

CIRCUIT INSPECTION

DTC	11, 12	ABS Control (Solenoid) Relay Circuit
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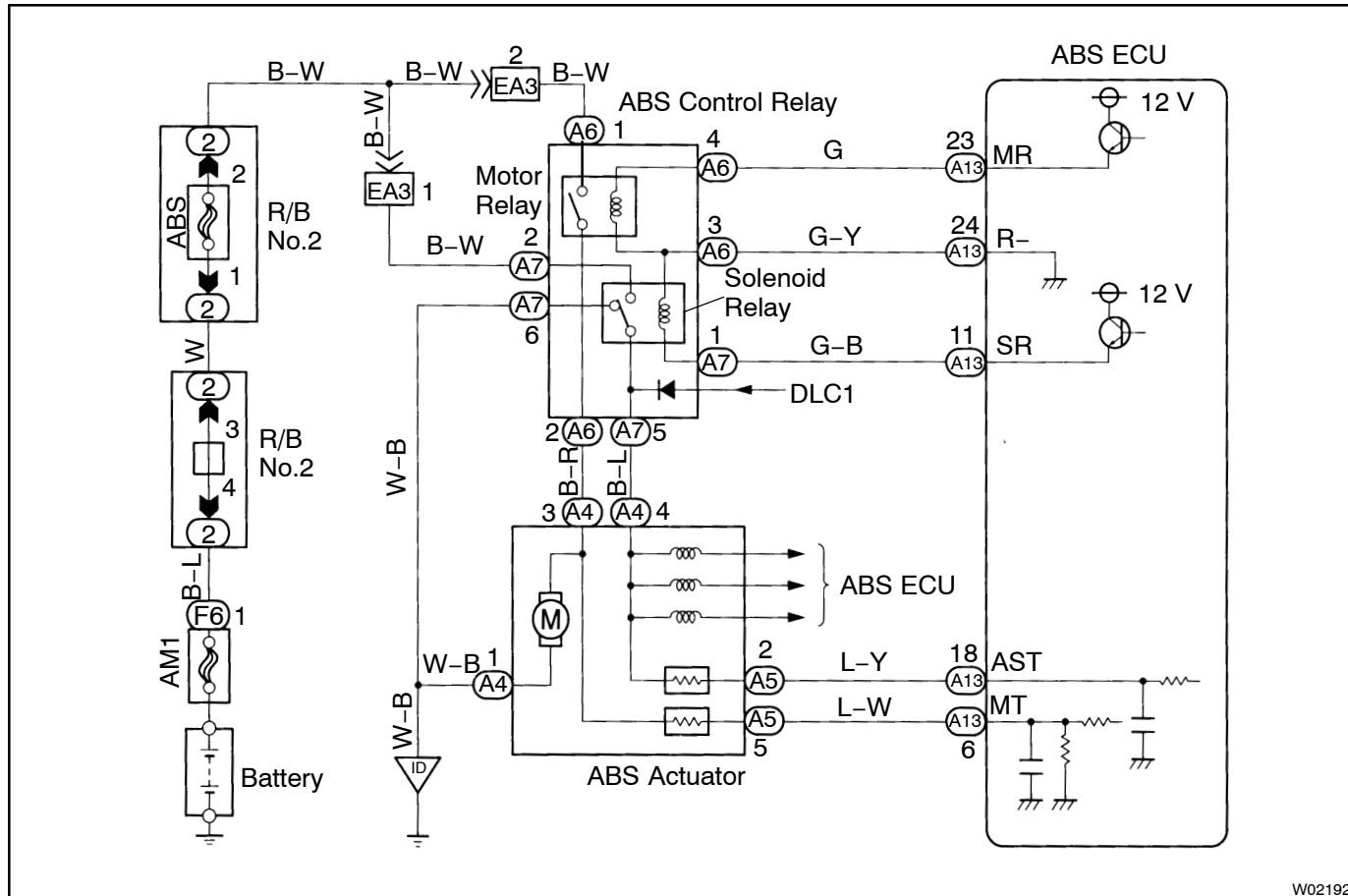
CIRCUIT DESCRIPTION

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) ABS control (solenoid) relay terminal (SR) voltage: Battery positive voltage (2) ABS control (solenoid) relay monitor terminal (AST) voltage: 0 V	• ABS control (solenoid) relay • Open or short in ABS control (solenoid) relay circuit
12	Conditions (1) and (2) continue for 0.2 sec. or more: (1) ABS control (solenoid) relay terminal (SR) voltage: 0 V (2) ABS control (solenoid) relay monitor terminal (AST) voltage: Battery positive voltage	• ABS control (solenoid) relay • B+ short in ABS control (solenoid) relay circuit

Fail safe function: If trouble in the ABS control (solenoid) relay circuit, the ECU cuts off current to the ABS control (solenoid) relay and prohibits ABS control.

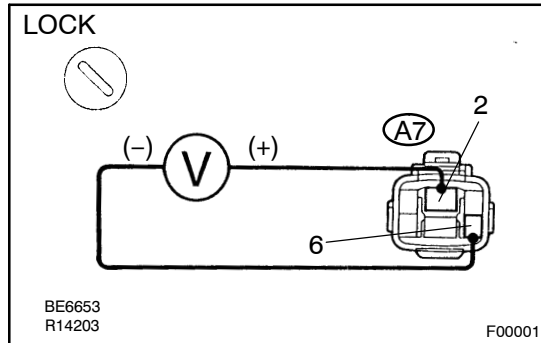
WIRING DIAGRAM



W02192

INSPECTION PROCEDURE

- 1 Check voltage between terminals A7 - 2 and A7 - 6 of ABS control relay connector.**

**PREPARATION:**

Disconnect the ABS control relay connector.

CHECK:

Measure the voltage between terminals A7 - 2 and A7 - 6 of ABS control relay harness side connector.

OK:

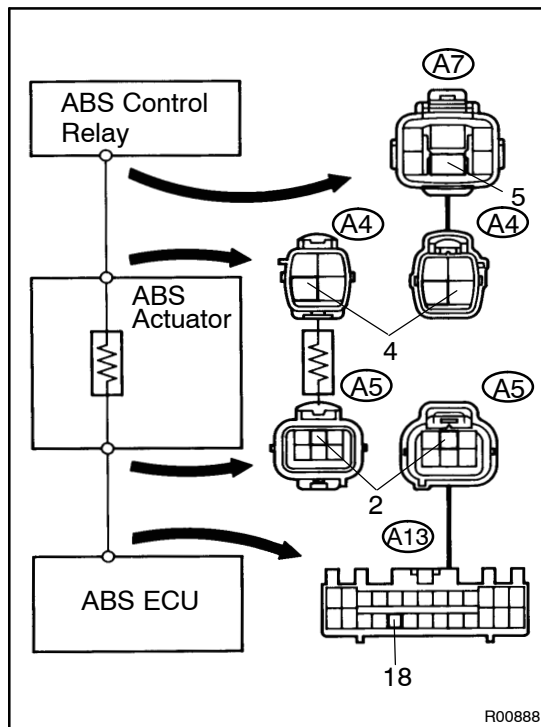
Voltage: 10 - 14 V

NG

Check and repair harness or connector.

OK

- 2 Check continuity between terminals A7 - 5 and A4 - 4, A4 - 4 and A5 - 2, A5 - 2 and A13 - 18.**

**PREPARATION:**

Disconnect the 2 connectors from ABS actuator.

CHECK:

Check continuity between terminals A7 - 5 and A4 - 4, A4 - 4 and A5 - 2, A5 - 2 and A13 - 18.

OK:

Continuity

HINT:

There is a resistance of 4 ~ 6 Ω between terminals A4 - 4 and A5 - 2.

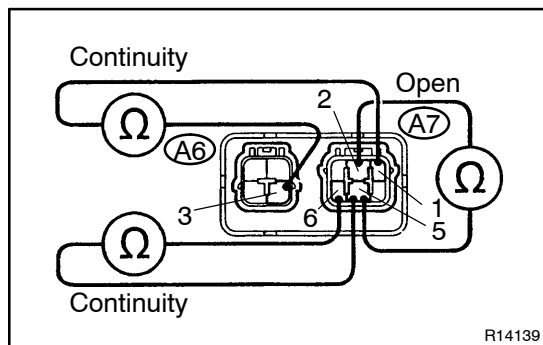
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Repair or replace harness or ABS actuator.

OK

1997 LAND CRUISER (RM510U)

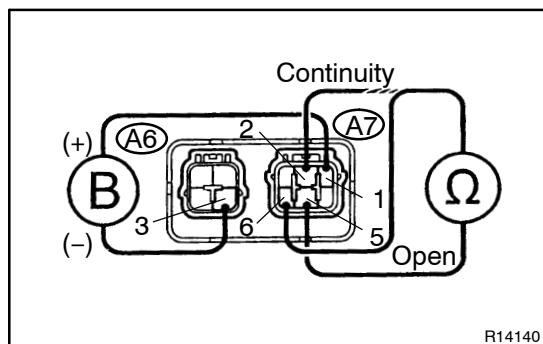
3 Check ABS control (solenoid) relay.

**CHECK:**

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

OK:

Terminals A7 - 1 and A6 - 3	Continuity (Reference value approx. 80 Ω)
Terminals A7 - 5 and A7 - 6	Continuity
Terminals A7 - 2 and A7 - 5	Open

**CHECK:**

- Apply battery positive voltage between terminals A7 - 1 and A6 - 3.
- Check continuity between each terminal of ABS control (solenoid) relay.

OK:

Terminals A7 - 5 and A7 - 6	Open
Terminals A7 - 2 and A7 - 5	Continuity

NG**Replace ABS control relay.****OK**

4 Check for open and short in harness and connector between ABS control (solenoid) relay and ABS ECU (See page [IN-27](#)).

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.