Last Modified: 12-04-2024	6.11:8.1.0	**Doc ID:** RM100000002BM1J
Model Year Start: 2023	**Model:** Prius Prime	**Prod Date Range:** [03/2023 -]
Title: M20A-FXS (ENGINE CONTROL): SFI SYSTEM: P261029,P261093; ECM/PCM Engine Off Timer Performance Signal Invalid; 2023 - 2024 MY Prius Prius Prime [03/2023 -]		

DTC	**P261029**	**ECM/PCM Engine Off Timer Performance Signal Invalid**

DTC	**P261093**	**ECM/PCM Engine Off Timer Performance No Operation**

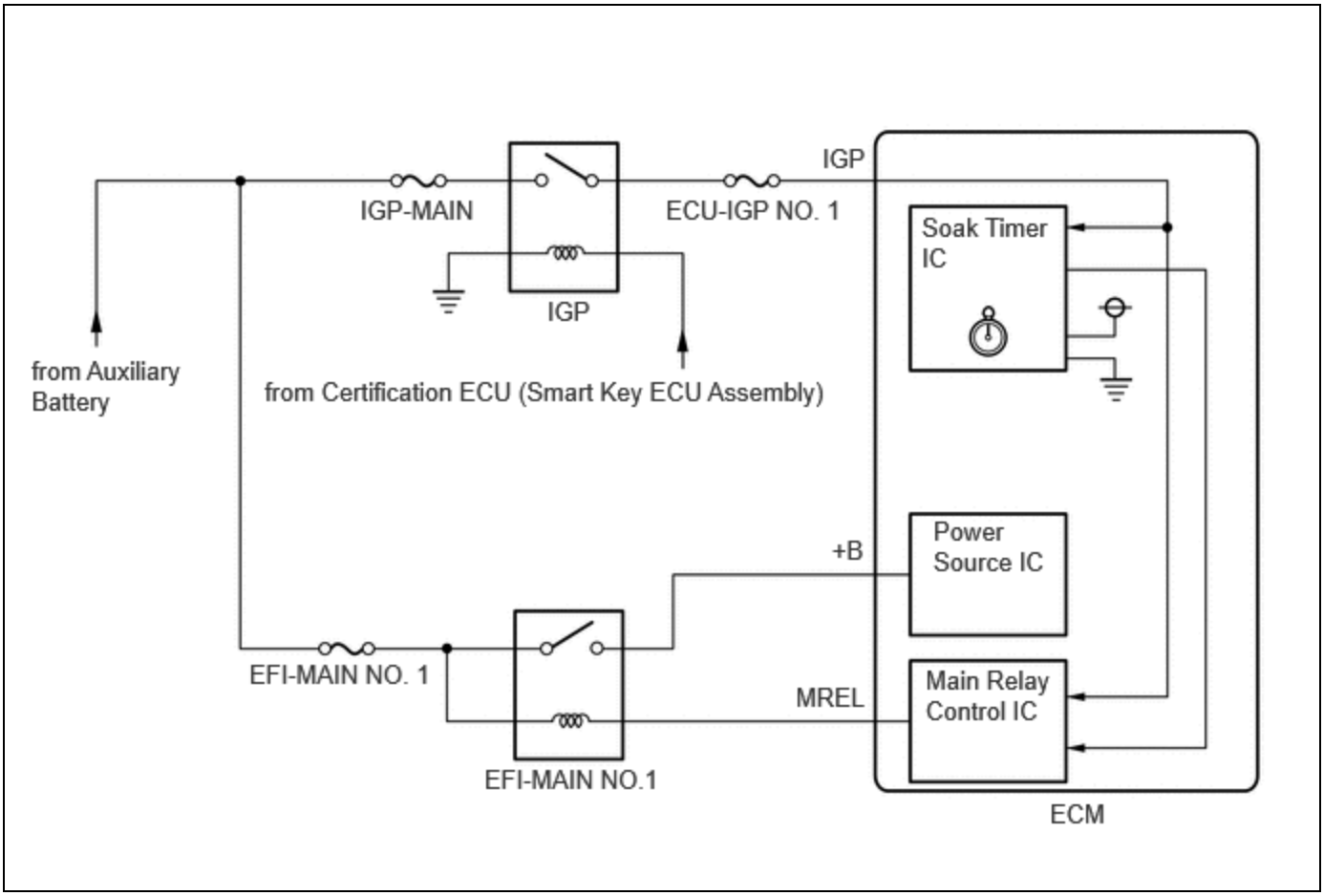
DTC SUMMARY

DTC NO.	DETECTION ITEM	DTC DETECTION CONDITION	TROUBLE AREA	MIL	DTC OUTPUT FROM	PRIORITY	NOTE
P261029	ECM/PCM Engine Off Timer Performance Signal Invalid	ECM internal malfunction	ECM	Comes on	Engine	A	SAE Code: P2610
P261093	ECM/PCM Engine Off Timer Performance No Operation	ECM internal malfunction	ECM	Comes on	Engine	A	SAE Code: P2610

DTC NO.	MONITORING ITEM	DETECTION TIMING	DETECTION LOGIC
P261029	Soak timer (built into ECM)	EVAP monitoring (ignition switch off)	2 trip
P261093	Soak timer (built into ECM)	Ignition switch ON	2 trip

DESCRIPTION

The soak timer operates after the ignition switch is turned off. When a certain amount of time has elapsed after turning the ignition switch off, the soak timer activates the ECM to perform malfunction checks which can only be performed after the engine is stopped. The soak timer is built into the ECM.



MONITOR DESCRIPTION

If the soak timer activates the ECM even though only a short amount of time has elapsed since the ignition switch was turned off, or if the soak timer does not activate the ECM even though a considerable amount of time has elapsed since the ignition switch was turned off, the ECM determines that the soak timer is malfunctioning, illuminates the MIL and stores a DTC the next time the ignition switch is turned to ON.

MONITOR STRATEGY

Related DTC	P2610: ECM internal engine off timer performance
Required Sensors/Components (Main)	ECM
Required Sensors/Components (Related)	-
Frequency of Operation	Once per driving cycle
Duration	2 times: Case 1 -: Case 2 and 3
MIL Operation	2 driving cycles
Sequence of Operation	None

TYPICAL ENABLING CONDITIONS

All

Monitor runs whenever the following DTCs are not stored	None

Case 1

All of the following conditions are met	-
Auxiliary battery voltage	8 V or higher
Ignition switch	Off
Internal engine off timer clear record	Off

Case 2

All of the following conditions are met	-
Internal engine off timer (elapsed time from engine stop)	10 minutes or more, and less than 30 minutes
Auxiliary battery voltage	8 V or higher
Ignition switch	On

Case 3

All of the following conditions are met	-
Internal engine off timer (elapsed time from engine stop)	40 minutes or more
Auxiliary battery voltage	8 V or higher
Ignition switch	On

TYPICAL MALFUNCTION THRESHOLDS

Case 1

One of the following conditions is met	A, B or C
A. Both of the following conditions are met	-
Internal engine off timer	9.375 seconds or more
CPU clock elapsed time	1.96608 seconds or more, and less than 8.323072 seconds
B. Both of the following conditions are met	-
Internal engine off timer	18.75 seconds or more
CPU clock elapsed time	8.323072 to 10.420224 seconds
C. Both of the following conditions are met	-
Internal engine off timer	Less than 9.375 seconds
CPU clock elapsed time	More than 10.420224 seconds

Case 2

ECM started by internal engine off timer last trip	Yes

Case 3

ECM started by internal engine off timer last trip	No

CONFIRMATION DRIVING PATTERN

HINT:

- After repair has been completed, clear the DTC and then check that the vehicle has returned to normal by performing the following All Readiness check procedure.

  Click here INFO
- When clearing the permanent DTCs, refer to the "CLEAR PERMANENT DTC" procedure.

  Click here INFO

1. Clear the DTCs (even if no DTCs are stored, perform the clear DTC procedure).
2. Turn the ignition switch off and wait for at least 30 seconds.
3. Put the engine in Inspection Mode (Maintenance Mode).

   Click here INFO
4. Start the engine and warm it up until the engine coolant temperature reaches 75°C (167°F) or higher [A].
5. Turn the ignition switch off and wait for at least 15 seconds [B].
6. Put the engine in Inspection Mode (Maintenance Mode).

   Click here INFO
7. Start the engine [C].
8. Stop the engine and leave the vehicle for 60 minutes or more [D].
9. Enter the following menus: Powertrain / Engine / Trouble Codes [E].
10. Read the pending DTCs.

    HINT:

    - If a pending DTC is output, the system is malfunctioning.
    - If a pending DTC is not output, perform the following procedure.
11. Enter the following menus: Powertrain / Engine / Utility / All Readiness.
12. Input the DTC: P261029 or P261093.
13. Check the DTC judgment result.

    HINT:

    - If the judgment result is NORMAL, the system is normal.
    - If the judgment result is ABNORMAL, the system has a malfunction.
    - [A] to [E]: Normal judgment procedure.

      The normal judgment procedure is used to complete DTC judgment and also used when clearing permanent DTCs.
    - When clearing the permanent DTCs, do not disconnect the cable from the auxiliary battery terminal or attempt to clear the DTCs during this procedure, as doing so will clear the universal trip and normal judgment histories.

CAUTION / NOTICE / HINT

NOTICE:

- Vehicle Control History may be stored in the hybrid vehicle control ECU if the engine is malfunctioning. Certain vehicle condition information is recorded when Vehicle Control History is stored. Reading the vehicle conditions recorded in both the freeze frame data and Vehicle Control History can be useful for troubleshooting.

  for HEV Model: Click here INFO

  for PHEV Model: Click here INFO

  (Select Powertrain in Health Check and then check the time stamp data.)
- If any "Engine Malfunction" Vehicle Control History item has been stored in the hybrid vehicle control ECU, make sure to clear it. However, as all Vehicle Control History items are cleared simultaneously, if any Vehicle

Control History items other than "Engine Malfunction" are stored, make sure to perform any troubleshooting for them before clearing Vehicle Control History.

for HEV Model: Click here INFO

for PHEV Model: Click here INFO

HINT:

- DTC P261029 or P261093 is set if an internal ECM problem is detected. Diagnostic procedures are not required. ECM replacement is required.
- If the cable is disconnected from the auxiliary battery terminal, the fuel vapor containment valve cannot close completely and an EVAP SYSTEM DTC will be stored. If the DTC is output, drive the vehicle at a speed of 10 km/h (6 mph) or more and then leave the vehicle for 30 seconds or more. Then perform the Evaporative System Check again.

PROCEDURE

1.	**REPLACE ECM**

HINT:

Click here INFO

NEXT

2.	**CLEAR DTC**

Pre-procedure1

(a) None.

Procedure1

(b) Clear the DTCs.

Powertrain > Engine > Clear DTCs

Post-procedure1

(c) Turn the ignition switch off and wait for at least 30 seconds.

NEXT

3.	**CHECK WHETHER DTC OUTPUT RECURS (DTC P261029 OR P261093)**

Pre-procedure1

(a) Drive the vehicle in accordance with the driving pattern described in Confirmation Driving Pattern.

Procedure1

(b) Read the Pending DTCs.

Powertrain > Engine > Trouble Codes

HINT:

If no pending DTC is output, the repair has been successfully completed.

Post-procedure1

(c) None.

NEXT END