1997 3.8L (L36) H-car
4T60-E TRANSMISSION DIAGNOSTIC PARAMETERS

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SENSED PARAMETER	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA AND THRESHOLD VALUE(S)	SECONDARY PARAMETERS AND ENABLE CONDITIONS	TIME REQUIRED AND FREQUENCY	MIL ILLUMINATION TYPE
Vehicle Speed Sensor - Low input	P0502	This DTC detects a low vehicle speed when the vehicle has a large engine speed in a drive gear range.	Output Speed < 150 rpm	Gear Range is not Park/Neutral No TP high or low sensor DTC's set Throttle Position > 15% No Map Sensor High or Low DTC's set 0 KPA > MAP sensor < 105 KPA 40 ftlbs <Engine Torque< 150 ftlbs Engine Speed > 2900 RPM	2.5 seconds Continuous	DTC Type A
Vehicle Speed Sensor - Intermittent	P0503	This DTC detects an unrealistic large drop in vehicle speed.	Output Speed drop >1500 RPM	Time since last Gear Range Change > 6. Sec Engine Speed > 500 rpm for 5 sec and not in fuel cutoff No Output Speed rise > 1000 rpm within 2 sec. Transmission not in P/N	2 sec	DTC Type A
Trans Fluid Temp Sensor Circuit - Range / Performance	P0711	The DTC detects an unrealistically large change in transmission temperature or a value which remains constant for a period of time in which a measurable amount of change is expected.	1) Trans Temp has not changed ≥ 1.5 deg C (absolute value) since startup. 2) Trans Temp changes ≥ 20 deg. C (absolute value) in 200 msec. & this happens ≥ 14 times in 7 sec.	System Voltage between 10 and 16 volts No VSS DTC's .2 volts < Raw TTS < 4.92 volts No DTC 1870 Engine Running ≥ 300 sec. Vehicle Speed ≥ 5 mph for ≥ 409 sec. cumulative this ignition cycle. Torque Converter Slip ≥ 120 rpm for ≥ 409 sec. cumulative this ignition cycle. Trans Temp at startup between -40 and 21 deg. C Coolant Temp ≥ 70 deg. C Coolant Temp. has changed by ≥ 50 deg. C since startup.	1) 409 seconds continuous. 2) 7 seconds continuous	DTC Type B
TCC Enable Solenoid Electrical	P0740	This DTC detects a continuous open or short to ground in the TCC circuit or the TCC solenoid	Every 100 msec the circuit is checked and a fail counter is incremented if an open or short is detected.	System Voltage between 10 and 16 volts Ign On Engine Speed > 500 rpm for 5 sec & not in fuel cutoff	Fail Counter > 43 Counts out of 50 Total Counts 100 ms/count Continuous	DTC Type A
TCC System Stuck ON	P0742	This DTC detects low torque converter slip when the TCC is commanded off.	3 occurrences of the TCC Slip between -20 rpm and 50 rpm for the duration of the fail timer	Engine Speed > 500 rpm for 5 sec and not in fuel cutoff 70 ftlbs < Eng Torque < 200 ftlbs Commanded Gear is not 1st Gear Range is D4, D3 or D2 Throttle Position between 14% and 50% TCC is commanded off Engine Speed between 800 rpm and 4000 rpm Vehicle Speed between 20 mph and 70 mph No Range change within 3 sec. No TP high or low sensor DTC's No VSS Low or Intermittent DTC's No TCC Enable Sol. DTC's No TCC Control Sol. DTC's	5 seconds Continuous	DTC Type B

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Shift Solenoid A Performance	P0751	This DTC detects 2-2-3-3 or a 1-1-4-4 shift pattern	Fail Counter >=2 . The fail counter is incremented if fail cases (1,2,3,& 4) or (1,2,3, & 5) are true	General Engine Speed > 500 rpm for 5 sec and & not in fuel cutoff Gear range is D4 Vehicle speed >5 mph 20 C < Trans. Temp. < 130 C No TP high or low DTC's No Vss low or intermittent DTC's No Sol electrical DTC's No DTC 742 Traction Control Not Active Fail Case 1 Commanded 1-2 shift 10% < TPS< 55% TPS constant within +/- 7% 5 mph< VSS < 40 mph In 2.5 seconds, engine speed in 2nd gear must be 100 rpm > last speed in 1st gear Fail Case 2 Commanded 2-3 shift 10% < TPS < 55% TPS constant within +/- 10% 25 mph < VSS < 55 mph In 2.5 sec, engine speed in 3rd gear must be 130 rpm < last speed in 2nd gear Fail Case 3 Commanded 3-4 shift 5 % < TPS < 20% TPS constant within +/- 7% 35 mph < VSS < 75 mph In 0.2 seconds, engine speed in 4th gear must be 1 rpm > last speed in 3rd gear Fail Case 4 Commanded 4th gear TCC on 5% < TPS < 30% 0.98 < Speed Ratio < 1.19 500 < TCC Slip < 1000 for > 3 sec Fail Case 5 Commanded 4th gear TCC on 5% < TPS < 30% 0.7 < Speed Ratio < 0.82 0 < TCC Slip < 50 for > 3 sec	Continuous	DTC Type A
Shift Solenoid A Electrical	P0753	This DTC detects a continuous open or short to ground in the SSA circuit or the SSA solenoid	Every 100 msec the circuit is checked and a fail counter is incremented if an open or short is detected.	System Voltage between 10 and 16 volts Ign On Engine Speed > 500 rpm for 5 sec & not in fuel cutoff	Fail Counter > 43 Counts out of 50 Total Counts 100 ms/count Continuous	DTC Type A

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Shift Solenoid B Performance	P0756	This DTC detects a 1-2-2-1 or a 4-3-3-4 shift pattern	The Stuck On Fail counter has reached a value of 3 or the Stuck Off Fail counter has reached a value of 3. The Stuck On counter is incremented when both Fail Case 3 & Fail Case 4 are true. The Stuck Off counter is incremented when both Fail Case 1 & Fail Case 3 are true or when both Fail Case 2 & Fail Case 3 are true.	Engine Speed > 500 rpm for 5 sec and not in fuel cutoff Vehicle Speed > 16 MPH Gear Range is D4 20 C < Trans Temp < 130 C No TPS sensor High or Low DTC's No VSS Low or Intermittent DTC's No Trans solenoid electrical DTC's No TCC Stuck On DTC. Fail Case 1 First gear commanded for > 2 sec. -4064 rpm < TCC Slip < -100 rpm 800 rpm < Output Speed < 1500 rpm 0.7 < Speed Ratio < 2.8 Throttle Position > 35% Fail Timer > 1.5 sec Fail Case 2 Second gear commanded for > 2 sec -1000 rpm < TCC Slip < 100 rpm 1000 rpm < Output Speed < 2100 rpm 1.09 < Speed Ratio < 1.6 Throttle Position > 18% Fail Timer > 2 sec Fail Case 3 2.5 sec < time with Third gear commanded < 7.5 sec 14% < Throttle Position < 45% TPS constant within +/- 7% Speed Ratio in Third gear does not drop more than .5 from the last Speed Ratio in Second gear TCC Slip in Third gear remains > 500 rpm higher than the last TCC Slip in Second gear Fail Timer > 2 sec Fail Case 4 Fourth Gear commanded for > 1.5 sec 1600 rpm < TCC Slip < 6000 rpm 1500 < Output Speed < 2800 2 < Speed Ratio < 4 Throttle Position > 10% Fail Timer > 2 sec	Continuous	DTC Type A
Shift Solenoid B Electrical	P0758	This DTC detects a continuous open or short to ground in the SSB circuit or the SSB solenoid	Every 100 msec the circuit is checked and a fail counter is incremented if an open or short is detected.	System Voltage between 10 and 16 volts Ign On Engine Speed > 500 rpm for 5 sec & not in fuel cutoff	Fail Counter > 43 Counts out of 50 Total Counts 100 ms/count Continuous	DTC Type A
TCC PWM Solenoid Electrical	P1860	This DTC detects a continuous open or short to ground in the TCC PWM circuit or the TCC PWM sensor	Every 100 msec the circuit is checked and a fail counter is incremented if an open or short is detected.	System Voltage between 10 and 16 volts Ign On Engine Speed > 500 rpm for 5 sec & not in fuel cutoff TCC Duty Cycle < 10% or > 90%	Fail Counter >43 Counts out of 50 Total Counts 100 ms/count Continuous	DTC Type A

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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 between 200 rpm and 1500 rpm for the length of the fail timer, then increment the fail counter by one. When the counter reaches 3, set the code.	Engine Speed > 500 rpm for 5 sec and not in fuel cutoff Gear is not 1st 8% < TPS < 35% 20 C < Trans. Temp. < 130C 50 ftlbs < Eng Torque < 170 ftlbs Gear Range is D4 TCC at Max Apply for > 5 sec TCC commanded on for > 5 sec 0.7 < Speed Ratio < 1.05 800 rpm < Engine Speed < 5000 rpm 35 mph < Vehicle Speed < 75 mph No TPS sensor High or Low DTC's No VSS Low or Intermittent DTC's No Trans solenoid electrical DTC's Shift Solenoid Performance Diagnostic counters are all zero	8 seconds Continuous	DTC Type B