COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD	O VALUE	SECONDARY PARAMETERS	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			>= 5 Fail Counts	One Trip
						Ignition Voltage Lo Ignition Voltage Hi	>= 8.5996 Volts <= 18 Volts		
					Disable Conditions:	MIL not Illuminated for DTC's:	TCM: P0601 ECM: None		
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			Runs Contin ously	One Trip
						Ignition Voltage Lo Ignition Voltage Hi	>= 8.5996 Volts <= 18 Volts		
					Disable Conditions:	MIL not Illuminated for DTC's:	TCM: P0603 ECM: None		
Transmission Control Module (TCM)	P0604	Transmission Electro-Hydraulic Control Module Random Access Memory	RAM Read/Write Failure (Single Word)	= TRUE	Boolean			>= 5 Fail Counts = 16 Counts	One Trip
						Ignition Voltage Lo Ignition Voltage Hi	>= 8.5996 Volts <= 18 Volts	Counts	
					Disable Conditions:	MIL not Illuminated for DTC's:	TCM: P0604 ECM: None		
Transmission Control Module (TCM)	P062F	Transmission Electro-Hydraulic Control Module Long Term Memory Performance	TCM Non-Volatile Memory bit Incorrect flag at Powerdown		Boolean			Runs Contin ously	One Trip
						Ignition Voltage Lo Ignition Voltage Hi	>= 8.5996 Volts <= 18 Volts		

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALU	UE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
				Co	Disable onditions:	MIL not Illuminated for DTC's:	TCM: P062F 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 Boo	lean			>= 3 Fail Counts	One Trip
							Test	out of 5 Sample Counts	
						P0658 Status is not	Test Failed = This Key On or Fault Active		
						High Side Driver 1 On	Deales		
				Co	Disable onditions:	MIL not Illuminated for DTC's:	TCM: None		
					mantons.		ECM: None		
Transmission Control Module (TCM)	P0667	TCM Internal Temp (substrate) Sensor Circuit Range/Performance	lf transmission oil temp to substrate temp Δ	Refer to Table > 19 in ℃ supporting documents					Two Trips
			If TCM substrate temp to power up temp $\Delta$	Refer to Table > 20 in °C supporting documents					
			Both conditions above required to increment fail counter					>= 3000 Fail (100ms loop)	
			Note: table reference temp = to the median temp of trans oil temp, substrate temp and power up temp.					Out of 3750 Out 3750 (100ms loop)	

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
			Non-continuous (intermittent) fail conditions will delay resetting fail counter until				>= 700 Pass (100ms loop)	
							Sample Out 875 Counts of 875 (100ms loop)	
					Engine Torque Signal Valid	= TRUE Boolea		
					Accelerator Position Signal Valid	= TRUE Boolea		
					Ignition Voltage Lo	>= 8.5996 Volts		
					Ignition Voltage Hi	<= 31.99 Volts		
					Engine Speed Lo			
					Engine Speed Hi			
					Engine Speed is within the allowable limits for	>= 5 Sec		
					Brake torque active	= FALSE		
					Below describes the brake torque entry criteria			
					Engine Torque			
					Throttle			
					Transmission Input Speed Vehicle Speed			
					Transmission Range			
					Transmission Range			
					РТО	Not		
					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		

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
					Clutch hydraulic pressure	Clutch Hydraul ≠ ic Air Purge Event		
					Clutch used to exit brake torque active			
					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		
					P0667 Status is	Test Failed ≠ This Key On or Fault Active		
				Disable Conditions:		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		

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA		THRESHOLI	D VALUE	SECONDARY PARAMETERS	ENABL	-E CONDI	TIONS	TIME	REQUI	RED	MIL ILLUM.
Transmission Control Module (TCM)	P0668	TCM internal temperature (substrate) thermistor failed at a low voltge	Type of Sensor Used	=	CeTFTI_e_V tageDirectPro	ol qu								Two Trips
			If TCM Substrate Temperature Sensor = Direct Proportional and Temp	<=	-249	°C								
			If TCM Substrate Temperature Sensor = Indirect Proportional and Temp	>=	-249	°C								
			Either condition above will satisfy the fail conditions								>=		Fail Timer (Sec)	
							Ignition Voltage Lo Ignition Voltage Hi Engine Speed Lo Engine Speed Hi	>=	8.5996 31.99 400 7500	Volts Volts RPM RPM				
							Engine Speed is within the allowable limits for	>=	5	Sec				
							P0668 Status is	¥	Test Failed This Key On or Fault Active					
						Disable Conditions:	MIL not Illuminated for DTC's:	TCM: No ECM: No						
Transmission Control Module (TCM)	P0669	TCM internal temperature (substrate) thermistor failed at a high voltage	Type of Sensor Used	=	CeTFTI_e_V tageDirectPro	ol qu								Two Trips
			If TCM Substrate Temperature Sensor = Direct Proportional and Temp	>=	249	°C								

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
			If TCM Substrate Temperature Sensor = Indirect Proportional and Temp	<= 249 °C				
			Either condition above will satisfy the fail conditions				Fail >= 60 Timer (Sec)	
					Ignition Voltage Lo Ignition Voltage Hi Engine Speed Lo	<= 31.99 Volts >= 400 RPM		
					Engine Speed Hi Engine Speed is within the allowable limits for	>= 5 Sec		
					P0669 Status is	Test Failed ≠ This Key On or Fault Active		
					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	= FALSE		
					Estimated Motor Power Loss Fault			
				Disable Conditions:	DTC's:	P0722, P0723		
						ECM: None		

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA		THRESHOLD VALUE	SECONDARY PARAMETERS	ENABL	E COND	ITIONS	TIME REQ	UIRED	MIL ILLUM.
Transmission Control Module (TCM)	P06AC	TCM Power-up Temp Sensor Circuit Range/Performance	If TCM power-up temp to substrate temp $\Delta$	>	Refer to Table 20 in °C supporting documents							Two Trips
			lf transmission oil temp to power up temp Δ	>	Refer to Table 18 in °C supporting documents							
			Both conditions above required to increment fail counter							>= 3000	Fail Counts (100ms loop)	
			Note: table reference temp = to the median temp of trans oil temp, substrate temp and power up temp.							Out of 3750	Sample Counts (100ms loop)	
			Non-continuous (intermittent) fail conditions will delay resetting fail counter until							>= 700	Pass Counts (100ms loop)	
										Out 875 of	Sample Counts (100ms loop)	
						Engine Torque Signal Valid	=	TRUE	Boolea n			
						Accelerator Position Signal Valid Ignition Voltage Lo Ignition Voltage Hi Engine Speed Lo Engine Speed Hi	= >= >= >= >= >= >= >= >= >= >= >= >= >=	TRUE 8.5996 31.99 400 7500	Boolea n Volts Volts RPM RPM			
						Engine Speed is within the allowable limits for	>=	5	Sec			

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS		TIME REQUIRED	MIL ILLUM.	
					Brake torque active	=	FALSE			
					Below describes the brake torque entry criteria					
					Engine Torque Throttle	>= >=	90 30	N*m Pct		
					Transmission Input Speed Vehicle Speed	<=	8	RPM Kph		
					Transmission Range Transmission Range	≠ ≠	Park			
					PTO	<i>∓</i> =	Neutral Not			
					Set Brake Torque Active TRUE if above conditions are met for:	>=	Active 7	sec		
					Below describes the brake torque exit criteria					
					Brake torque entry criteria		Not Met Clutch			
					Clutch hydraulic pressure	¥	Hydraul ic Air Purge Event			
					Clutch used to exit brake torque active	=	CeTFT D_e_C 3_Ratl Enbl			
					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		
					P06AC Status is	¥	Test Failed This Key On or Fault Active			

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
				Disable Conditions:		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			Fail >= 60 Time (Sec)	Two Trips
					Ignition Voltage Lo	>= 8.5996 Volts		
					Ignition Voltage Hi			
					Engine Speed Lo Engine Speed Hi	>= 400 RPM <= 7500 RPM		
					Engine Speed is within the allowable limits for	>- 5 500		
					P06AD Status is	Test Failed		
					For Hybrids, below conditions must also be met			
					Estimated Motor Power Loss	>= 0 kW		
					Estimated Motor Power Loss greater than limit for time			

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
					Lost Communication with Hybrid Processor Control Module Estimated Motor Power Loss	= FALSE		
				Disable Conditions:	Fault MIL not Illuminated for DTC's:	= FALSE		
Transmission Control Module (TCM)	P06AE	TCM power-up thermistor circuit voltage high	Power Up Temp	>= 164 °C			Fail >= 60 Time (Sec)	Two Trips
					Ignition Voltage Lo	>= 8.5996 Volts		
					Ignition Voltage Hi Engine Speed Lo			
					Engine Speed Hi			
					Engine Speed is within the			
					allowable limits for P06AE Status is	Test Failed This		
				Disable Conditions:	DTC's:			
Transmission Fluid Temperature Sensor (TFT)	P0711	Trans Fluid Temp Sensor Circuit Range/Performance	If transmission oil temp to substrate temp $\Delta$					Two Trips
			lf transmission oil temp to power up temp Δ					

#### MAIN SECTION 1 OF 5 SECTIONS

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
			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. Non-continuous (intermittent) fail conditions will delay resetting fail counter until				>= 3000 Fail Counts (100ms loop) Out 3750 Sample Counts (100ms loop) >= 700 Pass (100ms loop) >= 700 Sample Counts (100ms loop) Sample Counts (100ms loop)	
					Engine Torque Signal Valid Accelerator Position Signal Valid Ignition Voltage Lo Ignition Voltage Hi Engine Speed Lo Engine Speed Hi Engine Speed is within the allowable limits for Brake torque active Below describes the brake torque entry criteria Engine Torque Throttle Transmission Input Speed Vehicle Speed Transmission Range	≠ Park		

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABL	E CONDIT	TIONS	TIME REQUIRED	MIL ILLUM.
					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			
					Clutch hydraulic pressure	¥	Hydraul ic Air Purge Event			
					Clutch used to exit brake torque active		CeTFT D_e_C 3_Ratl Enbl			
					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			

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
				Disable Conditions:		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, P0306, P0307,		
Transmission Fluid Temperature Sensor (TFT)	P0712	Transmission fluid temperature thermistor failed at a low voltage	Type of Sensor Used	= CeTFTI_e_Vol tageDirectProp		P0308. P0401. P042E		Two Trips
			If Transmission Fluid Temperature Sensor = Direct Proportional and Temp	<= -74 °C				
			If Transmission Fluid Temperature Sensor = Indirect Proportional and Temp	>= -74 °C				
			Either condition above will satisfy the fail conditions				Fail >= 60 Time (Sec)	
					Ignition Voltage Lo Ignition Voltage Hi			
					Engine Speed Lo	>= 400 RPM		
					Engine Speed Hi			
					Engine Speed is within the allowable limits for			

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA		THRESHOLD	VALUE	SECONDARY PARAMETERS	ENABI	LE CONDI	TIONS	TIME REQU	lired	MIL ILLUM.
							P0712 Status is	¥	Test Failed This Key On or Fault Active				
							For Hybrids, below conditions must also be met						
							Estimated Motor Power Loss	>=	0	kW			
							Estimated Motor Power Loss greater than limit for time		0	Sec			
							Lost Communication with Hybrid Processor Control Module	=	FALSE				
							Estimated Motor Power Loss Fault	=	FALSE				
						Disable Conditions:		TCM: P( P0722, I		17,			
								ECM: N	one				
Transmission Fluid Temperature Sensor (TFT)	P0713	Transmission fluid temperature thermistor failed at a high voltage	Type of Sensor Used	=	CeTFTI_e_Vo tageDirectProp	1							Two Trips
			If Transmission Fluid Temperature Sensor = Direct Proportional and Temp	>=	174	°C							
			If Transmission Fluid Temperature Sensor = Indirect Proportional and Temp	~=	174	°C							
			Either condition above will satisfy the fail conditions								>= 60	Fail Time (Sec)	
							Ignition Voltage Lo Ignition Voltage Hi	>= <=	8.5996 31.99	Volts Volts		_	

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA		THRESHOLD	VALUE	SECONDARY PARAMETERS	ENAB	BLE COND	ITIONS	TIME REQUIRED	MIL ILLUM.
							Engine Speed Lo	>=	400	RPM		
							Engine Speed Hi Engine Speed is within the allowable limits for		7500 5	RPM Sec		
							P0713 Status is	¥	Test Failed This Key Or or Faul Active	t		
						Disable Conditions:	DTC's:	TCM: F P0717, ECM: N	P0722, P0	16, )723		
									one			
Mode 2 Multiplex Valve	P0752	Shift Solenoid Valve A Stuck On	Gear Box Slip	>=	400	Rpm						One Trip
			Commanded Gear	=	3rd	Gear						
			Commanded Gear has Achieved 1st Locked OR 1st Free-Wheel OR 2nd with Mode 2 Sol. Commanded On		TRUE	Boolean						
			C456/CBR1 Pressure Switch	=	Pressurized	Boolean						
			C456/CBR1 Pressure Switch Fault	=	FALSE	Boolean						
			If the above parameters are true									
											Pleas e Refer to Neutral Table Timer 16 in (Sec) rting Docu ments	

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
							>= 5 Counts	
					Ignition Voltage Lo	>= 8.5996 Volts		
					Ignition Voltage Hi	<= 31.99 Volts		
					Engine Speed Lo			
					Engine Speed Hi			
					Engine Speed is within the allowable limits for	>= 5 Sec		
					High-Side Driver is Enabled	= TRUE Boolea n		
					Throttle Position Signal Valid from ECM	= TRUE Boolea		
					Output Speed OR			
					TPS	>= 0.5005 %		
					Shift is Complete			
					Transmission Fluid Temperature			
					Input Speed Sensor fault	= FALSE Boolea n		
					Output Speed Sensor fault	= FALSE Boolea n		
					Default Gear Option is not present			
				Disable Conditions:		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, P0425		
						P0308, P0401, P042E		

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA		THRESHOLD V	ALUE	SECONDARY PARAMETERS	ENABL	E CONDI	TIONS	TIME REQU	IIRED	MIL ILLUM.
Mode 2 Multiplex Valve	P0756	Shift Solenoid Valve B Stuck Off	Fail Case 1 Commanded Gear	=	1st Locked								One Trip
			Gear Box Slip	>=	400	RPM					Pleas e Refer to 5 in Suppo rting Docu ments	Neutral Timer (Sec)	
			Intrusive Shift to 2nd										
			Commanded Gear Previous	=	1st Locked	Gear							
			Gear Ratio	<=	3.015991211								
			Gear Ratio	>=	2.728027344								
			If the above parameters are true										
											>= 1 >= 3	sec counts	
							Ignition Voltage Lo	>=	8.5996	Volts			
							Ignition Voltage Hi Engine Speed Lo	<= >=	31.99 400	Volts RPM			
							Engine Speed Hi	<=	7500	RPM			
							Engine Speed is within the allowable limits for	>=	5	Sec			
							Output Speed	>=	0	RPM			
							OR TPS	>=	0.5005	%			
							Shift is Complete Transmission Fluid						
							Temperature	>=	-6.656	°C			
							High-Side Driver is Enabled	=	TRUE	Boolea n			
							Throttle Position Signal Valid from ECM	=	TRUE	Boolea n			
							Input Speed Sensor fault	=	FALSE	Boolea n			
							Output Speed Sensor fault	=	FALSE	Boolea n			

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
				Disable Conditions:	DTC's:	= TRUE TCM: P0716, P0717, P0722, P0723, P182E ECM: P0101, P0102, P0103, P0106, P0107, P0108, P0171, P0172, P0174, P0175, P0201,		
Variable Bleed	P0776	Pressure Control (PC) Solenoid B Stuck Off [C35R]	<u>Fail Case</u> Case: Steady State 3rd 1 Gear			P0202, P0203, P0204, P0205, P0206, P0207, P0208, P0300, P0301, P0302, P0303, P0304, P0305, P0306, P0307, P0308, P0401, P042E		One Trip
Solenoid (VBS)		B Sluck On [C35K]	Commanded Gear Commanded Gear Gearbox Slip				Pleas e Refer to Neutral >= 5 in (Sec) Suppo	
			Intrusive Test: Command 4th Gear If attained Gear=4th gear for Time	Table Based Time Please Refer to Table Enable Time			rting Docu ments	
			It the above condiations are true, Increment 3rd gear fail counter	supporting documents			3rd >= 3 Gear Fail Counts or	

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
			and C35R Fail counter	r			3-5R >= 14 Clutch Fail Counts	
			<u>Fail Case</u> Case: Steady State 5th 2					
			Commanded Gear				Pleas e	
			Gearbox Slip	o >= 400 Rpm			Refer to Table Timer 5 in (Sec) rting Docu	
			Intrusive Test: Command 6th Gear				ments	
			If attained Gear=6th gear Time					
			It the above condiations are true, Increment 5th gear fail counter	n			5th >= 3 Gear Fail Counts or	
			and C35R Fail counter	r			3-5R >= 14 Clutch Fail Counts	
					PRNDL State defaulted	п		
					inhibit RVT	= FALSE Boolea n		
					IMS fault pending indication	п		
					TPS validity flag	= TRUE Boolea n		

COMPONENT/ SYSTEM FAULT MONITOR STRATEGY CODE DESCRIPTION MALFUNCTION CRITER	A THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
		Hydraulic System Pressurized	= TRUE Boolea		
		Minimum output speed for RVT			
		A OR B (A) Output speed enable			
		(B) Accelerator Pedal enable			
		Common Enable Criteria			
		Ignition Voltage Lo Ignition Voltage Hi			
		Engine Speed Lo	>= 400 RPM		
		Engine Speed Hi Engine Speed is within the			
		allowable limits for	Declar		
		Throttle Position Signal valid	= IRUE n		
		HSD Enabled	= TRUE Boolea n		
		Transmission Fluid Temperature	>= _6656 %		
		Input Speed Sensor fault	= FALSE Boolea		
		Output Speed Sensor fault	Declar		
		Default Gear Option is not			
		present			
	Disable	MIL not Illuminated for	TCM P0716 P0717		
	Conditions		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		

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA		THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
Variable Bleed Solenoid (VBS)	P0796	Pressure Control (PC) Solenoid C Stuck Off [C456] (Steady State)	Fail Case Case: Steady State 4th 1 Gear					Pleas	One Trip
			Gear slip	>=	400 RPM			e See Table 5 For Timer al Cal	
			Intrusive test: commanded 5th gear						
			If attained Gear ≠5th for time	>=	Table Based Time Please Refer to Table 3 in supporting documents				
			if the above conditions have been met						
			Increment 4th Gear Fail Counter					4th >= 3 Gear Fail Count OR	
			and C456 Fail Counters					C456 >= 14 Fail Counts	
			Fail Case Case: Steady State 5th 2 Gear					E.	
			Gear slip	>=	400 RPM			Pleas e See Table 5 For Timer al Cal	
			Intrusive test: commanded 6th gear						

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
			If attained Gear ≠ 6th for time					
			if the above conditions have been met					
			Increment 5th Gear Fail Counter				5th Gear Fail Count OR	
			and C456 Fail Counters				C456 >= 14 Fail Counts	
			Fail Case Case: Steady State 6th 3 Gear				Pleas	
			Gear slip	>= 400 RPM			e See Table Neutral >= 5 For Timer Neutr (Sec) al Time Cal	
			Intrusive test: commanded 5th gear				Gai	
			If attained Gear ≠ 5th for time					
			if the above conditions have been met				6th	
			Increment 6th Gear Fail Counter and C456 Fail Counter				>= 3 Gear Fail Count	
							OR C456	
			and C456 Fail Counter				>= 14 Fail Counts	

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE			TIME REQUIRED	MIL ILLUM.
					PRNDL State defaulted	= F	FALSE <sup>E</sup>	Boolea n		
					inhibit RVT	= F	FALSE E	Boolea n		
					IMS fault pending indication	= F	FALSE E	Boolea n		
					TPS validity flag	=	TRUE E	Boolea n		
					Hydraulic System Pressurized	=	TRUE E	Boolea n		
					Minimum output speed for RVT	>=	0	RPM		
					A OR B (A) Output speed enable	>=	16	RPM		
					(B) Accelerator Pedal enable	>= (	0.5005	Pct		
					Common Enable Criteria Ignition Voltage Lo	>= 8	8.5996	Volts		
					Ignition Voltage Hi			Volts		
					Engine Speed Lo			RPM		
					Engine Speed Hi			RPM		
					Engine Speed is within the allowable limits for			Sec		
					Throttle Position Signal valid	=	TRUE E	Boolea n		
					HSD Enabled	=	TRUE E	Boolea n		
					Transmission Fluid Temperature	>=	-6.656	°C		
					Input Speed Sensor fault	= F	FALSE	Boolea n		
					OutputSpeed Sensor fault		FALSE	Boolea n		
					Default Gear Option is not present	=	TRUE			
1										

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD	VALUE	SECONDARY PARAMETERS	ENABLE		ONS	TIME	REQU	IRED	MIL ILLUM.
					Disable Conditions:		TCM: P07 P0722, P0 ECM: P01 P0103, P0 P0108, P0 P0174, P0 P0202, P0 P0205, P0 P0208, P0 P0302, P0 P0305, P0 P0308, P0	723, P182 01, P0102, 106, P010 171, P017 175, P020 203, P020 206, P020 300, P030 303, P030 306, P030	E , 7, 2, 1, 4, 7, 1, 4, 7,				
Tap Up Tap Down Switch (TUTD)	P0826	Up and Down Shift Switch Circuit	TUTD Circuit Reads Invalid Voltage	= TRUE	Boolean Disable Conditions:		₩,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	31.99 V 400 F 7500 F 5 Test Failed This Key On or Fault Active	Volts Volts RPM RPM Sec	7=	60	Fail Time (Sec)	Special No Trip
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		Boolean			8.5996 \	Volts Volts	>= out of	5	Fail Time (Sec) Sample Time (Sec)	Two Trips

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE		SECONDARY PARAMETERS	ENABLE	E CONDI	TIONS	TIME F	REQUIRED	MIL ILLUM.
						Engine Speed Engine Speed	>= <=	400 7500	RPM RPM			
						Engine Speed is within the allowable limits for	>=	5	Sec			
					isable itions:	MIL not Illuminated for DTC's:	TCM: Non ECM: Non					
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 Boolea	n					>=	Fail I.5 Time (Sec)	
										out of 1.	Sample 875 Time (Sec)	
						Ignition Voltage Ignition Voltage	>= <=	8.5996 31.99	Volts Volts			
						Engine Speed	>=	400	RPM			
						Engine Speed	<=	7500	RPM			
						Engine Speed is within the allowable limits for	>=	5	Sec			
					isable itions:	MIL not Illuminated for DTC's:	TCM: Non ECM: Non					
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 Boolea	n					>= 4	Fail 4.4 Time (Sec)	
										out of	5 Time (Sec)	
						Ignition Voltage		8.5996 31.99	Volts			
						Ignition Voltage Engine Speed	<= >=	31.99 400	Volts RPM			
						Engine Speed	<=	7500	RPM			
						Engine Speed is within the allowable limits for	>=	5	Sec			

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLI	D VALUE	SECONDARY PARAMETERS	ENABLE CONDITION	5 TIME REQUIRED	MIL ILLUM.
					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			Fail >= 0.3 Time (Sec Samp out of 0.375 Time (Sec	: ) !e
						Ignition Voltage Ignition Voltage Engine Speed Engine Speed Engine Speed is within the allowable limits for	>= 400 RPN	5 5 1 1	, <u> </u>
						P0966 Status is not	Test Failed This Key On or Fault Active		
					Disable Conditions:	MIL not Illuminated for DTC's:	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			Fail >= 0.3 Time (Sec	
								Samp out of 0.375 Time (Sec	
						Ignition Voltage Ignition Voltage Engine Speed Engine Speed is within the allowable limits for	>- 5 Soc	5 1 1	

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD \	/ALUE	SECONDARY PARAMETERS	ENABLE CONDITION	S TIME REQUIRI	D MIL ILLUM.
						P0967 Status is not	Test Failed This Key On or Fault Active		
					Disable Conditions:	MIL not Illuminated for DTC's:	TCM: None ECM: None		
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		Boolean			>= 0.3 Ti (S	ail ne ec)
								out of 0.375 Ti	nple ne ec)
						P0970 Status is not	or Fault		
						Ignition Voltage			
						Ignition Voltage Engine Speed			
						Engine Speed			
						Engine Speed is within the allowable limits for	>= 5 Se	;	
					Disable Conditions:	MIL not Illuminated for DTC's:	TCM: None ECM: None		
Variable Bleed Solenoid (VBS)		Pressure Control (PC) Solenoid C Control Circuit High Voltage (C456/CBR1 VBS)	The HWIO reports a high voltage (open or power short) error flag		Boolean			>= 0.3 Ti	ail One Trip ne ec)
								out of 0.375 Ti	nple ne ec)

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
					P0971 Status is not Ignition Voltage	or Fault Active		
					Ignition Voltage Engine Speed	<= 31.99 Volts >= 400 RPM		
					Engine Speed Engine Speed is within the			
				Disable Conditions				
Shift Solinoid	P0973	Shift Solenoid A Control Circuit Low (Mode 2 Solenoid)	The HWIO reports a low voltage (ground short) error flag	= TRUE Boolean			Fail >= 1.2 Time (Sec)	One Trip
							Sample out of 1.5 Time (Sec)	
					P0973 Status is not	Test Failed This Key On or Fault Active		
					Ignition Voltage Ignition Voltage			
					Engine Speed Engine Speed	>= 400 RPM		
					Engine Speed is within the allowable limits for	N- E 800		
				Disable Conditions		TCM: None ECM: None		

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLI	D VALUE	SECONDARY PARAMETERS	ENABLE CO	ONDITIONS	TIME	REQU	JIRED	MIL ILLUM.
Shift Solinoid	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)	Two Trips
									out of		Sample Time (Sec)	
						P0974 Status is not	Fa T Ke or I	est iled his y On Fault tive				
						Ignition Voltage		996 Volts				
						Ignition Voltage Engine Speed		.99 Volts 00 RPM				
						Engine Speed Engine Speed		500 RPM				
						Engine Speed is within the allowable limits for		5 Sec				
					Disable	MIL not Illuminated for	TCM: Nono					
					Conditions:	DTC's:						
							ECM: None					
Mode 3 Multiplex Valve	P0976	Shift Solenoid BControl Circuit Low (Mode 3 Solenoid)	The HWIO reports a low voltage (ground short) error flag	= TRUE	Boolean				>=	1.2	Sec	Two Trips
									out of	1.5	Sec	
						P0976 Status is not	Fa = T Ke or I	est iled his y On <sup>-</sup> ault tive				
						Ignition Voltage		996 Volts				
						Ignition Voltage		.99 Volts				
						Engine Speed		00 RPM				
		I	l l			Engine Speed	<= 75	500 RPM	I			

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALU	JE	SECONDARY PARAMETERS	ENABLE	CONDI	TIONS	TIME R	EQUIRED	MIL ILLUM.
						Engine Speed is within the allowable limits for	>=	5	Sec			
				Co	Disable nditions:	DTC's:	TCM: None ECM: None					
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 Bool	lean					>= 1		One Trip
						P0977 Status is not	= k c	Test Failed This Key On or Fault Active		out of 1	.5 Sec	
						Ignition Voltage Ignition Voltage Engine Speed Engine Speed	<= >=	3.5996 31.99 400 7500	Volts Volts RPM RPM			
						Engine Speed is within the allowable limits for	>=	5	Sec			
				Co	Disable nditions:		TCM: None ECM: None					
Tap Up Tap Down Switch (TUTD)	P1761	Tap Up and Down switch signal circuit (rolling count)	Rolling count value received from BCM does not match expected value	= TRUE Bool	lean					>=	Fail 3 Count r	Special No Trip
										> 1	Sampl 0 Timer (Sec)	
						Tap Up Tap Down Message Health Engine Speed Lo		TRUE 400	Boolea n RPM			

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOL	D VALUE	SECONDARY PARAMETERS	ENABLE (	CONDITIONS		MIL ILLUM.
						Engine Speed Hi Engine Speed is within the allowable limits for	<= >=	7500 RPM 5 Sec		
					Disable Conditions:		TCM: None ECM: None			
Transmission Control Module (TCM)	P2534	Ignition Switch Run/Start Position Circuit Low	Run crank active (based on voltage thresholds below)	= FALSE						One Trip
			Ignition Voltage High Hyst (run crank goes true when above this value)	6	Volts				Fai Cour (25n Ioop	ts Is
			Ignition Voltage Low Hyst (run crank goes false when below this value)	2	Volts				Sam Out 280 Cour of 280 (25n Ioop	ts Is
						Normal CAN Comm Enabled ECM run/crank active status		TRUE Boolea n TRUE Boolea n		
					Disable Conditions:		TCM: None ECM: None			
Variable Bleed Solenoid (VBS)	P2714	Pressure Control (PC) Solenoid D Stuck Off [CB26]	Fail Case Case: Steady State 2nd 1 Gear						Pleas	One Trip
			Gear slip	>= 400	RPM				Fleas e See Table 5 For Tim Neutr al Time Cal	er
			Intrusive test: commanded 3rd gear						Gai	

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
			If attained Gear = 3rd for Time	Table Based Time Please see Table 2 in Supporting Documents				
			If Above Conditions have been met					
			Increment 2nd gear fai count				2nd >= 3 Gear Fail Count	
			and CB26 Fail Count				or CB26 >= 14 Fail Count	
			F <u>ail Case</u> Case: Steady State 6th <u>2</u> Gear				Pleas	
			Gear slip	>= 400 RPM			e See Table Neutral 5 For Timer al Time Cal	
			Intrusive test: commanded 5th gear				Gai	
			lf attained Gear  = 5th For Time	Table Based Time Please see Table 2 in Supporting Documents				
			If Above Conditions have been met, Increment 5th gear fail counter				5th >= 3 Gear Fail Count or	
			and CB26 Fail Count				CB26 >= 14 Fail Count	
					PRNDL State defaulted	= FALSE Boolea n		

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITION		MIL ILLUM.
					inhibit RVT	= FALSE <sup>Boo</sup> n	ea	
					IMS fault pending indication	= FALSE <sup>Boo</sup> n		
					TPS validity flag	= TRUE Boo		
					Hydraulic System Pressurized			
					Minimum output speed for RVT	. >= 0 RP	Ν	
					A OR B (A) Output speed enable		N	
					(B) Accelerator Pedal enable	>= 0.5005 Pc	t	
					Common Enable Criteria Ignition Voltage Lo		s	
					Ignition Voltage Hi	<= 31.99 Vo	s	
					Engine Speed Lo Engine Speed Hi			
					Engine Speed is within the allowable limits for			
					Throttle Position Signal valid	= TRUE <sup>Boo</sup> n		
					HSD Enabled	= TRUE <sup>Boo</sup>		
					Transmission Fluid Temperature			
					Input Speed Sensor fault	= FALSE Boo		
					Output Speed Sensor fault	= FALSE Boo		
					Default Gear Option is not present	= TRUE		

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD	VALUE	SECONDARY PARAMETERS	ENABLE CONDITION	S TIME REQ	UIRED	MIL ILLUM.
					Disable Conditions:		TCM: P0716, P0717, P0722, P0723, P182E ECM: P0101, P0102,			
							P0103, P0106, P0107, P0108, P0171, P0172, P0174, P0175, P0201, P0202, P0203, P0204, P0205, P0206, P0207,			
							P0206, 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)	One Trip
								out of 0.375	Sample Time (Sec)	
						P2770 Status is not	Key On or Fault			
						Ignition Voltage Ignition Voltage Engine Speed	<= 31.99 Vol	s		
						Engine Speed Engine Speed Engine Speed is within the allowable limits for	<= 7500 RP	Л		
					Disable Conditions:	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		Boolean			>= 0.3	Fail Time (Sec)	One Trip
								out of 0.375	Sample Time (Sec)	

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
					P2721 Status is not	Test Failed This Key On or Fault Active		
					Ignition Voltage Ignition Voltage Engine Speed Engine Speed Engine Speed is within the	<ul> <li>&lt;= 31.99 Volts</li> <li>&gt;= 400 RPM</li> <li>&lt;= 7500 RPM</li> </ul>		
				Disable Conditions:	allowable limits for MIL not Illuminated for DTC's:	TCM: None		
Variable Bleed Solenoid (VBS)	P2723	Pressure Control (PC) Solenoid E Stuck Off	<u>Fail Case</u> Case: Steady State 1st 1 Gear					One Trip
			Gear slip	>= 400 RPM			Pleas e See Table S For Neutral Neutr al (Sec) Time Cal	
			Intrusive test: commanded 2nd gear				Gai	
			lf attained Gear ≠ 2nd for Time					
			If Above Conditions have been met, Increment 1st gear fail counter				1st Gear Fail Count or	

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
			and C1234 fail counter				>= 14 Cl234 Clutch Fail Count	
			Fail Case Case: Steady State 2nd 2 Gear				Pleas e See	
			Gear slip	>= 400 RPM			For Table 5 For Neutr al Time Cal	
			Intrusive test: commanded 3rd gear	Table based			Cai	
			If attained Gear ≠ 3rd for Time	Timer, Please				
			If Above Conditions have been met, Increment 2nd gear fail counter				2nd >= 3 Gear Fail Count or	
			and C1234 fail counter				>= 14 C1234 Set 14 Clutch Fail Count	
			Fail Case Case: Steady State 3rd 3 Gear				Pleas	
			Gear slip	>= 400 RPM			e See Table >= 5 For Neutral al Time Cal	
			Intrusive test: commanded 4th gear					

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
			If attained Gear ≠ 4th for time					
			If Above Conditions have been met, Increment 3rd gear fail counter				>= 3 <sup>3rd</sup> Gear Fail Count or	
			and C1234 fail counter				>= 14 Cl234 Clutch Fail Count	
			Fail Case Case: Steady State 4th 4 Gear				Pleas	
			Gear slip	>= 400 RPM			e See Table 5 For Neutral al Cal	
			Intrusive test: commanded 5th gear					
			If attained Gear = 5th For Time	Timer, Please Enable Time				
			If Above Conditions have been met, Increment 4th gear fail counter				4th >= 3 Gear Fail Count or	
			and C1234 fail counter				>= 14 Clutch Fail Count	

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CO	NDITIONS	TIME REQUIRED	MIL ILLUM.
					PRNDL State defaulted	= FAI	SE Boolea n		
					inhibit RVT	= FA	SE Boolea n		
					IMS fault pending indication	= FAI	SE Boolea n		
					TPS validity flag	= TR	UE Boolea n		
					Hydraulic System Pressurized	= TR	UE Boolea n		
					Minimum output speed for RVT	2-	RPM		
					A OR B (A) Output speed enable		6 RPM		
					(B) Accelerator Pedal enable	>= 0.5	005 Pct		
					Common Enable Criteria Ignition Voltage Lo Ignition Voltage Hi Engine Speed Lo Engine Speed Hi	>= 8.5 <= 31 >= 4 <= 75	0 RPM		
					Engine Speed is within the allowable limits for	>=			
					Throttle Position Signal valid	= TR	n		
					HSD Enabled		UE Boolea n		
					Transmission Fluid Temperature	>= -6.	656 ℃		
					Input Speed Sensor fault	= FA	п		
					Output Speed Sensor fault	= FAI	SE Boolea n		
					Default Gear Option is not present	= TR	JE		

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD	VALUE	SECONDARY PARAMETERS	ENABLE CONDIT	IONS	TIME REQU	JIRED	MIL ILLUM.
					Disable Conditions:		TCM: P0716, P071 P0722, P0723, P18 ECM: P0101, P010 P0103, P0106, P01 P0108, P0171, P01 P0174, P0175, P02	2E 2, 07, 72,			
							P0202, P0203, P02 P0205, P0206, P02 P0208, P0300, P03 P0302, P0303, P03 P0305, P0306, P03 P0308, P0401, P04	04, 07, 01, 04, 07,			
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)	One Trip
									out of 0.375	Sample Time (Sec)	
						P2729 Status is not	Test Failed = This Key On or Fault Active				
						Ignition Voltage		Volt			
						Ignition Voltage Engine Speed	<= 31.99 >= 400	Volt RPM			
						Engine Speed		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)	P2730	Pressure Control (PC) Solenoid E Control Circuit High (C1234 VBS)	The HWIO reports a high voltage (open or power short) error flag		Boolean				>= 0.3	Fail Time (Sec)	One Trip

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD	VALUE	SECONDARY PARAMETERS	ENABL	E CONDI	TIONS	TIME	E REQU	IIRED	MIL ILLUM.
										out of	0.375	Sample Time (Sec)	
						P2730 Status is not	=	Test Failed This Key On or Fault Active					
						Ignition Voltage	>=	8.5996	Volt				
						Ignition Voltage		31.99	Volt				
						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: No ECM: No						
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)	Two Trips
										out of	5	Sample Time (Sec)	
						P2763 Status is not	=	Test Failed This Key On or Fault Active					
						Ignition Voltage	>=	8.5996	Volt				
						Ignition Voltage	<=	31.99	Volt				
						Engine Speed	>=	400	RPM				
						Engine Speed	<=	7500	RPM				
						Engine Speed is within the allowable limits for	>=	5	Sec				
						High Side Driver Enabled	=	TRUE	Boolea n				

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	٦	THRESHOLD	) VALUE	SECONDARY PARAMETERS ENABLE CONDITION		ENABLE CONDITIONS		ENABLE CONDITIONS		ENABLE CONDITIONS		ENABLE CONDITIONS		ENABLE CONDITIONS		TIME	EREQI	UIRED	MIL ILLUM.
						Disable Conditions:	MIL not Illuminated for DTC's:	TCM: PO ECM: No		59												
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					>= out of	4.4 5	MPH MPH	One Trip								
							P2764 Status is not	=	Test Failed This Key On or Fault Active													
							Ignition Voltage Ignition Voltage Engine Speed Engine Speed Engine Speed is within the	<= >= <=	8.5996 31.99 400 7500	Volt Volt RPM RPM												
							allowable limits for High Side Driver Enabled	/-	5 TRUE	Sec Boolea n												
						Disable Conditions:	MIL not Illuminated for DTC's:	TCM: PO ECM: No		59												
Communication	U0073	Controller Area Network Bus Communication Error	CAN Hardware Circuitry Detects a Low Voltage Error	=	TRUE	Boolean					>=	62	Fail counts (≈ 10 second s)	One Trip								
			Delay timer	>=	0.1125	sec					Out of	70	Sample Counts (≈ 11 second s)									
							Stabilization delay Power Mode	>= =	3 Run	sec												

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
					Ignition Voltage Lo Ignition Voltage Hi			
				Disable Conditions:	DTC's:			
Communication	U0100	Lost Communications with ECM (Engine Control Module)	CAN messages from ECM are not received by the TCM				>= 12 sec	One Trip
					Stabilization delay			
					Power Mode Ignition Voltage Lo			
					Ignition Voltage Hi			
				Disable Conditions:	DTC's:			

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA		THRESHOLD	VALUE	SECONDARY PARAMETERS	ENAB	LE CONDI	TIONS	TIME	REQU	JIRED	MIL ILLUM.
Transmission Control Module (TCM)	P0634	Transmission Electro-Hydraulic Control Module Internal Temperature Too High	Fail Case 1 Substrate Temperature	>=	146.296875	°C					>=	5	Fail Time (Sec)	One Trip
			Fail Case 2 Substrate Temperature	>=	50	°C					>=	2	Fail Time (Sec)	
			Ignition Voltage Note: either fail case can set the DTC		18	Volts								
							Ignition Voltage Lo Ignition Voltage Hi Substrate Temp Lo Substrate Temp Hi	>= <= >= <=	8.5996 31.99 0 170	Volts Volts °C °C				
							Substrate Temp Between Temp Range for Time P0634 Status is	7=	0.25 Test Failed This Key On or Fault Active	Sec				
						Disable Conditions:	MIL not Illuminated for DTC's:	TCM: N						
Transmission Input Speed Sensor (TISS)	P0716	Input Speed Sensor Performance	Transmission Input Speed Sensor Drops		1350	RPM					>=	0.8	Fail Time (Sec)	One Trip
							Engine Torque is Engine Torque is Engine Speed Engine Speed is within the allowable limits for Vehicle Speed is Throttle Position is	>= <= >= >=	0 8191.9 400 7500 5 0 0	N*m N*m RPM RPM Sec Kph Pct				

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	Тŀ	IRESHOLD	D VALUE	SECONDARY PARAMETERS	ENABI	LE COND	ITIONS	TIME REC	UIRED	MIL ILLUM.
							Transmission Input Speed is The previous requirement	>=	0	RPM Sec			
							has been satisfied for  The change (loop to loop) in transmission input speed is	<	8191.9	RPM/ Loop			
							The previous requirement has been satisfied for Throttle Position Signal Valid	>=	0 TRUE	Sec Boolea			
							Engine Torque Signal Valid Ignition Voltage		TRUE 8.5996	n			
							Ignition Voltage	<=	31.99 Test Failed This				
							P0716 Status is not	=	Key Or or Faul Active	t			
						Disable Conditions:		P0973, I	P0974				
			5-10						0101, P01 P0121, P0				One Trip
Transmission Input Speed Sensor (TISS)	P0717	Input Speed Sensor Circuit Low Voltage	Fail Case <u>1</u> Transmission Input Speed is	<	50	RPM					>= 4.5	Fail Time (Sec)	One Trip
			Eail Case 2 equal to Test Failed and Transmission Input Speed is	v	1000	RPM	Controller uses a single power supply for the speed sensors	=	1	Boolea n			
							Engine Torque is Engine Torque is Vehicle Speed	>= <= >=	50 8191.9 16	N*m N*m Kph			

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
					Engine Torque Signal Valid Ignition Voltage Ignition Voltage Engine Speed Engine Speed is within the allowable limits for P0717 Status is not	>= 8.5996 Volts <= 31.99 Volts >= 400 RPM <= 7500 RPM >= 5 Sec Test Failed This		
				Disable Conditions:	DTC's:	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	<= 70 RPM			Fail >= 4.5 Time (Sec)	One Trip
					P0722 Status is not	Test Failed This Key On or Fault Active		
					Transmission Input Speed Check	= TRUE Boolea n Boolea		
					Engine Torque Check Throttle Position	11		
					Transmission Fluid Temperature	N= 40 90		
					Disable this DTC if the PTO is active	= 1 Boolea		
					Engine Torque Signal Valid	Dealas		
					Throttle Position Signal Valid	= TRUE Boolea n		
I					Ignition Voltage is	>= 8.5996 Volts		

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABI	LE CONDI	TIONS	TIME REQUIRED	MIL ILLUM.
					Ignition Voltage is	<=	31.99	Volts		
					Engine Speed is	>=	400	RPM		
					Engine Speed is Engine Speed is within the		7500	RPM		
					allowable limits for	>=	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					
					Shift Status is not OR	=	comple te			
					Transmission Range is	=	Park or Neutral			
					Engine Torque is	>=	8191.8	N*m		
					Engine Torque is	<=	8191.8	N*m		
					Engine Torque Condition 2					
					Engine Torque is Engine Torque is	>= <=	35 8191.8	N*m N*m		
							0191.0			
					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	>=	1000	RPM		
					Transmission Input Speed is	<=	8191	RPM		
					TIS Check Condition 2					

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRE	SHOLD VAL	UE	SECONDARY PARAMETERS	ENABL	E COND.	ITIONS	TIME	REQUIR	ED	MIL ILLUM.
					Ca	Disable nditions:		= = TCM: P0	)101, P01	n '17,  02,				
Transmission Output Speed Sensor (TOSS)	P0723	Output Speed Sensor Circuit Intermittent	Raw Output Speed	>= ^	105 RP	M					>=	0.2 T	nable ime Sec)	One Trip
			Output Speed Delta	<= 8	3191 RP	м					>=	0 T (S	nable ime Sec)	
			Output Speed Drop	> (	650 RP	И					>=	Sp D 1.5 Re r T	utput beed brop cove Fail ime Sec)	
							Range_Disable OR	=	FALSE	See Below				
							Neutral_Range_Enable		TRUE	See Below				

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
					Neutral_Speed_Enable	= TRUE See Below		
					are TRUE concurrently			
					Transmission_Range_Enabl e	= TRUE See Below		
					Transmission_Input_Speed_ Enable	= TRUE <sup>See</sup> Below		
					No Change in Transfer Case Range (High <-> Low) for	>= 5 Second s		
					P0723 Status is not	Test Failed This Key On or Fault Active		
					Disable this DTC if the PTO is active			
					Ignition Voltage is Ignition Voltage is	>= 8.5996 Volts <= 31.99 Volts		
					Engine Speed is	>= 400 RPM		
					Engine Speed is			
					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 satsified for	>= 0 Time (Sec)		
					Input Speed Delta Raw Input Speed			

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
					TIS Condition 2 is TRUE when ALL of the next three conditions are satisfied			
					Input Speed A Single Power Supply is used for all speed sensors Powertrain Brake Pedal Applied is	= TRUE Boolea n = EALSE Boolea		
					Neutral_Range_Enable is TRUE when any of the next 3 conditions are TRUE			
					Transmission Range is	= Neutral ENUM		
					Transmission Range is	Revers e/Neutr = al ENUM Transit onal		
					Transmission Range is	Neutral /Drive Transiti onal		
					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/R everse Transit onal		
					Input Clutch is not	ON (Fully Applied )		

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
					Neutral_Speed_Enable is TRUE when All of the next three conditions are satsified for	Second		
					Transmission Output Speed	> 70 RPM		
					And the acceleration of the Transmission Output Speed is	RPM/L < 500 oop Rate		
					And the acceleration of the Transmission Output Speed is	RPM/L > 0 oop Rate		
					Transmission_Range_Enabl e is TRUE when one of the next four conditions is TRUE			
					Transmission Range is	= Neutral ENUM		
					Transmission Range is	Revers e/Neutr = al ENUM Transiti onal		
					Transmission Range is	Neutral /Drive Transiti onal		
					Range Change Delay Timer	>= 5 Sec		
				Disable Conditions:	DTC's:	TCM: P0973, P0974, P0976, P0977 ECM: P0101, P0102, P0103, P0121, P0122, P0123		

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA		THRESHOLD	VALUE	SECONDARY PARAMETERS	ENABL	E COND	TIONS	TIME	REQ	UIRED	MIL ILLUM.
Torque Converter Clutch (TCC)	P0741	TCC System Stuck OFF	TCC Pressure	>=	800	Кра					>=	2	Enable Time (Sec)	Two Trips
			Either Condition (A) or (B) Must be Met											
			(A) TCC Slip Error @ TCC On Mode	>=	Refer to Table 1 in Supporting Documents	RPM					>=	5	Fail Time (Sec)	
			(B) TCC Slip @ Lock On Mode	>=	130	RPM					>=	5	Fail Time (Sec)	
			If Above Conditions Have been Met, and Fail Timer Expired, Increment Fail Counter								>=	3	TCC Stuck Off Fail Counte r	
							Ignition Voltage Lo	>=	8.5996	Volts				
							Ignition Voltage Hi	<=	31.99	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	<=	8191.9	N*m				
							Throttle Position Lo Throttle Position Hi	>= <=	8.0002 99.998					
							2nd Gear Ratio Lo	>=	2.671	Ratio				
							2nd Gear Ratio High	<=	3.073	Ratio				
							3rd Gear Ratio Lo	>=	1.713	Ratio				
							3rd Gear Ratio High	<=	1.9709					
							4th Gear Ratio Lo	>=	1.3151					
							4th Gear Ratio High	<=	1.5129					
							5th Gear Ratio Lo 5th Gear Ratio Hi	>=	0.9301					
							6th Gear Ratio Lo	<= >=	1.0699 0.6901	Ratio				
							6th Gear Ratio High	<=	0.7939					
							Transmission Fluid Temperature Lo	>=	-6.664	°C				

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESH	DLD VALUE	SECONDARY PARAMETERS	ENABLE CO	ONDITIONS	TIME REQUIRED	MIL ILLUM.
						Transmission Fluid Temperature Hi	<= 1	30 °C		
						TCC Command Lock ON or ON mode	= TR	UE Boolea n		
						PTO Not Active	= TR	UE Boolea n		
						Engine Torque Signal Valid	= TR	UE Boolea n		
						Throttle Position Signal Valid	= TR	UE Boolea n		
						Dynamic Mode		_SE Boolea n		
						P0741 Status is	Fa T ≠ Key or F	est iled inis ic On Fault tive		
					Disable Conditions:	DTC's:	TCM: P0716, P0722, P0723 P2763, P2764	, P0742,		
							ECM: P0101, P0103, P0106 P0108, P0177 P0174, P0175 P0202, P0203 P0205, P0206 P0208, P0300 P0302, P0303 P0305, P0306 P0308, P0401	<ul> <li>a, P0107,</li> <li>b, P0172,</li> <li>b, P0201,</li> <li>c, P0204,</li> <li>c, P0207,</li> <li>c, P0301,</li> <li>c, P0304,</li> <li>c, P0307,</li> </ul>		
Torque Converter	P0742	TCC System Stuck ON	TCC Slip Speed	>= -20	RPM					One Trip
Clutch (TCC)			TCC Slip Speed		RPM					
									Fail >= 2.5 Time (Sec	

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
			If Above Conditions Have been Met, and Fail Timer Expired, Increment Fail Counter				Fail >= 6 Counte r	
					Run TCC Stuck On Test Enable Criteria:			
					Gear Ratio Gear Ratio	>= 0.6901 Ratio		
					Engine Speed Hi Engine Speed Lo Vehicle Speed HI	>= 500 RPM <= 511 KPH		
					Vehicle Speed Lo Stuck On During Upshift Enabled	Boole	1	
					If Stuck On During Upshift is enabled (See Above), Engine Torque Must be	>= 55 Nm		
					Down Shift In Progress	= FALSE Boole n	1	
					Current Gear	1st Boole ≠ Gear n Locked n	1	
					Engine Torque Hi Engine Torque Lo			
					Current Range			
					Current Range	e <del>≠ Revers</del> Range e Range		
					Transmission Sump Temperature			
					Transmission Sump Temperature	>= -0.004 °C		
					Throttle Position Hyst High Throttle Position Hyst Low			
					PTO Active	= FALSE Boole n	ł	
					Disable if in D1 and value true		a	

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CO	NDITIONS	TIME REQUIRED	MIL ILLUM.
					Disable if in D2 and value true	=	) Boolea n		
					Disable if in D3 and value true	=	) Boolea n		
					Disable if in D4 and value true	=	) Boolea n		
					Disable if in D5 and value true	=	) Boolea n		
					Disable if in MUMD and value true	=	) Boolea n		
					Disable if in TUTD and value true	=	) Boolea		
					4 Wheel Drive Active	= FAI	п		
					Hydraulic Clutch Air Purge Active Ignore Air Purge if value =	= FAI	п		
					true TCC Mode	= 0 = 0	) Boolea ) n		
					Common Enables: Ignition Voltage		996 V		
					Ignition Voltage	<= 31	99 V		
					Vehicle Speed Engine Speed	<= 5 >= 4	1 KPH		
					Engine Speed	<= 75			
					Engine Speed is within the allowable limits for	>=	5 Sec		
					Engine Torque Signal Valid	= TR	UE <sup>Boolea</sup> n		
					Throttle Position Signal Valid	= TR	n		
					P0742 Status is	TI	led iis On ault		

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA		THRESHOLD	VALUE	SECONDARY PARAMETERS	ENABL	E CONDI	TIONS	TIME	REQU	IRED	MIL ILLUM.
						Disable Conditions:		P0722, F P2763, F P0103, F P0108, F P0108, F P0174, F P0202, F P0205, F P0208, F P0208, F P0305, F	P0723, P0	741, 02, 107, 172, 201, 204, 207, 301, 304, 307,				
Mode 2 Multiplex Valve	P0751	Shift Solenoid Valve A Stuck Off	Commaned Gear Slip Commanded Gear Gear Ratio Gear Ratio If the above parameters are true	= <=	400 1st Lock 1.484985352 1.343017578	RPM rpm	Ignition Voltage Lo Ignition Voltage Hi Engine Speed Lo Engine Speed Hi Engine Speed is within the allowable limits for Transmission Fluid Temperature Shift is Complete TPS OR Output Speed	>= <= >= >= >= >= >= >= >= >= >= >= >= >= >=	8.5996 31.99 400 7500 5 -6.656 0.5005 0	Volts Volts RPM RPM Sec °C % RPM	>=	8 0 0.3	Fail Tmr Fail Counts Neutral Timer (Sec) Fail Timer (Sec) Counts	Two Trips

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
					Throttle Position Signal Valid from ECM			
					Engine Torque Signal Valio from ECM, High side driver is enabled	s = TRUE n		
					High-Side Driver is Enabled	ri -		
					Input Speed Sensor fau			
					Output Speed Sensor fau Default Gear Option is no	n		
					presen			
				Di Condi	sable MIL not Illuminated fo ions: 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 <u>1</u> Commanded Gear	= 1st Locked				One Trip
			Gear Box Slip Intrusive Shift to 2nd				Pleas e Refer to Neutral 5 in Suppo rting Docu ments	

#### 6T70/6T75 COMMON SECTION 2 OF 5 SECTIONS

IPONENT/ SYSTEM FAULT MONITOR STRAT CODE DESCRIPTION	GY MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
	Commanded Gea Previou Gear Ratii Gear Ratii If the above parameter are true	s = 1st Locked Gear c <= 3.015991211 c >= 2.728027344 s	Ignition Voltage Lo Ignition Voltage Hi Engine Speed Lo Engine Speed Hi Engine Speed is within the allowable limits for Output Speed OR TPS Shift is Complete Transmission Fluid Temperature High-Side Driver is Enabled Throttle Position Signal Valid from ECM Input Speed Sensor fault Output Speed Sensor fault Default Gear Option is not present	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	>= 1 sec >= 3 counts	

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA		THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRI	D M	NIL ILLUM.
					Disable Conditions:	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	B Stuck On [C35R] (Steady	Fail Case <u>1</u> Case: Steady State 1st							One Trip
		State)	Attained Gear slip	>=	400 RPM					
			If the Above is True for Time	>=	Table Based Time Please Refer to Table Enable Time 4 in (Sec) supporting documents					
			Intrusive test: (CBR1 clutch exhausted)							
			Gear Ratio Gear Ratio If the above parameters are true	<= >=	1.933959961 1.75					
								>= 1.1 Ti	ail ner ec)	
								>= 2 Co in G	ail unt 1st ear	
								To >= 3 F	or otal ail unts	

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA		THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
			<u>Fail Case</u> Case: Steady State 2nd <u>2</u> gear						
			Max Delta Output Speed Hysteresis	>=	Table Based value Please Refer to 3D Table 1 in supporting documents				
			Min Delta Output Speed Hysteresis	>=	Table Based value Please Refer to 3D Table 2 in supporting documents				
			If the Above is True for Time		Table Based Time Please Refer to Table 17 in Supporting documents				
			Intrusive test: (CB26 clutch exhausted)						
			Gear Ratio Gear Ratio If the above parameters are true	>=	1.933959961 1.75				
								Fail >= 1.1 Timer (Sec)	
								Fail >= 3 Count in 2nd Gear	
								or Total >= 3 Fail Counts	
			Fail Case 3 Case: Steady State 4th gear						

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA		THRESHOLD VALUE	SECONDAR PARAMETER	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
			Max Delta Output Speed Hysteresis	>=	Table Based value Please Refer to 3D Table 1 in supporting documents				
			Min Delta Output Speed Hysteresis		Table Based value Please Refer to 3D Table 2 in supporting documents				
			If the Above is True for Time	>=	Table Based Time Please Refer to Table 17 in Supporting documents				
			Intrusive test: (C1234 clutch exhausted)						
			Gear Ratio Gear Ratio If the above parameters are true	>=	1.050048828 0.949951172				
								Fail >= 1.1 Timer (Sec)	
								Fail >= 3 Count in 4th Gear or	
								Total >= 3 Fail Counts	
			Fail Case Case: Steady State 6th 4 gear						

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA		THRESHOLD VALUE	SECONDARY PARAMETERS	ENAB	LE CONDITIONS	TIME REQUIRED	MIL ILLUM.
			Max Delta Output Speed Hysteresis	>=	Table Based value Please Refer to 3D Table 1 in supporting documents					
			Min Delta Output Speed Hysteresis	>=	Table Based value Please Refer to 3D Table 2 in supporting documents					
			If the Above is True for Time	>=	Table Based Time Please Refer to Table 17 in supporting documents					
			Intrusive test: (CB26 clutch exhausted)							
			Gear Ratio	<=	1.050048828				Fail >= 1.1 Timer (Sec)	
			Gear Ratio If the above parameters are true	>=	0.949951172				>= 3 counts	
									Fail >= 1.1 Timer (Sec) Fail	
									>= 3 Count in 6th Gear	
									or Total >= 3 Fail Counts	
						PRNDL State defaulted	=	FALSE Boolea		
						inhibit RVT	=	FALSE Boolea n		

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CON	DITIONS	TIME REQUIRED	MIL ILLUM.
					IMS fault pending indication	= FALS	E Boolea n		
					output speed	>= 0	RPM		
					TPS validity flag	= TRU	∃ Boolea n		
					HSD Enabled	= TRU	∃ Boolea n		
					Hydraulic_System_Pressuriz ed	= TRU	∃ Boolea n		
					Minimum output speed for RVT	>= 0	Nm		
					A OR B				
					(A) Output speed enable		Nm		
					(B) Accelerator Pedal enable Ignition Voltage Lo				
					Ignition Voltage Hi				
					Engine Speed Lo	>= 400	RPM		
					Engine Speed Hi		RPM		
					Engine Speed is within the allowable limits for		Sec		
					if Attained Gear=1st FW Accelerator Pedal enable	>= 5.000	3 Pct		
					if Attained Gear=1st FW Engine Torque Enable		Nm		
					if Attained Gear=1st FW Engine Torque Enable	<= 0191	9 Nm		
					Transmission Fluid Temperature	>= -6.65	6 °C		
					Input Speed Sensor fault		E Boolea n		
					Output Speed Sensor fault	= FALS	E <sup>Boolea</sup> n		

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA		THRESHOLD	VALUE	SECONDARY PARAMETERS	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)	P0777	Pressure Control (PC) Solenoid B StuckOn [C35R] (Dymanic)	Primary Offgoing Clutch is exhausted (See Table 12 in Supporting Documents for Exhaust Delay Timers)	=	TRUE	Boolean				One Trip
			Primary Oncoming Clutch Pressure Command Status	=	Maximum pressurized					
			Primary Offgoing Clutch Pressure Command Status	=	Clutch exhaus command	:				
			Range Shift Status	¥	Initial Clutch Control					
			Attained Gear Slip	<=	40	RPM				
			If the above conditions are true run appropriate Fail 1 Timers Below:							
			fail timer 1 (3-1 shifting with Closed Throttle)	>=	0.5	Fail Time (Sec)				
			fail timer 1 (3-2 shifting with Throttle)	>=	0.5	Fail Time (Sec)				
			fail timer 1 (3-2 shifting with Closed Throttle)	>=	0.5	Fail Time (Sec)				

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA		THRESHOLD	VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
			fail timer 1 (3-4 shifting with Throttle)	>=	0.5	Fail Time (Sec)				
			fail timer 1 (3-4shifting with Closed Throttle)		0.5	Fail Time (Sec)				
			fail timer 1 (3-5 shifting with Throttle)	>=	0.5	Fail Time (Sec)				
			fail timer 1 (3-5 shifting with Closed Throttle)		0.5	Fail Time (Sec)				
			fail timer 1 (5-3 shifting with Throttle)	>=	0.5	Fail Time (Sec)				
			fail timer 1 (5-3 shifting with Closed Throttle)	>=	0.5	Fail Time (Sec)				
			fail timer 1 (5-4 shifting with Throttle)	>=	0.150390625	Fail Time (Sec)				
			fail timer 1 (5-4 shifting with Closed Throttle)	>=	0.5	Fail Time (Sec)				
			fail timer 1 (5-6 shifting with Throttle)	>=	0.5	Fail Time (Sec)				
			fail timer 1 (5-6 shifting with Closed Throttle)	>=	0.5	Fail Time (Sec)				

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
			If Attained Gear Slip is Less than Above Cal Increment Fail Timers				Total Fail Time = (Fail 1 + Fail 2) See Enabl e Timer 5 for Fail Timer 1, and Refer ence Suppo rting Table 15 for Fail Timer	
			If fail timer is greater than threshold increment corresponding gear fail counter and total fail counter					
			3rd gear fail counter				3rd >= 3 gear fail counts OR	
			5th gear fail counter				5th >= 5 gear fail counts OR	
			Total fail counter				>= 5 total fail counts	
					TUT Enable temperature Input Speed Sensor fault	>= -6.656 °C = FALSE Boolea n		

	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
					Output Speed Sensor fault	= FALSE Boolea n		
					Command / Attained Gear	≠ 1st Boolea n		
					High Side Driver ON	= TRUE Boolea		
					output speed limit for TUT	>= 350 RPM		
					input speed limit for TUT			
					PRNDL state defaulted	= FALSE Boolea n		
					IMS Fault Pending	= FALSE Boolea n		
					Service Fast Learn Mode	= FALSE Boolea n		
					HSD Enabled	= TRUE Boolea		
					Default Gear Option is not present	= TRUE		
				Disable	MIL not Illuminated for	TCM: P0716, P0717,		
				Conditions	DTC's:	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		Pressure Control (PC) Solenoid C Stuck On [C456] (Steady	Fail Case <u>1</u> Case: Steady State 1st			, , , -		One Trip
Solenoid (VBS)		State)	-					
			Attained Gear slip	>= 400 RPM Table Based				
			If the Above in True for	Time Please				
			If the Above is True for Time					

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
			Intrusive test: (CBR1 clutch exhausted) Gear Ratio Gear Ratio If the above parameters are true	>= 1.343017578			Fail >= 1.1 Timer (Sec) Fail >= 2 Count in 1st Gear or Total >= 3 Fail Counts	
			Fail Case 2 Case Steady State 2nd Max Delta Output Speed Hysteresis	Table Based value Please Refer to 3D Table 1 in supporting documents				
			Min Delta Output Speed Hysteresis	Table 2 in Tpriviec supporting documents Table Based				
			If the Above is True for Time Intrusive test: (CB26 clutch exhausted)	Time Please Refer to Table 17 in supporting documents				

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA		THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
			Gear Ratio Gear Ratio If the above parameters are true		1.484985352 1.343017578			Fail >= 1.1 Timer (Sec) Fail >= 3 Count in 2nd Gear or Total >= 3 fail counts	
			<u>Fail Case</u> 3 Case Steady State 3rd Max Delta Output Speed Hysteresis	>=	Table Based value Please Refer to 3D Table 1 in supporting documents				
			Min Delta Output Speed Hysteresis	>=	Table Based value Please Refer to 3D Table 2 in supporting documents				
			If the Above is True for Time	>=	Table Based Time Please Refer to Table 17 in Supporting documents				
			Intrusive test: (C35R clutch exhausted) Gear Ratio Gear Ratio If the above parameters are true	<= >=	1.484985352 1.343017578				

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CON	DITIONS	TIME REQUIRED	MIL ILLUM.
								Fail >= 1.1 Timer (Sec) Fail Count in 3rd Gear OR Total >= 3 Fail Counts	
					PRNDL State defaulted	= FALS	n		-
					inhibit RVT	= FALS = FALS	n F <sup>Boolea</sup>		
					output speed	>= 0	n RPM		
					TPS validity flag	= TRUI	n		
					HSD Enabled Hydraulic_System_Pressuriz	= TRUI	n Deelee		
					ed Minimum output speed for	= TRUI	n Nm		
					RVT A OR B (A) Output speed enable	>= 16	Nm		
					(B) Accelerator Pedal enable	>= 0.500			
					Ignition Voltage Lo Ignition Voltage Hi	>= 8.599 <= 31.99	9 Volts		
					Engine Speed Lo	>= 400			
					Engine Speed Hi	<= 7500	RPM		
					Engine Speed is within the allowable limits for if Attained Gear=1st FW	>= 5	Sec		
					Accelerator Pedal enable if Attained Gear=1st FW	>= 5.000			
					Engine Torque Enable	>= 20	Nm	l	

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
				Disable Conditions:		<= 8191.9 Nm >= -6.656 °C = FALSE Boolea n = FALSE Boolea n = TRUE		
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	<ul> <li>TRUE Boolean</li> <li>Maximum pressurized</li> <li>Clutch exhaust command</li> <li>Initial Clutch Control</li> </ul>		P0305, P0306, P0307, P0308, P0401, P042E		One Trip

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	Tł	RESHOLD	VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
			If the above conditions are true increment appropriate Fail 1 Timers Below:							
			fail timer 1 (4-1 shifting with throttle)	>=	0.5	Fail Time (Sec)				
			fail timer 1 (4-1 shifting without throttle)	>=	0.5	Fail Time (Sec)				
			fail timer 1 (4-2 shifting with throttle)	>=	0.5	Fail Time (Sec)				
			fail timer 1 (4-2 shifting without throttle)	>=	0.5	Fail Time (Sec)				
			fail timer 1 (4-3 shifting with throttle)	>=	0.5	Fail Time (Sec)				
			fail timer 1 (4-3 shifting without throttle)	>=	0.5	Fail Time (Sec)				
			fail timer 1 (5-3 shifting with throttle)	>=	0.5	Fail Time (Sec)				
			fail timer 1 (5-3 shifting without throttle)	>=	0.5	Fail Time (Sec)				
			fail timer 1 (6-2 shifting with throttle)	>=	0.5	Fail Time (Sec)				
			fail timer 1 (6-2 shifting without throttle)	>=	0.5	Fail Time (Sec)				

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
			If Attained Gear Slip is Less than Above Cal Increment Fail Timers				Total Fail Time = (Fail 1 + Fail 2) See Enabl e Timer s for >= Fail sec Timer 1, and Refer ence Suppo rting Table 15 for Fail Timer 2	
			If fail timer is greater than threshold increment corresponding gear fail counter and total fail counter				Fail	
			4th gear fail counter				Counte >= 3 r From 4th Gear OR Fail Counte	
			5th gear fail counter				>= 3 r From 5th Gear OR	

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
			6th gear fail counter				Fail Counte >= 3 r From 6th Gear OR	
			Total fail counter				Total >= 5 Fail counte	
					TUT Enable temperature Input Speed Sensor fault	>= -6.656 °C = FALSE Boolea		
					Output Speed Sensor fault	II Decleo		
					Command / Attained Gear	≠ 1st Boolea n		
					High Side Driver ON	= TRUE Boolea n		
					output speed limit for TUT	>= 350 RPM		
					input speed limit for TUT	>= 200 RPM		
					PRNDL state defaulted	= FALSE Boolea n		
					IMS Fault Pending	= FALSE Boolea n		
					Service Fast Learn Mode	= FALSE Boolea n		
					HSD Enabled	= TRUE Boolea n		

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA		THRESHOLD	VALUE	SECONDARY PARAMETERS	ENABLE COND	ITIONS	TIME REQU	JIRED	MIL ILLUM.
						Disable Conditions:		TCM: P0716, P07 P0722, P0723, P1				
								ECM: P0101, P01 P0103, P0106, P0 P0108, P0171, P0 P0174, P0175, P0 P0202, P0203, P0 P0205, P0206, P0 P0208, P0300, P0 P0302, P0303, P0 P0308, P0401, P0	107, 172, 201, 204, 207, 301, 304, 307,			
Transmission Fluid Pressure Switch	P0872	Transmission Fluid Pressure (TFP) Sensor C Circuit Low Voltage	CB26 Hydraulic pressure	<=	50	KPa						Special No Trip
			Hydraulic Delay Timer (Table Based)	>=	See Table 8 for Delay Timer Cal	Sec						
			Check for Switch to be in Exhausted Position after delay, If so then Increment Fail Counter							>= 18	Fail Counts	
			Note: Subsequent fail counts require CB26 pressure above this value to re-enable fail logic. Results in one fail count per clutch transition	>	50	Кра						
							Transmission Fluid Temperature Lo	>= -6.656	°C			
							Transmission Fluid Temperature Hyst Hi (disable above this)	Not >= 120	°C			
							Transmission Fluid Temperature Hyst Lo (enable below this)	<= 100	°C			
							Ignition Voltage Lo Ignition Voltage Hi Engine Speed Lo		Volts Volts RPM			

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA		THRESHOLD	VALUE	SECONDARY PARAMETERS	ENAB	LE COND	ITIONS	TIME REQUIRED	MIL ILLUM.
		Transmission Eluid Prossura				Disable Conditions:	DTC's:	= = = >= TCM: P P0713, P0722, P0742, P0973,	P0716, P0 P0723, P0 P0756, P0 P0974, P0 P1915, P1	RPM 12, )717, )751, )757, )976,		Special No.
Transmission Fluid Pressure Switch	P0873	Transmission Fluid Pressure (TFP) Sensor C Circuit High Voltage	CB26 Hydraulic Pressure Hydraulic Delay Timer (Table Based) Check for Switch to be in Pressurized Position after delay, If so then Increment Fail Counter Note: Subsequent fail counts require CB26 pressure below this value to re-enable fail logic. Results in one fail count per clutch transition	>=	700 See Table 8 for Delay Timer Cal	KPa Sec kpa					>= 20 Fail Counts	Special No Trip
							Transmission Fluid Temperature Lo	>=	-6.656	°C		

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA		THRESHOLD	VALUE	SECONDARY PARAMETERS	ENABL	E CONDI	TIONS	TIME REQUIRED	MIL ILLUM.
							Transmission Fluid Temperature Hyst Hi (disable above this)	Not >=	120	°C		
							Transmission Fluid Temperature Hyst Lo (enable below this)		100	°C		
							Ignition Voltage Lo Ignition Voltage Hi Engine Speed Lo Engine Speed Hi	<= >=	8.5996 31.99 400 7500	Volts Volts RPM RPM		
							Engine Speed is within the allowable limits for	>=	5	Sec		
							Default Gear Action High Side Driver ON RVT Status	=	FALSE TRUE Normal			
							Hydraulic Pressure Available	=	TRUE			
							Engine Speed Min	>=	550	RPM		
						Disable Conditions:	DTC's:	P0713, P P0722, P P0742, P P0973, P P0977, P	20716, P0 20723, P0 20756, P0 20974, P0 20974, P0 21915, P1	717, 751, 757, 976,		
								ECM: No	one			Special No
Transmission Fluid Pressure Switch	P0877	Transmission Fluid Pressure (TFP) Sensor D Circuit Low Voltage	C1234 Hydraulic pressure		50	KPa						Trip
			Hydraulic Delay Timer (Table Based)	>=	See Table 6 for Delay Timer Cal	Sec						
			Check for Switch to be in Exhausted Position after delay, If so then Increment Fail Counter								>= 5 Fail Counts	

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
			Note: Subsequent fail counts require C1234 pressure above this value to re-enable fail logic. Results in one fail count per clutch transition	> 50 kpa				
					Transmission Fluid Temperature Lo	>= -6.656 °C		
					Transmission Fluid Temperature Hyst Hi (disable above this)	Not >= 120 °C		
					Transmission Fluid Temperature Hyst Lo (enable below this)			
					Ignition Voltage Lo Ignition Voltage Hi Engine Speed Lo Engine Speed Hi	>= 400 RPM		
					Engine Speed is within the allowable limits for	N- 5 900		
					Default Gear Action High Side Driver ON	= TRUE		
					RVT Status Hydraulic Pressure Available			
					Engine Speed Min	>= 550 RPM		
				Disable Conditions:	DTC's:	TCM: P0711, P0712, P0713, P0716, P0717, P0722, P0723, P0751, P0742, P0756, P0757, P0973, P0974, P0976, P0977, P1915, P182E ECM: None		

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA		THRESHOLD	VALUE	SECONDARY PARAMETERS	ENABL	E CONDI	TIONS	TIME REQUIRED	MIL ILLUM.
Transmission Fluid Pressure Switch	P0878	Transmission Fluid Pressure (TFP) Sensor D Circuit High Voltage	C1234 Hydraulic pressure	>=	700	KPa						Special No Trip
			Hydraulic Delay Timer (Table Based)	>=	See Table 6 for Delay Timer Cal	Sec						
			Check for Switch to be in Pressurized Position after delay, If so then Increment Fail Counter								>= 8 Fail Counts	
			Note: Subsequent fail counts require C1234 pressure below this value to re-enable fail logic. Results in one fail count per clutch transition	<	700	Кра						
							Transmission Fluid Temperature Lo	>=	-6.656	°C		
							Transmission Fluid Temperature Hyst Hi (disable above this)	Not >=	120	°C		
							Transmission Fluid Temperature Hyst Lo (enable below this)	<=	100	°C		
							Ignition Voltage Lo	>=	8.5996			
							Ignition Voltage Hi Engine Speed Lo	<= >=	31.99 400	Volts RPM		
							Engine Speed Hi	<=	7500	RPM		
							Engine Speed is within the allowable limits for	>=	5	Sec		
							Default Gear Action	=	FALSE			
							High Side Driver ON	=	TRUE			
							RVT Status	=	Normal			
							Hydraulic Pressure Available	=	TRUE			
							Engine Speed Min	>=	550	RPM		
I												

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	٦	THRESHOLD	VALUE	SECONDARY PARAMETERS	ENABLE	E CONDIT	TIONS	TIME REQUIRED	MIL ILLUM.
						Disable Conditions:		P0713, P0	0716, P07 0723, P07 0756, P07 0974, P09 1915, P18	717, 751, 757, 976,		
Transmission Fluid Pressure Switch	P0989	Transmission Fluid Pressure (TFP) Sensor E Circuit Low Voltage	CBR1/C456 Hydraulic pressure Hydraulic Delay Timer (Table Based)	~=	50 See Table 9 for Delay Timer Cal	Kpa Sec						Special No Trip
			Check for Switch to be in Exhausted Position after delay, If so then Increment Fail Counter								>= 18 Fail Counts	
			Note: Subsequent fail counts require C35R pressure above this value to re-enable fail logic. Results in one fail count per clutch transition		50	kpa						
							Transmission Fluid Temperature Lo	>=	-6.656	°C		
							Transmission Fluid Temperature Hyst Hi (disable above this)	Not >=	120	°C		
							Transmission Fluid Temperature Hyst Lo (enable below this)	<=	100	°C		
							Ignition Voltage Lo Ignition Voltage Hi Engine Speed Lo Engine Speed Hi	>= <= >= <=	31.99 400	Volts Volts RPM RPM		
							Engine Speed is within the allowable limits for	>=	5	Sec		
							Default Gear Action High Side Driver ON	=	FALSE TRUE			

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA		THRESHOLD	VALUE	SECONDARY PARAMETERS	ENABI	-E CONDIT	IONS	TIME REQUIRED	MIL ILLUM.
							RVT Status	=	Normal			
							Hydraulic Pressure Available	=	TRUE			
							Engine Speed Min	>=	550	RPM		
						Disable Conditions:	DTC's:	P0713, I P0722, I P0742, I P0973, I	P0716, P07 P0723, P07 P0756, P07 P0974, P09 P1915, P18	17, 51, 57, 76,		
Transmission Fluid Pressure Switch	P0990	Transmission Fluid Pressure (TFP) Sensor E Circuit High Voltage	CBR1/C456 Hydraulic pressure	>=	700	Кра						Special No Trip
			Hydraulic Delay Timer (Table Based)		See Table 9 for Delay Timer Cal	Sec						
			Check for Switch to be in Pressurized Position after delay, If so then Increment Fail Counter								>= 15 Fail Counts	
			Note: Subsequent fail counts require C35R pressure above this value to re-enable fail logic. Results in one fail count per clutch transition		700	kpa						
							Transmission Fluid Temperature Lo	>=	-6.656	°C		
							Transmission Fluid Temperature Hyst Hi (disable above this)		120	°C		
							Transmission Fluid Temperature Hyst Lo (enable below this)	<=	100	°C		
							Ignition Voltage Lo	>=	8.5996	Volts		

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
					Ignition Voltage Hi Engine Speed Lo Engine Speed Hi	<= 31.99 Volts >= 400 RPM <= 7500 RPM		
					Engine Speed is within the allowable limits for	>= 5 Sec		
					Default Gear Action High Side Driver ON			
					RVT Status	= Normal		
					Hydraulic Pressure Available			
					Engine Speed Min	>= 550 RPM		
				Disable Conditions:	DTC's:	TCM: P0711, P0712, P0713, P0716, P0717, P0722, P0723, P0751, P0742, P0756, P0757, P0973, P0974, P0976, P0977, P1915, P182E		
						ECM: None		
Mode 2 Multiplex Valve	P1751	Shift valve 1 performance	Attained Gear Slip is	>= 100 RPM				Two Trips
			If Slip is Greater than the Above Cal Increment Fail Counter & Sample Counter				>= 5 Fail Counts	
							Out 5 Sample of Counts	
					Once this evaluation is complete the system will allow the valve to get back into position by delaying the next test for	= 1 Second		
					M2 Solenoid is Commanded On	= TRUE <sup>Boolea</sup> n		
					Current Gear ≠ 2nd Gear	≠ 2nd Gear Gear		

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE	CONDI	TIONS	TIME REQUIRED	MIL ILLUM.
					Calcaluted line pressure is	>=	1300	kPa		
					The test can begin when the M2 valve is verified to be in place because absolute value of attained gear slip and commanded gear slip is	<=	110	RPM		
					Test is delayed by a calibrated amount of time to allow the M2 valve to get into position	=	0.5	Sec		
					Upshift is In Progress	= 1	FALSE	Boolea n		
					Input Speed Sensor Signal Hyst High (enabled above this value)	>=	1175	RPM		
					Input Speed Sensor Signal Hyst Low (disabled below this value)	<=	900	RPM		
					The torque converter clutch has transition from Locked to Unlocked.		TRUE	Boolea n		
					TCC Stuck On Enable Criteria:					
					Gear Ratio Gear Ratio			Ratio Ratio		
					Engine Speed Hi		0.6901 6500	RPM		
					Engine Speed Lo		500	RPM		
					Vehicle Speed HI Vehicle Speed Lo		511 16	KPH KPH		
					Stuck On During Upshift Enabled	-	0	Boolea n		

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE COND	DITIONS	TIME REQUIRED	MIL ILLUM.
					If Stuck On During Upshift is enabled (See Above), Engine Torque Must be	>= 55	Nm		
					Down Shift In Progress	= FALSE	Boolea n		
					Current Gear	1st ≠ Gear Lockeo	Boolea 1		
					Engine Torque Hi	<= 8191.9	Nm		
					Engine Torque Lo		Nm		
					Current Range	≠ Neutra	I Range		
					Current Range	≠ Revers e	Range		
					Transmission Sump Temperature	<= 130	°C		
					Transmission Sump Temperature	>= -6.664	°C		
					Throttle Position Hyst High	>= 8.0002	Pct		
					Throttle Position Hyst Low	<= 2.9999			
					PTO Active	= FALSE	Boolea n		
					Disable if in D1 and value true	= 0	Boolea n		
					Disable if in D2 and value true	= 0	Boolea n		
					Disable if in D3 and value true	= 0	Boolea n		
					Disable if in D4 and value true	= 0	Boolea n		
					Disable if in D5 and value true	= 0	Boolea n		
					Disable if in MUMD and value true	= 0	Boolea n		
					Disable if in TUTD and value true	= 0	Boolea n		
					4 Wheel Drive Active	= FALSE	Boolea n		

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD	VALUE	SECONDARY PARAMETERS	ENABI	LE COND	ITIONS	TIME F	REQUIRED	MIL ILLUM.
						Air Purge Active	=	FALSE	Boolea n			
						Ignore Air Purge if value = true	=	0	Boolea n			
						TCC Mode	=	OFF				
						Common Enables:						
						Ignition Voltage	>=	8.5996				
						Ignition Voltage	<=	31.99				
						Vehicle Speed Engine Speed	<= >=	511 400	KPH RPM			
						Engine Speed Engine Speed	>= <=	400 7500	RPM			
						Engine Speed is within the allowable limits for	>=	5	Sec			
						Engine Torque Signal Valid	=	TRUE	Boolea n			
						Throttle Position Signal Valid	=	TRUE	Boolea n			
						P1751 Status is	¥	Test Failed This Key On				
					Disable Conditions:	MIL not Illuminated for DTC's:	P0722, I	0716, P07 P0723, P0 P2763, P2	0741,			
							P0103,   P0108,   P0174,   P0202,   P0205,	20101, P0 P0106, P0 P0171, P0 P0175, P0 P0203, P0 P0206, P0 P0300, P0	0107, 0172, 0201, 0204, 0207,			
							P0302, I P0305, I	P0300, P0 P0303, P0 P0306, P0 P0401, P0	)304, )307,			
Mode Switch	P1762	Transmission Mode Switch Signal Circuit (rolling count)	Rolling count value received from BCM does not match expected value	- IRUE	Boolean					>=	Fail 3 Counte r	Special No Trip

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA		THRESHOLD	/ALUE	SECONDARY PARAMETERS	ENABLE	CONDI	TIONS	TIME REQI	JIRED	MIL ILLUM.
											> 10	Sample Timer (Sec)	
							Pattern Switch Message Health	=	TRUE	Boolea n			
							Engine Speed Lo Engine Speed Hi	>= <=	400 7500	RPM RPM			
							Engine Speed is within the allowable limits for	>=	5	Sec			
						Disable Conditions:	MIL not Illuminated for DTC's:	TCM: None ECM: None					
Internal Mode Switch (IMS)	P182E	Internal Mode Switch - Circuit A Low Reported as Internal Mode Switch-Invalid Range	<u>Fail Case</u> <u>1</u> Current range	=	"Transitional 1"	Range State							One Trip
			Previous range	¥	CeTRGR_e_P RNDL_Drive6	Range State							
			Previous range	¥	CeTRGR_e_P RNDL_Drive4	Range State							
			Either the S1 or S3 Pressure Switch indicates "Pressure Present"	=	TRUE	Boolean							
			Engine Torque Engine Torque	>= <=		Nm Nm							
			If the above conditions are present Increment Fail Timer								>= 0.225	Fail Second s	
			If Fail Timer has Expired then Increment Fail Counter								>= 15	Fail Counts	
			<u>Fail Case</u> 2 Current range	=	"Transitional 1"	Range State							

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA		THRESHOLD	VALUE	SECONDARY PARAMETERS	ENABI		ITIONS	TIME REQUIRED	MIL ILLUM.
			S3 Pressure Switch indicates "Exhausted"	=	TRUE	Boolean						
			Commanded Gear	=	1st Locked	Gear						
			If the above conditions are present Increment Fail Timer								Fail >= 0.225 Second s	
			If Fail Timer has Expired then Increment Fail Counter								>= 15 Fail Counts	
			<u>Fail Case</u> <u>3</u> Current range	=	"Transitional 13"		Previous range	¥	CeTRG R_e_P RNDL_ Drive3			
			Either the S1 or S3 Pressure Switch indicates "Pressure Present"		TRUE	Boolean	Previous range	¥	CeTRG R_e_P RNDL_ Drive2			
			Engine Torque	>=	-8192	Nm	IMS is 7 position	=	0	Boolea n		
			Engine Torque	<=	8191.75	Nm	If the "IMS 7 Position config" = 1 then the "previous range" criteria above must also be satsified when the "current range" = "Transitional 13"					
			If the above conditions are present Increment Fail Timer								>= 0.225 Second s	
			If Fail Timer has Expired then Increment Fail Counter								>= 15 Fail Counts	
			Fail Case 4 Current range	=	"Transitional 2" or "Transitional 8"		Disable Fail Case 4 if last positive range was Drive 6 and current range is transitional 8					

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA		THRESHOLD	VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
			Inhibit bit (see definition)	=	FALSE		Set inihibit bit true if PRNDL = 1100 (rev) or 0100 (Rev- Neu transitional) Set inhibit bit false if PRNDL = 1001 (park)			
			Either the S1 or S3 Pressure Switch indicates "Pressure Present"	=	TRUE	Boolean				
			Steady State Engine Torque		100	Nm				
			Steady State Engine Torque	<=	8191.75	Nm				
			If the above conditions are present Increment Fail Timer						>= 0.225 Second s	
			If the above Condtions have been met, Increment Fail Counter						>= 15 Fail Counts	
			Fail Case 5 Current range	=	"Transitional 11"					
			Engine Torque		20	Nm				
			Either the S1 or S3 Pressure Switch indicates "Pressure Present"	=	TRUE	Boolean				
			If the above conditions are present Increment Fail Timer						>= 0.225 Second s	
			If the above Condtions have been met, Increment Fail Counter						>= 15 Fail Counts	
			Fail Case <u>6</u> Current range	=	"Illegal"		A Open Circuit Definition (flag set false if the following conditions are met):			

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
			and		Current Range	"Transit ≠ ional 11"		
			A Open Circuit (See Definition)	= FALSE Boolean	or			
					Last positive state or	≠ Neutral		
					Previous transitional state	Transiti ≠ onal 8 and Illegal		
					and			
					PRNDL Circuit A	= Open Circuit		
					PRNDL Circuit B	= Closed Circuit		
					PRNDL Circuit C	= Open Circuit		
					PRNDL Circuit P	= Open Circuit		
			If the above Condtions are present, Increment Fail timer				>= 6.25 Second s	
			Fail Case Z Current PRNDL State	= PRNDL circuit ABCP = 1101				
			and					
			Previous valid state	= PRNDL circuit ABCP =1111 Range				
			Input Speed					
			Reverse Trans Ratio Reverse Trans Ratio					
			If the above Conditions					
			are present, Increment Fail timer				>= 6.25 Second s	

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	٦	THRESHOLD	VALUE	SECONDARY PARAMETERS	ENABL	E CONDI	TIONS	TIME REQU	IRED	MIL ILLUM.
			P182E will report test fail when any of the above 7 fail cases are met										
							Ignition Voltage Lo Ignition Voltage Hi Vehicle Speed Lo Engine Speed Hi Engine Speed is within the		8.5996 31.99 511 400 7500 5	Volts Volts KPH RPM RPM Sec			
							allowable limits for Engine Torque Signal Valid		TRUE	Boolea n			
						Disable Conditions:		TCM: P0 ECM: P0 P0103, P P0108, P P0174, P P0202, P P0205, P P0208, P P0302, P P0305, P P0308, P	0101, P01 0106, P0 0171, P0 0175, P0 0203, P0 0206, P0 0300, P0 0303, P0 0306, P0	102, 107, 172, 201, 204, 207, 301, 304, 307,			
Internal Mode Switch (IMS)	P1915	Internal Mode Switch Does Not Indicate Park/Neutral (P/N) During Start	PRNDL State is	¥	Park or Neutral	Enumeration							One Trip
			The following events must occur Sequentially									Enable	
			Initial Engine speed	<=	50	RPM						Enable Time (Sec)	
			Engine Speed Between Following Cals										

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA		THRESHOLI	D VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
			Engine Speed Lo Hist	>=	50	RPM				
			Engine Speed Hi Hist	<=	480	RPM			Enable >= 0.069 Time (Sec)	
			Then Final Engine Speed	>=	525	RPM				
			Final Transmission Input Speed		100	RPM			Fail >= 1.25 Time (Sec)	
							DTC has Ran this Key Cycle?	= FALSE Boole	a	
							Ignition Voltage Lo Ignition Voltage Hi	>= 6 V <= 31.999 V		
							Ignition Voltage Hyst High (enables above this value)			
							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		
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)		TRUE	Boolean				One Trip

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA		THRESHOLD	VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
			Primary Oncoming Clutch Pressure Command Status	=	Maximum pressurized					
			Primary Offgoing Clutch Pressure Command Status	=	Clutch exhaus command	t				
			Range Shift Status Attained Gear Slip		Initial Clutch Control 40	RPM				
			If above coditons are true, increment appropriate Fail 1 Timers Below:							
			fail timer 1 (2-1 shifting with throttle)	>=	0.5	Fail Time (Sec)				
			fail timer 1 (2-1 shifting without throttle)	>=	0.5	Fail Time (Sec)				
			fail timer 1 (2-3 shifting with throttle)	>=	0.5	Fail Time (Sec)				
			fail timer 1 (2-3 shifting without throttle)		0.5	Fail Time (Sec)				
			fail timer 1 (2-4 shifting with throttle)	>=	0.5	Fail Time (Sec)				
			fail timer 1 (2-4 shifting without throttle)	>=	0.5	Fail Time (Sec)				
			fail timer 1 (6-4 shifting with throttle)	>=	0.5	Fail Time (Sec)				
			fail timer 1 (6-4 shifting without throttle)		0.5	Fail Time (Sec)				
			fail timer 1 (6-5 shifting with throttle)	>=	0.5	Fail Time (Sec)				

## 6T70/6T75 COMMON SECTION Page 49 of 67

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
			fail timer 1 (6-5 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 Enabl e Timer s for >= Fail sec Timer 1, and Refer ence Suppo rting Table 15 for Fail Timer 2	
			If fail timer is greater than threshold increment corresponding gear fail counter and total fail counter					
			2nd gear fail counter				Fail Counte >= 3 r From 2nd Gear OR	

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
			6th gear fail counter				Fail Counte >= 3 r From 6th Gear	
			total fail counter				OR Total >= 5 Counte r	
					TUT Enable temperature Input Speed Sensor fault	Declas		
					Output Speed Sensor fault	= FALSE Boolea n		
					Command / Attained Gear High Side Driver ON	n = TRUF <sup>Boolea</sup>		
					output speed limit for TUT input speed limit for TUT	>= 350 RPM		
					PRNDL state defaulted	II Decleo		
					IMS Fault Pending Service Fast Learn Mode	= FALSE n Boolog		
					HSD Enabled	Boolea		
				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		

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
Variable Bleed Solenoid (VBS)	P2715		Fail Case         1       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 = 3.015991211 >= 2.728027344			>= 1.1 Fail >= 1.1 Timer (Sec) >= 2 Fail Count in 1st Gear or Total >= 3 Fail Counts	One Trip
			Fail Case Case: Steady State 3rd Gear Max Delta Output Speed Hysteresis	Table Based value Please Refer to 3D				

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA		THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
			Min Delta Output Speed Hysteresis		Table Based value Please Refer to 3D Table 2 in supporting documents				
			If the Above is True for Time	>=	Table Based Time Please Refer to Table 17 in Supporting documents				
			Intrusive test: (C35R clutch exhausted)						
			Gear Ratio Gear Ratio If the above parameters are true	>=	3.015991211 2.728027344				
								Fail >= 1.1 Timer (Sec)	
								Fail >= 3 Count in 3rd Gear or	
								Total >= 3 Fail Counts	
			Fail Case Case: Steady State 4rd 3 Gear						
			Max Delta Output Speed Hysteresis	>=	Table Based value Please Refer to 3D Table 1 in supporting documents				

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
			Min Delta Output Speed Hysteresis	Table Based value Please Refer to 3D Table 2 in supporting documents				
			If the Above is True for Time	Table Based Time Please Refer to Table 17 in Supporting documents				
			Intrusive test: (C1234 clutch exhausted)					
			Gear Ratio Gear Ratio					
			If the above parameters are true					
							Fail >= 1.1 Timer (Sec)	
							Fail >= 3 Count in 4th Gear	
							or	
							Total >= 3 Fail Counts	
			F <u>ail Case</u> Case: Steady State 5th 4 Gear					
			Max Delta Output Speed Hysteresis					

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA		THRESHOLD VALUE	SECONDARY PARAMETERS	ENABI	LE CONDITIONS	TIME REQUIRED	MIL ILLUM.
			Min Delta Output Speed Hysteresis	>=	Table Based value Please Refer to 3D Table 2 in supporting documents					
			If the Above is True for Time		Table Based Time Please Refer to Table 17 in supporting documents					
			Intrusive test: (C35R clutch exhausted)							
			Gear Ratio Gear Ratio If the above parameters are true	>=	0.779052734 0.704956055					
									Fail >= 1.1 Timer (Sec)	
									Fail >= 3 Count in 5th Gear	
									or Total >= 3 Fail Counts	
						PRNDL State defaulted	=	FALSE Boolea		
						inhibit RVT	=	FALSE Boolea		
						IMS fault pending indication	=	FALSE Boolea n		
						output speed	>=	0 RPM		
						TPS validity flag	=	TRUE Boolea n		

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE	E CONDI	TIONS	TIME REQUIRED	MIL ILLUM.
					HSD Enabled	=	TRUE	Boolea n		
					Hydraulic_System_Pressuriz ed		TRUE	Boolea n		
					Minimum output speed for RVT	>=	0	Nm		
					A OR B (A) Output speed enable		16	Nm		
					(B) Accelerator Pedal enable	>=	0.5005	Nm		
					Ignition Voltage Lo Ignition Voltage Hi Engine Speed Lo	<=	8.5996 31.99 400	Volts Volts RPM		
					Engine Speed Eo		7500	RPM		
					Engine Speed is within the allowable limits for	~-	5	Sec		
					if Attained Gear=1st FW Accelerator Pedal enable		5.0003	Pct		
					if Attained Gear=1st FW Engine Torque Enable	>=	20	Nm		
					if Attained Gear=1st FW Engine Torque Enable		8191.9	Nm		
					Transmission Fluid Temperature		-6.656	°C		
					Input Speed Sensor fault	=	FALSE	Boolea n		
					Output Speed Sensor fault	=	FALSE	Boolea n		
					Default Gear Option is not present		TRUE			

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA		THRESHOLD	VALUE	SECONDARY PARAMETERS	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)	P2724	Pressure Control (PC) Solenoid E Stuck On (Dynamic)	Primary Offgoing Clutch is exhausted (See Table 10 in Supporting Documents for Exhaust Delay Timers)	=	TRUE	Boolean				One Trip
			Primary Oncoming Clutch Pressure Command Status	=	Maximum pressurized					
			Primary Offgoing Clutch Pressure Command Status	=	Clutch exhaus command	t				
			Range Shift Status	¥	Initial Clutch Control					
			Attained Gear Slip If the above conditions are true increment appropriate Fail 1 Timers Below:	<=	40	RPM				
			fail timer 1 (2-6 shifting with throttle)	>=	0.5	sec				
			fail timer 1 (2-6 shifting without throttle)	>=	0.5	sec				
			fail timer 1 (3-5 shifting with throttle)	>=	0.5	sec				

	throttle) fail timer 1 5 shifting with throttle) fail timer 1 (4-5 shifting without throttle) fail timer 1	>=	0.5	sec			
	5 shifting with throttle) fail timer 1 (4-5 shifting without throttle) fail timer 1			sec			
(4-6	(4-5 shifting without throttle) fail timer 1	>=	0.5				
(4-6	fail timer 1			sec			
	6 shifting with throttle)	>=	0.5	sec			
	fail timer 1 (4-6 shifting without throttle)	>=	0.5	sec			
Ir Ir	f Attained Gear Slip is Less than Above Cal ncrement Fail Timers il timer is greater than threshold increment					Total Fail Time = (Fail 1 + Fail 2) See Enabl e Timer s for >= Fail Refer ence Suppo rting Table 15 for Fail Timer 2	

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
			2nd gear fail counter				Fail Counte >= 3 r From 2nd Gear	
			3rd gear fail counter				Fail Counte >= 3 r From 3rd Gear	
			4th gear fail counter				Fail Counte >= 3 r From 4th Gear	
			total fail counter				Total >= 5 Fail r	
					TUT Enable temperature	>= -6.656 °C		
					Input Speed Sensor fault	- TALSE n		
					Output Speed Sensor fault	= FALSE Boolea n		
					Command / Attained Gear	≠ 1st Boolea n		
					High Side Driver ON	= TRUE Boolea n		
					output speed limit for TUT	>= 350 RPM		
					input speed limit for TUT	>= 200 RPM		
					PRNDL state defaulted	= FALSE Boolea n		
					IMS Fault Pending	= FALSE Boolea n		

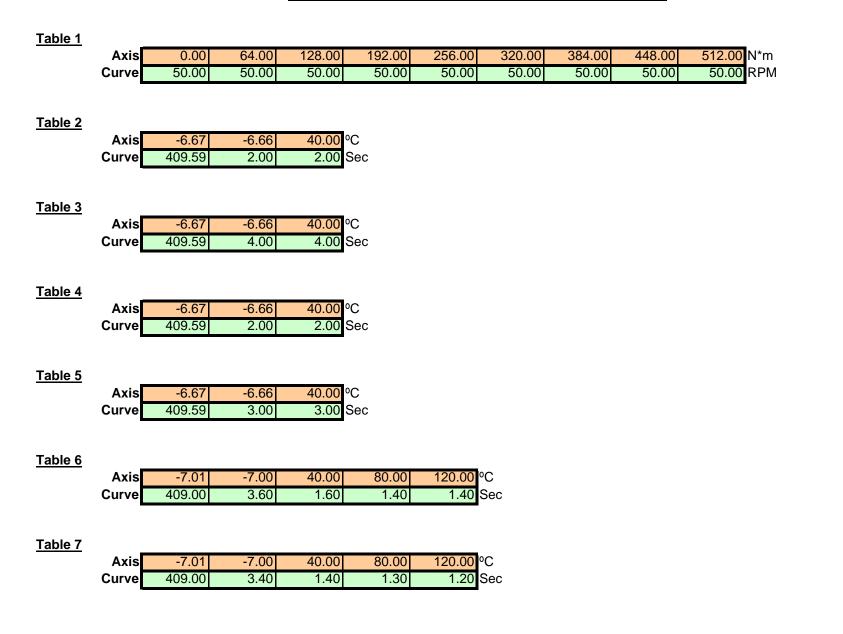
COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
					Service Fast Learn Mode HSD Enabled	n Booloo		
				Disable Conditions:	DTC's:	TCM: P0716, P0717, P0722, P0723, P182E ECM: P0101, P0102, P0103, P0106, P0107, P0108, P0171, P0172, P0174, P0175, P0201, P0202, P0203, P0204, P0205, P0206, P0207, P0208, P0300, P0301, P0302, P0306, P0307, P0308, P0401, P042E		
Variable Bleed Solenoid (VBS)	P2724	Pressure Control (PC) Solenoid E Stuck On (Steady State)	Fail Case 1 Case: 5th Gear					One Trip
			Max Delta Output Speed Hysteresis	Table Based value Please Refer to 3D Table 1 in supporting documents				
			Min Delta Output Speed Hysteresis	Table Based value Please Refer to 3D Table 2 in supporting documents				
			If the Above is True for Time	Table Based Time Please Refer to Table 17 in Supporting documents				

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
			Intrusive test: (C35R clutch exhausted) Gear Ratio Gear Ratio If the above parameters are true	<= 1.484985352 >= 1.343017578			Fail >= 1.1 Timer (Sec) >= 3 Fail Count in 5th Gear OR Total >= 3 Fail	
			<u>Fail Case</u> 2 Case: 6th Gear				Counts	
			Max Delta Output Speed Hysteresis	>= Table Based value Please Refer to 3D Table 1 in supporting documents				
			Min Delta Output Speed Hysteresis	Table Based value Please Refer to 3D Table 2 in supporting documents				
			If the Above is True for Time	Table Based Time Please Refer to Table 17 in Supporting documents				

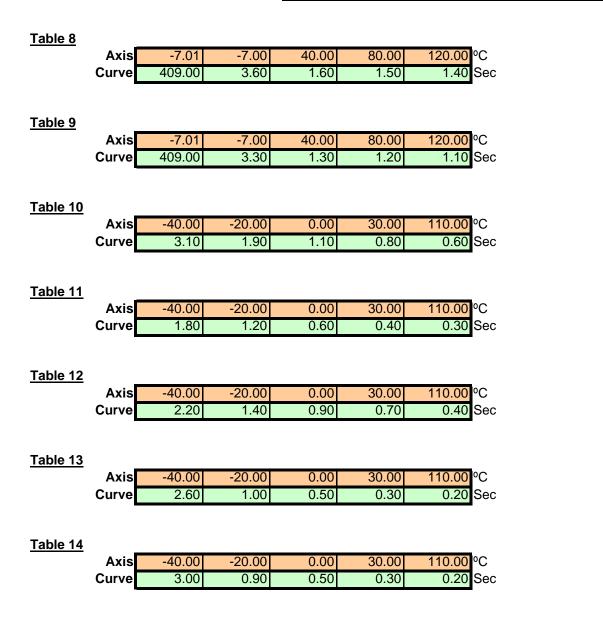
COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CO	ONDITIONS	TIME REQUIRED	MIL ILLUM.
			Intrusive test: (CB26 clutch exhausted) Gear Ratio Gear Ratio If the above parameters are true	>= 1.343017578				>= 1.1 Fail >= 1.1 Timer (Sec) >= 3 Count in 6th Gear OR >= 3 Total Fail Counts	
					PRNDL State defaulted inhibit RVT	= FA	LSE Boolea n LSE Boolea n		
					IMS fault pending indication output speed TPS validity flag	>=	0 RPM		
					HSD Enabled Hydraulic_System_Pressuriz ed	= TF	RUE Boolea n RUE Boolea n		
					Minimum output speed for RVT A OR B (A) Output speed enable		0 Nm 16 Nm		
					(B) Accelerator Pedal enable Ignition Voltage Lo		5005 Nm 5996 Volts		

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
					Ignition Voltage Hi	<= 31.99 Volts		
					Engine Speed Lo			
					Engine Speed Hi			
					Engine Speed is within the allowable limits for	>= 5 Sec		
					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	= FALSE Boole	a	
					Output Speed Sensor fault	= FALSE Boole	a	
					Default Gear Option is not present			
				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		

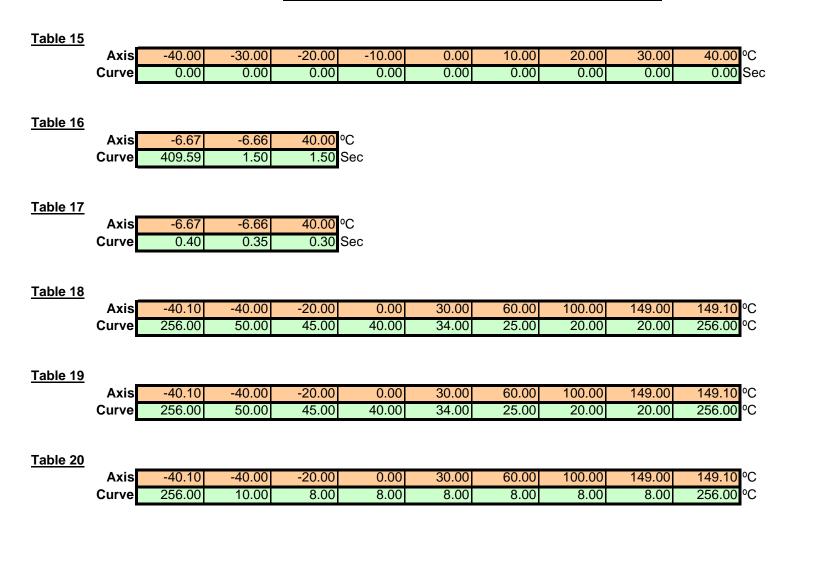
## 6T70E/6T75E Look-up Tables--2D



# 6T70E/6T75E Look-up Tables--2D



## 6T70E/6T75E Look-up Tables--2D



# **Supporting Documents - 3D Tables**

	0.00	2.00	5.00	25.00	100.00
-6.67	8191.75	8191.75	8191.75	8191.75	8191.75
-6.66	1125.00	1125.00	850.00	700.00	700.00
40.00	1125.00	1125.00	850.00	700.00	700.00

### 3D\_Table 1

3D	Table	2

	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

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

X-Axis Calibration

Y-Axis Calibration

Table Calibration

%

٥C

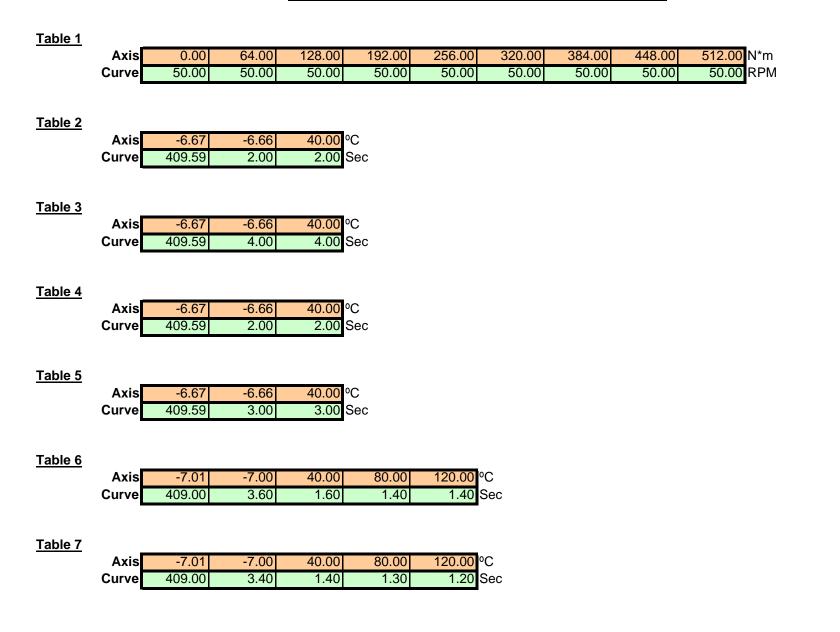
RPM/Sec

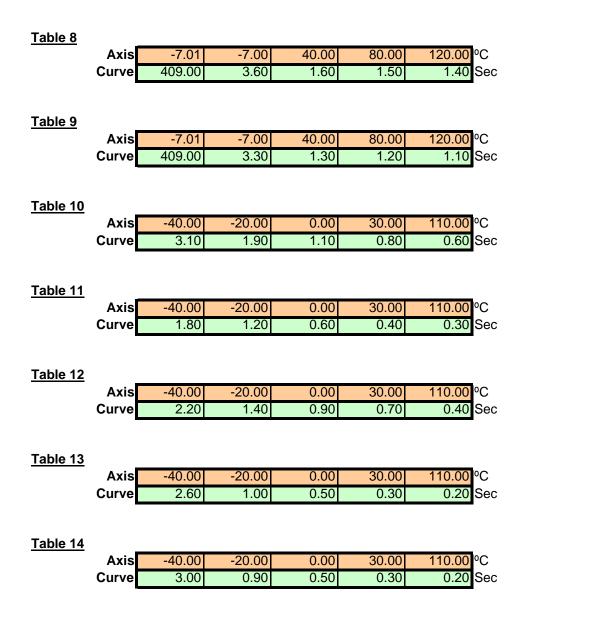
COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA		CRITERIA THRESHOLD VALUE		SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
Tap Up Tap Down Switch (TUTD)	P0815	Upshift Switch Circuit	Fail Case         Tap Up Switch Stuck in           1         the Up Position in Range           1         Enabled	=	1	Boolean				Special No Trip
			Tap Up Switch Stuck in the Up Position in Range 2 Enabled	=	1	Boolean				
			Tap Up Switch Stuck in the Up Position in Range 3 Enabled	=	1	Boolean				
			Tap Up Switch Stuck in the Up Position in Range 4 Enabled	=	1	Boolean				
			Tap Up Switch Stuck in the Up Position in Range 5 Enabled	=	1	Boolean				
			Tap Up Switch Stuck in the Up Position in Range 6 Enabled	=	1	Boolean				
			Tap Up Switch Stuck in the Up Position in Neutral Enabled	=	1	Boolean				
			Tap Up Switch Stuck in the Up Position in Park Enabled	=	1	Boolean				
			Tap Up Switch Stuck in the Up Position in Reverse Enabled	=	1	Boolean				
			Tap Up Switch ON	=	TRUE	Boolean			>= 1 Fail /Soc)	
			Fail Case Tap Up Switch Stuck in 2 the Up Position in Range 1 Enabled	=	1	Boolean				
			Tap Up Switch Stuck in the Up Position in Range 2 Enabled	=	1	Boolean				
			Tap Up Switch Stuck in the Up Position in Range 3 Enabled Tap Up Switch Stuck in	=	1	Boolean				
			the Up Position in Range 4 Enabled Tap Up Switch Stuck in	=	1	Boolean				
			the Up Position in Range 5 Enabled	=	1	Boolean				

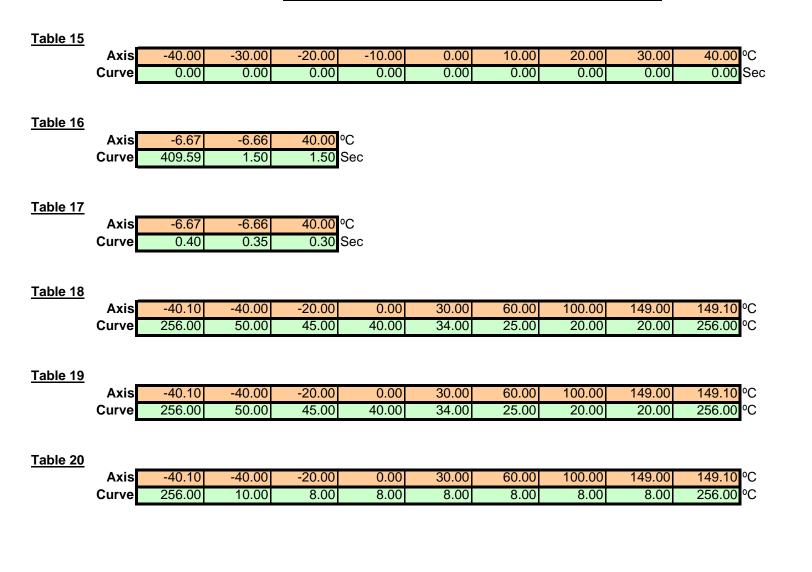
COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA		THRESHOLI	D VALUE	SECONDARY PARAMETERS	ENABI	E COND	ITIONS	TIME REQU	IIRED	MIL ILLUM.
			Tap Up Switch Stuck in the Up Position in Range 6 Enabled	=	1	Boolean							
			Tap Up Switch Stuck in the Up Position in Neutral Enabled	=	1	Boolean							
			Tap Up Switch Stuck in the Up Position in Park Enabled	=	1	Boolean							
			Tap Up Switch Stuck in the Up Position in Reverse Enabled	=	1	Boolean							
			Tap Up Switch ON	=	TRUE	Boolean							
			NOTE: Both Failcase1 and Failcase 2 Must Be Met								>= 600	Fail Time (Sec)	
							Time Since Last Range Change	>=	1	Enable Time (Sec)			
							Ignition Voltage Lo	>=	8.5996				
							Ignition Voltage Hi	<=	31.99	Volts			
							Engine Speed Lo Engine Speed Hi	>= <=	400 7500	RPM RPM			
							Engine Speed is within the allowable limits for	>=	5	Sec			
							P0815 Status is	¥	Test Failed This Key On or Fault Active	t			
						Disable Conditions:			P1876, P <sup>.</sup>				
Tap Up Tap Down Switch (TUTD)	P0816	Downshift Switch Circuit	Fail Case         Tap Down Switch Stuck           1         in the Down Position in           Range 1 Enabled		1	Boolean							Special No Trip
			Tap Down Switch Stuck in the Down Position in Range 2 Enabled	=	1	Boolean							

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	Т	HRESHOLI	D VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
			Tap Down Switch Stuck in the Down Position in Range 3 Enabled	=	1	Boolean				
			Tap Down Switch Stuck in the Down Position in Range 4 Enabled	=	1	Boolean				
			Tap Down Switch Stuck in the Down Position in Range 5 Enabled Tap Down Switch Stuck	=	1	Boolean				
			in the Down Position in Range 6 Enabled Tap Down Switch Stuck	=	1	Boolean				
			in the Down Switch Stuck Range Neutral Enabled Tap Down Switch Stuck	=	1	Boolean				
			in the Down Position in Range Park Enabled Tap Down Switch Stuck	=	1	Boolean				
			in the Down Position in Range Reverse Enabled Tap Down Switch ON	=	1 TRUE	Boolean Boolean			>= 1 sec	
			Fail Case Tap Down Switch Stuck 2 in the Down Position in Range 1 Enabled	=	1	Boolean				
			Tap Down Switch Stuck in the Down Position in Range 2 Enabled	=	1	Boolean				
			Tap Down Switch Stuck in the Down Position in Range 3 Enabled	=	1	Boolean				
			Tap Down Switch Stuck in the Down Position in Range 4 Enabled	=	1	Boolean				
			Tap Down Switch Stuck in the Down Position in Range 5 Enabled	=	1	Boolean				
			Tap Down Switch Stuck in the Down Position in Range 6 Enabled	=	1	Boolean				
			Tap Down Switch Stuck in the Down Position in Neutral Enabled	=	1	Boolean				

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRES	THRESHOLD VALUE SI PA		ENABLE CON	DITIONS	TIME REQUIRED	MIL ILLUM.
			Tap Down Switch Stuck in the Down Position in Park Enabled	= '	1 Boolean					
			Tap Down Switch Stuck in the Down Position in Reverse Enabled	= '	1 Boolean					
			Tap Down Switch ON NOTE: Both Failcase1 and Failcase 2 Must Be Met		RUE Boolean				>= 600 sec	
						Time Since Last Range Change	2-	Enable Time (Sec)		
						Ignition Voltage Lo Ignition Voltage H	i <= 31.9	9 Volts		
						Engine Speed Lo Engine Speed H	i <= 750			
						Engine Speed is within the allowable limits fo	>= 5 Tes	Sec t		
						P0816 Status is	Faile	d 5 Dn ult		
					Disal Conditior		TCM: P0815, P0 P182E, P1876, P1915, P1761			
							ECM: None			







# **Supporting Documents - 3D Tables**

-					
	0.00	2.00	5.00	25.00	100.00
-6.67	8191.75	8191.75	8191.75	8191.75	8191.75
-6.66	1125.00	1125.00	850.00	700.00	700.00
40.00	1125.00	1125.00	850.00	700.00	700.00

3D_Table 1	
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3D	Table 2	

	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

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

X-Axis Calibration %

Y-Axis Calibration Table Calibration

٥C

RPM/Sec

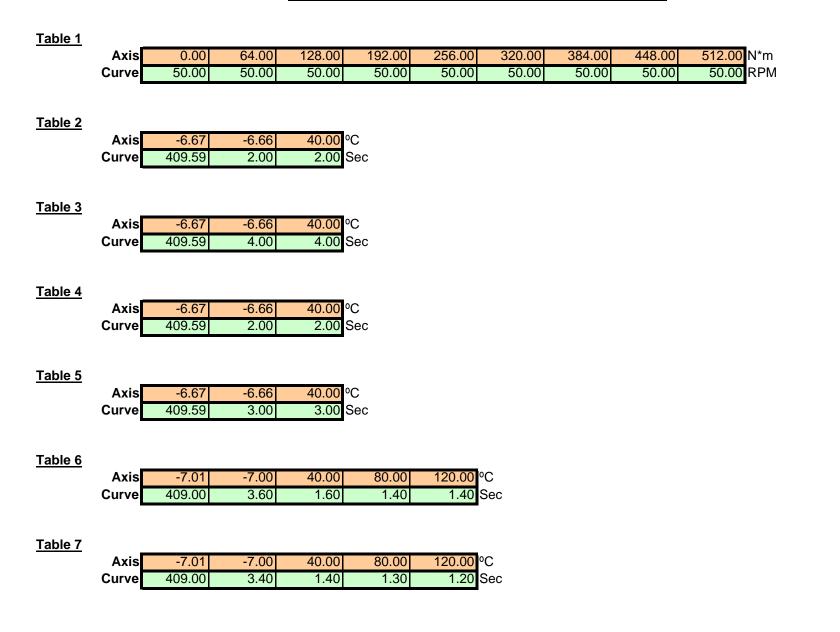
COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE		D VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS		TIME REQUIRED			MIL ILLUM.
Mode Switch	P071A	Transmission Mode Switch A Circuit	If Tow Haul / Winter Switch Active	=	TRUE	Boolean				>=	600	Fail Time (Sec)	Special No Trip
							Ignition Voltage Lo Ignition Voltage Hi Engine Speed Lo Engine Speed Hi Engine Speed is within the allowable limits for	>= 8.59 <= 31.5 >= 400 <= 750 >= 5	9 Volts RPM				
						Disable Conditions:	MIL not Illuminated for DTC's:	TCM: P1762 ECM: None					
Tap Up Tap Down Switch (TUTD)	P0815	Upshift Switch Circuit	Fail Case         Tap Up Switch Stuck in           1         the Up Position in Range           1         Enabled	=	0	Boolean							Special No Trip
			Tap Up Switch Stuck in the Up Position in Range 2 Enabled	=	0	Boolean							
			Tap Up Switch Stuck in the Up Position in Range 3 Enabled	=	0	Boolean							
			Tap Up Switch Stuck in the Up Position in Range 4 Enabled	=	0	Boolean							
			Tap Up Switch Stuck in the Up Position in Range 5 Enabled	=	0	Boolean							
			Tap Up Switch Stuck in the Up Position in Range 6 Enabled	=	0	Boolean							
			Tap Up Switch Stuck in the Up Position in Neutral Enabled	=	1	Boolean							
			Tap Up Switch Stuck in the Up Position in Park Enabled	=	1	Boolean							
			Tap Up Switch Stuck in the Up Position in Reverse Enabled	=	0	Boolean							
			Tap Up Switch ON	=	TRUE	Boolean				>=	1	Fail Time (Sec)	

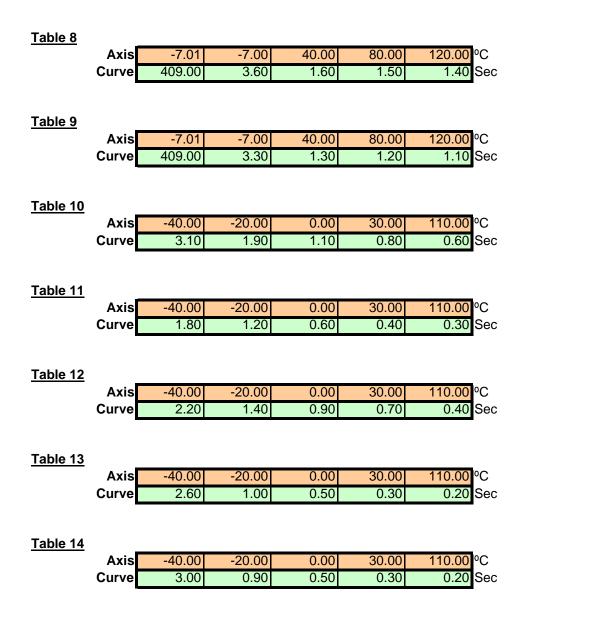
COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA		THRESHOLD	) VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
			Fail Case Tap Up Switch Stuck in 2 the Up Position in Range 1 Enabled	=	1	Boolean				
			Tap Up Switch Stuck in the Up Position in Range 2 Enabled	=	1	Boolean				
			Tap Up Switch Stuck in the Up Position in Range 3 Enabled	=	1	Boolean				
			Tap Up Switch Stuck in the Up Position in Range 4 Enabled	=	1	Boolean				
			Tap Up Switch Stuck in the Up Position in Range 5 Enabled	=	1	Boolean				
			Tap Up Switch Stuck in the Up Position in Range 6 Enabled	=	1	Boolean				
			Tap Up Switch Stuck in the Up Position in Neutral Enabled	=	0	Boolean				
			Tap Up Switch Stuck in the Up Position in Park Enabled	=	0	Boolean				
			Tap Up Switch Stuck in the Up Position in Reverse Enabled	=	0	Boolean				
			Tap Up Switch ON NOTE: Both Failcase1 and Failcase 2 Must Be	=	TRUE	Boolean			Fail >= 600 Time	
			Met						(Sec)	
							Time Since Last Range Change	Enable >= 1 Time (Sec)		

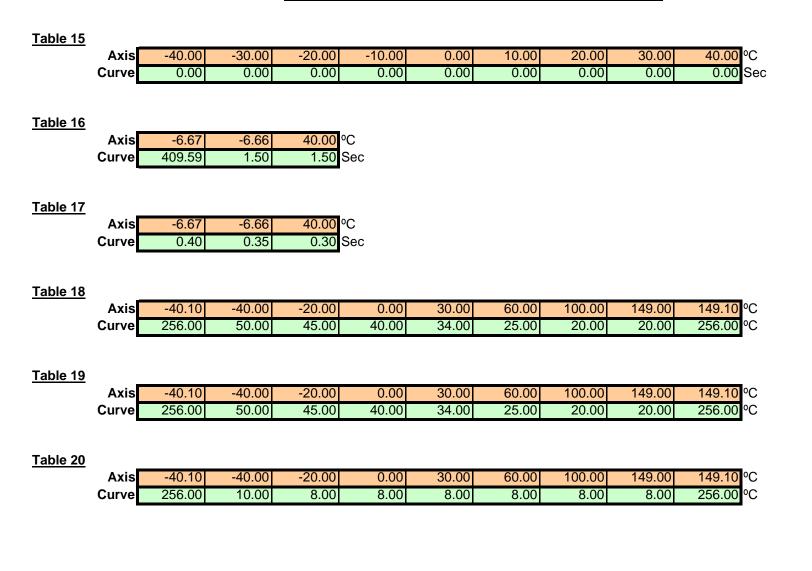
COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	1	THRESHOLD	D VALUE	SECONDARY PARAMETERS	ENABI	LE COND	ITIONS	TIME REQUIRED	MIL ILLUM.
							Ignition Voltage Lo Ignition Voltage Hi Engine Speed Lo Engine Speed Hi Engine Speed is within the allowable limits for	>= <= >= >=	8.5996 31.99 400 7500 5 Test Failed	Volts Volts RPM RPM Sec		
							P0815 Status is	¥	This Key Or or Faul Active			
						Disable Conditions:			P1876, P P1761			
Tap Up Tap Down Switch (TUTD)	P0816	Downshift Switch Circuit	Fail Case         Tap Down Switch Stuck           1         in the Down Position in           Range 1 Enabled		0	Boolean						Special No Trip
			Tap Down Switch Stuck in the Down Position in Range 2 Enabled	=	0	Boolean						
			Tap Down Switch Stuck in the Down Position in Range 3 Enabled		0	Boolean						
			Tap Down Switch Stuck in the Down Position in Range 4 Enabled	=	0	Boolean						
			Tap Down Switch Stuck in the Down Position in Range 5 Enabled		0	Boolean						
			Tap Down Switch Stuck in the Down Position in Range 6 Enabled		0	Boolean						
			Tap Down Switch Stuck in the Down Position in Range Neutral Enabled	=	1	Boolean						
			Tap Down Switch Stuck in the Down Position in Range Park Enabled	=	1	Boolean						

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA		THRESHOLD	D VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
			Tap Down Switch Stuck in the Down Position in Range Reverse Enabled	=	0	Boolean				
			Tap Down Switch ON	=	TRUE	Boolean			>= 1 sec	
			Fail Case         Tap Down Switch Stuck           2         in the Down Position in Range 1 Enabled	=	1	Boolean				
			Tap Down Switch Stuck in the Down Position in Range 2 Enabled Tap Down Switch Stuck	=	1	Boolean				
			in the Down Position in Range 3 Enabled	=	1	Boolean				
			Tap Down Switch Stuck in the Down Position in Range 4 Enabled	=	1	Boolean				
			Tap Down Switch Stuck in the Down Position in Range 5 Enabled	=	1	Boolean				
			Tap Down Switch Stuck in the Down Position in Range 6 Enabled	=	1	Boolean				
			Tap Down Switch Stuck in the Down Position in Neutral Enabled	=	0	Boolean				
			Tap Down Switch Stuck in the Down Position in Park Enabled	=	0	Boolean				
			Tap Down Switch Stuck in the Down Position in Reverse Enabled	=	0	Boolean				
			Tap Down Switch ON NOTE: Both Failcase1 and Failcase 2 Must Be	=	TRUE	Boolean			>= 600 sec	
			Met							

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
					Time Since Last Range Change Ignition Voltage Lo Ignition Voltage Hi Engine Speed Lo Engine Speed Hi Engine Speed is within the allowable limits for P0816 Status is	>= 8.5996 Volts <= 31.99 Volts >= 400 RPM <= 7500 RPM >= 5 Sec Test Failed Thic		
				Disable Conditions:	DTC's:	TCM: P0815, P0826, P182E, P1876, P1877, P1915, P1761 ECM: None		







# **Supporting Documents - 3D Tables**

	0.00	2.00	5.00	25.00	100.00
-6.67	8191.75	8191.75	8191.75	8191.75	8191.75
-6.66	1125.00	1125.00	850.00	700.00	700.00
40.00	1125.00	1125.00	850.00	700.00	700.00

25.00

8191.75

300.00

300.00

100.00

8191.75

300.00

300.00

### 3D\_Table 1

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

#### 3D\_Table 2

	-	-				
			0.00	2.00	5.00	
		-6.67	8191.75	8191.75	8191.75	
ec		-6.66	500.00	500.00	300.00	
		40.00	500.00	500.00	300.00	

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

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA		THRESHOLD	) VALUE	SECONDARY PARAMETERS	ENABL	-E CONDI	TIONS	TIME REQUIRED			MIL ILLUM.
Transmission Control Module (TCM)	P0634	Transmission Electro-Hydraulic Control Module Internal Temperature Too High	Fail Case 1 Substrate Temperature	>=	142.1015625	5 ℃					7=	5	Fail Time (Sec)	One Trip
			Fail Case 2 Substrate Temperature	>=	50	°C					>=	2	Fail Time (Sec)	
			Ignition Voltage	>=	18	Volts								
			Note: either fail case can set the DTC											
							Ignition Voltage Lo	>=	8.5996					
							Ignition Voltage Hi	<=	31.999	Volts				
							Substrate Temp Lo Substrate Temp Hi	>= <=	0 170	℃ ℃				
							Substrate Temp Between							
							Temp Range for Time	>=	0.25	Sec				
							P0634 Status is	¥	Test Failed This Key On or Fault Active					
						Disable Conditions:	MIL not Illuminated for DTC's:	TCM: None ECM:						
Transmission Input			- · · · ·					None					Fail	One Trip
Speed Sensor (TISS)	P0716	Input Speed Sensor Performance	Transmission Input Speed Sensor Drops	>=	881.75	RPM					>=	0.8	Time (Sec)	
							Engine Torque is	>=	0	N*m				
							Engine Torque is	<=	8191.9	N*m				
							Engine Speed	>=	400	RPM				
							Engine Speed	<=	7500	RPM				
							Engine Speed is within the allowable limits for	>=	5	Sec				
							Vehicle Speed is	>=	0	Kph				
							Throttle Position is	>=	0	Pct				
I				I		_								

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	1	THRESHOLD	O VALUE	SECONDARY PARAMETERS	ENABL	E COND	E CONDITIONS		UIRED	MIL ILLUM.
							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	<	8191.9	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 Ignition Voltage	>= <=	8.5996 31.999 Test				
							P0716 Status is not	=	Failed This Key On or Fault Active				
						Disable Conditions:	MIL not Illuminated for DTC's:	TCM: P0717, P0752, P0973, P0974					
								ECM: P0101, P0102, P0103, P0121, P0122,					
Transmission Input Speed Sensor (TISS)	P0717	Input Speed Sensor Circuit Low Voltage	Fail Case Transmission Input 1 Speed is	<	32.625	RPM		P0123			>= 4.5	Fail Time	One Trip
			Fail Case When P0722 DTC Status 2 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 Engine Torque is	>= <=	50 8191.9	N*m N*m			
							Vehicle Speed		16	Kph			

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
					Engine Torque Signal Valid Ignition Voltage Ignition Voltage Engine Speed Engine Speed is within the allowable limits for P0717 Status is not	>= 8.5996 Volts <= 31.999 Volts >= 400 RPM <= 7500 RPM >= 5 Sec Test Failed This		
				Disable Conditions:	MIL not Illuminated for DTC's:			0
Transmission Output Speed Sensor (TOSS)	P0722	Output Speed Sensor Circuit Low Voltage	Transmission Output Speed Sensor Raw Speed	<= 35 RPM			Fail >= 4.5 Time (Sec)	One Trip
					P0722 Status is not	Test Failed This Key On or Fault Active		
					Transmission Input Speed Check Engine Torque Check Throttle Position	= TRUE Boolean = TRUE Boolean >= 8.0002 Pct		
					Transmission Fluid Temperature Disable this DTC if the PTO is active	= 1 Boolean		
					Engine Torque Signal Valid	= TRUE Boolean		
					Throttle Position Signal Valid			
					Ignition Voltage is Ignition Voltage is Engine Speed is Engine Speed is	<= 31.999 Volts >= 400 RPM		

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABL	-E CONDI	TIONS	TIME REQUIRED	MIL ILLUM.
					Engine Speed is within the allowable limits for	>=	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					
					Shift Status is not	=	comple te			
					OR					
					Transmission Range is	=	Park or Neutral			
					Engine Torque is Engine Torque is	>= <=	8191.8 8191.8			
					Engine Torque Condition 2 Engine Torque is Engine Torque is	>= <=	50 8191.8	N*m N*m		
					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	>=	653.13	RPM		
					Transmission Input Speed is	<=	5350	RPM		
					TIS Check Condition 2					
					Engine Speed without the brake applied is	>=	3200	RPM		
					Engine Speed with the brake applied is	>=	3200	RPM		
					Engine Speed is	<=	8191.9	RPM		

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	т	HRESHOLD	VALUE	SECONDARY PARAMETERS	ENABL	E CONDITIONS	TIME	REQU	IRED	MIL ILLUM.
							Controller uses a single power supply for the speed sensors Powertrain Brake Pedal is Valid	=	1 Boolean TRUE Boolean				
						Disable Conditions:		P0716, P0717, P0723					
Teneniciae Outrut								ECM: P0101, P0102, P0103, P0121, P0122, P0123					One Trip
Transmission Output Speed Sensor (TOSS)	P0723	Output Speed Sensor Circuit Intermittent	Raw Output Speed	>=	105	RPM				>=	0	Enable Time (Sec)	One mp
			Output Speed Delta	<=	8192	RPM				>=	0	Enable Time (Sec)	
			Output Speed Drop	>	650	RPM				>=		Output Speed Drop Recove r Fail Time (Sec)	
							 Range_Disable OR	=	FALSE Boolean				
							 Neutral_Range_Enable And Neutral_Speed_Enable are TRUE concurrently	=	TRUE Boolean				
							 Transmission_Range_Enabl e	=	TRUE Boolean				

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
					Transmission_Input_Speed_ Enable	= TRUE Boolean		
					No Change in Transfer Case Range (High <-> Low) for	>= 5 Seconds		
					Engine Torque Signal Valid	= TRUE Boolean		
					Throttle Position Signal Valid	= TRUE Boolean		
					P0723 Status is not	Test Failed = This Key On or Fault Active		
					Disable this DTC if the PTO is active	= 1 Boolean		
					Ignition Voltage is			
					Ignition Voltage is Engine Speed is			
					Engine Speed is			
					Engine Speed is within the allowable limits for			
					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 satsified for	>= 0 Time		
					Input Speed Delta Raw Input Speed			
					TIS Condition 2 is TRUE when ALL of the next three conditions are satisfied			
					Input Speed A Single Power Supply is used for all speed sensors			

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
					Powertrain Brake Pedal Applied is 	= FALSE Boolean		
					Neutral_Range_Enable is TRUE when any of the next 3 conditions are TRUE			
					Transmission Range is	<ul> <li>Neutral ENUM</li> <li>Revers</li> </ul>		
					Transmission Range is	e/Neutr = al ENUM Transit onal		
					Transmission Range is	Neutral /Drive Transiti onal		
					And when a drop occurs Loop to Loop Drop of			
					Transmission Output Speed is	> 8192 RPM		
					Range_Disable is TRUE when any of the next three conditions are TRUE			
					Transmission Range is	Park/R		
					Transmission Range is	= everse Transit onal		
					Input Clutch is not	ON (Fully ENUM )		
					Neutral_Speed_Enable is TRUE when All of the next three conditions are satsified	> 409.59 Second		
					for Transmission Output Speed			

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	I	SECONDARY PARAMETERS	ENABL	E COND	TIONS	TIME REQUIRED	MIL ILLUM.
						And the acceleration of the Transmission Output Speed is	<	0	RPM/ Loop Rate		
						And the acceleration of the Transmission Output Speed is		0	RPM/ Loop Rate		
						Transmission_Range_Enabl e is TRUE when one of the next four conditions is TRUE					
						Transmission Range is Transmission Range is		Transiti			
						Transmission Range is		onal Neutral /Drive Transiti onal	ENUM		
						Range Change Delay Timer	>=	5	Sec		
					Disable ditions:	MIL not Illuminated for DTC's:	TCM: P0973, P0974, P0976, P0977				
							ECM: P0101, P0102, P0103, P0121, P0122,				
Torque Converter Clutch (TCC)	P0741	TCC System Stuck OFF	TCC Pressure	>= 750 Kpa			P0123			Enable >= 2 Time (Sec)	Two Trips

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
			Either Condition (A) or (B) Must be Met (A) TCC Slip Error @ TCC On Mode (B) TCC Slip @ Lock On Mode If Above Conditions Have been Met, and Fail Timer Expired, Increment Fail Counter	Refer to Table >= 1 in RPM Supporting Documents >= 130 RPM	Ignition Voltage Lo Ignition Voltage Hi Engine Speed Engine Speed Engine Speed is within the allowable limits for Engine Torque Lo Engine Torque Lo Engine Torque Hi Throttle Position Lo Throttle Position Hi 2nd Gear Ratio Lo 2nd Gear Ratio High 3rd Gear Ratio Lo 3rd Gear Ratio Lo 3rd Gear Ratio Lo 4th Gear Ratio Lo 5th Gear Ratio Lo 5th Gear Ratio High Transmission Fluid Temperature Lo Transmission Fluid Temperature Hi TCC Command Lock ON or ON mode PTO Not Active	<=       7500       RPM         >=       5       Sec         >=       50       N*m         <=       8191.9       N*m         >=       8.0002       Pct         <=       99.998       Pct         >=       2.1948       Ratio         <=       2.5251       Ratio         <=       1.4229       Ratio         <=       1.6371       Ratio         >=       1.0695       Ratio         <=       0.7905       Ratio         >=       0.623       Ratio         >=       0.623       Ratio         >=       -6.656       °C         <=       130       °C         =       TRUE       Boolean         =       TRUE       Boolean	Fail >= 6 Time (Sec) = 6 Time (Sec) TCC Stuck >= 2 Off Fail Counte r	
I					Engine Torque Signal Valid	= TRUE Boolean		

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
					Throttle Position Signal Valid			
					Dynamic Mode	= FALSE Boolean Test Failed		
					P0741 Status is	Th:-		
				Disable		TCM:		
				Conditions:	DTC's:	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		

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	٦	THRESHOL	D VALUE	SECONDARY PARAMETERS	ENABI	LE COND	ITIONS	TIME RE	EQUIRED	MIL ILLUM.
Torque Converter	P0742	TCC System Stuck ON	TCC Slip Speed	>=	-12	RPM							One Trip
Clutch (TCC)			TCC Slip Speed	<=	13	RPM							
					10						>= 2.	Fail 5 Time (Sec)	
			If Above Conditions Have been Met, and Fail Timer Expired, Increment Fail Counter								>= 6	Fail Counte r	
							Run TCC Stuck On Test Enable Criteria:						
							Gear Ratio	<=		Ratio			
							Gear Ratio	>=	0.623	Ratio			
							Engine Speed Hi	<=	6500	RPM			
							Engine Speed Lo Vehicle Speed HI	>= <=	500 511	RPM KPH			
							Vehicle Speed Lo	>=	16	KPH			
							Stuck On During Upshift Enabled		0	Boolean			
							If Stuck On During Upshift is enabled (See Above), Engine Torque Must be	>=	55	Nm			
							Down Shift In Progress	=	FALSE	Boolean			
							Current Gear	¥	1st Gear Locked	Boolean			
							Engine Torque Hi	<=	8191.9	Nm			
							Engine Torque Lo	>=	80	Nm			
							Current Range	¥	Neutral	Range			
							Current Range	¥	Reverse	Range			
							Transmission Sump Temperature	<=	130	°C			
							Transmission Sump Temperature	>=	-6.656	°C			
							Throttle Position Hyst High	>=	8.0002	Pct			
							Throttle Position Hyst Low	<=	2.9999				
I							PTO Active	=	FALSE	Boolean			I I

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABL	E COND	ITIONS	TIME REQUIRED	MIL ILLUM.
					Disable if in D1 and value true	=	0	Boolean		
					Disable if in D2 and value true	=	0	Boolean		
					Disable if in D3 and value true	=	0	Boolean		
					Disable if in D4 and value true	=	0	Boolean		
					Disable if in D5 and value true	=	0	Boolean		
					Disable if in MUMD and value true	_	0	Boolean		
					Disable if in TUTD and value true	_	0	Boolean		
					4 Wheel Drive Active		FALSE	Boolean		
					Hydraulic Clutch Air Purge Active		FALSE	Boolean		
					Ignore Air Purge if value = true	=	0	Boolean		
					TCC Mode Common Enables:	=	OFF			
					Ignition Voltage	>=	8.5996	V		
					Ignition Voltage		31.999			
					Vehicle Speed Engine Speed		511 400	KPH 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		
					P0742 Status is	¥	Test Failed This Key On or Fault Active	t		

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
				Disable Conditions:		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, P0206, P0207, P0208, P0300, P0301, P0302, P0303, P0304, P0305, P0306, P0307, P0308, P0307, P0308, P0401, P042E+ W597		
Mode 2 Multiplex Valve	P0751	Shift Solenoid Valve A Stuck Off	Commaned Gear Slip Commanded Gear Gear Ratio	= 1st Lock rpm			>= 0.2 Fail Tmr	Two Trips

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
			Gear Ratio If the above parameters are true				= 8 Fail Counts	
							Neutral ≠ 0 Timer (Sec)	
							Fail >= 0.3 Timer (Sec) >= 8 Counts	
					Ignition Voltage Lo Ignition Voltage Hi Engine Speed Lo Engine Speed Hi	<= 31.999 Volts >= 400 RPM		
					Engine Speed is within the allowable limits for Transmission Fluid	>= 5 Sec		
					Temperature Shift is Complete TPS	>= 0.5005 %		
					OR Output Speed Throttle Position Signal Valid from ECM	>= 0 RPM		
					Engine Torque Signal Valid from ECM, High side driver is enabled	= TRUE Boolean		
					High-Side Driver is Enabled Input Speed Sensor fault Output Speed Sensor fault Default Gear Option is not present	= FALSE Boolean = FALSE Boolean		

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
				Disable Conditions:	MIL not Illuminated for DTC's:			
Mode 2 Multiplex Valve	P0756	Shift Solenoid Valve B Stuck Off	Fail Case 1 Commanded Gear	= 1st Locked				One Trip

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
			Gear Box Slip	>= 400 RPM			Pleas e Refer to Neutral 5 in Suppo rting Docu ments	
			Intrusive Shift to 2nd Commanded Gear Previous Gear Ratio Gear Ratio If the above parameters are true	<ul> <li>= 1st Locked Gear</li> <li>&lt;= 2.482177734</li> <li>&gt;= 2.245849609</li> </ul>			>= 1 sec	
					Ignition Voltage Lo Ignition Voltage Hi Engine Speed Lo Engine Speed Hi Engine Speed is within the allowable limits for Output Speed OR TPS Shift is Complete Transmission Fluid Temperature High-Side Driver is Enabled Throttle Position Signal Valid from ECM Input Speed Sensor fault	>= 5 Sec >= 0 RPM >= 0.5005 % >= -6.656 °C = TRUE Boolean = TRUE Boolean	>= 3 counts	
					Output Speed Sensor fault Default Gear Option is not present	= FALSE Boolean		

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
				Disable Conditions:	MIL not Illuminated for DTC's:	P0717, P0722, P0723, P182E ECM: P0101, P0102, P0103, P0106, P0107, P0108, P0171, P0172, P0174, P0175, P0201, P0202, P0203, P0204, P0205, P0206, P0206, P0207, P0206, P0207, P0206, P0207, P0208, P0300, P0301, P0302, P0303, P0304, P0305, P0306, P0307, P0308, P0401,		
Variable Bleed Solenoid (VBS)	P0777	Pressure Control (PC) Solinoid B Stuck On [C35R] (Steady State)	<u>Fail Case</u> 1 Case: Steady State 1st Attained Gear slip			P042E		One Trip

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	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	>= 1.455444336				
							Fail >= 1.1 Timer (Sec) Fail	
							>= 2 in 1st Gear or Total	
			Fail Case Case: Steady State 2nd 2 gear				>= 3 Fail Counts	
			Max Delta Output Speed Hysteresis	Table Based value Please Refer to 3D Table 1 in supporting documents				
			Min Delta Output Speed Hysteresis	Table Based value Please Refer to 3D Table 2 in supporting documents				

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
			If the Above is True for Time	Table Based Time Please Refer to Table 17 in Supporting documents				
			Intrusive test: (CB26 clutch exhausted)					
			Gear Ratio Gear Ratio If the above parameters are true					
							Fail >= 1.1 Timer (Sec)	
							Fail >= 3 Count in 2nd Gear	
							or Total >= 3 Fail Counts	
			Fail Case Case: Steady State 4th 3 gear					
			Max Delta Output Speed Hysteresis	Table Based value Please Refer to 3D Table 1 in supporting documents				
			Min Delta Output Speed Hysteresis	Table Based value Please Refer to 3D Table 2 in supporting documents				

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
			If the Above is True for Time					
			Intrusive test: (C1234 clutch exhausted)					
			Gear Ratio Gear Ratio If the above parameters are true	>= 0.809448242				
							Fail >= 1.1 Timer (Sec)	
							Fail >= 3 Count in 4th Gear	
							or Total >= 3 Fail Counts	
			F <u>ail Case</u> Case: Steady State 6th <u>4</u> gear					
			Max Delta Output Speed Hysteresis	Table Based value Please Refer to 3D Table 1 in supporting documents				
			Min Delta Output Speed Hysteresis	>= Table Based value Please Refer to 3D Table 2 in supporting documents				

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
			If the Above is True for Time	Table Based Time Please Refer to Table 17 in Supporting documents				
			Intrusive test: (CB26 clutch exhausted)					
			Gear Ratio	<= 0.89465332			Fail >= 1.1 Timer (Sec)	
			Gear Ratio If the above parameters are true	>= 0.809448242			>= 3 counts	
							Fail >= 1.1 Timer (Sec)	
							>= 3 Fail >= 3 Count in 6th Gear	
							or Total >= 3 Fail Counts	
					PRNDL State defaulted			
					inhibit RVT			
					IMS fault pending indication output speed			
					TPS validity flag			
					HSD Enabled			
					Hydraulic_System_Pressuriz ed	= TRUE Boolean	I	
					Minimum output speed for RVT	>= 0 Nm		
					A OR B (A) Output speed enable	>= 16 Nm		

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
				Disable Conditions:	(B) Accelerator Pedal enable Ignition Voltage Lo Ignition Voltage Hi Engine Speed Lo 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 MIL not Illuminated for DTC's:	<ul> <li>&gt;= 8.5996 Volts</li> <li>31.999 Volts</li> <li>&gt;= 400 RPM</li> <li>&lt;= 7500 RPM</li> <li>&gt;= 5 Sec</li> <li>&gt;= 5.0003 Pct</li> <li>&gt;= 5 Nm</li> <li>&lt;= 8191.9 Nm</li> <li>&gt;= -6.656 °C</li> <li>= FALSE Boolear</li> <li>= FALSE Boolear</li> </ul>		

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA		THRESHOLD V	ALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
								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] (Dymanic)	Primary Offgoing Clutch is exhausted (See Table 12 in Supporting Documents for Exhaust Delay Timers)	=	TRUE	Boolean				One Trip
			Primary Oncoming Clutch Pressure Command Status	=	Maximum pressurized					
			Primary Offgoing Clutch Pressure Command Status	=	Clutch exhaust command					
			Range Shift Status Attained Gear Slip	≠ <=	Initial Clutch Control 40	RPM				
			If the above conditions are true run appropriate Fail 1 Timers Below:							
			fail timer 1 (3-1 shifting with Closed Throttle)	>=		Fail Time (Sec)				
			fail timer 1 (3-2 shifting with Throttle)	>=		Fail Time (Sec)				

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA		THRESHOLD	VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
			fail timer 1 (3-2 shifting with Closed Throttle)	>=		Fail Time (Sec)				
			fail timer 1 (3-4 shifting with Throttle)	>=	0.299804688	Fail Time (Sec)				
			fail timer 1 (3-4shifting with Closed Throttle)	>=		Fail Time (Sec)				
			fail timer 1 (3-5 shifting with Throttle)	>=		Fail Time (Sec)				
			fail timer 1 (3-5 shifting with Closed Throttle)	>=		Fail Time (Sec)				
			fail timer 1 (5-3 shifting with Throttle)	>=		Fail Time (Sec)				
			fail timer 1 (5-3 shifting with Closed Throttle)	>=		Fail Time (Sec)				
			fail timer 1 (5-4 shifting with Throttle)	>=	0.299804688	Fail Time (Sec)				
			fail timer 1 (5-4 shifting with Closed Throttle)			Fail Time (Sec)				
			fail timer 1 (5-6 shifting with Throttle)	>=	0.299804688	Fail Time (Sec)				
			fail timer 1 (5-6 shifting with Closed Throttle)			Fail Time (Sec)				

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
			If Attained Gear Slip is Less than Above Cal Increment Fail Timers				Total Fail Time = (Fail 1 + Fail 2) See Enabl e Timer 5 for Fail Refer ence Suppo rting Table 15 for Fail Timer	
			If fail timer is greater than threshold increment corresponding gear fail counter and total fail counter					
			3rd gear fail counter				3rd >= 3 gear fail counts OR	
			5th gear fail counter				>= 3 5th gear fail counts OR	
			Total fail counter				>= 5 total fail counts	
					Trans oil temperature Input Speed Sensor fault Output Speed Sensor fault	> 255.99 °C = FALSE Boolean = FALSE Boolean		

6L45/6L50 UNIQUE SECTION Page 25 of 84

FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
			Disable Conditions:	Command / Attained Gear High Side Driver ON output speed limit for TUT input speed limit for TUT TUT Enable temperature PRNDL state defaulted IMS Fault Pending Service Fast Learn Mode HSD Enabled Default Gear Option is not present MIL not Illuminated for DTC's:	= TRUE Boolean >= 100 RPM >= 150 RPM >= -6.656 °C = FALSE Boolean = FALSE Boolean = TRUE Boolean = TRUE		

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
						P0307, P0308, P0401, P042E		
Variable Bleed Solenoid (VBS)	P0797	Pressure Control (PC) Solenoid C Stuck On [C456] (Steady State)	Fail Case 1 Case: Steady State 1st Attained Gear slip If the Above is True for Time	Table Based Time Please				One Trip
			Intrusive test: (CBR1 clutch exhausted) Gear Ratio Gear Ratio If the above parameters are true				>= 1.1 Fail >= 1.1 Timer (Sec) Fail Count in 1st Gear or Total >= 3 Fail Counts	
			<u>Fail Case</u> 2 Case Steady State 2nd Max Delta Output Speed Hysteresis	Table Based value Please				

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA		THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
			Min Delta Output Speed Hysteresis	>=	Table Based value Please Refer to 3D Table 2 in supporting documents				
			If the Above is True for Time		Table Based Time Please Refer to Table 17 in Supporting documents				
			Intrusive test: (CB26 clutch exhausted)						
			Gear Ratio Gear Ratio If the above parameters are true	>=	1.209594727 1.094360352				
								Fail >= 1.1 Timer (Sec)	
								Fail >= 3 Count in 2nd Gear or	
								Total >= 3 fail counts	
			Fail Case 3 Case Steady State 3rd						
			Max Delta Output Speed Hysteresis	>=	Table Based value Please Refer to 3D Table 1 in supporting documents				

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA		THRESHOLD VALUE	SECONDARY PARAMETERS	ENABL	E CONDITIONS	TIME REQUIRED	MIL ILLUM.
			Min Delta Output Speed Hysteresis	>=	Table Based value Please Refer to 3D Table 2 in supporting documents					
			If the Above is True for Time	>=	Table Based Time Please Refer to Table 17 in Supporting documents					
			Intrusive test: (C35R clutch exhausted)							
			Gear Ratio Gear Ratio If the above parameters are true		1.209594727 1.094360352				Fail	
									>= 1.1 Timer (Sec) Fail >= 3 Count in 3rd	
									Gear OR >= 3 Fail Counts	
						PRNDL State defaulted inhibit RVT	=	FALSE Boolean FALSE Boolean		
						IMS fault pending indication output speed TPS validity flag HSD Enabled Hydraulic_System_Pressuriz ed	= >= = =	FALSE Boolean 0 RPM TRUE Boolean TRUE Boolean TRUE Boolean		
						Minimum output speed for RVT	>=	0 Nm		

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABL	E CONDI	TIONS	TIME REQUIRED	MIL ILLUM.
					A OR B (A) Output speed enable	>=	16	Nm		
					(B) Accelerator Pedal enable		0.5005	Nm		
					Ignition Voltage Lo	>=	8.5996	Volts		
					Ignition Voltage Hi	<=	31.999	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	>=	5.0003	Pct		
					if Attained Gear=1st FW Engine Torque Enable	>=	5	Nm		
					if Attained Gear=1st FW Engine Torque Enable	<=	8191.9	Nm		
					Transmission Fluid Temperature	>=	-6.656	°C		
					Input Speed Sensor fault		FALSE			
					Output Speed 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,				

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA		THRESHOLD	VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
								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)	=	TRUE	Boolean				One Trip
			Primary Oncoming Clutch Pressure Command Status	=	Maximum pressurized					
			Primary Offgoing Clutch Pressure Command Status		Clutch exhaust command Initial Clutch					
			Range Shift Status Attained Gear Slip		Control 40	RPM				
			If the above conditions are true increment appropriate Fail 1 Timers Below:							
			fail timer 1 (4-1 shifting with throttle)	>=	0.299804688	Fail Time (Sec)				

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA		THRESHOLD VALUE		SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
			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)				

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
			If Attained Gear Slip is Less than Above Cal Increment Fail Timers				Total Fail Time = (Fail 1 + Fail 2) See Enabl e Timer s for >= Fail Refer ence Suppo rting Table 15 for Fail Timer 2	
			If fail timer is greater than threshold increment corresponding gear fail counter and total fail counter					
			4th gear fail counter				Fail Counte >= 3 r From 4th Gear OR	
			5th gear fail counter				Fail Counte >= 3 r From 5th Gear OR	

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
			6th gear fail counter				Fail Counte >= 3 r From 6th Gear	
			Total fail counter		-		OR Total >= 5 Fail counte r	
					Trans oil temperature Input Speed Sensor fault Output Speed Sensor fault Command / Attained Gear High Side Driver ON output speed limit for TUT input speed limit for TUT TUT Enable temperature PRNDL state defaulted IMS Fault Pending Service Fast Learn Mode HSD Enabled	<ul> <li>= FALSE Boolean</li> <li>= FALSE Boolean</li> <li>≠ 1st Boolean</li> <li>= TRUE Boolean</li> <li>&gt;= 100 RPM</li> <li>&gt;= 150 RPM</li> <li>&gt;= -6.656 °C</li> <li>= FALSE Boolean</li> <li>= FALSE Boolean</li> <li>= FALSE Boolean</li> </ul>		
				Disable Conditions:		TCM: P0716, P0717, P0722, P0723, P182E		
						ECM: P0101, P0102, P0103, P0106, P0107, P0108, P0171, P0172, P0174, P0175, P0201,		

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHO	LD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
							P0202, P0203, P0204, P0205, P0206, P0207, P0208, P0300, P0301, P0302, P0303, P0304, P0305, P0306, P0306, P0307, P0308, P0401, P042E		
Tap Up Tap Down Switch (TUTD)	P0815	Upshift Switch Circuit	Eail Case Tap Up Switch Stuck in the Up Position in Range 1 Enabled	= 1	Boolean				Special No Trip
			Tap Up Switch Stuck in the Up Position in Range 2 Enabled	= 1	Boolean				
			Tap Up Switch Stuck in the Up Position in Range 3 Enabled	= 1	Boolean				
			Tap Up Switch Stuck in the Up Position in Range 4 Enabled	= 1	Boolean				
			Tap Up Switch Stuck in the Up Position in Range 5 Enabled	= 1	Boolean				
			Tap Up Switch Stuck in the Up Position in Range 6 Enabled	= 1	Boolean				
			Tap Up Switch Stuck in the Up Position in Neutral Enabled	= 1	Boolean				

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	-	THRESHOLI	D VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
			Tap Up Switch Stuck in the Up Position in Park Enabled	=	1	Boolean				
			Tap Up Switch Stuck in the Up Position in Reverse Enabled	=	1	Boolean				
			Tap Up Switch ON	=	TRUE	Boolean			Fail >= 1 Time (Sec)	
			Fail Case         Tap Up Switch Stuck in           2         the Up Position in Range           1 Enabled	=	1	Boolean				
			Tap Up Switch Stuck in the Up Position in Range 2 Enabled	=	1	Boolean				
			Tap Up Switch Stuck in the Up Position in Range 3 Enabled	=	1	Boolean				
			Tap Up Switch Stuck in the Up Position in Range 4 Enabled	=	1	Boolean				
			Tap Up Switch Stuck in the Up Position in Range 5 Enabled	=	1	Boolean				
			Tap Up Switch Stuck in the Up Position in Range 6 Enabled	=	1	Boolean				
			Tap Up Switch Stuck in the Up Position in Neutral Enabled	=	1	Boolean				
			Tap Up Switch Stuck in the Up Position in Park Enabled	=	1	Boolean				
			Tap Up Switch Stuck in the Up Position in Reverse Enabled	=	1	Boolean				

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
			Tap Up Switch ON NOTE: Both Failcase1 and Failcase 2 Must Be Met				Fail >= 600 Time (Sec)	
					Time Since Last Range Change Ignition Voltage Lo Ignition Voltage Hi Engine Speed Lo Engine Speed is within the allowable limits for P0815 Status is	>= 1 Inne (Sec) >= 8.5996 Volts <= 31.999 Volts >= 400 RPM <= 7500 RPM >= 5 Sec Test Failed This		

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHO	DLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
					Disable Conditions:	MIL not Illuminated for DTC's:	TCM: P0816, P0826, P182E, P1876, P1877, P1915, P1761 ECM: None		
Tap Up Tap Down Switch (TUTD)	P0816	Downshift Switch Circuit	Fail Case 1 Tap Down Switch Stuck in the Down Position in Range 1 Enabled	= 1	Boolean				Special No Trip
			Tap Down Switch Stuck in the Down Position in Range 2 Enabled	= 1	Boolean				
			Tap Down Switch Stuck in the Down Position in Range 3 Enabled	= 1	Boolean				
			Tap Down Switch Stuck in the Down Position in Range 4 Enabled	= 1	Boolean				
			Tap Down Switch Stuck in the Down Position in Range 5 Enabled	= 1	Boolean				
			Tap Down Switch Stuck in the Down Position in Range 6 Enabled	= 1	Boolean				
			Tap Down Switch Stuck in the Down Position in Range Neutral Enabled	= 1	Boolean				

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	Т	HRESHOLI	D VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
			Tap Down Switch Stuck in the Down Position in Range Park Enabled	=	1	Boolean				
			Tap Down Switch Stuck in the Down Position in Range Reverse Enabled	=	1	Boolean				
			Tap Down Switch ON	=	TRUE	Boolean			>= 1 sec	
			Fail Case         Tap Down Switch Stuck           2         in the Down Position in           Range 1 Enabled	=	1	Boolean				
			Tap Down Switch Stuck in the Down Position in Range 2 Enabled	=	1	Boolean				
			Tap Down Switch Stuck in the Down Position in Range 3 Enabled	=	1	Boolean				
			Tap Down Switch Stuck in the Down Position in Range 4 Enabled	=	1	Boolean				
			Tap Down Switch Stuck in the Down Position in Range 5 Enabled	=	1	Boolean				
			Tap Down Switch Stuck in the Down Position in Range 6 Enabled	=	1	Boolean				
			Tap Down Switch Stuck in the Down Position in Neutral Enabled	=	1	Boolean				
			Tap Down Switch Stuck in the Down Position in Park Enabled	=	1	Boolean				
			Tap Down Switch Stuck in the Down Position in Reverse Enabled	=	1	Boolean				
1			Tap Down Switch ON	=	TRUE	Boolean				

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
			NOTE: Both Failcase1 and Failcase 2 Must Be Met				>= 600 sec	
					Time Since Last Range Change	Enable >= 1 Time (Sec)		
					Ignition Voltage Lo Ignition Voltage Hi Engine Speed Lo Engine Speed Hi	>= 400 RPM		
					Engine Speed is within the allowable limits for			
					P0816 Status is	Test Failed This Key On or Fault Active		
				Disable Conditions:	MIL not Illuminated for DTC's:	TCM: P0815, P0826, P182E, P1876, P1877, P1915,		
						P1761 ECM: None		

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA		THRESHOLD	VALUE	SECONDARY PARAMETERS	ENABL	E CONDI	TIONS	TIME REQUIRED	MIL ILLUM.
Transmission Fluid Pressure Switch	P0872	Transmission Fluid Pressure (TFP) Sensor C Circuit Low Voltage	CB26 Hydraulic pressure	<=	50	KPa						Special No Trip
			Hydraulic Delay Timer (Table Based)	>=	See Table 8 for Delay Timer Cal	Sec						
			Check for Switch to be in Exhausted Position after delay, If so then Increment Fail Counter								>= 10 Fail Counts	
			Note: Subsequent fail counts require CB26 pressure above this value to re-enable fail logic. Results in one fail count per clutch transition	>	50	Кра						
							Transmission Fluid Temperature Lo	>=	-6.656	°C		
							Transmission Fluid Temperature Hyst Hi (disable above this)	Not >=	120	°C		
							Transmission Fluid Temperature Hyst Lo (enable below this)	<=	255.99	°C		
							Ignition Voltage Lo	>=	8.5996			
							Ignition Voltage Hi Engine Speed Lo	<= >=	31.999 400	Volts RPM		
							Engine Speed Hi		7500	RPM		
							Engine Speed is within the allowable limits for	>=	5	Sec		
							Default Gear Action	=	FALSE			
							High Side Driver ON	=	TRUE			
							RVT Status Hydraulic Pressure Available	=	Normal TRUE			
							Engine Speed Min		550	RPM		

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA		THRESHOLD	VALUE	SECONDARY PARAMETERS	ENABLE CONDITION	S TIME REC	UIRED	MIL ILLUM.
						Disable Conditions:		TCM: P0711, P0712, P0713, P0716, P0717, P0722, P0723, P0751, P0742, P0756, P0757, P0974, P0976, P0977, P1915, P1915, P182E ECM: None			
Transmission Fluid Pressure Switch	P0873	Transmission Fluid Pressure (TFP) Sensor C Circuit High Voltage	CB26 Hydraulic Pressure Hydraulic Delay Timer (Table Based) Check for Switch to be in Pressurized Position after delay, If so then Increment Fail Counter	>=	700 See Table 8 for Delay Timer Cal	KPa Sec			>= 15	Fail Counts	Special No Trip
			Note: Subsequent fail counts require CB26 pressure below this value to re-enable fail logic. Results in one fail count per clutch transition	<	700	kpa	Transmission Fluid Temperature Lo Transmission Fluid Temperature Hyst Hi (disable above this)	>= -6.656 °C Not >= 120 °C			

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDIT	IONS	TIME REQUIRED	MIL ILLUM.
				Disable		<pre>&lt;= 255.99 &gt;= 8.5996 &lt;= 31.999 &gt;= 400 &lt;= 7500 &gt;= 5 = FALSE = TRUE = Normal = TRUE &gt;= 550 TCM:</pre>	°C Volts RPM RPM Sec		
				Conditions		P0711, P0712, P0713, P0716, P0717, P0722, P0723, P0751, P0742, P0756, P0757, P0973, P0974, P0976, P0977, P1915, P182E ECM: None			Constable
Transmission Fluid Pressure Switch	P0877	Transmission Fluid Pressure (TFP) Sensor D Circuit Low Voltage	C1234 Hydraulic pressure						Special No Trip

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA		THRESHOLD	VALUE	SECONDARY PARAMETERS	ENABL	E CONDI	TIONS	TIME REQUIRED	MIL ILLUM.
			Hydraulic Delay Timer (Table Based)	>=	See Table 6 for Delay Timer Cal	Sec						
			Check for Switch to be in Exhausted Position after delay, If so then Increment Fail Counter								>= 5 Fail Counts	
			Note: Subsequent fail counts require C1234 pressure above this value to re-enable fail logic. Results in one fail count per clutch transition	>	50	kpa						
							Transmission Fluid Temperature Lo	>=	-6.656	°C		
							Transmission Fluid Temperature Hyst Hi (disable above this)	Not >=	120	°C		
							Transmission Fluid Temperature Hyst Lo (enable below this)	<=	255.99	°C		
							Ignition Voltage Lo Ignition Voltage Hi	>= <=	8.5996 31.999	Volts Volts		
							Engine Speed Lo	>=	400	RPM		
							Engine Speed Hi Engine Speed is within the allowable limits for	<= >=	7500 5	RPM Sec		
							Default Gear Action	=	FALSE			
							High Side Driver ON		TRUE			
							RVT Status	=	Normal			
							Hydraulic Pressure Available	=	TRUE			
							Engine Speed Min	>=	550	RPM		
I												

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA		THRESHOLD	VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
						Disable Conditions:	MIL not Illuminated for DTC's:	TCM: P0711, P0712, P0713, P0716, P0717, P0722, P0723, P0751, P0742, P0756, P0757, P0973, P0974, P0976, P0977, P1915, P182E ECM: None		
Transmission Fluid Pressure Switch	P0878	Transmission Fluid Pressure (TFP) Sensor D Circuit High Voltage	C1234 Hydraulic pressure	>=	700	KPa				Special No Trip
			Hydraulic Delay Timer (Table Based) Check for Switch to be in Pressurized Position after delay, If so then Increment Fail Counter	>=	See Table 6 for Delay Timer Cal	Sec			>= 6 Fail Counts	
			Note: Subsequent fail counts require C1234 pressure below this value to re-enable fail logic. Results in one fail count per clutch transition	<	700	Кра				
							Transmission Fluid Temperature Lo	>= -6.656 °C		

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABL	E CONDI	TIONS	TIME REQUIRED	MIL ILLUM.
					Transmission Fluid Temperature Hyst Hi (disable above this)	Not >=	120	°C		
					Transmission Fluid Temperature Hyst Lo (enable below this)	<=	255.99	°C		
					Ignition Voltage Lo	>=	8.5996			
					Ignition Voltage Hi		31.999			
					Engine Speed Lo		400	RPM		
					Engine Speed Hi		7500	RPM		
					Engine Speed is within the allowable limits for	>=	5	Sec		
					Default Gear Action		FALSE			
					High Side Driver ON		TRUE			
					RVT Status	=	Normal			
					Hydraulic Pressure Available	=	TRUE			
					Engine Speed Min	>=	550	RPM		
				Disable Conditions:	MIL not Illuminated for DTC's:	P0711, P0712, P0713, P0716, P0717, P0722, P0723, P0751, P0754, P0756, P0757, P0974, P0976, P0977, P1915, P182E				
						ECM: None				

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA		THRESHOLD	VALUE	SECONDARY PARAMETERS	ENABL	E CONDI	TIONS	TIME REQUIRED	MIL ILLUM.
Transmission Fluid Pressure Switch	P0989	Transmission Fluid Pressure (TFP) Sensor E Circuit Low Voltage	CBR1/C456 Hydraulic pressure	<=	50	Кра						Special No Trip
			Hydraulic Delay Timer (Table Based)	>=	See Table 9 for Delay Timer Cal	Sec						
			Check for Switch to be in Exhausted Position after delay, If so then Increment Fail Counter								>= 18 Fail Counts	
			Note: Subsequent fail counts require C35R pressure above this value to re-enable fail logic. Results in one fail count per clutch transition	>	50	kpa						
							Transmission Fluid Temperature Lo	>=	-6.656	°C		
							Transmission Fluid Temperature Hyst Hi (disable above this)	Not >=	120	°C		
							Transmission Fluid Temperature Hyst Lo (enable below this)	<=	255.99	°C		
							Ignition Voltage Lo	>=	8.5996			
							Ignition Voltage Hi Engine Speed Lo	<= >=	31.999 400	Volts RPM		
							Engine Speed Hi	<=	7500	RPM		
							Engine Speed is within the allowable limits for	>=	5	Sec		
							Default Gear Action	=	FALSE			
							High Side Driver ON RVT Status	=	TRUE Normal			
							Hydraulic Pressure Available	=	TRUE			
							Engine Speed Min	>=	550	RPM		

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA		THRESHOLD	VALUE	SECONDARY PARAMETERS		TIME REQUIRED	MIL ILLUM.
						Disable Conditions		TCM: P0711, P0712, P0713, P0716, P0717, P0722, P0723, P0751, P0742, P0756, P0757, P0973, P0974, P0976, P0977, P1915, P182E ECM: None		
Transmission Fluid Pressure Switch	P0990	Transmission Fluid Pressure (TFP) Sensor E Circuit High Voltage	CBR1/C456 Hydraulio pressure		700	Кра				Special No Trip
			Hydraulic Delay Timer (Table Based)	>=	See Table 9 for Delay Timer Cal	Sec				
			Check for Switch to be in Pressurized Position after delay, If so then Increment Fail Counter						>= 15 Fail Count	
			Note: Subsequent fail counts require C35R pressure above this value to re-enable fail logic. Results in one fail count per clutch transition		700	kpa				
							Transmission Fluid Temperature Lo Transmission Fluid Temperature Hyst Hi (disable above this)			

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
				Disable Conditions		<= 255.99 °C >= 8.5996 Volts <= 31.999 Volts >= 400 RPM <= 7500 RPM >= 5 Sec = FALSE = TRUE = Normal = TRUE >= 550 RPM		
Mode 2 Multiplex Valve	P1751	Shift valve 1 performance	Attained Gear Slip is If Slip is Greater than the Above Cal Increment Fail Counter & Sample Counter				>= 5 Fail Counts	Two Trips

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
							Out Sample of Counts	
					Once this evaluation is complete the system will allow the valve to get back into position by delaying the next test for	= 1 Seconds		
					M2 Solenoid is Commanded On	= TRUE Boolean		
					Current Gear ≠ 2nd Gear	≠ 2nd Gear Gear		
					Calcaluted line pressure is	>= 1300 kPa		
					The test can begin when the M2 valve is verified to be in place because absolute value of attained gear slip and commanded gear slip is	<= 110 RPM		
					Test is delayed by a calibrated amount of time to allow the M2 valve to get into position	= 0.5 Sec		
					Upshift is In Progress	= FALSE Boolean		
					Input Speed Sensor Signal Hyst High (enabled above this value)	>= 1175 RPM		
					Input Speed Sensor Signal Hyst Low (disabled below this value)	<= 900 RPM		

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
					The torque converter clutch has transition from Locked to Unlocked.	= TRUE Boolea	n	
					TCC Stuck On Enable Criteria:			
					Gear Ratio Gear Ratio Engine Speed Hi	>= 0.623 Ratio		
					Engine Speed Lo Vehicle Speed HI	>= 500 RPM <= 511 KPH		
					Vehicle Speed Lo Stuck On During Upshift Enabled		n	
					If Stuck On During Upshift is enabled (See Above), Engine Torque Must be	>= 55 Nm		
					Down Shift In Progress		n	
					Current Gear	1st ≠ Gear Boolea Locked	n	
					Engine Torque Hi Engine Torque Lo			
					Current Range			
					Current Range Transmission Sump Temperature	- 120 90	2	
					Transmission Sump Temperature	>= -6.656 °C		
					Throttle Position Hyst High Throttle Position Hyst Low			
					PTO Active		n	
					Disable if in D1 and value true		n	
					Disable if in D2 and value true	= 0 Boolea	n	
					Disable if in D3 and value true		n	
					Disable if in D4 and value true	= () Boolea	n	

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE	CONDI	TIONS	TIME REQUIRED	MIL ILLUM.
					Disable if in D5 and value true	=	0	Boolean		
					Disable if in MUMD and value true	=	0	Boolean		
					Disable if in TUTD and value true	-		Boolean		
					4 Wheel Drive Active		FALSE			
					Air Purge Active	= 1	FALSE	Boolean		
					Ignore Air Purge if value = true			Boolean		
					TCC Mode	=	OFF			
					Common Enables: Ignition Voltage	>=	8.5996	v		
					Ignition Voltage		31.999	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		
					P1751 Status is	≠	Test Failed This Key On			
				Disable Conditions:	MIL not Illuminated for DTC's:					
						P2764 ECM: P0101, P0102,				

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
						P0103, P0106, P0107, P0108, P0171, P0172, P0174, P0175, P0201, P0202, P0203, P0204, P0205, P0206, P0206, P0207, P0208, P0300, P0301, P0302, P0303, P0304, P0305, P0306, P0307, P0308, P0308, P0401, P042E		
Tap Up Tap Down Switch (TUTD)	P1765	Upshift Switch Circuit #2	Fail Case         Tap Up Switch Stuck in           1         the Up Position in Range           1         1 Enabled           Tap Up Switch Stuck in	= 0 Boolean				Special No Trip
			the Up Position in Range 2 Enabled Tap Up Switch Stuck in the Up Position in Range 3 Enabled	= 0 Boolean				
			Tap Up Switch Stuck in the Up Position in Range 4 Enabled	= 0 Boolean				
			Tap Up Switch Stuck in the Up Position in Range 5 Enabled	= 0 Boolean				

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA		THRESHOLI	D VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
			Tap Up Switch Stuck in the Up Position in Range 6 Enabled	=	0	Boolean				
			Tap Up Switch Stuck in the Up Position in Neutral Enabled	=	1	Boolean				
			Tap Up Switch Stuck in the Up Position in Park Enabled	=	1	Boolean				
			Tap Up Switch Stuck in the Up Position in Reverse Enabled	=	0	Boolean				
			Tap Up Switch ON	=	TRUE	Boolean			Fail >= 1 Time (Sec)	
			Fail Case         Tap Up Switch Stuck in           2         the Up Position in Range           1         Enabled	=	1	Boolean				
			Tap Up Switch Stuck in the Up Position in Range 2 Enabled	=	1	Boolean				
			Tap Up Switch Stuck in the Up Position in Range 3 Enabled	=	1	Boolean				
			Tap Up Switch Stuck in the Up Position in Range 4 Enabled	=	1	Boolean				
			Tap Up Switch Stuck in the Up Position in Range 5 Enabled	=	1	Boolean				
			Tap Up Switch Stuck in the Up Position in Range 6 Enabled	=	1	Boolean				
			Tap Up Switch Stuck in the Up Position in Neutral Enabled	=	0	Boolean				

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA		THRESHOLI	D VALUE	SECONDARY PARAMETERS	ENABL	E COND	ITIONS	TIME REQU	JIRED	MIL ILLUM.
			Tap Up Switch Stuck in the Up Position in Park Enabled	=	0	Boolean							
			Tap Up Switch Stuck in the Up Position in Reverse Enabled		0	Boolean							
			Tap Up Switch ON	=	TRUE	Boolean							
			NOTE: Both Failcase1 and Failcase 2 Must Be Met								>= 600	Fail Time (Sec)	
							Time Since Last Range Change	>=	1	Enable Time (Sec)			
							Ignition Voltage Lo	>=	8.5996	Volts			
							Ignition Voltage Hi	<=	31.999				
							Engine Speed Lo Engine Speed Hi	>= <=	400 7500	RPM RPM			
							Engine Speed is within the allowable limits for	>=	5	Sec			
							P1765 Status is	¥	Test Failed This Key On or Fault Active	t			
						Disable Conditions:	MIL not Illuminated for DTC's:	TCM: P1767, P1761, P182E, P1915					
								ECM: None					
Tap Up Tap Down Switch (TUTD)	P1766	Downshift Switch Circuit #2	Fail Case         Tap Down Switch Stuck           1         in the Down Position in           Range 1 Enabled	=	0	Boolean							Special No Trip

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA		THRESHOLD	D VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
			Tap Down Switch Stuck in the Down Position in Range 2 Enabled	=	0	Boolean				
			Tap Down Switch Stuck in the Down Position in Range 3 Enabled	=	0	Boolean				
			Tap Down Switch Stuck in the Down Position in Range 4 Enabled	=	0	Boolean				
			Tap Down Switch Stuck in the Down Position in Range 5 Enabled	=	0	Boolean				
			Tap Down Switch Stuck in the Down Position in Range 6 Enabled	=	0	Boolean				
			Tap Down Switch Stuck in the Down Position in Range Neutral Enabled	=	1	Boolean				
			Tap Down Switch Stuck in the Down Position in Range Park Enabled	=	1	Boolean				
			Tap Down Switch Stuck in the Down Position in Range Reverse Enabled	=	0	Boolean				
			Tap Down Switch ON	=	TRUE	Boolean			>= 1 sec	
			Fail Case         Tap Down Switch Stuck           2         in the Down Position in           Range 1 Enabled	=	1	Boolean				
			Tap Down Switch Stuck in the Down Position in Range 2 Enabled	=	1	Boolean				
			Tap Down Switch Stuck in the Down Position in Range 3 Enabled	=	1	Boolean				
			Tap Down Switch Stuck in the Down Position in Range 4 Enabled	=	1	Boolean				

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	-	THRESHOLD	) VALUE	SECONDARY PARAMETERS	ENABLE	E CONDI	TIONS	TIME REQU	IIRED	MIL ILLUM.
			Tap Down Switch Stuck in the Down Position in Range 5 Enabled	=	1	Boolean							
			Tap Down Switch Stuck in the Down Position in Range 6 Enabled	=	1	Boolean							
			Tap Down Switch Stuck in the Down Position in Neutral Enabled	=	0	Boolean							
			Tap Down Switch Stuck in the Down Position in Park Enabled	=	0	Boolean							
			Tap Down Switch Stuck in the Down Position in Reverse Enabled	=	0	Boolean							
			Tap Down Switch ON NOTE: Both Failcase1 and Failcase 2 Must Be Met		TRUE	Boolean					>= 600	sec	
							Time Since Last Range Change	>=	1	Sec			
							Ignition Voltage Lo	>=	8.5996	Volts			
							Ignition Voltage Hi Engine Speed Lo	<= >=	18 400	Volts RPM			
							Engine Speed Hi	<=	7500	RPM			
							Engine Speed is within the allowable limits for	>=	5	Sec			
							P1766 Status is		Test Failed This Key On or Fault Active				
						Disable Conditions:	MIL not Illuminated for DTC's:	TCM: P1767, P1761, P182E, P1915					
								ECM: None					

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA		THRESHOLD	VALUE	SECONDARY PARAMETERS	ENABL	E CONDI	TIONS	TIME	REQU	JIRED	MIL ILLUM.
Tap Up Tap Down Switch (TUTD)	P1767	Up and Down Shift Switch Circuit #2	TUTD Circuit Reads Invalid Voltage	=	TRUE	Boolean					>=	60	Fail Time (Sec)	Special No Trip
							Ignition Voltage Lo Ignition Voltage Hi Engine Speed Lo Engine Speed Hi Engine Speed is within the allowable limits for	>=	8.5996 31.999 400 7500 5	Volts Volts RPM RPM Sec				
							P1767 Status is	¥	Test Failed This Key On or Fault Active					
						Disable Conditions:	MIL not Illuminated for DTC's:	TCM: P1761 ECM: None						
Internal Mode Switch (IMS)	P182E	Internal Mode Switch - Circuit A Low Reported as Internal Mode Switch-Invalid Range	<u>Fail Case</u> <u>1</u> Current range	=	"Transitional 1"	Range State								One Trip
			Previous range	¥	CeTRGR_e_P RNDL_Drive6	Range State								
			Previous range	¥	CeTRGR_e_P RNDL_Drive5	Range State								
			Either the S1 or S3 Pressure Switch indicates "Pressure Present"	=	TRUE	Boolean								
			Engine Torque		-50	Nm								
			Engine Torque If the above conditions are present Increment Fail Timer	<=	8191.75	Nm					>=	0.225	Fail Second s	

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA		THRESHOLD	VALUE	SECONDARY PARAMETERS	ENABL	E CONDITIONS	TIME REQUIRED	MIL ILLUM.
			If Fail Timer has Expired then Increment Fail Counter							>= 15 Fail Counts	
			<u>Fail Case</u> 2 Current range	=	"Transitional 1"	Range State					
			S3 Pressure Switch indicates "Exhausted"	-	TRUE	Boolean					
			Commanded Gear If the above conditions are present Increment Fail Timer	=	1st Locked	Gear				Fail >= 0.225 Second s	
			If Fail Timer has Expired then Increment Fail Counter							>= 15 Fail Counts	
			<u>Fail Case</u> <u>3</u> Current range	=	"Transitional 13"		Previous range	¥	CeTRG R_e_P RNDL_ Drive5		
			Either the S1 or S3 Pressure Switch indicates "Pressure Present"	=	TRUE	Boolean	Previous range	¥	CeTRG R_e_P RNDL_ Drive5		
			Engine Torque	>=	-8192	Nm	IMS is 7 position configuration	=	0 Boolean		
			Engine Torque	<=	8191.75	Nm	If the "IMS 7 Position config" = 1 then the "previous range" criteria above must also be satsified when the "current range" = "Transitional 13"				
			If the above conditions are present Increment Fail Timer							>= 0.225 Seconds	
			If Fail Timer has Expired then Increment Fail Counter							>= 15 Fail Counts	

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA		THRESHOLD	VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
			<u>Fail Case</u> <u>4</u> Current range	=	"Transitional 2" or "Transitional 8"		Disable Fail Case 4 if last positive range was Drive 6 and current range is transitional 8			
			Inhibit bit (see definition)	=	FALSE		Set inihibit bit true if PRNDL = 1100 (rev) or 0100 (Rev- Neu transitional) Set inhibit bit false if PRNDL = 1001 (park)			
			Either the S1 or S3 Pressure Switch indicates "Pressure Present"	=	TRUE	Boolean				
			Steady State Engine Torque	>=	30	Nm				
			Steady State Engine Torque	<=	8191.75	Nm				
			If the above conditions are present Increment Fail Timer						>= 0.225 Seconds	
			If the above Condtions have been met, Increment Fail Counter						>= 15 Fail Counts	
			<u>Fail Case</u> 5 Current range	=	"Transitional 11"					
			Engine Torque Either the S1 or S3	>=	-50	Nm				
			Pressure Switch indicates "Pressure Present"	=	TRUE	Boolean				
			If the above conditions are present Increment Fail Timer						>= 0.225 Seconds	
			If the above Condtions have been met, Increment Fail Counter						>= 15 Fail Counts	

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA		THRESHOLD VALUE	SECONDARY PARAMETERS	ENAB	ELE CONDITIONS	TIME REQUIRED	MIL ILLUM.
			<u>Fail Case</u> <u>6</u> Current range	=	"Illegal"	A Open Circuit Definition (flag set false if the following conditions are met):				
			and			Current Range	¥	"Transit ional 11"		
			A Open Circuit (See Definition)	=	FALSE Boolean	or				
						Last positive state or	¥	Neutral		
						Previous transitional state	¥	Transiti onal 8 and Illegal		
						and		Open		
						PRNDL Circuit A	=	Circuit		
						PRNDL Circuit B	=	Circuit		
						PRNDL Circuit C	=	Open Circuit		
						PRNDL Circuit P	=	Open Circuit		
			If the above Condtions are present, Increment Fail timer						>= 6.25 Seconds	
			Fail Case 7 Current PRNDL State	=	PRNDL circuit ABCP = 1101					
			and Previous valid state	=	PRNDL circuit ABCP =1111					
			Input Speed	>=	150 RPM					
			Reverse Trans Ratio Reverse Trans Ratio		2.975952148 ratio 3.423950195 ratio					
			If the above Condtions are present, Increment		5.725950195 Idli0				>= 6.25 Seconds	
I			Fail timer							

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA		THRESHOLD	VALUE	SECONDARY PARAMETERS	ENABI	E COND	ITIONS	TIME REG	UIRED	MIL ILLUM.
			P182E will report test fail when any of the above 7 fail cases are met										
							Ignition Voltage Lo Ignition Voltage Hi Vehicle Speed Lo Engine Speed Lo Engine Speed Hi Engine Speed is within the allowable limits for	,	8.5996 31.999 511 400 7500 5				
						Disable Conditions:	Engine Torque Signal Valid MIL not Illuminated for DTC's:	=	TRUE	Boolean			
Tap Up Tap Down Switch (TUTD)	P1876	Tap Up and Down Enable Switch Circuit	Current range	=	Park or Reverse or Neutral	Range State							Special No Trip
			TUTD Enable Switch is Active	=	TRUE	Boolean					>= 3	Fail Time	
							Ignition Voltage Lo	>=	8.5996	Volts	>= 5	(Sec) Fail Counts	
							Ignition Voltage Lo Ignition Voltage Hi Vehicle Speed Lo Engine Speed Hi	>= <= >= <=	8.5996 31.999 511 400 7500				
							Engine Speed is within the allowable limits for	>=	5	Sec			

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	Т	HRESHOLD	) VALUE	SECONDARY PARAMETERS	ENABL	E CONDITIONS	TIME REQ	UIRED	MIL ILLUM.
							P1876 Status is	¥	Test Failed This Key On or Fault Active			
						Disable Conditions:	MIL not Illuminated for DTC's:	TCM: P0815, P0816, P0826, P1761, P1825, P1877, P1915, U0100 ECM:				
								None				
Internal Mode Switch (IMS)	P1915	Internal Mode Switch Does Not Indicate Park/Neutral (P/N) During Start	PRNDL State is	¥	Park or Neutral	Enumeration						One Trip
			The following events must occur Sequentially									
			Initial Engine speed	<=	50	RPM				>= 0.25	Enable Time (Sec)	
			Then Engine Speed Between Following Cals									
			Engine Speed Lo Hist	>=	50	RPM						
			Engine Speed Hi Hist	<=	480	RPM				>= 0.069	Enable Time (Sec)	
			Then Final Engine Speed	>=	525	RPM						
			Final Transmission Input Speed		200	RPM				>= 1.25	Fail Time (Sec)	

6L45/6L50 UNIQUE SECTION Page 63 of 84

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	PARA			SECONDARY PARAMETERS	ENABL	E CONDIT	IONS	TIME REQUIRED	MIL ILLUM.
							DTC has Ran this Key Cycle? Ignition Voltage Lo Ignition Voltage Hi	= >= <=	FALSE 6 31.999	Boolean V V		
							Ignition Voltage Hyst High (enables above this value)	>=	6	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				
			Primary Offgoing Clutch									One Trip
Variable Bleed Solenoid (VBS)	P2715	Pressure Control (PC) Solenoid D Stuck On [CB26] (Dynamic)	is exhausted (See Table 13 in Supporting Documents for Exhaust Delay Timers)		TRUE	Boolean						
			Primary Oncoming Clutch Pressure Command Status	=	Maximum pressurized							
			Primary Offgoing Clutch Pressure Command Status	=	Clutch exhaust command							
			Range Shift Status		Initial Clutch Control							
I			Attained Gear Slip	<=	40	RPM						

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA		THRESHOLD	/ALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
			If above coditons are true, increment appropriate Fail 1 Timers Below:							
			fail timer 1 (2-1 shifting with throttle)	>=		Fail Time (Sec)				
			fail timer 1 (2-1 shifting without throttle)	>=		Fail Time (Sec)				
			fail timer 1 (2-3 shifting with throttle)	>=	n 7008n/688	Fail Time (Sec)				
			fail timer 1 (2-3 shifting without throttle)	>=		Fail Time (Sec)				
			fail timer 1 (2-4 shifting with throttle)	>=		Fail Time (Sec)				
			fail timer 1 (2-4 shifting without throttle)	>=		Fail Time (Sec)				
			fail timer 1 (6-4 shifting with throttle)	>=		Fail Time (Sec)				
			fail timer 1 (6-4 shifting without throttle)	>=		Fail Time (Sec)				
			fail timer 1 (6-5 shifting with throttle)	>=		Fail Time (Sec)				
			fail timer 1 (6-5 shifting without throttle)	>=		Fail Time (Sec)				

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
			If Attained Gear Slip is Less than Above Cal Increment Fail Timers				Total Fail Time = (Fail 1 + Fail 2) See Enabl e Timer s for >= Fail Sec Timer 1, and Refer ence Suppo rting Table 15 for Fail Timer 2	
			If fail timer is greater than threshold increment corresponding gear fail counter and total fail counter					
			2nd gear fail counter				Fail Counte >= 3 r From 2nd Gear OR	
			6th gear fail counter				Fail Counte >= 3 r From 6th Gear OR	

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
			total fail counter				Total >= 5 Fail r	
					Trans oil temperature Input Speed Sensor fault Output Speed Sensor fault Command / Attained Gear High Side Driver ON	= FALSE Boolean = FALSE Boolean ≠ 1st Boolean		
					output speed limit for TUT input speed limit for TUT TUT Enable temperature PRNDL state defaulted	>= 100 RPM >= 150 RPM >= -6.656 °C		
					IMS Fault Pending Service Fast Learn Mode HSD Enabled	= FALSE Boolean		
				Disable Conditions:	MIL not Illuminated for DTC's:			
						P182E ECM: P0101, P0102,		
						P0103, P0106, P0107, P0108, P0171,		
						P0172, P0174, P0175, P0201, P0202,		
						P0203, P0204, P0205, P0206, P0207,		
						P0208, P0300,		

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA		THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
							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)	Fail Case 1 Case: Steady State 1st						One Trip
			Attained Gear slip	>=	400 RPM				
			If the Above is True for Time	>=	Table Based Time Please Refer to Table Enable Time 4 in (Sec) supporting documents				
			Intrusive test: (CBR1 clutch exhausted)						
			Gear Ratio		2.482177734				
			Gear Ratio If the above parameters are true		2.245849609				
								Fail >= 1.1 Timer (Sec)	
								Fail >= 2 <sup>Count</sup> in 1st Gear	
								or Total >= 3 Fail Counts	

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
			<u>Fail Case</u> 2 Case: Steady State 3rd Gear					
			Max Delta Output Speed Hysteresis	Table Based value Please Refer to 3D Table 1 in supporting documents				
			Min Delta Output Speed Hysteresis	Table Based value Please >= Refer to 3D Table 2 in supporting documents				
			If the Above is True for Time	>= Sec				
			Intrusive test: (C35R clutch exhausted)					
			Gear Ratio Gear Ratio If the above parameters are true	o >= 2.245849609				
							Fail >= 1.1 Timer (Sec)	
							Fail >= 3 Count in 3rd Gear or	
							Total >= 3 Fail Counts	

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHO	LD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
			Fail Case 3 Case: Steady State 4rd Gear						
			Max Delta Output Speed Hysteresis	Table Base value Plea Refer to 3 Table 1 ir supporting document	se D rpm/sec g				
			Min Delta Output Speed Hysteresis	Table Base value Plea Refer to 3 Table 2 ir supporting document	se D rpm/sec g				
			If the Above is True for Time	Table Bass Time Plea: Refer to Ta 17 in supportin document	se <sup>ble</sup> Sec 9				
			Intrusive test: (C1234 clutch exhausted)						
			Gear Ratio Gear Ratio						
			If the above parameters are true						
								Fail >= 1.1 Timer (Sec)	
								Fail >= 3 Count in 4th Gear	
								or Total >= 3 Fail Counts	

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
			Fail Case 4 Case: Steady State 5th Gear					
			Max Delta Output Speed Hysteresis	>= Table Based value Please Refer to 3D Table 1 in supporting documents				
			Min Delta Output Speed Hysteresis					
			If the Above is True for Time	>= Sec				
			Intrusive test: (C35R clutch exhausted)					
			Gear Ratio Gear Ratio If the above parameters are true	>= 0.633666992				
							Fail >= 1.1 Timer (Sec)	
							Fail >= 3 Count in 5th Gear or	
							Total >= 3 Fail Counts	

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABI	-E CONDI		TIME REQUIRED	MIL ILLUM.
					PRNDL State defaulted	=	FALSE	Boolean		
					inhibit RVT	=	FALSE	Boolean		
					IMS fault pending indication	=	FALSE	Boolean		
					output speed	>=	0	RPM		
					TPS validity flag		TRUE			
					HSD Enabled		TRUE	Boolean		
					Hydraulic_System_Pressuriz ed	=	TRUE	Boolean		
					Minimum output speed for RVT	>=	0	Nm		
					A OR B					
					(A) Output speed enable	>=	16	Nm		
					(B) Accelerator Pedal enable		0.5005	Nm		
					Ignition Voltage Lo	>=	8.5996	Volts		
					Ignition Voltage Hi		31.999	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	>=	5.0003	Pct		
					if Attained Gear=1st FW Engine Torque Enable	>=	5	Nm		
					if Attained Gear=1st FW Engine Torque Enable		8191.9	Nm		
					Transmission Fluid Temperature	>=	-6.656	°C		
					Input Speed Sensor fault	=	FALSE	Boolean		
					Output Speed Sensor fault	=	FALSE			
					Default Gear Option is not present	=	TRUE			

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	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, P0172, P0174, P0175, P0201, P0202, P0203, P0204, P0205, P0206, P0207, P0206, P0207, P0208, P0300, P0301, P0302, P0303, P0304, P0305, P0306, P0307, P0308, P0307, P0308, P0307, P0308, P0307, P0308, 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)	= TRUE Boolean				One Trip

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA		THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
			Primary Oncoming Clutch Pressure Command Status	=	Maximum pressurized				
			Primary Offgoing Clutch Pressure Command Status	=	Clutch exhaust command				
			Range Shift Status	¥	Initial Clutch Control				
			Attained Gear Slip	<=	40 RPM				
			If the above conditions are true increment appropriate Fail 1 Timers Below:						
			fail timer 1 (2-6 shifting with throttle)	>=	0.299804688 sec				
			fail timer 1 (2-6 shifting without throttle)	>=	0.5 sec				
			fail timer 1 (3-5 shifting with throttle)	>=	0.299804688 sec				
			fail timer 1 (3-5 shifting without throttle)	>=	0.5 sec				
			fail timer 1 (4-5 shifting with throttle)	>=	0.299804688 sec				
			fail timer 1 (4-5 shifting without throttle)	>=	0.5 sec				
			fail timer 1 (4-6 shifting with throttle)	>=	0.299804688 sec				
			fail timer 1 (4-6 shifting without throttle)	>=	0.5 sec				

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
			If Attained Gear Slip is Less than Above Cal Increment Fail Timers				Total Fail Time = (Fail 1 + Fail 2) See Enabl e Timer s for >= Fail sec Timer 1, and Refer ence Suppo rting Table 15 for Fail Timer 2	
			If fail timer is greater than threshold increment corresponding gear fail counter and total fail counter					
			2nd gear fail counter				Fail Counte >= 3 r From 2nd Gear	
			3rd gear fail counter				Fail Counte >= 3 r From 3rd Gear	

FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
		4th gear fail counter				Fail Counte >= 3 r From 4th Gear	
		total fail counter				Total Fail >= 5 Counte r	
			Disable Conditions:	Trans oil temperature Input Speed Sensor fault Output Speed Sensor fault Command / Attained Gear High Side Driver ON output speed limit for TUT input speed limit for TUT TUT Enable temperature PRNDL state defaulted IMS Fault Pending Service Fast Learn Mode HSD Enabled MIL not Illuminated for DTC's:	<ul> <li>= FALSE Boolean</li> <li>= FALSE Boolean</li> <li>≠ 1st Boolean</li> <li>= TRUE Boolean</li> <li>&gt;= 100 RPM</li> <li>&gt;= 150 RPM</li> <li>&gt;= -6.656 °C</li> <li>= FALSE Boolean</li> <li>= FALSE Boolean</li> <li>= FALSE Boolean</li> <li>= TRUE Boolean</li> </ul>		

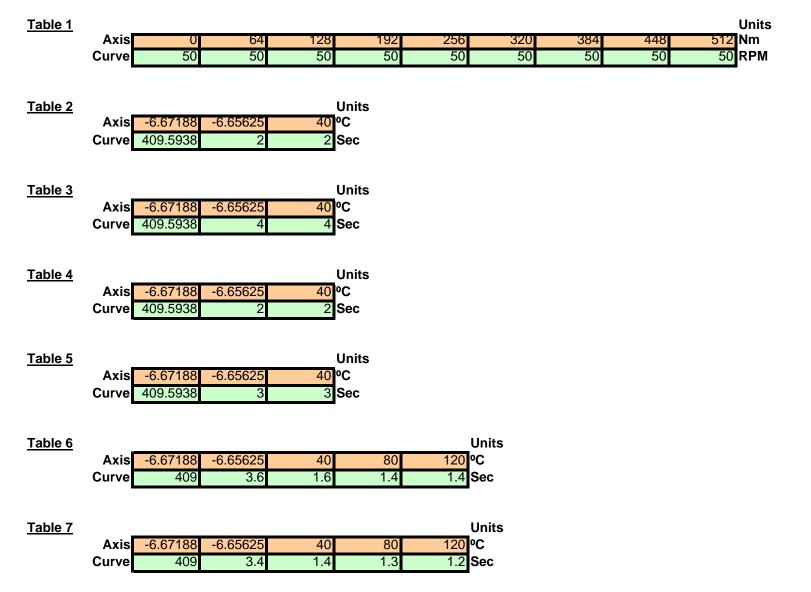
COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
						P0204, P0205, P0206, P0207, P0208, P0300, P0301, P0302, P0303, P0304, P0305, P0306, P0307, P0308,		
Variable Bleed Solenoid (VBS)	P2724	Pressure Control (PC) Solenoid E Stuck On (Steady State)	<u>Fail Case</u> 1			P0401, P042E		One Trip
			Max Delta Output Speed Hysteresis	Table Based value Please Refer to 3D Table 1 in supporting documents				
			Min Delta Output Speed Hysteresis	Table Based value Please Refer to 3D Table 2 in supporting documents				
			If the Above is True for Time					
			Intrusive test: (C35R clutch exhausted) Gear Ratio					
I			Gear Ratio					

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
			If the above parameters are true					
							Fail	
							>= 1.1 Timer (Sec)	
							Fail Count	
							>= 3 in 5th Gear	
							OR	
							Total >= 3 Fail	
			Fail Case				Counts	
			2 Case: 6th Gear					
				Table Based value Please				
			Max Delta Output Speed Hysteresis	Table 1 in				
				supporting documents				
				Table Based value Please				
			Min Delta Output Speed Hysteresis	Table 2 in				
				supporting documents				
			If the Above is True for	Table Based Time Please				
			If the Above is True for Time					
				documents				
			Intrusive test: (CB26 clutch exhausted)					
			Gear Ratio					
			Gear Ratio					
			If the above parameters are true					

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CO	NDITIONS	TIME REQU	RED	MIL ILLUM.
									Fail Timer (Sec)	
								>= 3	Fail Count in 6th Gear	
								>= 3	OR Total Fail Counts	
					PRNDL State defaulted inhibit RVT		SE Boolean SE Boolean		Journs	
					IMS fault pending indication	= FAL	SE Boolean			
					output speed TPS validity flag HSD Enabled		RPM JE Boolean JE Boolean			
					Hydraulic_System_Pressuriz ed		JE Boolean			
					Minimum output speed for RVT	>= (	Nm			
					A OR B (A) Output speed enable	>= 1	6 Nm			
					(B) Accelerator Pedal enable	>= 0.5	005 Nm			
					Ignition Voltage Lo Ignition Voltage Hi Engine Speed Lo	>= 8.55 <= 31.5 >= 4(				
					Engine Speed Eo	<= 75				
					Engine Speed is within the allowable limits for	>= {	Sec			
					if Attained Gear=1st FW Accelerator Pedal enable	>= 5.0	003 Pct			
					if Attained Gear=1st FW Engine Torque Enable	>= {	Nm			

Image: Section of the section of th	COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
Impending       Impending       Impending       Impending       Impediation       Impediation <t< th=""><th></th><th></th><th></th><th></th><th></th><th>if Attained Gear=1st FW Engine Torque Enable</th><th>&lt;= 8191.9 Nm</th><th></th><th></th></t<>						if Attained Gear=1st FW Engine Torque Enable	<= 8191.9 Nm		
Output Speed Spansor faul       =       FALSE       Boolean         Default Gear Option is present       =       TRUE         Disable       ML not Illuminated for       TCM:         P0772,       P0773,         P0722,       P0723,         P0724,       P0724,         P0725,       P0723,         P0724,       P0724,         P0725,       P0723,         P0724,       P0724,         P0725,       P0723,         P0726,       P0724,         P0727,       P0723,         P0728,       P0724,         P0729,       P0724,         P0721,       P0724,         P0722,       P0723,         P0723,       P0733,         P0734,       P0734,         P0735,       P0734,         P0734,       P0734,         P0735,       P0204,         P0734,       P0204,         P0204,       P0204,         P0205,       P0204,         P0204,       P0204,         P0204,       P0204,         P0204,       P0204,         P0204,       P0204,         P0204,       P0204,						Temperature	>0.050 C		
Default Geory Cotton is nol       = TRUE         Disable       ML not Illuminated for       TCM:         P0773,       P0723,         P0774       P0723,         P0723,       P0723,         P0724,       P0723,         P0725,       P0723,         P0726,       P0723,         P0727,       P0723,         P0728,       P0723,         P0729,       P0723,         P0101,       P0102,         P0102,       P0103,         P0103,       P0104,         P0104,       P0107,         P0105,       P0107,         P0107,       P0107,         P0108,       P0107,         P0109,       P0109,         P0109,       P0109,         P0109,       P0201,         P0201,       P0201,         P0201,       P0201,         P0201,       P0201,         P0201									
Conditions       DTCs:       P076,         P072,       P072,         P072,       P072,         P072,       P072,         P072,       P072,         P072,       P072,         P074,       P072,         P074,       P072,         P074,       P072,         P074,       P074,         P0101,       P0102,         P0102,       P0103,         P0104,       P0104,         P0105,       P0107,         P0107,       P0108,         P0107,       P0174,         P0174,       P0174,         P0174,       P0174,         P0175,       P0174,         P0174,       P0204,         P0207,       P0204,         P0204,       P0207,         P0205,       P0206,						Default Gear Option is not	= TRUE		
P0307, P0308,						MIL not Illuminated for	TCM: P0716, P0717, P0722, P0723, P182E ECM: P0101, P0102, P0103, P0106, P0107, P0108, P0171, P0172, P0174, P0175, P0201, P0202, P0203, P0204, P0205, P0206, P0205, P0206, P0207, P0208, P0206, P0207, P0208, P0206, P0207, P0208, P0206, P0207, P0208, P0206, P0207, P0208, P0206, P0207, P0208, P0206, P0207, P0208, P0206, P0207, P0208, P0206, P0207, P0208, P0206, P0207, P0208, P0206, P0207, P0208, P0206, P0207, P0208, P0206, P0207, P0208, P0207, P0208, P0206, P0207, P0208, P0206, P0207, P0208, P0207, P0208, P02007, P0208, P0207, P0208, P0300, P0307,		

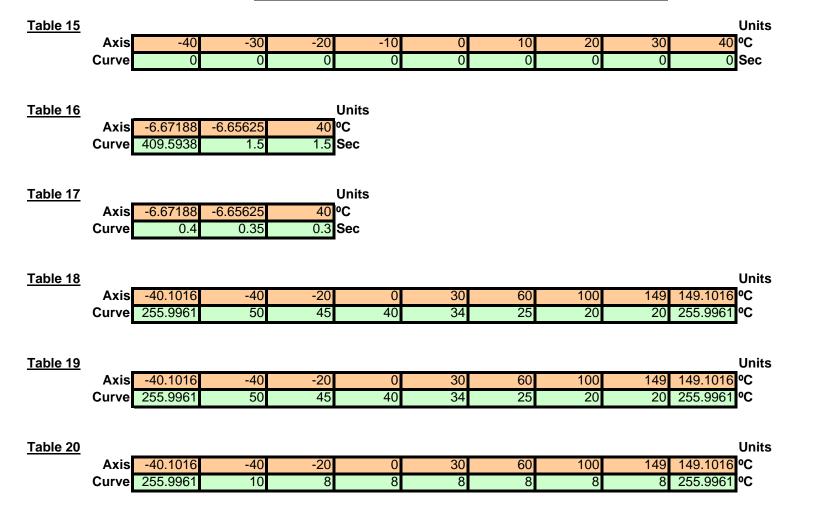
# 6L40E/6L50E LOOK-UP TABLES--2D



# 6L40E/6L50E LOOK-UP TABLES--2D

Table 8						Units
	Axis	-6.67188	-6.65625	40	80	120 °C
	Curve	409	3.6	1.6	1.5	1.4 Sec
Table 9						Units
	Axis	-6.67188	-6.65625	40	80	120 °C
	Curve	409	3.3	1.3	1.2	1.1 Sec
Table 10		100	010			Units
<u></u>	Axis	-40	-20	0	30	110 °C
	Curve	3.029297	1.857422	1.00293	0.754883	0.583984 Sec
	Curre	0.020201	1.001 422	1.00200	0.104000	
<u> Table 11</u>						Units
	Axis	-40	-20	0	30	110 °C
	Curve	1.720703	1.108398	0.595703	0.359375	0.21582 Sec
Table 12						Units
	Axis	-40	-20	0	30	110 °C
	Curve	2.121094	1.393555	0.841797	0.642578	0.332031 Sec
Table 13	• - · · ·	40	00		0.01	Units
	Axis	-40	-20	0	30	110 °C
	Curve	2.507813	0.952148	0.499023	0.292969	0.126953 Sec
Table 14	<b>.</b>	40	00		0.01	Units
	Axis	-40	-20	0	30	110 °C
	Curve	2.972656	0.818359	0.47168	0.204102	0.132813 Sec

## 6L40E/6L50E LOOK-UP TABLES--2D



## **Supporting Documents - 3D Tables**

	0.00	2.00	5.00	25.00	100.00
-6.67	8191.75	8191.75	8191.75	8191.75	8191.75
-6.66	1125.00	1125.00	850.00	700.00	700.00
40.00	1125.00	1125.00	850.00	700.00	700.00

#### 3D\_Table 1

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

#### 3D\_Table 2

	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

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