DI2R1–01

DTC	C1253 / 53	Motor Relay Circuit

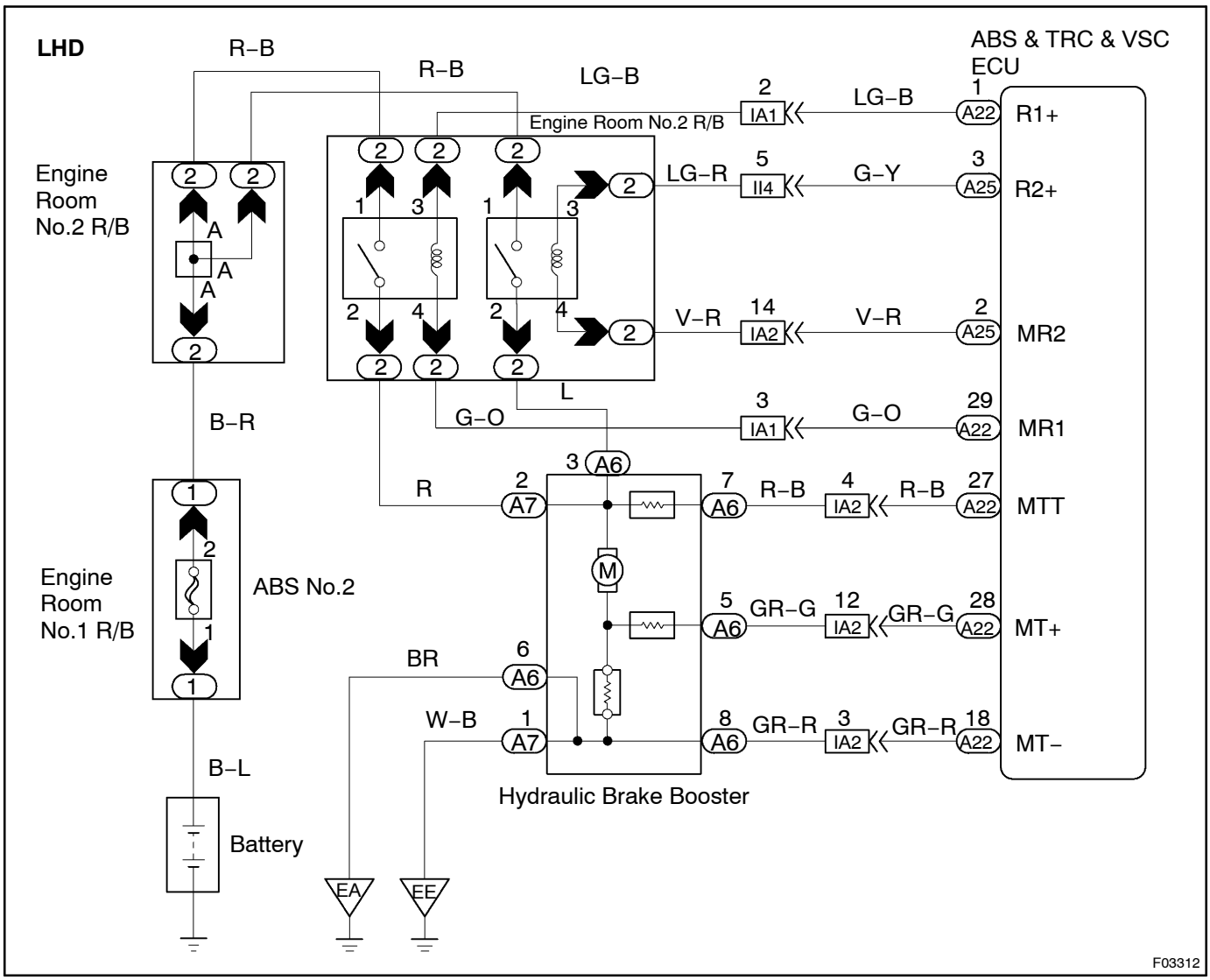
CIRCUIT DESCRIPTION

The ABS and TRC motor relay supplies power to the hydraulic brake booster pump motor. While the ABS & TRC & VSC are activated, the ECU switches the motor relay ON and operates the hydraulic brake booster pump motor.

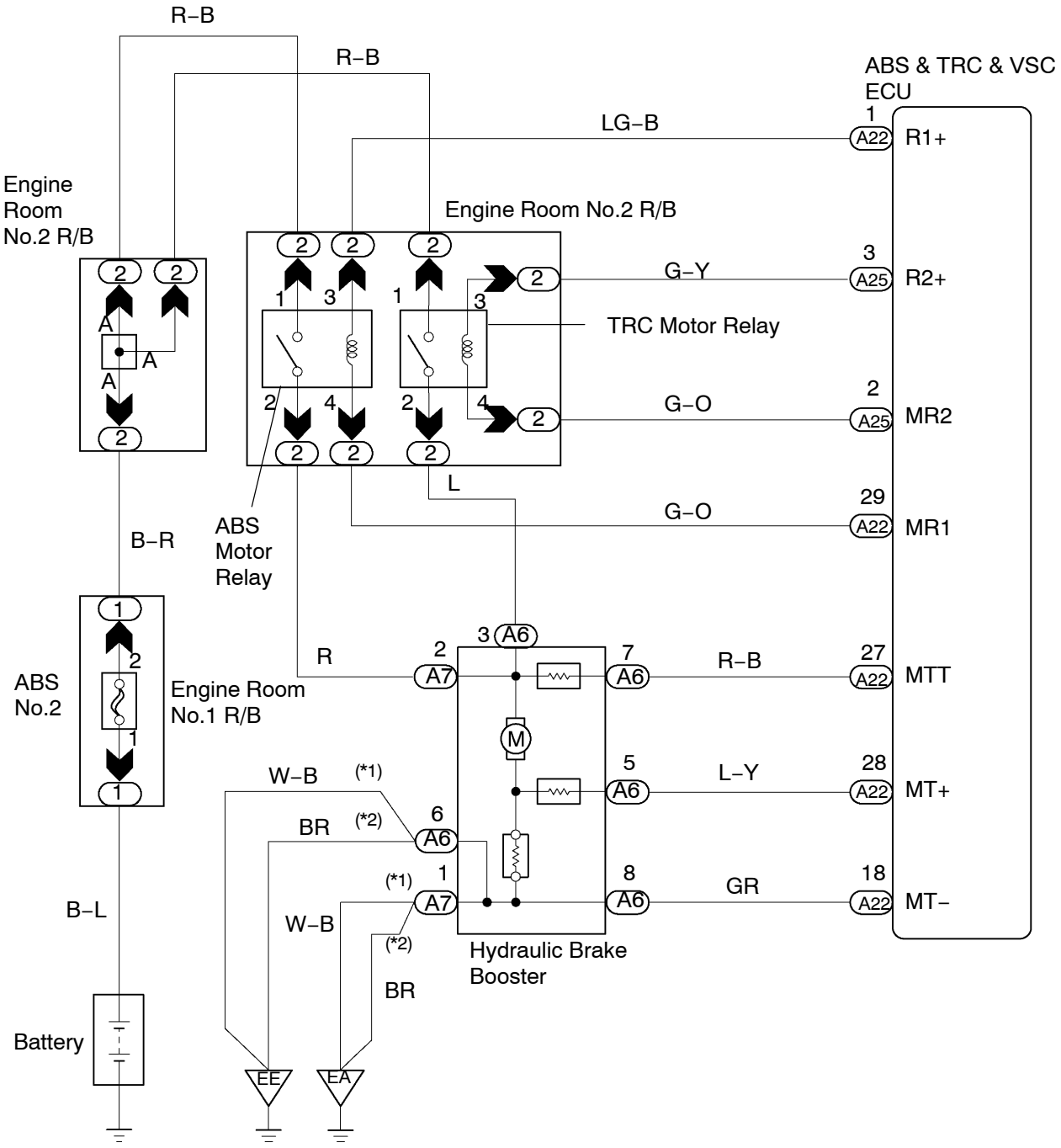
DTC No.	DTC Detecting Condition	Trouble Area
C1253 / 53	When any of the following (1) through (4) is detected: (1) After turning the ignition switch ON, open circuit in the relay coil is detected for more than 1 sec. (2) When the pressure switch does not control motor driving, the status that the motor relay is always ON continues for more than 1 sec. due to short circuit. (3) When the pressure switch (PH) detects the low pressure or while the pump motor operates to increase the pressure, the status that the motor relay does not turn ON continues for more than 0.2 secs. (4) When pressure switch does not control motor driving, the status that the motor relay is always ON due to the welded contact continues for more than 2 secs.	• ABS or TRC motor relay • ABS or TRC motor relay circuit • Hydraulic brake booster pump motor circuit

Fail safe function:
If trouble occurs in the ABS and TRC motor relay circuit, the ECU cuts off current to the ABS solenoid relay and prohibits ABS & TRC & VSC controls and the brake system becomes normal.

WIRING DIAGRAM



RHD



(*1) : Australia
(*2) : Europe

F03313

INSPECTION PROCEDURE

Start the inspection from step 1 in case of using the hand–held tester and start from step 3 in case of not using hand–held tester.

1	**Check ABS and TRC motor relay operation.**

PREPARATION:

(a) Connect the hand–held tester to the DLC3.

(b) Turn the ignition switch ON and push the hand–held tester main switch ON.

(c) Select the ACTIVE TEST mode on the hand–held tester.

CHECK:

Check the operation sound of the ABS and TRC motor relays individually when operating it with the hand–held tester.

OK:

The operation sound of the ABS and TRC motor relay should be heard.

NG → **Go to step 3.**

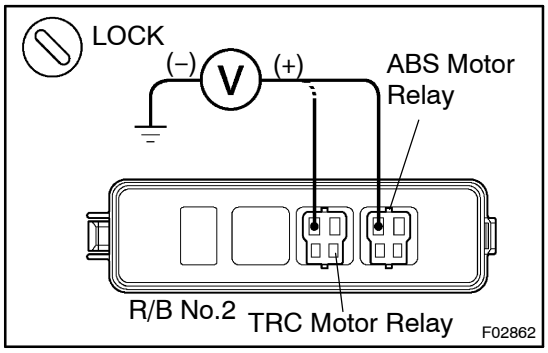
OK

2	**Check for short circuit (to B+) in harness and connector between MTT of hydraulic brake booster and ABS & TRC & VSC ECU (See page IN–29).**

OK → **Check and replace ABS & TRC & VSC ECU.**

NG

3	**Check voltage between terminal 1 of Engine Room R/B No.2 (for ABS and TRC motor relay) and body ground.**



PREPARATION:

Remove ABS and TRC motor relay from Engine Room R/B No.2.

CHECK:

Measure voltage between terminal 1 of Engine Room R/B No.2 (for ABS and TRC motor relay) and body ground.

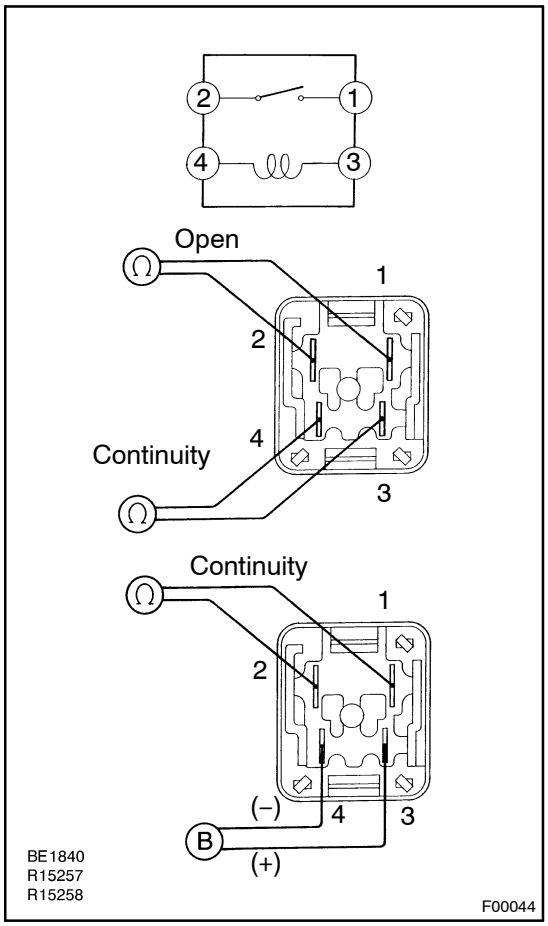
OK:

Voltage: 10 – 14 V

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

OK

4	**Check ABS and TRC motor relay.**



PREPARATION:

Remove ABS and TRC motor relay from Engine Room R/B No.2.

CHECK:

Check continuity between each pair of terminal of motor relay.

OK:

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

*1: ABS motor relay 62 Ω
TRC motor relay 54 Ω

CHECK:

(a) Apply battery voltage between terminals 3 and 4.
(b) Check continuity between terminals.

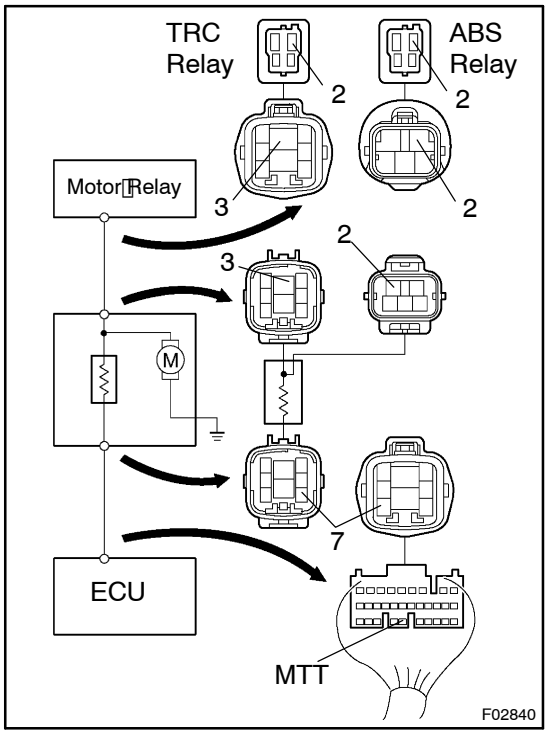
OK:

Terminals 1 and 2	Continuity

NG → **Replace ABS or TRC motor relay.**

OK

5	**Check continuity between each terminal (BM1 and BM2) and terminal MTT of ABS & TRC & VSC ECU.**



PREPARATION:

Disconnect the 2 connectors from the hydraulic brake booster.

CHECK:

(a) Check continuity between terminal 2 of ABS motor relay and terminal MTT of ABS & TRC & VSC ECU.

(b) Check continuity between terminal 2 of TRC motor relay and terminal MTT of ABS & TRC & VSC ECU.

OK:

Continuity

HINT:

There is resistance of 33 ± 3 Ω between terminals A6 – 3 or A7 – 2 and A6 – 7 of the hydraulic brake booster.

NG	**Repair or replace harness or hydraulic brake booster.**

OK

6	**Check for open and short circuit in harness and connector between ABS and TRC motor relay and ABS & TRC & VSC ECU (See page IN–29).**

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 connections are normal, the ECU may be defective.