

09 OBDG09 TRANS Diagnostics

COMPONENT/ SYSTEM	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA	THRESHOLD VALUE	SECONDARY PARAMETERS	ENABLE CONDITIONS	TIME REQUIRED	MIL ILLUM.
Transmission Output Speed Sensor (TOSS)	P0502	Output Speed Sensor Circuit Low Voltage	TOSS	<= 150 RPM	Ignition Voltage Engine Speed Engine Torque Engine Torque Throttle Position TISS TFT	between 8 to 18 V >= 500 RPM >= 50 N*m <= 300 N*m >= 12 % >= 1500 RPM >= 0 C	>= 5 Sec >= 5 Sec	One Trip
Transmission Output Speed Sensor (TOSS)	P0503	Output Speed Sensor Circuit Intermittent	Drop in TOSS	>= 1500 RPM	Time Since last range change	>= 6 Sec	>= 2 Sec	One Trip
Transmission Fluid Temperature Sensor (TFT)	P0711	Trans Fluid Temp Sensor Circuit Range/Performance	<u>Fail Case 1</u> Transmission Fluid Temp has not changed <u>Fail Case 2</u> Transmission Fluid Temp changes	>= 1.5 C 14 Times	Ignition Voltage Engine Running TFT at Startup Engine Coolant Engine Coolant change since startup	between 8 to 18 V >= 400 RPM between -40 to 20 C >= 70 C >= 55 C	>= 409 Sec = 7 Sec >= 300 Sec	Special No Trip

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					Disable Conditions:	MIL not Illuminated for DTC's:		
						P0711, P0716, P0717, P0722, P0723		
Transmission Fluid Temperature Sensor (TFT)	P0712	Transmission fluid temperature thermistor failed at a high temperature (short to ground).	Transmission Fluid Temperature	>= 254 C		Ignition Voltage between 8 to 18 V	>= 10 Sec	Special No Trip
					Disable Conditions:	MIL not Illuminated for DTC's:		
						P0712 not FA or TFTKO		
Transmission Fluid Temperature Sensor (TFT)	P0713	Transmission fluid temperature thermistor failed at a low temperature (open or short to power).	TFT	<= -254 C		Ignition Voltage between 8 to 18 V	>= 400 Sec	Special No Trip
					Disable Conditions:	MIL not Illuminated for DTC's:		
						P0723 not FA or TFTKO		
Transmission Input Speed Sensor (TISS)	P0716	Input Speed Sensor Performance	TISS Drops	>= 1300 RPM		Ignition Voltage between 8 to 18 V Throttle Position >= 14 % Engine Speed >= 500 RPM Vehicle Speed >= 5 MPH	>= 0.8 sec >= 5 sec	One Trip
					Disable Conditions:	MIL not Illuminated for DTC's:		
						P0716 not FA or TFTKO		
Transmission Input Speed Sensor (TISS)	P0717	Input Speed Sensor Circuit Low Voltage	TISS	< 100 RPM		Ignition Voltage between 8 to 18 V	>= 5 sec	One Trip

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						Engine Speed >= 500 RPM Engine Torque between 50 - 500 lb ft Vehicle Speed >= 5 MPH Disable Conditions: MIL not Illuminated for DTC's: P0717 not FA or TFTKO	>= 5 sec	
Torque Converter Clutch (TCC)	P0741	TCC System Stuck OFF	TCC Slip Speed TCC Fail Counter	>= 180 RPM >= 4 Count	TCC State = Commanded Locked TCC Capacity >= 50 % Ignition Voltage between 8 to 18 V Engine Speed >= 500 RPM Engine Torque between 21 to 500 lb ft Trottle Position between 4 to 99 % Commanded Gear = 2nd, 3rd, 4th Gear TFT between 20 to 130 C	>= 7 Sec Disable Conditions: MIL not Illuminated for DTC's: P0716, P0717, P0722, P0723, P0742	>= 5 sec	One Trip

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Torque Converter Clutch (TCC)	P0742	TCC System Stuck ON	TCC Slip Speed	between -20 to 25 RPM			>= 8 Sec	One Trip
			TCC Fail Counter	>= 3 Count				
<div style="display: flex; justify-content: space-between; font-size: small;"> Ignition Voltage between 8 to 18 V Engine Speed >= 500 RPM >= 5 sec </div> <div style="display: flex; justify-content: space-between; font-size: small;"> TFT between 20 to 130 C Trottle Position between 4 to 99 % </div> <div style="display: flex; justify-content: space-between; font-size: small;"> Engine Torque between 70 to 500 lb ft TCC State = Commanded OFF </div>								
Disable Conditions: MIL not Illuminated for DTC's:					P0716, P0717, P0722, P0723, P0741			
Shift solenoid A Performance	P0751	Shift Solenoid Valve A Stuck Off 2-2-3-3	<u>Fail Case 1</u>	1st Gear Command = 2nd Gear Ratio			= 1 Sec	Two Trips
			<u>Fail Case 2</u>	4th Gear Command = 3rd Gear Ratio			= 1 Sec	
			Solenoid Performance Fail Counter	= 2 counts				
<div style="display: flex; justify-content: space-between; font-size: small;"> Ignition Voltage between 8 to 18 V Engine Speed >= 500 RPM >= 5 sec </div> <div style="display: flex; justify-content: space-between; font-size: small;"> TFT between 20 to 130 C Trottle Position >= 10 % </div>								

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					Engine Torque	between 20 to 200 lb ft		
					Output Speed	>= 300 RPM		
					Input Speed	>= 150 RPM		
					Disable Conditions: MIL not Illuminated for DTC's:			
Shift solenoid A Performance	P0752	Shift Solenoid Valve A Stuck On 1-1-4-4	<u>Fail Case 1</u> 2nd Gear Command = 1st Gear Ratio				= 1 Sec	Two Trips
			<u>Fail Case 2</u> 3rd Gear Command = 4th Gear Ratio				= 1 Sec	
			Solenoid Performance Fail Counter = 2 counts					
					Ignition Voltage	between 8 to 18 V		
					Engine Speed	>= 500 RPM	>= 5 sec	
					TFT	between 20 to 130 C		
					Trottle Position	>= 10 %		
					Engine Torque	between 20 to 200 lb ft		
					Output Speed	>= 300 RPM		
					Input Speed	>= 150 RPM		
					Disable Conditions: MIL not Illuminated for DTC's:			
Shift Solinoid	P0753	Shift Solenoid A Control Circuit Electrical Fault	hardware circuitry detects ground short, open or short to voltage	>= 43 of 50 Cnts			>= 4.3 sec	One Trip
					Ignition Voltage	between 8 to 18 V		
					Engine Speed	>= 500 RPM	>= 5 sec	
					Disable Conditions: MIL not Illuminated for DTC's:		None	

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Shift solenoid B Performance	P0756	Shift Solenoid Valve B Stuck On 4-3-3-4	<u>Fail Case 1</u>	1st Gear Command = 4th Gear Ratio			= 1 Sec	One Trip
			<u>Fail Case 2</u>	2nd Gear Command = 3rd Gear Ratio			= 1 Sec	
			Solenoid Performance Fail Counter = 2 counts					
					Ignition Voltage	between 8 to 18 V		
					Engine Speed	>= 500 RPM	>= 5 sec	
					TFT	between 20 to 130 C		
					Trottle Position	>= 10 %		
					Engine Torque	between 20 to 200 lb ft		
					Output Speed	>= 300 RPM		
					Input Speed	>= 150 RPM		
				Disable Conditions:	MIL not Illuminated for DTC's:			
Shift solenoid B Performance	P0757	Shift Solenoid Valve B Stuck Off 1-2-2-1	<u>Fail Case 1</u>	3rd Gear Command = 2nd Gear Ratio			= 1 Sec	One Trip
			<u>Fail Case 2</u>	4th Gear Command = 1st Gear Ratio			= 1 Sec	
			Solenoid Performance Fail Counter = 2 counts					
					Ignition Voltage	between 8 to 18 V		
					Engine Speed	>= 500 RPM	>= 5 sec	
					TFT	between 20 to 130 C		
					Trottle Position	>= 10 %		
					Engine Torque	between 20 to 200 lb ft		

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					Output Speed Input Speed	>= 300 RPM >= 150 RPM		
					Disable Conditions:	MIL not Illuminated for DTC's:		
Shift Solenoid	P0758	Shift Solenoid B Control Circuit Electrical Fault	hardware circuitry detects ground short, open or short to voltage	>= 43 of 50 Cnts		Ignition Voltage between 8 to 18 V Engine Speed >= 500 RPM	>= 4.3 sec >= 5 sec	Two Trips
					Disable Conditions:	MIL not Illuminated for DTC's:	None	
Torque Converter Clutch (TCC) Release Switch	P0842	TCC Release Switch Circuit Low Voltage. TCC is commanded OFF and Slip is High but TCC Release switch is indicating TCC is applied	TCC Release Switch State TCC Release Switch Fail Counter	= Applied = 2 counts		TCC State = Commanded OFF TCC Slip >= 80 RPM Ignition Voltage between 8 to 18 V Engine Speed >= 500 RPM Engine Torque between 30 to 300 lb ft Vehicle Speed between 10 to 90 MPH TFT between 20 to 130 C	>= 10 Sec >= 5 sec	Two Trips
					Disable Conditions:	MIL not Illuminated for DTC's:	None	
Torque Converter Clutch (TCC) Release Switch	P0843	TCC Release Switch Circuit High Voltage	TCC Release Switch State TCC Release Switch Fail Counter	= Released = 2 counts			>= 6 Sec	Two Trips

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					TCC State = Commanded Locked TCC Slip between -20 to 25 RPM Ignition Voltage between 8 to 18 V Engine Speed >= 500 RPM Engine Torque between 30 to 300 lb ft Vehicle Speed between 10 to 90 MPH TFT between 20 to 130 C		>= 5 sec	
Disable Conditions:					MIL not Illuminated for DTC's:			
						None		
Internal Mode Switch (IMS)	P182A	Internal Mode Switch-Circuit A Low Voltage	Park timer >= 2 sec IMS Circuit A Fail Timer >= 8 sec		Ignition Voltage between 8 to 18 V Engine Speed >= 500 RPM Engine Torque between 40 to 300 lb ft MAP between 0 to 105 kPa IMS = Transitional 1		>= 5 sec	Two Trips
Disable Conditions:					MIL not Illuminated for DTC's:			
					No MAP DTCs			

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Internal Mode Switch (IMS)	P182C	Internal Mode Switch-Circuit B High Voltage	Park timer IMS Circuit B Fail Timer	>= 2 sec >= 8 sec	Ignition Voltage Engine Speed Engine Torque MAP IMS	between 8 to 18 V >= 500 RPM between 40 to 300 lb ft between 0 to 105 kPa = Transitional 13	>= 5 sec	Two Trips
Internal Mode Switch (IMS)	P182D	Internal Mode Switch-Circuit P Low Voltage	Park timer IMS Circuit P Fail Timer	>= 2 sec >= 8 sec	Ignition Voltage Engine Speed Engine Torque MAP IMS	between 8 to 18 V >= 500 RPM between 40 to 300 lb ft between 0 to 105 kPa = Transitional 8	>= 5 sec	Two Trips
Internal Mode Switch (IMS)	P182E	Internal Mode Switch-Invalid Range	IMS Range Fail Timer	>= 60 sec	Ignition Voltage	between 8 to 18 V		Two Trips

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					Engine Speed IMS Disable Conditions:	>= 500 RPM = Invalid MIL not Illuminated for DTC's:	>= 5 sec	
Internal Mode Switch (IMS)	P182F	Internal Mode Switch-Circuit C High Voltage	IMS Circuit C Fail Timer	>= 60 sec	Ignition Voltage Gear Ratio Engine Speed Engine Torque Vehicle Speed Disable Conditions:	between 8 to 18 V = 1st, 2nd, 3rd or 4th Gear >= 500 RPM between 20 to 300 lb ft between 10 to 90 MPH MIL not Illuminated for DTC's: P1826 has not passed	>= 5 sec	Two Trips
Torque Converter Clutch (TCC) PWM Solenoid	P2761	TCC PWM Solenoid Switch Circuit High or Low Voltage. This DTC detects a continuous Open, Short to Ground, or Short to Voltage.	hardware circuitry detects ground short, open or short to voltage	>= 43 of 50 Cnts	TCC Capacity Ignition Voltage Engine Speed Disable Conditions:	between 10 to 70 % between 8 to 18 V >= 500 RPM MIL not Illuminated for DTC's: None	>= 4.3 sec >= 5 sec	Two Trips