

DTC	13	Fuel Tank Select Relay Malfunction
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CIRCUIT DESCRIPTION

Refer to DTC 11 (Main Fuel Pump Circuit Malfunction) on [page DI-138](#).

DTC No.	DTC Detecting Condition	Trouble Area
13	Conditions (a), (b) and (c) continue: (a) Fuel tank changeover switch OFF (Voltage of FPMS terminal is low) (b) Voltage of FPM terminal is low (c) Voltage of FPMR terminal is high	<ul style="list-style-type: none"> • Fuel tank select relay • Open or short in main fuel pump circuit • Main fuel pump • Fuel pump relay • Circuit opening relay • Short in sub fuel tank forcing driving relay circuit • Sub fuel tank forcing driving relay • Short in sub fuel pump circuit (+B short)

WIRING DIAGRAM

Refer to DTC 11 (Main Fuel Pump Circuit Malfunction) on [page DI-138](#).

INSPECTION PROCEDURE

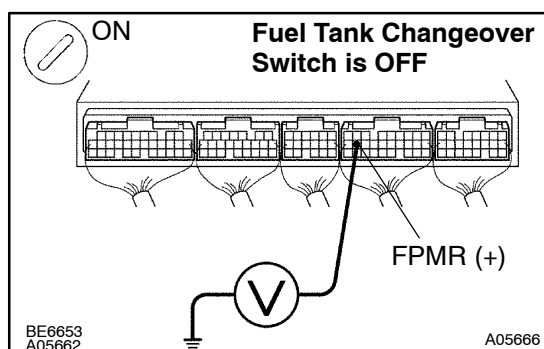
1	Check fuel tank select relay (See page FI-56).
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NG

Replace fuel tank select relay.

OK

2	Check voltage between terminal FPMR of engine ECU connector and body ground.
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PREPARATION:

- Remove the glove compartment door.
- Turn the ignition switch ON.
- Fuel tank changeover switch is OFF.

CHECK:

Measure voltage between terminal FPMR of engine ECU and body ground, and turn the ignition switch ON after 4 seconds or more.

OK:

Voltage: 0 - 3.0V

OK

Go to step 5.

NG

3 Check sub fuel tank forcing driving relay ([See page FI-58](#)).

NG

Replace sub fuel tank forcing driving relay, and then go to step 5.

OK

4 Check for short in harness and connector between sub fuel tank forcing driving relay and engine ECU ([See page IN-19](#)).

NG

Repair or replace harness and connector, and then go to step 5.

OK

Check and replace engine ECU ([See page IN-19](#)).

5 Check voltage between terminal FPM of engine ECU connector and body ground ([See page DI-138](#), step 1).

OK

Go to step 8.

NG

6 Check fuel pump relay (Marking: FUEL/PMP) ([See page FI-54](#)).

NG

Replace fuel pump relay.

OK

7 Check circuit opening relay (Marking: C/OPN) ([See page FI-53](#)).

NG

Replace circuit opening relay.

OK

8 Check operation of main fuel pump ([See page DI-138](#), step 5).

HINT:

If you have no hand –held tester, and then go to step 9.

OK Go to step 11.

NG

9 Check main fuel pump ([See page FI-7](#)).

NG

Replace main fuel pump.

OK

10 Check for open or short in harness and connector between main fuel pump and fuel tank select relay, fuel tank select relay and fuel pump relay, fuel pump relay and circuit opening relay ([See page IN-19](#)).

NG

Repair or replace.

OK

11

Check for open and short in harness and connector between fuel tank select relay and engine ECU ([See page IN-19](#)).

NG

Repair or replace harness and connector.

OK

Check and replace engine ECU
([See page IN-19](#)).