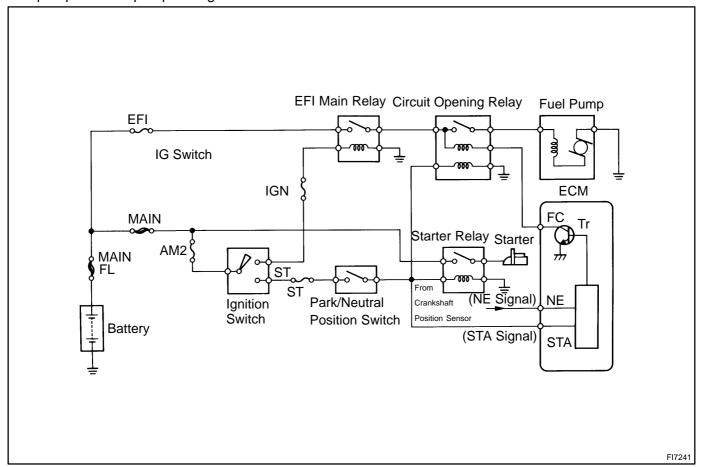
DI6VR-02

# **Fuel Pump Control Circuit**

### **CIRCUIT DESCRIPTION**

In the diagram below, when the engine is cranked, current flows from terminal ST of the ignition switch to the starter relay coil and also current flows to terminal STA of ECM (STA signal).

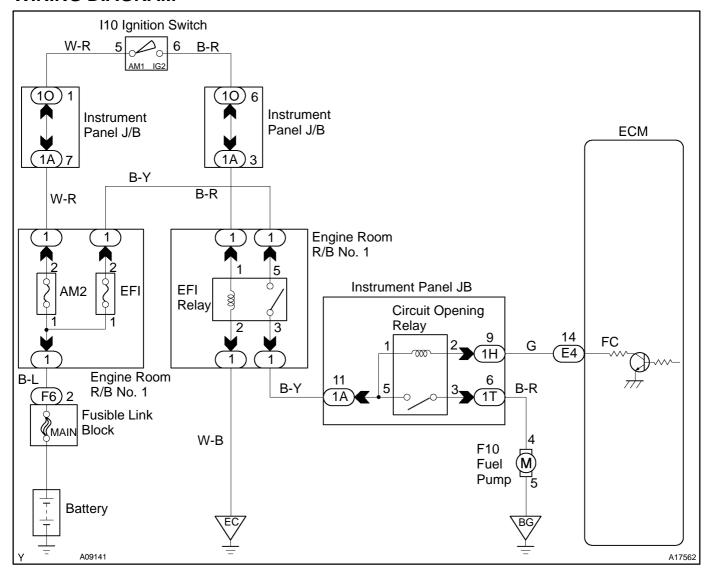
When the STA signal and NE signal are input to the ECM, Tr is turned ON, current flows to coil of the circuit opening relay, the relay switches on, power is supplied to the fuel pump and the fuel pump operates. While the NE signal is generated (engine running), the ECM keeps Tr ON (circuit opening relay ON) and the fuel pump also keeps operating.



2002 ECHO (RM884U)

Author: Date: 311

# **WIRING DIAGRAM**



Author: Date: 312

## **INSPECTION PROCEDURE**

## **TOYOTA** hand-held tester:

1 Connect the TOYOTA hand-held tester and check operation of fuel pump (See page DI-3).

OK

Proceed to next circuit inspection shown on problem symptoms table (See page DI-21).

NG

2 Check for ECM power source circuit (See page DI-138).

NG

Repair or replace.

ΟK

3 Check circuit opening relay (Marking: CIR OPN) (See page SF-48).

NG

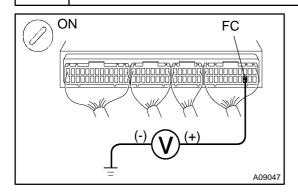
Replace circuit opening relay.

OK

2002 ECHO (RM884U)

4

Check voltage between terminal FC of ECM and body ground.



#### **PREPARATION:**

- (a) Remove the connector cover from the ECM.
- (b) Turn the ignition switch ON.

#### **CHECK:**

Measure voltage between terminal FC of the ECM and body ground.

#### OK:

Voltage 9 - 14 V



Check for open in harness and connector between EFI main relay and circuit opening relay and ECM (See page IN-29).

OK

5 Check fuel pump (See page SF-6).

NG

Repair or replace fuel pump.

OK

6 Check for open in harness and connector between circuit opening relay (Marking: CIR OPN) and fuel pump and body ground (See page IN-29).

NG

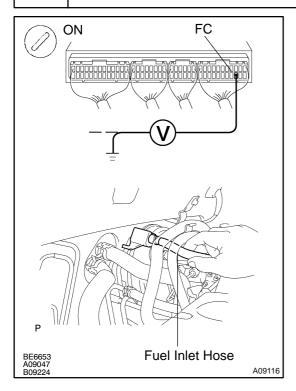
Repair or replace harness or connector.

OK

Check and replace ECM (See page IN-29).

# **OBD II scan tool (excluding TOYOTA hand-held tester):**

1 Check operation of fuel pump.



#### PREPARATION:

- (a) Remove the connector cover from the ECM.
- (b) Turn the ignition switch ON.

#### **CHECK:**

- (a) Connect between terminal FC of the ECM connector and body ground.
- (b) Check for fuel pressure in the fuel inlet hose when it is pinched off.

#### OK:

There is pressure in fuel inlet hose.

#### HINT:

At this time, you will hear a fuel return flowing noise.

OK

Proceed to next circuit inspection shown on problem symptoms table (See page DI-21).

NG

2

Check for ECM power source circuit (See page DI-138).

NG

Repair or replace.

ок

3

Check circuit opening relay (Marking: CIR OPN) (See page SF-48).

NG

Replace circuit opening relay.

oĸ

4	Check voltage between terminal FC of ECM and body ground (See page DI-141).
	NG Check for open in harness and connector between EFI main relay and circuit opening relay and ECM (See page IN-29).
ок	
5	Check fuel pump (See page SF-6).
	NG Repair or replace fuel pump.
	Repair of Teplace raci pamp.
ОК	
<u></u>	
6	Check for open in harness and connector between circuit opening relay (Marking: CIR OPN) and fuel pump and body ground (See page IN-29).
	NG Repair or replace harness or connector.
ОК	
Check and replace ECM (See page IN-29 ).	

2002 ECHO (RM884U)