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| Last Modified: 8-27-2020 | 6.10:8.0.50 | Doc ID: RM000000T6X02IX |
| Model Year Start: 2008 | Model: FJ Cruiser | Prod Date Range: [07/2007 -] |
| Title: 1GR-FE ENGINE CONTROL SYSTEM: SFI SYSTEM: P2610; ECM / PCM Internal Engine Off Timer Performance; 2008 MY FJ Cruiser [07/2007 -] | | |
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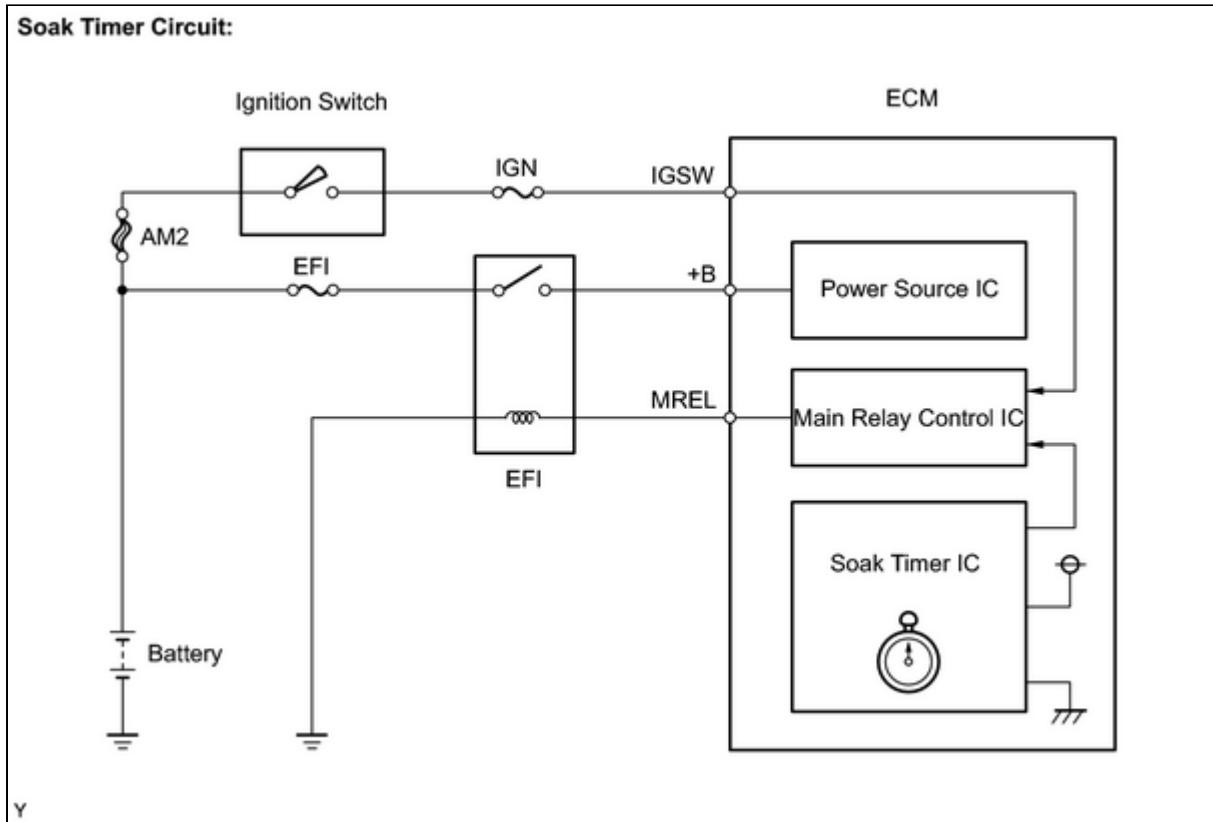
DTC P2610 ECM / PCM Internal Engine Off Timer Performance

DTC SUMMARY

| DTC NO. | MONITORING ITEMS | MALFUNCTION DETECTION CONDITIONS | TROUBLE AREAS | DETECTION TIMINGS | DETECTION LOGIC |
|---------|-----------------------------|----------------------------------|---------------|-------------------|-----------------|
| P2610 | Soak timer (built into ECM) | ECM internal malfunction | ECM | Engine running | 2 trip |

DESCRIPTION

To ensure the accuracy of the EVAP (Evaporative Emission) monitor values, the soak timer, which is built into the ECM, measures 5 hours (+/-15 minutes) from when the ignition switch is turned OFF, before the monitor is run. This allows the fuel to cool down, which stabilizes the EVAP pressure. When 5 hours have elapsed, 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 these two are not synchronized, the ECM interprets this as a malfunction, illuminates the MIL and sets the DTC (2 trip detection logic).

MONITOR STRATEGY

| | |
|-----------------------------|------------------------|
| 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 necessary.
- Read freeze frame data using a Techstream. Freeze frame data record 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.

PROCEDURE

| | |
|-----------|--------------------|
| 1. | REPLACE ECM |
|-----------|--------------------|

(a) Replace the ECM  .

NEXT

| | |
|-----------|--|
| 2. | CHECK WHETHER DTC OUTPUT RECURS (DTC P2610) |
|-----------|--|

(a) Connect a Techstream to the DLC3.

(b) Turn the ignition switch ON.

(c) Turn the tester ON.

(d) Clear DTCs  .

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

NEXT  **END**

