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|---|---|---|
| **Last Modified:** 12-04-2024 | 6.11:8.1.0 | **Doc ID:** RM100000002BM0F |
| **Model Year Start:** 2023 | **Model:** Prius Prime | **Prod Date Range:** [03/2023 - ] |
| **Title:** M20A-FXS (ENGINE CONTROL): SFI SYSTEM: P106A62,P106C62; Evaporative Emission System Pressure / Intake Air Pressure Signal Compare Failure; 2023 - 2024 MY Prius Prius Prime [03/2023 - ] | | |

| | | |
|---|---|---|
| **DTC** | **P106A62** | **Evaporative Emission System Pressure / Intake Air Pressure Signal Compare Failure** |

| | | |
|---|---|---|
| **DTC** | **P106C62** | **Evaporative Emission System Pressure/Barometric Pressure Signal Compare Failure** |

# DESCRIPTION

Those DTCs are designed to detect a deviation in the output characteristics of a pressure sensor.

| DTC NO. | DETECTION ITEM | DTC DETECTION CONDITION | TROUBLE AREA | MIL | DTC OUTPUT FROM | PRIORITY | NOTE |
|---|---|---|---|---|---|---|---|
| P106A62 | Evaporative Emission System Pressure / Intake Air Pressure Signal Compare Failure | The difference between the pressure of the canister pressure sensor (Vapor Pressure Pump*) and manifold absolute pressure sensor assembly (Intake Manifold Absolute Pressure*) is higher than 8.69 kPa (1.26 psi) (2 trip detection logic). | • Canister pressure sensor (canister pump module)<br>• Manifold absolute pressure sensor | Comes on | Engine | B | SAE Code: P106A |
| P106C62 | Evaporative Emission System Pressure/Barometric Pressure Signal Compare Failure | The difference between the pressure of the canister pressure sensor (Vapor Pressure Pump*) and atmospheric pressure sensor (Atmospheric Pressure*) is higher than 7.89 kPa (1.14 psi) (2 trip detection logic). | • Canister pressure sensor (canister pump module)<br>• Atmospheric pressure sensor (ECM) | Comes on | Engine | B | SAE Code: P106C |

*: Data List name

## MONITOR DESCRIPTION

Those DTCs are stored when a deviation from pressure sensor characteristics is detected.

The pressure sensors* are checked approximately 50 minutes after the ignition switch is turned off. If the pressures detected by the pressure sensors* differ by a certain amount, the MIL is illuminated and a DTC is stored (2 trip detection logic).

**HINT:**

- *: P106A62 checks the canister pressure sensor and the manifold absolute pressure sensor. P106C62 checks the canister pressure sensor and atmospheric pressure sensor.
- Correct judgment may not be possible when the altitude is 4000 m (13120 ft.) or more.

## MONITOR STRATEGY

| | |
|---|---|
| Related DTCs | P106A: Canister pressure sensor - manifold absolute pressure sensor rationality<br>P106C: Canister pressure sensor - barometric pressure sensor rationality |
| Required Sensors/Components (Main) | Canister pressure sensor<br>Atmospheric pressure sensor (ECM)<br>Manifold absolute pressure sensor |
| Required Sensors/Components (Related) | - |
| Frequency of Operation | Continuous |
| Duration | P106A: Within 65 seconds<br>P106C: - |
| MIL Operation | 2 driving cycles |
| Sequence of Operation | None |

## TYPICAL ENABLING CONDITIONS

**P106A**

| | |
|---|---|
| Monitor runs whenever the following DTCs are not stored | P0106, P0107, P0108 (Manifold absolute pressure)<br>P0401 (EGR system)<br>P0452, P0453 (Evaporative emission system pressure sensor) |
| Time after ignition switch off | 50 minutes |
| Time after ECM started by soak-timer | 60 seconds or more |
| Auxiliary battery voltage | 8 V or higher |
| Intake air temperature | -10°C (14°F) or higher |
| Engine coolant temperature | -10°C (14°F) or higher |

**P106C**

| | |
|---|---|
| Time after ignition switch off | 50 minutes |

| | |
|---|---|
| Time after ECM started by soak-timer | 60 seconds or more |
| Auxiliary battery voltage | 8 V or higher |
| Intake air temperature | -10°C (14°F) or higher |
| Engine coolant temperature | -10°C (14°F) or higher |
| EVAP system pressure sensor malfunction (P0451, P0452, P0453) | Not detected |

## TYPICAL MALFUNCTION THRESHOLDS

**P106A**

| | |
|---|---|
| Difference between canister pressure and manifold absolute pressure | Higher than 8.69 kPa (1.26 psi) |

**P106C**

| | |
|---|---|
| Difference between canister pressure and atmospheric pressure | Higher than 7.89 kPa (1.14 psi) |

## 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 idle for 10 seconds or more [A].
5. Turn the ignition switch off.
6. Leave the ignition switch off for 55 minutes [B].
7. Enter the following menus: Powertrain / Engine / Trouble Codes [C].
8. 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.
9. Enter the following menus: Powertrain / Engine / Utility / All Readiness.
10. Input the DTC: P106A62 or P106C62.
11. Check the DTC judgment result.

    **HINT:**

    - If the judgment result is NORMAL, the system is normal.
    - If the judgment result is ABNORMAL, the system is malfunctioning.
    - If the judgment result is INCOMPLETE, perform steps [A] through [C] again.
    - [A] to [C]: 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:**

Refer to "Data List / Active Test" [Atmospheric Pressure, Intake Manifold Absolute Pressure and Vapor Pressure Pump].

Click here INFO

## PROCEDURE

| | |
|---|---|
| **1.** | **CHECK ANY OTHER DTCS OUTPUT (IN ADDITION TO DTC P106A62 AND/OR P106C62)** |

(a) Read the DTCs.

**Powertrain > Engine > Trouble Codes**

| RESULT | PROCEED TO |
|---|---|
| P106A62 or P106C62 and other DTCs are output | A |
| P106A62 and P106C62 are output | B |
| P106A62 is output | C |
| P106C62 is output | D |

**HINT:**

If any DTCs other than P106A62 and/or P106C62 are output, troubleshoot those DTCs first.

**A ▶ GO TO DTC CHART**

C ▶ GO TO STEP 3

D ▶ GO TO STEP 4

B ▼

| | |
|---|---|
| 2. | REPLACE CANISTER PUMP MODULE |

**HINT:**

for HEV Model: Click here INFO

for PHEV Model: Click here INFO

NEXT ▶ GO TO STEP 5

| | |
|---|---|
| 3. | REPLACE MANIFOLD ABSOLUTE PRESSURE SENSOR |

**HINT:**

Click here INFO

NEXT ▶ GO TO STEP 5

| | |
|---|---|
| 4. | REPLACE ECM (ATMOSPHERIC PRESSURE SENSOR) |

**HINT:**

Click here INFO

NEXT ▼

| | |
|---|---|
| 5. | 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**

| | |
|---|---|
| **6.** | **CONFIRM WHETHER MALFUNCTION HAS BEEN SUCCESSFULLY REPAIRED** |

(a) Confirm that the difference between Intake Manifold Absolute Pressure and Vapor Pressure Pump is 8.69 kPa (1.26 psi) or less.

**Powertrain > Engine > Data List**

| TESTER DISPLAY |
|---|
| Intake Manifold Absolute Pressure |
| Vapor Pressure Pump |

(b) Confirm that the difference between Atmospheric Pressure and Vapor Pressure Pump is 7.89 kPa (1.14 psi) or less.

**Powertrain > Engine > Data List**

| TESTER DISPLAY |
|---|
| Atmospheric Pressure |
| Vapor Pressure Pump |

**NEXT** **END**