1997 2.4L (LD9) J-car and N-Malibu, N-Cutlass
4T40-E TRANSMISSION DIAGNOSTIC PARAMETERS

97c24T_JP9aT.doc

SENSED PARAMETER	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA AND THRESHOLD VALUE(S)	SECONDARY PARAMETERS AND ENABLE CONDITIONS	TIME REQUIRED AND FREQUENCY	MIL ILLUM. 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 Sensor signal is less than 2 mph.	Gear Range is not Park/Neutral No PSA sensor DTC's set No TP high or low sensor DTC's set Throttle Position > 15% No Map Sensor High or Low DTC's set MAP > 50 KPA Input Speed > 2000 RPM Engine speed between 2500 & 4775 rpm	4 seconds CONTINUOUS CHECK	DTC TYPE B
Vehicle Speed Sensor - Intermitttent	P0503	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 Sensor signal drop is greater than 1200 rpm for 2.5 seconds in Park/Neutral and all other gear selector ranges.	No PRNDL range changes for 3 sec Max positive loop to loop change less than 500 rpm. Time delay if max loop to loop is exceeded = 5 sec Output Speed greater than 600 rpm	2.5 seconds CONTINUOUS CHECK	DTC TYPE B
Trans Fluid Temp Sensor Circuit - Range/Perf	P0711	0.24V to 5.0V This DTC detects an unrealistically large change in transmission temperature or a trans temp value which remains constant for a period of time in which a measurable amount of change is expected.	Fail Case 1 Trans Temp has not changed more than 1.5 deg C Fail Case 2 Trans Temp changes of more than 20 deg C in 200 msec increments fail counter.	Engine Running > 300 sec System Voltage between 9 & 16 volts No VSS codes No ISS codes Vehicle Speed > 5 mph for 409 sec cumulative. Trans Temp at startup between -40 deg C and 21 deg C TCC slip > 300 rpm for > 409 sec cumulative. Engine Coolant Temp > 70 deg C ECT has changed by more than 50 deg C since startup	Fail Case 1 timer 80 seconds Fail Case 2 Timer Fail Counter > 14 counts within 7 seconds.	DTC TYPE B
Input Speed Sensor Circuit - Range/Perf	P0716	0 RPM TO 6000 RPM The DTC detects an unrealistically large change in Input Speed in a very short period of time	Input Speed change > 1200 RPM	No ISS DTC's set No TPS High or Low DTC's set No VSS Low DTC No SSA DTC's set No SSB DTC's set Input Speed sensor > 125 rpm Vehicle Speed Sensor > 5 mph Throttle Position Sensor > 15%	0.8 seconds CONTINUOUS CHECK	DTC TYPE B
Input Speed Sensor Circuit - No Signal	P0717	0 RPM TO 6000 RPM The DTC detects a Low Input Speed when the vehicle has large vehicle speed.	Input Speed < 100 RPM	No VSS Low DTC set No PSA Sensor DTC's set PSA indicating not in P/N Engine Running VSS > 5 mph	5 seconds CONTINUOUS CHECK	DTC TYPE B

1997 2.4L (LD9) J-car and N-Malibu, N-Cutlass
4T40-E TRANSMISSION DIAGNOSTIC PARAMETERS

97c24T_JP9aT.doc

SENSED PARAMETER	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA AND THRESHOLD VALUE(S)	SECONDARY PARAMETERS AND ENABLE CONDITIONS	TIME REQUIRED AND FREQUENCY	MIL ILLUM. TYPE
TCC System Stuck OFF	P0741	This DTC detects high TCC Slip Speed when TCC is commanded on.	Slip Speed > 300 rpm	Throttle > 15% 30 C < Trans Temp < 110 C TCCMODE = LOCKED Commanded Gear > 1 PRNDL = D4 or D3 or D2 No Input Speed Sensor Codes No TPS codes No PSM codes No Vehicle Speed Sensor Code No TCC Electrical Codes No TCC Stuck ON Codes	5 seconds CONTINUOUS CHECK	DTC TYPE B
TCC System Stuck ON	P0742	This DTC detects Torque Converter release oil pressure (Switch is closed) when the TCC is commanded off.	TCC Release Switch is closed.	Engine Running TCC is commanded off No TCC Release Switch Codes No TCC Solenoid Codes Throttle > 20%	8 seconds CONTINUOUS CHECK	DTC TYPE A
Shift Solenoid A Performance	P0751	This DTC detects shift patterns of 1-1-4-4 or 2-2-3-3 i.e., 1st in 2nd, 4th in 3rd. or 2nd in 1st, 3rd in 4th.	Command Gear = 1 Ratio = 2nd Command Gear = 2 Ratio = 1st Command Gear = 3 Ratio = 4th Command Gear = 4 Ratio = 3rd	PRNDL not in park, reverse, or neutral. TPS > 15%. VSS > 7 mph. The engine is running. 40 kpa < MAP < 105 kpa No ISS codes. No PSA codes. No TPS codes. No VSS code. No Shift Solenoid Electrical codes present.	6 Seconds CONTINUOUS CHECK	DTC TYPE B
Shift Solenoid A Electrical	P0753	0 to 12V This DTC detects a continuous open, short to ground, or short to voltage in SSA circuit (ODM) or solenoid.	SSA ODM feedback circuit state does not equal PCM commanded state	Ignition ON 10 Volts < System voltage < 16V	5 seconds CONTINUOUS CHECK	DTC TYPE A
Shift Solenoid B Performance	P0756	This DTC detects 4th gear ratio when 1st gear is commanded or 1st gear ratio when 4th gear is commanded.	Gear is 1st and Ratio is < 0.72 or Gear is 4th and Ratio is > 2.87	Vehicle Speed > 7 MPH TPS > 15% Gear Range is D4, D3, D2 or D1 Trans Fluid Temp > 30C 40 kpa < MAP < 105 kpa No TTS sensor DTC's set No PSA sensor DTC's set No TPS sensor High or Low DTC's set No VSS Low DTC' set Engine Running	7 seconds CONTINUOUS CHECK	DTC TYPE A

1997 2.4L (LD9) J-car and N-Malibu, N-Cutlass
4T40-E TRANSMISSION DIAGNOSTIC PARAMETERS

97c24T_JP9aT.doc

SENSED PARAMETER	FAULT CODE	MONITOR STRATEGY DESCRIPTION	MALFUNCTION CRITERIA AND THRESHOLD VALUE(S)	SECONDARY PARAMETERS AND ENABLE CONDITIONS	TIME REQUIRED AND FREQUENCY	MIL ILLUM. TYPE
Shift Solenoid B Electrical	P0758	0 to 12V This DTC detects a continuous open, short to ground, or short to voltage in SSB circuit (ODM) or solenoid.	SSB ODM feedback circuit state does not equal PCM commanded state	Ignition ON 10 Volts < System voltage < 16V	5 seconds CONTINUOUS CHECK	DTC TYPE A
PSA Circuit Malfunction **(Fail Case 1)**	P1810	0V to 12V This DTC detects an invalid state of the PSA sensor or the PSA circuit by deciphering the PSA inputs.	Illegal Range is true	Engine Run	60 seconds CONTINUOUS CHECK	DTC TYPE B
PSA Circuit Malfunction **(Fail Case 2)**	P1810	0V to 12V This DTC detects an invalid state of the PSA sensor or the PSA circuit by deciphering the PSA inputs.	PSA indicates D2, D4 & Rev after Start-up	Engine Speed Transition From 0 RPM to > 500 RPM No Vehicle Speed Code VEHSPEED < 7 mph	2 seconds only at Engine Start-up CONTINUOUS CHECK	DTC TYPE B
PSA Circuit Malfunction **(Fail Case 3)**	P1810	0V to 12V This DTC detects an invalid state of the PSA sensor or the PSA circuit by deciphering the PSA inputs.	**A).** PSA indicates P/N when Ratio indicates 4th Gear > 0.72 **B).** PSA indicates Reverse when Ratio indicates Drive **C).** PSA indicates D4, D3, D2, or D1 when Ratio indicates Reverse	STATUS(ENGRUN) is SET No Throttle Codes No Vehicle Speed Code No Input Speed Codes No PSA Code VEHSPEED ≥ 10 mph THROTMOD ≥ 15 %	10 seconds CONTINUOUS CHECK	DTC TYPE B
TCC Release Switch Circuit Malf	P1887	This DTC detects release switch is open indicating TCC is not applied when PCM and slip speed indicate TCC is locked.	The release switch status is on.	The engine is running. The TCC is commanded ON. Slip is between -20 rpm and 20 rpm PRNDLFLG = D4 No TCC solenoid electrical failure codes are present. No input speed codes are present.	8 seconds CONTINUOUS CHECK	DTC TYPE B