2000trans10.doc

SENSED PARAMETER	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA AND THRESHOLD VALUE(S)	SECONDARY PARAMETERS AND ENABLE CONDITIONS	TIME LENGTH AND FREQUENCY	MIL ILLUMINATION TYPE
Vehicle Speed Sensor - Low input	P0502	0 RPM to 6000 RPM This DTC detects a low vehicle speed when the vehicle has a large engine speed in a drive gear range.	Output Speed < 150 rpm (2 mph)	- Gear Range is not Park/Neutral - No TPS high or low DTC's set - No Map Sensor DTC's set - No PSA DTC set - Vacuum > 50% - Engine Torque: 40 to 400 ft-lbs - Throttle Position > 15% - Engine Speed > 3000 RPM	3.0 seconds Continuous	DTC Type B
Vehicle Speed Sensor - Intermittent	P0503	0 RPM to 6000 RPM This DTC detects an unrealistic large drop in vehicle speed.	In P/N: Output Speed drop > 8000 RPM Not P/N: Output Speed drop >1300 RPM	- Time since last Gear Range Change > 6 Seconds - Engine Speed > 450 rpm for 5 seconds and not in fuel cutoff - No Output Speed rise > 600 rpm within 6 seconds - No PSA DTC set	In park or neutral for 409 seconds. Not in park or neutral for 3 seconds.	DTC Type B
TCC Enable Solenoid Electrical	P0740	0V to 12V This DTC detects a continuous open or short to ground in the TCC circuit or the TCC solenoid	Fail Counter >43 Counts out of 50 Total Counts	- System Voltage: 8 to 18 volts - Engine Speed > 450 rpm for 5 seconds and not in fuel cutoff	Continuous	DTC Type A
TCC System Stuck ON	P0742	This DTC detects low torque converter slip when the TCC is commanded off.	TCC Slip: -20 to +30 RPM for > 5.0 seconds Slip Counter >=3	- Engine Speed > 450 rpm for 5 seconds and not in fuel cutoff - No Range change within 6 sec. - No MAP low and high DTC set - No TP high or low sensor DTC's - No VSS DTC's - No TCC Enable Sol. DTC's - No TCC Control Sol. DTC's -No PSA DTC set - Eng Torque: 40 to 400 ft-lbs - Vacuum: 0 to 105 kPa - Commanded Gear is not 1st - Gear Range is D4 - Throttle Position: 15% to 60% - TCC is commanded off - Engine Speed: 1000 to 3000 rpm - Speed Ratio: 0.65 to 1.25 - Vehicle Speed: 20 to 65 mph	5.0 seconds Continuous	DTC Type B

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Shift Solenoid A Performance	P0751	This DTC detects abnormal shift patterns:
		
		Stuck OFF:
		  2-2-3-3 pattern
		
		Stuck ON:
		  1-1-4-4 pattern
			Fail Counter >=3 .
			The fail counter is incremented when the following fail cases are true:
			
			Stuck OFF:
			  1,2,3,& 4
			
			Stuck ON:
			  1,2,3, & 5
				<u>General</u>
				-Engine Speed > 450 rpm for 5 seconds and not in fuel cutoff
				-Gear range is D4
				-No TP high or low DTC's
				-No VSS low or intermittent DTC's
				-No Solenoid electrical DTC's
				-No DTC 742
				-No PSA DTC set
				-Time since last shift is >0 sec
				-Vehicle speed >5 mph
				-Trans Temp.: 20 C to 130 C
				<u>Fail Case 1</u>
				- Commanded 1-2 shift
				- TPS: 10% to 50%
				- TPS constant within +/- 6%
				- Vehicle Speed: 5 to 35 mph
				- After 2 seconds, engine speed in 2nd gear must be 80 rpm > last speed in 1st gear
				<u>Fail Case 2</u>
				- Commanded 2-3 shift
				- TPS: 10% to 50%
				- TPS constant within +/- 7%
				- Vehicle Speed: 15 to 60 mph
				- After 2 sec, engine speed in 3rd gear must be 100 rpm < last speed in 2nd gear
				<u>Fail Case 3</u>
				- Commanded 3-4 shift
				- TPS: 10% to 50%
				- TPS constant within +/- 7%
				- Vehicle speed: 30 to 65 mph
				- After 2.5 seconds, engine speed in 4th gear must be 10 rpm > last speed in 3rd gear
				<u>Fail Case 4</u>
				- Commanded 4th gear
				- TCC commanded ON
				- TPS: 10% to 50%
				- Speed Ratio: 0.95 to 1.25
				- TCC Slip: 400 to 1200 rpm
				        for > 4 sec
				<u>Fail Case 5</u>
				- Commanded 4th gear
				- TCC commanded ON
				- TPS: 10% to 50%
				- Speed Ratio: .65 to 0.80
				- TCC Slip: -20 to +50 rpm
				        for > 4 sec
					Continuous	DTC Type A

Shift Solenoid A Electrical	P0753	0V to 12V This DTC detects a continuous open or short to ground in the SSA circuit or the SSA solenoid	Fail Counter >43 Counts out of 50 Total Counts .	- System Voltage: 8 to 18 volts - Engine Speed > 450 rpm for 5 seconds and not in fuel cutoff	Continuous	DTC Type B

2000trans10.doc

SENSED PARAMETER	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA AND THRESHOLD VALUE(S)	SECONDARY PARAMETERS AND ENABLE CONDITIONS	TIME LENGTH AND FREQUENCY	MIL ILLUMINATION TYPE

Shift Solenoid B Performance	P0756	This DTC detects abnormal shift patterns:
		
		Stuck OFF:
		  4-3-3-4 pattern
		
		Stuck ON:
		  1-2-2-1 pattern
			Fail Counter >=3 .
			The fail counter is incremented when the following fail cases are true:
			
			Stuck OFF:
			  1 and 3, or
			  2 and 3
			
			Stuck ON:
			  3 and 4
				- Engine Speed > 450 rpm for 5 seconds and not in fuel cutoff
				- Gear Range is D4
				- No TPS DTC's
				- No VSS DTC's
				- No solenoid electrical DTC's
				- No TCC Stuck On DTC.
				- No PSA DTC set
				- Trans Temp: 20 C to 130 C
				- Vehicle Speed > 5 MPH
				
				Fail Case 1
				- 1st gear commanded > 2.0 sec.
				- Engine Torque: 40 to 400 ft lbs
				- Vacuum: 0 to 105 kpa
				- Output Speed: 400 to 1500 rpm
				- Speed Ratio: 0.70 to 3.0
				- Throttle Position > 25%
				- TCC Slip: -3000 to -100 rpm
				      for > 1.5 seconds
				Fail Case 2
				- 2nd gear command > 409.5 sec
				- Engine Torque: 40 to 400 ft lbs
				- Vacuum: 0 to 105 kpa
				- TCC Slip: 8191 to 8191 rpm
				- Output speed: 8191 to 8191 rpm
				- Speed Ratio: 8 to 8
				- Throttle Position > 99.9%
				- Fail Timer > 409.5 sec
				Fail Case 3
				- Time with 3rd gear commanded:
				      2.0 to 6.0 seconds
				- TPS: 10% to 50%
				- TPS constant within +/- 7%
				- Engine Torque: 40 to 400 ft lbs
				- Vacuum: 0 to 105 kpa
				- Speed Ratio in Third gear does not drop more than 0.35 from the last Speed Ratio in Second gear
				- TCC Slip in Third gear remains > 300 rpm higher than the last TCC Slip in Second gear
				- Fail Timer > 1.5 sec
				Fail Case 4
				- 4th Gear commanded for > 1 sec
				- Engine Torque: 0 to 400 ft lbs
				- Vacuum: 0 to 105 kpa
				- Output Speed: 1400 to 3000 rpm
				- Speed Ratio: 1.68 to 3.5
				- Throttle Position > 10%
				- TCC Slip: 1000 to 4000 rpm
				      for > 1.0 sec
					Continuous	DTC Type A

Shift Solenoid B Electrical	P0758	0V to 12V This DTC detects a continuous open or short to ground in the SSB circuit or the SSB solenoid	Fail Counter >43 Counts out of 50 Total Counts	- System Voltage: 8 to 18 volts - Engine Speed > 450 rpm for 5 seconds and not in fuel cutoff	Continuous	DTC Type A
3-2 Downshift Solenoid Electrical	P0785	0V to 12V This DTC detects a continuous open or short to ground in the SSB circuit or the SSB solenoid	Fail Counter >43 Counts out of 50 Total Counts	- System Voltage: 8 to 18 volts - Engine Speed > 450 rpm for 5 seconds and not in fuel cutoff	Continuous	DTC Type A

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PSA Circuit Malfunction	P1810	0V to 12V
		This DTC detects an invalid state of the PSA sensor or the PSA circuit by deciphering the PSA inputs.
			Fail Case 1
			 Illegal Trans Pressure Switch State (111) or (101)
			
			.
			
			Fail Case 2
			 Gear range is D2, D4, or Reverse during engine startup.
			
			Fail Case 3
			Gear range is Park or Neutral when operating in D4.
				Fail Case 1
				- Engine Speed > 450 rpm for 5 seconds and not in fuel cutoff
				- System Voltage: 8 to 18 volts
				
				Fail Case 2
				- System Voltage: 8 to 18 volts
				- No VSS DTC's
				- Vehicle Speed <2 mph
				
				1. Engine Speed < 80 rpm
				    for > 0.1 seconds, then,
				2. Engine Speed: 80 to 600 rpm
				    for > .08 seconds, then,
				3. Engine Speed > 600 rpm
				
				Fail Case 3
				- Engine Speed > 450 rpm for 5 seconds and not in fuel cutoff
				- System Voltage: 8 to 18 volts
				- 4th gear commanded
				- Engine Torque: 40 to 450 ft-lbs
				- Vacuum: 0 to 105 kPa
				- TCC ON
				- No VSS DTC's
				- Speed Ratio: 0.65 to 0.75
				- TPS: 10% to 50%
					Fail Case 1
					 60 seconds
					
					Fail Case 2
					 5 Seconds
					
					Fail Case 3
					 10 seconds
					
					Continuous
						DTC Type B

TCC PWM Solenoid Electrical	P1860	0V to 12V This DTC detects a continuous open or short to ground in the TCC PWM circuit or the TCC PWM sensor	Fail Counter >43 Counts out of 50 Total Counts	- System Voltage: 8 to 18 volts - Engine Speed > 450 rpm for 5 seconds and not in fuel cutoff - Commanded Gear is 1st - TCC Duty Cycle < 10% or > 90%	Continuous	DTC Type B

2000trans10.doc

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Transmission Component Slipping	P1870	This DTC detects excessive TCC slip when the torque converter clutch should be engaged.	If TCC slip is:
			
			 300 to 1000 rpm
			
			  for 7 seconds,
			
			then increment the Trans Slip Counter by one.
			
			When the counter reaches 3, set the code.
				- Engine Speed > 450 rpm for 5 seconds and not in fuel cutoff
				- Gear is not 1st
				- Gear Range is D4
				- No TPS High or Low DTC's
				- No VSS DTC's
				- No solenoid electrical DTC's
				- Shift Solenoid Performance Diagnostic counters are all zero
				- TPS: 12% to 50%
				- Trans temp.: 20 C to 130C
				- Engine Torque: 40 to 450 ft-lbs
				- Speed ratio: 0.64 to .95
				- Engine Speed: 1500 to 3500 rpm
				- Vehicle Speed: 35 to 65 mph
				
				Fail Case 1
				- TCC commanded on for > 5 seconds, then :
				- TCC at max duty cycle for > 5 seconds
				
				Fail Case 2
				- Run fail case 2 immediately after fail case 1 increments the trans slip counter to either 1or 2. Discontinue fail case 2 if the TCC is commanded OFF at any time.
				- TPS: 7% to 40%
				
				     Criteria A
				If : 200 rpm < TCC slip < 1000 rpm for 7 seconds,
				then: Go to max pressure
				        freeze adapts
				         go to criteria B
				
				     Criteria B
				If : 200 rpm < TCC slip < 1000 rpm for 7 seconds,
				then: Command TCC OFF for
				        1.5 seconds
				         go to criteria C
				
				     Criteria C
				If : 200 rpm < TCC slip < 1000 rpm
				       for 7 seconds,
				then: Set code p1870
					Continuous	DTC Type B