

DTC No.	DTC Detecting Condition	Trouble Area
C1252 / 52	After the ignition switch has been turned ON, when the power is supplied to the pump motor for more than 5 minutes.	• Hydraulic brake booster pump motor • Hydraulic brake booster pump motor circuit • Pressure switch (PH or PL)

If trouble occurs in the pump motor, the ECU cuts off current to the ABS solenoid relay and prohibits ABS & BA & TRC & VSC controls.

Wiring diagram of the ABS & BA & TRC & VSC ECU system. The diagram shows the connection between the ECU, the Engine Room R/B, the Hydraulic Brake Booster, and the ABS Motor Relays.

ECU Connections:

- W-L (W-L) to 3 (A55) R2+
- W-B (W-B) to 6 (A49) and 1 (A48)
- GR (GR) to 8 (A49)

Engine Room R/B Connections:

- B (B) to 1 (1N)
- 1 (1N) to 1 (1B)
- 2 (1B) to 10 (1B)
- 3 (1B) to 12 (1B)
- 4 (1B) to 8 (1B)
- 5 (1B) to 11 (1B)
- 6 (1B) to 12 (1B)
- 7 (1B) to 11 (1B)
- 8 (1B) to 11 (1B)
- 9 (1B) to 11 (1B)
- 10 (1B) to 11 (1B)
- 11 (1B) to 11 (1B)
- 12 (1B) to 11 (1B)

Hydraulic Brake Booster Connections:

- L-R (L-R) to 2 (A48)
- R (R) to 3 (A49)
- Y-B (Y-B) to 2 (A55) MR2

ABS Motor Relays:

- ABS Motor 1 Relay: 1 (1B) to 10 (1B), 2 (1B) to 12 (1B), 3 (1B) to 12 (1B), 4 (1B) to 8 (1B), 5 (1B) to 11 (1B), 6 (1B) to 12 (1B), 7 (1B) to 11 (1B), 8 (1B) to 11 (1B), 9 (1B) to 11 (1B), 10 (1B) to 11 (1B), 11 (1B) to 11 (1B), 12 (1B) to 11 (1B).
- ABS Motor 2 Relay: 1 (1B) to 11 (1B), 2 (1B) to 12 (1B), 3 (1B) to 12 (1B), 4 (1B) to 8 (1B), 5 (1B) to 11 (1B), 6 (1B) to 12 (1B), 7 (1B) to 11 (1B), 8 (1B) to 11 (1B), 9 (1B) to 11 (1B), 10 (1B) to 11 (1B), 11 (1B) to 11 (1B), 12 (1B) to 11 (1B).

Hydraulic Brake Booster Internal Connections:

- 2 (A48) to 3 (A49)
- 3 (A49) to 7 (A49) B-R
- 5 (A49) to 28 (A52) MT+
- 8 (A49) to 18 (A52) MT-

ECU Internal Connections:

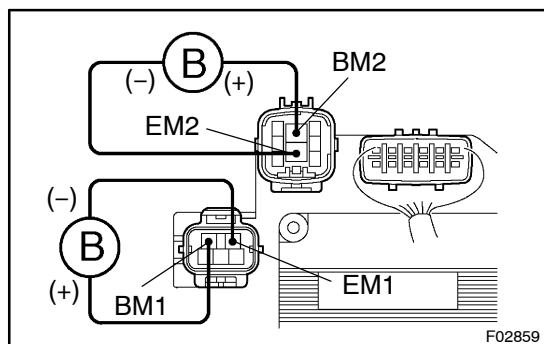
- 1 (A52) R1+
- 29 (A52) MR1
- 27 (A52) MTT

Other Components:

- Battery
- FL Block
- EB (Electrical Brake)

INSPECTION PROCEDURE

1 Check operation of hydraulic brake booster pump motor.



PREPARATION:

Disconnect the 2 connectors from the hydraulic brake booster.

CHECK:

Connect battery positive $\oplus$ lead to BM1 or BM2 terminal and battery negative $\ominus$ lead to EM1 or EM2 terminal of the hydraulic brake booster (pump motor) connector.

OK:

The operation sound of the pump motor should be heard.

NG

Go to step 9.

OK

2 Check for short circuit (to B+) in harness and connector between BM1 or BM2 of hydraulic brake booster and ABS motor 1 or ABS motor 2 relay (See page IN-35).

NG

Repair or replace harness or connector.

OK

3 Check for short circuit (to B+) in harness and connector between MTT of hydraulic brake booster and ABS & BA & TRC & VSC ECU (See page IN-35).

NG

Repair or replace harness or connector.

OK

4 Check pressure switch (PH).**In case of using the hand-held tester.****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 DATALIST mode on the hand-held tester.

CHECK:

Depress the brake pedal more than 40 times with the ignition switch OFF then turn the ignition switch ON and check the pressure switch (PH) condition.

HINT:

When a pressure in power supply system is released, reaction force becomes light and stroke becomes longer.

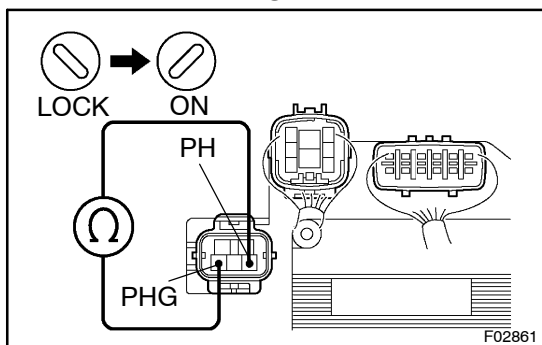
OK:

"OFF" turns to "ON".

HINT:

OFF: Low pressure

ON: High pressure

In case of not using the hand-held tester.**PREPARATION:**

- (a) Disconnect the connector (5P) from the hydraulic brake booster.
- (b) With the ignition switch OFF, depress the brake pedal more than 40 times to decrease the accumulator pressure.

HINT:

When a pressure in power supply system is released, reaction force becomes light and stroke becomes longer.

CHECK:

Measure resistance between terminals PH and PHG of hydraulic brake booster connector.

OK:

Resistance: 1.0 kΩ

PREPARATION:

- (a) Connect the connector (5P) to the hydraulic brake booster.
- (b) Disconnect the connector (5P) after ignition switch has been ON and the pump motor has stopped.

CHECK:

Measure resistance between terminals PH and PHG of hydraulic brake booster connector.

OK:

Resistance: 0 Ω

HINT:

After inspection, connect the connector and clear the DTC ([See page DI-4](#)).

NG**Replace hydraulic brake booster assembly.**

OK

5 Check pressure switch (PL).

In case of using hand-held tester:

PREPARATION:

- Connect the hand-held tester to the DLC3.
- Turn the ignition switch ON and push the hand-held tester main switch ON.
- Select the DATALIST mode on the hand-held tester.

CHECK:

Depress the brake pedal more than 40 times with the ignition switch OFF then turn the ignition switch ON and check the pressure switch (PL) condition.

HINT:

When a pressure in power supply system is released, reaction force becomes light and stroke becomes longer.

OK:

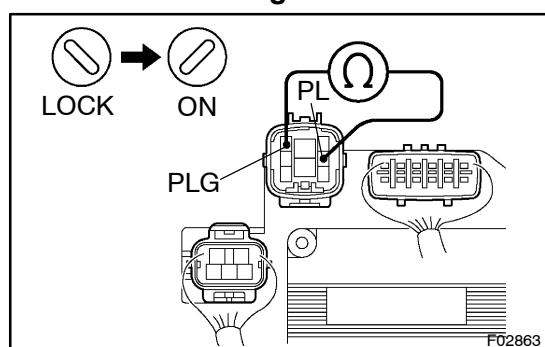
"OFF" turns to "ON".

HINT:

OFF: Low pressure

ON: High pressure

In case of not using hand-held tester:



PREPARATION:

- Disconnect the connector (8P) from the hydraulic brake booster.
- With the ignition switch OFF, depress the brake pedal more than 40 times to decrease the accumulator pressure.

HINT:

When a pressure in power supply system is released, reaction force becomes light and stroke becomes longer.

CHECK:

Measure resistance between terminals PL and PLG of hydraulic brake booster connector.

OK:

Resistance: 5.7 kΩ

PREPARATION:

- Connect the connector (8P) to the hydraulic brake booster.
- Disconnect the connector (8P) after ignition switch has been ON and the pump motor has stopped.

CHECK:

Measure resistance between terminals PL and PLG of hydraulic brake booster connector.

OK:

Resistance: 1.0 kΩ

HINT:

After inspection, connect the connector and clear the DTC (See page DI-4).

NG

Replace hydraulic brake booster assembly.

OK

6

Check for short circuit (to B+) in harness and connector between pressure switch and ABS & BA & TRC & VSC ECU (See page IN-35).

NG

Repair or replace harness or connector.

OK

7

Check ABS motor 1 and ABS motor 2 relay.

PREPARATION:

Remove ABS motor 1 and ABS motor 2 relay from engine room J/B.

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 1 relay 54 Ω

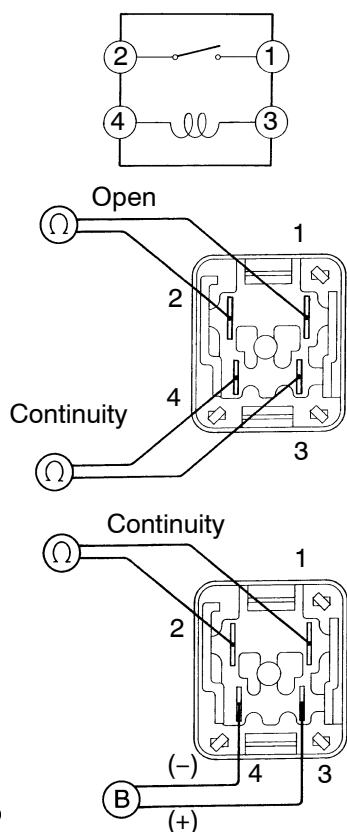
ABS motor 2 relay 62 Ω

CHECK:

- Apply battery voltage between terminals 3 and 4.
- Check continuity between terminals.

OK:

Terminals 1 and 2	Continuity
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BE1840
R15257
R15258

F00044

NG

Replace ABS motor 1 or ABS motor 2 relay.

OK

8

Check for short circuit in harness and connector between ABS motor 1 or ABS motor 2 relay and ABS & BA & TRC & VSC ECU ([See page IN-35](#)).

NG

Repair or replace harness or connector.

OK

Check and replace ABS & BA & TRC & VSC ECU.

9

Check for open or short circuit in harness and connector between hydraulic brake booster pump motor and hydraulic brake booster ([See page IN-35](#)).

NG

Replace wire harness.

OK

10

Check hydraulic brake booster pump motor ([See page BR-32](#)).

NG

Replace hydraulic brake booster pump motor.

OK

Replace hydraulic brake booster.