Last Modified: 12-04-2024	6.11:8.1.0	**Doc ID:** RM100000002BM1X
Model Year Start: 2023	**Model:** Prius Prime	**Prod Date Range:** [03/2023 -]
Title: M20A-FXS (ENGINE CONTROL): SFI SYSTEM: P26CE37; Engine Coolant Pump Overspeed; 2023 - 2024 MY Prius Prius Prime [03/2023 -]		

DTC	**P26CE37**	**Engine Coolant Pump Overspeed**

DESCRIPTION

Refer to DTC P26CA12.

Click here INFO

DTC NO.	DETECTION ITEM	DTC DETECTION CONDITION	TROUBLE AREA	MIL	DTC OUTPUT FROM	PRIORITY	NOTE
P26CE37	Engine Coolant Pump Overspeed	The speed of the engine water pump assembly is a certain value or more when an operation request signal is being output to the engine water pump assembly (1 trip detection logic).	• Lack of engine coolant • Engine coolant leak • Engine water pump assembly (water inlet housing)	Does not come on	Engine	B	SAE Code: P26CE

Related Data List

DTC NO.	DATA LIST
P26CE37	• Coolant Temperature • Electric Water Pump Target Speed • Electric Water Pump Speed

MONITOR DESCRIPTION

The ECM monitors the speed of the engine water pump assembly. When the speed becomes a certain value or more, the ECM judges that the speed is abnormally high and stores a DTC (The MIL does not illuminate).

MONITOR STRATEGY

Frequency of Operation	Continuous

CONFIRMATION DRIVING PATTERN

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 maintain the engine speed of 2500 rpm or more for at least 40 seconds.
5. Enter the following menus: Powertrain / Engine / Trouble Codes.
6. 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.

7. Enter the following menus: Powertrain / Engine / Utility / All Readiness.
8. Input the DTC: P26CE37.
9. 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.
   - If the judgment result is INCOMPLETE, perform steps [A] through [B].

10. Idle the engine for 5 minutes or more [A].
11. Enter the following menus: Powertrain / Engine / Trouble Codes [B].
12. 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.

13. Enter the following menus: Powertrain / Engine / Utility / All Readiness.
14. 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.

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:

- If the engine is run continuously with a low engine coolant level, DTC P26CE37 may be stored.
- If the engine coolant level is sufficient but DTC P26CE37 is output, confirm with the customer whether engine coolant was added after the vehicle had been driven with insufficient engine coolant.

PROCEDURE

1.	**CHECK ANY OTHER DTCS OUTPUT (IN ADDITION TO DTC P26CE37)**

(a) Read the DTCs.

Powertrain > Engine > Trouble Codes

RESULT	PROCEED TO
P26CE37 and P26CB71 are output	A
P26CE37 and other DTCs are output	B
P26CE37 is output	C

HINT:

- If any DTCs other than P26CE37 are output, troubleshoot those DTCs first.
- If both DTC P26CB71 (pump stuck) and P26CE37 (pump overspeed) are stored, perform troubleshooting for DTC P26CB71 first as the engine coolant pump assembly may be stuck.

A ▶ **GO TO DTC P26CB71**

B ▶ **GO TO DTC CHART**

C ▼

2.	**CHECK ENGINE COOLANT LEVEL IN RESERVOIR TANK**

(a) Check that the engine coolant level is between the FULL and LOW lines.

Click here INFO

RESULT	PROCEED TO
Engine coolant level is above the LOW line	A
Engine coolant level is below the LOW line	B

A ▶ **GO TO STEP 6**

B

3.	**CHECK FOR ENGINE COOLANT LEAKS**

(a) Check the areas around the engine and heater for engine coolant leaks.

Click here INFO

HINT:

If the engine oil is cloudy during the engine oil level dipstick check, it means that engine coolant has entered the engine lubrication system.

OK:

No leaks.

NG ▶ **GO TO STEP 5**

OK

4.	**ADD ENGINE COOLANT**

(a) Fill the reservoir tank up to the FULL line with engine coolant.

NOTICE:

Make sure not to add engine coolant when the engine is hot.

NEXT ▶ **GO TO STEP 6**

5.	**REPAIR OR REPLACE MALFUNCTIONING PARTS, COMPONENT AND AREA**

(a) Repair any engine coolant leaks.

HINT:

Add engine coolant and perform air bleeding after repair.

NEXT

6.	**BLEED ENGINE COOLANT**

HINT:

Click here INFO

NEXT

7.	**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

8.	**CHECK WHETHER DTC OUTPUT RECURS (DTC P26CE37)**

Pre-procedure1

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

Procedure1

(b) Read the DTCs.

Powertrain > Engine > Trouble Codes

RESULT	PROCEED TO
DTCs are not output	A
P26CB71 is output	B
P26CE37 is output	C

Post-procedure1

(c) None.

A END

B GO TO DTC P26CB71

C

9.	BLEED ENGINE COOLANT

(a) Bleed air from the cooling system.

HINT:

Click here INFO

NEXT

10.	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

11.	CHECK WHETHER DTC OUTPUT RECURS (DTC P26CE37)

Pre-procedure1

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

Procedure1

(b) Read the DTCs.

Powertrain > Engine > Trouble Codes

RESULT	PROCEED TO
DTCs are not output	A
P26CE37 is output	B

Post-procedure1

(c) None.

A ▶ **END**

B

12.	REPLACE ENGINE WATER PUMP ASSEMBLY (WATER INLET HOUSING)

HINT:

- Click here INFO
- When replacing any cooling system parts, if excessive deposits of rust or scale exist or the concentration of the engine coolant is abnormal, replace the engine coolant.

NEXT

13.	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

14.	**CHECK WHETHER DTC OUTPUT RECURS (DTC P26CE37)**

Pre-procedure1

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

Procedure1

(b) Read the DTCs.

Powertrain > Engine > Trouble Codes

HINT:

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

Post-procedure1

(c) None.

NEXT **END**