

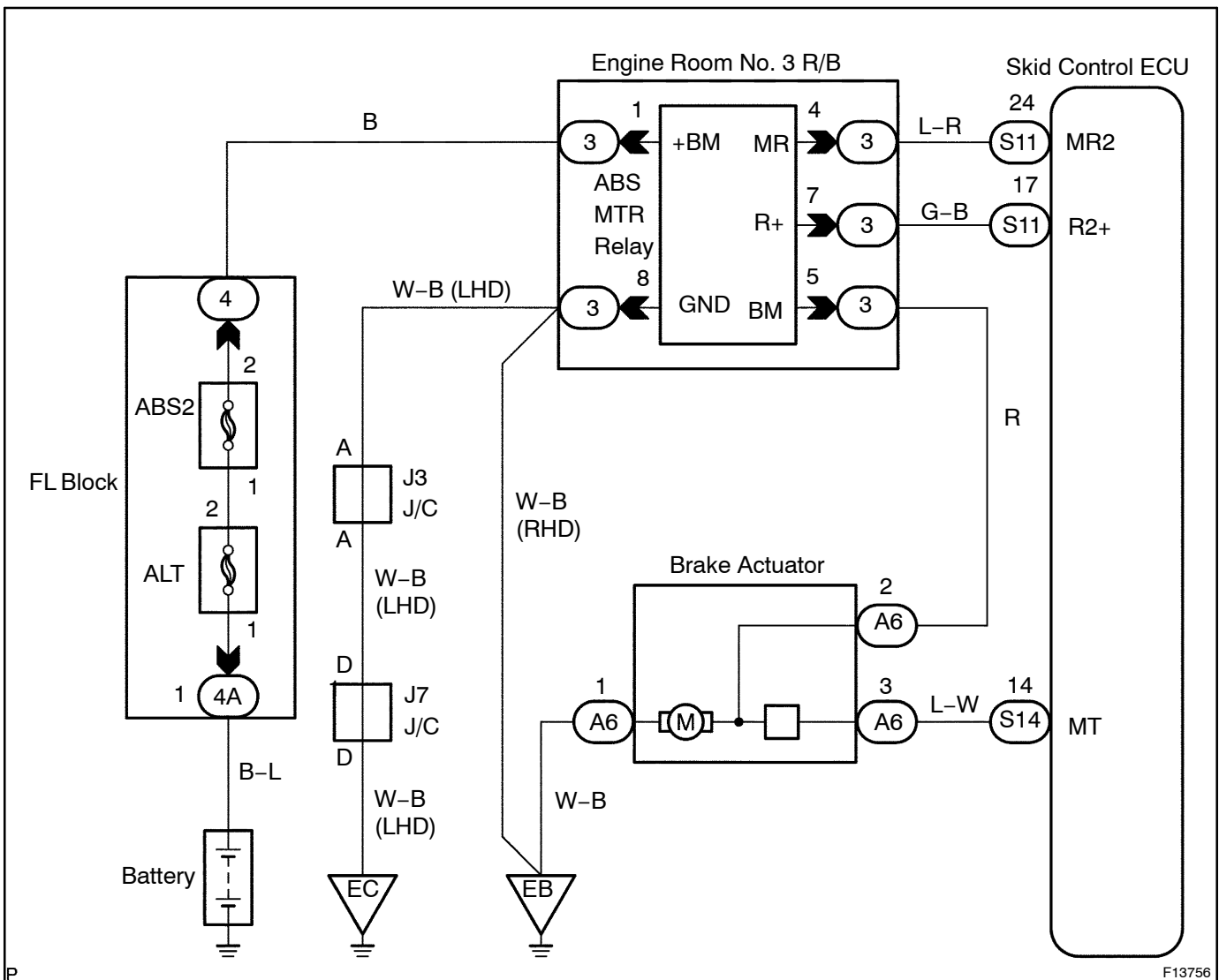
DTC	C0273 / 13, C0274 / 14	ABS MTR Relay Circuit
------------	-------------------------------	------------------------------

CIRCUIT DESCRIPTION

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

DTC No.	DTC Detecting Condition	Trouble Area
C0273 / 13	Detection of either condition 1. or 2.: 1. When ECU IG1 terminal voltage is 9.5 to 17.2 V, it is in the initial check, ABS, BA, TRC or VSC are in operation and the MTR relay is ON, the contact point of the MTR relay is OFF for 0.2 sec. or more. 2. When ECU IG1 terminal voltage is 9.5 V or less, and the MTR relay is ON, the contact point of the MTR relay cannot be ON for 0.2 sec. or more.	<ul style="list-style-type: none"> • ABS MTR relay • ABS MTR relay circuit
C0274 / 14	When the MTR relay is OFF, the contact point of the MTR relay is ON for 4 sec. or more.	

WIRING DIAGRAM



F13756

INSPECTION PROCEDURE

HINT:

Start the inspection from step 1 in case of using the hand-held tester and start from step 2 in case of not using the hand-held tester.

1	Check ABS MTR relay operation.
----------	---------------------------------------

PREPARATION:

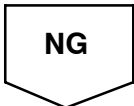
- (a) Connect the hand-held tester to the DLC3.
- (b) Turn the ignition switch ON and turn the hand-held tester main switch ON.
- (c) Select the ACTIVE TEST mode on the hand-held tester.

CHECK:

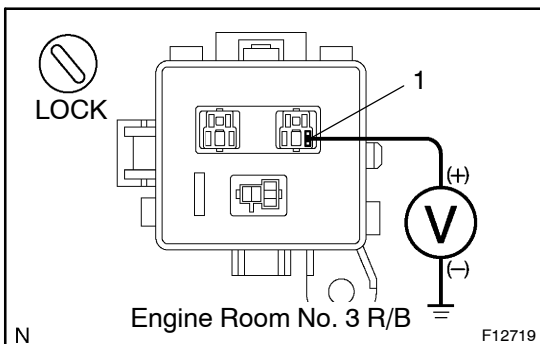
Check the operation sound of the ABS MTR relay when operating it with the hand-held tester.

OK:

The operation sound of the ABS MTR relay should be heard.



2	Check voltage between terminal 1 of engine room No. 3 R/B and body ground.
----------	---



PREPARATION:

Remove the ABS MTR relay from the engine room No. 3 R/B.

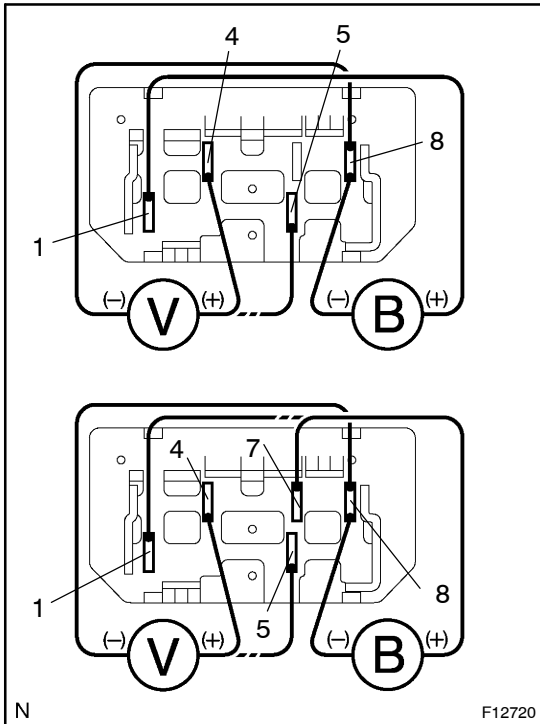
CHECK:

Measure voltage between terminal 1 of engine room No. 3 R/B (for ABS MTR relay) and body ground.

OK:

Voltage: 10 – 14 V



3 Check ABS MTR relay.**CHECK:**

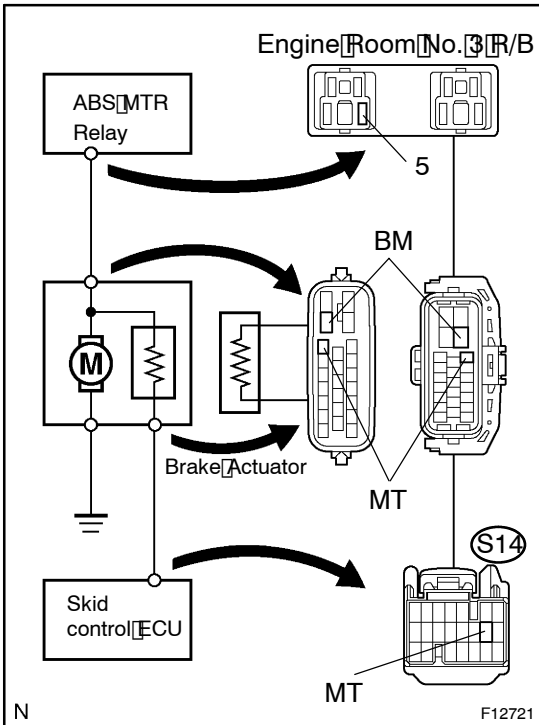
- Apply battery voltage between terminals +BM (1) and GND (8) of the ABS MTR relay.
- Check the output voltage between terminals MR (4) and GND (8) and between terminals BM (5) and GND (8).

OK:**Voltage: 0 V****CHECK:**

- Apply the battery voltage on the terminals R+ (7) and GND (8), also.
- Check the output voltage between terminals MR (4) and GND (8) and between terminals BM (5) and GND (8).

OK:**Voltage:****Terminal MR (4) – GND (8): 1.6 – 12.4 V****Terminal BM (5) – GND (8): 10 – 14 V****NG****Replace ABS MTR relay.****OK**

4 Check continuity between terminal 5 of engine room No. 3 R/B and terminal MT of skid control ECU.



PREPARATION:

Disconnect the connector (S14) from the skid control ECU.

CHECK:

Check continuity between terminal 5 of engine room No. 3 R/B (for ABS MTR relay) and terminal MT (S14 - 4) of skid control ECU harness side connector.

OK:

Continuity

HINT:

There is resistance of 27 - 39 Ω between terminals BM and MT of the brake actuator.

NG

Repair or replace harness or brake actuator.

OK

5 Check for open and short circuit in harness and connector between engine room No. 3 R/B (for ABS MTR relay) and skid control ECU (See page IN-35).

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.