Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria		eshold /alue	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
Transmission Control Module (TCM)	P0601	Transmission Electro-Hydraulic Control Module Read Only Memory	Incorrect program/calibrations checksum	= TRUE	Boolean Disable	MIL not Illuminated for	TCM: 20601	>= 5 Fail Counts	One Trip
					Conditions:	DTC's:	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 Continously	One Trip
					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 Sample Count	One Trip s
					Disable Conditions:	MIL not Illuminated for DTC's:	TCM: P0604 ECM: None		
Transmission Control Module (TCM)		Transmission Electro-Hydraulic Control Module Long Term Memory Performance	TCM Non-Volatile Memory bit Incorrect flag at Powerdown	= TRUE	Boolean			Runs Continously	One Trip
					Disable Conditions:	MIL not Illuminated for DTC's:	TCM: P062F ECM: None		
Transmission Control Module (TCM)		Transmission Electro-Hydraulic Control Module Internal Temperature Too High	Fail Case 1 Substrate Temperature	>= 146.29687	5°C			>= 5 Fail Time (Sec	One Trip

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Th	reshold /alue	Secondary Malfunction		Enable Conditions			Tiı Requ	me uired	Mil Illum.
			<u>Fail Case 2</u> Substrate Temperature	>= 50	°C					>=	2	Fail Time (Sec)	
			Ignition Voltage	>= 18	Volts								
			Note: either fail case can set the DTC										
						Ignition Voltage Lo Ignition Voltage Hi Substrate Temp Lo Substrate Temp Hi Substrate Temp Between Temp Range for Time	>= <=	8.5996094 31.990234 0 170 0.25	Volts Volts °C °C Sec				
						P0634 Status is		Test Failed This Key On or Fault Active					
					Disable Conditions:	MIL not Illuminated for DTC's:							
High Side Driver 1	P0658	Actuator Supply Voltage Circuit Low	The HWIO reports a low voltage (open or ground short) error flag	= TRUE	Boolean					>= out of	4 6	Fail Counts Sample Counts	One Trip
						P0658 Status is not	=	Test Failed This Key On or Fault Active					

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction		Enable Conditions				ime Juired	Mil Illum.
- Official		Decemption			High Side Driver 1 On		True	Boolean				
				Disat Condition		TCM: None ECM: None						
Transmission Control Module (TCM)	P0667	TCM Internal Temp (substrate) Sensor Circuit Range/Performance	If transmission oil temp to substrate temp Δ If TCM substrate temp to power up temp Δ	supporting documents Refer to Table 20 in								Two Trips
			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.						>= Out of	3000 3750	Fail Counts (100ms loop) Sample Counts (100ms loop)	
			Non-continuous (intermittent) fail conditions will delay resetting fail counter until						>= Out of	700 875	Pass 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	= >= <= >= <= >=	TRUE TRUE 8.5996094 31.990234 400 7500 5 FALSE	Boolean Boolean Volts Volts RPM RPM Sec				

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction		Enable Conditions		Time Required	Mil Illum.
					Below describes the brake					
					torque entry criteria					
					Engine Torque	>=	90	N*m		
					Throttle	>=	30.000305	Pct		
					Transmission Input Speed	<=	200	RPM		
					Vehicle Speed	<=	8	Kph		
					Transmission Range	≠	Park			
					Transmission Range	≠	Neutral			
					PTO	=	Not Active			
					Set Brake Torque Active					
					TRUE if above conditions are	>=	7	sec		
					met for:					
					Below describes the brake					
					torque exit criteria					
					Brake torque entry criteria	=	Not Met			
							Clutch			
					Clutch hydraulic pressure	≠	Hydraulic			
					Ciuten nyuraulie pressure	+	Air Purge			
							Event			
					Clutch used to suit brake		CeTFTD_e			
					Clutch used to exit brake	=	_C3_RatlE			
					torque active		nbl			
					The above clutch pressure is					
					greater than this value for one	>=	600	kpa		
					loop					
					Set Brake Torque Active					
					FALSE if above conditions are	>=	20	Sec		
					met for:					
							Test Failed			
					P0667 Status is	≠	This Key			
							On or Fault			
							Active			

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
				Disal		<ul> <li>TCM: P0658, P0668, P0669, P06AD,</li> <li>P06AE, P0716, P0712, P0713, P0717, P0722, P0723, P0962, P0963, P0966, P0967, P0970, P0971, P215C, P2720, P2721, P2729, P2730</li> <li>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</li> </ul>		
Transmission Control Module (TCM)	P0668	TCM internal temperature (substrate) thermistor failed at a low voltge	Type of Sensor Used If TCM Substrate Temperature Sensor = Direct Proportional and Temp If TCM Substrate Temperature Sensor = Indirect Proportional and Temp Either condition above will satisfy the fail conditions	p <= -249 °C >= -249 °C	Ignition Voltage La Ignition Voltage La Ignition Voltage H Engine Speed La Engine Speed is within the allowable limits fo P0668 Status is	D >= 8.5996094 Volts ii <= 31.990234 Volts D >= 400 RPM ii <= 7500 RPM P >= 5 Sec Test Failed This Koy	>= 60 Fail Timer (Sec)	Two Trips

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria			eshold alue		Secondary Malfunction		Enable Conditions		F	Time Required	Mil Illum.
							Disable Conditions:	MIL not Illuminated for DTC's:	TCM: None ECM: None					
Transmission Control Module (TCM)	P0669	TCM internal temperature (substrate) thermistor failed at a high voltage	Type of Sensor Used If TCM Substrate Temperature Sensor = Direct Proportional and Temp If TCM Substrate Temperature Sensor = Indirect Proportional and Temp Either condition above will satisfy the fail conditions	= ta	ieTFTI_e_V ageDirectPr p 249 249			Ignition Voltage Lo Ignition Voltage Hi Engine Speed Lo Engine Speed Hi Engine Speed is within the	>= <= >= <=	8.5996094 31.990234 400 7500	Volts Volts RPM RPM	>= 60	Fail Timer (Sec)	Two Trips
								allowable limits for P0669 Status is	>=	5 Test Failed This Key On or Fault Active	Sec			
								For Hybrids, below conditions must also be met Estimated Motor Power Loss Estimated Motor Power Loss greater than limit for time Lost Communication with Hybrid Processor Control Module Estimated Motor Power Loss Fault	>= = =	0 0 FALSE FALSE	kW Sec			

Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions				Mil Illum.
	2001.p.0.1		Disab	le MIL not Illuminated for	TCM: P0716, P0717, P0722, P0723				
P06AC	TCM Power-up Temp Sensor Circuit Range/Performance	If TCM power-up temp to substrate temp $\Delta$ If transmission oil temp to power up temp $\Delta$	documents Refer to Table 18 in						Two Trips
		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				>= Out of	3000 3750	Fail Counts (100ms loop) Sample Counts (100ms loop)	
		conditions will delay resetting fail counter until				>= Out of	700 875	(100ms loop) Sample Counts (100ms loop)	
				Valid Ignition Voltage Lo Ignition Voltage Hi Engine Speed Lo Engine Speed Hi Engine Speed is within the	= TRUE Boolean >= 8.5996094 Volts <= 31.990234 Volts >= 400 RPM <= 7500 RPM >= 5 Sec = FALSE				
	Code	Code Description	Code         Description         Criteria           P06AC         TCM Power-up Temp Sensor Circuit Range/Performance         If TCM power-up temp to substrate temp Δ           If transmission oil temp to power up temp Δ         If transmission oil temp to power up temp Δ           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	Code     Description     Criteria     Value       Code     Description     Criteria     Value       Disable     Conditions     Conditions       P06AC     TCM Power-up Temp Sensor Circuit     If TCM power-up temp to substrate temp Δ     Refer to Table       P06AC     TCM Power-up Temp Sensor Circuit     If transmission oil temp to power up temp Δ     Refer to Table       P06AC     Both conditions above required to increment fail counter     Non-continuous (intermitten), fail       Non-continuous (intermitten) fail     Conditions will delay resetting fail	Code         Description         Criteria         Value         Mafunction           P06AC         TCM Power-up Temp Sensor Circuit         If TCM power-up temp to substrate temp A         Refer to Table         20 in supporting         Supporting         Conditions         Conditions         Supporting         Conditions         Conditions         Conditions         Supporting         Conditions         Conditions         Conditions         Supporting         Conditions         Conditions         Conditions         Conditions         Conditions         Conditions         Conditions         Conditions <td< td=""><td>POGAC         TCM Power-up Temp Sensor Circuit         Lif TCM power-up temp to substrate temp Δ         Refer to Table 20 in supporting *C addresses         MIL not Illuminated for TCM: P0716, P0712, P0722, P0723 ECM: None           POGAC         TCM Power-up Temp Sensor Circuit         Lif TCM power-up temp to substrate temp Δ         Refer to Table 20 in supporting *C addresses         Refer to Table 30 in support *C addres *C address *C addresses</td><td>PG6AC         CCM Power-up Temp Sensor Cicuit         If TCM power-up temp to substrate temp Δ         PG6AC         CCM Power-up Temp Sensor Cicuit         If TCM power-up temp to substrate temp Δ         PG6AC         CCM Power-up Temp Sensor Cicuit         If TCM power-up temp to substrate temp Δ         PG6AC         Refer to Table 20 in ~C documents         Conditions         Conditions</td><td>Disable Conditions         MIL not Illuminated for TCAE POTA, POTA, POTA, POTA, POTA DISS CONDITIONS         MIL not Illuminated for TCAE POTA, POTA, POTA, POTA, POTA DISS CONTINUES         Conditions           POGAC         TCM Power-up Temp Sensor Circuit         If TCM power-up temp to substate temp 4         Refer to Table 20 in supporting "C documents         None         If TCM power-up temp to substate temp 4         Refer to Table 20 in supporting "C documents         None         If Transmission oil temp to power up temp 4         Refer to Table 18 in supporting "C documents         None         If Transmission oil temp to power up temp 4         None         If Transmission oil temp to power up temp 4         None         None</td><td>Observe up Temp Sensor Circuit     If TCM power-up temp to substrate temp A     Refer to Table 20 n     Conditions     MIL not illuminator for DICS: SCM None     CCM POYTA, P0722, P0723 ECM None       P06AC     CMP Power-up Temp Sensor Circuit     If TCM power-up temp to substrate temp A     Refer to Table 20 n     Supporting Conditions     C     Supporting Conditions     C       Both conditions above required to increment fail counter Nate table redornce temp a property substrate temp and power up     Refer to Table Supporting Counter until counter until Counte until Count</td></td<>	POGAC         TCM Power-up Temp Sensor Circuit         Lif TCM power-up temp to substrate temp Δ         Refer to Table 20 in supporting *C addresses         MIL not Illuminated for TCM: P0716, P0712, P0722, P0723 ECM: None           POGAC         TCM Power-up Temp Sensor Circuit         Lif TCM power-up temp to substrate temp Δ         Refer to Table 20 in supporting *C addresses         Refer to Table 30 in support *C addres *C address *C addresses	PG6AC         CCM Power-up Temp Sensor Cicuit         If TCM power-up temp to substrate temp Δ         PG6AC         CCM Power-up Temp Sensor Cicuit         If TCM power-up temp to substrate temp Δ         PG6AC         CCM Power-up Temp Sensor Cicuit         If TCM power-up temp to substrate temp Δ         PG6AC         Refer to Table 20 in ~C documents         Conditions         Conditions	Disable Conditions         MIL not Illuminated for TCAE POTA, POTA, POTA, POTA, POTA DISS CONDITIONS         MIL not Illuminated for TCAE POTA, POTA, POTA, POTA, POTA DISS CONTINUES         Conditions           POGAC         TCM Power-up Temp Sensor Circuit         If TCM power-up temp to substate temp 4         Refer to Table 20 in supporting "C documents         None         If TCM power-up temp to substate temp 4         Refer to Table 20 in supporting "C documents         None         If Transmission oil temp to power up temp 4         Refer to Table 18 in supporting "C documents         None         If Transmission oil temp to power up temp 4         None         If Transmission oil temp to power up temp 4         None         None	Observe up Temp Sensor Circuit     If TCM power-up temp to substrate temp A     Refer to Table 20 n     Conditions     MIL not illuminator for DICS: SCM None     CCM POYTA, P0722, P0723 ECM None       P06AC     CMP Power-up Temp Sensor Circuit     If TCM power-up temp to substrate temp A     Refer to Table 20 n     Supporting Conditions     C     Supporting Conditions     C       Both conditions above required to increment fail counter Nate table redornce temp a property substrate temp and power up     Refer to Table Supporting Counter until counter until Counte until Count

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction		Enable Conditions		Time Required	Mil Illum.
Oystem	ooue	Description	Onteria	Value	Throttle	>=	30.000305	Pct	Required	
					Transmission Input Speed		200	RPM		
					Vehicle Speed	<=	8	Kph		
					Transmission Range		Park			
					Transmission Range	≠	Neutral			
					PTO	=	Not Active			
					Set Brake Torque Active					
					TRUE if above conditions are	>=	7	sec		
					met for:					
					Below describes the brake					
					torque exit criteria					
					Brake torque entry criteria	=	Not Met			
							Clutch			
						,	Hydraulic			
					Clutch hydraulic pressure	≠	Air Purge			
							Event			
							CeTFTD_e			
					Clutch used to exit brake	=	_C3_RatlE			
					torque active		nbl			
					The above clutch pressure is					
					greater than this value for one		600	kpa		
					loop					
					Set Brake Torque Active					
					FALSE if above conditions are	>=	20	Sec		
					met for:					
							Test Failed			
					P06AC Status is	≠	This Key			
							On or Fault			
							Active			
									1	

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
				Disable Conditions:	DTC's:	TCM: P0658, P0668, P0669, P06AD, P06AE, P0716, P0712, P0713, P0717, P0722, P0723, P0962, P0963, P0966, P0967, P0970, P0971, P215C, P2720, P2721, P2729, P2730 ECM: P0101, P0102, P0103, P0106, P0107, P0108, P0171, P0172, P0174, P0175, P0201, P0202, P0203, P0204, P0205, P0206, P0207, P0208, P0300, P0301, P0302, P0303, P0304, P0305, P0306, P0307, P0308, P0401, P042E		
Transmission Control Module (TCM)	P06AD	TCM power-up thermistor circuit voltage low	Power Up Temp	<= -59 °C			>= 60 Fail Time (Sec)	Two Trips
		5			Ignition Voltage Lo Ignition Voltage Hi Engine Speed Lo Engine Speed Hi Engine Speed is within the allowable limits for	<= 31.990234 Volts >= 400 RPM <= 7500 RPM		
					P06AD Status is	Test Failed		
					For Hybrids, below conditions must also be met Estimated Motor Power Loss Estimated Motor Power Loss	>= 0 kW		
					greater than limit for time Lost Communication with Hybrid Processor Control	>= 0 Sec = FALSE		
					Module Estimated Motor Power Loss Fault	- FALSE		

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
				Disable Conditions:	MIL not Illuminated for DTC's:	TCM: P0716, P0717, P0722, P0723 ECM: None		
Transmission Control Module (TCM)	P06AE	TCM power-up thermistor circuit voltage high	Power Up Temp	>= 164 °C			>= 60 Fail Time (Sec)	Two Trips
					Ignition Voltage Lo Ignition Voltage Hi Engine Speed Lo Engine Speed Hi Engine Speed is within the allowable limits for P06AE Status is	<= 31.990234 Volts >= 400 RPM <= 7500 RPM >= 5 Sec Test Failed This Koy		
				Disable Conditions:	MIL not Illuminated for DTC's:			
Transmission Fluid Temperature Sensor (TFT)	P0711	Trans Fluid Temp Sensor Circuit Range/Performance	If transmission oil temp to substrate temp Δ If transmission oil temp to power	<ul> <li>supporting documents</li> <li>Refer to Table</li> <li>18 in</li> </ul>				Two Trips
			up temp ∆ 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.	supporting documents			>= 3000 Fail Counts (100ms loop) Out 3750 Sample Counts of (100ms loop)	-

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction		Enable Conditions				me uired	Mil Illum.
			Non-continuous (intermittent) fail conditions will delay resetting fail counter until						>=	700	Pass Counts (100ms loop)	
									Out of	875	Sample Counts (100ms loop)	
					Engine Torque Signal Valid Accelerator Position Signal	=	TRUE TRUE	Boolean Boolean				
					Valid Ignition Voltage Lo	>=	8.5996094	Volts				
					Ignition Voltage Hi Engine Speed Lo Engine Speed Hi	<= >= <=	31.990234 400 7500	Volts RPM RPM				
					Engine Speed is within the allowable limits for	>=	5	Sec				
					Brake torque active Below describes the brake	=	FALSE					
					torque entry criteria Engine Torque Throttle	>= >=	90 30.000305	N*m Pct				
					Transmission Input Speed Vehicle Speed	<= <=	200 8	RPM Kph				
					Transmission Range Transmission Range	≠ ≠	Park Neutral	·				
					PTO Set Brake Torque Active TRUE if above conditions are	=	Not Active	sec				
					met for: Below describes the brake							
					torque exit criteria Brake torque entry criteria	=	Not Met Clutch					
					Clutch hydraulic pressure	¥	Hydraulic Air Purge					
					Clutch used to exit brake torque active	=	Event CeTFTD_e _C3_RatIE nbl					

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
					The above clutch pressure is greater than this value for one loop Set Brake Torque Active FALSE if above conditions are	>= 600 kpa		
					met for: P0711 Status is	Test Failed This Key On or Fault Active		
				Disab Condition	s: DTC's:	TCM: P0658, P0668, P0669, P06AD, P06AE, P0716, P0712, P0713, P0717, P0722, P0723, P0962, P0963, P0966, P0967, P0970, P0971, P215C, P2720, P2721, P2729, P2730		
						ECM: P0101, P0102, P0103, P0106, P0107, P0108, P0171, P0172, P0174, P0175, P0201, P0202, P0203, P0204, P0205, P0206, P0207, P0208, P0300, P0301, P0302, P0303, P0304, P0305, P0306, P0307, P0308, P0401, P042E		
Transmission Fluid Temperature Sensor (TFT)	P0712	Transmission fluid temperature thermistor failed at a low voltage	Type of Sensor Used If Transmission Fluid Temperature Sensor = Direct Proportional and Temp If Transmission Fluid Temperature Sensor = Indirect Proportional and Temp	р <= -74 °С >= -74 °С				Two Trips
			Either condition above will satisfy the fail conditions		Ignition Voltage Lo Ignition Voltage H Engine Speed Lo	<= 31.990234 Volts	>= 60 Fail Time (Sec)	

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
					Engine Speed Hi Engine Speed is within the allowable limits for	5 5 Soc		
					P0712 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	>= 0 kW		
					greater than limit for time Lost Communication with Hybrid Processor Control Module Estimated Motor Power Loss	= FALSE		
				Disabl Conditions	: DTC's:	= FALSE TCM: P0716, P0717, P0722, P0723 ECM: None		
Transmission Fluid Temperature Sensor (TFT)	P0713	Transmission fluid temperature thermistor failed at a high voltage	Type of Sensor Used If Transmission Fluid Temperature Sensor = Direct Proportional and Temp If Transmission Fluid Temperature Sensor = Indirect Proportional and Temp	р >= 174 °С				Two Trips
			Either condition above will satisfy the fail conditions			0.500/004	>= 60 Fail Time (Sec)	
					Ignition Voltage Lo Ignition Voltage Hi Engine Speed Lo Engine Speed Hi	<= 31.990234 Volts >= 400 RPM		

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	eshold /alue	Secondary Malfunction		Enable Conditions			Time Required		Mil Illum.
					Engine Speed is within the allowable limits for		5	Sec				
					P0713 Status is		Test Failed This Key On or Fault Active					
				Disable Conditions:	MIL not Illuminated for DTC's:			7, P0722,				
Transmission Input Speed Sensor (TISS)	P0716	Input Speed Sensor Performance	Transmission Input Speed Sensor Drops	RPM		ECIM. NOTIE	!		>= 0.8	B Fa	ill Time (Sec)	One Trip
					Engine Torque is Engine Torque is Engine Speed	<= >=	0 8191.875 400	N*m N*m RPM				
					Engine Speed Engine Speed is within the allowable limits for	>=	7500 5	RPM Sec				
					Vehicle Speed is Throttle Position is  Transmission Input Speed is	>=	10 0 0	Kph Pct RPM				
					The previous requirement has been satisfied for	<b>\-</b>	0	Sec				
					The change (loop to loop) in transmission input speed is The previous requirement has	<	8191.875	RPM/Loop				
					been satisfied for	>=		Sec				
					Throttle Position Signal Valid Engine Torque Signal Valid Ignition Voltage Ignition Voltage	= >=	TRUE TRUE 8.5996094 31.990234	Boolean Boolean Volts Volts				

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria			eshold /alue		Secondary Malfunction		Enable Conditions			Tir Requ		Mil Illum.
								P0716 Status is not	=	Test Failed This Key On or Fault Active					
						Dis Conditi	able ons:			1, P0102, P0103					
Transmission Input Speed Sensor (TISS)	P0717	Input Speed Sensor Circuit Low Voltage	Fail Case 1 Transmission Input Spe	ed is <	33	RPM						>=	4.5	Fail Time (Sec)	One Trip
			Fail Case 2 When P0722 DTC Status eq Test Failed and Transmission Spe	Input <	1000	RPM		Controller uses a single power supply for the speed sensors	=	1	Boolean				
								Engine Torque is Engine Torque is Vehicle Speed Ingine Torque Signal Valid Ignition Voltage Ignition Voltage Engine Speed Engine Speed is within the allowable limits for P0717 Status is not	>= = >= <= >= <=	50 8191.875 16 TRUE 8.5996094 400 7500 5 Test Failed This Key On or Fault Active					
						Dis Conditi	able ons:	MIL not Illuminated for DTC's:		2, P0723 1, P0102, P0103	3				

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria			eshold alue		Secondary Malfunction		Enable Conditions				ime Juired	Mil Illum.
Mode Switch		Transmission Mode Switch A Circuit	Tow Haul Mode Switch state	=	TRUE	Boolean						>=	600	Fail Time (Sec)	Specia No MII
								Ignition Voltage Lo	>=	8.5996094	Volts				
								Ignition Voltage Hi		31.990234	Volts				
								Engine Speed Lo		400	RPM				
								Engine Speed Hi	<=	7500	RPM				
								Engine Speed is within the	>=	5	Sec				
								allowable limits for							
							Disable	MIL not Illuminated for	TCM- D1762						
							ditions:	DTC's:	10101.11702						
						0011	antions.	5103.	ECM: None						
ransmission Output Speed Sensor (TOSS)	P0722	Output Speed Sensor Circuit Low Voltage	Transmission Output Speed Sensor Raw Speed	<=	35	RPM						>=	3.75	Fail Time (Sec)	One -
										Test Failed					
										This Key					
								P0722 Status is not	=	On or Fault					
										Active					
								Transmission Input Speed		TRUE	Boolean				
								Check							
								Engine Torque Check	=	TRUE	Boolean				
								Throttle Position	>=	8.0001831	Pct				
								Transmission Fluid	>=	-40	°C				
								Temperature Disable this DTC if the PTO is							
								active	=	1	Boolean				
								Engine Torque Signal Valid	=	TRUE	Boolean				
								Throttle Position Signal Valid		TRUE	Boolean				
								Ignition Voltage is		8.5996094	Volts				
								Ignition Voltage is	<=	31.990234	Volts				
								Engine Speed is	>=	400	RPM				
	1							Engine Speed is	<=	7500	RPM				1
	1							Engine Speed is within the	>=	5	Sec				1
								allowable limits for		-					
								Enable_Flags Defined Below							1
								_ •							

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction		Enable Conditions		Time Required	Mil Illum.
		·			The Engine Torque Check is TRUE, if either of the two					
					following conditions are TRUE					
					Engine Torque Condition 1					
						,	Range			
					Range Shift Status	¥	shift completed	ENUM		
					OR		•			
					Transmission Range is	=	Park or Neutral			
					Engine Torque is	>=	8191.75	N*m		
					Engine Torque is	<=	8191.75	N*m		
					Engine Torque Condition 2					
					Engine Torque is Engine Torque is	>=	35 8191.75	N*m N*m		
						<=	0191.75	IN 111		
					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					
					Engine Speed without the brake applied is	>=	3200	RPM		
					Engine Speed with the brake	>=	3200	RPM		
					applied is Engine Speed is	<=	8191	RPM		
					Controller uses a single power	=	1	Boolean		
					supply for the speed sensors	-		DUUICAIT		
					Powertrain Brake Pedal is Valid	=	TRUE	Boolean		

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria			eshold ′alue		Secondary Malfunction		Enable Conditions				me uired	Mil Illum.
						Co	Disable nditions:			1, P0102, P0103					
Transmission Output Speed Sensor (TOSS)		Output Speed Sensor Circuit Intermittent	Transmission Output Speed Sensor Raw Speed	>=	105	RPM						>=	0.2	(Sec)	One Trip
			Output Speed Delta	<=	8191	RPM						>=	0	Enable Time (Sec)	
			Output Speed Drop	>	650	RPM						>=	1.5	Output Speed Drop Recovery Fail Time (Sec)	
			AND		Driven rang	P									
			Transmission Range is	=	(R,D)	0									
								Range_Disable OR	=	FALSE	See Below				
								Neutral_Range_Enable And	=	TRUE	See Below				
								Neutral_Speed_Enable are TRUE concurrently	=	TRUE	See Below				
								Transmission_Range_Enable	=	TRUE	See Below				
								Transmission_Input_Speed_En able	=	TRUE	See Below				
								No Change in Transfer Case Range (High <-> Low) for	>=	5	Seconds				
								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	>= <= >= <=	8.5996094 31.990234 400 7500	Volts Volts RPM RPM				

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction		Enable Conditions		Time Required	Mil Illum.
					Engine Speed is within the allowable limits for	>=	5	Sec		
					Enable_Flags Defined Below					
					Transmission_Input_Speed_En able is TRUE when either TIS					
					Condition 1 or TIS Condition 2					
					is TRUE:					
					TIS Condition 1 is TRUE when both of the following conditions	>=	0	Enable Time (Sec)		
					are satsified for Input Speed Delta	<=	4095	RPM		
					Raw Input Speed	>=	500	RPM		
					TIS Condition 2 is TRUE when ALL of the next two conditions					
					are satisfied Input Speed	=	0	RPM		
					A Single Power Supply is used	=	TRUE	Boolean		
					for all speed sensors					
					Neutral_Range_Enable is TRUE when any of the next 3					
					conditions are TRUE Transmission Range is	=	Neutral	ENUM		
					Transmission Range is	_	Reverse/N			
					Transmission Range is	=	eutral Transitonal	ENUM		
							Neutral/Dri			
					Transmission Range is	=	ve Transitiona			
							i ransiuona I			
					And when a drop occurs					
					Loop to Loop Drop of Transmission Output Speed is	>	650	RPM		

Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction		Enable Conditions		Time Required	Mil Illum.
				Range_Disable is TRUE when any of the next three conditions					
				Transmission Range is	=	Park	ENUM		
				Transmission Range is	=	Park/Rever se Transitonal	ENUM		
				Input Clutch is not	=	ON (Fully Applied)	ENUM		
				Neutral Speed Enable is					-
							<b>a</b> 1		
				three conditions are satsified	>	1.5	Seconds		
				Transmission Output Speed	>	130	RPM		
				The loop to loop change of the Transmission Output Speed is	<	20	RPM		
				The loop to loop change of the Transmission Output Speed is	>	-10	RPM		
					-				-
					_	Noutral	ENILIM		
				Transmission Nange is	-		LINOW		
				Transmission Range is	=	eutral	ENUM		
				Transmission Range is	=	l Neutral/Dri ve Transitiona	ENUM		
	Code	Code Description	Code     Description     Criteria       Image: Code     Image: Code     Image: Code     Image: Code       Image: Code     Image: Code     Image: Code     Image: Code	Code     Description     Criteria     Value	Range_Disable is TRUE when any of the next three conditions are TRUE Transmission Range is Transmission Range is Input Clutch is not Neutral_Speed_Enable is TRUE when All of the next three conditions are satslifted for Transmission Output Speed The loop to loop change of the Transmission Quput Speed is The loop to loop change of the Transmission Quput Speed is The loop to loop change of the Transmission Quput Speed is The loop to loop change of the Transmission Range_Enable is TRUE when one of the next sk conditions is TRUE Transmission Range is Transmission Range is Transmission Range is Transmission Range is	Range_Disable is TRUE when any of the next three conditions are TRUE Transmission Range is       =         Transmission Range is       =         Input Clutch is not       =         Input Clutch is not	Range_Disable is TRUE when any of the next three conditions are TRUE Transmission Range is       Park         arr RUE       Transmission Range is       Park         Transmission Range is       Start RUE       Park/Rever         Transmission Range is       Start RUE       Transmission Range is       Park/Rever         Reutral_Speed_Enable is       Transmission Range is       Neutral_Speed_Enable is       Transmission Range is       Neutral_Speed_Enable is         True Cutch is not        Neutral_Speed_Enable is       True conditions are satisfied       1.5         True conditions are satisfied        1.30       The loop to loop change of the Transmission Output Speed is        20         The loop to loop change of the Transmission Output Speed is         -10         Transmission Range_Enable is       Transmission Range is        -10         Transmission Range is        -10       -10       -10         Transmission Range is         -10       -10         Transmission Rang	Range_Disable is TRUE when any of the next three conditions are TRUE Transmission Range is       =       Park       ENUM         Park/Rever Transmission Range is       =       Park       ENUM         Input Clutch is not       =       ON (Fully Applied)       ENUM         Neutral_Speed_Enable is TRUE when All of the next three conditions are satisfied or Transmission Output Speed       >       1.5       Seconds         The loop to loop change of the Transmission Output Speed is STRUE when one of the next is TRUE when one of the next six conditions is TRUE       >       -10       RPM         The loop to loop change of the Transmission Output Speed is STRUE when one of the next six conditions is TRUE       >       -10       RPM         Transmission Range is       =       Neutral_Transmission Range is       =       Neutral_Transmision Range is <td>Range_Disable       Range_Disable is TRUE when any of the next three conditions are set in the transmission Range is = \$\$\$ ENUM         Park/Rever       Transmission Range is = \$\$\$ ENUM         Input Clutch is not       = 00N (Fully         Input Clutch is not       = 00N (Fully         RUE when All of the next       = \$\$\$ ENUM         Transmission Output Speed frame is three conditions are satisfied to the next three conditions to the next three conditions are satisfied to the next three conditions thend to the next three condithend to the nex</td>	Range_Disable       Range_Disable is TRUE when any of the next three conditions are set in the transmission Range is = \$\$\$ ENUM         Park/Rever       Transmission Range is = \$\$\$ ENUM         Input Clutch is not       = 00N (Fully         Input Clutch is not       = 00N (Fully         RUE when All of the next       = \$\$\$ ENUM         Transmission Output Speed frame is three conditions are satisfied to the next three conditions to the next three conditions are satisfied to the next three conditions thend to the next three condithend to the nex

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Seco Malfu	ndary Inction		Enable Conditions			Tim Requi		Mil Illum.
						e a driven range as been selected		Table Based Time Please Refer to Table 21 in supporting documents	Sec				
					Sei	on Output Speed nsor Raw Speed eed when a faul was detected	>=	500 500	RPM RPM				
				D Cond		t Illuminated for DTC's:		, P0102, P0103,					
Torque Converter Clutch (TCC	) P0741	TCC System Stuck OFF	TCC Pressure Either Condition (A) or (B) Must be Met							>=	2	Enable Time (Sec)	Two Trips
			(A) TCC Slip Error @ TCC On Mode (B) TCC Slip @ Lock On Mode	>= 1 in Supporting Documents						>=	5	Fail Time (Sec) Fail Time (Sec)	
			If Above Conditions Have been Met, and Fail Timer Expired, Increment Fail Counter							>=	2	TCC Stuck Off Fail Counter	
						TCC Mode nition Voltage Lo nition Voltage H Engine Speed Engine Speed	) >= i <= >=	On or Lock 8.5996094 31.990234 400 7500	Volts Volts RPM RPM				

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction		Enable Conditions		Time Required	Mil Illum.
System	Code	Description	Criteria	Value	Engine Speed is within the		Conditions		Kequileu	
					allowable limits for	>=	5	Sec		
					Engine Torque Lo		50	N*m		
					Engine Torque Hi		8191.875	N*m		
					Throttle Position Lo	>=	8.0001831	Pct		
					Throttle Position Hi	<=	99.998474	Pct		
					2nd Gear Ratio Lo	>=	2.6710205	Ratio		
					2nd Gear Ratio High	<=	3.072998	Ratio		
					3rd Gear Ratio Lo	>=	1.7130127	Ratio		
					3rd Gear Ratio High		1.9709473	Ratio		
					4th Gear Ratio Lo	>=	1.3150635	Ratio		
					4th Gear Ratio High	<=	1.5129395	Ratio		
					5th Gear Ratio Lo	>=	0.9300537	Ratio		
					5th Gear Ratio Hi	<=	1.0699463	Ratio		
					6th Gear Ratio Lo	>=	0.6900635	Ratio		
					6th Gear Ratio High	<=	0.7939453	Ratio		
					Transmission Fluid		( ( ( 10/ 2	°C		
					Temperature Lo	>=	-6.664063	-0		
					Transmission Fluid		130	°C		
					Temperature Hi	<=	130	C		
					PTO Not Active	=	TRUE	Boolean		
					Engine Torque Signal Valid	=	TRUE	Boolean		
					Throttle Position Signal Valid	=	TRUE	Boolean		
					Dynamic Mode	=	FALSE	Boolean		
							Test Failed			
							This Key			
					P0741 Status is	¥	On or Fault			
							Active			
							Active			

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria			eshold ′alue		Secondary Malfunction		Enable Conditions				ime quired	Mil Illum.
						Co	Disable nditions:	MIL not Illuminated for DTC's:	TCM: P0716 P0742, P276		, P0723,				
									P0107, P01 P0175, P02 P0205, P02 P0301, P03	1, P0102, P0103 08, P0171, P017 01, P0202, P020 06, P0207, P020 02, P0303, P030 07, P0308, P040	2, P0174, 03, P0204, 08, P0300, 04, P0305,				
Torque Converter Clutch (TCC)	P0742	TCC System Stuck ON	TCC Slip Speed	>=	-50	RPM									One Trip
			TCC Slip Speed	<=	13	RPM						>=	2	Fail Time (Sec)	
			If Above Conditions Have been Met, and Fail Timer Expired, Increment Fail Counter									>=	6	Fail Counter	
								TCC Mode = Enable test if Cmnd Gear 1stFW and value true	=	Off 1	Boolean				
								Enable test if Cmnd Gear = 2nd and value true	=	0	Boolean				
								Engine Speed Hi Engine Speed Lo	<= >=	6000 500	RPM RPM				
								Vehicle Speed HI Vehicle Speed Lo	<= >=	511 1	KPH KPH				
								Engine Torque Hi Engine Torque Lo Current Range	<= >= ≠	8191.875 80 Neutral	Nm Nm Range				
								Current Range Transmission Sump	<i>∓</i> ≠	Reverse	Range				
								Temperature Transmission Sump	<=	130	°C				
								Temperature Throttle Position Hyst High	>=	18 5.0003052	°C Pct				
								AND Max Vehicle Speed to Meet Throttle Enable	<=	8	KPH				

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction		Enable Conditions		Time Required	Mil Illum.
oystem	oode	Description	ontena	Value	Once Hyst High has been met,		Conditions		Required	
					the enable will remain while	>=	2.0004272	Pct		
					Throttle Position		210001272	1.01		
					Disable for Throttle Position		75	Pct		
					Disable if PTO active and					
					value true	=	1	Boolean		
					Disable if in D1 and value true	=	1	Boolean		
					Disable if in D2 and value true	=	1	Boolean		
					Disable if in D3 and value true	=	1	Boolean		
					Disable if in D4 and value true	=	1	Boolean		
					Disable if in D5 and value true	=	1	Boolean		
					Disable if in MUMD and value	=	1	Boolean		
					true		I	DUUICAII		
					Disable if in TUTD and value	=	1	Boolean		
					true					
					4 Wheel Drive Low Active		FALSE	Boolean		
					Disable if Air Purge active and		0	Boolean		
					value false					
					RVT Diagnostic Active		FALSE	Boolean		
					Ignition Voltage		8.5996094	V		
					Ignition Voltage		31.990234	V		
					Vehicle Speed		511	KPH		
					Engine Speed		400	RPM		
					Engine Speed		7500	RPM		
					Engine Speed is within the		5	Sec		
					allowable limits for					
					Engine Torque Signal Valid		TRUE	Boolean		
					Throttle Position Signal Valid	=	TRUE	Boolean		
							Test Failed			
					D0740.01	,	This Key			
					P0742 Status is	¥	On or Fault			
							Active			

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions		Time Required	Mil Illum.
				Disable Conditions:	DTC's:	TCM: P0716, P0717, P0722, P0723, P0741, P2763, P2764 ECM: P0101, P0102, P0103, P0106, P0107, P0108, P0171, P0172, P0174, P0175, P0201, P0202, P0203, P0204, P0205, P0206, P0207, P0208, P0300, P0301, P0302, P0303, P0304, P0305, P0306, P0307, P0308, P0401, P042E			
Mode 2 Multiplex Valve	P0751	Shift Solenoid Valve A Stuck Off		= 1st Lock rpm <= 1.484985352 >= 1.343017578	Ignition Voltage Lo Ignition Voltage Hi Engine Speed Lo Engine Speed is within the allowable limits for Transmission Fluid Temperature Range Shift State TPS OR Output Speed Throttle Position Signal Valid from ECM	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	>= 0.3 = 5 ≠ 0 >= 0.3 >= 8	Fail Counts Neutral Timer (Sec)	Two Trips

Component/	Fault	Monitor Strategy	Malfunction		shold	Secondary	Enable	Time		Mil
System	Code	Description	Criteria	V	alue	Malfunction	Conditions	Required	d	Illum.
						Engine Torque Signal Valid				
						from ECM, High side driver is				
						enabled High-Side Driver is Enabled				
						Input Speed Sensor fault				
						Output Speed Sensor fault				
						Default Gear Option is not				
						present				
					Disable	MIL not Illuminated for	TCM: P0716, P0717, P0722, P0723,			
					Conditions:	DTC's:	P182E			
							ECM: P0101, P0102, P0103, P0106,			
							P0107, P0108, P0171, P0172, P0106, P0107, P0108, P0171, P0174, P0			
							P0175, P0201, P0202, P0203, P0204,			
							P0205, P0206, P0207, P0208, P0300,			
							P0301, P0302, P0303, P0304, P0305,			
							P0306, P0307, P0308, P0401, P042E			
Mode 2 Multiplex Valve	P0752	Shift Solenoid Valve A Stuck On	Gear Box Slip	>= 400	RPM				0	One Trip
			Commanded Gear	= 3rd	Gear					
			Commanded Gear has Achieved							
			1st Locked OR 1st Free-Wheel OR 2nd with Mode 2 Sol. Commanded	= TRUE	Boolean					
			2nd with wode 2 Sol. Commanded On							
			If the above parameters are true							
								Please Refer		
								to Table 16 in	Neutral Timer	
								>= Supporting	(Sec)	
								Documents		
			Command 4th Gear once Output	<= 800	RPM					
			Shaft Speed							
				>= 4.25976562						
			And Gear Ratio	<= 4.708251953	3					
								>= 1.5 Fa	ail Timer (Sec)	
								>= 5	Counts	
								/- J	Counts	

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction		Enable Conditions		Time Required	Mil Illum.
					Ignition Voltage Lo	>=	8.5996094	Volts		
					Ignition Voltage Hi	<=	31.990234	Volts		
					Engine Speed Lo	>=	400	RPM		
					Engine Speed Hi		7500	RPM		
					Engine Speed is within the		5	Sec		
					allowable limits for					
					High-Side Driver is Enabled		TRUE	Boolean		
					Throttle Position Signal Valid from ECM		TRUE	Boolean		
					Output Speed		36	RPM		
					Output Speed OR		30	KPIVI		
					TPS		0.5004883	%		
					110			70		
							Range			
					Range Shift State	=	Shift	ENUM		
							Completed			
					Transmission Fluid		( / Г / ЭГ	00		
					Temperature	>=	-6.65625	°C		
					Input Speed Sensor fault	=	FALSE	Boolean		
					Output Speed Sensor fault		FALSE	Boolean		
					Default Gear Option is not	=	TRUE			
					present	-	INOL			
				Disable	MIL not Illuminated for		, P0717, P0722	, P0723,		
				Conditions:	DTC's:	P182E				
						COM 00101	, P0102, P0103	D010/		
							, P0102, P0103 8, P0171, P017			
							1, P0202, P020			
							6, P0207, P020			
							2, P0303, P030			
							7, P0308, P040			
							.,	.,		
Mode 2 Multiplex Valve	P0756	Shift Solenoid Valve B Stuck Off	Fail Case 1 Commanded Gea	ar = 1st Locked						One Trip
									Please Refer	1
			0 D 0	p >= 400 RPM					to Table 5 in Neutral Timer	
			Gear Box Sli	p >= 400 RPM					>= Supporting (Sec)	
									Documents	

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction		Enable Conditions			Tim Requ		Mil Illum.
System	Code	Description	Intrusive Shift to 2nd Commanded Gear Previous Gear Ratio	= 1st Locked Gear <= 3.015991211 >= 2.728027344					>= >=	1 3	sec counts	
					Ignition Voltage Lo Ignition Voltage Hi Engine Speed Lo	>= <= >=	8.5996094 31.990234 400	Volts Volts RPM				
					Engine Speed Hi Engine Speed is within the allowable limits for	<u>\</u> _	7500 5	RPM Sec				
					Output Speed OR TPS	>=	36 0.5004883	RPM %				
					Range Shift State	>=	Range Shift Completed	ENUM				
					Transmission Fluid Temperature	>=	-6.65625	°C				
					High-Side Driver is Enabled Throttle Position Signal Valid from ECM	=	TRUE TRUE	Boolean Boolean				
					Input Speed Sensor fault Output Speed Sensor fault Default Gear Option is not	=	FALSE FALSE	Boolean Boolean				
					present	=	TRUE					

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	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, P0208, P0300, P0301, P0302, P0303, P0304, P0305, P0306, P0307, P0308, P0401, P042E		
Variable Bleed Solenoid (VBS)	P0776	Pressure Control (PC) Solenoid B Stuck Off [C35R]	Fail Case 1 Case: Steady State 3rd Gear	-				One Trip
			Commanded Gear Gearbox Slip				Please Refer to Table 16 in Neutral Time Supporting (Sec) Documents	er
							Doumons	
							>= 3 Fail Timer (Se	, i
			It the above condiations are true, Increment 3rd gear fail counter				>= 3 3rd Gear Fa Counts or	il
			and C35R Fail counter				>= 14 3-5R Clutch F Counts	ail
			Fail Case 2 Case: Steady State 5th Gear Commanded Gear					
			Gearbox Slip	>= 400 Rpm			Please Refer >= to Table 5 in Neutral Time Supporting (Sec) Documents	er
			Intrusive Test: Command 6th Gear					

Component/	Fault	Monitor Strategy	Malfunction	Threshold	Secondary		Enable				me	Mi
System	Code	Description	Criteria	Value	Malfunction		Conditions			Rec	uired	Illun
			If attained Gear=6th gear Time	Please refer to >= Table 3 in supporting documents								
			It the above condiations are true, Increment 5th gear fail counter	docaments					>=	3	5th Gear Fail Counts or	
			and C35R Fail counter						>=	14	3-5R Clutch Fail Counts	
					PRNDL State defaulted inhibit RVT	=	FALSE FALSE	Boolean Boolean				
					IMS fault pending indication TPS validity flag	=	FALSE TRUE	Boolean Boolean				
					Hydraulic System Pressurized	=	TRUE	Boolean				
					Minimum output speed for RVT A OR B	>=	36	RPM				
					(A) Output speed enable (B) Accelerator Pedal enable	>= >=	36 0.5004883	RPM Pct				
					Common Enable Criteria Ignition Voltage Lo		8.5996094	Volts				
					Ignition Voltage Lo Ignition Voltage Hi Engine Speed Lo	>= <=	31.990234 400	Volts RPM				
					Engine Speed Hi	>= <=	7500	RPM				
					Engine Speed is within the allowable limits for	>=	5	Sec				
					Throttle Position Signal valid HSD Enabled	=	TRUE TRUE	Boolean Boolean				
					Transmission Fluid Temperature	>=	-6.65625	٥C				
					Input Speed Sensor fault Output Speed Sensor fault	=	FALSE FALSE	Boolean Boolean				
					Default Gear Option is not present	=	TRUE					

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions			ime Juired	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) Solinoid B Stuck On [C35R] (Steady State)	Fail Case 1 Case: Steady State 1st							One Trip
			Attained Gear slip							
				Table Based Time Please						
			If the Above is True for Time	4 in (Sec)						
				supporting documents						
			Intrusive test: (CBR1 clutch exhausted)							
			Gear Ratio Gear Ratio	<= 1.933959961 >= 1.75						
			If the above parameters are true							
							>=	1.1	Fail Timer (Sec)	
							>=	2	Fail Count in 1st Gear	
							>=	3	or Total Fail Counts	
			Fail Case 2 Case: Steady State 2nd gear	Table Based						
				value Please						
			Max Delta Output Speed Hysteresis							
				supporting documents						

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
			Min Delta Output Speed Hysteresis	supporting				
			If the Above is True for Time	documents Table Based Time Please Refer to Table 17 in Supporting				
			Gear Ratio	documents <= 1.933959961 >= 1.75				
			If the above parameters are true				>= 1.1 Fail Timer (Sec >= 3 Fail Count in 2nd Gear	1
			Fail Case 3         Case: Steady State 4th gear				>= 3 Total Fail Counts	_
			Max Delta Output Speed Hysteresis	Table Based value Please >= Refer to Table 22 in rpm/sec				
			Min Delta Output Speed Hysteresis	supporting documents Table Based value Please >= Refer to Table 23 in rpm/sec				
				supporting documents				

Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illun
			Table Based Time Please				Τ
		If the Above is True for Time	Refer to Table Soc				
			supporting				
		Intrusive test:	documents				
		(C1234 clutch exhausted)	1 0500 400 20				
		If the above parameters are true					
						>= 1.1 Fail Timer (Sec	
						>= 3 Gear	h
						>= 3 Total Fail Counts	
		Fail Case 4         Case: Steady State 6th gear					
			unlus Disess				
		Max Delta Output Speed Hysteresis	>= Refer to Table 22 in rpm/sec				
			Table Based				
		Min Delta Output Speed Hysteresis	Refer to Table				
			supporting documents				
			Table Based Time Please				
		If the Above is True for Time	17 11				
			documents				
		Intrusive test:					
		Fault     Monitor Strategy       Code     Description	Code       Description       Criteria         If the Above is True for Time       Intrusive test:       (C1234 clutch exhausted)         Gear Ratio       Gear Ratio       Gear Ratio         If the above parameters are true       Fail Case 4       Case: Steady State 6th gear         Min Delta Output Speed       Hysteresis       Min Delta Output Speed Hysteresis         If the Above is True for Time       If the Above is True for Time	Code     Description     Criteria     Value       Table Based     Time Please     Refer to Table Sec     17 in       17 in     Intrusive test:     (C1234 dutch exhausted)     Sec     17 in       Gear Ratio     <=	Code     Description     Criteria     Value     Mafunction       If the Above is True for Time     Faile Based Time Please Refer to Table Sec 17 in supporting documents     Table Based Time Please Refer to Table Sec 17 in supporting documents     Table Based sec 17 in supporting documents       Eall Case 4     Case: Steady State 6th gear Hysterests     Table Based value Please 22 in supporting documents       Max Delta Output Speed Hysterests     = Refer to Table 22 in supporting documents       If the Above is True for Time     = Refer to Table Supporting documents       If the Above is True for Time     = Refer to Table Refer to Table Supporting documents       If the Above is True for Time     = Refer to Table Table Based Table Based Table Based Table Based Supporting documents	Code     Description     Criteria     Value     Mailunction     Conditions       Table Based Time Please (C1234 clutch extracted) (C1234 clutch extracted) (C124 clutch extracted) (C124 clutch extracted) (C124 clutch extracted) (C124 clutch extracted) (C124 clutc	Code     Description     Criteria     Value     Mathunction     Conditions     Required       I able Based ITMP Phase (1274 duth obtained) Coar Pate (2724 duth obtained) Care Pate (2724 duth obtained) (2724 duth obtained) Care Pate (2724 duth obtained) (2724 duth obtained) Care Pate (2724 duth obtained) (2724 duth obtained)

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction		Enable Conditions				ime quired	Mil Illum
System	Code	Description			warunction		Conditions					
				<= 1.050048828					>=	1.1	Fail Timer (Sec)	
				>= 0.949951172					>=	3	counts	
			If the above parameters are true									
									>=	1.1	Fail Timer (Sec)	
										2	Fail Count in 6th	
									>=	3	Gear	
											Or	
									>=	3	Total Fail Counts	
					PRNDL State defaulted	=	FALSE	Boolean			Counts	
					inhibit RVT	=	FALSE	Boolean				
					IMS fault pending indication	=	FALSE	Boolean				
					output speed	>=	0	RPM				
					TPS validity flag HSD Enabled	=	TRUE TRUE	Boolean Boolean				
						=						
					Hydraulic_System_Pressurized	=	TRUE	Boolean				
					A OR B							
					(A) Output speed enable	>=	36	Nm				
					(B) Accelerator Pedal enable Ignition Voltage Lo	>=	0.5004883 8.5996094	Nm Volts				
					Ignition Voltage Lo	>= <=	8.5996094 31.990234	Volts				
					Engine Speed Lo	>=	400	RPM				
					Engine Speed Hi	<=	7500	RPM				
					Engine Speed is within the	>=	5	Sec				
					allowable limits for	-	0	000				
					if Attained Gear=1st FW Accelerator Pedal enable	>=	5.0003052	Pct				
					if Attained Gear=1st FW							
					Engine Torque Enable	>=	20	Nm				
					if Attained Gear=1st FW		8191.875	Nm				
					Engine Torque Enable	<=	0191.0/0	INITI				
					Transmission Fluid	>=	-6.65625	°C				
					Temperature		FALSE	Boolean				
					Input Speed Sensor fault Output Speed Sensor fault	=	FALSE	Boolean				
						-	TALUL	Dooicall				
												l I

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria			eshold alue	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
						Disable Conditions:	MIL not Illuminated for DTC's:	TCM: P0716, P0717, P0722, P0723,		
								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) Primary Oncoming Clutch Pressure Command Status Primary Offgoing Clutch Pressure Command Status Range Shift Status Attained Gear Slip If the above conditions are true run	= = ≠ <=	TRUE Maximum pressurized Clutch exhaust command Initial Clutch Control 40					One Trip
			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)				
			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)				

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria			eshold alue	Secondary Malfunction		Enable Conditions			Tin Requ		Mil Illum.
			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.	5	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)								
			If Attained Gear Slip is Less than Above Cal Increment Fail Timers								Tir + En >= for S S Ti	Total Fail ne = (Fail 1 Fail 2) See able Timers Fail Timer 1, and Reference Supporting able 15 for ail Timer 2	5	
			If fail timer is greater than threshold increment corresponding gear fail counter and total fail counter											
			3rd gear fail counter								>=	3	3rd gear fail counts OR	
			5th gear fail counter								>=	5	5th gear fail counts OR	
			Total fail counter								>=	5	total fail counts	
							TUT Enable temperature Input Speed Sensor fault Output Speed Sensor fault Command / Attained Gear	>= = =	-6.65625 FALSE FALSE 1st	°C Boolean Boolean Boolean				

Component/	Fault	Monitor Strategy	Malfunction	Threshold	Secondary	Enable	Time		Mil
System	Code	Description	Criteria	Value	Malfunction	Conditions	Require	ed	Illum.
					High Side Driver Of				
					output speed limit for TU				
					input speed limit for TU				
					PRNDL state defaulted				
					IMS Fault Pendin				
					Service Fast Learn Mode				
					HSD Enable				
					Default Gear Option is no	t = TRUE			
					presen	t			
						r TCM: P0716, P0717, P0722, P0723,			
				Condit	ons: DTC's	: 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			
	0.0070/	Pressure Control (PC) Solenoid C	Fail Case 1						One Trip
Variable Bleed Solenoid (VBS)	) P0796	Stuck Off [C456] (Steady State)	Case: Steady State 4th Gear						· ·
							Please See		
			C !'	400 DDM			Table 5 For	Neutral Timer	
			Gear slip	>= 400 RPM			>= Neutral Time	(Sec)	
							Cal		
			Intrusive test:						
			commanded 5th gear						
				Please refer to					
			If attained Gear ≠5th for time	>= Table 3 in Shift Time (\$					
				Supporting					
				Documents					
			if the above conditions have been						
			met						
			Increment 4th Gear Fail Counter				>= 3	4th Gear Fail	
							- 5	Count	
								OR	

Component/ System	Fault Code	Monitor Strategy	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions		Time Required	Mil Illun
System	Code	Description		value	Waltunction	Conditions		C 454	
			and C456 Fail Counters					>= 14 Cou	
			Fail Case 2 Case: Steady State 5th Gear Gear slip	>= 400 RPM				Please See Table 5 For Neutra Neutral Time (Se Cal	
			Intrusive test: commanded 6th gear						
			If attained Gear ≠ 6th for time	Please Refer to Table 3 in Supporting Documents					
			if the above conditions have been met						
			Increment 5th Gear Fail Counter					>= 3 5th Ge Co O	unt
			and C456 Fail Counters					>= 14 C456 Cou	
			Fail Case 3 Case: Steady State 6th Gear Gear slip	>= 400 RPM				Please See Table 5 For Neutra Neutral Time (So Cal	
			Intrusive test: commanded 5th gear	Please refer to					
			If attained Gear $\neq$ 5th for time	>= Table 3 in Supporting Documents					
			if the above conditions have been met Increment 6th Gear Fail Counter					(1) (1)	or Foil
			increment of Gear Fail Counter and C456 Fail Counter					>= 3 6th Ge Co O	unt
			and C456 Fail Counter					>= 14 C456 Cou	
					PRNDL State defaulted inhibit RVT	= FALSE = FALSE	Boolean Boolean		

Vanable Bleed Solehold (VBS) P0/97 Stuck On [C456] (Steady State) Case: steady State 1st	Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction		Enable Conditions		Time Required	Mil Illum.
Vanable Bleed Solemord (VD) Spectradic       Edit Case 1       Case 5 Steady State 1       For 100       For 100 <td></td> <td></td> <td>1</td> <td></td> <td></td> <td>IMS fault pending indication</td> <td>=</td> <td>FALSE</td> <td>Boolean</td> <td></td> <td></td>			1			IMS fault pending indication	=	FALSE	Boolean		
Name								TRUE	Boolean		
Variaba Baced Solemoid (VES)       Party       Persuper Control (PC) Solemoid C:       Ball Cash 1       Cash: Stoady State 15       Control Transmission Table       Persuper Control (PC) Solemoid C:       Persuper Control (PC) Solemoid						Hydraulic System Pressurized	=	TRUE	Boolean		
Variabe Bleed Solemoir (VC)       Port       Persure Control (PC) Solemoid C       Eal(Case: Steady State 1s)         Variabe Bleed Solemoir (VC)       Port       Persure Control (PC) Solemoid C       Eal(Case: Steady State 1s)       Solemoir (PC)       Port       Persure Control (PC) Solemoid C       Port True						Minimum output speed for RVT	>=	36	RPM		
(b) Accelent Pedia nebile (g) Accelent Pedia (g) Accelent (g) Accelent Pedia (g) Accelent (g) Accelent Pedia (g) Accelent (g) Accelent Pedia (g) Accelent (g) Accele						A OR B					
Variabe Bleed Solenoi (VR)       Porty       Persure Control (PC) Solenoid C       Selection (PC) Sole						(A) Output speed enable	>=	36	RPM		
Variable Bleed Solenal (USB)       Port       Persure Control (PC) Solenal UC       Fall Case: Steady State 1s       Fall Case: Ste						(B) Accelerator Pedal enable	>=	0.5004883	Pct		
Variable Bleed Solenoid (VB)       P0779       Pressure Control (PC) Solenoid C       Sale Sale Sale Sale Sale Sale Sale Sale						Common Enable Criteria					
Variable Bleed Solenoid (VB)       POT9       Portse       Eal Case 1       Case: Steady State 15       Cont Port 16       Case: Steady State 15       Case: Steady								8.5996094	Volts		
Variable Bleed Solonoid (VB)       P077       Prossure Control (PC) Solenoid C       Eall Case: 1       Case: Steady State: 1       Case: 1       <							<=				
Variable Bleed Solenoid (VBS)       PM Presure Control (PC) Solenoid C       Eal Case: Steady State 1s       Case: Steady State 1s       Eagle Speed is within the allowable limits to allowable limits											
Variable Bieded Solenoid (MSS)       POP7       Pressure Control (PC) Solenoid C       Fail Case: 1       Case: Steady State 1       Sole       Sole       Sole         Variable Bieded Solenoid (MSS)       Porto       Pressure Control (PC) Solenoid C       Fail Case: Steady State 1       Sole       Sole       Sole       Sole       Sole         Variable Bieded Solenoid (MSS)       Porto       Pressure Control (PC) Solenoid C       Fail Case: Steady State 1       Sole       Sole <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>&lt;=</td> <td>7500</td> <td>RPM</td> <td></td> <td></td>							<=	7500	RPM		
Variable Bleed Solenoid (VB)       Pormy       Pressure Control (PC) Solenoid C       Balacase 1       State 2							<u> </u>	5	Soc		
Variable Bleed Solenoid (VBS)       P077       Prospec       Falcase 1       Case: Sleady Slate 15       Case: Sleady Sl											
Variable Bleed Solenoid (VBS)       Port       Starter Control (PC) Solenoid C       Fall Case: 1       Case: Steady State 1       Cas											
Variable Bleed Solenoid (VBS)       P079       Prozecure Control (PC) Solenoid C       Sale Case: Steady State 15       Sale Case:							=	TRUE	Boolean		
Variable Bleed Solenoid (VS)       P077       Pressure Control (PC) Solenoid C Stuck On (CA56) (Steady State)       Fall Case 1 (Case: Steady State) IS       Case: Steady State IS       Conditions       Fall Case       Fall Case: Steady State IS       One Trip							>=	-6 65625	°C		
Variable Bleed Solenoid (VBB)       PO79       Pressure Control (PC) Solenoid C Stuck On (C456) (Steady State)       Eall Case: 1       Case: Steady State 1s       Case: Steady State 1s       Content is not pressure       FALSE Boolean persone       FALSE Boolean = TRUE       Boolean = TRUE       FALSE Boolean = TRUE       FALSE Boolean = TRUE         MIL not Illuminated for pressure       TCM: P0716, P0717, P0722, P0723, P075, P0201, P0202, P0203, P0204, P075, P0201, P0202, P0203, P0204, P075, P0201, P0202, P0203, P0204, P0301, P0302, P0203, P0204, P0305, P0306, P0307, P0308, P0401, P042E       ECM: P0101, P0102, P0103, P0106, P0107, P0108, P0101, P0102, P0104, P0102, P0104, P0102, P010											
Image: bit is a bit is a bit is bit bit is bit											
Variable Bleed Solenoid (VBS)       P079       Pressure Control (PC) Solenoid C State)       Fall Case: Steady State 1st								FALSE	Boolean		
Variable Bleed Solenoid (VBB)         PO79         Pressure Control (PC) Solenoid C State)         Eal Case: Steady State) 15         Case: Steady							=	TRUE			
Variable Bleed Solenoid (VBS)PO797Pressure Control (PC) Solenoid C Stuck On [C456] (Steady State)Eail Case: Steady State 1stConditions:DTC's:P182E SchedibleP182E 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, P042EOne Trip						present		INCL			
Variable Bleed Solenoid (VBS)PO797Pressure Control (PC) Solenoid C Stuck On [C456] (Steady State)Eail Case: Steady State 1stConditions:DTC's:P182E SchedibleP182E 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, P042EOne Trip					Disable	MIL not Illuminated for	TCM: P071	6 P0717 P0722	P0723		
LineLi								0,10/17,10/22	,10723,		
LineLi					oonations.	5103.	TIOZE				
LineLi											
LineLi							ECM: P010	1, P0102, P0103	, P0106,		
LineLi											
Image: Second Constraint of the second c											
Image: Second (VBS)       P0797       Pressure Control (PC) Solenoid C Stack (Steady State)       Fail Case: Steady State 1st       Case: Steady State 1st       Case: Steady State 1st       Case: Steady State 1st							P0205, P02	06, P0207, P020	8, P0300,		
Image: Control (VBS)     P0797     Pressure Control (PC) Solenoid C Stuck On [C456] (Steady State)     Fail Case: Steady State 1st     Case: Steady State 1st     Cone Trip											
Variable Bleed Solenoid (VBS) P0/97 Stuck On [C456] (Steady State) Case: steady State Ist											
Variable Bleed Solenoid (VBS) P0/97 Stuck On [C456] (Steady State) Case: steady State Ist											
	Variable Bleed Solenoid (VB	S) P0797		Fail Case 1 Case: Steady State 1st							One Trip
			Slack On [0430] (Sleady Slale)	Attained Gear slin	>= 400 RPM						

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
			If the Above is True for Time	supporting				
			Intrusive test: (CBR1 clutch exhausted) Gear Ratio	documents <= 1.484985352				
				>= 1.343017578			>= 1.1 Fail Timer (Sec	.)
							>= 2 Fail Count in 1s Gear or	
			Fail Case 2 Case Steady State 2nd	Table Based			>= 3 Total Fail Counts	-
			Max Delta Output Speed Hysteresis	value Please				
			Min Delta Output Speed Hysteresis	documents Table Based value Please >= Refer to Table 23 in rpm/sec				
				23 in supporting documents Table Based				
			If the Above is True for Time	Time Please Refer to Table 17 in Supporting				
			Intrusive test: (CB26 clutch exhausted) Gear Ratio	documents <= 1.484985352				

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
				>= 1.343017578				
			If the above parameters are true					
							>= 1.1 Fail Timer (Sec)	)
							- Fail Count in	
							>= 3 2nd Gear	
							or	
							>= 3 Total fail counts	3
			Fail Case 3 Case Steady State 3rd					1
				Table Based				
				value Please				
			Max Delta Output Speed Hysteresis					
			Tysteresis	supporting				
				documents				
				Table Based				
				value Please				
			Min Delta Output Speed Hysteresis	>= Refer to Table 23 in rpm/sec				
				supporting				
				documents				
				Table Based				
				Time Please				
			If the Above is True for Time	>= Refer to Table Sec 17 in				
				supporting				
				documents				
			Intrusive test:					
			(C35R clutch exhausted)					
				<= 1.484985352				
			If the above parameters are true	>= 1.343017578				
			in the above parameters are the					
							>= 1.1 Fail Timer (Sec)	)
							>= 3 Fail Count in	
							3rd Gear	
			1		1	1	OR	

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction		Enable Conditions			Tim Requi		Mil Illum
									>=	3	Total Fail Counts	
					PRNDL State defaulted	=	FALSE	Boolean				
					inhibit RVT	=	FALSE	Boolean				
					IMS fault pending indication	=	FALSE	Boolean				
					output speed	>=	0	RPM				
					TPS validity flag	=	TRUE	Boolean				
					HSD Enabled	=	TRUE	Boolean				
					Hydraulic_System_Pressurized	=	TRUE	Boolean				
					A OR B							
					(A) Output speed enable	>=	36	Nm				
					(B) Accelerator Pedal enable	>=	0.5004883	Nm				
					Ignition Voltage Lo	>=	8.5996094	Volts				
					Ignition Voltage Hi	<=	31.990234	Volts				
					Engine Speed Lo	>=	400	RPM				
					Engine Speed Hi	<=	7500	RPM				
					Engine Speed is within the		5	Sec				
					allowable limits for	>=	5	Sec				
					if Attained Gear=1st FW	>=	5.0003052	Pct				
					Accelerator Pedal enable	>-	5.0003052	FUL				
					if Attained Gear=1st FW	>=	20	Nm				
					Engine Torque Enable	>=	20	INIII				
					if Attained Gear=1st FW	<=	8191.875	Nm				
					Engine Torque Enable	<=	0191.075	INIII				
					Transmission Fluid	>=	-6.65625	°C				
					Temperature	>-	-0.03023	C				
					Input Speed Sensor fault	=	FALSE	Boolean				
					Output Speed Sensor fault	=	FALSE	Boolean				1
					Default Gear Option is not	=	TRUE					
					present	-	INUL					
			<u> </u>									

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Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria			eshold alue	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
						Disable Conditions:	MIL not Illuminated for DTC's:	TCM: P0716, P0717, P0722, P0723,		
						Conditions.	DTC 3.	PIOZE		
								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		
	00707	Pressure Control (PC) Solenoid C	Primary Offgoing Clutch is exhausted (See Table 11 in			<b>D</b>				One Trip
Variable Bleed Solenoid (VBS)	P0797	Stuck On [C456] (Dynamic)	Supporting Documents for Exhaust Delay Timers)		TRUE	Boolean				
			Primary Oncoming Clutch Pressure	_	Maximum					
			Command Status		pressurized Clutch					
			Primary Offgoing Clutch Pressure Command Status		exhaust command					
			Range Shift Status	≠	Initial Clutch					
			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)	>=	0.5	Fail Time (Sec)				
			fail timer 1	>=	0.5	Fail Time (Sec)				
			(4-1 shifting without throttle) fail timer 1							
			(4-2 shifting with throttle) fail timer 1	>=	0.5	Fail Time (Sec)				
			(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)				

Code	Description	Criteria	1	/alue	Secondary Malfunction		Conditions			Requ	ne Iired	Mil Illum.
		fail timer 1		Fail Time (Sec)						•		
		(5-3 shifting with throttle) fail time 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)								
		If Attained Gear Slip is Less than Above Cal Increment Fail Timers							Tin + I Ena for >= R S Ta	ne = (Fail <sup>2</sup> Fail 2) See able Timer Fail Timer 1, and Reference upporting able 15 for	s sec	
		If fail timer is greater than threshold increment corresponding gear fail counter and total fail counter										
		4th gear fail counter							>=	3	Fail Counter From 4th Gear	
		5th gear fail counter							>=	3	Fail Counter From 5th Gear	
		6th gear fail counter							>=	3	Fail Counter From 6th Gear	
		Total fail counter							>=	5	Total Fail Counter	
					Input Speed Sensor fault Output Speed Sensor fault Command / Attained Gear High Side Driver ON	>= = ≠ =	FALSE FALSE 1st TRUE	Boolean Boolean Boolean Boolean				
			fail timer 1         (5-3 shifting without throttle)         fail timer 1         (6-2 shifting without throttle)         fail timer is greater than threshold increment Fail Timers         If fail timer is greater than threshold increment corresponding gear fail counter         4th gear fail counter         4th gear fail counter         5th gear fail counter         6th gear fail counter	fail timer 1       >=       0.5         fail timer 1       (6-2 shifting without throttle)       >=       0.5         if Attained Gear Slip is Less than Above Cal Increment Fail Timers       0.5         If fail timer is greater than threshold increment corresponding gear fail counter       1         4th gear fail counter       5         5th gear fail counter       5         6th gear fail counter       6	fail timer 1 (5-3 shifting without throttle) fail timer 1 (6-2 shifting without throttle) fail timer 1 (6-2 shifting without throttle)       >=       0.5       Fail Time (Sec)         fail timer 1 (6-2 shifting without throttle)       >=       0.5       Fail Time (Sec)         If Attained Gear Slip is Less than Above Cal Increment Fail Timers       >=       0.5       Fail Time (Sec)         If fail timer is greater than threshold increment corresponding gear fail counter       If fail timer is greater than threshold increment corresponding the shift counter       If gear fail counter         6th gear fail counter       6th gear fail counter       6th gear fail counter	Image: Second	Image: Second strain	fail timer 1	Image: Single state in the state interest of the state in	all limer 1       >=       0.5       Fall Time (Sec)         all limer 1       >=       0.5       Fall Time (Sec)         all limer 1       >=       0.5       Fall Time (Sec)         (6-2 shifting with not throatic)       >=       0.5       Fail Time (Sec)         (6-2 shifting without throatic)       >=       0.5       Fail Time (Sec)         (6-2 shifting without throatic)       >=       0.5       Fail Time (Sec)         (F Attained Cear Slp is Less than Above Cal increment Fail Timers       >       >       >         (F Attained Cear Slp is Less than Above Cal increment fail Timers       >       >       >         (f all timer is greater than threshold increment corresponding gear fail counter and total fail counter       >       >       >         Sht gear fail counter         >       >       >=         Sht gear fail counter         >       >       >=         Sht gear fail counter         >       >       >       >         (f all timer is greater than threshold         >       >       >=       >=         Sht gear fail counter          >       >       >=       >=       >=	Image: Section of the section of th	Image: state of the state

Component/ System	Fault Code	Monitor Strategy Description		Malfunction Criteria			eshold alue	Secondary Malfunction	Enable Conditions			Time Required	d	Mil Illum.
								input speed limit for TUT PRNDL state defaulted IMS Fault Pending Service Fast Learn Mode HSD Enabled	= FALSE = FALSE	RPM Boolean Boolean Boolean Boolean				
							Disable Conditions:	MIL not Illuminated for DTC's:	TCM: P0716, P0717, P0722, F P182E	20723,				
									ECM: P0101, P0102, P0103, F P0107, P0108, P0171, P0172, P0175, P0201, P0202, P0203, P0205, P0206, P0207, P0208, P0301, P0302, P0303, P0304, P0306, P0307, P0308, P0401,	, P0174, , P0204, , P0300, , P0305,				
Tap Up Tap Down Switch			Fail Case 1	Tap Up Switch Stuck in the Up										Special
(TUTD)	P0815	Upshift Switch Circuit	<u>raii Case i</u>	Position in Range 1 Enabled	=	0	Boolean							No MIL
				Tap Up Switch Stuck in the Up Position in Range 2 Enabled		0	Boolean							
				Tap Up Switch Stuck in the Up		0	Boolean							
				Position in Range 3 Enabled 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 F	ail Time (Sec)	
			Fail Case 2	Tap Up Switch Stuck in the Up Position in Range 1 Enabled	=	1	Boolean							

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
			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	= TRUE Boolean			>= 600 Fail Time (Sec)	、 
			Failcase 2 Must Be Met				>= 600 Fail Time (Sec)	-
					Time Since Last Range Change	>= 1 Enable Tin (Sec)	16	
					Ignition Voltage Lo Ignition Voltage Hi	>= 8.5996094 Volts <= 31.990234 Volts		
					Engine Speed Lo	>= 400 RPM		
					Engine Speed Hi Engine Speed is within the	<= 7500 RPM >= 5 Sec		
					allowable limits for			

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria		reshold Value	Secondary Malfunction	Enable Conditions		Time Required	Mil Illum.
						P0815 Status is	Test Failed This Key On or Fault Active			
					Disable Conditions:		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	= 0	Boolean					Special No MIL
			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		Boolean					
			Tap Down Switch Stuck in the Down Position in Range Neutral Enabled		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	= 0	Boolean					
			Enabled Tap Down Switch ON	= TRUE	Boolean			>=	1 sec	

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria		eshold alue	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
			Fail Case 2 Tap Down Switch Stuck 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 Tap Down Switch Stuck in the Down Position in Park Enabled	= 0 = 0	Boolean 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	

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	c	Enable Conditions			Tir Requ		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	>= >= <= >=		Enable Time (Sec) Volts Volts RPM RPM Sec		<u> </u>		
					P0816 Status is	+	Test Failed This Key On or Fault Active					
				Disable Conditions:		TCM: P0815, P0 P1877, P1915, ECM: None		P1876,				
Tap Up Tap Down Switch (TUTD)	P0826	Up and Down Shift Switch Circuit	TUTD Circuit Reads Invalid Voltage	= TRUE Boolean					>=	60	Fail Time (Sec)	Special No MIL
					Ignition Voltage Lo Ignition Voltage Hi Engine Speed Lo Engine Speed Hi Engine Speed is within the allowable limits for	<= >= <=	8.5996094 31.990234 400 7500 5	Volts Volts RPM RPM Sec				
					P0826 Status is	+	Test Failed This Key On or Fault Active					
				Disable Conditions:	MIL not Illuminated for DTC's:	TCM: P1761 ECM: None						

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria		eshold alue	Secondary Malfunction		Enable Conditions			Tiı Requ	ne Jired	Mil Illum.
Variable Bleed Solenoid (VBS)		Pressure Control (PC) Solenoid A Control Circuit Rationality Test (Line Pressure VBS)	The HWIO reports an invalid voltage (out of range) error flag	TRUE	Boolean					>=	4.4	Fail Time (Sec)	Two Trips
										out of	5	Sample Time (Sec)	
						Ignition Voltage Ignition Voltage Engine Speed Engine Speed Engine Speed is within the allowable limits for	<= >= <=	8.5996094 31.990234 400 7500 5	Volts Volts RPM RPM Sec				
					Disable Conditions:	MIL not Illuminated for DTC's:	TCM: None ECM: None						
Variable Bleed Solenoid (VBS)		Pressure Control (PC) Solenoid A Control Circuit Low Voltage (Line Pressure VBS)	The HWIO reports a low voltage (ground short) error flag	TRUE	Boolean					>=	1.5	Fail Time (Sec)	One Trip
										out of	1.875	Sample Time (Sec)	
						Ignition Voltage Ignition Voltage Engine Speed Engine Speed Engine Speed is within the allowable limits for	<= >= <=	8.5996094 31.990234 400 7500 5	Volts Volts RPM RPM Sec				
					Disable Conditions:	MIL not Illuminated for DTC's:	TCM: None ECM: None						

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria		reshold Value	Secondary Malfunction		Enable Conditions				me uired	Mil Illum.
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		Boolean					>=	4.4	Fail Time (Sec)	Two Trips
						Ignition Voltage Ignition Voltage Engine Speed Engine Speed is within the allowable limits for	>= <= >= <=	8.5996094 31.990234 400 7500 5	Volts Volts RPM RPM Sec	out of	5	Sample Time (Sec)	
					Disable Conditions:	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					>= out of	0.3 0.375	Fail Time (Sec) Sample Time (Sec)	One Trip
						Ignition Voltage Ignition Voltage Engine Speed Engine Speed is within the allowable limits for P0966 Status is not	>= <= >= <= =	8.5996094 31.990234 400 7500 5 Test Failed This Key On or Fault Active	Volts Volts RPM RPM Sec	01		(SeC)	

Fault Code	Monitor Strategy Description	Malfunction Criteria			Secondary Malfunction		Enable Conditions					Mil Illum.
				Disable Conditions:	MIL not Illuminated for DTC's:	TCM: None ECM: None						
				Boolean					>=	0.3	Fail Time (Sec)	One Trip
							8.5996094 31.990234 400 7500 5 Test Failed This Key On or Fault Active	Volts Volts RPM RPM Sec	out of	0.375	Sample Time (Sec)	
				Disable Conditions:	DTC's:							
				Boolean					>=	0.3	Fail Time (Sec)	One Trip
					Ignition Voltage Ignition Voltage	>= <=	Test Failed This Key On or Fault Active 8.5996094 31.990234 400	Volts Volts RPM	of	0.375	(Sec)	-
	Code	Code         Description           P0967         Pressure Control (PC) Solenoid B Control Circuit High Voltage (C35R VBS)           P0967         Pressure Control (PC) Solenoid C P0970           P0967         Pressure Control (PC) Solenoid C Control Circuit Low Voltage	Code         Description         Criteria           P0967         Pressure Control (PC) Solenoid B Control Circuit High Voltage (C35R VBS)         The HWIO reports a high voltage (open or power short) error flag           P0967         Control Circuit High Voltage         Image: Control Circuit High Voltage         Image: Control Circuit High Voltage           P0967         Pressure Control (PC) Solenoid C Control Circuit Low Voltage         The HWIO reports a low voltage	Code       Description       Criteria         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         P0967       Control Circuit High Voltage (C35R VBS)       Image: Control Circuit High Voltage (open or power short) error flag       = TRUE         P0967       Pressure Control (PC) Solenoid C Control Circuit Low Voltage       The HWIO reports a low voltage (reports a low voltage       = TRUE	Code     Description     Criteria     Value       Disable     Disable     Conditions:       P0967     Pressure Control (PC) Solenoid B     The HWIO reports a high voltage (Open or power short) error flag     = TRUE     Boolean       P0967     Control Circuit High Voltage     Image: Control (PC) Solenoid B     Image: Control (PC) Solenoid B     Image: Control (PC) Solenoid B     Image: Control (PC) Solenoid C       P0970     Pressure Control (PC) Solenoid C     The HWIO reports a low voltage (reports) a low voltage     Image: Control (PC) Solenoid C     Image: Control (PC) Solenoid C	Possure Control (PC) Solenoid B (C3SR VBS)         The HWIO reports a high voltage (open or power short) error flag         TRUE         Boolean           Image: Possure Control (PC) Solenoid B (C3SR VBS)         The HWIO reports a high voltage (open or power short) error flag         TRUE         Boolean           Image: Possure Control (PC) Solenoid C Engine Speed         Image: Possure Control (PC) Solenoid C Conditions:         Image: Possure Control (PC) Solenoid C Engine Speed         Image: Possure Control (PC) Solenoid C Conditions:         Image: Possure Control (PC) Sol	Pressure Control (PC) Solenoid B Conditions:         ITCM: None DTCS: ECM: None           P0967         Control (PC) Solenoid B Conditions:         The HWIO reports a high voltage (open or power short) error flag         =         TRUE         Boolean         =         =         ECM: None           P0967         Control Circuit High Voltage (C3SR VBS)         Ignition Voltage (open or power short) error flag         =         TRUE         Boolean         =	Code         Description         Criteria         Value         Munction         Conditions           Piessure Control (PC) Solenoid B         Pressure Control (PC) Solenoid B         The HWIO reports a high voltage (open or power short) error flag         =         TRUE         Boolean         Ignition Voltage         >=         8.5994094           Control (Crout High Voltage (C3SR VBS)         Pressure Control (PC) Solenoid B         The HWIO reports a high voltage (open or power short) error flag         =         TRUE         Boolean         Ignition Voltage         >=         8.5994094           Control Crout High Voltage (C3SR VBS)         Pressure Control (PC) Solenoid B         The HWIO reports a high voltage (open or power short) error flag         =         TRUE         Boolean         Ignition Voltage         >=         8.5994094           Log (C4SR VBS)         Pressure Control (PC) Solenoid C         The HWIO reports a low voltage (open or power short) error flag         =         Trest Failed         Pressure Control (PC) Solenoid C         Trest Failed         Pressure Control (PC) Solenoid C         Trest Failed         Pressure Control (PC) Solenoid C         The HWIO reports a low voltage (ground short) error flag         =         Trest Failed         Pressure Control (PC) Solenoid C         Trest Failed         Pressure Control (PC) Solenoid C         Pressure Control (PC) Solenoid C         Trest Failed         Trest Failed         Pressure C	Pressure Control (PC) Solenoid B Control Crout Hiph Voltage (C3R VBS)         The HWIO reports a high voltage (open or power shurt) error flag         = TRUE         Boolean         Ignition Voltage (sprint voltage (c3R VBS)         >= 8.5996094         Volts           P0967         Control Crout Hiph Voltage (C3R VBS)         The HWIO reports a high voltage (open or power shurt) error flag         = TRUE         Boolean         Ignition Voltage (= 31990234         Volts           Engine Speed         -=         7500         RPM           Engine Speed volts         -=         5         Sec           Test Failed         The HWIO reports a low voltage (ground short) error flag         =         TRUE         Boolean           P0970         Pressure Control (PC) Solenoid C (C456/CBR1 VBS)         The HWIO reports a low voltage (ground short) error flag         =         TRUE         Boolean           P0970         Control Crouth Low Voltage (C456/CBR1 VBS)         The HWIO reports a low voltage (ground short) error flag         =         TRUE         Boolean         Image: Failed This Key On or Fault Active           P0970         Status is not         Test Failed This Key On or Fault Active         This Key On or Fault Active         =         Test Failed This Key On or Fault Active	Pressure Control (PC) Solenoid B (CSR VBS)         The HWIO reports a high valuage (open or power short) error flag         = TRUE         Boolean         Image: Speed Engine Speed	Power         Disable Conditions         MIL not Illuminated for TCAL Rone DICS: ECM: None         >=         0.3           P0967         Pressure Control (PC) Sciencid B COSH VES)         The HWIO reports a high voltage (Open or power short) error flag         =         TRUE         Boolean         =         0.1         od of 0.375         0.375           VESSIVES)         Implicit Migh Voltage         =         TRUE         Boolean         =         8.5996094         Volts = 31.990234         volts = 4.00         volts = 1.9700         volts = 1.9700         volts = 1.9700 RPM         =         0.375           Implicit Nutlage (CSIN VES)         =         0.0375         Implicit Nutlage = 1.9700 RPM         =         8.5996094         Volts = 1.9700 RPM         =         0.375           Implicit Nutlage (CSIN VES)         =         Implicit Nutlage = 1.9700 RPM         =         =         1.97002 Notes = 1.9700 RPM         =         0.0         =         0.0         =         0.0         0         =         0.0         0 <td>Pressure Control (PC) Salenoid B (control Crcut High Voltage (CSR VBS)         The HWIO reports a high voltage (open or power short) error flag         - TRUE         Boolean         - 0.3         Fail Time (Sec) out           P0967         Pressure Control (PC) Salenoid B (control Crcut High Voltage (CSR VBS)         The HWIO reports a high voltage (open or power short) error flag         - TRUE         Boolean         - 0.3         Fail Time (Sec) out         0.375         Sample Time (Sec)           P0967         Signition Voltage (CSR VBS)         - 0.3         Fail Time (Sec) out         0.375         Sample Time (Sec)           P0970         Signition Voltage (CSR VBS)         - 0.3         Fail Time (Sec) out         - 0.3         Fail Time (Sec) out</td>	Pressure Control (PC) Salenoid B (control Crcut High Voltage (CSR VBS)         The HWIO reports a high voltage (open or power short) error flag         - TRUE         Boolean         - 0.3         Fail Time (Sec) out           P0967         Pressure Control (PC) Salenoid B (control Crcut High Voltage (CSR VBS)         The HWIO reports a high voltage (open or power short) error flag         - TRUE         Boolean         - 0.3         Fail Time (Sec) out         0.375         Sample Time (Sec)           P0967         Signition Voltage (CSR VBS)         - 0.3         Fail Time (Sec) out         0.375         Sample Time (Sec)           P0970         Signition Voltage (CSR VBS)         - 0.3         Fail Time (Sec) out         - 0.3         Fail Time (Sec) out

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria		Fhreshold Value	Secondary Malfunction		Enable Conditions				me uired	Mil Illum.
						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)	P0971	Pressure Control (PC) Solenoid C Control Circuit High Voltage (C456/CBR1 VBS)	The HWIO reports a high voltage (open or power short) error flag		E Boolean					>=	0.3	Fail Time (Sec)	One Trip
										out of	0.375	Sample Time (Sec)	
						P0971 Status is not	=	Test Failed This Key On or Fault Active					
						Ignition Voltage Ignition Voltage Engine Speed Engine Speed is within the allowable limits for	<= >= <=	8.5996094 31.990234 400 7500 5	Volts Volts RPM RPM Sec				
					Disable Conditions:	MIL not Illuminated for DTC's:							
Shift Solinoid	P0973	Shift Solenoid A Control Circuit Low (Mode 2 Solenoid)	The HWIO reports a low voltage (ground short) error flag	= TRUI	E Boolean					>= out of	1.2 1.5	Fail Time (Sec) Sample Time (Sec)	One Trip
						P0973 Status is not	=	Test Failed This Key On or Fault Active					
						Ignition Voltage	>=	8.5996094	Volts				

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	reshold /alue	Secondary Malfunction		Enable Conditions				ime uired	Mil Illum.
					Ignition Voltage Engine Speed Engine Speed Engine Speed is within the allowable limits for	<= >= <= >=	31.990234 400 7500 5	Volts RPM RPM Sec				
				Disable Conditions:	DTC's:	TCM: None ECM: None						
Shift Solinoid	P0974	Shift Solenoid A Control Circuit High (Mode 2 Solenoid)	The HWIO reports a high voltage (open or power short) error flag	Boolean					>= out of	1.2 1.5	Fail Time (Sec) Sample Time (Sec)	Two Trips
					P0974 Status is not	=	Test Failed This Key On or Fault Active					
					Ignition Voltage Ignition Voltage Engine Speed Engine Speed Engine Speed is within the allowable limits for	>= <= >= <=	8.5996094 31.990234 400 7500 5	Volts Volts RPM RPM Sec				
				Disable Conditions:	MIL not Illuminated for 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	Boolean					>= out	1.2	Sec	One Tr
									of	1.5	Sec	

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria		reshold /alue	Secondary Malfunction		Enable Conditions			Ti Requ	me uired	Mil Illum.
						P0977 Status is not	=	Test Failed This Key On or Fault Active					
						Ignition Voltage Ignition Voltage Engine Speed Engine Speed	<= >= <=	8.5996094 31.990234 400 7500	Volts Volts RPM RPM				
						Engine Speed is within the allowable limits for		5	Sec				
					Disable Conditions:	MIL not Illuminated for DTC's:							
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	Boolean					>=	3	Fail Counter Sample Timer	Special No MIL
						Tap Up Tap Down Message Health	=	TRUE	Boolean	>	10	(Sec)	
						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						
Mode Switch	P1762	Transmission Mode Switch Signal Circuit (rolling count)	Rolling count value received from BCM does not match expected value		Boolean					>=	3	Fail Counter	Special No MIL
			vuice							>	10	Sample Timer (Sec)	

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
					Pattern Switch Message Health	= TRUE Boolean		
					Engine Speed Lo			
					Engine Speed Eo			
					Engine Speed is within the			
					allowable limits for	>= 5 Sec		
				Disable	MIL not Illuminated for	TCM Nana		
				Disable Conditions				
				Conditions		ECM: None		
			Fail Case 1	Transition 1				One Trip
Internal Mode Switch (IMS)	P182E	Internal Mode Switch - Invalid Range	Current range					
				1110)				
			Previous range	<pre></pre>				
			l londus railigo	RNDL_Drive6				
				, CeTRGR e P				
			Previous range	<pre></pre>				
			Danga Chiff Ctata	Range Shift				
			Range Shift State	Completed				
			Absolute Attained Gear Slip					
			Attained Gear					
			Attained Gear Throttle Position Available					
				>= 8.000183105 pct				
			Output Speed					
			Engine Torque					
			Engine Torque	e <= 8191.75 Nm				
			If the above conditions are met				>= 1 Fail Seconds	
			then Increment Fail Timer					
			If Fail Timer has Expired then Increment Fail Counter	-			>= 5 Fail Counts	
			Fail Case 2 Output Speed	<= 70 rpm				-
	1			< <u> </u>	8	1	8	

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Thres Val		Secondary Malfunction		Enable Conditions		Γ	Tin Requ		M Illu
oystem	Code	Description	The following PRNDL sequence	T di	uc			Conditions		<u> </u>	noqu	lica	<u> </u>
			events occur in this exact order:										
			PRNDL state	Drive 6 (bit	Range								
				state 0110)									
			PRNDL state = Drive 6 for		Sec								
				Transition 8									
			PRNDL state		Range								
				0111) Drivo 6 (bit									
			PRNDL state	= Drive 6 (bit state 0110)	Range								
				Transition 1									
			PRNDL state		Range								
				1110)	J								
			Above sequencing occurs in	<= 1	Sec								
			Neutral Idle Mode	= Inactive									
			If all conditions above are met										
			Increment delay Timer										
			If the below two conditions are met							>=	3	Fail Seconds	
			Increment Fail Timer delay timer	>= 1	Sec								
			Input Speed		Sec								
			If Fail Timer has Expired then	- 400	500								
			Increment Fail Counter							>=	2	Fail Counts	
			Fail Case 3	Transition 13				CeTRGR_					1
			Current range	= (bit state	Range	Previous range	≠	e_PRNDL					
				0010)				_Drive4					
								CeTRGR_					
			Engine Torque	>= -8192	Nm	Previous range	≠	e_PRNDL					
			Engine Torque	<= 8191.75	Nm	IMS is 7 position configuration	=	_Drive1 0	Boolean				
			Engine Torque	<= 0191.70	INITI	IMS is 7 position configuration	=	0	DUUIEdII				
			If the above conditions are met			1 then the "previous range"							
			then, Increment Fail Timer			criteria above must also be				>=	0.225	Seconds	
						satsified when the "current							
			If Fail Timer has Expired then			range" = "transition 12"				Ι.	15	Fail Court-	
			Increment Fail Counter							>=	15	Fail Counts	
			Fail Case 4	Transition 8		Disable Fail Case 4 if last							
			Current range		Range	positive range was Drive 6 and							
			2 un ontrango	0111)		current range is transition 8				1			
				,		, , , , , , , , , , , , , , , , , , ,							L

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
			Inhibit bit (see definition)	= FALSE	Set inhibit bit true if PRNDL = 1100 (rev) or 0100 (Rev-Neu transition 11) Set inhibit bit false if PRNDL = 1001 (park)			
			Steady State Engine Torque Steady State Engine Torque If the above conditions are met then Increment Fail Timer				>= 0.225 Seconds	
			If the above Condtions have been met, Increment Fail Counter				>= 15 Fail Counts	
			Fail Case 5 Throttle Position Available The following PRNDL sequence events occur in this exact order:	= TRUE Boolean				
			PRNDL State	= Reverse (bit state 1100) Transition 11				
			PRNDL State	= (bit state Range 0100)				
			PRNDL State	= Neutral (bit state 0101) Range Transition 11				
			PRNDL State	0100)				
			Above sequencing occurs in Then delay timer increments Delay timer					
			Range Shift State	= Range Shift Complete				
			Absolute Attained Gear Slip Attained Gear Attained Gear	<= Sixth				
			Throttle Position Output Speed	>= 8.000183105 pct				
			If the above conditions are met Increment Fail Timer Fail Case 6	Illegal (bit	A Open Circuit Definition (flag		>= 20 Seconds	_
			Current range		set false if the following conditions are met):			

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
			and		Current Range	Transition ≠ 11 (bit state 0100)		
			A Open Circuit (See Definition)	= FALSE Boolean	or Last positive state	✓ Neutral (bit state 0101)		
					or Previous transition state	Transition ≠ 8 (bit state 0111)		
			If the above Condtions are met then, Increment Fail timer		Fail case 5 delay timer	= 0 sec	>= 6.25 Seconds	
			Fail Case 7 Current PRNDL State	ABCh = 1101				
				ABCD = I I I I				
			If the above Condtions are met then, Increment Fail timer	>= 2.001342404 1900			>= 6.25 Seconds	
			P182E will report test fail when any of the above 7 fail cases are met					
					Ignition Voltage Lo Ignition Voltage Hi Engine Speed Lo Engine Speed Hi	>= 8.5996094 Volts <= 31.990234 Volts >= 400 RPM <= 7500 RPM		
					Engine Speed is within the allowable limits for Engine Torque Signal Valid	>= 5 Sec = TRUE Boolean		

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria			eshold alue	Secondary Malfunction		Enable Conditions			Tir Requ		Mil Illum.
						Disable Conditions:	MIL not Illuminated for DTC's:		, P0717, P0722, BF, P077C, P07					
								P0107, P010 P0175, P020 P0205, P020 P0301, P030	1, P0102, P0103 )8, P0171, P017. )1, P0202, P020 )6, P0207, P020 )2, P0303, P030 )7, P0308, P040	2, P0174, 3, P0204, 8, P0300, 4, P0305,				
Internal Mode Switch (IMS)	P1915	Internal Mode Switch Does Not Indicate Park/Neutral (P/N) During Start	PRNDL State is		ark or eutral	Enumeration								One Trip
			The following events must occur Sequentially										Enable Time	
			Initial Engine speed <	<=	50	RPM					>=	0.25	(Sec)	
			Then Engine Speed Between Following Cals											
			Engine Speed Lo Hist > Engine Speed Hi Hist <		50 480	RPM RPM					>=	0.06875	Enable Time (Sec)	
			Then Final Engine Speed Final Transmission Input Speed		525 100	RPM RPM					>=	1.25	Fail Time (Sec)	
							DTC has Ran this Key Cycle?	=	FALSE	Boolean				
							Ignition Voltage Lo Ignition Voltage Hi	>= <=	6 31.999023	V V				
							Ignition Voltage Hyst High (enables above this value)	>=	5	V				
							Ignition Voltage Hyst Low (disabled below this value) Transmission Output Speed	<= <=	2 90	V rpm				

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria		reshold /alue	Secondary Malfunction		Enable Conditions				me uired	Mil Illum.
						P1915 Status is	¥	Test Failed This Key On or Fault Active					
					Disable Conditions:	MIL not Illuminated for DTC's:	TCM: P0722, ECM: None	P0723					
Transmission Control Module (TCM)	P2534	Ignition Switch Run/Start Position Circuit Low	TCM Run crank active (based on voltage thresholds below) Ignition Voltage High Hyst (run	= FALSE	Boolean								One Trip
			crank goes true when above this value)	5	Volts					>=	280	Fail Counts (25ms loop)	
			Ignition Voltage Low Hyst (run crank goes false when below this value)		Volts					Out of	280	Sample Counts (25ms loop)	
						ECM run/crank active status available	=	TRUE	Boolean				
						ECM run/crank active status	=	TRUE	Boolean				
					Disable Conditions:	MIL not Illuminated for DTC's:	TCM: None ECM: None						
Transmission Control Module (TCM)		Ignition Switch Run/Start Position Circuit High	TCM Run crank active (based on voltage thresholds below)	= IRUE	Boolean								One Trip
			Ignition Voltage High Hyst (run crank goes true when above this value)		Volts					>=	280	Fail Counts (25ms loop)	
			Ignition Voltage Low Hyst (run crank goes false when below this value)	2	Volts					Out of	280	Sample Counts (25ms loop)	
						ECM run/crank active status available ECM run/crank active status	=	TRUE FALSE	Boolean Boolean				
						ECIVI TUTI/CIATIK ACTIVE STATUS	=	FALSE	BOOIGAU				

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
				Disable Conditions:	MIL not Illuminated for DTC's:			
Variable Bleed Solenoid (VBS)	P2714	Pressure Control (PC) Solenoid D Stuck Off [CB26]	Fail Case 1 Case: Steady State 2nd Gear					One Trip
			Gear slip	>= 400 RPM			>= Please See Table 5 For Neutral Timer Neutral Time (Sec)	
			Intrusive test: commanded 3rd gear				Cal	
			If attained Gear = 3rd for Time	Time Please >= see Table 2 in Supporting Documents				
			If Above Conditions have been met					
			Increment 2nd gear fail count				>= 3 2nd Gear Fail Count or	
			and CB26 Fail Count				>= 14 CB26 Fail Count	
			Fail Case 2 Case: Steady State 6th Gear				Please See	
			Gear slip	>= 400 RPM			>= Table 5 For Neutral Timer Neutral Time (Sec) Cal	
			Intrusive test: commanded 5th gear				Gai	
			If 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				>= 3 5th Gear Fail Count	

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction		Enable Conditions			Tin Requ		Mil Illum
System	Code	Description	Citteria	Value	indirariotion		Conditions			Kequ		-
			and CB26 Fail Count						>=	14	or CB26 Fail Count	
					PRNDL State defaulted	=	FALSE	Boolean				
					inhibit RVT	=	FALSE	Boolean				
					IMS fault pending indication	=	FALSE	Boolean				
					TPS validity flag	=	TRUE	Boolean				
					Hydraulic System Pressurized	=	TRUE	Boolean				
					Minimum output speed for RVT	>=	0	RPM				
					A OR B							
					(A) Output speed enable	>=	36	RPM				
					(B) Accelerator Pedal enable	>=	0.5004883	Pct				
					Common Enable Criteria							
					Ignition Voltage Lo	>=	8.5996094	Volts				
					Ignition Voltage Hi	<=	31.990234	Volts				
					Engine Speed Lo	>=	400	RPM				
					Engine Speed Hi	<=	7500	RPM				
					Engine Speed is within the		-	C				
					allowable limits for	>=	5	Sec				
					Throttle Position Signal valid	=	TRUE	Boolean				
					HSD Enabled	=	TRUE	Boolean				
					Transmission Fluid							
					Temperature	>=	-6.65625	°C				
					Input Speed Sensor fault	=	FALSE	Boolean				
					Output Speed Sensor fault	=	FALSE	Boolean				1
					Default Gear Option is not	=	TRUE					
					present		INCL					
												1

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Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria			eshold alue	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
						Disable Conditions:	MIL not Illuminated for DTC's:	TCM: P0716, P0717, P0722, P0723, P1825		
						oonunions.	5103.			
								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		
			Primary Offgoing Clutch is							One Trip
Variable Bleed Solenoid (VBS)	P2715	Pressure Control (PC) Solenoid D Stuck On [CB26] (Dynamic)	exhausted (See Table 13 in Supporting Documents for Exhaust	=	TRUE	Boolean				
			Delay Timers) Primary Oncoming Clutch Pressure		Maximum					
			Command Status		pressurized					
			Primary Offgoing Clutch Pressure Command Status		Clutch exhaust					
					command Initial Clutch					
			Range Shift Status		Control	RPM				
			Attained Gear Slip		40	RPIVI				
			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)				

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria		reshold /alue	Secondary Malfunction		Enable Conditions			Ti Req	ne Jired	Mil Illum.
			fail timer 1	= 0.5	Fail Time (Sec)						·		
			(6-4 shifting with throttle) >= 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)								
			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							Tin + I Ena for >= R S Ta	Total Fail ne = (Fail Fail 2) See able Time Fail Time 1, and Reference upporting able 15 for able 15 for	s r sec	
			If fail timer is greater than threshold increment corresponding gear fail counter and total fail counter										
			2nd gear fail counter							>=	3	Fail Counter From 2nd Gear OR	
			6th gear fail counter							>=	3	Fail Counter From 6th Gear OR	
			total fail counter							>=	5	Total Fail Counter	
						TUT Enable temperature Input Speed Sensor fault	>=	-6.65625 FALSE	°C Boolean				
						Output Speed Sensor fault	=	FALSE	Boolean				
						Command / Attained Gear	¥	1st	Boolean				
						High Side Driver ON	=	TRUE	Boolean				
						output speed limit for TUT	>=	100	RPM				
						input speed limit for TUT	>=	200 EALSE	RPM Boolean				
			1			PRNDL state defaulted	=	FALSE	Boolean				

Component/	Fault	Monitor Strategy	Malfunction	Threshold	Secondary Malfunction	Enable		Time	Mil
System	Code	Description	Criteria	Value		Conditions	R	equired	Illum
					IMS Fault Pending	= FALSE Boolean			
					Service Fast Learn Mode	= FALSE Boolean			
					HSD Enabled	= TRUE Boolean			
				Disable	MIL not Illuminated for	TCM: P0716, P0717, P0722, P0723,			
				Conditions:	DTC's:				
				contaitions.	5103.	11022			
						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			
iable Bleed Solenoid (VBS)	P2715	Pressure Control (PC) Solenoid D	Fail Case 1 Case: Steady State 1st						One
, , , , , , , , , , , , , , , , , , ,		Stuck On [CB26] (Steady State)	,						
			Attained Gear slip	>= 400 RPM Table Based					
				Time Please					
				Pofor to Tablo, Enable Time					
			If the Above is True for Time	>= 4 in (Sec)					
				supporting					
				documents					
			Intrusive test:						
			(CBR1 clutch exhausted)						
			Gear Ratio	<= 3.015991211					
				>= 2.728027344					
			If the above parameters are true						
							>= 1.1	Fail Timer (Sec)	)
								Fail Count in 1s	
							>= 5	Gear	l.
								or	
								Total Fail	
							>= 5	Counts	
			Fail Case 2 Case: Steady State 3rd Gear				1	004.10	1

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
System	Code	Description	Criteria Max Delta Output Speed Hysteresis Min Delta Output Speed Hysteresis If the Above is True for Time	Table Based value Please >= Refer to Table 22 in supporting documents Table Based value Please 23 in supporting documents Table Based Time Please Perfer to Table	Malfunction	Conditions	Required	
				documents <= 3.015991211 >= 2.728027344			>= 1.1 Fail Timer (Sec	.)
							>= 3 Fail Count in 3rd Gear or >= 5 Total Fail Counts	·
			Fail Case 3 Case: Steady State 4rd Gear Max Delta Output Speed Hysteresis	Table Based value Please Refer to Table				

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
			Min Delta Output Speed Hysteresis	Table Based value Please Refer to Table 23 in supporting documents				
			If the Above is True for Time	Table Based Time Please Pofor to Table				
			Gear Ratio	documents				
			If the above parameters are true				>= 1.1 Fail Timer (Sec >= 3 Fail Count in 4t Gear	
			Fail Case 4 Case: Steady State 5th Gear	Table Based			>= 5 Total Fail Counts	_
			Max Delta Output Speed Hysteresis					
			Min Delta Output Speed Hysteresis	Table Based value Please Pofor to Table				

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction		Enable Conditions				ime Juired	Mil Illum.
			If the Above is True for Time	17 in								
				supporting documents								
			Intrusive test:									
			(C35R clutch exhausted)									
				<= 0.779052734								
			If the above parameters are true	>= 0.704956055								
			ii the above parameters are the									
									>=	1.1	Fail Timer (Sec)	
									>=	3	Fail Count in 5th Gear	
											or Total Fail	
									>=	5	Counts	
					PRNDL State defaulted	=	FALSE	Boolean			obunts	
					inhibit RVT	=	FALSE	Boolean				
					IMS fault pending indication	=	FALSE	Boolean				
					output speed	>=	0	RPM				
					TPS validity flag	=	TRUE	Boolean				
					HSD Enabled	=	TRUE	Boolean				
					Hydraulic_System_Pressurized	=	TRUE	Boolean				
					A OR B							
					(A) Output speed enable	>=	36	Nm				
					(B) Accelerator Pedal enable	>=	0.5004883	Nm				
					Ignition Voltage Lo	>=	8.5996094	Volts				
					Ignition Voltage Hi	<=	31.990234	Volts				
					Engine Speed Lo	>=	400	RPM				
					Engine Speed Hi	<=	7500	RPM				
					Engine Speed is within the	>=	5	Sec				
					allowable limits for	-	0	000				
					if Attained Gear=1st FW	>=	5.0003052	Pct				
					Accelerator Pedal enable							
					if Attained Gear=1st FW	>=	20	Nm				
					Engine Torque Enable							

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
					if Attained Gear=1st FW Engine Torque Enable Transmission Fluid Temperature Input Speed Sensor fault Output Speed Sensor fault Default Gear Option is not present	= FALSE Boolean		
				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, 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				>= 0.3 Fail Time (S out 0.375 Sample Tir of 0.375 (Sec)	, i i i i i i i i i i i i i i i i i i i
					P2770 Status is not	Test Failed This Key On or Fault Active	()	
					Ignition Voltage Ignition Voltage Engine Speed Engine Speed Engine Speed is within the allowable limits for	<= 31.990234 Volts >= 400 RPM <= 7500 RPM		

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value		Secondary Malfunction		Enable Conditions			Tim Requi		Mil Illum.
				Di Condi	sable tions:	MIL not Illuminated for DTC's:	TCM: None ECM: None						
Variable Bleed Solenoid (VBS)	P2721	Pressure Control (PC) Solenoid D Control Circuit High (CB26 VBS)	The HWIO reports a high voltage (open or power short) error flag							>= out of	0.3 0.375	Fail Time (Sec) Sample Time (Sec)	One Trip
						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 allowable limits for	>= <= >= <= >=	8.5996094 31.990234 400 7500 5	Volts Volts RPM RPM Sec				
				D Condi	sable lions:	MIL not Illuminated for DTC's:	TCM: None ECM: None						
Variable Bleed Solenoid (VBS)	P2723	Pressure Control (PC) Solenoid E Stuck Off	Fail Case 1 Case: Steady State 1st Gear Gear slip							, T	Please See Fable 5 For eutral Time		One Trip
			Intrusive test: commanded 2nd gear If attained Gear ≠ 2nd for Time	Please refer to	Sec)						Cal		

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
		· · · ·	If Above Conditions have been met, Increment 1st gear fail				>= 3 1st Gear Fail Count	
			counter and C1234 fail counter				or C1234 Clutch	
			Fail Case 2 Case: Steady State 2nd Gear				Fail Count	-
			Gear slip	>= 400 RPM			Please See Table 5 For Neutral Timer >= Neutral Time (Sec) Cal	
			Intrusive test: commanded 3rd gear					
			If attained Gear ≠ 3rd for Time	Tablo 2 in				
			If Above Conditions have been met, Increment 2nd gear fail counter				>= 3 2nd Gear Fail Count	
			and C1234 fail counter				>= 14 Or Fail Count	
			Fail Case 3 Case: Steady State 3rd Gear Gear slip	>= 400 RPM			Please See Table 5 For Neutral Timer Neutral Time (Sec)	
			Intrusive test: commanded 4th gear				Cal	
			If attained Gear ≠ 4th for time	Tablo 2 in				
			If Above Conditions have been met, Increment 3rd gear fail counter				>= 3 3rd Gear Fail Count	
			and C1234 fail counter				>= 14 or C1234 Clutch Fail Count	

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction		Enable Conditions			Tin Requ		Mil Illum.
			Fail Case 4 Case: Steady State 4th Gea Gear sli						_ Τ	lease See able 5 For eutral Time Cal	Neutral Timer	
			Intrusive test commanded 5th gea If attained Gear = 5th For Time	r Please refer to Table 3 in								
			If Above Conditions have beer met, Increment 4th gear fa counte	Documents I					>=	3	4th Gear Fail Count	
			and C1234 fail counte	r					>=	14	or C1234 Clutch Fail Count	
					PRNDL State defaulted	=	FALSE	Boolean				
					inhibit RVT IMS fault pending indication	=	FALSE FALSE	Boolean Boolean				
					TPS validity flag	=	TRUE	Boolean				
					Hydraulic System Pressurized	=	TRUE	Boolean				
					Minimum output speed for RVT	>=	0	RPM				
					A OR B							
					(A) Output speed enable	>=	36	RPM				
					(B) Accelerator Pedal enable	>=	0.5004883	Pct				
					Common Enable Criteria		0.500/00/	N/ II				
					Ignition Voltage Lo Ignition Voltage Hi	>=	8.5996094 31.990234	Volts Volts				
					Engine Speed Lo	<= >=	400	RPM				
					Engine Speed Lo	<=	7500	RPM				
					Engine Speed is within the							
					allowable limits for	>=	5	Sec				
					Throttle Position Signal valid	=	TRUE	Boolean				
					HSD Enabled	=	TRUE	Boolean				
					Transmission Fluid Temperature	>=	-6.65625	°C				
					Input Speed Sensor fault	=	FALSE	Boolean				
					Output Speed Sensor fault	=	FALSE	Boolean				

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria		eshold alue	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
						Default Gear Option is not present	= TRUE		
					Disable Conditions:	MIL not Illuminated for DTC's:	TCM: P0716, P0717, P0722, P0723, P182E		
							ECM: P0101, P0102, P0103, P0106, P0107, P0108, P0171, P0172, P0174, P0175, P0201, P0202, P0203, P0204, P0205, P0206, P0207, P0208, P0300, P0301, P0302, P0303, P0304, P0305, P0306, P0307, P0308, P0401, P042E		
Variable Bleed Solenoid (VBS)	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	= pressurized					
			Primary Offgoing Clutch Pressure Command Status	command					
			Range Shift Status	CONTION					
			Attained Gear Slip If the above conditions are true increment appropriate Fail 1 Timers Below:		RPM				
			fail timer 1 (2-6 shifting with throttle) fail timer 1	>= 0.5	Sec				
			(2-6 shifting without throttle) fail timer 1	>= 0.5	Sec				
			(3-5 shifting with throttle) fail timer 1	>= 0.5	Sec				
			(3-5 shifting without throttle)	>= 0.5	Sec				

Code	Description	Criteria	Value	Malfunction	Conditions	Required	Illum.
		fail timer 1 (4-5 shifting with throttle)	>= 0.5 sec				
		fail timer 1	>= 0.5 sec				
		fail timer 1 (4-6 shifting with throttle)	>= 0.5 sec				
		fail timer 1 (4-6 shifting without throttle)	>= 0.5 sec				
		If Attained Gear Slip is Less than Above Cal Increment Fail Timers				Total Fail Time = (Fail 1 + Fail 2) See Enable Timers for Fail Timer 1, and Reference Supporting Table 15 for Fail Timer 2	
		If fail timer is greater than threshold increment corresponding gear fail counter and total fail counter					
		2nd gear fail counter				>= 3 Fail Counter From 2nd Gear	r
		3rd gear fail counter				>= 3 Fail Counter From 3rd Gear	
		4th gear fail counter				>= 3 Fail Counter From 4th Gear	
		total fail counter				>= 5 Total Fail Counter	
				Input Speed Sensor fault Output Speed Sensor fault Command / Attained Gear High Side Driver ON	<ul> <li>FALSE Boolean</li> <li>FALSE Boolean</li> <li>≠ 1st Boolean</li> <li>= TRUE Boolean</li> </ul>		
			(4-5 shifting without throttle) fail timer 1 (4-6 shifting with throttle) fail timer 1 (4-6 shifting without throttle) If Attained Gear Slip is Less than Above Cal Increment Fail Timers If fail timer is greater than threshold increment corresponding gear fail counter and total fail counter 2nd gear fail counter 3rd gear fail counter 4th gear fail counter	(4-5 shifting without throttle)       >=       0.5       Sec         fail timer 1       (4-6 shifting without throttle)       >=       0.5       Sec         fail timer 1       (4-6 shifting without throttle)       >=       0.5       Sec         fail timer 1       (4-6 shifting without throttle)       >=       0.5       Sec         if Attained Gear Slip is Less than Above Cal Increment Fail Timers       Above Cal Increment Fail Timers       If fail timer is greater than threshold increment corresponding gear fail counter       2nd gear fail counter         2nd gear fail counter       3rd gear fail counter       4th gear fail counter	(4-5 shifting without throttle)       >       0.5       Sec         fail timer 1       >       0.5       sec         fif fail timer is greater than threshold increment Fail Timers       increment corresponding gear fail counter       2nd gear fail counter         2nd gear fail counter       3rd gear fail counter       TUT Enable temperature input Speed Sensor fault Output	(4-5 shifting without throtte)       >>       0.5       Sec         fail inter 1       (4-6 shifting with nottle)       >>       0.5       Sec         fail inter 1       (4-6 shifting without throtte)       >>       0.5       Sec         fail inter 1       (4-6 shifting without throtte)       >>       0.5       Sec         fif fail inter is greater than threshold increment Fail Timers             If fail inter is greater than threshold increment corresponding gear fail counter          >>          2nd gear fail counter           >>        >>           total fail counter            >>        >>         >>         >>         >>         >>         >>          >>	(4-5 shifting without throute)       >       0.5       sec        Total Fail         (4-6 shifting without throute)       >       0.5       sec        Total Fail         (4-6 shifting without throute)       >       0.5       sec        Total Fail         (4-6 shifting without throute)       >       0.5       sec        Total Fail         (4-6 shifting without throute)       >       0.5       sec        Fail 20 sec         (4-6 shifting without throute)       >       0.5       sec        Fail 20 sec         (4-6 shifting without throute)       >       0.5       sec        Fail 20 sec         (4-6 shifting without throute)       >       0.5       sec        Sec         Reference       Second       Reference       Second       Reference       Second         Reference       Second       Reference       Second       Reference       Second       Second         2nd gear fail counter       2nd gear fail counter        >       >       >       >       >       >       >       >       >       >       Second       Reference       Second       Second       Second       Second </td

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
					input speed limit for TUT	>= 200 RPM		
					PRNDL state defaulted			
					IMS Fault Pending Service Fast Learn Mode			
					HSD Enabled			
					TISD ENABLED			
				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 (Steady State)	Fail Case 1 Case: 5th Gear					One Trip
				Table Based				
			Mau Dalta Outaut Canad	value Please				
			Max Delta Output Speed Hysteresis	>= Refer to Table 22 in rpm/sec				
				supporting				
				documents				
				Table Based				
				value Please				
			Min Delta Output Speed Hysteresis	>= Refer to Table 23 in rpm/sec				
				supporting				
				documents				
				Table Based				
				Time Please				
			If the Above is True for Time	I / In				
				supporting documents				
			Intrusive test:					
			(C35R clutch exhausted)					

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
				<= 1.484985352 >= 1.343017578				
			in the above parameters are not				>= 1.1 Fail Timer (Sec)	)
							>= 3 Fail Count in 5th Gear	1
							OR >= 3 Total Fail Counts	
			Fail Case 2 Case: 6th Gear				Counts	-
				Table Based value Please				
			Max Delta Output Speed Hysteresis					
				supporting documents				
				Table Based value Please				
			Min Delta Output Speed Hysteresis	Pofor to Tablo				
				supporting documents				
				Table Based Time Please				
			If the Above is True for Time	Defer to Table				
				supporting documents				
			Intrusive test: (CB26 clutch exhausted)					
			Gear Ratio	<= 1.484985352 >= 1.343017578				
			If the above parameters are true					
							>= 1.1 Fail Timer (Sec)	
							>= 3 Fail Count in 6th Gear OR	1

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Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction		Enable Conditions			Tim Requi		Mil Illum
									>=	3	Total Fail Counts	
					PRNDL State defaulted	=	FALSE	Boolean				
					inhibit RVT	=	FALSE	Boolean				
					IMS fault pending indication	=	FALSE	Boolean				
					output speed	>=	0	RPM				
					TPS validity flag	=	TRUE	Boolean				
					HSD Enabled	=	TRUE	Boolean				
					Hydraulic_System_Pressurized	=	TRUE	Boolean				
					A OR B							
					(A) Output speed enable	>=	36	Nm				
					(B) Accelerator Pedal enable	>=	0.5004883	Nm				
					Ignition Voltage Lo	>=	8.5996094	Volts				
					Ignition Voltage Hi	<=	31.990234	Volts				
					Engine Speed Lo	>=	400	RPM				
					Engine Speed Hi	<=	7500	RPM				
					Engine Speed is within the		5	Sec				
					allowable limits for	>=	5	Sec				
					if Attained Gear=1st FW	>=	5.0003052	Pct				
					Accelerator Pedal enable	>-	5.0003052	FUL				
					if Attained Gear=1st FW	>=	20	Nm				
					Engine Torque Enable	>=	20	INIII				
					if Attained Gear=1st FW	<=	8191.875	Nm				
					Engine Torque Enable	<=	0191.075	INIII				
					Transmission Fluid	>=	-6.65625	°C				
					Temperature	>-	-0.03023	C				
					Input Speed Sensor fault	=	FALSE	Boolean				
					Output Speed Sensor fault	=	FALSE	Boolean				1
					Default Gear Option is not	=	TRUE					
					present	-	INUL					
			<u> </u>									

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Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria		eshold ′alue	Secondary Malfunction	Enable Conditions				me uired	Mil Illum.
					Disable Conditions:	MIL not Illuminated for DTC's:	TCM: P0716, P0717, P0722 P182E	, P0723,				
							ECM: P0101, P0102, P0103 P0107, P0108, P0171, P017 P0175, P0201, P0202, P020 P0205, P0206, P0207, P020 P0301, P0302, P0303, P030 P0306, P0307, P0308, P040	2, P0174, 3, P0204, 8, P0300, 4, P0305,				
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				>= out	0.3 0.375	Fail Time (Sec) Sample Time	One Trip
						P2729 Status is not	Test Failed This Key On or Fault Active		of		(Sec)	
						Ignition Voltage Ignition Voltage Engine Speed Engine Speed Engine Speed is within the allowable limits for	<pre>&lt;= 31.990234 &gt;= 400 &lt;= 7500</pre>	Volt Volt RPM RPM 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
		·····/							out of	0.375	Sample Time (Sec)	

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Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value		Secondary Malfunction		Enable Conditions			Tir Requ	me uired	Mil Illum.
						P2730 Status is not	=	Test Failed This Key On or Fault Active					
						Ignition Voltage Ignition Voltage Engine Speed Engine Speed is within the allowable limits for	>= <= >= <=	8.5996094 31.990234 400 7500 5	Volt Volt RPM RPM Sec				
				C	Disable Conditions:	MIL not Illuminated for DTC's:	TCM: None ECM: None						
Variable Bleed Solenoid (VBS)	P2763	Torque Converter Clutch Pressure High	The HWIO reports a low pressure/high voltage (open or power short) error flag	= TRUE Boole	an					>= out of	4.4 5	Fail Time (Sec) Sample Time (Sec)	Two Trips
						P2763 Status is not	=	Test Failed This Key On or Fault Active					
						Ignition Voltage Ignition Voltage Engine Speed Engine Speed Engine Speed is within the	>= <= >= <=	8.5996094 31.990234 400 7500	Volt Volt RPM RPM				
						allowable limits for High Side Driver Enabled	>=	5 TRUE	Sec Boolean				
				C	Disable Conditions:	MIL not Illuminated for DTC's:	TCM: P0658, ECM: None	P0659					

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Component/	Fault	Monitor Strategy	Malfunction		eshold	Secondary		Enable				me	Mil
System	Code	Description Torque Converter Clutch Pressure	Criteria The HWIO reports a high		alue	Malfunction		Conditions				uired	Illum. One Tri
/ariable Bleed Solenoid (VBS)	P2764	Control Solenoid Control Circuit Low	pressure/low voltage (ground short) error flag	= TRUE	Boolean					>=	4.4	Fail Time (Sec)	
										out of	5	Sample Time (Sec)	
						P2764 Status is not	=	Test Failed This Key On or Fault Active					
						Ignition Voltage Ignition Voltage	>= <=	8.5996094 31.990234	Volt Volt				
						Engine Speed Engine Speed	>= <=	400 7500	RPM RPM				
						Engine Speed is within the allowable limits for	>=	5	Sec				
						High Side Driver Enabled	=	TRUE	Boolean				
					Disable Conditions:	MIL not Illuminated for DTC's:	TCM: P0658 ECM: None	, P0659					
Communication	U0073	Controller Area Network Bus Communication Error	CAN Hardware Circuitry Detects a Low Voltage Error	= TRUE	Boolean					>=	62	Fail counts (≈ 10 seconds)	One Tri
			Delay timer :	>= 0.1125	sec					Out of	70	Sample Counts (≈ 11 seconds)	
						Stabilization delay Ignition Voltage Ignition Voltage Power Mode	>= >= <=	3 8.5996094 31.990234 Run	sec Volt Volt				
					Disable Conditions:	MIL not Illuminated for DTC's:	TCM: None ECM: None						
Communication	U0100	Lost Communications with ECM (Engine Control Module)	CAN messages from ECM are not received by the TCM	= TRUE	Boolean					>=	12	Sec	One Tri
		· • ·				Stabilization delay	>=	3	sec				1

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction		Enable Conditions			Time Require		Mil Illum.
					Ignition Volta Ignition Volta Power Mo	ge <=	8.5996094 31.990234 Run	Volt Volt				
				D Condi	sable MIL not Illuminated ions: DTC							
Transmission Control Module (TCM)	C1251	The lateral accleration signal is stuck at a high magnitude in range	absolute value (lateral accleration)	>= 0.529999971 g's	absolute value (late accleration) for stab		0.53	g's	>=	75	Sec	Special No MIL
			absolute value (lateral accleration)	<= 3.849999905 g's	absolute value (late accleration) for state	<=	3.84999999	g's				
					stability ti Diagnostic shifting overr comma	de _	30 FALSE	Sec Boolean				
					Attained Gear St		1st through 8th					
					Attained Gear	ilip <=	100 Clutch to	RPM				
					Transmission T	pe =	Clutch Transmissi					
					High Side Drivers enab Vehicle Spe		on TRUE 15	Boolean kph				
					Lateral acceleration stuc range diagnostic ena	in ble =	1	·				
					calibrai Battery Volta Battery Volta	ge <=	31.999023 9	Volts Volts				
					Battery voltage is within allowable limits	he for	0.1	Sec				
					Ignition Volta Ignition Volta Service Fast Learn (SFL) Mo	ge >=	31.999023 9	Volts Volts				
					VBS Fails Ignition voltage and S	afe = FL	FALSE	Boolean Sec				
					conditions met		U. I	Sec				

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Component/	Fault	Monitor Strategy	Malfunction	Threshold	Secondary	Enable	Time	Mil
System	Code	Description	Criteria	Value	Malfunction	Conditions	Required	Illum.
				Disable Conditions:	DTC's:	TCM: P0716, P0717, P0721, P0722, P0723, P07BF, P07C0, P077B, P077C, P077D, P215C, U0073 ECM: None		

Table 1	_									
	Axis	0.00	64.00	128.00	192.00	256.00	320.00	384.00	448.00	512.00 N*m
	Curve	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00 RPM
<u>Table 2</u>	Axis Curve	-6.67 409.59	-6.66 2.00	40.00 ⁰C 2.00 Se						
Table 3	_									
	Axis	-6.67	-6.66	40.00 °C						
	Curve	409.59	4.00	4.00 Se	C					
Table 4										
	Axis	-6.67	-6.66	40.00 °C						
	Curve	409.59	2.00	2.00 Se	C					
Table 5	_									
	Axis	-6.67	-6.66	40.00 °C						
	Curve	409.59	3.00	3.00 Se	С					
Table 6										
	Axis	-6.67	-6.66	40.00	80.00	120.00 °C				
	Curve	409.00	3.60	1.60	1.40	1.40 S	ec			

Table 7						
	Axis	-6.67	-6.66	40.00	80.00	120.00 °C
	Curve	409.00	3.40	1.40	1.30	1.20 Sec
Table 8	-					
	Axis	-6.67	-6.66	40.00	80.00	<mark>120.00</mark> °C
	Curve	409.00	3.60	1.60	1.50	1.40 Sec
Table 9	_					
	Axis	-6.67	-6.66	40.00	80.00	<mark>120.00</mark> °C
	Curve	409.00	3.30	1.30	1.20	1.10 Sec
Table 10						
	Axis	-6.67	-6.66	40.00	80.00	120.00 °C
	Curve	3.10	1.90	1.10	0.80	0.60 Sec
Table 11	_					
	Axis	-6.67	-6.66	40.00	80.00	120.00 °C
	Curve	1.80	1.20	0.60	0.40	0.30 Sec
Table 12	_					

Axis	-6.67	-6.66	40.00	80.00	120.00 °C	
Curve	2.20	1.40	0.90	0.70	0.40 Sec	

Table 13

Axis	-6.67	-6.66	40.00	80.00	120.00 °C	
Curve	2.60	1.00	0.50	0.30	0.20 Se	С

Table 14

Axis	-6.67	-6.66	40.00	80.00	120.00	٥C
Curve	3.00	0.90	0.50	0.30	0.20	Sec

### Table 15

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

<u>Table 16</u>

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

### <u>Table 17</u>

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

### Table 18

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

### Table 19

Axis	-40.10	-40.00	-20.00	0.00	30.00	60.00	100.00	149.00	<mark>149.10</mark> ⁰C
Curve	256.00	50.00	45.00	40.00	34.00	25.00	20.00	20.00	256.00 °C

### Table 20

Axis	-40.10	-40.00	-20.00	0.00	30.00	60.00	100.00	149.00	149.10	°C
Curve	256.00	10.00	8.00	8.00	8.00	8.00	8.00	8.00	256.00	⁰С

### Table 21

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

### <u>Table 22</u>

Axis	-6.67	-6.66	40.00	°C
Curve	8191.75	8191.75	8191.75	RPM/Sec

### <u>Table 23</u>

Axis	-6.67	-6.66	40.00	°C
Curve	8191.75	8191.75	8191.75	RPM/Sec