

<b>DTC</b>	<b>C1737/31</b>	<b>Right Front Height Control Solenoid Valve Circuit</b>
<b>DTC</b>	<b>C1738/32</b>	<b>Left Front Height Control Solenoid Valve Circuit</b>
<b>DTC</b>	<b>C1739/33</b>	<b>Right Rear Height Control Solenoid Valve Circuit</b>
<b>DTC</b>	<b>C1740/34</b>	<b>Left Rear Height Control Solenoid Valve Circuit</b>

## DESCRIPTION

### FRONT HEIGHT CONTROL SOLENOID VALVE:

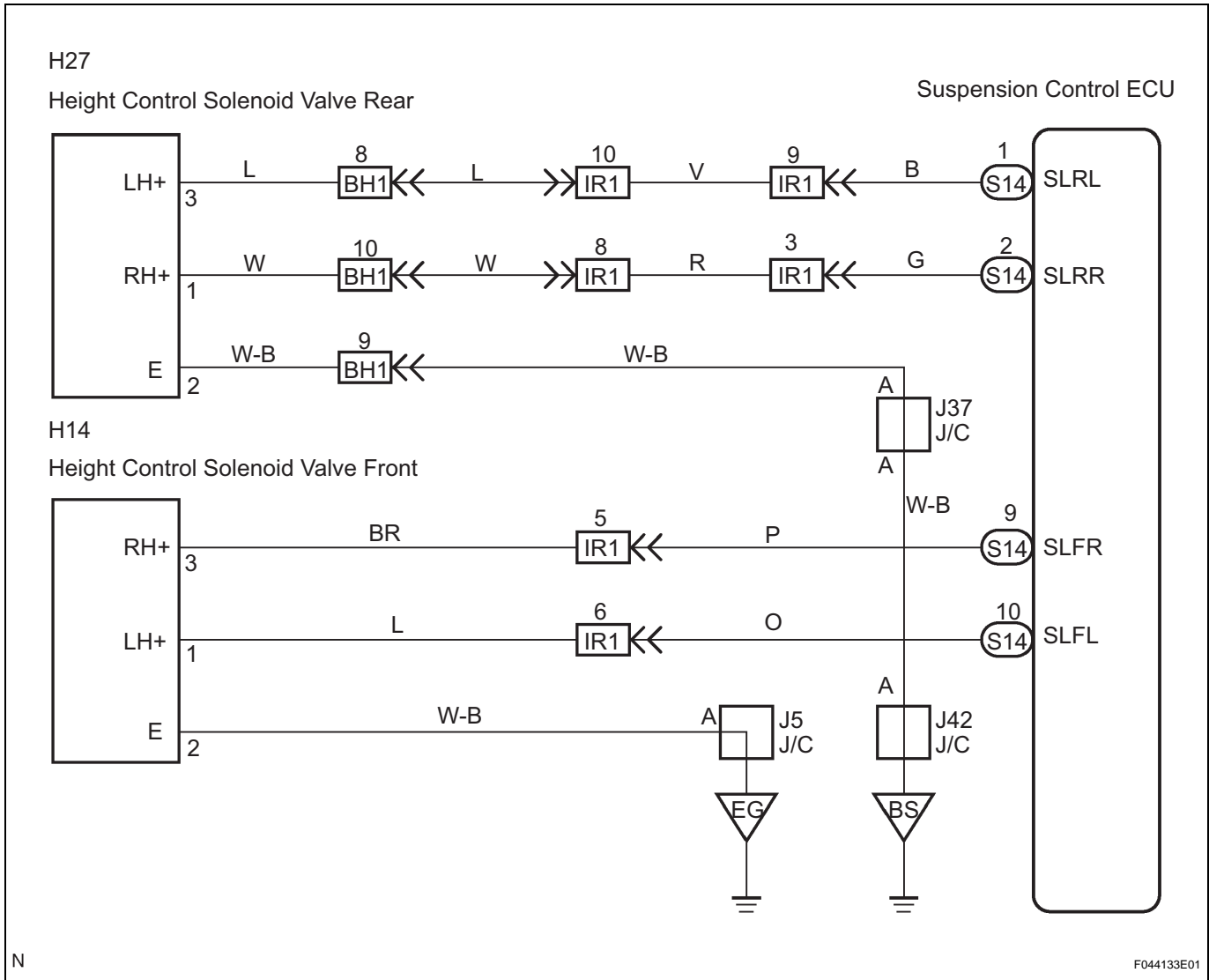
The height control valve sub-assembly No. 1 independently opens and closes paths to the pneumatic cylinder for the front wheel side by receiving the signal from the suspension control ECU. The height control valve sub-assembly No. 1 continues its operation for max. 60 seconds after the ignition switch is turned off. This takes place in order to discharge the high pressure air which is produced when the vehicle's height is lowered by the auto leveling function and in the access mode.

### REAR HEIGHT CONTROL SOLENOID VALVE:

The height control valve sub-assembly No. 2 independently opens and closes paths to the pneumatic cylinder for the rear wheel side by receiving the signal from suspension control ECU. The height control valve sub-assembly No. 2 continues its operation for max. 60 seconds after the ignition switch is turned off. This takes place in order to discharge the high pressure air which is produced when the vehicle's height is lowered by the auto leveling function and in the access mode.

<b>DTC No.</b>	<b>DTC Detecting Condition</b>	<b>Trouble Area</b>
C1737/31	Either the condition 1 or 2 is detected: 1. With the height control solenoid valve inactivated, an open signal of the height control solenoid valve is detected for 1 sec. or more. 2. With the height control solenoid valve activated, a short signal of the height control solenoid valve is detected 8 times successively.	<ul style="list-style-type: none"> <li>• Height control solenoid valve front RH</li> <li>• Right front height control solenoid valve circuit</li> <li>• Suspension control ECU</li> </ul>
C1738/32		<ul style="list-style-type: none"> <li>• Height control solenoid valve front LH</li> <li>• Left front height control solenoid valve circuit</li> <li>• Suspension control ECU</li> </ul>
C1739/33		<ul style="list-style-type: none"> <li>• Height control solenoid valve rear RH</li> <li>• Right rear height control solenoid valve circuit</li> <li>• Suspension control ECU</li> </ul>
C1740/34		<ul style="list-style-type: none"> <li>• Height control solenoid valve rear LH</li> <li>• Left rear height control solenoid valve circuit</li> <li>• Suspension control ECU</li> </ul>

WIRING DIAGRAM



HINT:

Proceed to troubleshooting following the flow chart, regardless of whether or not DTC C1737/31, C1738/32, C1739/33 or C1740/34 is displayed.

**1 RECONFIRM DTC**

(a) Check DTCs (See page SC-28).

(1) Confirm if the DTC C1761/61 and/or C1774/74 is recorded.

**OK:**

**DTC C1761/61 and/or C1774/74 is output.**

**HINT:**

If either DTCC1761/61 (ECU malfunction) (See page SC-76) or C1774/74 (power source circuit) (See page SC-79) is displayed, carry out the necessary inspection. If they are output at the same time, carry out the necessary inspection for DTC C1774/74 first.

**NG** **REPAIR CIRCUIT INDICATED BY OUTPUT CODE**

**OK**

**2 PERFORM ACTIVE TEST BY INTELLIGENT TESTER**

**HINT:**

When not using intelligent tester, go to step 3.

- (a) Connect the intelligent tester to the DLC3.
- (b) Turn the ignition switch to ON position, and push the intelligent tester main switch on.
- (c) Select the item below in the ACTIVE TEST, and operate it with the intelligent tester.

**AIRSUS**

Item	Vehicle Condition / Test Details	Diagnostic Note
FR SOL	Turn OFF right front solenoid valve one second after turning it ON	Operation of solenoid (clicking sound) can be heard
FL SOL	Turn OFF left front solenoid valve one second after turning it ON	Operation of solenoid (clicking sound) can be heard
RR SOL	Turn OFF right rear solenoid valve one second after turning it ON	Operation of solenoid (clicking sound) can be heard
RL SOL	Turn OFF left rear solenoid valve one second after turning it ON	Operation of solenoid (clicking sound) can be heard

- (d) Check whether the height control solenoid valve has continuity (will vibrate).

**OK:**

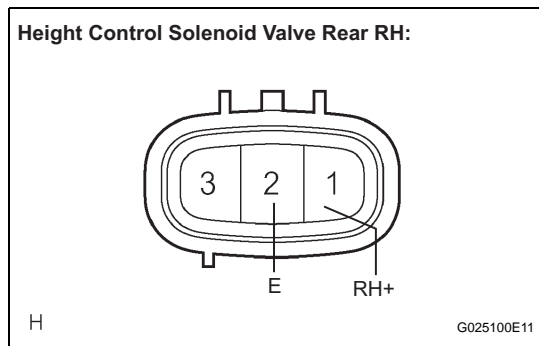
**The solenoid makes sound, and the height control solenoid valve has continuity (will vibrate).**

**NG** **Go to step 3**

**OK**

**REPLACE SUSPENSION CONTROL ECU**

**3 INSPECT HEIGHT CONTROL SOLENOID VALVE**



- (a) HEIGHT CONTROL SOLENOID VALVE FRONT:

- (1) Disconnect the height control solenoid valve connector.
- (2) Measure the resistance according to the values in the table below.

**Resistance (RH): (C1737/31)**

Tester Connection	Specified Condition
2 (E) - 3 (RH+)	12 +- 2 Ω

**Resistance (LH): (C1738/32)**

Tester Connection	Specified Condition
1 (LH+) 2 - (E)	12 +- 2 Ω

- (3) Check the operating sound of the height control solenoid valve when positive battery voltage is applied to the terminals.

**RH: (C1737/31)**

Battery Positive	Battery Negative
3 (RH+)	2 (E)

**LH: (C1738/32)**

Battery Positive	Battery Negative
1 (LH+)	2 (E)

**OK:**

**It should make an operating sound (click).**

**Result**

Result	Proceed to
OK	A
NG	B

**HINT:**

When a malfunction is found in the front solenoid valve, replace the height control valve sub-assembly No. 1.

- (b) **HEIGHT CONTROL SOLENOID VALVE REAR:**

- (1) Disconnect the height control solenoid valve connector.
- (2) Measure the resistance according to the values in the table below.

**Resistance (RH): (C1739/33)**

Tester Connection	Specified Condition
1 (RH+) - 2 (E)	12 +- 2 Ω

**Resistance (LH): (C1740/34)**

Tester Connection	Specified Condition
2 (E) - 3 (LH+)	12 +- 2 Ω

**Resistance:**

**12 +- 2 Ω**

- (3) Check the operating sound of the height control solenoid valve when positive battery voltage is applied to the terminals.

**RH: (C1739/39)**

Battery Positive	Battery Negative
1 (RH+)	2 (E)

**LH: (C1740/34)**

Battery Positive	Battery Negative
3 (LH+)	2 (E)

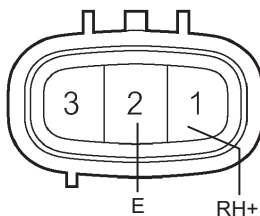
**OK:**

**It should make an operating sound (click).**

**Result**

Result	Proceed to
OK	A
NG	C

Height Control Solenoid Valve Rear RH:



H

G025100E11

HINT:

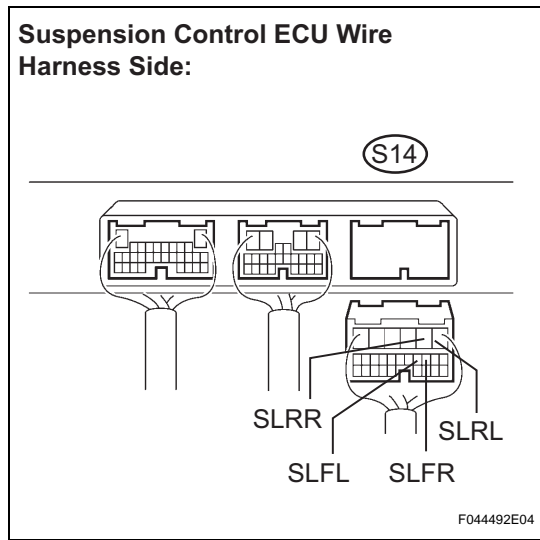
When a malfunction is found in the front solenoid valve, replace the height control valve sub-assembly No. 2.

**B** REPLACE HEIGHT CONTROL VALVE SUB-ASSEMBLY NO.1

**C** REPLACE HEIGHT CONTROL VALVE SUB-ASSEMBLY NO.2

**A**

**4 CHECK HARNESS AND CONNECTOR (SUSPENSION CONTROL ECU - HEIGHT CONTROL SOLENOID VALVE)**



- (a) Disconnect the suspension control ECU S14 connector.
- (b) Measure the resistance according to the values in the table below.

**Resistance (Front RH): (C1737/31)**

Tester Connection	Specified Condition
S14-9 (SLFR) - H14-3 (RH+)	Below 1 Ω
S14-9 (SLFR) - Body ground	10 kΩ or higher

**Resistance (Front LH): (C1738/32)**

Tester Connection	Specified Condition
S14-10 (SLFL) - H14-1 (LH+)	Below 1 Ω
S14-10 (SLFL) - Body ground	10 kΩ or higher

**Resistance (Rear RH): (C1739/33)**

Tester Connection	Specified Condition
S14-2 (SLRR) - H27-1 (RH+)	Below 1 Ω
S14-2 (SLRR) - Body ground	10 kΩ or higher

**Resistance (Rear LH): (C1740/34)**

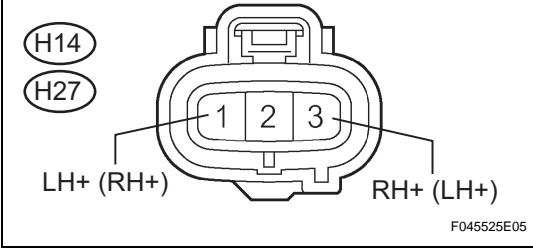
Tester Connection	Specified Condition
S14-1 (SLRL) - H27-3 (LH+)	Below 1 Ω
S14-1 (SLRL) - Body ground	10 kΩ or higher

**NG** REPAIR OR REPLACE HARNESS OR CONNECTOR

**OK**

**5 CHECK HARNESS AND CONNECTOR (HEIGHT CONTROL SOLENOID VALVE - BODY GROUND)**

Height Control Solenoid Valve Wire Harness Side:



(a) Measure the resistance according to the values in the table below.

**Resistance (Front RH): (C1737/31)**

Tester Connection	Specified Condition
H14-3 (RH+) - Body ground	Below 1 Ω

**Resistance (Front LH): (C1738/32)**

Tester Connection	Specified Condition
H14-1 (LH+) - Body ground	Below 1 Ω

**Resistance (Rear RH): (C1739/33)**

Tester Connection	Specified Condition
H27-1 (RH+) - Body ground	Below 1 Ω

**Resistance (Rear LH): (C1740/34)**

Tester Connection	Specified Condition
H27-3 (LH+) - Body ground	Below 1 Ω

**NG** → **REPAIR OR REPLACE HARNESS OR CONNECTOR**

**OK**

**REPLACE SUSPENSION CONTROL ECU**