

|            |                   |                               |
|------------|-------------------|-------------------------------|
| <b>DTC</b> | <b>C1743 / 43</b> | <b>AHC Main Relay Circuit</b> |
|------------|-------------------|-------------------------------|

## CIRCUIT DESCRIPTION

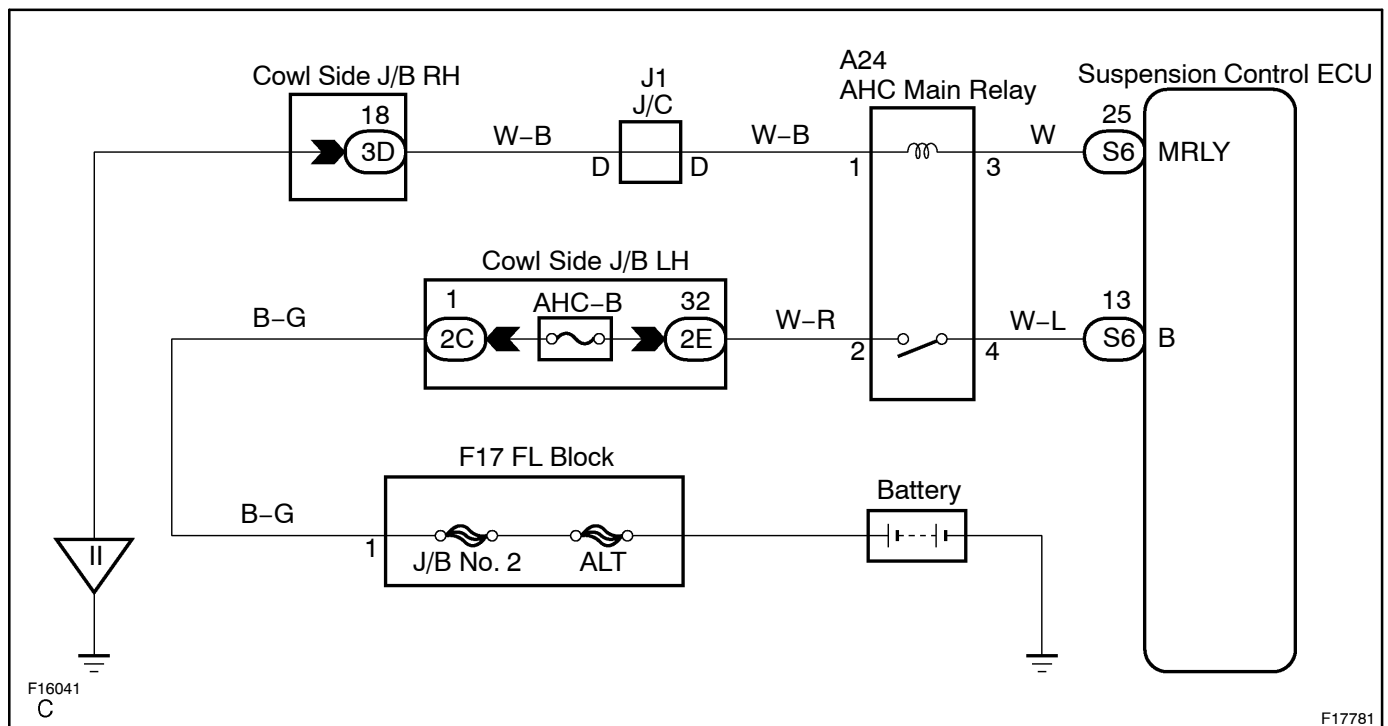
This relay is to supply power source to the suspension control ECU. The relay comes ON a few seconds after the ignition switch is turned ON.

| DTC No.    | DTC Detecting Condition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Trouble Area                                                                                                        |
|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| C1743 / 43 | <p>Either of the following 1., 2. or 3. detected:</p> <ol style="list-style-type: none"> <li>When the condition that the IG terminal voltage of ECU is more than <math>10 \pm 0.5</math> V and the B terminal voltage of ECU is 1.0 V or less while the main relay is in drive condition continued for 0.5 sec.</li> <li>After the condition that the upper reaches voltage of the main solenoid when the main relay is ON is 2 V or less continued for <math>40 \pm 10</math> msec. and when turning the electricity <math>1 \pm 0.1</math> sec. later and detecting the short circuit condition 4 times continuously</li> <li>When detecting that the IG terminal voltage of ECU is <math>10 \pm 0.5</math> V or more when the main relay is non-driving and the condition that the IG terminal voltage is less than the voltage added 4 V to the B terminal voltage of ECU continued for 2 secs.</li> </ol> | <ul style="list-style-type: none"> <li>• AHC main relay</li> <li>• AHC main relay circuit</li> <li>• ECU</li> </ul> |

Fail safe function:

If a trouble occurs in the AHC main relay circuit, the ECU prohibits the height control and fixed the damping force at the sports mode.

## WIRING DIAGRAM



F16041  
C

F17781

**INSPECTION PROCEDURE**

|          |                                        |
|----------|----------------------------------------|
| <b>1</b> | <b>Check AHC main relay operation.</b> |
|----------|----------------------------------------|

**IN CASE OF USING LEXUS HAND-HELD TESTER:****PREPARATION:**

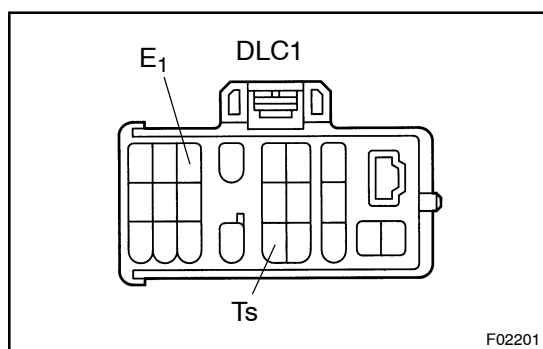
- (a) Connect the LEXUS hand-held tester to the DLC3.
- (b) Turn the ignition switch ON and push the LEXUS hand-held tester main switch ON.
- (c) Select the ACTIVE TEST mode on the LEXUS hand-held tester.

**CHECK:**

Check the operation sound of the AHC main relay when operating it with the LEXUS hand-held tester.

**OK:**

The operation sound of the AHC main relay should be heard.

**IN CASE OF NOT USING LEXUS HAND-HELD TESTER:****PREPARATION:**

- (a) Using SST, connect terminals Ts and E<sub>1</sub> of DLC1.  
SST 09843-18020
- (b) Push the "DOWN" button of the height select switch 5 times or more within 5 seconds after turning the ignition switch ON.

**HINT:**

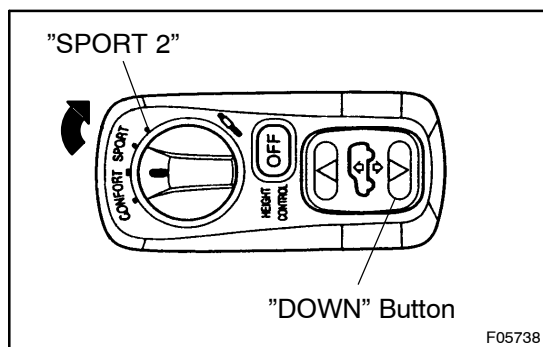
At this time the height control OFF indicator light flashes at 0.25 second intervals.

**CHECK:**

- (a) Change the damping mode select switch to the "SPORT 2" position.
- (b) Push the "DOWN" button of the height select switch, then check the operation sound of the AHC main relay.

**OK:**

The operation sound of the AHC main relay should be heard.

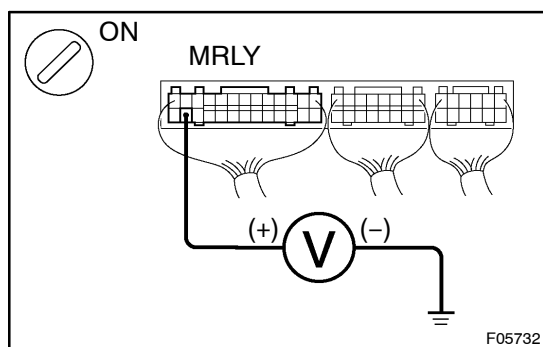


OK

Clear the DTC (See page [DI-336](#)).

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## 2 Check voltage between terminal MRLY of suspension control ECU and body ground.



### PREPARATION:

Remove the suspension control ECU with connectors still connected.

### CHECK:

- Turn the ignition switch ON.
- Measure voltage between terminal MRLY of suspension control ECU and body ground.

### OK:

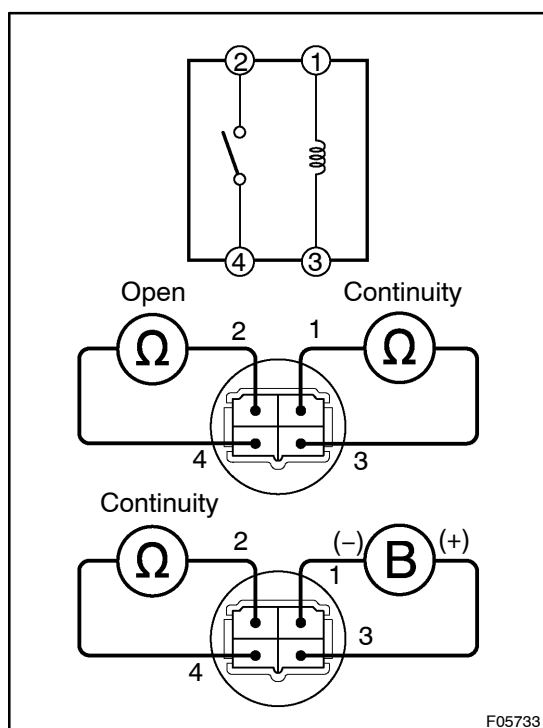
Voltage: 9 – 14 V

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Check and replace suspension control ECU.

OK

## 3 Check AHC main relay.



### PREPARATION:

- Disconnect the AHC main relay connector.
- Remove the AHC main relay from suspension control ECU.

### CHECK:

Check continuity between each pair of terminal of motor relay.

### OK:

|                   |                                              |
|-------------------|----------------------------------------------|
| Terminals 1 and 3 | Continuity<br>(Reference value 62 $\Omega$ ) |
| Terminals 2 and 4 | Open                                         |

### CHECK:

- Apply battery positive voltage between terminals 1 and 3.
- Check continuity between terminals 2 and 4.

### OK:

|                   |            |
|-------------------|------------|
| Terminals 2 and 4 | Continuity |
|-------------------|------------|

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Replace AHC main relay.

OK

|   |                                                                                                                                                         |
|---|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4 | Check for open and short circuit in harness and connector between AHC main relay and battery, suspension control ECU (See page <a href="#">IN-36</a> ). |
|---|---------------------------------------------------------------------------------------------------------------------------------------------------------|

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Repair or replace harness or connector.

OK

Clear the DTC (See page [DI-336](#)).