

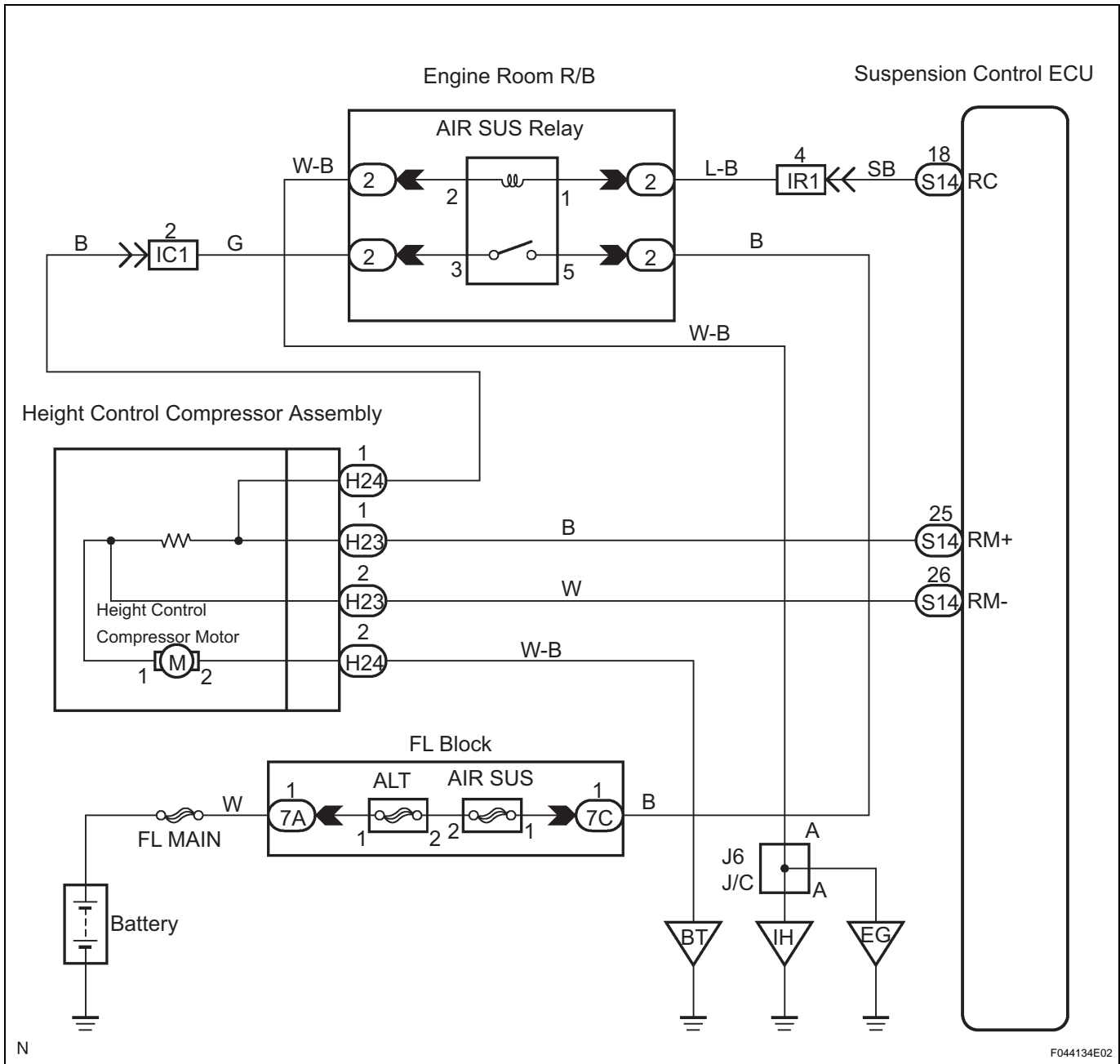
| | | |
|------------|-----------------|--|
| DTC | C1742/42 | Height Control Compressor Circuit |
|------------|-----------------|--|

DESCRIPTION

The signal from suspension control ECU turns on the AIR SUS relay. At the time, battery voltage is input to height control compressor motor through the AIR SUS relay. The height control compressor motor starts.

| DTC No. | DTC Detecting Condition | Trouble Area |
|----------|---|--|
| C1742/42 | 42 With the AIR SUS relay activated, a lock signal of the height control compressor motor is detected for 4 sec. or more. | <ul style="list-style-type: none"> Height control compressor motor Height control compressor circuit Suspension control ECU |

WIRING DIAGRAM



Refer to DTC C1735/35 (See page SC-45), C1737/31 (See page SC-48), C1744/44 (See page SC-67).

SC

1 RECONFIRM DTC

(a) Check if DTC C1741/41 is output (See page SC-28).

OK:

DTC C1741/41 is output.

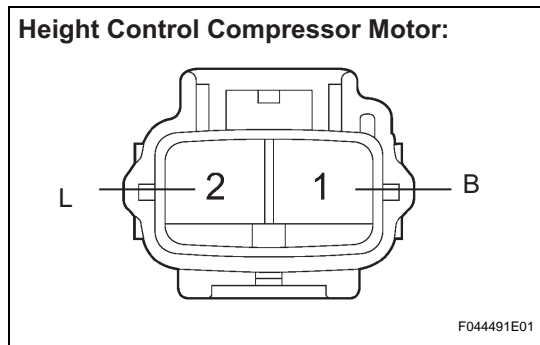
| | |
|-------------------------|---|
| DTC C1741/41 is output. | A |
| Other DTC is output | B |

NG

REPAIR CIRCUIT INDICATED BY OUTPUT CODE

OK

2 INSPECT HEIGHT CONTROL COMPRESSOR



- (a) Disconnect the height control compressor motor connector.
- (b) Check the operating sound of the compressor motor when battery positive voltage is applied to the terminals.

| Battery Positive | Battery Negative |
|------------------|------------------|
| 1 (B) | 2 (L) |

OK:

Compressor motor operates.

NOTICE:

- Do not operate the height control compressor assembly 60 seconds. or more.
- Since a short and a lock-up inside the height control compressor assembly causes enormous current to flow, stop operation immediately when it does not rotate.

HINT:

When a malfunction is found in the height control compressor motor, replace the height control compressor assembly.

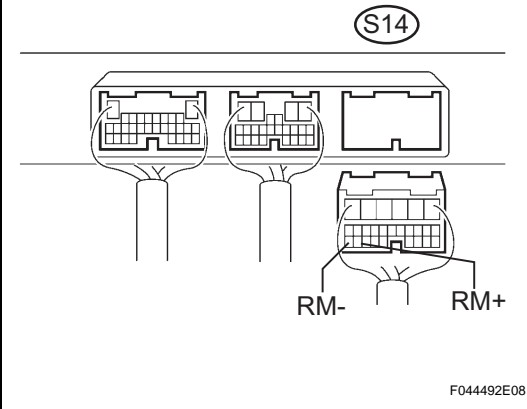
NG

REPLACE CONTROL COMPRESSOR ASSEMBLY

OK

3 CHECK HARNESS AND CONNECTOR (SUSPENSION CONTROL ECU - HEIGHT CONTROL COMPRESSOR MOTOR)

Suspension Control ECU Wire Harness Side:



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

Resistance

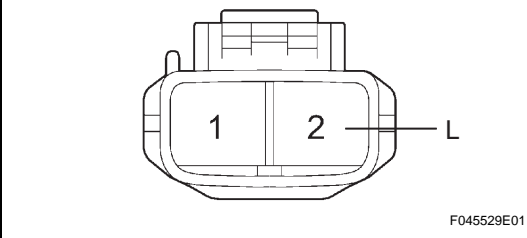
| Tester Connection | Specified Condition |
|-----------------------------|---------------------|
| S14-25 (RM+) - S14-26 (RM-) | 6.4 to 7.4 Ω |

NG REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

4 CHECK HARNESS AND CONNECTOR (HEIGHT CONTROL COMPRESSOR MOTOR - BODY GROUND)

Height Control Compressor Motor Wire Harness Side:



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

Resistance

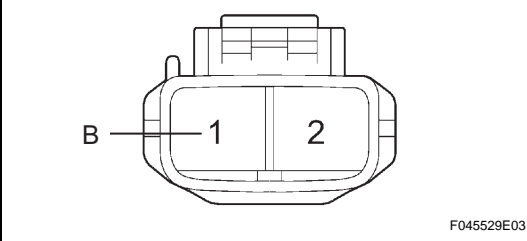
| Tester Connection | Specified Condition |
|---------------------|---------------------|
| 2 (L) - Body ground | Below 1 Ω |

NG REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

5 CHECK HARNESS AND CONNECTOR (HEIGHT CONTROL COMPRESSOR MOTOR - AIR SUS RELAY)

Height Control Compressor Motor Wire Harness Side:



- (a) Disconnect the AIR SUS relay from the engine room R/B.
- (b) Measure the resistance according to the values in the table below.

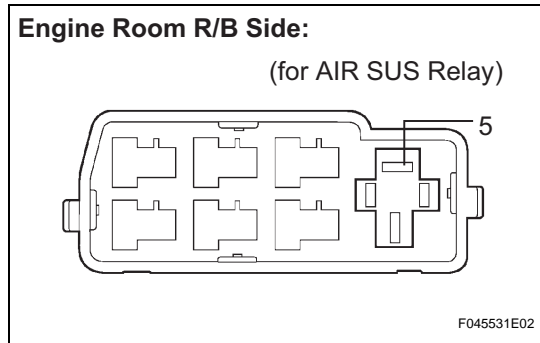
Resistance

| Tester Connection | Specified Condition |
|-------------------------------|---------------------|
| 1 (B) - 3 (for AIR SUS relay) | Below 1 Ω |
| 1 (B) - Body ground | 10 kΩ or higher |

NG REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

6 CHECK HARNESS AND CONNECTOR (AIR SUS RELAY - AIR SUS FUSE)



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

Voltage

| Tester Connection | Specified Condition |
|-------------------------------------|---------------------|
| 5 (for AIR SUS relay) - Body ground | 11 to 14 V |

Result

| Result | Proceed to |
|--------|---|
| OK | A (When using intelligent tester) |
| | (Reference) B (When not using intelligent tester) |
| NG | C |

B → **Go to step 8**

C → **REPAIR OR REPLACE HARNESS OR CONNECTOR**

A

7 INSPECT HEIGHT CONTROL SOLENOID VALVE

- (a) Connect the intelligent tester to the DLC3.
- (b) Turn the ignition switch to the 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 a continuity (will vibrate).

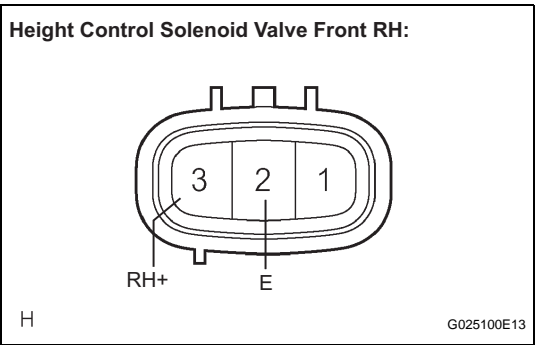
OK:

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

OK → **Go to step 9**

NG

8 INSPECT HEIGHT CONTROL SOLENOID VALVE



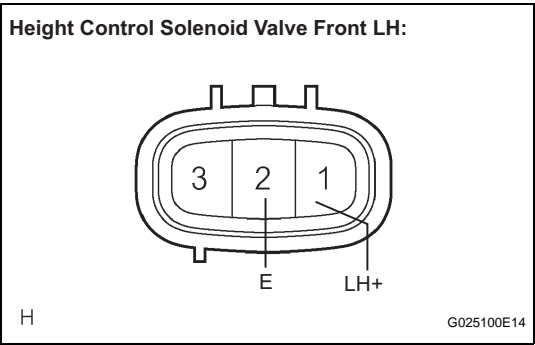
- (a) HEIGHT CONTROL SOLENOID VALVE FRONT RH:
- (1) Disconnect the height control solenoid valve connector.
 - (2) Check the operating sound of the height control solenoid valve when positive battery voltage is applied to the terminals.

| Tester Connection | |
|-------------------|------------------|
| Battery Positive | Battery Negative |
| 3 (RH+) | 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.



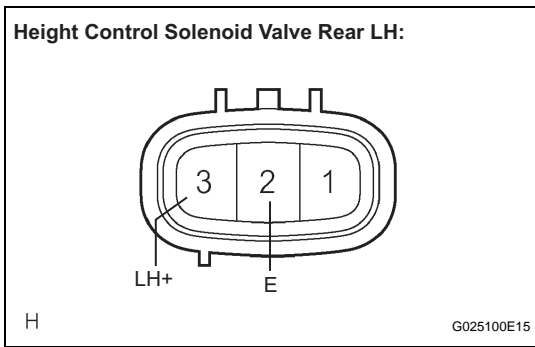
- (b) HEIGHT CONTROL SOLENOID VALVE FRONT LH:
- (1) Disconnect the height control solenoid valve connector.
 - (2) Check the operating sound of the height control solenoid valve when positive battery voltage is applied to the terminals.

| 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.



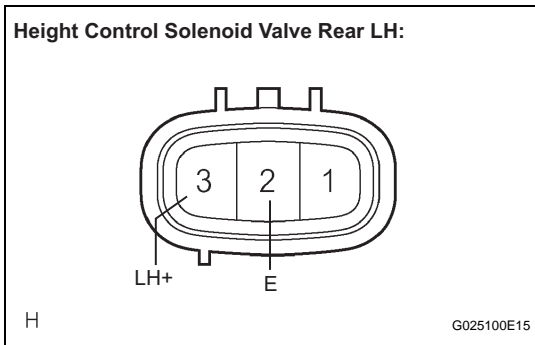
- (c) HEIGHT CONTROL SOLENOID VALVE REAR RH:
- (1) Disconnect the height control solenoid valve connector.
 - (2) Check the operating sound of the height control solenoid valve when positive battery voltage is applied to the terminals.

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

OK:
It should make an operating sound (click).
Result

| Result | Proceed to |
|--------|------------|
| OK | A |
| NG | C |

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



- (d) HEIGHT CONTROL SOLENOID VALVE REAR LH:
- (1) Disconnect the height control solenoid valve connector.
 - (2) Check the operating sound of the height control solenoid valve when positive battery voltage is applied to the terminals.

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

OK:
It should make an operating sound (click).
Result

| Result | Proceed to |
|--------|------------|
| OK | A |
| NG | C |

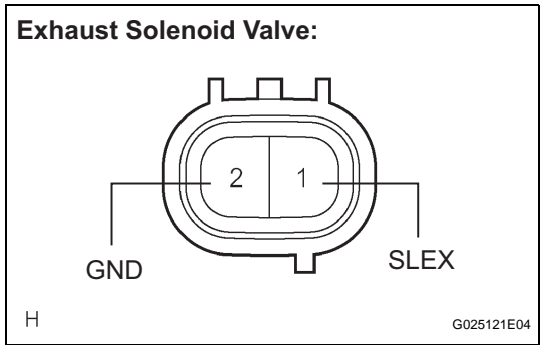
HINT:
When a malfunction is found in the rear solenoid valve, replace the height control valve sub-assembly No. 2.

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

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

A

9 INSPECT EXHAUST SOLENOID VALVE



- (a) Disconnect the exhaust solenoid valve connector.
- (b) Check the operating sound of the exhaust solenoid valve when positive battery voltage is applied to the terminals.

| Battery Positive | Battery Negative |
|------------------|------------------|
| 1 (SLEX) | 2 (GND) |

OK:

It should make an operating sound (click).

HINT:

When a malfunction is found in the exhaust solenoid valve, replace the height control compressor assembly.

Result

| Result | Proceed to |
|--------|--|
| OK | A (When using intelligent tester) |
| | (Referece) B (When not using intelligent tester) |
| NG | C |

B → **Go to step 11**

C → **REPLACE HEIGHT CONTROL COMPRESSOR ASSEMBLY**

A

10 INSPECT TANK SOLENOID VALVE

- (a) Connect the intelligent tester to the DLC3.
- (b) Turn the ignition switch to the 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 |
|-----------------|--------------------------------------|---|
| LOW PRS TNK SOL | Turn tank solenoid valve / ON or OFF | Operation of solenoid (clicking sound) can be heard |

- (d) Check whether the tank solenoid valve has a continuity (will vibrate).

OK:

The solenoid makes sound, and the tank solenoid valve has a continuity (will vibrate).

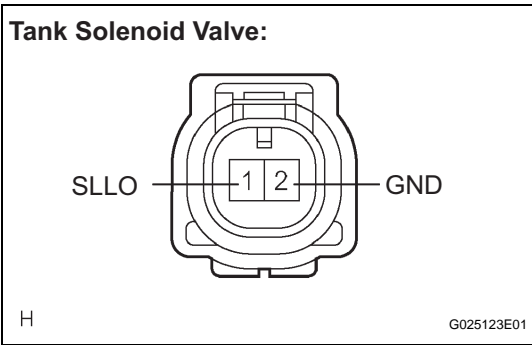
OK → **Go to step 12**

NG

REPLACE PNEUMATIC W/TUBE TANK ASSEMBLY

11 INSPECT TANK SOLENOID VALVE

Tank Solenoid Valve:



- (a) Disconnect the exhaust solenoid valve connector.
- (b) Check the operating sound of the tank solenoid valve when positive battery voltage is applied to the terminals.

| Battery Positive | Battery Negative |
|------------------|------------------|
| 1 (SLLO) | 2 (GND) |

OK:

The solenoid makes sound, and the tank solenoid valve has a continuity (will vibrate).

HINT:

When a malfunction is found in the tank solenoid valve, replace the pneumatic tank assembly.

NG → **REPLACE PNEUMATIC W/TUBE TANK ASSEMBLY**

OK

12 INSPECT FOR CLOGGED AIR TUBE

- (a) Check visually for a clog, damage or breakage on the air tube (See page [SC-5](#)).

NG → **REPAIR OR REPLACE AIR TUBE**

OK

REPLACE SUSPENSION CONTROL ECU