D Table 2 in supporting documents rpm/sec			
			If the Above is True for Time	>=	Refer to Table 17 in supporting documents Sec			
			Intrusive test: (CB26 clutch exhausted) Gear Ratio	<=	1.209594727			
			Gear Ratio	>=	1.094360352			
			If the above parameters are true				>= 1.1	Fail Timer (Sec)

17 OBDG06 TCM Summary Tables

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.	
							>= 3 Fail Count in 6th Gear OR >= 3 Total Fail Counts		
					PRNDL State defaulted inhibit RVT IMS fault pending indication output speed TPS validity flag HSD Enabled Hydraulic_System_Pressurize d A OR B (A) Output speed enable (B) Accelerator Pedal enable Ignition Voltage Lo Ignition Voltage Hi Engine Speed Lo Engine Speed Hi Engine Speed is within the allowable limits for if Attained Gear=1st FW Accelerator Pedal enable if Attained Gear=1st FW Engine Torque Enable if Attained Gear=1st FW Engine Torque Enable Transmission Fluid Temperature Input Speed Sensor fault Output Speed Sensor fault Default Gear Option is not present	= FALSE Boolean = FALSE Boolean = FALSE Boolean >= 0 RPM = TRUE Boolean = TRUE Boolean = TRUE Boolean >= 67 Nm >= 0.5004883 Nm >= 8.5996094 Volts <= 31.999023 Volts >= 400 RPM <= 7500 RPM >= 5 Sec >= 5.0003052 Pct >= 5 Nm <= 8191.875 Nm >= -6.65625 °C = FALSE Boolean = FALSE Boolean = TRUE	MIL not Illuminated for DTC's:	TCM: P0716, P0717, P0722, P0723, P182E ECM: P0101, P0102, P0103, P0106, P0107, P0108, P0171, P0172, P0174, P0175, P0201, P0202, P0203, P0204, P0205, P0206, P0207, P0208, P0300, P0301, P0302, P0303, P0304, P0305, P0306, P0307, P0308, P0401, P042E	
Variable Bleed Solenoid (VBS)	P2729	Pressure Control (PC) Solenoid E Control Circuit Low (C1234 VBS)	The HWIO reports a low voltage (ground short) error flag	= TRUE Boolean			>= 0.3 Fail Time (Sec) out of 0.375 Sample Time (Sec)	One Trip	
					P2729 Status is not	= Test Failed This Key On or Fault Active			

17 OBDG06 TCM Summary Tables

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
					Ignition Voltage Ignition Voltage Engine Speed Engine Speed Engine Speed is within the allowable limits for	>= 8.5996094 Volt <= 31.999023 Volt >= 400 RPM <= 7500 RPM >= 5 Sec		
				Disable Conditions:	MIL not Illuminated for DTC's:	TCM: None ECM: None		
Variable Bleed Solenoid (VBS)	P2730	Pressure Control (PC) Solenoid E Control Circuit High (C1234 VBS)	The HWIO reports a high voltage (open or power short) error flag	= TRUE Boolean			>= 0.3 Fail Time (Sec) out of 0.375 Sample Time (Sec)	One Trip
					P2730 Status is not Ignition Voltage Ignition Voltage Engine Speed Engine Speed Engine Speed is within the allowable limits for	Test Failed This Key = On or Fault Active >= 8.5996094 Volt <= 31.999023 Volt >= 400 RPM <= 7500 RPM >= 5 Sec		
				Disable Conditions:	MIL not Illuminated for DTC's:	TCM: None ECM: None		
Variable Bleed Solenoid (VBS)	P2763	Torque Converter Clutch Pressure High	The HWIO reports a low pressure/high voltage (open or power short) error flag	= TRUE Boolean			>= 4.4 Fail Time (Sec) out of 5 Sample Time (Sec)	Two Trips
					P2763 Status is not Ignition Voltage Ignition Voltage Engine Speed Engine Speed Engine Speed is within the allowable limits for High Side Driver Enabled	Test Failed This Key = On or Fault Active >= 8.5996094 Volt <= 31.999023 Volt >= 400 RPM <= 7500 RPM >= 5 Sec = TRUE Boolean		
				Disable Conditions:	MIL not Illuminated for DTC's:	TCM: P0658, P0659 ECM: None		

17 OBDG06 TCM Summary Tables

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
Variable Bleed Solenoid (VBS)	P2764	Torque Converter Clutch Pressure Control Solenoid Control Circuit Low	The HWIO reports a high pressure/low voltage (ground short) error flag	= TRUE Boolean			>= 4.4 MPH out of 5 MPH	One Trip
					P2764 Status is not Ignition Voltage >= 8.5996094 Volt Ignition Voltage <= 31.999023 Volt Engine Speed >= 400 RPM Engine Speed <= 7500 RPM Engine Speed is within the allowable limits for >= 5 Sec High Side Driver Enabled = TRUE Boolean	Test Failed This Key = On or Fault Active TCM: P0658, P0659 ECM: None		
Communication	U0073	Controller Area Network Bus Communication Error	CAN Hardware Circuitry Detects a Low Voltage Error	= TRUE Boolean			>= 62 Fail counts (≈ 10 seconds) Out of 70 Sample Counts (≈ 11 seconds)	One Trip
			Delay timer >= 0.1125 sec		Stabilization delay >= 3 sec Ignition Voltage >= 8.5996094 Volt Ignition Voltage <= 31.999023 Volt Power Mode = Run	MIL not Illuminated for DTC's: TCM: None ECM: None		
Communication	U0100	Lost Communications with ECM (Engine Control Module)	CAN messages from ECM are not received by the TCM	= TRUE Boolean			>= 12 sec	One Trip
					Stabilization delay >= 3 sec Ignition Voltage >= 8.5996094 Volt Ignition Voltage <= 31.999023 Volt Power Mode = Run	MIL not Illuminated for DTC's: TCM: U0073 ECM: None		

17 OBDG06 Diagnostic Supporting Tables

Table 1

Axis	0.00	64.00	128.00	192.00	256.00	320.00	384.00	448.00	512.00	N*m
Curve	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	RPM

Table 2

Axis	-6.67	-6.66	40.00	°C
Curve	409.59	2.00	2.00	Sec

Table 3

Axis	-6.67	-6.66	40.00	°C
Curve	409.59	4.00	4.00	Sec

Table 4

Axis	-6.67	-6.66	40.00	°C
Curve	409.59	2.00	2.00	Sec

Table 5

Axis	-6.67	-6.66	40.00	°C
Curve	409.59	3.00	3.00	Sec

Table 6

Axis	-6.67	-6.66	40.00	80.00	120.00	°C
Curve	409.00	3.60	1.60	1.40	1.40	Sec

Table 7

Axis	-6.67	-6.66	40.00	80.00	120.00	°C
Curve	409.00	3.40	1.40	1.30	1.20	Sec

17 OBDG06 Diagnostic Supporting Tables

Table 8

Axis	-6.67	-6.66	40.00	80.00	120.00	°C
Curve	409.00	3.60	1.60	1.50	1.40	Sec

Table 9

Axis	-6.67	-6.66	40.00	80.00	120.00	°C
Curve	409.00	3.30	1.30	1.20	1.10	Sec

Table 10

Axis	-40.00	-20.00	0.00	30.00	110.00	°C
Curve	3.03	1.86	1.00	0.75	0.58	Sec

Table 11

Axis	-40.00	-20.00	0.00	30.00	110.00	°C
Curve	1.72	1.11	0.60	0.36	0.22	Sec

Table 12

Axis	-40.00	-20.00	0.00	30.00	110.00	°C
Curve	2.12	1.39	0.84	0.64	0.33	Sec

Table 13

Axis	-40.00	-20.00	0.00	30.00	110.00	°C
Curve	2.51	0.95	0.50	0.29	0.13	Sec

Table 14

Axis	-40.00	-20.00	0.00	30.00	110.00	°C
Curve	2.97	0.82	0.47	0.20	0.13	Sec

17 OBDG06 Diagnostic Supporting Tables

Table 15

Axis	-40.00	-30.00	-20.00	-10.00	0.00	10.00	20.00	30.00	40.00	°C
Curve	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Sec

Table 16

Axis	-6.67	-6.66	40.00	°C
Curve	409.59	2.50	2.50	Sec

Table 17

Axis	-6.67	-6.66	40.00	°C
Curve	0.40	0.35	0.30	Sec

Table 18

Axis	-40.10	-40.00	-20.00	0.00	30.00	60.00	100.00	149.00	149.10	°C
Curve	256.00	50.00	45.00	40.00	34.00	25.00	20.00	20.00	256.00	°C

Table 19

Axis	-40.10	-40.00	-20.00	0.00	30.00	60.00	100.00	149.00	149.10	°C
Curve	256.00	50.00	45.00	40.00	34.00	25.00	20.00	20.00	256.00	°C

Table 20

Axis	-40.10	-40.00	-20.00	0.00	30.00	60.00	100.00	149.00	149.10	°C
Curve	256.00	10.00	8.00	8.00	8.00	8.00	8.00	8.00	256.00	°C

Table 21

Axis	-40.00	-20.00	40.00	°C
Curve	5.00	3.00	1.00	Sec

17 OBDG06 Diagnostic Supporting Tables

3D_Table 1

X-Axis Calibration	%
Y-Axis Calibration	°C
Table Calibration	RPM/Sec

	0.00	2.00	5.00	25.00	100.00
-6.67	8191.75	8191.75	8191.75	8191.75	8191.75
-6.66	8191.75	8191.75	8191.75	8191.75	8191.75
40.00	8191.75	8191.75	8191.75	8191.75	8191.75

3D_Table 2

X-Axis Calibration	%
Y-Axis Calibration	°C
Table Calibration	RPM/Sec

	0.00	2.00	5.00	25.00	100.00
-6.67	8191.75	8191.75	8191.75	8191.75	8191.75
-6.66	500.00	500.00	300.00	300.00	300.00
40.00	500.00	500.00	300.00	300.00	300.00