

1995 3.8L (L36) F-car 4L60-E TRANSMISSION DIAGNOSTIC PARAMETERS

95c38K_F_aT.doc

SENSED PARAMETER	FAULT CODE	SENSOR SIGNAL TYPE	ACCEPTABLE OPERATING RANGE AND RATIONALITY	PRIMARY MALF DETECTION PARAMETERS	SECONDARY MONITORING PARAMETERS AND CONDITIONS	FAIL MONITORING TIME LENGTH AND FREQUENCY OF CHECK	MONITORING METHOD	FAULT CODE STORAGE AND ILLUMINATION
Vehicle Speed Sensor - Low input	P0502	Analog	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	Gear Range is not Park/Neutral No PSA sensor DTC's set No TP high or low sensor DTC's set Throttle Position > 20% No Map Sensor High or Low DTC's set 0KPA > VAC* < 106KPA 40ftlbs < Engine Torque < 400ftlbs Engine Speed > 4000 RPM	2.5 seconds Continuous	AC Voltage generating Vehicle Speed Sensor	DTC Type A
Vehicle Speed Sensor - Intermittent	P0503	Analog	0 RPM to 6000 RPM This DTC detects an unrealistic large drop in vehicle speed.	Output Speed drop > 2050 RPM in P/N or Output Speed drop > 1800 RPM not in P/N	Time since last Gear Range Change > 6. Sec No PSA sensor DTC's set Engine Speed > 400 rpm for 8 sec and not in fuel cutoff	In park or neutral 4 sec Not in park or neutral 2 sec Continuous	AC Voltage generating Vehicle Speed Sensor	DTC Type A
Trans Fluid Temp Sensor Circuit - Low input	P0712	Analog	.24V to 5.0V The DTC detects a continuous short to ground in the TTS signal circuit or the TTS sensor	Raw TTS < .2 volts	No DTC 0560 Ignition "on"	10 sec Continuous	Thermister	DTC Type A
Trans Fluid Temp. Sensor Circuit - High Input	P0713	Analog	.24V to 5.0V The DTC detects a continuous open or short to high in the TTS signal circuit or the TTS sensor	Raw TTS > 4.92 Volts	No DTC 0560 Ignition "on"	400 seconds Continuous	Thermister	DTC Type A

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TCC System Stuck ON	P0742	Software	This DTC detects low torque converter slip when the TCC is commanded off.	TCC Slip is between -20rpm and 30rpm for > 5 sec TCC stuck on counter >= 1	Engine Speed > 400 rpm for 8 sec and not in fuel cutoff 0kpa<VAC*<106kpa 40ftlbs<Eng Torque<400ftlbs Commanded Gear is not 1st Gear Range is D4 No PSA sensor DTC's set No TP high or low sensor DTC's set Throttle Position>15% TCC is commanded off No VSS Low or Intermittent DTC's set No TCC Enable Sol. DTC's set No TCC Control Sol. DTC's set	5seconds Continuous	1X Engine Speed Signal and the Vehicle Speed Sensor	DTC Type A

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Shift Solenoid A Performance	P0751	Analog	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	<p>General Engine Speed > 400 rpm for 8 sec and not in fuel cutoff No TP high or low DTC's set No Vss low or intermittent DTC's set No PSA DTC's set Gear range is D4 Vehicle speed >5 mph 20C<TTS<130C No Sol electrical DTC's No DTC 742 Traction Control Not Active Previous shift time > 0sec</p> <p>Fail Case 1 Commanded 1-2 shift 8%<TPS<42% TPS constant within +/- 3% 8 mph<VSS<40mph In 3.75 seconds, engine speed in 2nd gear must be 150 rpm > last speed in 1st gear</p> <p>Fail Case 2 Commanded 2-3 shift 9%<TPS<32% TPS constant within +/- 3% 20 mph<VSS<45 mph In 2.25 sec, engine speed in 3rd gear must be 150 rpm < last speed in 2nd gear</p> <p>Fail Case 3 Commanded 3-4 shift 9 %<TPS<27% TPS constant within +/- 3% 42mph<VSS<65mph In 3.5 seconds, engine speed in 3rd gear must be 15 rpm > last speed in 4th gear</p> <p>Fail Case 4 Commanded 4th gear TCC on 9%<TPS<27% 42<Speed Ratio<47 500<TCC Slip< 1000 for > 5sec</p> <p>Fail Case 5 Commanded 4th gear TCC on 9%<TPS<27% 30<Speed Ratio<34 -20prm<TCC Slip<40 rpm for >5sec</p>	Continuous	Shift Solenoid	DTC Type B

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Shift Solenoid A Electrical	P0753	Analog	0V to 12V This DTC detects a continuous open or short to ground in the SSA circuit or the SSA sensor	Fail Counter >43 Counts out of 50 Total Counts	No System Voltage DTC's Ign On	Continuous	Shift Solenoid	DTC Type A
Shift Solenoid B Performance	P0756	Software	This DTC detects a non - 1st gear when 1st gear is commanded or 1st gear when 4th gear is commanded	Fail Case 1 Gear is 1st and Speed Ratio is < 115 or Fail Case 2 Gear is 4th and Speed Ratio is > 100	GENERAL Vehicle Speed > 20 MPH Gear Range is D4, D3, D2 or D1 Trans Fluid Temp > 20C No TTS sensor DTC's set No PSA sensor DTC's set No TPS sensor High or Low DTC's set No VSS Low or Intermittent DTC's set Engine Speed > 400 rpm for 8 sec and not in fuel cutoff FAIL CASE 1 TPS > 45% FAIL CASE 2 TPS > 18%	Fail Case 1 1 seconds Fail Case 2 2 second Continuous	Shift Solenoid	DTC Type B
Shift Solenoid B Electrical	P0758	Analog	0V to 12V This DTC detects a continuous open or short to ground in the SSB circuit or the SSB sensor	Fail Counter >43 Counts out of 50 Total Counts	No System Voltage DTC's Ign On	Continuous	Shift Solenoid	DTC Type A

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PSA Circuit Malfunction	P1810	Digital	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 Fail Case 2 Gear range is D2, D4, Rev Fail Case 3 Gear range is P/N	Fail Case 1 Enging Running No Sys Volt DTC's Fail Case 2 No Sys Volt DTC's No VSS DTC's Engine Speed < 100 rpm for > .3 sec then Engine Speed >100rpm and < 650rpm for > .1sec then Engine Speed > 650 rpm Vehicle Speed <2 mph Fail Case 3 4th gear 29<Speed Ratio<33 TCC Locked On No VSS DTC's	Fail Case 1 5 seconds Fail Case 2 5 seconds Fail Case 3 24 seconds Continuous	Pressure Switch Assembly	DTC Type A
TCC PWM Solenoid Electrical	P1860	Analog	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	No System Voltage DTC's Ign On gear = 1st	Continuous	TCC PWM Solenoid	DTC Type A
TCC Solenoid Electrical	P1864	Analog	0V to 12V This DTC detects a continuous open or short to ground in the TCC circuit or the TCC sensor	Fail Counter >43 Counts out of 50 Total Counts	No System Voltage DTC's Ign On	Continuous	TCC Solenoid	DTC Type A

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Transmission Component Slipping	P1870	Software	This DTC detects excessive TCC slip when the torque converter clutch should be engaged.	If TCC Slip is above 175 rpm for > 7 sec, then increment the Trans Slip Counter by 1. If the Trans Slip Counter is 3 or greater, then set the code.	Engine Speed > 400 rpm for 8 sec and not in fuel cutoff> sec Gear is not 1st No TPS sensor High or Low DTC's set 9%<TPS<35% No TTS sensor DTC's set 20C<TTS<120C No PSA DTC's set No VSS Low or Intermittent DTC's set No TCC Enable Sol. DTC's set No TCC Control Sol. DTC's set No SSA Sol. DTC's set No SSB Sol. DTC's set 0 kpa<Eng Vac<106 kpa 50 ftlbs<Eng Torque<500 ftlbs Gear Range is D4 TCC at Max Apply for > 5 sec TCC on for > 5 sec Shift Solenoid Perf Counters equal zero	7 seconds Continuous	1X Engine Speed Signal and the Vehicle Speed Sensor	DTC Type A
3-2 Control Solenoid Electrical	P1886	Analog	0V to 12V This DTC detects a continuous open or short to ground in the 3-2 control sol. circuit or the 3-2 control sol. sensor	Fail Counter >43 Counts out of 50 Total Counts	No System Voltage DTC's Ign On	Continuous	3-2 Control Solenoid	DTC Type A