| | | |
|---|---|---|
| **Last Modified:** 12-04-2024 | 6.11:8.1.0 | **Doc ID:** RM100000002AQOI |
| **Model Year Start:** 2023 | **Model:** Prius Prime | **Prod Date Range:** [03/2023 - ] |
| **Title:** HEATING / AIR CONDITIONING: AIR CONDITIONING SYSTEM (for PHEV Model): B3A0112; A/C Evaporator Front Magnetic Valve Circuit Short to Battery; 2023 - 2024 MY Prius Prime [03/2023 - ] | | |

| | | |
|---|---|---|
| **DTC** | **B3A0112** | **A/C Evaporator Front Magnetic Valve Circuit Short to Battery** |

# DESCRIPTION

The evaporator front magnetic valve (No. 1 magnet valve assembly) is installed to the accumulator assembly.

The evaporator front magnetic valve (No. 1 magnet valve assembly) is open when the ignition switch is turned off.

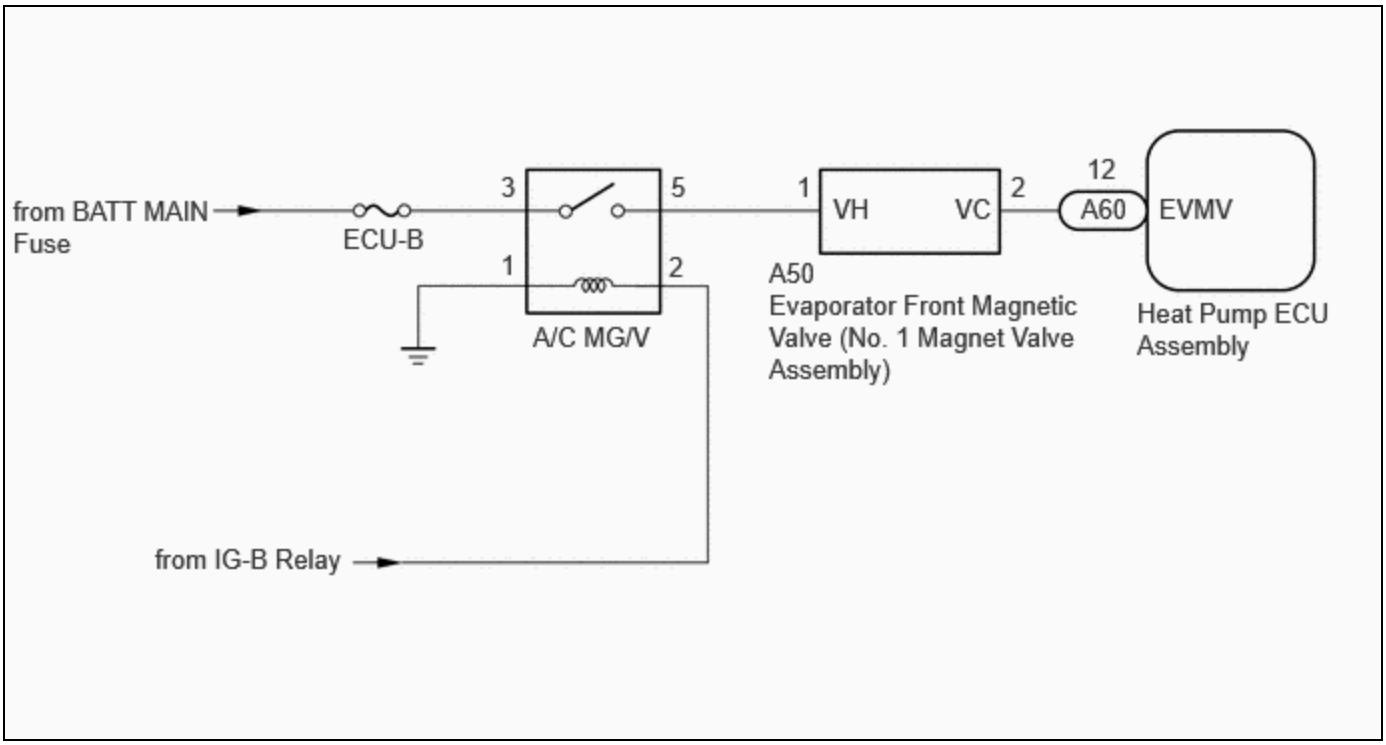
When the ignition switch is turned to ON, the evaporator front magnetic valve (No. 1 magnet valve assembly) opens and closes according to heat pump air conditioning control.

When heat pump air conditioning control is performing heating/single battery cooling/gas injection heating, the evaporator front magnetic valve (No. 1 magnet valve assembly) is closed according to signals from the heat pump ECU assembly.

When heat pump air conditioning control is performing parallel dehumidification heating, the evaporator front magnetic valve (No. 1 magnet valve assembly) is open.

| DTC NO. | DETECTION ITEM | DTC DETECTION CONDITION | TROUBLE AREA | MIL | MEMORY | DTC OUTPUT FROM | PRIORITY | NOTE |
|---|---|---|---|---|---|---|---|---|
| B3A0112 | A/C Evaporator Front Magnetic Valve Circuit Short to Battery | Diagnosis condition:<br>Evaporator front magnetic valve (No. 1 magnet valve assembly) operating<br>Malfunction status:<br>Short to +B in evaporator front magnetic valve (No. 1 magnet valve assembly) circuit<br>Detection time:<br>Continuously for 4 seconds or more | • Heat pump ECU assembly<br>• Harness or connector | Does not come on | Memorized | Air Conditioner | A | - |

# WIRING DIAGRAM




# CAUTION / NOTICE / HINT

**NOTICE:**

Inspect the fuses for circuits related to this system before performing the following procedure.

# PROCEDURE

| | |
|---|---|
| **1.** | **CHECK HARNESS AND CONNECTOR (EVAPORATOR FRONT MAGNETIC VALVE (NO. 1 MAGNET VALVE ASSEMBLY) - HEAT PUMP ECU ASSEMBLY)** |

Pre-procedure1

(a) Disconnect the A50 evaporator front magnetic valve (No. 1 magnet valve assembly) connector.

(b) Disconnect the A60 heat pump ECU assembly connector.

Procedure1

(c) Measure the voltage according to the value(s) in the table below.

Standard Voltage:

EWD INFO

**Click Location & Routing(A50,A60)**
**Click Connector(A50)**
**Click Connector(A60)**

| TESTER CONNECTION | CONDITION | SPECIFIED CONDITION | RESULT |
|---|---|---|---|
| A50-2 (VC) or A60-12 (EVMV) - Body ground | Always | Below 1 V | V |

(d) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

**Click Location & Routing(A50,A60)**
**Click Connector(A50)**
**Click Connector(A60)**

| TESTER CONNECTION | CONDITION | SPECIFIED CONDITION | RESULT |
|---|---|---|---|
| A50-2 (VC) or A60-12 (EVMV) - Other terminals and body ground | Always | 10 kΩ or higher | kΩ |

Post-procedure1

(e) None

**OK** ▶ **REPLACE HEAT PUMP ECU ASSEMBLY**

**NG** ▶ **REPAIR OR REPLACE HARNESS OR CONNECTOR**