DI0BI–04

CIRCUIT INSPECTION

DTC	11, 12	ABS Solenoid Relay Circuit

CIRCUIT DESCRIPTION

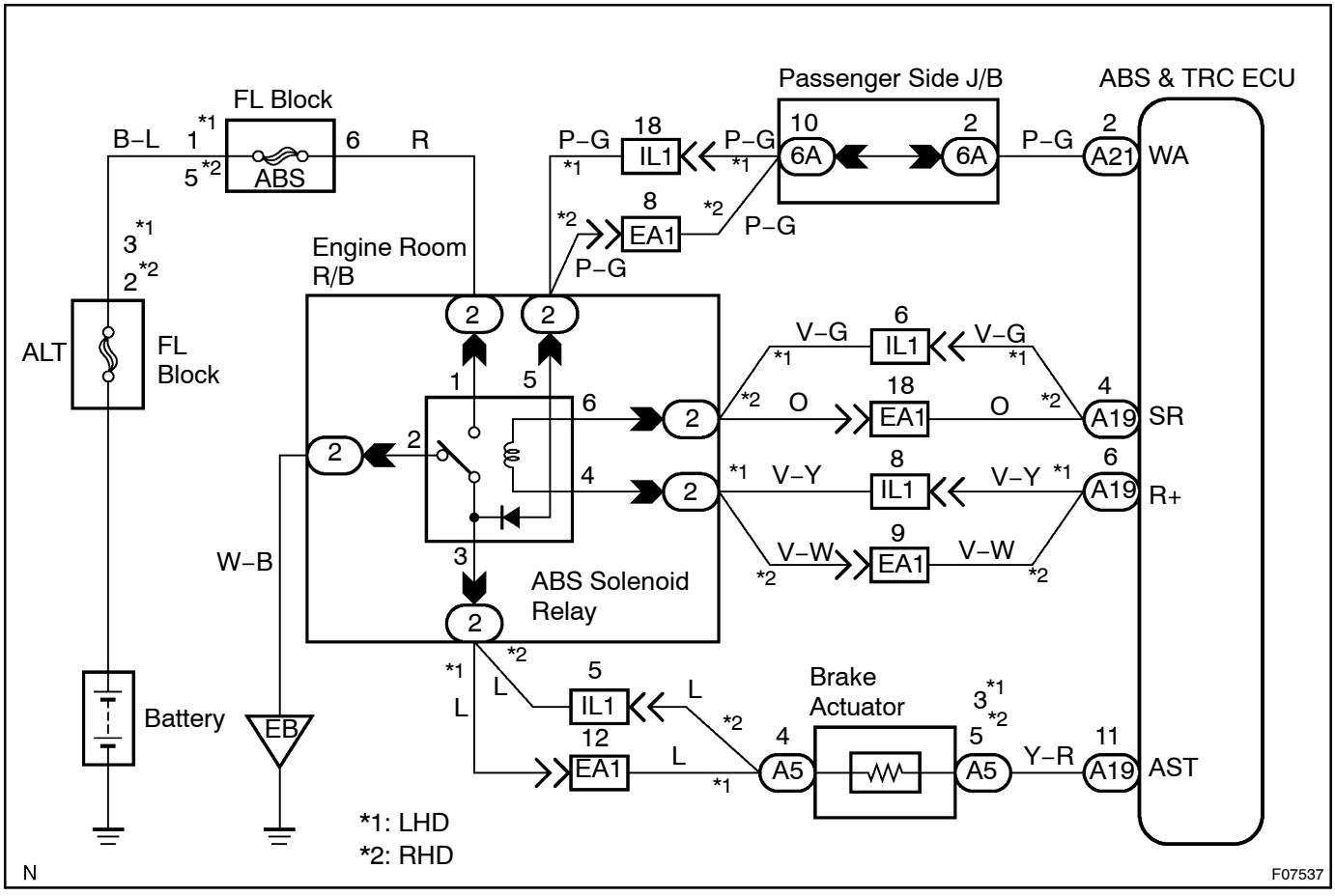
This relay supplies power to each ABS solenoid. After the ignition switch is turned ON, if the initial check is OK, the relay goes on.

DTC No.	DTC Detecting Condition	Trouble Area
11	Conditions 1. and 2. continue for 0.2 sec. or more: 1. ECU terminal IG1 voltage is 9.5 V to 18 V and the solenoid relay is ON, however the contact point of the solenoid relay is OFF. 2. With solenoid relay ON driving, ECU terminal IG1 voltage becomes 9.5 V or less and the contact point of the solenoid relay does not become ON.	• ABS solenoid relay • ABS solenoid relay circuit
12	Immediately after ECU terminal IG1 becomes ON, and solenoid relay is OFF, however the condition that the contact point of the solenoid relay is ON continues for 0.2 sec. or more.	

Fail safe function:

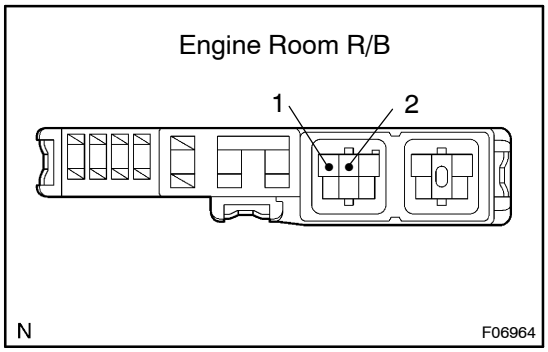
If any trouble occurs in the ABS solenoid relay circuit, the ECU cuts off current to the ABS solenoid relay and prohibits ABS control.

WIRING DIAGRAM



INSPECTION PROCEDURE

1	**Check voltage between terminals +BS (1) and GND (2) of engine room R/B (for ABS solenoid relay).**



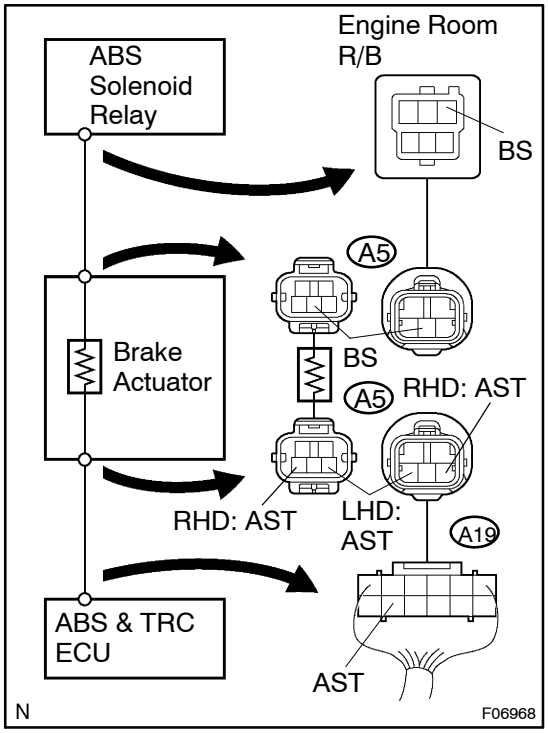
PREPARATION:
Remove ABS solenoid relay from engine room R/B.
CHECK:
Measure the voltage between terminals 1 and 2 of engine room R/B (for ABS solenoid relay).
OK:

Voltage: 10 – 14 V

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

OK

2	**Check continuity between terminal BS (3) of engine room R/B (for ABS solenoid relay) and terminal AST (A19 – 11) of ABS & TRC ECU.**



CHECK:
Check continuity between terminal BS of engine room R/B and terminal AST of ABS & TRC ECU.
OK:

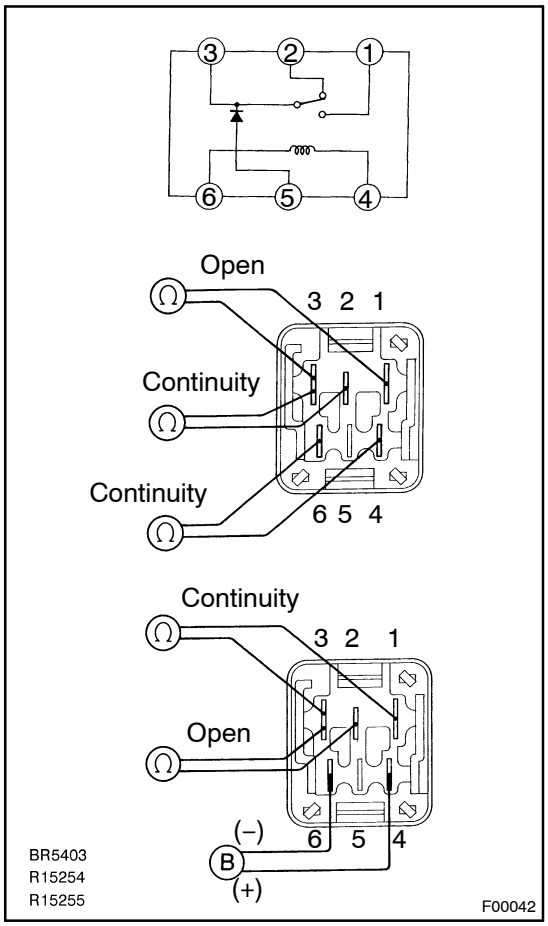
Continuity

HINT:
There is a resistance of 4 – 6 Ω between terminals BS and AST of brake actuator.

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

OK

3	**Check ABS solenoid relay.**



CHECK:

Check continuity between each terminal of ABS solenoid relay.

OK:

Terminals 4 and 6	Continuity (Reference value approx. 49 – 134 Ω)
Terminals 2 and 3	Continuity
Terminals 1 and 3	Open

CHECK:

(a) Apply battery voltage between terminals 4 and 6.

(b) Check continuity between each terminal of ABS solenoid relay.

OK:

Terminals 2 and 3	Open
Terminals 1 and 3	Continuity

NG → **Replace ABS solenoid relay.**

OK

4	**Check for open and short circuit in harness and connector between ABS solenoid relay and ABS & TRC ECU (See page IN–30).**

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.