DTC	P0601	Internal Control Module Memory Check Sum Error

MONITOR DESCRIPTION

The ECM continuously monitors its own internal memory status, internal circuits, and output signals transmitted to the throttle actuator. This self-check insures that the ECM is functioning properly. If any malfunction is detected, the ECM sets the appropriate DTC and illuminates the MIL.
The ECM memory status is diagnosed by internal mirroring of the main CPU and the sub CPU to detect Random Access Memory (RAM) errors. The two CPUs also perform continuous mutual monitoring. The ECM illuminates the MIL and sets a DTC if: 1) outputs from the two CPUs are different or deviate from the standards, 2) the signals sent to the throttle actuator deviate from the standards, 3) a malfunction is found in the throttle actuator supply voltage, and 4) any other ECM malfunction is found.

DTC No.	DTC Detection Conditions	Trouble Areas
P0601	ECM internal error (1 trip detection logic)	ECM

MONITOR STRATEGY

Related DTCs	P0601: ECM Check Sum error
Required Sensors/Components (Main)	ECM
Required Sensors/Components (Related)	-
Frequency of Operation	Continuous
Duration	135 seconds
MIL Operation	Immediate
Sequence of Operation	None

TYPICAL ENABLING CONDITIONS

The monitor will run whenever the following DTCs are not present	None

TYPICAL MALFUNCTION THRESHOLDS

ECM Check Sum error:

Check sum	Error

Electronic throttle control system power supply function of ECM malfunctions (P0657):

ETCS (Electronic Throttle Control System) power supply when ignition switch turned to ON.	7 V or more

INSPECTION PROCEDURE

HINT:
Read freeze frame data using an intelligent tester or OBD II scan tool. The ECM records vehicle and driving condition information as freeze frame data the moment a DTC is stored. When troubleshooting, freeze frame data can be helpful in determining whether the vehicle was running or stopped, whether the engine was warmed up or not, whether the air-fuel ratio was lean or rich, as well as other data recorded at the time of a malfunction.

1	REPLACE ECM

(a) Replace the ECM (See page ES-407).

NEXT

END