1997 3.4L DOHC (LQ1) W-car
4T65-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 > 12% No Map Sensor High or Low DTC's set 0KPA > MAP sensor < 105KPA 40 ftlbs <Engine Torque< 150 ftlbs Input Speed > 2500 RPM	2.5 seconds Continuous	DTC Type B
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 B
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 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
Input/Turbine Speed Sensor Range /Performance	P0716	This DTC detects an unrealistically large change in input speed in a short period of time.	Input Speed change > 1300 RPM	Engine Speed > 500 rpm for 5 sec and not in fuel cutoff No ISS DTC's set P0717 has passed this ign. cycle No TPS High or Low DTC's set No VSS Low or Performance DTC's set No SSA DTC's set No SSB DTC's set TPS > 14 % VSS > 5 MPH	0.8 sec. Continuous	DTC Type B

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Input/Turbine Speed Sensor No Input	P0717	This DTC detects a low input speed when the vehicle has at least a minimum vehicle speed.	Input Speed < 50 RPM	Engine Speed > 500 rpm for 5 sec and not in fuel cutoff No VSS Low or Performance DTC's set No PSA DTC's set PSA indicating not in P/N VSS > 5 MPH	5 seconds Continuous	DTC Type B
TCC System Stuck Off	P0741	This DTC detects high TCC Slip when the Clutch is commanded on	TCC Slip > 250 rpm	Engine Speed > 500 rpm for 5 sec and not in fuel cutoff TPS between 5% and 30% 20 C < Trans Temp < 130 C time since last range change > 3 sec TCC is commanded locked for > 0.5 sec. TCC Pressure at max. allowed Transmission in D4, D3 or D2 No ISS DTC's No TPS DTC's No PSA DTC No VSS DTC's No TCC solenoid electrical DTC No TCC Stuck On DTC No TCC Release Switch DTC	8 sec Continuous	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.	The TCC Release Switch being closed (indicating TCC applied) for the length of the fail timer increments the fail counter; the diagnostic is set when this fail counter is ≥ 6.	Engine Speed > 500 rpm for 5 sec and not in fuel cutoff Throttle Position between 14% and 45% TCC is commanded off No TPS DTC's No VSS Low or Intermittent DTC's No TCC Control Sol. DTC's No TCC Release Switch DTC's time since last range change > 3 sec	4 seconds Continuous	DTC Type A

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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 (2 & 3) or (1 & 4) are true	General No TPS DTC's No VSS low or intermittent DTC's No Shift or TCC Solenoid electrical DTC's No PSA DTC's No ISS DTC's Engine Speed > 500 rpm for 5 sec and & not in fuel cutoff Vehicle speed >5 mph Trans. Temp. > 20 C TPS< 14% Transmission not in P/N 50 ftlbs < Eng Torque < 200 ftlbs Fail Case 1 Commanded Gear is 1 Ratio is 2nd gear Fail Fail Case 2 Commanded gear is 2 Ratio is 1st gear Fail Case 3 Commanded gear is 3 Ratio is 4th gear Fail Case 4 Commanded gear is 4 Ratio is 3rd gear	Fail Case 1 2 sec Fail Case 2 3 sec Fail Case 3 3 sec Fail Case 4 3 sec Continuous	DTC Type B
Shift Solenoid A Electrical	P0753	This DTC detects a continuous open or short to ground in the SSA circuit or the SSA solenoid	Every 100msec 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	Fail Counter >=2 . The fail counter is incremented if fail cases (1 & 2) or (3 & 4) are true	General No TPS DTC's No VSS low or intermittent DTC's No Shift or TCC Solenoid electrical DTC's No PSA DTC's No ISS DTC's Engine Speed > 500 rpm for 5 sec and & not in fuel cutoff Trans. Temp. > 20 C Transmission not in P/N Fail Case 1 50 ftlbs < Eng Torque < 200 ftlbs Vehicle speed >7 mph TPS< 14% Commanded Gear is 1 Ratio is 4th gear Fail Fail Case 2 50 ftlbs < Eng Torque < 200 ftlbs Vehicle speed >7 mph TPS< 14% Commanded gear is 2 Ratio is 3rd gear Fail Case 3 50 ftlbs < Eng Torque < 200 ftlbs Vehicle speed >7 mph TPS< 14% Commanded gear is 3 Ratio is 2nd gear Fail Case 4 0 ftlbs < Eng Torque < 80 ftlbs 35 mph < Vehicle speed > 75 mph 7 % < TPS< 40 % Engine Speed < 6700 rpm Commanded gear is 4 Ratio is approximately 1st gear (1.05 - 2.97)	Fail Case 1 3 sec Fail Case 2 3 sec Fail Case 3 3 sec Fail Case 4 3 sec Continuous	DTC Type A

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Shift Solenoid B Electrical	P0758	This DTC detects a continuous open or short to ground in the SSB circuit or the SSB solenoid	Every 100msec 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
Pressure Switch Assembly Malfunction	P1810	This DTC detects an invalid state of the PSA circuit by deciphering the PSA inputs	Fail Case 1 The PSA inputs indicate an Illegal combination Fail Case 2 PSA indicates D2, D4 or Reverse continuously through start up without indicating P/N Fail Case 3 A) PSA indicates P/N B) PSA indicates Reverse C) PSA indicates D4, D3, D2 or D1	Fail Case 1 Engine Speed > 500 rpm for 5 sec and not in fuel cutoff System Voltage between 10 and 16 volts Fail Case 2 System Voltage between 10 and 16 volts No VSS DTC's Vehicle Speed < 3 mph Engine Speed Transitions from < 50 to > 800 rpm (start up) Fail Case 3 Engine Speed > 500 rpm for 5 sec and not in fuel cutoff No Shift solenoid electrical or performance DTC's No ISS DTC's No VSS DTC's Vehicle Speed > 5 mph No TPS DTC's TPS > 9 % 50 ftlbs < Eng Torque < 170 ftlbs A) Ratio indicates gear 1,2,3,4 or Reverse B) Ratio indicates gear 1,2,3 or 4 C) Ratio indicates Reverse	Fail Case 1 60 sec Fail Case 2 7 sec only at Engine start up Fail Case 3 A) 5 sec B) 7 sec C) 5 sec Continuous	DTC Type B

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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 100msec 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
TCC Release Switch Circuit Fault	P1887	This DTC detects the Release switch being open (indicating TCC is not applied) when the PCM and slip speed indicate the TCC is locked.	TCC Release Switch Status indicates released (switch open)	Engine Speed > 500 rpm for 5 sec and not in fuel cutoff TCC commanded on TCC Slip between -20 and 40 rpm Transmission is in D4 No TCC solenoid DTC No ISS DTC's No PSA DTC	10 sec Continuous	DTC Type B