

**TRANSMISSION DIAGNOSTIC PARAMETERS**

2005trans3.doc

SENSED PARAMETER	FAULT CODE	ACCEPTABLE OPERATING RANGE AND RATIONALITY	PRIMARY MALF DETECTION PARAMETERS	SECONDARY MALF PARAMETERS & CONDITIONS	MIL ILLUM. TYPE
Transmission Fluid Overtemperature	<b>P0218</b>	High Trans Fluid Temp over long period of time	Trans Temp > 130° C.	-39° C < Trans Temp < 149° C. > 10.0 sec	600 sec Type C
Output Speed Sensor Circuit: Low Voltage	<b>P0502</b>	0 – 6500 RPM Low vehicle speed with large engine speed in Drive range	raw Output Speed < 150 RPM	No MAP, TPS (see below), P0503, P0716, P0717 DTCs No Engine Torque default Gear Selector ≠ Park/Neutral TPS > 12.0% TCC Slip > 0 RPM Trans Temp > 0° C. 1500 < Input Speed < 5000 RPM 85 < Engine Torque < 150 N-m	2.6 sec  Type B
Output Speed Sensor Circuit: Intermittent	<b>P0503</b>	0 – 6500 RPM Loss of vehicle speed with moving vehicle	$\Delta$ VSS > 600 RPM in Drive ranges VSS > 300 RPM (34 kph) for > 3.0 sec	No P0716, P0717, P1843 DTCs No Engine Torque default 500 < Engine Speed < 6500 RPM for 5.0 sec, not in fuel cutoff Time since Range change > 6.0 sec Positive $\Delta$ VSS, loop-to-loop, < 250 RPM for > 2.0 sec 85 < Engine Torque < 150 N-m Positive $\Delta$ ISS, loop-to-loop, < 500 RPM for > 2.0 sec	2.0 sec for Drive ranges  Type B
System Voltage: LOW	<b>P0562</b>	0 – 24 V LOW voltage with operating vehicle	Ignition Voltage $\leq$ 8.0 V	Engine Speed > 1200 RPM Powertrain components powered	20.0 sec  Type A
System Voltage: HIGH	<b>P0563</b>	0 – 24 V HIGH voltage with operating vehicle	Ignition Voltage $\geq$ 18.0 V	500 < Engine RPM < 6500 for 5.0 sec, not in fuel cutoff Powertrain components powered	43 fail counts out of 50 total counts  Type A

**TRANSMISSION DIAGNOSTIC PARAMETERS**

2005trans3.doc

SENSED PARAMETER	FAULT CODE	ACCEPTABLE OPERATING RANGE AND RATIONALITY	PRIMARY MALF DETECTION PARAMETERS	SECONDARY MALF PARAMETERS & CONDITIONS	MIL ILLUM. TYPE
Transmission Control Module Read Only Memory	<b>P0601</b>	EPROM/Flash memory corruption (Incorrect program/calibrations checksum)	RAM fail count > 5	None	Immediate  Type A
Transmission Control Module Not Programmed	<b>P0602</b>	Non-programmed ITCM (calibrations)	KbCOND_NoStartCal = TRUE	None	Immediate  Type A
Transmission Control Module Long-Term Memory Reset	<b>P0603</b>	Wrong copy of Non-volatile Memory to RAM	Non-volatile memory (static or dynamic) checksum failure	None	Immediate  Type A
Transmission Control Module Random Access Memory	<b>P0604</b>	RAM failure	RAM read/write failure (single word)	None	Immediate  Type A
Transmission Range Switch Circuit	<b>P0705</b>	TCM detects invalid PRNDL (NSBU) range	PRNDL range = Illegal	8.0 < Ignition Voltage < 18.0 V 500 < Engine RPM < 6500 for 5.0 sec, not in fuel cutoff	20.0 sec  Type C
Transmission Fluid Temperature Sensor Performance	<b>P0711</b>	0.24 - 5.0 V  <u>Fail Cases 1 &amp; 2</u> Trans Temp remains constant when measurable change is expected  <u>Fail Case 3</u> Unrealistic change in trans temperature	<u>Fail Case 1</u> -40° C. < Startup Trans Temp < 21° C. $\Delta$ Trans Temp < 2° C.  <u>Fail Case 2</u> 129° C. < Startup Trans Temp < 145° C. $\Delta$ Trans Temp < 2° C.  <u>Fail Case 3</u> $\Delta$ Trans Temp > 20° C. in 200 msec	No ECT (see below) P0502, P0503, P0716, P0717 DTCs Vehicle Speed > 8.0 kph for 900 sec cumulative -38° C. < Trans Temp < 149° C. TCC Slip > 120 RPM for > 409 sec cumulative ECT > 70° C. $\Delta$ ECT > 55° C. since start-up	<u>Fail Cases 1, 2</u> 80 sec  <u>Fail Case 3</u> Fail Counter > 14 within 7.0 sec  Type C

**TRANSMISSION DIAGNOSTIC PARAMETERS**

2005trans3.doc

SENSED PARAMETER	FAULT CODE	ACCEPTABLE OPERATING RANGE AND RATIONALITY	PRIMARY MALF DETECTION PARAMETERS	SECONDARY MALF PARAMETERS & CONDITIONS	MIL ILLUM. TYPE
Transmission Fluid Temperature Sensor Circuit: LOW Voltage	<b>P0712</b>	0.24 - 5.0 V Continuous Short-to-Ground in Trans Temperature Sensor or TTS circuit	Raw TTS > 150° C	500 < Engine RPM < 6500 for 5.0 sec, not in fuel cutoff	10.0 sec  Type C
Transmission Fluid Temperature Sensor Circuit: HIGH Voltage	<b>P0713</b>	0.24 - 5.0 V Continuous Open in Trans Temperature Sensor or TTS circuit	Raw TTS < -35° C	No P0502, P0503, P0716, P0717 DTC 500 < Engine RPM < 6500 for 5.0 sec, not in fuel cutoff TCC Slip > 120 RPM > 200 sec VSS > 50 RPM for 400 sec	25.5 sec  Type C
Input Speed Sensor Circuit Performance	<b>P0716</b>	0 - 6500 RPM Unrealistically large change in Input Speed in very short time	Input Speed change > 1300 RPM	No P0502, P0503, P0717, P0752, P1842, P1843, TPS DTCs No Engine Torque default 500 < Engine RPM < 6500 for 5.0 sec, not in fuel cutoff Positive ΔISS < 500 RPM for 0.5 sec ISS > 1800 for 4.0 sec 85 < Engine Torque < 150 N-m TPS > 15.0% Vehicle Speed > 8.0 kph	0.8 sec  Type B
Input Speed Sensor Circuit LOW Voltage	<b>P0717</b>	0 - 6500 RPM Low Input Speed with large vehicle speed	Input Speed < 100 RPM	No P0502, P0503 DTCs No Engine Torque default 500 < Engine RPM < 6500 for 5.0 sec, not in fuel cutoff 100 < Engine Torque < 150 N-m Vehicle Speed > 8.0 kph	5.0 sec  Type B
Brake Switch Circuit: LOW Voltage	<b>P0719</b>	0 – 12 V OPEN Brake Switch during decelerations	Decel count = 8	No P0502, P0503 DTCs <u>Increment Decel counter when:</u> Brake Switch OFF AND Vehicle Speed > 32.0 kph for 4.0 sec THEN 8.0 < Vehicle Speed < 32.0 kph for 3.0 < Time < 6.0 sec THEN Vehicle Speed < 8.0 kph  Brake Switch OFF for 900.0 sec	Reset counter if Brake Switch state changes during test  Type C

**TRANSMISSION DIAGNOSTIC PARAMETERS**

2005trans3.doc

SENSED PARAMETER	FAULT CODE	ACCEPTABLE OPERATING RANGE AND RATIONALITY	PRIMARY MALF DETECTION PARAMETERS	SECONDARY MALF PARAMETERS & CONDITIONS	MIL ILLUM. TYPE
Brake Switch Circuit: HIGH Voltage	<b>P0724</b>	0 – 12 V  CLOSED Brake Switch during accelerations	Accel count = 8	No P0502, P0503 DTCs Increment Accel counter when: Brake Switch ON AND Vehicle Speed < 8.0 kph THEN 8.0 < Vehicle Speed < 32.0 kph for 3.0 < Time < 6.0 sec THEN Vehicle Speed > 32.0 kph for 4.0 sec	Reset counter if Brake Switch state changes during test  Type C
Engine Speed: No Signal	<b>P0727</b>	0 - 6500 RPM Detects no response from CAN Bus signal for engine speed	CAN Bus Engine Speed Incorrect flag = 1	8.0 < Ignition Voltage < 18.0 V 500 < Engine RPM < 6500 for 5.0 sec, not in fuel cutoff CAN BUS ECU Failure ≠ 0 sec	1.0 sec  Type B
Incorrect Gear 1 Ratio	<b>P0731</b>	Unknown gear ratio with 1st commanded	Ratio > 7.90 OR 2.23 < Ratio < 2.87 OR 1.71 < Ratio < 2.02 OR 1.07 < Ratio < 1.54 OR 0.71 < Ratio < 0.91 OR Ratio < 0.60	No TPS (see below), P0502, P0503, P0716, P0717, P1810 DTCs No Engine Torque Default 500 < Engine RPM < 6500 for 5.0 sec, not in fuel cutoff Commanded Gear = 1st TPS > 15.0% Vehicle speed > 8.0 kph PSA ≠ PARK or NEUTRAL 20° C < Trans Temp < 130° C. 0 < Engine Torque < 250 N-m Time since Range change > 6.0 sec	5.0 sec  Type C
Incorrect Gear 2 Ratio	<b>P0732</b>	Unknown gear ratio with 2 <sup>nd</sup> commanded	See P0731	Commanded Gear = 2nd  See P0731	5.0 sec  Type C
Incorrect Gear 3 Ratio	<b>P0733</b>	Unknown gear ratio with 3 <sup>rd</sup> commanded	See P0731	Commanded Gear = 3rd  See P0731	7.0 sec  Type C

**TRANSMISSION DIAGNOSTIC PARAMETERS**

2005trans3.doc

SENSED PARAMETER	FAULT CODE	ACCEPTABLE OPERATING RANGE AND RATIONALITY	PRIMARY MALF DETECTION PARAMETERS	SECONDARY MALF PARAMETERS & CONDITIONS	MIL ILLUM. TYPE
Incorrect Gear 4 Ratio	<b>P0734</b>	Unknown gear ratio with 4th commanded	See P0731	Commanded Gear = 4th See P0731	7.0 sec  Type C
Torque Converter Clutch System Stuck OFF	<b>P0741</b>	High TCC Slip speed with TCC commanded ON	TCC Slip speed > 200 RPM  Count = 1	No TPS (see below), P0502, P0503, P0716, P0717, P0742, P1860, P1887 DTCs No Engine Torque Default 500 < Engine RPM < 6500 for 5.0 sec, not in fuel cutoff Time since Range change > 6.0 sec 8.0 < TPS < 100% 20° C. < Trans Temp < 130° C. Commanded Gear > 1 Clutch Capacity > 60% for 3.0 sec 0.61 < Trans Ratio < 1.71 40 < Engine Torque < 250 N-m	6.0 sec  Type B
Torque Converter Clutch System Stuck ON	<b>P0742</b>	Lack of Torque Converter release oil pressure (Switch is closed) with TCC commanded OFF	TCC Release Switch is closed  Count = 2	No TPS (see below), P1860, P1887 DTCs No Engine Torque Default 500 < Engine RPM < 6500 for 5.0 sec, not in fuel cutoff TCC commanded OFF Time since Range change > 6.0 sec 15.0 < Vehicle Speed < 255 kph 12.0 < TPS < 100.0% 0.61 < Trans Ratio < 1.71 10° C. < Trans Temp < 130° C. 40 < Engine Torque < 250 N-m	6.0 sec  Type B
Pressure Control Solenoid Control Circuit	<b>P0748</b>	0 – 12 V  Continuous Open or Short-to-Ground in Pressure Control Solenoid circuit	Pressure Control Solenoid Short bit = 1	Ignition Voltage Low timer = 0 10.5 < Ignition Voltage < 11.0 V (–40° C.) 12.5 < Ignition Voltage < 13.0 V (152° C.)	Type C

**TRANSMISSION DIAGNOSTIC PARAMETERS**

2005trans3.doc

SENSED PARAMETER	FAULT CODE	ACCEPTABLE OPERATING RANGE AND RATIONALITY	PRIMARY MALF DETECTION PARAMETERS	SECONDARY MALF PARAMETERS & CONDITIONS	MIL ILLUM. TYPE
1-2 Shift Solenoid Valve Performance: Stuck OFF	<b>P0751</b>	2-2-3-3 shift pattern	<p><u>Fail Case 1</u> Command Gear = 1 1.54 &lt; Ratio &lt; 1.71</p> <p><u>Fail Case 2</u> Command Gear = 4 0.91 &lt; Ratio &lt; 1.07</p> <p>Count = 2</p>	<p>No Engine Torque Default No TPS (see below), P0502, P0503, P0716, P0717, P1842, P1843, P1845, P1847 DTCs No Engine Torque Default 500 &lt; Engine RPM &lt; 6500 for 5.0 sec, not in fuel cutoff TPS &gt; 8.0% Vehicle Speed &gt; 8.0 kph 20° C. &lt; Trans Temp &lt; 130° C. 30 &lt; Engine Torque &lt; 250 N-m</p>	<p><u>Fail Case 1</u> 2.0 sec</p> <p><u>Fail Case 2</u> 5.0 sec</p> <p>Type B</p>
1-2 Shift Solenoid Valve Performance: Stuck ON	<b>P0752</b>	1-1-4-4 shift pattern	<p><u>Fail Case 3</u> Command Gear = 2 2.87 &lt; Ratio &lt; 3.13</p> <p><u>Fail Case 4</u> Command Gear = 3 0.61 &lt; Ratio &lt; 0.71</p> <p>Count = 2</p>	See P0751	<p><u>Fail Case 3</u> 3.0 sec</p> <p><u>Fail Case 4</u> 5.0 sec</p> <p>Type B</p>
2-3 Shift Solenoid Valve Performance: Stuck ON	<b>P0756</b>	4-3-3-4 shift pattern	<p><u>Fail Case 5</u> Command Gear = 1 0.61 &lt; Ratio &lt; 0.71</p> <p><u>Fail Case 6</u> Command Gear = 2 0.91 &lt; Ratio &lt; 1.07</p> <p>Count = 1</p>	See P0751	<p><u>Fail Case 5</u> 2.0 sec</p> <p><u>Fail Case 6</u> 3.0 sec</p> <p>Type A</p>

**TRANSMISSION DIAGNOSTIC PARAMETERS**

2005trans3.doc

SENSED PARAMETER	FAULT CODE	ACCEPTABLE OPERATING RANGE AND RATIONALITY	PRIMARY MALF DETECTION PARAMETERS	SECONDARY MALF PARAMETERS & CONDITIONS	MIL ILLUM. TYPE
2-3 Shift Solenoid Valve Performance: Stuck OFF	<b>P0757</b>	1-2-2-1 shift pattern	<p><u>Fail Case 7</u> 30 &lt; Engine Torque &lt; 250 N-m Command Gear = 3 1.54 &lt; Ratio &lt; 1.71</p> <p><u>Fail Case 8</u> 0 &lt; Engine Torque &lt; 250 N-m Command Gear = 4 1.71 &lt; Ratio &lt; 3.13</p> <p>Count = 1</p>	<p>No Engine Torque Default No TPS (see below), P0502, P0503, P0716, P0717, P1842, P1843, P1845, P1847 DTCs No Engine Torque Default 500 &lt; Engine RPM &lt; 6500 for 5.0 sec, not in fuel cutoff 8.0 &lt; TPS &lt; 100% 20° C. &lt; Trans Temp &lt; 130° C. Vehicle Speed &gt; 8.0 kph</p>	<p><u>Fail Case 7</u> 3.0 sec</p> <p><u>Fail Case 8</u> 2.0 sec</p> <p>Type A</p>
TCM Long-Term Memory Performance	<b>P1621</b>	NVM write error at key-down	TCM Non-Volatile Memory Incorrect flag = 1	8.0 < Ignition Voltage < 18.0 V Ignition ON	Immediate  Type A
Engine Torque Signal	<b>P1779</b>	CAN: Protocol for TCM to receive engine control inputs from Engine Control Module. CAN confirms messages are being received via BUS failure timer. CAN bits are checked for Pass/ Fail.	CAN Bus Engine Torque Incorrect flag = 1	8.0 < Ignition Voltage < 18.0 V CAN BUS ECU Failure ≠ 0 sec  NOTE: Fail time = 0, code has failed	1.0 sec  Type A
Torque Reduction Signal	<b>P1780</b>	CAN: Protocol for TCM to receive engine control inputs from Engine Control Module. CAN confirms messages are being received via BUS failure timer. CAN bits are checked for Pass/ Fail.	CAN Bus Torque Reduction Signal Incorrect flag = 1	8.0 < Ignition Voltage < 18.0 V 500 < Engine RPM < 6500 for 5.0 sec, not in fuel cutoff CAN BUS ECU Failure ≠ 0 sec  NOTE: Fail time = 0, DTC has failed	1.0 sec  Type C

**TRANSMISSION DIAGNOSTIC PARAMETERS**

2005trans3.doc

SENSED PARAMETER	FAULT CODE	ACCEPTABLE OPERATING RANGE AND RATIONALITY	PRIMARY MALF DETECTION PARAMETERS	SECONDARY MALF PARAMETERS & CONDITIONS	MIL ILLUM. TYPE
Pedal Position Signal	<b>P1791</b>	CAN: Protocol for TCM to receive engine control inputs from Engine Control Module. CAN confirms messages are being received via BUS failure timer. CAN bits are checked for Pass/ Fail.	Throttle Position Invalid Flag = 1	8.0 < Ignition Voltage < 18.0 V CAN BUS ECU Failure ≠ 0 sec  NOTE: Fail time = 0, DTC has failed	1.0 sec  Type A
Engine Coolant Temperature Signal	<b>P1792</b>	CAN: Protocol for TCM to receive engine control inputs from Engine Control Module. CAN confirms messages are being received via BUS failure timer. CAN bits are checked for Pass/ Fail.	Engine Coolant Temperature Incorrect flag in CAN Bus = 1	8.0 < Ignition Voltage < 18.0 V CAN BUS ECU Failure ≠ 0 sec  NOTE Fail time = 0, DTC has failed	1.0 sec  Type C without lamp illumination
Throttle Blade Position Signal	<b>P1795</b>	CAN: Protocol for TCM to receive engine control inputs from Engine Control Module. CAN confirms messages are being received via BUS failure timer. CAN bits are checked for Pass/ Fail.	Throttle Position Incorrect flag in CAN Bus = 1	8.0 < Ignition Voltage < 18.0 V CAN BUS ECU Failure ≠ 0 sec  NOTE: Fail time = 0, DTC has failed	1.0 sec  Type A
Transmission Pressure Switch Assembly - Illegal Range	<b>P1810</b>	0 – 12 V  Invalid PSA state or PSA circuit	Range = ILLEGAL	500 < Engine Speed < 6500 RPM for 5.0 sec, not at fuel cutoff	60 sec  Type B
Maximum Adapt and Long Shift	<b>P1811</b>	Long shifts which cannot be shortened by adapts	Adaptable Shift time > 0.59 sec	Test run after each adaptable shift  Adapts at maximum value	2 counts  Type C



**TRANSMISSION DIAGNOSTIC PARAMETERS**

2005trans3.doc

SENSED PARAMETER	FAULT CODE	ACCEPTABLE OPERATING RANGE AND RATIONALITY	PRIMARY MALF DETECTION PARAMETERS	SECONDARY MALF PARAMETERS & CONDITIONS	MIL ILLUM. TYPE
Transmission Pressure Switch Assembly: Park/Neutral with Drive Ratio	<b>P1816</b>	0 – 12 V Invalid PSA state or PSA circuit malfunction	PSA indicates P/N when Ratio indicates Drive	No TPS (see below), P0502, P0503, P0716, P0717, P0751, P0752, P0756, P0757, P1810, P1842, P1843, P1845, P1847 DTCs 8.0 < Ignition Voltage < 18.0 V 500 < Engine RPM < 5500 for 5.0 sec, not in fuel cutoff Output Speed ≥ 42 RPM TPS ≥ 10.0 % 35 < Engine Torque < 250 N-m	5.0 sec  Type B
Transmission Pressure Switch Assembly: Drive without Drive Ratio	<b>P1818</b>	0 – 12 V Invalid PSA state or PSA circuit malfunction	PSA = D4 when Ratio indicates Reverse	No TPS (see below), P0502, P0503, P0716, P0717, P0751, P0752, P0756, P0757, P1810, P1816, P1842, P1843, P1845, P1847 DTCs 8.0 < Ignition Voltage < 18.0 V 500 < Engine RPM < 6500 for 5.0 sec, not in fuel cutoff Output Speed ≥ 42 RPM TPS ≥ 10.0 % 35 < Engine Torque < 250 N-m	5.0 sec  Type B
Shift Lock Solenoid Control Circuit: Low Voltage	<b>P1831</b>	0 – 12 V Continuous Open, Short-to-Ground in High Side Driver 1 circuit	High Side Driver 1 feedback circuit state ≠ PCM commanded state	500 < Engine RPM < 6500 for 5.0 sec, not in fuel cutoff High Side Driver 1 commanded ON	Fail cnt = 43/50 (Total time ≈ 4.3 sec)  Type A
Shift Solenoid Control Circuit: Low Voltage	<b>P1833</b>	0 – 12 V Continuous Open, Short-to-Ground in High Side Driver 2 circuit	High Side Driver 2 feedback circuit state ≠ PCM commanded state	500 < Engine RPM < 6500 for 5.0 sec, not in fuel cutoff High Side Driver 2 commanded ON	Fail cnt = 43/50 (Total time ≈ 4.3 sec)  Type A

**TRANSMISSION DIAGNOSTIC PARAMETERS**

2005trans3.doc

SENSED PARAMETER	FAULT CODE	ACCEPTABLE OPERATING RANGE AND RATIONALITY	PRIMARY MALF DETECTION PARAMETERS	SECONDARY MALF PARAMETERS & CONDITIONS	MIL ILLUM. TYPE
1-2 Shift Solenoid Control Circuit: LOW Voltage (Shift Solenoid A)	<b>P1842</b>	0 – 12 V Continuous Open, Short-to-Ground in SSA circuit (ODM) or SSA solenoid	Short to Ground bit = 1 OR Shift Solenoid 1-2 Commanded ON & Open bit = 1	500 < Engine RPM < 6500 for 5.0 sec, not in fuel cutoff High Side Driver 1 ON	Fail cnt = 43/50  (Total time ≈ 4.3 sec)  Type A
1-2 Shift Solenoid Control Circuit: HIGH Voltage (Shift Solenoid A)	<b>P1843</b>	0 – 12 V Short-to-Power in SSA circuit (ODM) or SSA solenoid	SS 1-2 feedback circuit state ≠ PCM commanded state	500 < Engine RPM < 6500 for 5.0 sec, not in fuel cutoff Shift Solenoid 1-2 commanded ON High Side Driver 1 ON	Fail cnt = 43/50  (Total time ≈ 4.3 sec)  Type A
2-3 Shift Solenoid Control Circuit: LOW Voltage (Shift Solenoid B)	<b>P1845</b>	0 – 12 V Continuous Open, Short-to-Ground in SSB circuit (ODM) or solenoid	Short to GND bit = 1 OR Shift Solenoid 2-3 Commanded ON & Open bit = 1	500 < Engine RPM < 6500 for 5.0 sec, not in fuel cutoff High Side Driver 2 ON	Fail count = 43 out of 50 total  (Total time ≈ 4.3 sec)  Type A
2-3 Shift Solenoid Control Circuit: HIGH Voltage (Shift Solenoid B)	<b>P1847</b>	0 - 12 V Short-to-Power in SSB circuit (ODM) or solenoid	SS 2-3 feedback circuit state ≠ PCM commanded state	500 < Engine RPM < 6500 for 5.0 sec, not in fuel cutoff Shift Solenoid 2-3 commanded ON High Side Driver 2 ON	Fail count = 43 out of 50 total  (Total time ≈ 4.3 sec)  Type A
Torque Converter Clutch Pulse Width Modulated Solenoid Control Circuit	<b>P1860</b>	Continuous Open or Short-to-Ground in TCC PWM circuit or TCC PWM solenoid	Every 100 msec, fail counter incremented if open or short detected	No P0741, P0742 DTCs 500 < Engine RPM < 6500 for 5.0 sec, not in fuel cutoff TCC Duty Cycle < 10% or > 80%	Fail count = 43 out of 50 total  (Total time ≈ 4.3 sec)  Type A
Transmission Fluid Life	<b>P1868</b>	Percent of transmission fluid life remaining	Transmission fluid life remaining < 10%	No P0711, P0712, P0713 DTCs	Type C

**TRANSMISSION DIAGNOSTIC PARAMETERS**

2005trans3.doc

SENSED PARAMETER	FAULT CODE	ACCEPTABLE OPERATING RANGE AND RATIONALITY	PRIMARY MALF DETECTION PARAMETERS	SECONDARY MALF PARAMETERS & CONDITIONS	MIL ILLUM. TYPE
Torque Converter Clutch Release Switch Circuit	<b>P1887</b>	OPEN Release Switch (TCC not applied) when PCM & TCC slip speed indicate TCC is locked	Count = 1	No P0716, P0717, P0741, P0742, P1860 DTCs 500 < Engine RPM < 6500 for 5.0 sec, not in fuel cutoff TCC commanded ON 20° C. < Trans Temp < 130° C. -20 < TCC Slip < 60 RPM 40 < Engine Torque < 130 N-m 103 < TCC Pressure < 824 kPa	6.0 sec  Type B
CAN Bus Reset Counter Overrun	<b>U2104</b>	CAN: A protocol for TCM to receive engine control inputs from Engine Control Module. CAN confirms messages are being received via BUS failure timer. CAN bits are checked for Pass/ Fail.	Bus reset Fail count ≥ 64	8.0 < Ignition Voltage < 18.0 V Ignition ON	Type A
CAN Bus Error ECM	<b>U2105</b>	Communication between TCM & Engine Control Unit (ECU)	CAN Bus ECU Error flag = 1	8.0 < Ignition Voltage < 18.0 V Ignition ON	1.0 sec  Type A
CAN Bus Error BCM	<b>U2107</b>	Communication between TCM & Body Control Module (BCM)	CAN Bus BCM Error flag = 1	8.0 < Ignition Voltage < 18.0 V Ignition ON	1.0 sec  Type A