DTC	P2610	ECM/PCM INTERNAL ENGINE OFF TIMER PERFORMANCE

MONITOR DESCRIPTION

To check the heat retention of the tank in the coolant heat storage (CHS) system, the ECM may cause the water pump of the CHS system to operate 5 hours after the power switch has been turned OFF.
A timer and a clock are contained in the ECM internal circuit, and the timer starts when the ignition switch is turned OFF (this process is called the ”soak mode”).
When the HV main system is started at the power switch, the ECM monitors its internal circuit. If the ECM detects a deviation between the clock and the timer, or an abnormal condition during a comparison between the starting history and the length of time the HV main power has been turned OFF, the ECM determines that its internal circuit has malfunction and sets a DTC

DTC No.	DTC Detection Condition	Trouble Area
P2610	ECM internal error	• ECM

MONITOR STRATEGY

Related DTCs	P2610: ECM internal engine off timer performance
Required sensors/components	ECM
Frequency of operation	Once per driving cycle
Duration	600 seconds
MIL operation	2 driving cycles
Sequence of operation	None

TYPICAL ENABLING CONDITIONS

The monitor will run whenever the following DTCs are not present	See page 05–20
Engine	Running

TYPICAL MALFUNCTION THRESHOLDS

Case 1

Time internal engine off timer clock reads when CPU clock has elapsed 600 seconds	780 seconds

Case 2

Presens of history that ECM had woken up by internal engine off timer	YES
Time period vehicle has been soaked	Less than programmed period

Case 3

Presens of history that ECM had woken up by internal engine off timer	NO
Time period vehicle has been soaked	More than or equal to programmed period

INSPECTION PROCEDURE

HINT:
Read freeze frame data using the hand–held tester or the OBD II scan tool. Freeze frame data records the engine condition when malfunction is detected. When troubleshooting, freeze frame data can help determine if the vehicle was running or stopped, 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.

REPLACE ECM (See page 10–24)