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Model Year Start: 2009	Model: GX470	Prod Date Range: [08/2008 -]
Title: 2UZ-FE ENGINE CONTROL SYSTEM: SFI SYSTEM: P2610; ECM / PCM Internal Engine Off Timer Performance; 2009 MY GX470 [08/2008 -]		

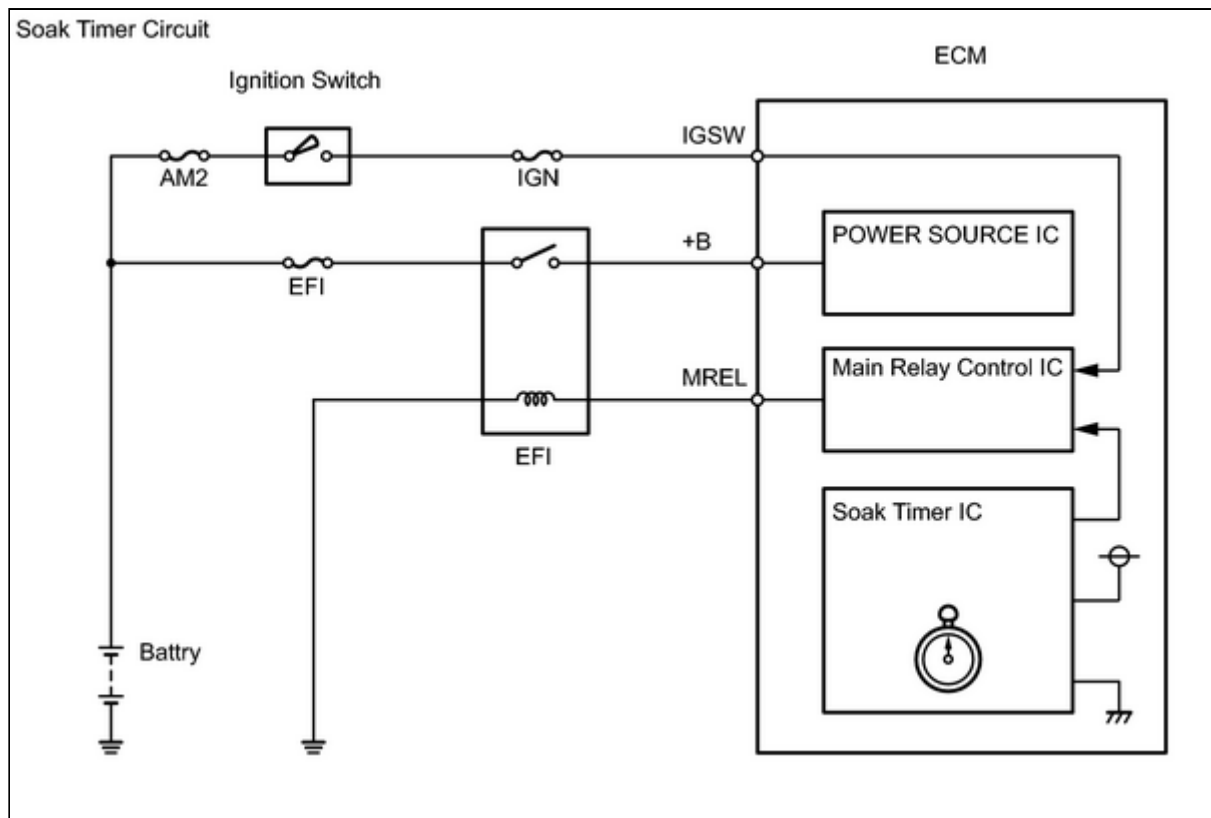
DTC	P2610	ECM / PCM Internal Engine Off Timer Performance
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DTC SUMMARY

DTC NO.	MONITORING ITEM	MALFUNCTION DETECTION CONDITION	TROUBLE AREA	DETECTION TIMING	DETECTION LOGIC
P2610	Soak timer (built into ECM)	ECM internal malfunction	ECM	Engine running	2 trip

DESCRIPTION

The soak timer is built into the ECM. To ensure that the Evaporative Emission (EVAP) monitor values will be accurate, the soak timer counts 5 hours (+/-15 minutes) from when the ignition switch is turned OFF. This allows the fuel to cool down, which stabilizes the Fuel Tank Pressure (FTP). When approximately 5 hours have passed, the ECM turns ON.



MONITOR DESCRIPTION

5 hours after the ignition switch is turned OFF, the soak timer activates the ECM to begin the EVAP system monitor. While the engine is running, the ECM monitors the synchronization of the soak timer and the CPU clock. If the soak timer and CPU clock are not synchronized, the ECM interprets this as a malfunction, illuminates the MIL and sets the DTC (2 trip detection logic).

MONITOR STRATEGY

Related DTCs	P2610: Soak timer (built into ECM)
Required Sensors/Components	ECM
Frequency of Operation	Once per driving cycle
Duration	10 minutes
MIL Operation	2 driving cycles
Sequence of Operation	None

TYPICAL ENABLING CONDITIONS

Monitor runs whenever following DTC not present	None
Ignition switch	ON
Engine	Running
Battery voltage	8 V or more
Starter	OFF

TYPICAL MALFUNCTION THRESHOLDS

Soak timer measurement when ECM CPU clock counts 10 minutes	Less than 7 minutes or more than 13 minutes
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INSPECTION PROCEDURE

HINT:

- DTC P2610 is set if an internal ECM problem is detected. Diagnostic procedures are not required. ECM replacement is required.
- Read freeze frame data using the Techstream. 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.

PROCEDURE

1.	REPLACE ECM
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(a) Replace the ECM  .

NEXT



2.	CHECK WHETHER DTC OUTPUT RECURS
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(a) Connect the Techstream to the DLC3.

(b) Turn the ignition switch ON and turn the tester ON.

(c) Clear the DTCs  .

- (d) Start the engine and wait for 10 minutes or more.
- (e) Enter the following menus: Powertrain / Engine and ECT / Trouble Codes / Pending.
- (f) If no pending DTC is displayed, the repair has been successfully completed.

NEXT  **END**

