DI1J7–03

DTC	13, 14	ABS Motor Relay Circuit

CIRCUIT DESCRIPTION

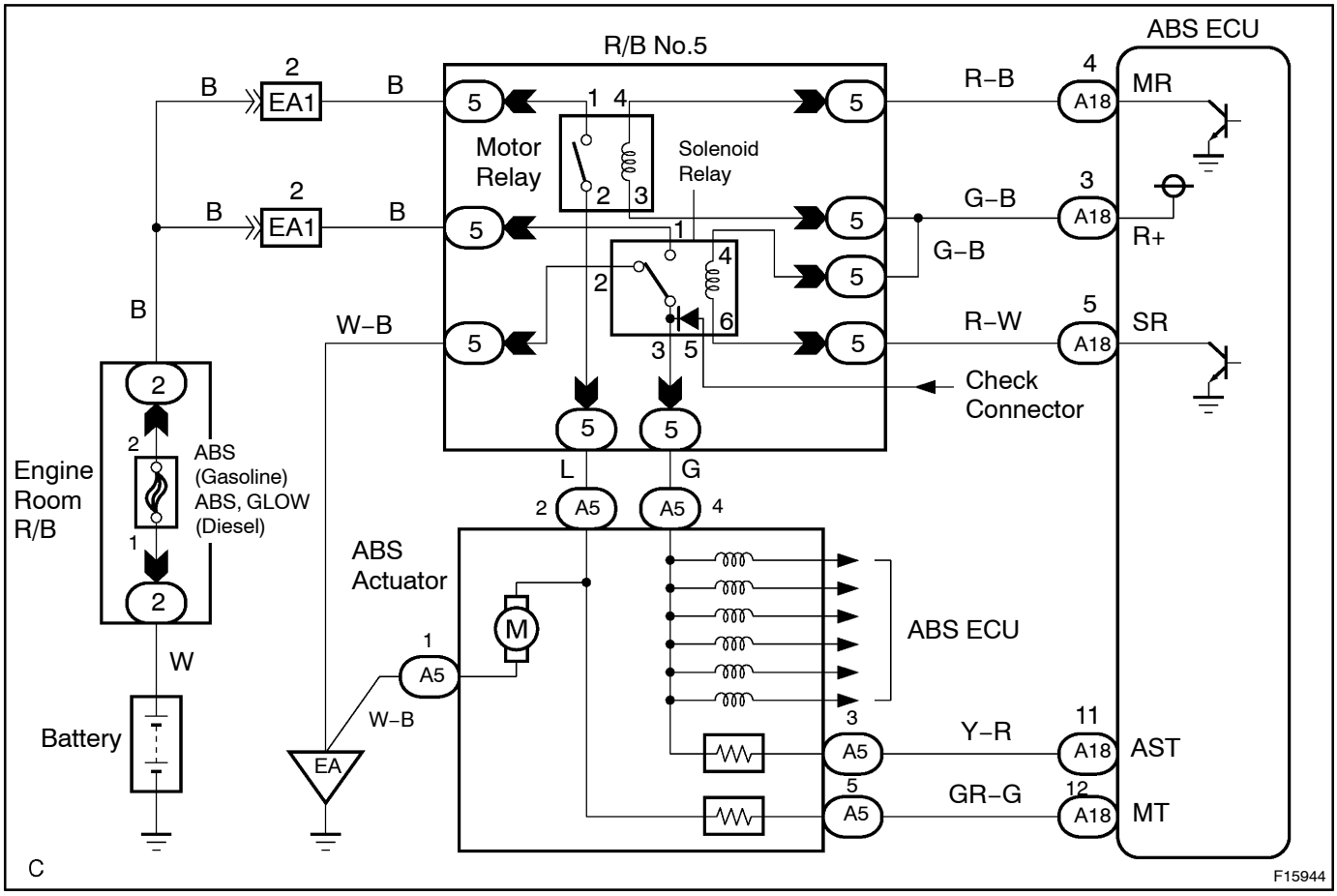
The ABS motor relay supplies power to the ABS pump motor. While the ABS is activated, the ECU switches the ABS motor relay ON and operates the ABS pump motor.

DTC No.	DTC Detecting Condition	Trouble Area
13	Conditions (1) and (2) continued for 0.2 sec. or more: (1) ABS motor relay terminal (MR) voltage: Battery voltage (2) ABS motor relay monitor terminal (MT) voltage: 0 V	• ABS motor relay • Open or short in ABS motor relay circuit • ECU
14	Conditions (1) and (2) continued for 2.5 sec. or more: (1) ABS motor relay terminal (MR) voltage: 0 V (2) ABS motor relay monitor terminal (MT) voltage: Battery voltage	• ABS motor relay • B+ short in ABS motor relay circuit • ECU

Fail safe function:

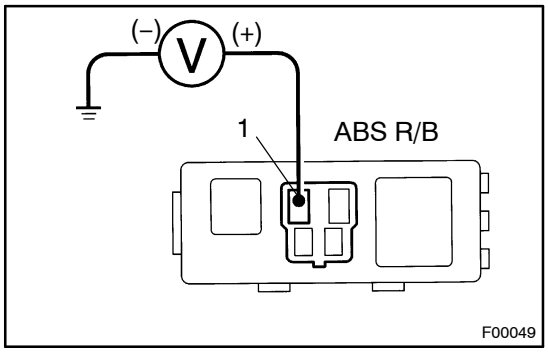
If trouble occurs in the ABS motor relay circuit, the ECU cuts off current to the ABS solenoid relay and prohibits ABS control.

WIRING DIAGRAM



INSPECTION PROCEDURE

1	**Check voltage between terminal 1 of ABS R/B (for ABS motor relay) and body ground.**

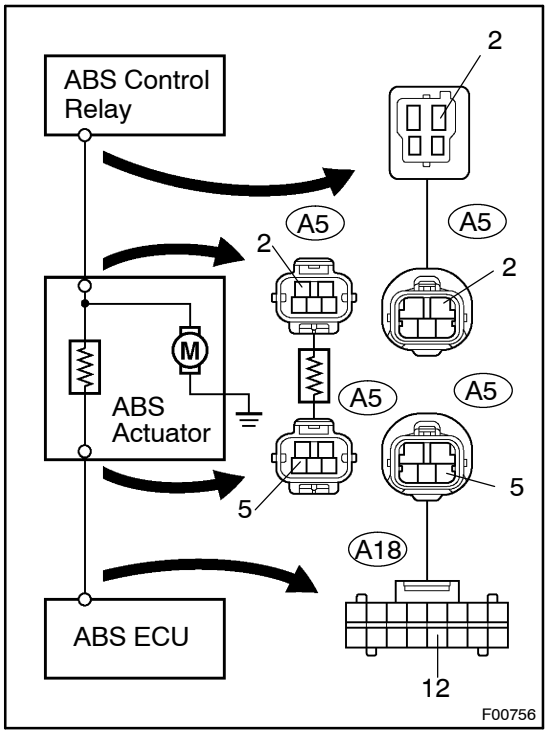


PREPARATION:
Remove ABS motor relay from ABS R/B.
CHECK:
Measure voltage between terminal 1 of ABS R/B (for ABS motor relay) and body ground.
OK:
Voltage: 10 – 14 V

NG → **Check and repair harness or connector.**

OK

2	**Check continuity between terminal 2 of ABS R/B (for ABS motor relay) and A5 – 2, A5 – 2 and A5 – 5, A5 – 5 and A18 – 12.**

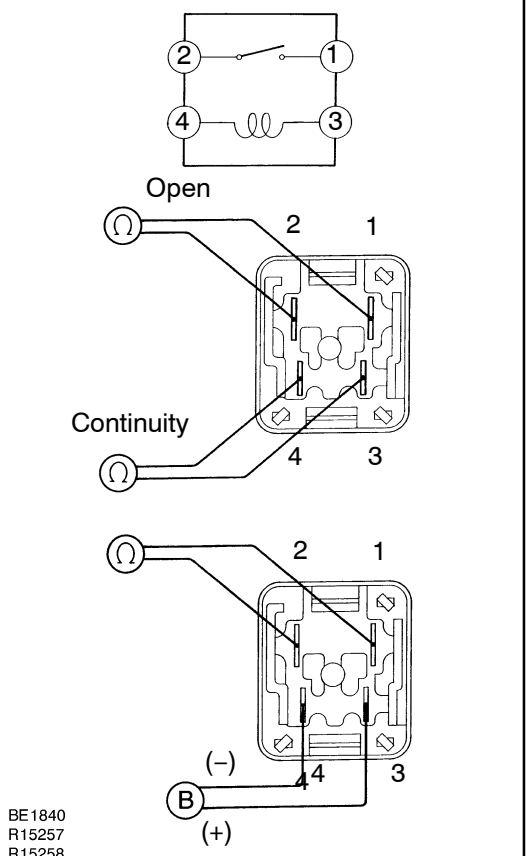


PREPARATION:
Disconnect the 2 connectors from ABS actuator.
CHECK:
Check continuity between terminals 2 of ABS R/B (for ABS motor relay and A5 – 2, A5 – 2 and A5 – 5, A5 – 5 and A18 – 12.
OK:
Continuity
HINT:
There is a resistance of 26 – 40 Ω between terminals A5 – 2 and A5 – 5.

NG → **Repair or replace harness or ABS actuator.**

OK

3	Check ABS motor relay.



PREPARATION:

Remove ABS motor relay from ABS R/B.

CHECK:

Check continuity between each terminal of ABS motor relay.

OK:

Terminals 3 and 4	Continuity (Reference value 62 Ω)
Terminals 1 and 2	Open

CHECK:

(a) Apply battery positive voltage between terminals 3 and 4.

(b) Check continuity between terminals of ABS motor relay.

Terminals 1 and 2	Continuity

NG → **Replace ABS motor relay.**

OK

4	Check for open and short in harness and connector between ABS motor relay and ABS ECU (See page IN–26).

NG → **Repair or replace harness or connector.**

OK

If the same code is still output after the DTC is deleted, check the contact condition of each connection.
If the connection is normal, the ECU may be defective.