DTC	P0604	Internal Control Module Random Access Memory (RAM) Error

DESCRIPTION

The ECM continuously monitors its own internal memory status, internal circuits, and output signals transmitted to the throttle actuator. This self-check ensures 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.

ES

DTC No.	DTC Detection Condition	Trouble Area
P0604	ECM internal error (1 trip detection logic)	ECM

MONITOR STRATEGY

Related DTCs	P0604: ECM RAM error
Required Sensors/Components (Main)	ECM
Required Sensors/Components (Related)	-
Frequency of Operation	Continuous
Duration	16 seconds
MIL Operation	Immediate
Sequence of Operation	None

TYPICAL ENABLING CONDITIONS

Monitor runs whenever following DTCs not present	None

TYPICAL MALFUNCTION THRESHOLDS

ECM RAM errors:

RAM mirror check	Fail

INSPECTION PROCEDURE

Read freeze frame data using the intelligent tester. Freeze frame data records the engine condition when malfunctions are detected. When troubleshooting, freeze frame data can help determine if the vehicle was moving or stationary, if the engine was warmed up or not, if the air-fuel ratio was lean or rich, and other data from the time the malfunction occurred.

1	CHECK ANY OTHER DTCS OUTPUT (IN ADDITION TO DTC P0604)

(a) Connect the intelligent tester to the DLC3.
(b) Turn the ignition switch to the ON position.
(c) Turn the tester on.
(d) Select the following menu items: DIAGNOSIS / ENHANCED OBD II / DTC INFO / CURRENT CODES.
(e) Read DTCs.

Result

Display (DTC Output)	Proceed to
P0604	A
No output	B

B → CHECK FOR INTERMITTENT PROBLEMS

A

REPLACE ECM