# FUEL PUMP CONTROL CIRCUIT

## CIRCUIT DESCRIPTION

Refer to DTC P0230 on page 05–122.

## WIRING DIAGRAM

Refer to DTC P0230 on page 05–122.

## INSPECTION PROCEDURE

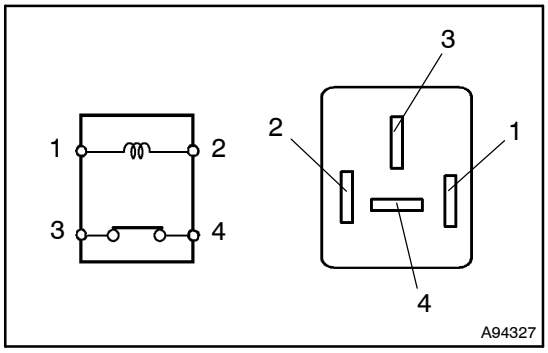
**1 PERFORM ACTIVE TEST (OPERATE F/PMP RELAY)**

(a) Connect the Intelligent Tester II to the DLC3.
(b) Turn the ignition switch ON and push the Intelligent Tester II main switch ON.
(c) Enter the following menus: Enter/ Diagnosis/ OBD·MOBD/ Power train/ Engine and ECT/ Active Test/”Control the fuel pump/ speed”.
(d) Check the relay operation while operating it with the Intelligent Tester II.
**OK: Operating noise can be heard from the relay.**

**OK** → **Go to step 5**

**NG**

**2 INSPECT RELAY (F/PMP)**



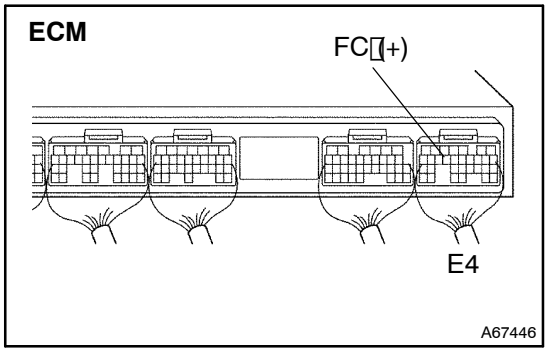

(a) Remove the F/PMP relay from the engine room Relay Block (R/B).
(b) Measure the resistance.
**Standard:**

| Tester Connection | Specified Condition |
|---|---|
| 3 – 4 | Below 1 Ω |
| 3 – 4 | 10 kΩ or higher (apply battery voltage to terminals 1 and 2) |

**NG** → **REPLACE RELAY (F/PMP)**

**OK**

**3 INSPECT ECM (FC VOLTAGE)**



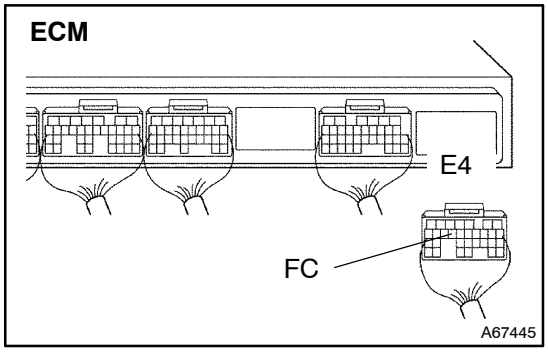

(a) Turn the ignition switch ON.
(b) Measure the voltage of ECM connector.
**Standard:**

| Tester Connection | Specified condition |
|---|---|
| E4–14 (FC) – Body ground | 9 to 14 V |

**OK** → **REPLACE ECM (See page 10–21)**

**OK**

| 4 | CHECK WIRE HARNESS (ECM – C/OPN RELAY, C/OPN RELAY – IGNITION SWITCH) |
|---|---|




(a) Check the wire harness between the ECM and the C/OPN relay.

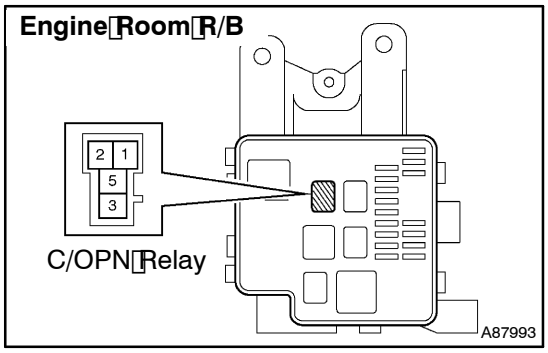
(1) Disconnect the E4 ECM connector.

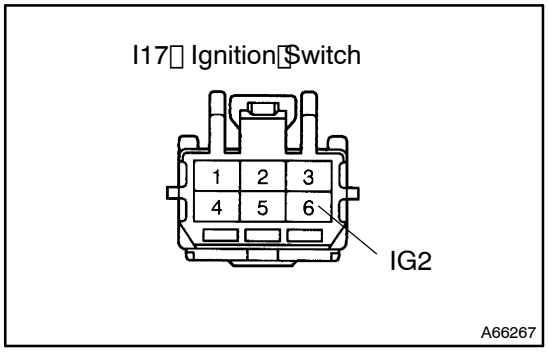
(2) Remove the C/OPN relay from the engine room R/B.

(3) Measure the resistance of the wire harness side connectors.

**Standard:**

| Tester Connection | Specified Condition |
|---|---|
| E4–14 (FC) – R/B C/OPN relay terminal 2 | Below 1 Ω |
| E4–14 (FC) or 2 of C/OPN relay – Body ground | 10 kΩ or higher |




(b) Check the wire harness between the C/OPN relay and the ignition switch.

(1) Check the IG2 fuse.

- Remove the IG2 fuse from the engine room R/B.
- Measure the resistance of the IG2 fuse.

**Standard: Below 1 Ω**

- Reinstall the IG2 fuse.

(2) Remove the C/OPN relay from the engine room R/B.

(3) Disconnect the I17 ignition switch connector.

(4) Measure the resistance of the wire harness side connectors.

**Standard:**

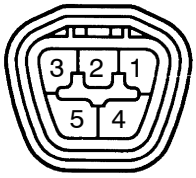
| Tester Connection | Specified Condition |
|---|---|
| R/B C/OPN relay terminal 1 – I17–6 | Below 1 Ω |
| R/B C/OPN relay terminal 1 or I17–6 – Body ground | 10 kΩ or higher |

**NG** → **REPAIR OR REPLACE HARNESS AND CONNECTOR**

**OK**

**REPLACE ECM (See page 10–21)**

## 5 INSPECT FUEL PUMP



Fuel Pump
A74356

(a) Check the fuel pump resistance.
(1) Measure the resistance between terminals 4 and 5.
**Standard: 0.2 to 3.0 Ω at 20°C (68°F)**

(b) Check the fuel pump operation
(1) Apply battery voltage to both the terminals. Check that the pump operates.

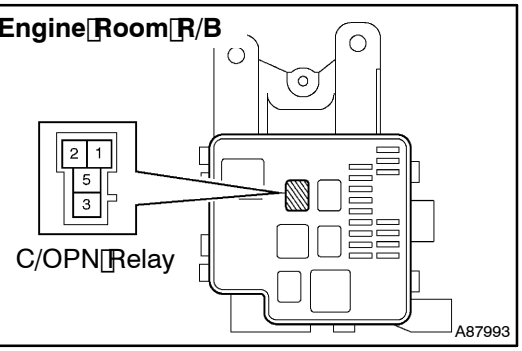
**NOTICE:**
- **These tests must be done quickly (within 10 seconds) to prevent the coil from burning out.**
- **Keep fuel pump as far away from the battery as possible.**

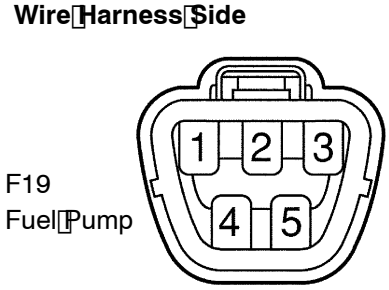
**CAUTION:**
**Always turn on and off the voltage on the battery side, not the fuel pump side.**

**NG** → **REPLACE FUEL PUMP (See page 11–21)**

**OK**

## 6 CHECK WIRE HARNESS (C/OPN RELAY – FUEL PUMP – BODY GROUND)




(a) Check the wire harness between the C/OPN relay and the fuel pump.
(1) Remove the C/OPN relay from the engine room R/B.
(2) Disconnect the F19 fuel pump connector.
(3) Measure the resistance of the wire harness side connectors.
**Standard:**

| Tester Connection | Specified Condition |
|---|---|
| R/B C/OPN relay terminal 3 – F19–4 (Fuel pump) | Below 1 Ω |
| R/B C/OPN relay terminal 3 or F19–4 (Fuel pump) – Body ground | 10 kΩ or higher |

(4) Measure the resistance of the wire harness side connector.
**Standard:**

| Tester Connection | Specified Condition |
|---|---|
| F19–5 – Body ground | Below 1 Ω |

**NG** → **REPLACE ECM (See page 10–21)**

**OK**

**REPAIR OR REPLACE HARNESS AND CONNECTOR**