SENSED PARAMETER	FAULT CODE	ACCEPTABLE OPERATING RANGE AND RATIONALITY	PRIMARY MALF DETECTION PARAMETERS	SECONDARY PARAMETERS AND CONDITIONS	MONITORING TIME LENGTH & DTC TYPE
Vehicle Speed Sensor: Low Input	P0502	0 - 6000 RPM Low vehicle speed with large engine speed in Drive range	unfiltered Output Speed < 200 RPM	No MAP, TPS DTCs (see below) No P0716, P0717 DTCs No Engine Torque malfunction Input Speed > 1500 RPM TPS ≥ 5.0% 0 < MAP < 105 kpa Trans Temp >20.25° C. TCC Slip > -20 RPM_s Engine RPM > 500 for 5.0 sec, NIFCO Park/Neutral Case 1500 ≤ Eng Torque in P/N ≤ 1500 ft-lb Drive Case 37 < Engine Torque < 1500 ft-lb	4.5 sec Type B
Vehicle Speed Sensor: Intermittent	P0503	0 - 6000 RPM Loss of vehicle speed when vehicle is moving	Park/Neutral Case Drop in Output Speed > 8192 RPM Drive Case Drop in unfiltered Output Speed > 1200 RPM	Engine RPM > 500 for 5.0 sec, NIFCO No Engine Torque malfunction **IF** +Δraw VSS, loop-to-loop, > 500 RPM **THEN** wait 2.0 sec Range Change Time > 6.0 sec TCC Slip > -5 RPM Transmission Temp > -20° C.	Park/Neutral 409 sec Drive Case 4.0 sec Type B
Transmission Fluid Temperature Sensor Circuit: Range/ Performance	P0711	0.24 - 5.0 V Fail Case 1 Trans Fluid Temp remains constant for a time in which a change is expected **OR** Fail Case 2 Unrealistically large change in TFT	Fail Case 1 ΔTFT ≤ 2.25° C. Fail Case 2 ΔTFT ≥ 20.25° C. in 100 msec	No P0502, P0503, P0716, P0717, ECT DTCs 10 ≤ TFT A/D counts ≤ 251 NOT (8.0 < Ign Voltage < 18.0 V) < 0.5 sec. Engine Speed > 500 RPM for 5.0 sec, not in fuel cutoff Vehicle Speed ≥ 5.0 mph for 300 sec cumulative -39.75° C. ≤ TFT at startup ≤ 21° C. TCC Slip ≥ 120 RPM ≥ 300 sec cumulative ECT ≥ 69.75° C. ΔECT > 54.75° C. since start-up	Fail Case 1 80.0 sec Fail Case 2 Fail count > 14 within 7.0 sec Type C
Transmission Fluid Temperature Sensor Circuit: Low Input	P0712	0.24 - 5.0 V Continuous Short-to-Ground in Trans Fluid Temp sensor or TFT signal circuit	Trans Temp Sensor ≤ 10 counts (Raw TTS ≤ 0.33 Volts)	NOT (8.0 < Ign Voltage < 18.0 V) < 0.5 sec.	10.0 sec Type C
Transmission Fluid Temperature Sensor Circuit: High Input	P0713	0.24 - 5.0 V Continuous Open or Short-to-Power in TFT sensor or TFT signal circuit	Trans Temp Sensor ≥ 251 counts (Raw TTS ≥ 4.92 Volts)	NOT (8.0 < Ign Voltage < 18.0 V) < 0.5 sec.	400.0 sec Type C
Input Speed Sensor Circuit: Range/ Performance	P0716	0 - 6000 RPM Unrealistically large change in Input Speed within very short time	unfiltered Input Speed drop ≥ 1000 RPM	No TPS DTCs (see below) No P0502, P0503, P0717, P0751 P0752, P0753 DTCs Engine RPM > 500 for 5.0 sec, not in fuel cutoff 37 < Engine Torque < 1500 ft-lb TPS ≥ 5.0% Vehicle Speed ≥ 10.0 mph	4.0 sec Type B

SENSED PARAMETER	FAULT CODE	ACCEPTABLE OPERATING RANGE AND RATIONALITY	PRIMARY MALF DETECTION PARAMETERS	SECONDARY PARAMETERS AND CONDITIONS	MONITORING TIME LENGTH & DTC TYPE
Input Speed Sensor Circuit: No Signal	P0717	0 - 6000 RPM Low Input Speed with large vehicle speed	unfiltered Input Speed < 100 RPM	No P0502, P0503 DTCs No Engine Torque malfunction 37 < Engine Torque < 1500 ft-lb Engine RPM > 500 for 5.0 sec, not in fuel cutoff Vehicle Speed ≥ 10.0 mph	4.5 sec Type B
Torque Converter Clutch System Stuck OFF	P0741	High TCC slip with TCC commanded on	TCC Slip > 200 RPM increments Stuck OFF counter Count = 1	No P0502, P0503, P0716, P0717, P0742, P2761, P1887, TPS DTCs No Engine Torque malfunction Engine RPM > 500 for 5.0 sec, not in fuel cutoff 4.99% < TPS < 100.0% 20° C. ≤ Trans Temp < 130° C. 56 < Engine Torque < 340 ft-lb TCC Capacity ≥ 60% ≥ 3.0 sec .61< Ratio < .71 or .90 < Ratio < 1.07	6.0 sec Type B
Torque Converter Clutch System Stuck ON	P0742	Lack of Torque Converter Clutch release oil pressure when TCC commanded off	TCC Release Switch is CLOSED Count = 4	No P0716, P0717, P2761, P1887 TPS DTCs Engine RPM > 500 for 5.0 sec, not in fuel cutoff No Engine Torque malfunction TCC Mode = OFF 10° C. ≤ Trans Temp ≤ 130° C. 37 < Engine Torque < 1500 ft-lb 7.99% ≤ TPS ≤ 100.0%	6.0 sec Type B
Shift Solenoid A Performance Stuck OFF	P0751	2-2-3-3 shift pattern	<u>Fail Case 1</u> Commanded 1st 1.54 < Ratio < 1.71 1.0 sec. after gear change <u>Fail Case 2</u> Commanded 4th 0.91 < Ratio < 1.07 1.0 sec. after gear change Count = 2	No P0502, P0503, P0716, P0717, P0742, P0753, P0758, P2761, TPS DTCs No Engine Torque malfunction TPS ≥ 8.0% VSS ≥ 200 RPM 20° C. ≤ Trans Temp ≤ 130° C. Engine RPM > 500 for 5.0 sec, not in fuel cutoff 8.0 ≤ Ignition Voltage ≤ 18.0 V 150 ≤ Input Speed ≤ 6000 RPM 37 ≤ Engine Torque ≤ 1500 ft-lb	<u>Fail Case 1</u> 2.0 sec <u>Fail Case 2</u> 4.0 sec Type B
Shift Solenoid A Performance Stuck ON	P0752	1-1-4-4 shift pattern	<u>Fail Case 3</u> Commanded 2nd 2.87 < Ratio < 3.13 1.0 sec. after gear change <u>Fail Case 4</u> Commanded 3rd 0.61 < Ratio < 0.71 1.0 sec. after gear change Count = 2	See P0751	<u>Fail Case 3</u> 2.0 sec <u>Fail Case 4</u> 3.0 sec Type B
Shift Solenoid A Electrical	P0753	0 – 12 V Continuous Open, Short-to-Ground, or Short-to-Power in Shift Solenoid A or SSA circuit (ODM)	Shift Solenoid A Status = INVALID	NOT (8.0 < Ignition Voltage < 18.0 V) < 0.5 sec.	Fail count = 43 in sample of 50 (Time ≈ 4.3 sec) Type A

SENSED PARAMETER	FAULT CODE	ACCEPTABLE OPERATING RANGE AND RATIONALITY	PRIMARY MALF DETECTION PARAMETERS	SECONDARY PARAMETERS AND CONDITIONS	MONITORING TIME LENGTH & DTC TYPE
Shift Solenoid B Performance Stuck ON	P0756	4-3-3-4 shift pattern	<u>Fail Case 5</u> 200 ≤ TCC Slip ≤ 1850 RPM VSS > 160 RPM Commanded 1st 0.61 < Ratio < 1.71 1.0 sec. after gear change <u>Fail Case 6</u> Commanded 2nd 0.91 < Ratio < 1.07 1.0 sec. after gear change Count = 2	No P0502, P0503, P0716, P0717, P0742, P0753, P0758, P2761, TPS DTCs No Engine Torque malfunction TPS ≥ 8.0% 20° C. ≤ Trans Temp ≤ 130° C. Engine RPM > 500 for 5.0 sec, not in fuel cutoff 8.0 ≤ Ignition Voltage ≤ 18.0 V 150 ≤ Input Speed ≤ 6000 RPM 37 ≤ Engine Torque ≤ 1500 ft-lb VSS ≥ 200 RPM	<u>Fail Case 5</u> 2.0 sec <u>Fail Case 6</u> 3.0 sec Type A
Shift Solenoid B Performance Stuck OFF	P0757	1-2-2-1 shift pattern	<u>Fail Case 7</u> 37 ≤ Engine Torque ≤ 1500 ft-lb Commanded 3rd 1.54 < Ratio < 1.71 1.0 sec. after gear change <u>Fail Case 8</u> 15 ≤ Engine Torque ≤ 1500 ft-lb Commanded 4th 1.37 < Ratio < 3.13 1.0 sec. after gear change Count = 2	No P0502, P0503, P0716, P0717, P0742, P0753, P0758, P2761, TPS DTCs No Engine Torque malfunction TPS ≥ 8.0% 20° C. ≤ Trans Temp ≤ 130° C. Engine RPM > 500 for 5.0 sec, not in fuel cutoff 8.0 ≤ Ignition Voltage ≤ 18.0 V 150 ≤ Input Speed ≤ 6000 RPM VSS ≥ 200 RPM	<u>Fail Case 7</u> 2.0 sec <u>Fail Case 8</u> 2.0 sec Type A
Shift Solenoid B Electrical	P0758	0 – 12 V Continuous Open, Short-to-Ground, or Short-to-Power in Shift Solenoid B or SSB circuit (ODM)	Shift Solenoid B Status = INVALID	NOT (8.0 < Ignition Voltage < 18.0 V) < 0.5 sec.	Fail count = 43 in sample of 50 (Time ≈ 4.3 sec) Type A
Transmission Range Illegal Status	P1810	0 – 12 V Invalid Range	Illegal PSA range	Engine RPM > 500 for 5.0 sec, not in fuel cutoff NOT (8.0 < Ign Voltage < 18.0 V) < 0.5 sec	60.0 sec Type B
Pressure Switch Drive Ratio in Park/Neutral Range	P1816	0 – 12 V Mismatch: P/N range indicated with Drive gear ratio	PSA = P/N **AND** 2.87 ≤ Ratio ≤ 3.13 **OR** 1.54 ≤ Ratio ≤ 1.71 **OR** 0.91 ≤ Ratio ≤ 1.07 **OR** 0.61 ≤ Ratio ≤ 0.71	No P1810, P1818 DTCs NOT (8.0 < Ignition Voltage < 18.0 V) < 0.5 sec. No Engine Torque malfunction Engine RPM > 500 for 5.0 sec, not in fuel cutoff Vehicle Speed ≥ 3.0 mph TPS ≥ 10.0% 25 ≤ Engine Torque ≤ 225 ft-lbs	5.0 sec Continuous Type B

SENSED PARAMETER	FAULT CODE	ACCEPTABLE OPERATING RANGE AND RATIONALITY	PRIMARY MALF DETECTION PARAMETERS	SECONDARY PARAMETERS AND CONDITIONS	MONITORING TIME LENGTH & DTC TYPE
Pressure Switch Assembly Reverse Ratio in Drive Range	P1818	0 – 12 V Mismatch: Drive range indicated with Reverse gear ratio	PSA = P/N or Drive range **AND** 2.02 ≤ Ratio ≤ 2.23 (Ratio = Reverse)	No P1810, P1816 DTCs NOT (8.0 < Ignition Voltage < 18.0 V) < 0.5 sec. No Engine Torque malfunction Engine RPM > 500 for 5.0 sec, not in fuel cutoff Vehicle Speed ≥ 3.0 mph TPS ≥ 3.0% 25 ≤ Engine Torque ≤ 225 ft-lbs	2.75 sec Continuous Type B
Torque Converter Clutch Release Switch Circuit Malfunction	P1887	Release Switch OPEN when PCM and TCC Slip show TCC is ON	Release Switch is OPEN **AND** TCC was off this key on Count = 2	No P0716, P0717, P0741, P0742, P2761 DTCs Engine RPM > 500 for 5.0 sec, not in fuel cutoff No Engine Torque malfunction TCC Mode = LOCKED -20 < Slip < 60 RPM 30 < Engine Torque < 225 ft-lb 15 < TCC Pressure < 120 psi	6.0 sec Type B
Torque Converter Clutch Pulse Width Modulated Solenoid Electrical	P2761	Continuous Open or Short-to-Ground in TCC PWM solenoid or TCC PWM circuit	If TCC Control Solenoid Status = INVALID, increment FAIL counter	No P2761 DTC NOT (8.0 < Ignition Voltage < 18.0 V) < 0.5 sec. TCC Duty Cycle ≤ 10.0% **OR** ≥ 80.0%	Fail Count = 43 in sample of 50 (Time ≈ 4.3 sec) Type A