Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria		Thres Va		Secondary Malfunction	Enable Conditions	Time Require		Mil Illum.
Transmission Control Module (TCM)	P0601	Transmission Electro-Hydraulic Control Module Read Only Memory	Incorrect program/calibrations checksum	= T		Boolean			>= 5	Fail Counts	One Trip
						Disable Conditions:	MIL not Illuminated for DTC's:	TCM: P0601 ECM: None			
Transmission Control Module (TCM)	P0603	Transmission Electro-Hydraulic Control Module Long-Term Memory Reset	Non-volatile memory (static or dynamic) checksum failure at Powerup	= T	RUE	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)	= T	TRUE	Boolean			>= 5 = 16	Fail Counts Sample Counts	One Trip
						Disable Conditions:	MIL not Illuminated for DTC's:	TCM: P0604 ECM: None			
Transmission Control Module (TCM)	P062F	Transmission Electro-Hydraulic Control Module Long Term Memory Performance	TCM Non-Volatile Memory bit Incorrect flag at Powerdown	= T	RUE	Boolean			Runs Continously		One Trip
						Disable Conditions:	MIL not Illuminated for DTC's:	TCM: P062F ECM: None			
Transmission Control Module (TCM)	P0634	Transmission Electro-Hydraulic Control Module Internal Temperature Too High	Fail Case 1 Substrate Temperature		2.1016					Fail Time (Sec)	One Trip
			Fail Case 2 Substrate Temperature	>=	50	°C			>= 2	Fail Time (Sec)	<u> </u>

Component/	Fault	Monitor Strategy	Malfunction		reshold	Secondary Malfunction		Enable				me	Mil Illum.
System	Code	Description	Criteria Ignition Voltage		/alue Volts	Mairunction		Conditions			кеq	uired	mum.
			Note: either fail case can set the	>= 18	VOIIS								
			DTC										
						Ignition Voltage Lo	>=	8.59961	Volts				
						5 5							
						Ignition Voltage Hi	<=	31.99902	Volts				
						Substrate Temp Lo		0	°C				
						Substrate Temp Hi		170	°C				
						Substrate Temp Between	>=	0.25	Sec				
						Temp Range for Time							
								Test Failed					
						P0634 Status is	¥	This Key					
								On or Fault Active					
								Active					
					Disable	MIL not Illuminated for	TCM: None						
					Conditions:	DTC's:							
							ECM: None						
High Side Driver 1	P0658	Actuator Supply Voltage Circuit Low	The HWIO reports a low voltage (open or ground short) error flag	= TRUE	Boolean					>=	4	Fail Counts	One Trip
										out	6	Sample Counts	
										of	0	Sample Counts	
								Test Failed					
						P0658 Status is not	=	This Key					
								On or Fault					
								Active					
						High Side Driver 1 On	=	True	Boolean				
I													

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction		Enable Conditions				me uired	Mil Illum.
		2000, p. 0.1		Disable Conditions:	MIL not Illuminated for DTC's:	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								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						>= Out of	3000 3750	Fail Counts (100ms loop) Sample Counts (100ms loop)	
			temp. 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 Palow describes the brake	= = >= >= <= >= =	TRUE TRUE 8.59961 31.99902 400 7500 5 FALSE	Boolean Boolean Volts Volts RPM RPM Sec				
					Below describes the brake torque entry criteria Engine Torque Throttle	>= >=	90 30.0003	N*m Pct				

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction		Enable Conditions		Time Required	Mil Illum.
					Transmission Input Speed	<=	200	RPM		1
					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			
					Ciulon nyuraulio pressure	7	Air Purge			
							Event			
					Clutch used to exit brake		CeTFTD_e			
					torque active		_C3_RatlE			
					loique 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			
							This Key			
					P0667 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.
				Disat Conditior	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 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 Lc Ignition Voltage H Engine Speed L Engine Speed H Engine Speed is within the allowable limits for P0668 Status is	i <= 31.99902 Volts >= 400 RPM i <= 7500 RPM >= 5 Sec Test Failed This Kay	>= 60 Fail Timer (Sec,	Two Trips

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction		Enable Conditions			lime quired	Mil Illum.
				Disab Condition							
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	p >= 249 ℃	Ignition Voltage Lo Ignition Voltage Hi Engine Speed Lo Engine Speed Hi Engine Speed s within the allowable limits for	<= >= <= >=	8.59961 31.99902 400 7500 5 Test Failed This Key	Volts Volts RPM RPM Sec	>= 60	Fail Timer (Sec)	Two Trips
					P0669 Status is For Hybrids, below conditions must also be mel Estimated Motor Power Loss greater than limit for time Lost Communication with Hybrid Processor Control Module Estimated Motor Power Loss Fault	>= >= =	On or Fault Active 0 0 FALSE FALSE	kW Sec			

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value		Secondary Malfunction		Enable Conditions			Ti Req	me uired	Mil Illum.
Cycloni		Description	entend		Disable	MIL not Illuminated for	TCM: P0716,		, P0723				
				C	onditions:	DTC's:							
							ECM: None						
				Refer to Table									Two
Transmission Control Module	P06AC	TCM Power-up Temp Sensor Circuit	If TCM power-up temp to substrate	> 20 in °C									Trips
(TCM)		Range/Performance	temp Δ	supporting documents									
				uocuments									
				Refer to Table									
			If transmission oil temp to power	10 in									
			up temp Δ	> supporting °C									
				documents									
			Both conditions above required to							>=	3000	Fail Counts	
			increment fail counter									(100ms loop)	
			Note: table reference temp = to the median temp of trans oil temp,							Out		Sample Counts	
			substrate temp and power up							of	3750	(100ms loop)	
			temp.									(
			Non-continuous (intermittent) fail									Dago Counto	
			conditions will delay resetting fail							>=	700	Pass Counts (100ms loop)	
			counter until										
										Out	875	Sample Counts	
										of		(100ms loop)	
						Engine Torque Signal Valid	=	TRUE	Boolean				
						Accelerator Position Signal	-						
						Valid	=	TRUE	Boolean				
						Ignition Voltage Lo	>=	8.59961	Volts				
						Ignition Voltage Hi	<=	31.99902	Volts				
						Engine Speed Lo	>=	400	RPM				
						Engine Speed Hi	<=	7500	RPM				
						Engine Speed is within the	>=	5	Sec				
						allowable limits for Brake torque active	_	FALSE					
						Brake forgue active Below describes the brake	=	FALSE					
						torque entry criteria							
						Engine Torque	>=	90	N*m				
						Throttle	>=	30.0003	Pct				

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction		Enable Conditions		Time Required	Mil Illum.
					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			
					Ciulon nyuraulio pressure	+	Air Purge			
							Event			
					Clutch used to exit brake		CeTFTD_e			
					torque active	=	_C3_RatlE			
					loique 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			
							This Key			
					P06AC Status is	¥	On or Fault			
							Active			
1				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
		Voldge low			Ignition Voltage Lo Ignition Voltage Hi Engine Speed Lo Engine Speed Hi Engine Speed is within the allowable limits for P06AD Status is P06AD Status is For Hybrids, below conditions must also be met Estimated Motor Power Loss greater than limit for time Lost Communication with Hybrid Processor Control Module Estimated Motor Power Loss Fault	>= 5 Sec Test Failed ≠ This Key On or Fault Active >= 0 kW >= 0 Sec		

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 is within the allowable limits for P06AE Status is	>= 400 RPM <= 7500 RPM		
				Disable Conditions	MIL not Illuminated for DTC's:	Active		
Transmission Fluid Temperature Sensor (TFT)		Trans Fluid Temp Sensor Circuit Range/Performance	If transmission oil temp to substrate temp Δ If transmission oil temp to power up temp Δ	Supporting C documents Refer to Table 18 in C				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.				>= 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	Boolean				
					Valid	=	TRUE	Boolean				
					Ignition Voltage Lo	>=	8.59961	Volts				
					Ignition Voltage Hi	<=	31.99902	Volts				
					Engine Speed Lo	>=	400	RPM				
					Engine Speed Hi Engine Speed is within the	<=	7500	RPM				
					allowable limits for	>=	5	Sec				
					Brake torque active	=	FALSE					
					Below describes the brake							
					torque entry criteria							
					Engine Torque	>=	90	N*m				
					Throttle	>=	30.0003	Pct				
					Transmission Input Speed Vehicle Speed	<=	200 8	RPM Kph				
					Transmission Range	<= ≠	8 Park	крп				
					Transmission Range	<i>+</i> ≠	Neutral					
					PTO	=	Not Active					
					Set Brake Torque Active							
					TRUE if above conditions are	>=	7	sec				
					met for:							
					Below describes the brake							
					torque exit criteria		Not Met					
					Brake torque entry criteria	=	Clutch					
							Hydraulic					
					Clutch hydraulic pressure	≠	Air Purge					
							Event					
					Clutch used to exit brake		CeTFTD_e					
					torque active	=	_C3_RatlE					
							nbl					
					The above clutch pressure is		(00	kno				
					greater than this value for one loop	>=	600	kpa				
L			1		юор							

Component/	Fault	Monitor Strategy	Malfunction	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
System	Code	Description	Criteria	Value	Set Brake Torque Active	Conditions	Required	mum.
					FALSE if above conditions are	>= 20 Sec		
					met for:			
						Test Failed		
					D0711 Chabus is	This Kov		
					P0711 Status is	✓ On or Fault		
						Active		
				Disabl Conditions		TCM: P0658, P0668, P0669, P06AD,		
				Conditions		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, P0103, P0106, P0107, P0108, P0174, P0107, P0108, P0171, P0172, P0174, P0		
						P0175, P0201, P0202, P0203, P0204,		
						P0205, P0206, P0207, P0208, P0300,		
						P0301, P0302, P0303, P0304, P0305, P0306, P0307, P0308, P0401, P042E		
						P0306, P0307, P0308, P0401, P042E		
								T
Transmission Fluid	P0712	Transmission fluid temperature	Type of Sensor Used	CeTFTI_e_Vol = tageDirectPro				Two Trips
Temperature Sensor (TFT)	10/12	thermistor failed at a low voltage		p				mps
			If Transmission Fluid Temperature					
			Sensor = Direct Proportional and					
			Temp					
			If Transmission Fluid Temperature Sensor = Indirect Proportional and					
			Temp	>74 C				
			Either condition above will satisfy				>= 60 Fail Time (Se	
			the fail conditions				>= ou Fairnne (Se	ec)
	1				Ignition Voltage Lo	>= 8.59961 Volts		
	1				Ignition Voltage Hi Engine Speed Lo			
	1				Engine Speed Lu			
	1				Engine Speed is within the	F		
					allowable limits for	>= 5 Sec		1

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
					P0712 Status is	Test Failed This Key On or Fault Active		
					For Hybrids, below conditions must also be me Estimated Motor Power Loss Estimated Motor Power Loss greater than limit for time Lost Communication with Hybrid Processor Contro Module Estimated Motor Power Loss Faul	>= 0 kW >= 0 Sec = FALSE		
				Disa Conditio		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	p >= 174 ℃				Two Trips
			Either condition above will satisfy the fail conditions		Ignition Voltage Lo Ignition Voltage H Engine Speed Lo Engine Speed I Engine Speed is within the allowable limits for	i <= 31.99902 Volts >= 400 RPM i <= 7500 RPM	>= 60 Fail Time (Sec)	

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	reshold /alue	Secondary Malfunction		Enable Conditions		T Re	Time quired	Mil Illum.
					P0713 Status is	¥	Test Failed This Key On or Fault Active				
				Disable Conditions:	MIL not Illuminated for DTC's:		, P0716, P0717	, P0722,			
Transmission Input Speed Sensor (TISS)	P0716	Input Speed Sensor Performance	Transmission Input Speed Sensor Drops	RPM					>= 0.8	Fail Time (Sec)	One Trip
					Engine Torque is Engine Torque is Engine Speed Engine Speed Engine Speed is within the allowable limits for Vehicle Speed is Throttle Speed is Throttle Speed is The previous requirement has been satisfied for The change (loop to loop) in transmission input speed is The previous requirement has been satisfied for Throttle Position Signal Valid Engine Torque Signal Valid Ignition Voltage Ignition Voltage	>= <= >= >= >= >= >= = = = =	0 8191.88 400 7500 5 10 0 0 0 8191.88 0 TRUE TRUE TRUE TRUE 8.59961 31.99902 Test Failed This Key On or Fault Active	N*m RPM RPM Sec Kph Pct RPM Sec RPM/Loop Sec Boolean Boolean Volts Volts			

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria			shold lue	Secondary Malfunction	Enable Conditions	Ti Req	ne uired	Mil Illum.
						Disable Conditions:	DTC's:	TCM: P0717, P0752, P0973, P0974 ECM: P0101, P0102, P0103, P0121, P0122, P0123			
Transmission Input Speed Sensor (TISS)	P0717	Input Speed Sensor Circuit Low Voltage	Fail Case 1 Transmission Input Speed is	<	33	RPM			>= 4.5	Fail Time (Sec)	One Trip
			Fail Case 2 When P0722 DTC Status equal to Test Failed and Transmission Input Speed is	<	653.13	RPM	Controller uses a single power supply for the speed sensors	= 1 Boolean			
						Disable Conditions:	Engine Torque is Engine Torque is Vehicle Speed Engine Torque Signal Valid Ignition Voltage Ignition Voltage Engine Speed Engine Speed is within the allowable limits for P0717 Status is not MIL not Illuminated for DTC's:	<= 31.99902 Volts >= 400 RPM <= 7500 RPM >= 5 Sec Test Failed This Key On or Fault Active			
Transmission Output Speed Sensor (TOSS)		Output Speed Sensor Circuit Low Voltage	Transmission Output Speed Sensor Raw Speed	<=	35	RPM			>= 4.5	Fail Time (Sec)	One Trip
							P0722 Status is not	Test Failed 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.
					Transmission Input Speed Check	=	TRUE	Boolean		
					Engine Torque Check	=	TRUE	Boolean		
					Throttle Position	>=	8.0002	Pct		
					Transmission Fluid	>=	-40	°C		
					Temperature	/-	-40	C		
					Disable this DTC if the PTO is	=	1	Boolean		
					active Engine Torque Signal Valid	=	TRUE	Boolean		
					Throttle Position Signal Valid	=	TRUE	Boolean		
					Ignition Voltage is		8.59961	Volts		
					Ignition Voltage is	<=	31.99902	Volts		
					Engine Speed is	>=	400	RPM		
					Engine Speed is	<=	7500	RPM		
					Engine Speed is within the allowable limits for	>=	5	Sec		
					allowable littlits for					
					Enable_Flags Defined Below					-
					The Engine Torque Check is					
					TRUE, if either of the two following conditions are TRUE					
					Tollowing conditions are TROL					
					Engine Torque Condition 1					
					5		Range			
					Range Shift Status	≠	shift	ENUM		
							completed			
					OR		Deale an			
					Transmission Range is	=	Park or Neutral			
					Engine Torque is	>=	8191.75	N*m		
					Engine Torque is	<=	8191.75	N*m		
					3 1111					
					Engine Torque Condition 2					
					Engine Torque is	>=	50	N*m		
					Engine Torque is	<=	8191.75	N*m		
					The Transmission Input Speed					
					(TIS) Check is TRUE, if either					
					of the two following conditions					
					are TRUE					

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria		eshold /alue	Secondary Malfunction		Enable Conditions				me uired	Mil Illum.
System		Description	Criteria		aue	TIS Check Condition 1 Transmission Input Speed is Transmission Input Speed is TIS Check Condition 2 Engine Speed without the brake applied is Engine Speed with the brake applied is Engine Speed single power supply for the speed sensors	<= >= <=	653.13 5350 3200 3200 8191.88 1	RPM RPM RPM RPM RPM Boolean			urea	
						Powertrain Brake Pedal is Valid	_	TRUE	Boolean				
					Disable Conditions	DTC's:		, P0102, P010					
Transmission Output Speed Sensor (TOSS)	P0723	Output Speed Sensor Circuit Intermittent	Transmission Output Speed Sensor Raw Speed		RPM					>=	0	Enable Time (Sec)	One Trip
			Output Speed Delta	<= 8192	RPM					>=	0	Enable Time (Sec)	
			Output Speed Drop		RPM					>=	1.5	Output Speed Drop Recovery Fail Time (Sec)	
			AND Transmission Range is	Drivon rong	e								
						 Range_Disable OR		FALSE	See Below				
						Neutral_Range_Enable		TRUE	See Below				
						Neutral_Speed_Enable are TRUE concurrently		TRUE	See Below				

Component/	Fault	Monitor Strategy	Malfunction	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
System	Code	Description	Criteria	value		Conditions	Required	inum.
					Transmission_Range_Enable	= TRUE See Below		
					Transmission_Input_Speed_E			
					nable	= TRUE See Below		
					No Change in Transfer Case	E Counda		
					Range (High <-> Low) for	>= 5 Seconds		
						Test Failed		
						This Key		
					P0723 Status is not	= On or Fault		
						Active		
					Disable this DTC if the PTO is active	= 1 Boolean		
					Ignition Voltage is	>= 8.59961 Volts		
					Ignition Voltage is	<= 31.99902 Volts		
					Engine Speed is	>= 400 RPM		
					Engine Speed is	<= 7500 RPM		
					Engine Speed is within the	F		
					allowable limits for	>= 5 Sec		
					Enable_Flags Defined Below			
		_						
					Transmission_Input_Speed_E			
					nable is TRUE when either TIS			
					Condition 1 or TIS Condition 2 is TRUE:			
					IS TRUE.			
					TIS Condition 1 is TRUE when			
					both of the following conditions	>= 0 Enable Time		
					are satsified for	Sec)		
					Input Speed Delta	<= 4095.88 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		
				1	for all speed sensors			

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Condition	IS	Time Required	Mil Illum.
					Neutral_Range_Enable is TRUE when any of the next 3 conditions are TRUE				
					Transmission Range is	= Neutra	ENUM		
					Transmission Range is	Reverse = eutral Transitor	ENUM		
					Transmission Range is	Neutral/I = ve Transitio I			
					And when a drop occurs				
					Loop to Loop Drop of Transmission Output Speed is	> 650	RPM		
					Range_Disable is TRUE when any of the next three conditions are TRUE				_
					Transmission Range is	= Park	ENUM		
					Transmission Range is	Park/Rev = se Transitor	ENUM		
					Input Clutch is not	= ON (Ful Applied	y ENUM		
					Neutral_Speed_Enable is TRUE when All of the next three conditions are satsified for	> 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		RPM		

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Thr V	eshold /alue	Secondary Malfunction		Enable Conditions			Tir Requ	ne iired	Mil Illum.
						Transmission_Range_Enable is TRUE when one of the next six conditions is TRUE Transmission Range is		Neutral	ENUM				
						Transmission Range is	=	Reverse/N eutral Transitiona I	ENUM				
						Transmission Range is	=	Neutral/Dri ve Transitiona I	ENUM				
						Time since a driven range (R,D) has been selected	>=	Table Based Time Please Refer to Table 21 in supporting documents	Sec				
						Transmission Output Speed Sensor Raw Speed Output Speed when a fault	>=	500	RPM				
						was detected	>=	500	RPM				
					Disable Conditions:			, P0102, P0103					
Torque Converter Clutch (TCC)	P0741	TCC System Stuck OFF	TCC Pressure Either Condition (A) or (B) Must be Met		Кра					>=	2	Enable Time (Sec)	Two Trips

Component/	Fault	Monitor Strategy	Malfunction	Threshold	Secondary		Enable				ime	Mil
System	Code	Description	Criteria	Value	Malfunction		Conditions			Rec	quired	Illum.
	1 1			Refer to Table								
	1 1		(A) TCC Slip Error @ TCC On						>=	5	Fail Time (Sec)	
	1 1		Mode	Supporting								
	1 1			Documents						-	E 11 TI (O)	
	1 1		(B) TCC Slip @ Lock On Mode	>= 130 RPM					>=	5	Fail Time (Sec)	
	1 1		If Above Conditions Have been							2	TCC Stuck Off	
	1 1		Met, and Fail Timer Expired, Increment Fail Counter						>=	2	Fail Counter	
	1 1		Increment Fair Counter									
					TCC Mode	=	On or Lock					
					Ignition Voltage Lo	>=	8.59961	Volts				
					Ignition Voltage Hi	<=	31.99902	Volts				
	1 1				Engine Speed	>=	400	RPM				
	1 1				Engine Speed	<=	7500	RPM				
	1 1				Engine Speed is within the	>=	5	Sec				
	1 1				allowable limits for	>=	5					
	1 1				Engine Torque Lo	>=	50	N*m				
	1 1				Engine Torque Hi	<=	8191.88	N*m				
	1 1				Throttle Position Lo	>=	8.0002	Pct				
	1 1				Throttle Position Hi	<=	99.9985	Pct				
	1 1				2nd Gear Ratio Lo	>=	2.19482	Ratio				
	1 1				2nd Gear Ratio High	<=	2.52515	Ratio				
	1 1				3rd Gear Ratio Lo	>=	1.42285	Ratio				
	1 1				3rd Gear Ratio High	<=	1.63708	Ratio				
	1 1				4th Gear Ratio Lo	>=	1.06946	Ratio				
	1 1				4th Gear Ratio High	<=	1.23047	Ratio				
	1 1				5th Gear Ratio Lo	>=	0.79053	Ratio				
	1 1				5th Gear Ratio Hi	<=	0.90955	Ratio				
	1 1				6th Gear Ratio Lo	>=	0.62305	Ratio				
	1 1				6th Gear Ratio High	<=	0.71692	Ratio				
					Transmission Fluid Temperature Lo	>=	-6.6563	°C				
					Transmission Fluid							
					Temperature Hi	<=	130	°C				
					PTO Not Active	=	TRUE	Boolean				
					Engine Torque Signal Valid	=	TRUE	Boolean				
					Throttle Position Signal Valid	=	TRUE	Boolean				
					Dynamic Mode	=	FALSE	Boolean				

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria			eshold alue	Secondary Malfunction		Enable Conditions				me uired	Mil Illum.
							P0741 Status is	¥	Test Failed This Key On or Fault Active					
						Disabi Conditions	: DTC's:	P0742, P270 ECM: P010 P0107, P010 P0175, P020 P0205, P020 P0301, P030		3, P0106, 72, P0174, 03, P0204, 08, P0300, 04, P0305,				
Torque Converter Clutch (TCC)	P0742	TCC System Stuck ON	TCC Slip Speed TCC Slip Speed If Above Conditions Have been Met, and Fail Timer Expired, Increment Fail Counter	<=	-50 13	RPM RPM	TCC Mode Enable test if Cmnd Gear = 1stFW and value true Enable test if Cmnd Gear = 2nd and value true Engine Speed Hi	=	Off 1 0 6000	Boolean Boolean RPM	>= >=	1.5	Fail Time (Sec) Fail Counter	One Trip
							Engine Speed Lo Vehicle Speed HI Vehicle Speed Lo Engine Torque Hi Engine Torque Lo Current Range Current Range Transmission Sump Temperature Transmission Sump Temperature	>= <= ≠ <=	500 511 1 8191.88 80 Neutral Reverse 130 18	RPM KPH Nm Nm Range Range ℃				

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction		Enable Conditions		Time Required	Mil Illum.
					Throttle Position Hyst High	>=	5.0003	Pct		
					AND					
					Max Vehicle Speed to Meet	<=	8	KPH		
					Throttle Enable	<=	0	NETT		
					Once Hyst High has been met,					
					the enable will remain while	>=	2.0004	Pct		
					Throttle Position					
					Disable for Throttle Position	>=	75	Pct		
					Disable if PTO active and	=	1	Boolean		
					value true					
					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 1	Boolean		
					Disable if in D5 and value true Disable if in MUMD and value	=	I	Boolean		
						=	1	Boolean		
					true Disable if in TUTD and value					
					true	=	1	Boolean		
					4 Wheel Drive Low Active	=	FALSE	Boolean		
					Disable if Air Purge active and	-	TALSE	DUUICATI		
					value false	=	0	Boolean		
					RVT Diagnostic Active	=	FALSE	Boolean		
					Ignition Voltage	>=	8.59961	V		
					Ignition Voltage	<=	31.99902	v		
					Vehicle Speed	<=	511	KPH		
					Engine Speed	>=	400	RPM		
					Engine Speed	<=	7500	RPM		
					Engine Speed is within the					
					allowable limits for	>=	5	Sec		
					Engine Torque Signal Valid	=	TRUE	Boolean		
					Throttle Position Signal Valid	=	TRUE	Boolean		
					Ű					
							Test Failed			
					P0742 Status is	¥	This Key On or Fault			
							Active			
							Active			

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria		hreshold Value	Secondary Malfunction		Enable Conditions				ime quired	Mil Illum.
					Disat Conditior	is: DTC's:	ECM: P0741, P2 ECM: P01 P0107, P0 P0175, P0 P0205, P0 P0301, P0		, P0106, 2, P0174, 3, P0204, 8, P0300, 4, P0305,				
Mode 2 Multiplex Valve	P0751	Shift Solenoid Valve A Stuck Off	Commaned Gear Slip Commanded Gear Gear Ratio Gear Ratio If the above parameters are true	= 1st Loc <= 1.2095	?	Ignition Voltage Lo Ignition Voltage Lo Ignition Voltage H Engine Speed Lo Engine Speed Is within the allowable limits for Transmission Fluid Temperature Range Shift State TPS OR Output Speec Throttle Position Signal Valid	<pre><= <= </pre>	8.59961 31.99902 400 7500 5 -6.6563 Range Shift Completed 0.5005 67 TRUE	Volts Volts RPM RPM Sec °C ENUM % RPM Boolean	>= = >= >=	0.2 5 0 0.3 8	Fail Tmr Fail Counts Neutral Timer (Sec) Fail Timer (Sec) Counts	Two Trips

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria			eshold alue	Secondary Malfunction	Enable Conditions	Time Require		Mil Illum.
							Engine Torque Signal Valid from ECM, High side driver is	= TRUE Boolean			
							enabled				
							High-Side Driver is Enabled Input Speed Sensor fault				
							Output Speed Sensor fault				
							Default Gear Option is not	= TRUE			
							present				
						Disable	MIL not Illuminated for	TCM: P0716, P0717, P0722, P0723,			
						Conditions:	DTC's:				
								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	P0752	Shift Solenoid Valve A Stuck On	Gear Box Slip	>=	400	RPM					One Trip
			Commanded Gear	=	3rd	Gear					
			Commanded Gear has Achieved								
			1st Locked OR 1st Free-Wheel OR 2nd with Mode 2 Sol. Commanded	=	TRUE	Boolean					
			On If the above parameters are true								
									Please Refer		
									>= to Table 16 in Supporting	Neutral Timer (Sec)	
									Documents	(300)	
			Command 4th Gear once Output Shaft Speed	<=	400	RPM					
			If Gear Ratio	>=	3.82568						
			And Gear Ratio		4.22839						
									>= 1.5 F	ail Timer (Sec)	
									>= 5	Counts	
							Ignition Voltage Lo	>= 8.59961 Volts			

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction		Enable Conditions		Tim Requi		Mil Illum.
System	Code	Description	Criteria	value	Ignition Voltage Hi	i <=	31.99902	Volts	Requi	rea	mum.
					Engine Speed Lo) >=	400	RPM			
					Engine Speed Hi		7500	RPM			
					Engine Speed is within the allowable limits for		5	Sec			
					High-Side Driver is Enabled		TRUE	Boolean			
					Throttle Position Signal Valid		TRUE	Boolean			
					from ECM						
					Output Speed		67	RPM			
					OR TPS		0.5005	%			
					IFJ	>=		70			
					Dange Chift State		Range Shift	ENUM			
					Range Shift State	=	Completed	ENUW			
							oompicicu				
					Transmission Fluid Temperature		-6.6563	°C			
					Input Speed Sensor fault		FALSE	Boolean			
					Output Speed Sensor fault		FALSE	Boolean			
					Default Gear Option is not	=	TRUE				
					present	t –	INUL				
				Dis	able MIL not Illuminated for	TCM: P0716	5 P0717 P0722	P0723			
				Conditi		P182E	,10/17,10/22	., 1 0/20,			
							1 00100 00100	D010/			
							1, P0102, P0103 08, P0171, P013				
							01, P0202, P020				
							06, P0207, P020				
							02, P0303, P030				
						P0306, P03	07, P0308, P040	01, P042E			
Made 2 Multiplay Value	D075/	Shift Solenoid Valve B Stuck Off	Fail Case 1 Commanded Ge	ar = 1st Locked		<u> </u>					One Trir
Mode 2 Multiplex Valve	PU/56	Shin Solehold Agive R Strick Oll	Fail Case 1 Commanded Ge	ar = TSt Locked					Please Refer		One Trip
									to Table 5 in	Neutral Timer	
			Gear Box SI	ip >= 400 RPM					>= Supporting	(Sec)	
									Documents		
			Intrusive Shift to 2r								
1			Commanded Gear Previou	us = 1st Locked Gear		1			1		1

Component/	Fault	Monitor Strategy	Malfunction	Threshold Value	Secondary Malfunction	Enable Conditions			Time Require) od	Mil Illum
System	Code	Description	Criteria Gear Ratio		Manunction	Conditions			Require	ea	mum
			Gear Ratio								
			If the above parameters are true								
			· ·					>=	1	sec	
								>=	3	counts	
					Ignition Voltage Lo	>= 8.59961	Volts				
					Ignition Voltage Hi		Volts				
					Engine Speed Lo		RPM				
					Engine Speed Hi		RPM				
					Engine Speed is within the allowable limits for		Sec				
					Output Speed		RPM				
					Ouipui Speed OR	>= 67	KPIVI				
					TPS	>= 0.5005	%				
					110		70				
						Range					
					Range Shift State		ENUM				
						Completed					
					Transmission Fluid		°C				
					Temperature	>= -6.6563	-0				
					High-Side Driver is Enabled		Boolean				
					Throttle Position Signal Valid		Boolean				
					from ECM						
					Input Speed Sensor fault		Boolean				
					Output Speed Sensor fault		Boolean				
					Default Gear Option is not	= TRUE					
					present						
				Disabl	MIL not Illuminated for	TCM: P0716, P0717, P0722	P0723				
				Conditions			.,10720,				
						1022					
						ECM: P0101, P0102, P0103					
						P0107, P0108, P0171, P01					1
						P0175, P0201, P0202, P020					1
						P0205, P0206, P0207, P020					1
						P0301, P0302, P0303, P030 P0306, P0307, P0308, P040					1
						PU300, PU307, PU308, PU40	J1, PU42E				1

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria		shold Ilue	Secondary Malfunction		Enable Conditions		Tim Requ	ie ired	Mil Illum.
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	= 3rd >= 400	Gear RPM							
										Please Refer to Table 16 in	Neutral Timer	
										>= Supporting Documents	(Sec)	
			Command 4th Gear once Output Shaft Speed	<= 400	RPM							
			If Gear Ratio And Gear Ratio									
										>= 3	Fail Timer (Sec)	
			It the above condiations are true, Increment 3rd gear fail counter							>= 3	3rd Gear Fail Counts	
			and C35R Fail counter							>= 14	or 3-5R Clutch Fail Counts	
			Fail Case 2 Case: Steady State 5th Gear		_						oounis	
			Commanded Gear	= 5th	Gear							
			Gearbox Slip	>= 400	Rpm					>= Supporting	Neutral Timer (Sec)	
			Intrusive Test: Command 6th Gear							Documents		
			initiusive rest: Command our Gear	Please refer to	0							
			If attained Gear=6th gear Time	Table 0 in	Shift Time (Sec)							
			It the above condiations are true, Increment 5th gear fail counter	documents						>= 3	5th Gear Fail Counts	
			and C35R Fail counter							>= 14	or 3-5R Clutch Fail Counts	
						PRNDL State defaulted inhibit RVT	=	FALSE FALSE	Boolean Boolean			
						IMS fault pending indication	=	FALSE	Boolean			
1						TPS validity flag	=	TRUE	Boolean			

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Thres Val		Secondary Malfunction		Enable Conditions		Time Required	Mil Illum.
						Hydraulic System Pressurized	=	TRUE	Boolean		
						Minimum output speed for RVT	>=	67	RPM		
						A OR B					
						(A) Output speed enable		67	RPM		
						(B) Accelerator Pedal enable		0.5005	Pct		
						Common Enable Criteria Ignition Voltage Lo		8.59961	Volts		
						Ignition Voltage Lo		31.99902	Volts		
						Engine Speed Lo		400	RPM		
						Engine Speed Eo		7500	RPM		
						Engine Speed is within the					
						allowable limits for	>=	5	Sec		
						Throttle Position Signal valid	=	TRUE	Boolean		
						HSD Enabled	=	TRUE	Boolean		
						Transmission Fluid	>=	-6.6563	°C		
						Temperature					
						Input Speed Sensor fault Output Speed Sensor fault		FALSE FALSE	Boolean Boolean		
						Default Gear Option is not	=		DUDIEGI		
						present	=	TRUE			
						present					
					Disable	MIL not Illuminated for		5, P0717, P0722	, P0723,		
					Conditions:	DTC's:	P182E				
							FOM DO10	00100 00100	D010/		
								1, P0102, P0103 08, P0171, P017			
								08, P0171, P017 01, P0202, P020			
								06, P0207, P020			
								02, P0303, P030			
							P0306, P03	07, P0308, P040)1, P042E		
Variable Bleed Solenoid (VBS)	P0777	Pressure Control (PC) Solinoid B	Fail Case 1 Case: Steady State 1st								One Trip
		Stuck On [C35R] (Steady State)	,		DDM						
<u> </u>			Attained Gear slip	>= 400	RPM						1

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	Table Based Time Please Refer to Table Enable Time 4 in (Sec) supporting documents				
			Intrusive test: (CBR1 clutch exhausted) Gear Ratio Gear Ratio	<= 1.60864 >= 1.45544				
			If the above parameters are true				>= 1.1 Fail Timer (Sec)	
							>= 2 Fail Count in 1st Gear	I I
			Fail Case 2 Case: Steady State 2nd gear				or >= 3 Total Fail Counts	-
			Max Delta Output Speed Hysteresis	Table Based value Please Refer to 3D Table 1 in supporting documents				
			Min Delta Output Speed Hysteresis	supporting documents				
			If the Above is True for Time	Table Based Time Please >= Refer to Table 17 in supporting documents				
			Intrusive test: (CB26 clutch exhausted) Gear Ratio Gear Ratio	<= 1.60864				

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
ź		·	If the above parameters are true					
							>= 1.1 Fail T	Timer (Sec)
							- Fai	il Count in
								nd Gear
							-	or otal Fail
								Counts
			Fail Case 3 Case: Steady State 4th gear					
				Table Based				
			Max Delta Output Speed	value Please Refer to 3D				
			Hysteresis	>= Refer to 3D Table 1 in rpm/sec				
				supporting				
				documents Table Based				
				value Please				
			Min Delta Output Speed Hysteresis	Refer to 3D				
			with Bolita Output Speed Hystoresis	>= Table 2 in supporting				
				documents				
				Table Based				
				Time Please				
			If the Above is True for Time	>= Refer to Table 17 in Sec				
				supporting				
				documents				
			Intrusive test: (C1234 clutch exhausted)					
			Gear Ratio	<= 0.89465				
			Gear Ratio					
			If the above parameters are true					
							>= 1.1 Fail T	Timer (Sec)
							, Fail (Count in 4th
								Gear
							-	or intel Fail
								otal Fail Counts
			Fail Case 4 Case: Steady State 6th gear				`	

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction		Enable Conditions			T Rec	ime quired	Mil Illum.
			Max Delta Output Speed Hysteresis	Table Based value Please Refer to 3D Table 1 in supporting documents								
			Min Delta Output Speed Hysteresis	Table Based value Please								
			If the Above is True for Time	Table Based Time Please Refer to Table 17 in supporting documents								
			Intrusive test: (CB26 clutch exhausted)									
			Gear Ratio	<= 0.89465					>=	1.1	Fail Timer (Sec)	
			Gear Ratio If the above parameters are true						>=	3	counts	
									>=	1.1	Fail Timer (Sec)	
									>=	3	Fail Count in 6th Gear	
									>=	3	or Total Fail Counts	
					PRNDL State defaulted	=	FALSE	Boolean				
					inhibit RVT IMS fault pending indication	=	FALSE FALSE	Boolean 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	>=	67	Nm				

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria		shold Ilue	Secondary Malfunction		Enable Conditions		Time Required	Mil Illum.
						(B) Accelerator Pedal enable	>=	0.5005	Nm		
						Ignition Voltage Lo	>=	8.59961	Volts		
						Ignition Voltage Hi	<=	31.99902	Volts		
						Engine Speed Lo	>=	400	RPM		
						Engine Speed Hi	<=	7500	RPM		
						Engine Speed is within the allowable limits for	>=	5	Sec		
						if Attained Gear=1st FW Accelerator Pedal enable	>=	5.0003	Pct		
						if Attained Gear=1st FW Engine Torque Enable	>=	5	Nm		
						if Attained Gear=1st FW Engine Torque Enable	<=	8191.88	Nm		
						Transmission Fluid Temperature	>=	-6.6563	°C		
						Input Speed Sensor fault	=	FALSE	Boolean		
						Output Speed Sensor fault	=	FALSE	Boolean		
					Disable Conditions:	MIL not Illuminated for DTC's:		6, P0717, P0722	, P0723,		
							P0107, P010 P0175, P020 P0205, P020 P0301, P030	I, 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,		
Variable Bleed Solenoid (VBS)	P0777	Pressure Control (PC) Solenoid B StuckOn [C35R] (Dymanic)	Primary Offgoing Clutch is exhausted (See Table 12 in Supporting Documents for Exhaust Delay Timers)	= TRUE	Boolean						One Trip
			Primary Oncoming Clutch Pressure Command Status								
			Primary Offgoing Clutch Pressure Command Status	Clutch = exhaust command							
			Range Shift Status	≠ Initial Clutch Control							

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria		eshold alue	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
			Attained Gear Slip <=	40	RPM				
			If the above conditions are true run appropriate Fail 1 Timers Below:						
			fail timer 1 (3-1 shifting with Closed Throttle) >=	0.5	Fail Time (Sec)				
			fail timer 1 (3-2 shifting with Throttle) >=	0.2998	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) >=	0.2998	Fail Time (Sec)				
			fail timer 1 (3-4shifting with Closed Throttle) >=	0.5	Fail Time (Sec)				
			fail timer 1 (3-5 shifting with Throttle) >=	0.2998	Fail Time (Sec)				
			fail timer 1 (3-5 shifting with Closed Throttle) >=	0.5	Fail Time (Sec)				
			fail timer 1 (5-3 shifting with Throttle) >=	0.2998	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) >=	0.2998	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) >=	0.2998	Fail Time (Sec)				
			fail timer 1 (5-6 shifting with Closed Throttle) >=	0.5	Fail Time (Sec)				

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction		Enable Conditions				me uired	Mil Illum.
			If Attained Gear Slip is Less than Above Cal Increment Fail Timers						Til + En >=	Total Fail me = (Fail Fail 2) See hable Time r Fail Time 1, and Reference Supporting Table 15 for fail Timer 2	e rs r sec	
			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						>=	3	5th gear fail counts OR	
			Total fail counter						>=	5	total fail counts	
					TUT Enable temperature	>=	-6.6563	°C				1
					Input Speed Sensor fault	=	FALSE	Boolean				
					Output Speed Sensor fault	=	FALSE	Boolean				
					Command / Attained Gear	¥	1st	Boolean				
					High Side Driver ON	=	TRUE	Boolean				
					output speed limit for TUT	>=	100	RPM				
					input speed limit for TUT PRNDL state defaulted	>=	150 FALSE	RPM Boolean				
					IMS Fault Pending	=	FALSE	Boolean				
					Service Fast Learn Mode	=	FALSE	Boolean				
					HSD Enabled	=	TRUE	Boolean				
					Default Gear Option is not present	=	TRUE	Doolean				
					present							

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Require	ed	Mil Illum.
				Disable		TCM: P0716, P0717, P0722, P0723,			
				Conditions:	DTC's:	P182E			1
									1
						ECM: P0101, P0102, P0103, P0106,			1
						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			1
		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						One mp
							Please See		1
			Gear slip	>= 400 RPM			>= Table 5 For Neutral Time	Neutral Timer (Sec)	1
							Cal	(360)	1
			Intrusive test:						
			commanded 5th gear						1
				Please refer to Table 3 in					1
			If attained Gear ≠5th for time	Supporting					1
			if the share and this as have been	Documents					1
			if the above conditions have been met						1
			Increment 4th Gear Fail Counter				>= 3	4th Gear Fail	1
			increment 4th Gear Fair Counter				>= 3	Count	1
								OR C456 Fail	1
			and C456 Fail Counters				>= 14	Counts	
			Fail Case 2 Case: Steady State 5th Gear						1
							Please See Table 5 For	Neutral Timer	1
			Gear slip	>= 400 RPM			>= Neutral Time	(Sec)	1
							Cal		
			Intrusive test: commanded 6th gear						1
			commanded our gear	Please Refer					
			If attained Gear ≠ 6th for time	to Table 2 in					
				Supporting Documents					
L	1			Documents					

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction		Enable Conditions			Tim Requi		Mil Illum.
			if the above conditions have been met									
			Increment 5th Gear Fail Counter						>=	3	5th Gear Fail Count	
			and C456 Fail Counters						>=	14	OR C456 Fail Counts	
			Fail Case 3 Case: Steady State 6th Gear							ease See		
			Gear slip	>= 400 RPM						able 5 For eutral Time Cal	Neutral Timer (Sec)	
			Intrusive test: commanded 5th gear									
			If attained Gear ≠ 5th for time	Please refer to Table 3 in Supporting Documents								
			if the above conditions have been met	Documents								
			Increment 6th Gear Fail Counter and C456 Fail Counter						>=	3	6th Gear Fail Count OR	
			and C456 Fail Counter						>=	14	C456 Fail Counts	
					PRNDL State defaulted inhibit RVT	=	FALSE FALSE	Boolean				
					IMS fault pending indication	=	FALSE	Boolean Boolean				
					TPS validity flag	=	TRUE	Boolean				
					Hydraulic System Pressurized	=	TRUE	Boolean				
					Minimum output speed for RVT	>=	67	RPM				
					A OR B							
					(A) Output speed enable	>=	67	RPM				
					(B) Accelerator Pedal enable	>=	0.5005	Pct				
					Common Enable Criteria		0 E0041	Volto				
					Ignition Voltage Lo Ignition Voltage Hi	>= <=	8.59961 31.99902	Volts Volts				
					Engine Speed Lo	<= >=	400	RPM				
					Engine Speed Hi	<=	7500	RPM				

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Tim Requi	e red	Mil Illum.
		Description		Disable Conditions:	Engine Speed is within the allowable limits for Throttle Position Signal valid HSD Enabled Transmission Fluid Temperature Input Speed Sensor fault OutputSpeed Sensor fault Default Gear Option is not present MIL not Illuminated for DTC's:	>= 5 Sec = TRUE Boolean = TRUE Boolean >= -6.6563 °C = FALSE Boolean = FALSE Boolean - TRUE			
Variable Bleed Solenoid (VBS)	P0797	Pressure Control (PC) Solenoid C Stuck On [C456] (Steady State)	Fail Case 1 Case: Steady State 1st Attained Gear slip If the Above is True for Time Intrusive test: (CBR1 clutch exhausted) Gear Ratio Gear Ratio If the above parameters are true	>= 400 RPM Table Based Time Please Refer to Table Enable Time 4 in (Sec) supporting documents <= 1.20959 >= 1.09436				Fail Timer (Sec) Fail Count in 1st Gear	One Trip

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
							>= 3 ^{or} Counts	
			Fail Case 2 Case Steady State 2nd					1
			Max Delta Output Speed Hysteresis	Table Based value Please Refer to 3D Table 1 in supporting documents				
			Min Delta Output Speed Hysteresis	Table Based value Please Refer to 3D				
			If the Above is True for Time	supporting				
			Intrusive test: (CB26 clutch exhausted) Gear Ratio Gear Ratio If the above parameters are true	<= 1.20959 >= 1.09436				
							>= 1.1 Fail Timer (Sec	c)
							>= 3 Fail Count in 2nd Gear or	
							>= 3 Total fail counts	.s
			Fail Case 3 Case Steady State 3rd					-1

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	E Co	Enable Inditions			T Req	ime uired	Mil Illum.
			Max Delta Output Speed Hysteresis	Table Based value Please Refer to 3D Table 1 in supporting documents								
			Min Delta Output Speed Hysteresis	Table Based value Please								
			If the Above is True for Time	Table Based Time Please Refer to Table Sec supporting documents								
			Intrusive test: (C35R clutch exhausted) Gear Ratio Gear Ratio If the above parameters are true									
									>=	1.1	Fail Timer (Sec)	
									>=	3 OR	Fail Count in 3rd Gear	
									>=	3	Total Fail Counts	
					PRNDL State defaulted		FALSE	Boolean				1
					inhibit RVT IMS fault pending indication		FALSE FALSE	Boolean Boolean				
					output speed	>=	0	RPM				
					TPS validity flag	=	TRUE	Boolean				
					HSD Enabled	=	TRUE	Boolean				
					Hydraulic_System_Pressurized	=	TRUE	Boolean				
					A OR B							
					(A) Output speed enable	>=	67	Nm				
					(B) Accelerator Pedal enable	>=	0.5005	Nm				

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Thres Va		Secondary Malfunction		Enable Conditions		Time Required	Mil Illum.
System	Code					Ignition Voltage Lo Ignition Voltage Hi Engine Speed Lo Engine Speed Is within the allowable limits for if Attained Gear=1st FW Accelerator Pedal enable if Attained Gear=1st FW Engine Torque Enable if Attained Gear=1st FW Engine Torque Enable Transmission Fluid Temperature	>= <= <= >= >= >= <= >=	8.59961 31.99902 400 7500 5 5.0003 5 8191.88 -6.6563	Volts Volts RPM RPM Sec Pct Nm Nm		
					Disable Conditions:		P182E ECM: P0101, P0107, P010 P0175, P020 P0205, P020	FALSE FALSE TRUE P0717, P0722 P0102, P0103 8, P0171, P017 1, P0202, P020 6, P0207, P020 2, P0303, P030	, P0106, 2, P0174, 3, P0204, 18, P0300,		
Variable Bleed Solenoid (VBS) P0797	Pressure Control (PC) Solenoid C Stuck On [C456] (Dynamic)	Primary Offgoing Clutch is exhausted (See Table 11 in Supporting Documents for Exhaust Delay Timers) Primary Oncoming Clutch Pressure Command Status Primary Offgoing Clutch Pressure Command Status	= TRUE = Maximum pressurized Clutch	Boolean		P0306, P030	7, P0308, P040	11, P042E		One Trip

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria		Thre Va	eshold alue	Secondary Malfunction	Enable Conditions	Time Required	M Illu	
			Range Shift Status Attained Gear Slip	+	itial Clutch Control 40	RPM					
			If the above conditions are true increment appropriate Fail 1 Timers Below:								
			(4-1 shifting with throttle)	>=	0.2998	Fail Time (Sec)					
			fail timer 1 (4-1 shifting without throttle) fail timer 1	>=	0.5	Fail Time (Sec)					
			(4-2 shifting with throttle) fail timer 1	>=	0.2998	Fail Time (Sec)					
			(4-2 shifting without throttle) fail timer 1	>=	0.5	Fail Time (Sec)					
			(4-3 shifting with throttle) fail timer 1		0.2998	Fail Time (Sec)					
			(4-3 shifting without throttle) fail timer 1	>=	0.5 0.2998	Fail Time (Sec) Fail Time (Sec)					
			(5-3 shifting with throttle) fail timer 1 (5-3 shifting without throttle)	>=	0.5	Fail Time (Sec)					
			fail timer 1 (6-2 shifting with throttle)	>=	0.2998	Fail Time (Sec)					
			fail timer 1 (6-2 shifting without throttle)	>=	0.5	Fail Time (Sec)					
			If Attained Gear Slip is Less than Above Cal Increment Fail Timers						Total Fail Time = (Fail 1 + Fail 2) See Enable Timers for Fail Timer 1, and Reference Supporting	sec	
									Supporting Table 15 for Fail Timer 2		

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions		ime quired	Mil Illum.
			If fail timer is greater than threshold increment corresponding gear fail counter and total fail counter						
			4th gear fail counter				>= 3	Fail Counter From 4th Gear OR	
			5th gear fail counter				>= 3	Fail Counter From 5th Gear OR	
			6th gear fail counter				>= 3	Fail Counter From 6th Gear OR	
			Total fail counter				>= 5	Total Fail Counter	
					TUT Enable temperature Input Speed Sensor faull Output Speed Sensor faull Command / Attained Gear High Side Driver ON output speed limit for TUT input speed limit for TUT PRNDL state defaulted IMS Fault Pending Service Fast Learn Mode HSD Enabled	 FALSE Boolean FALSE Boolean ✓ 1st Boolean TRUE Boolean TRUE Boolean >= 100 RPM >= 150 RPM FALSE Boolean FALSE Boolean = FALSE Boolean a FALSE Boolean TRUE Boolean 			
				Disabl Condition:	:: 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			
Tap Up Tap Down Switch (TUTD)	P0815	Upshift Switch Circuit	Fail Case 1 Tap Up Switch Stuck in the Up Position in Range 1 Enabled	= 0 Boolean					Special No MIL

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria		reshold /alue	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
			Tap Up Switch Stuck in the Up Position in Range 2 Enabled	= 0	Boolean				
			Tap Up Switch Stuck in the Up Position in Range 3 Enabled	= 0	Boolean				
			Tap Up Switch Stuck in the Up Position in Range 4 Enabled	= 0	Boolean				
			Tap Up Switch Stuck in the Up Position in Range 5 Enabled	= 0	Boolean				
			Tap Up Switch Stuck in the Up Position in Range 6 Enabled	= 0	Boolean				
			Tap Up Switch Stuck in the Up Position in Neutral Enabled	= 1	Boolean				
			Tap Up Switch Stuck in the Up Position in Park Enabled	= 1	Boolean				
			Tap Up Switch Stuck in the Up Position in Reverse Enabled	= 0	Boolean				
			Tap Up Switch ON	= TRUE	Boolean			>= 1 Fail Time (See	:)
			Fail Case 2 Tap Up Switch Stuck in the Up Position in Range 1 Enabled	= 1	Boolean				
			Tap Up Switch Stuck in the Up Position in Range 2 Enabled	= 1	Boolean				
			Tap Up Switch Stuck in the Up Position in Range 3 Enabled	= 1	Boolean				
			Tap Up Switch Stuck in the Up Position in Range 4 Enabled	= 1	Boolean				
			Tap Up Switch Stuck in the Up Position in Range 5 Enabled	= 1	Boolean				
			Tap Up Switch Stuck in the Up Position in Range 6 Enabled	= 1	Boolean				
			Tap Up Switch Stuck in the Up Position in Neutral Enabled	= 0	Boolean				
			Tap Up Switch Stuck in the Up Position in Park Enabled	= 0	Boolean				
			Tap Up Switch Stuck in the Up Position in Reverse Enabled	= 0	Boolean				
			Tap Up Switch ON NOTE: Both Failcase1 and	= TRUE	Boolean			>= 600 Fail Time (Se	.)
			Failcase 2 Must Be Met						-
			1						

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Thr V	eshold /alue	Secondary Malfunction	l Co	Enable onditions		Time Required	Mil Illum.
						Time Since Last Range Change Ignition Voltage Lo Ignition Voltage Hi Engine Speed Lo Engine Speed Hi Engine Speed is within the allowable limits for	<= 3 >= <= >=	1 E 8.59961 31.99902 400 7500 5 	nable Time (Sec) Volts Volts RPM RPM Sec		
					Disable Conditions:	P0815 Status is MIL not Illuminated for DTC's	<i>*</i> Ο		P1876,		
					oonanionoi						
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		ECM: None				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						

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria		reshold /alue	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
			Tap Down Switch Stuck in the Down Position in Range 5 Enabled	= 0	Boolean				
			Tap Down Switch Stuck in the Down Position in Range 6 Enabled	= 0	Boolean				
			Tap Down Switch Stuck in the Down Position in Range Neutral Enabled	- 1	Boolean				
			Tap Down Switch Stuck in the Down Position in Range Park Enabled	- 1	Boolean				
			Tap Down Switch Stuck in the Down Position in Range Reverse Enabled	= 0	Boolean				
			Tap Down Switch ON	TRUE	Boolean			>= 1 sec	
			Fail Case 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	= 0	Boolean				
			Tap Down Switch Stuck in the Down Position in Park Enabled	- 0	Boolean				

Component/	Fault	Monitor Strategy	Malfunction		eshold alue	Secondary Malfunction		Enable Conditions			Ti	me uired	Mil
System	Code	Description	Criteria Tap Down Switch Stuck in the Down Position in Reverse Enabled	= 0	Boolean	Manunction		Conditions			Keq	uirea	
			Tap Down Switch ON NOTE: Both Failcase1 and Failcase 2 Must Be Met	= TRUE	Boolean					>=	600	sec	
						Time Since Last Range	>=	1	Enable Time				
						Change Ignition Voltage Lo Ignition Voltage Hi	>= <=	8.59961 31.99902	(Sec) Volts Volts				
						Engine Speed Lo Engine Speed Hi Engine Speed is within the	>= <=	400 7500	RPM RPM				
						allowable limits for	>=	5 Test Failed	Sec				
						P0816 Status is	¥	This Key On or Fault Active					
					Disable Conditions:	MIL not Illuminated for DTC's:	TCM: P0815, P1877, P191		, P1876,				
							ECM: None						
p Up Tap Down Switch UTD)	P0826	Up and Down Shift Switch Circuit	TUTD Circuit Reads Invalid Voltage	= TRUE	Boolean					>=	60	Fail Time (Sec) Spe No
						Ignition Voltage Lo Ignition Voltage Hi Engine Speed Lo	>= <= >=	8.59961 31.99902 400	Volts Volts RPM				

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria		reshold /alue	Secondary Malfunction		Enable Conditions				me uired	Mil Illum.
Gystein	oode	besonption	Union a			Engine Speed Hi Engine Speed is within the allowable limits for		7500 5	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						
Variable Bleed Solenoid (VBS)	P0961	Pressure Control (PC) Solenoid A Control Circuit Rationality Test (Line Pressure VBS)	The HWIO reports an invalid voltage (out of range) error flag		Boolean					>=	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	<= >= <=	8.59961 31.99902 400 7500 5	Volts Volts RPM RPM Sec				
					Disable Conditions:	MIL not Illuminated for DTC's:	TCM: None ECM: None						
Variable Bleed Solenoid (VBS)	P0962	Pressure Control (PC) Solenoid A Control Circuit Low Voltage (Line Pressure VBS)	The HWIO reports a low voltage (ground short) error flag	= TRUE	Boolean					>=	1.5	Fail Time (Sec)	One Trij
										out of	1.875	Sample Time (Sec)	
						Ignition Voltage Ignition Voltage Engine Speed Engine Speed		8.59961 31.99902 400 7500	Volts Volts RPM RPM				

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Thr V	eshold alue	Secondary Malfunction		Enable Conditions			Tir Requ		Mil Illum.
						Engine Speed is within the allowable limits for	>=	5	Sec				
					Disable Conditions:	MIL not Illuminated for DTC's:	TCM: None ECM: None						
													Two Trips
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)	
										out of	5	Sample Time (Sec)	
						Ignition Voltage Ignition Voltage	>= <=	8.59961 31.99902	Volts Volts				
						Engine Speed	>=	400	RPM				
						Engine Speed	<=	7500	RPM				
						Engine Speed is within the allowable limits for	>=	5	Sec				
					Disable Conditions:	MIL not Illuminated for DTC's:	TCM: None ECM: None						
Variable Bleed Solenoid (VBS)	P0966	Pressure Control (PC) Solenoid B Control Circuit Low Voltage (C35R VBS)	The HWIO reports a low voltage (ground short) error flag		Boolean					>=	0.3	Fail Time (Sec)	One Trip
										out of	0.375	Sample Time (Sec)	
						Ignition Voltage	>=	8.59961	Volts				
						Ignition Voltage Engine Speed	<= >=	31.99902 400	Volts RPM				
						Engine Speed	<=	7500	RPM				
						Engine Speed is within the	>=	5	Sec				
						allowable limits for	>=	J	JEL				

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria		Threshold Value	Secondary Malfunction		Enable Conditions			Ti Requ	me uired	Mil Illum.
						P0966 Status is not	=	Test Failed This Key On or Fault Active					
					Disable Conditions:	MIL not Illuminated for DTC's:	TCM: None ECM: None						
Variable Bleed Solenoid (VBS)	P0967	Pressure Control (PC) Solenoid B Control Circuit High Voltage (C35R VBS)	The HWIO reports a high voltage (open or power short) error flag	= TF	RUE Boolean					>=	0.3	Fail Time (Sec)	One Trip
										out of	0.375	Sample Time (Sec)	
						Ignition Voltage Ignition Voltage Engine Speed Engine Speed Engine Speed is within the allowable limits for		8.59961 31.99902 400 7500 5 Test Failed	Volts Volts RPM RPM Sec				
						P0967 Status is not	=	This Key On or Fault Active					
					Disable Conditions:	MIL not Illuminated for DTC's:							
Variable Bleed Solenoid (VBS)	P0970	Pressure Control (PC) Solenoid C Control Circuit Low Voltage (C456/CBR1 VBS)	The HWIO reports a low voltage (ground short) error flag		RUE Boolean					>=	0.3	Fail Time (Sec)	One Trip
										out of	0.375	Sample Time (Sec)	

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Thresho Value		Secondary Malfunction		Enable Conditions				me uired	Mil Illum.
						P0970 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	>= <= >= >=	8.59961 31.99902 400 7500 5	Volts Volts RPM RPM 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	= TRUE B	oolean					>= out of	0.3 0.375	Fail Time (Sec) Sample Time (Sec)	
						P0971 Status is not	=	Test Failed This Key On or Fault Active		U		(386)	
						Ignition Voltage Ignition Voltage Engine Speed Engine Speed is within the allowable limits for	>= <= >= >=	8.59961 31.99902 400 7500 5	Volts Volts RPM RPM Sec				
					Disable Conditions:	MIL not Illuminated for DTC's:	TCM: None ECM: None						
Shift Solinoid	P0973	Shift Solenoid A Control Circuit Low (Mode 2 Solenoid)	The HWIO reports a low voltage (ground short) error flag	= TRUE B	oolean					>=	1.2	Fail Time (Sec)	One T

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	eshold alue	Secondary Malfunction		Enable Conditions				me uired	Mil Illum.
									out of	1.5	Sample Time (Sec)	
					P0973 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	<= >= <=	8.59961 31.99902 400 7500 5	Volts Volts RPM RPM Sec				
				Disable Conditions:	MIL not Illuminated for 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	<= >= <=	8.59961 31.99902 400 7500 5	Volts Volts RPM RPM Sec				

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria		reshold /alue	Secondary Malfunction		Enable Conditions				me uired	Mil Illum.
					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 1.5	Sec Sec	One Trip
						P0977 Status is not		Test Failed This Key On or Fault Active		of	1.5		
						Ignition Voltage Ignition Voltage Engine Speed Engine Speed Engine Speed is within the allowable limits for	<= >= <=	8.59961 31.99902 400 7500 5	Volts Volts RPM RPM Sec				
					Disable Conditions:	MIL not Illuminated for DTC's:	TCM: None ECM: None						
Tap Up Tap Down Switch (TUTD)	P1761	Tap Up and Down switch signal circuit (rolling count)	Rolling count value received from BCM does not match expected value	= TRUE	Boolean					>=	3	Fail Counter	Special No MIL
						Tea lla Tea Davia Massara				>	10	Sample Timer (Sec)	
						Tap Up Tap Down Message Health Engine Speed Lo Engine Speed Hi Engine Speed is within the allowable limits for	>= <=	TRUE 400 7500 5	Boolean RPM RPM Sec				

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value		Secondary Malfunction	Enable Conditions		ime uired	Mil Illum.
- Of October		Decemption			Disable	MIL not Illuminated for				
					Conditions:	DTC's:				
							ECM: None			
	-		Fail Case 1	Transition 1						One Trip
Internal Mode Switch (IMS)	P182E	Internal Mode Switch - Invalid Range	Current range	= (bit state Rang	je					
				1110)						
			Previous range	≠ CeTRGR_e_P RNDL_Drive6 Rang	10					
			i revious range	RNDL_Drive6	JC					
			Previous range	≠ CeTRGR_e_P RNDL_Drive5 Rang	je					
				Dongo Chift						
			Range Shift State	= Completed ENU	М					
			Absolute Attained Gear Slip							
			Attained Gear							
			Attained Gear Throttle Position Available	>= First = TRUE						
			Throttle Position							
			Output Speed							
			Engine Torque	>= 50 Nm						
			Engine Torque	<= 8191.75 Nm						
			If the above conditions are met						5	
			then Increment Fail Timer					>= 1	Fail Seconds	
			If Fail Timer has Expired then					>= 5	Fail Counts	
			Increment Fail Counter Fail Case 2 Output Speed	<= 70 rpm						
			The following PRNDL sequence	<- <i>10</i> ipiii						
			events occur in this exact order:							
			PRNDL state	= Drive 6 (bit Rang	e					
			PRNDL state = Drive 6 for	State 0110)	, -					
1		1	PRIVUL SIDIE = DIVE 0 101	>= 1 Sec				I		

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria			shold lue	Secondary Malfunction		Enable Conditions			Tir Requ		Mil Illum.
				T	ransition 8									
			PRNDL state			Range								
					0111)									
				1	Drive 6 (bit	_								
			PRNDL state	= 5	state 0110)	Range								
					ransition 1									
			PRNDL state			Range								
					1110)	5								
			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											
			Increment Fail Timer								>=	3	Fail Seconds	
			delay timer	>=	1	Sec								
			Input Speed		400	Sec								
			If Fail Timer has Expired then									2	E all Caunta	
			Increment Fail Counter								>=	2	Fail Counts	
			Fail Case 3	T	ransition 13				CeTRGR_					1
			Current range	=	(bit state	Range	Previous range	¥	e_PRNDL					
					0010)				_Drive5					
									CeTRGR_					
			Engine Torque	>=	-8192	Nm	Previous range	≠	e_PRNDL					
									_Drive5					
			Engine Torque	<=	8191.75	Nm	IMS is 7 position configuration if the INIS / Position config =	=	0	Boolean				
							1 then the "previous range"							
			If the above conditions are met				criteria above must also be				>=	0.225	Seconds	
			then, Increment Fail Timer				satsified when the "current				/-	0.225	Seconds	
							range" - "Transition 13"							
			If Fail Timer has Expired then								>=	15	Fail Counts	
			Increment Fail Counter								/-	15	T all Courits	
			Fail Case 4	l ,	Fransition 8		Disable Fail Case 4 if last							
			Current range		(bit state	Range	positive range was Drive 6 and							
			ourient tange		0111)	Runge	current range is transition 8							
					5111)		Ũ							
							Set inhibit bit true if PRNDL =				1			
							1100 (rev) or 0100 (Rev-Neu							
			Inhibit bit (see definition)	=	FALSE		transition 11)							
							Set inhibit bit false if PRNDL =							
							1001 (park)							
			Steady State Engine Torque	>=	100	Nm								

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
			Steady State Engine Torque If the above conditions are met then Increment Fail Timer	<= 8191.75 Nm			>= 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	Sidle (100)				
			PRNDL State	Transition 11 = (bit state Range 0100)				
			PRNDL State	 Neutral (bit state 0101) Range Transition 11 				
			PRNDL State					
			Above sequencing occurs in Then delay timer increments					
			Delay timer Range Shift State	Danas Chift				
			Absolute Attained Gear Slip Attained Gear	<= Sixth				
			Attained Gear Throttle Position Output Speed	>= 8.0002 pct				
			If the above conditions are met Increment Fail Timer				>= 20 Seconds	
			Fail Case 6 Current range	Illegal (bit = state 0000 or 1000 or 0001)	A Open Circuit Definition (flag set false if the following conditions are met):			
			and		Current Range	Transition ≠ 11 (bit state 0100)		
			A Open Circuit (See Definition)	= FALSE Boolean	or			

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
					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	ABCP = 1101				
			Previous PRNDL state Input Speed Reverse Trans Ratio Reverse Trans Ratio	>= 150 RPM <= 2.97595 ratio				
			If the above Condtions are met then, Increment Fail timer				>= 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	<= 31.99902 Volts		
					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		Thre Va	eshold alue	Secondary Malfunction		Enable Conditions			Tir Requ		Mil Illum.
						Disable Conditions:		P07C0, P0 ECM: P010 P0107, P01 P0175, P02 P0205, P02		77D 3, P0106, 72, P0174, 03, P0204, 08, P0300,				
								P0306, P03	807, P0308, P040	01, P042E				
Internal Mode Switch (IMS)	P1915	Internal Mode Switch Does Not Indicate Park/Neutral (P/N) During Start	PRNDL State is		Park or Neutral	Enumeration								One Trip
			The following events must occur Sequentially											
			Initial Engine speed	<=	50	RPM					>=	0.25	Enable Time (Sec)	
			Then Engine Speed Between Following Cals											
			Engine Speed Lo Hist		50	RPM							Enable Time	
			Engine Speed Hi Hist	<=	480	RPM					>=	0.06875	(Sec)	4
			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 31.99902	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		Threshold Value	Secondary Malfunction		Enable Conditions				me uired	Mil Illum.
						P1915 Status is	¥	Test Failed This Key On or Fault Active					
					Disable Conditions:	DTC's:		, P0723					
Transmission Control Module (TCM)	P2534	Ignition Switch Run/Start Position Circuit Low	TCM Run crank active (based on voltage thresholds below)	= FAL	SE 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	=	TRUE	Boolean				
						ECM run/crank active status	=	TRUE	Boolean				
					Disable Conditions:	MIL not Illuminated for DTC's:	TCM: None ECM: None						
Transmission Control Module (TCM)	P2535	Ignition Switch Run/Start Position Circuit High	TCM Run crank active (based on voltage thresholds below)	= 160	JE Boolean								One Trip
			Ignition Voltage High Hyst (run 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)	2	Volts					Out of	280	Sample Counts (25ms loop)	
						ECM run/crank active status available	=	TRUE	Boolean				
						ECM run/crank active status	=	FALSE	Boolean				

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
				Disable Conditions:	MIL not Illuminated for DTC's:	TCM: None		
						ECM: None		
Variable Bleed Solenoid (VBS)	P2714	Pressure Control (PC) Solenoid D Stuck Off [CB26]	Fail Case 1 Case: Steady State 2nd Gear					One Trip
							Please See	
			Gear slip	>= 400 RPM			>= Table 5 For Neutral Timer Neutral Time (Sec) Cal	
			Intrusive test: commanded 3rd gear					
				Table Based Time Please				
			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					
			Kathaland Coose . Eth For Time	Table Based Time Please Enable Time				
			ii attained Gear = 5th For Time	Time Please see Table 2 in Supporting Documents				
			If Above Conditions have been met, Increment 5th gear fail				>= 3 5th Gear Fail Count	
			counter				Or	

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction		Enable Conditions			Time Requir		Mil Illum.
			and CB26 Fail Count						>=	14	CB26 Fail Count	
					PRNDL State defaulted	=	FALSE	Boolean				
					inhibit RVT	=	FALSE	Boolean				
					IMS fault pending indication	=	FALSE	Boolean				
					TPS validity flag	=	TRUE	Boolean				
					Hydraulic System Pressurized	=	TRUE	Boolean				
					Minimum output speed for RVT	>=	0	RPM				
					A OR B							
					(A) Output speed enable		67	RPM				
					(B) Accelerator Pedal enable		0.5005	Pct				
					Common Enable Criteria							
					Ignition Voltage Lo	>=	8.59961	Volts				
					Ignition Voltage Hi	<=	31.99902	Volts				
					Engine Speed Lo		400	RPM				
					Engine Speed Hi		7500	RPM				
					Engine Speed is within the	>=	5	Sec				
					allowable limits for			Sec				
					Throttle Position Signal valid		TRUE	Boolean				
					HSD Enabled	=	TRUE	Boolean				
					Transmission Fluid Temperature	>=	-6.6563	°C				
					Input Speed Sensor fault		FALSE	Boolean				
					Output Speed Sensor fault		FALSE	Boolean				
					Default Gear Option is not			Doolcan				
					present	=	TRUE					
				Disable Conditions:	MIL not Illuminated for DTC's:		6, P0717, P0722	, P0723,				
						P0107, P01 P0175, P02 P0205, P02 P0301, P03	1, P0102, P0103 08, P0171, P017 001, P0202, P020 06, P0207, P020 002, P0303, P030 007, P0308, P040	72, P0174, 03, P0204, 08, P0300, 04, P0305,				

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria			eshold alue	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
Variable Bleed Solenoid (VBS)	P2715	Pressure Control (PC) Solenoid D Stuck On [CB26] (Dynamic)	Primary Offgoing Clutch is exhausted (See Table 13 in Supporting Documents for Exhaust Delay Timers)	=	TRUE	Boolean				One Trip
			Primary Oncoming Clutch Pressure Command Status	-	Maximum pressurized					
			Primary Offgoing Clutch Pressure Command Status		Clutch exhaust command					
			Range Shift Status	Ŧ	nitial Clutch Control					
			Attained Gear Slip	<=	40	RPM				
			If above coditons are true, increment appropriate Fail 1 Timers Below:							
			fail timer 1 (2-1 shifting with throttle)	>=	0.2998	Fail Time (Sec)				
			fail timer 1 (2-1 shifting without throttle)	>=	0.5	Fail Time (Sec)				
			fail timer 1 (2-3 shifting with throttle)	>=	0.2998	Fail Time (Sec)				
			fail timer 1 (2-3 shifting without throttle)	>=	0.5	Fail Time (Sec)				
			fail timer 1 (2-4 shifting with throttle)	>=	0.2998	Fail Time (Sec)				
			fail timer 1 (2-4 shifting without throttle)	>=	0.5	Fail Time (Sec)				
			fail timer 1 (6-4 shifting with throttle)	>=	0.2998	Fail Time (Sec)				
			fail timer 1 (6-4 shifting without throttle)	>=	0.5	Fail Time (Sec)				
			fail timer 1 (6-5 shifting with throttle)	>=	0.2998	Fail Time (Sec)				
			fail timer 1 (6-5 shifting without throttle)	>=	0.5	Fail Time (Sec)				

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
			If Attained Gear Slip is Less than Above Cal Increment Fail Timers				Total Fail Time = (Fail 1 + Fail 2) See Enable Timers = for Fail Timer 1, and Sec 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 OR	r
			6th gear fail counter				>= 3 Fail Counter From 6th Gear	
			total fail counter				>= 5 OR Total Fail Counter	
					TUT Enable temperature Input Speed Sensor fault			
					Output Speed Sensor fault			
					Command / Attained Gear	≠ 1st Boolean		
					High Side Driver ON	= TRUE Boolean		
					output speed limit for TUT			
					input speed limit for TUT			
					PRNDL state defaulted			
					IMS Fault Pending Service Fast Learn Mode			
					Service Fast Learn Mode HSD Enabled			
					HSD Ellableu			

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	F	Time Required	Mil Illum.
				Disable Conditions:	MIL not Illuminated for DTC's:	TCM: P0716, P0717, P0722, P0723, P182E			
						ECM: P0101, P0102, P0103, P0106, P0107, P0108, P0171, P0172, P0174, P0175, P0201, P0202, P0203, P0204, P0205, P0206, P0207, P0208, P0300, P0301, P0302, P0303, P0304, P0305, P0306, P0307, P0308, P0401, P042E			
Variable Bleed Solenoid (VBS)	P2715	Pressure Control (PC) Solenoid D Stuck On [CB26] (Steady State)	Fail Case 1 Case: Steady State 1st						One Trip
			Attained Gear slip	>= 400 RPM Table Based Time Please					
			If the Above is True for Time	>= Refer to Table Enable Time 4 in (Sec) supporting					
			Intrusive test: (CBR1 clutch exhausted) Gear Ratio Gear Ratio If the above parameters are true	<= 2.48218 >= 2.24585					
							>= 1.1	Fail Timer (Sec)	
							>= 5	Fail Count in 1st Gear	
							>= 5	or Total Fail Counts	
			Fail Case 2 Case: Steady State 3rd Gear Max Delta Output Speed Hysteresis	Table Based value Please Refer to 3D					

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
			Min Delta Output Speed Hysteresis	Table Based value Please Refer to 3D Table 2 in supporting documents				
			If the Above is True for Time	Table Based Time Please Refer to Table 17 in supporting documents				
			Intrusive test: (C35R clutch exhausted) Gear Ratio Gear Ratio If the above parameters are true	<= 2.48218				
							>= 1.1 Fail Timer (Sec	:)
							>= 3 Fail Count in 3rd Gear or 5 Total Fail	
			Fail Case 3 Case: Steady State 4rd Gear				Counts	-
			Max Delta Output Speed Hysteresis					
			Min Delta Output Speed Hysteresis	Table Based value Please Refer to 3D Table 2 in supporting documents				

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
			If the Above is True for Time	supporting				
			Intrusive test: (C1234 clutch exhausted) Gear Ratio Gear Ratio	<= 0.70032 >= 0.63367				
			If the above parameters are true				>= 1.1 Fail Timer (Sec)	
							>= 3 Fail Count in 4th Gear or	
							>= 5 Total Fail Counts	
			Fail Case 4 Case: Steady State 5th Gear Max Delta Output Speed Hysteresis	Table Based value Please Refer to 3D				
			Min Delta Output Speed Hysteresis	supporting documents				
			If the Above is True for Time	Table Based Time Please Refer to Table 17 in Supporting documents				
			Intrusive test: (C35R clutch exhausted) Gear Ratio Gear Ratio	<= 0.70032				

Component/	Fault	Monitor Strategy	Malfunction	Threshold	Secondary		Enable				ime	М
System	Code	Description	Criteria	Value	Malfunction		Conditions			Rec	quired	Illu
			If the above parameters are true									
									>=	1.1	Fail Timer (Sec)	
									>=	3	Fail Count in 5th Gear	
											or	
									>=	5	Total Fail Counts	
					PRNDL State defaulted	=	FALSE	Boolean				1
					inhibit RVT	=	FALSE	Boolean				
					IMS fault pending indication	=	FALSE	Boolean				
					output speed	>=	0	RPM				
					TPS validity flag	=	TRUE	Boolean				
					HSD Enabled	=	TRUE	Boolean				
					Hydraulic_System_Pressurized	=	TRUE	Boolean				
					A OR B							
					(A) Output speed enable	>=	67	Nm				
					(B) Accelerator Pedal enable	>=	0.5005	Nm				
					Ignition Voltage Lo	>=	8.59961	Volts				
					Ignition Voltage Hi	<=	31.99902	Volts				
					Engine Speed Lo	>=	400	RPM				
					Engine Speed Hi	<=	7500	RPM				
					Engine Speed is within the allowable limits for	>=	5	Sec				
					if Attained Gear=1st FW Accelerator Pedal enable	>=	5.0003	Pct				
					if Attained Gear=1st FW Engine Torque Enable	>=	5	Nm				
					if Attained Gear=1st FW Engine Torque Enable	<=	8191.88	Nm				
					Transmission Fluid Temperature	>=	-6.6563	°C				
					Input Speed Sensor fault	=	FALSE	Boolean				
					Output Speed Sensor fault	=	FALSE	Boolean				
					Default Gear Option is not	=	TRUE					
					present	=	IKUE					
												1

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Thr V	reshold /alue	Secondary Malfunction	Enabl Conditie	ons		Ti Req	me uired	Mil Illum.
					Disable Conditions:		P182E ECM: P0101, P0102, P P0107, P0108, P0171, P0175, P0201, P0202, P0205, P0206, P0207, P0301, P0302, P0303,	20103, P0106, 20172, P0174, 20203, P0204, 20208, P0300, 20304, 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		Boolean				>=	0.3	Fail Time (Sec)	One Trip
		(0000 000)							out of	0.375	Sample Time (Sec)	
						P2770 Status is not	Test Fa This K On or F Activ	ey ault				
						Ignition Voltage Ignition Voltage Engine Speed Engine Speed		02 Volts RPM				
						Engine Speed is within the allowable limits for		Sec				
					Disable Conditions:	MIL not Illuminated for DTC's:	TCM: None ECM: None					
Variable Bleed Solenoid (VBS)		Pressure Control (PC) Solenoid D Control Circuit High (CB26 VBS)	The HWIO reports a high voltage (open or power short) error flag		Boolean				>=	0.3	Fail Time (Sec)	One Trip
									out of	0.375	Sample Time (Sec)	

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
					P2721 Status is not	Test Failed This Key On or Fault Active		
					Ignition Voltage Ignition Voltage Engine Speed Engine Speed is within the allowable limits for	<= 31.99902 Volts >= 400 RPM <= 7500 RPM		
				Disable Conditions:	MIL not Illuminated for DTC's:			
Variable Bleed Solenoid (VBS)	P2723	Pressure Control (PC) Solenoid E Stuck Off	Fail Case 1 Case: Steady State 1st Gear Gear slip Intrusive test: commanded 2nd gear If attained Gear ≠ 2nd for Time	>= 400 RPM Please refer to >= Table 3 in Supporting Shift Time (Sec)			Please See Table 5 For Neutral Timer Neutral Time (Sec) Cal	One Trip
			If Above Conditions have been met, Increment 1st gear fail counter				>= 3 1st Gear Fail Count or	
			and C1234 fail counter Fail Case 2 Case: Steady State 2nd Gear				>= 14 C1234 Clutch Fail Count	-
			Gear slip				>= Please See Table 5 For Neutral Timer Neutral Time (Sec) Cal	

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

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction		Enable Conditions			Tin Requ		Mil Illum.
			If Above Conditions have been met, Increment 4th gear fail counter						>=	3	4th Gear Fail Count	
			and C1234 fail counter						>=	14	or C1234 Clutch Fail Count	
					PRNDL State defaulted	=	FALSE	Boolean				
					inhibit RVT		FALSE	Boolean				
					IMS fault pending indication		FALSE	Boolean				
					TPS validity flag		TRUE	Boolean				
					Hydraulic System Pressurized	=	TRUE	Boolean				
					Minimum output speed for RVT	>=	0	RPM				
					A OR B							
					(A) Output speed enable		67	RPM				
					(B) Accelerator Pedal enable		0.5005	Pct				
					Common Enable Criteria							
					Ignition Voltage Lo	>=	8.59961	Volts				
					Ignition Voltage Hi	<=	31.99902	Volts				
					Engine Speed Lo	>=	400	RPM				
					Engine Speed Hi		7500	RPM				
					Engine Speed is within the allowable limits for		5	Sec				
					Throttle Position Signal valid		TRUE	Boolean				
					HSD Enabled		TRUE	Boolean				
					Transmission Fluid	<u> </u>	-6.6563	°C				
					Temperature							
					Input Speed Sensor fault		FALSE	Boolean				
					Output Speed Sensor fault		FALSE	Boolean				
					Default Gear Option is not present	=	TRUE					
					P							

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, 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)		Pressure Control (PC) Solenoid E Stuck On (Dynamic)	Primary Offgoing Clutch is exhausted (See Table 10 in Supporting Documents for Exhaust Delay Timers) Primary Oncoming Clutch	=	TRUE Maximum	Boolean				One Trip
			Pressure Command Status Primary Offgoing Clutch Pressure Command Status	=	pressurized Clutch exhaust command					
			Range Shift Status Attained Gear Slip If the above conditions are true	≠ <=	Initial Clutch Control 40	RPM				
			increment appropriate Fail 1 Timers Below: fail timer 1	>=	0.2998	sec				
			(2-6 shifting with throttle) fail timer 1 (2-6 shifting without throttle) fail timer 1	>=	0.5	sec				
			(3-5 shifting with throttle) fail time 1 (3-5 shifting without throttle)	>=	0.2998 0.5	sec sec				
			fail timer 1 (4-5 shifting with throttle) fail timer 1	>=	0.2998 0.5	sec sec				
			(4-5 shifting without throttle) fail timer 1 (4-6 shifting with throttle)	>=	0.2998	sec				

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum.
			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 Sec 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 Gea	
			3rd gear fail counter				>= 3 Fail Counter From 3rd Gear	r
			4th gear fail counter				>= 3 Fail Counter From 4th Gear	r
			total fail counter				>= 5 Total Fail Counter	_
					TUT Enable temperature Input Speed Sensor fault Output Speed Sensor fault Command / Attained Gear High Side Driver ON output speed limit for TUT input speed limit for TUT PRNDL state defaulted IMS Fault Pending Service Fast Learn Mode HSD Enabled	 = FALSE Boolean ≠ 1st Boolean = TRUE Boolean >= 100 RPM >= FALSE Boolean = FALSE Boolean = FALSE Boolean 		

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Tin Requ		Mil Illum.
				Disable Conditions:	MIL not Illuminated for DTC's:	TCM: P0716, P0717, P0722, P0723, P182E			
						ECM: P0101, P0102, P0103, P0106, P0107, P0108, P0171, P0172, P0174, P0175, P0201, P0202, P0203, P0204, P0205, P0206, P0207, P0208, P0300, P0301, P0302, P0303, P0304, P0305, P0306, P0307, P0308, P0401, P042E			
Variable Bleed Solenoid (VBS	P2724	Pressure Control (PC) Solenoid E Stuck On (Steady State)	Fail Case 1 Case: 5th Gear						One Trip
			Max Delta Output Speed Hysteresis	Table Based value Please >= Refer to 3D Table 1 in supporting documents					
			Min Delta Output Speed Hysteresis	supporting documents					
			If the Above is True for Time	Table Based Time Please Refer to Table 17 in Supporting documents					
			Intrusive test: (C35R clutch exhausted) Gear Ratio Gear Ratio If the above parameters are true	<= 1.20959					
							>= 1.1 >= 3	Fail Timer (Sec) Fail Count in 5th Gear OR	I I

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Condition	s		Ti Req	me uired	Mil Illum.
								>=	3	Total Fail Counts	
			Fail Case 2 Case: 6th Gear							Counts	
			Max Delta Output Speed Hysteresis	Table Based value Please >= Refer to 3D Table 1 in supporting							
			Min Delta Output Speed Hysteresis	documents Table Based value Please Refer to 3D rpm/sec Table 2 in supporting documents							
			If the Above is True for Time	Table Based Time Please Refer to Table 17 in supporting							
			Intrusive test: (CB26 clutch exhausted) Gear Ratio Gear Ratio If the above parameters are true	<= 1.20959							
								>=	1.1	Fail Timer (Sec)	
								>=	3	Fail Count in 6th Gear	
								>=	3	OR Total Fail Counts	
					PRNDL State defaulted inhibit RVT IMS fault pending indication output speed TPS validity flag HSD Enabled	= FALSE = FALSE = FALSE >= 0 = TRUE = TRUE	Boolean Boolean RPM Boolean Boolean				
					Hydraulic_System_Pressurized	= TRUE	Boolean				

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Thres Valu		Secondary Malfunction		Enable Conditions			Ti Requ	me uired	Mil Illum.
System	Code	Description	Ciliena	Vui		A OR B		Conditions		<u> </u>	neq	anca	
						(A) Output speed enable	>=	67	Nm				
						(B) Accelerator Pedal enable	>=	0.5005	Nm				
						Ignition Voltage Lo	>=	8.59961	Volts				
						Ignition Voltage Hi	<=	31.99902	Volts				
						Engine Speed Lo	>=	400	RPM				
						Engine Speed Hi	<=	7500	RPM				
						Engine Speed is within the	>=	5	Sec				
						allowable limits for		5	000				
						if Attained Gear=1st FW	>=	5.0003	Pct				
						Accelerator Pedal enable	· -	0.0000	1.00				
						if Attained Gear=1st FW	>=	5	Nm				
						Engine Torque Enable		-					
						if Attained Gear=1st FW		8191.88	Nm				
						Engine Torque Enable							
						Transmission Fluid	>=	-6.6563	°C				
						Temperature		EALCE	Deeleen				
						Input Speed Sensor fault Output Speed Sensor fault	=	FALSE FALSE	Boolean Boolean				
						Default Gear Option is not	-	TALSE	DUDIEdi				
						present	=	TRUE					
						present							
					Disable	MIL not Illuminated for	TCM· P0716	P0717 P0722	P0723				
					Conditions:	DTC's:		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	1101201				
							TOLL						
							ECM: P010 ⁴	I, P0102, P0103	, P0106,				
								08, P0171, P017					
								01, P0202, P020					
								06, P0207, P020					
								02, P0303, P030					
							P0306, P03	07, P0308, P040)1, P042E				
		Pressure Control (PC) Solenoid E	The HWIO reports a low voltage										One Trip
Variable Bleed Solenoid (VBS) P2729		(ground short) error flag		Boolean					>=	0.3	Fail Time (Sec)	
		(C1234 VBS)	(ground short) error hay										
										out	0.375	Sample Time	
										of	0.373	(Sec)	1

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria	Threshold Value	Secondary Malfunction	Enable Conditions	Time Required	Mil Illum
					P2729 Status is not	Test Failed		
					Ignition Voltage Ignition Voltage Engine Speed Engine Speed Engine Speed is within the allowable limits for	 <= 31.99902 Volt >= 400 RPM <= 7500 RPM 		
				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 vollage (open or power short) error flag	= TRUE Boolean			>= 0.3 Fail Time (Sec) out 0.375 Sample Time of (Sec)	
					P2730 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	 <= 31.99902 Volt >= 400 RPM <= 7500 RPM >= 5 Sec 		
				Disable Conditions:	MIL not Illuminated for DTC's:			

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria			eshold alue	Secondary Malfunction		Enable Conditions				ïme quired	Mil Illum.
Variable Bleed Solenoid (VBS)	P2763	Torque Converter Clutch Pressure High	The HWIO reports a low pressure/high voltage (open or power short) error flag	=	TRUE	Boolean					>=	4.4	Fail Time (Sec)	Two Trips
											out of	5	Sample Time (Sec)	
							P2763 Status is not	=	Test Failed This Key On or Fault Active					
							Ignition Voltage Ignition Voltage Engine Speed Engine Speed	>= <= >= <=	8.59961 31.99902 400 7500	Volt Volt RPM RPM				
							Engine Speed is within the allowable limits for High Side Driver Enabled	>=	5 TRUE	Sec Boolean				
						Disable Conditions:	MIL not Illuminated for DTC's:	TCM: P0658 ECM: None	, P0659					
Variable Bleed Solenoid (VBS)	P2764	Torque Converter Clutch Pressure Control Solenoid Control Circuit Low	The HWIO reports a high pressure/low voltage (ground short) error flag	=	TRUE	Boolean					>= out	4.4 5	Fail Time (Sec) Sample Time	One Trip
							P2764 Status is not	=	Test Failed This Key On or Fault Active		of	5	(Sec)	-
							Ignition Voltage Ignition Voltage Engine Speed Engine Speed Engine Speed is within the	>= <= >= <= >=	8.59961 31.99902 400 7500 5	Volt Volt RPM RPM Sec				
							allowable limits for High Side Driver Enabled	=	TRUE	Boolean				

Component/ System	Fault Code	Monitor Strategy Description	Malfunction Criteria		Thre Va	eshold alue	Secondary Malfunction		Enable Conditions			Ti Requ	me uired	Mil Illum.
						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 Delay timer	=	TRUE 0.1125	Boolean					>= Out of	62 70	Fail counts (≈ 10 seconds) Sample Counts (≈ 11 seconds)	One Trip
							Stabilization delay Ignition Voltage Ignition Voltage Power Mode	>= >= <=	3 8.59961 31.99902 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 Trip
							Stabilization delay Ignition Voltage Ignition Voltage Power Mode	>= >= <= =	3 8.59961 31.99902 Run	sec Volt Volt				
						Disable Conditions:	MIL not Illuminated for DTC's:	TCM: U0073 ECM: None						

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

Axis -6.67 -6.66 40.00 80.00 120.00 °C Curve 409.00 3.60 1.60 1.50 1.40 Sec Table 9 Axis -6.67 -6.66 40.00 80.00 120.00 °C Curve 409.00 3.30 1.30 1.20 1.10 Sec Table 10 Axis -40.00 -20.00 0.00 30.00 110.00 °C Curve 3.03 1.86 1.00 0.75 0.58 Sec Table 11 Axis -40.00 -20.00 0.00 30.00 110.00 °C Curve 1.72 1.11 0.60 0.36 0.22 Sec Table 12 Axis -40.00 -20.00 0.00 30.00 110.00 °C Curve 2.12 1.39 0.84 0.64 0.33 Sec Table 13 Axis -40.00 -20.00 0.00 30.00 110.00 °C Curve 2.51 0.95 0.50 0.29 0.13 Sec	Table 8						
Table 9 Axis -6.67 -6.66 40.00 80.00 120.00 °C Curve 409.00 3.30 1.30 1.20 1.10 Sec Table 10 Axis -40.00 -20.00 0.00 30.00 110.00 °C Curve 3.03 1.86 1.00 0.75 0.58 Sec Table 11 Axis -40.00 -20.00 0.00 30.00 110.00 °C Curve 1.72 1.11 0.60 0.36 0.22 Sec Table 11 Axis -40.00 -20.00 0.00 30.00 110.00 °C Curve 1.72 1.11 0.60 0.36 0.22 Sec Table 12 Axis -40.00 -20.00 0.00 30.00 110.00 °C Curve 2.12 1.39 0.84 0.64 0.33 Sec Table 13 Axis -40.00 -20.00 0.00 30.00 110.00 °C Curve 2.51 0.95 0.50		Axis	-6.67	-6.66	40.00	80.00	120.00 °C
Axis -6.67 -6.66 40.00 80.00 120.00 °C Curve 409.00 3.30 1.30 1.20 1.10 Sec Table 10 Axis -40.00 -20.00 0.00 30.00 110.00 °C Curve 3.03 1.86 1.00 0.75 0.58 Sec Table 11 Axis -40.00 -20.00 0.00 30.00 110.00 °C Curve 1.72 1.11 0.60 0.36 0.22 Sec Table 12 Axis -40.00 -20.00 0.00 30.00 110.00 °C Curve 2.12 1.39 0.84 0.64 0.33 Sec Table 13 Axis -40.00 -20.00 0.00 30.00 110.00 °C Curve 2.12 1.39 0.84 0.64 0.33 Sec Table 13 Axis -40.00 -20.00 0.00 30.00 110.00 °C Curve 2.51 0.95 0.50 0.29 0.13 Sec		Curve	409.00	3.60	1.60	1.50	1.40 Sec
Curve 409.00 3.30 1.30 1.20 1.10 Sec Table 10 Axis -40.00 -20.00 0.00 30.00 110.00 °C Curve 3.03 1.86 1.00 0.75 0.58 Sec Table 11 Axis -40.00 -20.00 0.00 30.00 110.00 °C Curve 1.72 1.11 0.60 0.36 0.22 Sec Table 12 Axis -40.00 -20.00 0.00 30.00 110.00 °C Curve 2.12 1.39 0.84 0.64 0.33 Sec Table 13 Axis -40.00 -20.00 0.00 30.00 110.00 °C Curve 2.12 1.39 0.84 0.64 0.33 Sec Table 13 Axis -40.00 -20.00 0.00 30.00 110.00 °C Curve 2.51 0.95 0.50 0.29 0.13 Sec	<u>Table 9</u>	_					
Table 10 Axis -40.00 -20.00 0.00 30.00 110.00 °C Curve 3.03 1.86 1.00 0.75 0.58 Sec Table 11 Axis -40.00 -20.00 0.00 30.00 110.00 °C Curve 1.72 1.11 0.60 0.36 0.22 Sec Table 12 Axis -40.00 -20.00 0.00 30.00 110.00 °C Curve 1.72 1.11 0.60 0.36 0.22 Sec Table 12 Axis -40.00 -20.00 0.00 30.00 110.00 °C Curve 2.12 1.39 0.84 0.64 0.33 Sec Table 13 Axis -40.00 -20.00 0.00 30.00 110.00 °C Curve 2.51 0.95 0.50 0.29 0.13 Sec							
Axis -40.00 -20.00 0.00 30.00 110.00 °C Curve 3.03 1.86 1.00 0.75 0.58 Sec Table 11 Axis -40.00 -20.00 0.00 30.00 110.00 °C Curve 1.72 1.11 0.60 0.36 0.22 Sec Table 12 Axis -40.00 -20.00 0.00 30.00 110.00 °C Curve 2.12 1.39 0.84 0.64 0.33 Sec Table 13 Axis -40.00 -20.00 0.00 30.00 110.00 °C Curve 2.12 1.39 0.84 0.64 0.33 Sec Table 13 Axis -40.00 -20.00 0.00 30.00 110.00 °C Curve 2.51 0.95 0.50 0.29 0.13 Sec		Curve	409.00	3.30	1.30	1.20	1.10 Sec
Curve 3.03 1.86 1.00 0.75 0.58 Sec Table 11 Axis -40.00 -20.00 0.00 30.00 110.00 °C Curve 1.72 1.11 0.60 0.36 0.22 Sec Table 12 Axis -40.00 -20.00 0.00 30.00 110.00 °C Curve 2.12 1.39 0.84 0.64 0.33 Sec Table 13 Axis -40.00 -20.00 0.00 30.00 110.00 °C Table 14 Distribution Curve 2.51 0.95 0.50 0.29 0.13 Sec	Table 10						
Table 11 Axis -40.00 -20.00 0.00 30.00 110.00 °C Curve 1.72 1.11 0.60 0.36 0.22 Sec Table 12 Axis -40.00 -20.00 0.00 30.00 110.00 °C Curve 2.12 1.39 0.84 0.64 0.33 Sec Table 13 Axis -40.00 -20.00 0.00 30.00 110.00 °C Curve 2.51 0.95 0.50 0.29 0.13 Sec							
Axis -40.00 -20.00 0.00 30.00 110.00 °C Curve 1.72 1.11 0.60 0.36 0.22 Sec Table 12 Axis -40.00 -20.00 0.00 30.00 110.00 °C Curve 2.12 1.39 0.84 0.64 0.33 Sec Table 13 Axis -40.00 -20.00 0.00 30.00 110.00 °C Curve 2.51 0.95 0.50 0.29 0.13 Sec		Curve	3.03	1.86	1.00	0.75	0.58 Sec
Axis -40.00 -20.00 0.00 30.00 110.00 °C Curve 2.12 1.39 0.84 0.64 0.33 Sec Table 13 Axis -40.00 -20.00 0.00 30.00 110.00 °C Curve 2.51 0.95 0.50 0.29 0.13 Sec Table 14	<u>Table 11</u>						
Curve 2.12 1.39 0.84 0.64 0.33 Sec Table 13 Axis -40.00 -20.00 0.00 30.00 110.00 °C Curve 2.51 0.95 0.50 0.29 0.13 Sec Table 14	Table 12						
Table 13 Axis -40.00 -20.00 0.00 30.00 110.00 °C Curve 2.51 0.95 0.50 0.29 0.13 Sec Table 14		Axis	-40.00	-20.00	0.00	30.00	110.00 °C
Axis -40.00 -20.00 0.00 30.00 110.00 °C Curve 2.51 0.95 0.50 0.29 0.13 Sec Table 14		Curve	2.12	1.39	0.84	0.64	0.33 Sec
Table 14	Table 13						
			1	0.00	0.00	0.20	0.10
	Table 14	Axis	-40.00	-20.00	0.00	30.00	110.00 °C

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

<u>ble 15</u>	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 Se
ble 16										
	Axis	-6.67	-6.66	40.00 °C	;					
	Curve	409.59	2.50	2.50 Se	ec					
ble 17										
	Axis	-6.67	-6.66	40.00 °C	;					
	Curve	0.40	0.35	0.30 Se						
	-	•								
<u>ble 18</u>	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
	_	I				I			I	
<u>ble 19</u>	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
ble 20	Auto	40.40	40.00	00.00	0.00	20.00	00.00	400.00	4.40.00	440.40
	Axis Curve	-40.10 256.00	-40.00 10.00	-20.00 8.00	0.00 8.00	30.00 8.00	60.00 8.00	100.00	149.00 8.00	149.10 °C 256.00 °C
	Curve	200.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	256.00 °C

Table 21					
	Axis	-40.00	-20.00	40.00	°C
	Curve	5.00	3.00	1.00	Sec

3D_Table 1

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

X-Axis Calibration

Y-Axis Calibration

Table Calibration

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

3D_Table 2

%			0.00	2.00	5.00	25.00	100.00
°C		-6.67	8191.75	8191.75	8191.75	8191.75	8191.75
RPM/Sec		-6.66	500.00	500.00	300.00	300.00	300.00
	•	40.00	500.00	500.00	300.00	300.00	300.00