DI299–06

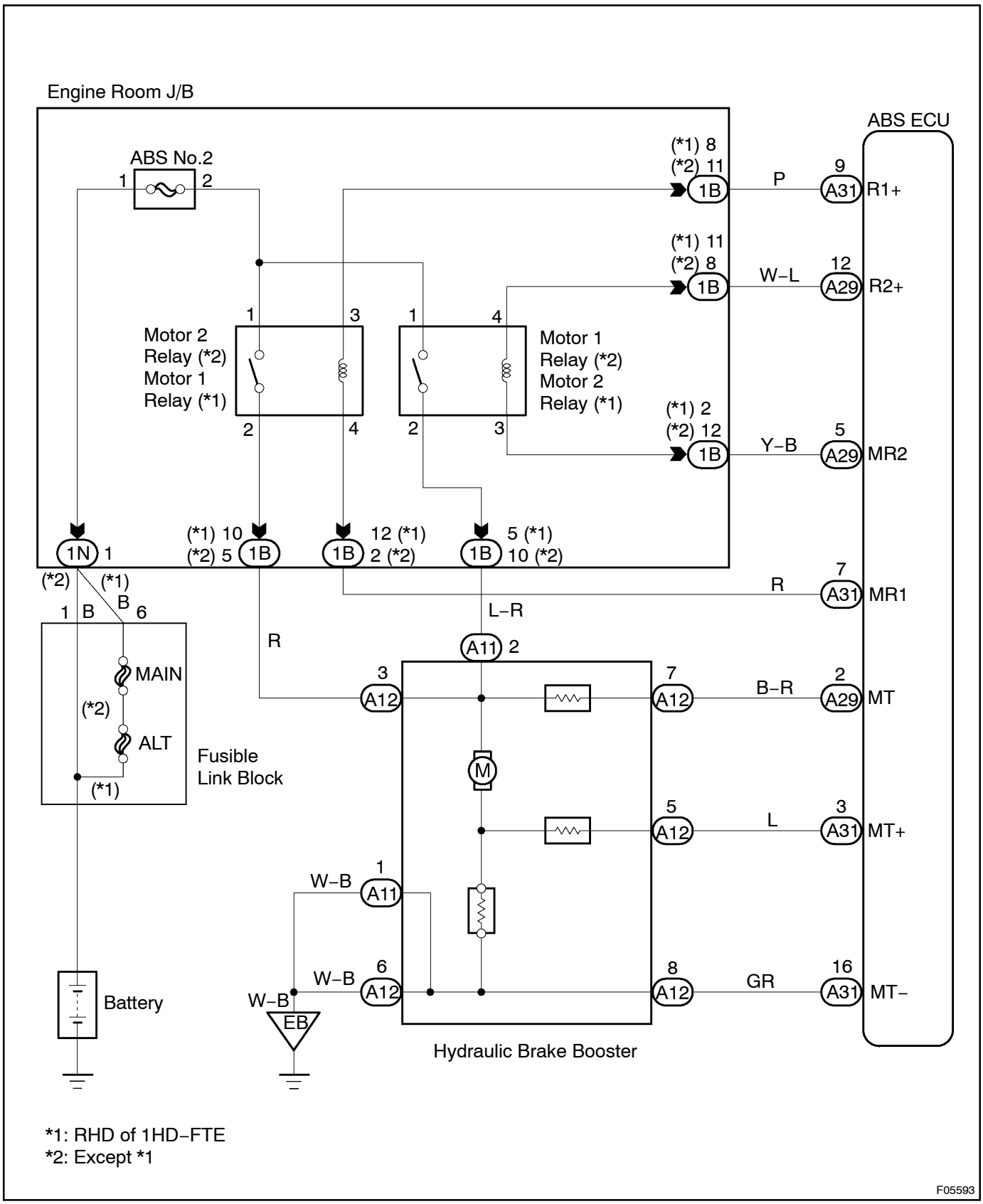
DTC	C1252 / 52	Hydraulic brake booster Pump Motor ON Time Abnormally Long

CIRCUIT DESCRIPTION

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)

Fail safe function:
If trouble occurs in the pump motor, the ECU cuts off current to the ABS solenoid relay and prohibits ABS control.

WIRING DIAGRAM

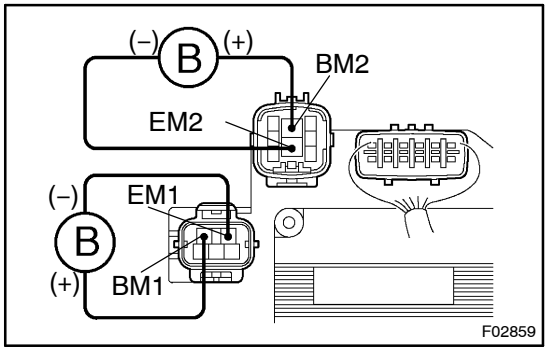


*1: RHD of 1HD–FTE
*2: Except *1

F05593

INSPECTION PROCEDURE

1	**Check operation of hydraulic brake booster pump motor.**



PREPARATION:

Disconnect the 2 connectors from hydraulic brake booster connector.

CHECK:

Connect positive ⊕ lead to BM1 or BM2 terminal and negative ⊖ lead to EM1 or EM2 terminal of the hydraulic brake booster (pump motor) connector.

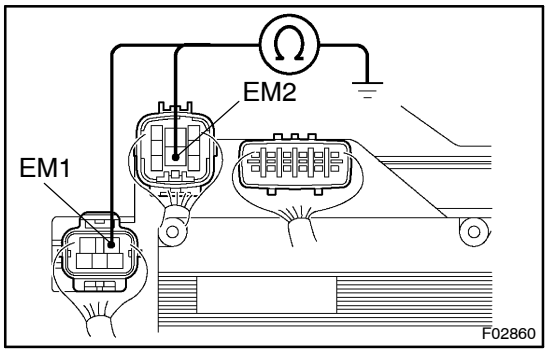
OK:

The operation sound of the pump motor should be heard.

OK	**Go to step 3.**

NG

2	**Check continuity between GND terminal of hydraulic brake booster (pump motor) connector and body ground.**



CHECK:

Check continuity between EM1 or EM2 terminal of hydraulic brake booster (pump motor) connector and body ground.

OK:

Continuity

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

OK

Replace hydraulic brake booster pump motor.

3	Check for short circuit in harness and connector between hydraulic brake booster (pump motor) and ABS ECU (See page IN–24).

NG → Repair or replace harness or connector.

OK

4	Check for short circuit (to B+) in harness and connector between MT of hydraulic brake booster and ABS ECU (See page IN–24).

OK → Check and replace ABS ECU.

NG

5	Check pressure switch (PH).

IN CASE OF USING 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.

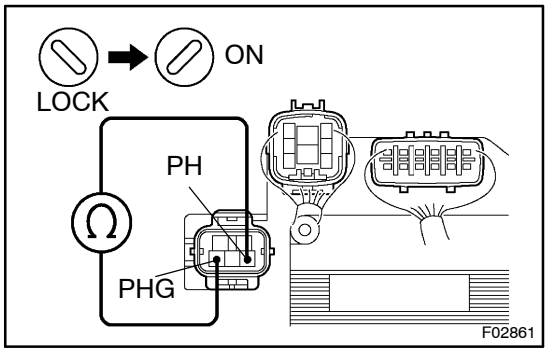
OK:

”OFF” turns to ”ON”.

HINT:

OFF: Low pressure
ON: High pressure

IN CASE OF NOT USING HAND–HELD TESTER:



PREPARATION:

(a) Disconnect the connector from the hydraulic brake booster.
(b) With 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 kΩ

PREPARATION:

(a) Connect the connector to the hydraulic brake booster.

(b) Disconnect the connector after ignition switch has been ON and the pump motor has been stopped.

CHECK:

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

OK:

Resistance: 0 Ω

HINT:

After inspection, clear the DTC (See page DI–312).

NG	**Replace hydraulic brake booster.**

OK

6	**Check pressure switch (PL).**

IN CASE OF USING 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 (PL) condition.

HINT:

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

OK:

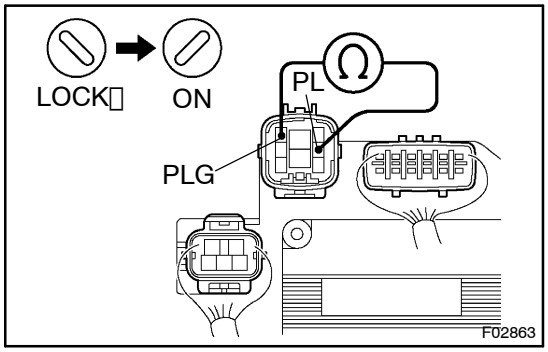
”OFF” turns to ”ON”.

HINT:

OFF: Low pressure

ON: High pressure

IN CASE OF NOT USING HAND–HELD TESTER:



PREPARATION:

(a) Disconnect the connector from the hydraulic brake booster.

(b) With 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:

(a) Connect the connector to the hydraulic brake booster.

(b) Disconnect the connector after ignition switch has been ON and the pump motor has been stopped.

CHECK:

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

OK:

Resistance: 1.0 kΩ

HINT:

After inspection, clear the DTC (See page DI–312).

NG	**Replace hydraulic brake booster.**

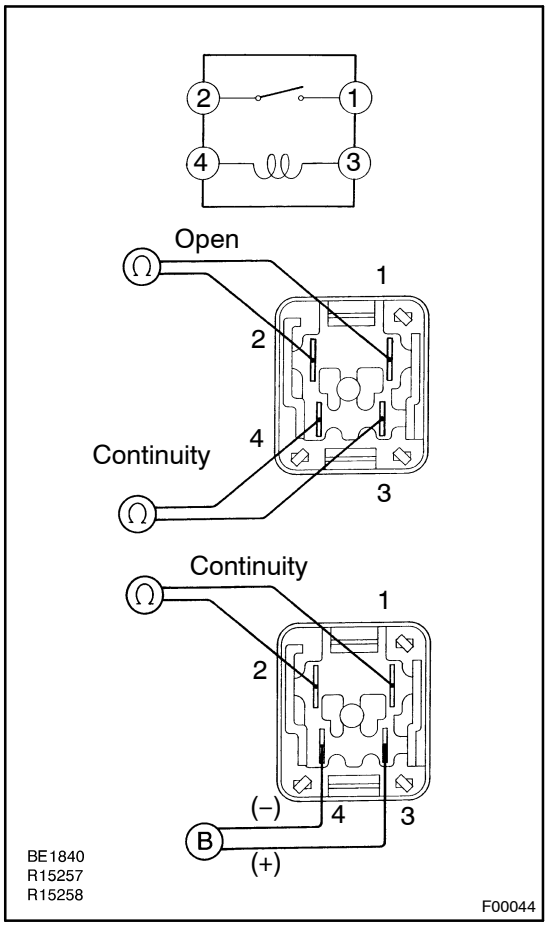
OK

7	**Check for open and short circuit in harness and connector between pressure switch and ABS ECU (See page IN–24).**

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

OK

8	Check ABS motor relays.



PREPARATION:

Remove the 2 ABS motor relays 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: Motor relay 1 62 Ω**
Motor relay 2 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 motor relay.**

OK ↓

9	Check for short circuit in harness and connector between ABS motor relay and ABS ECU (See page IN–24).

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

OK ↓

Check and replace ABS ECU.