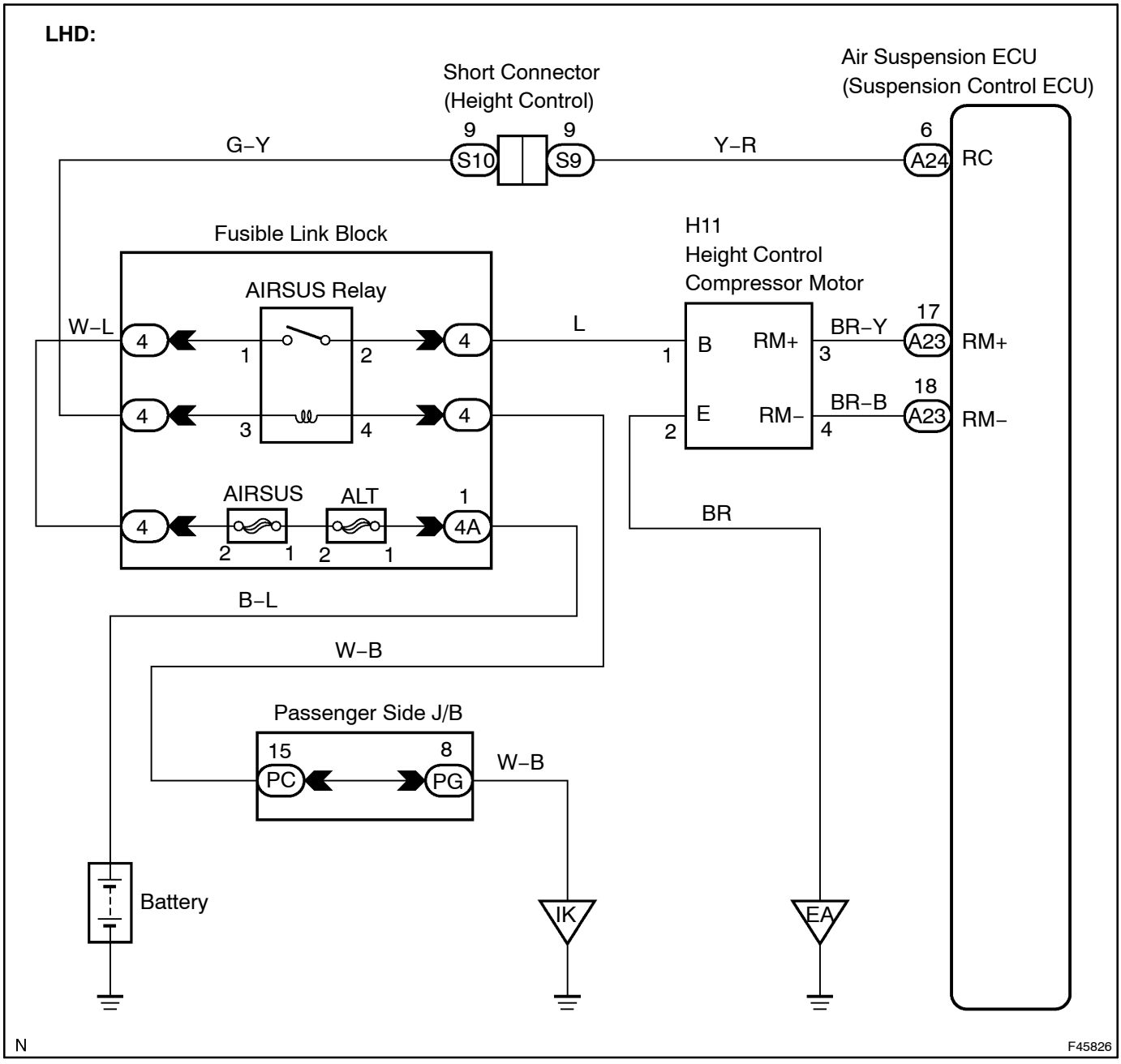
DTC C1742 HEIGHT CONTROL COMPRESSOR CIRCUIT

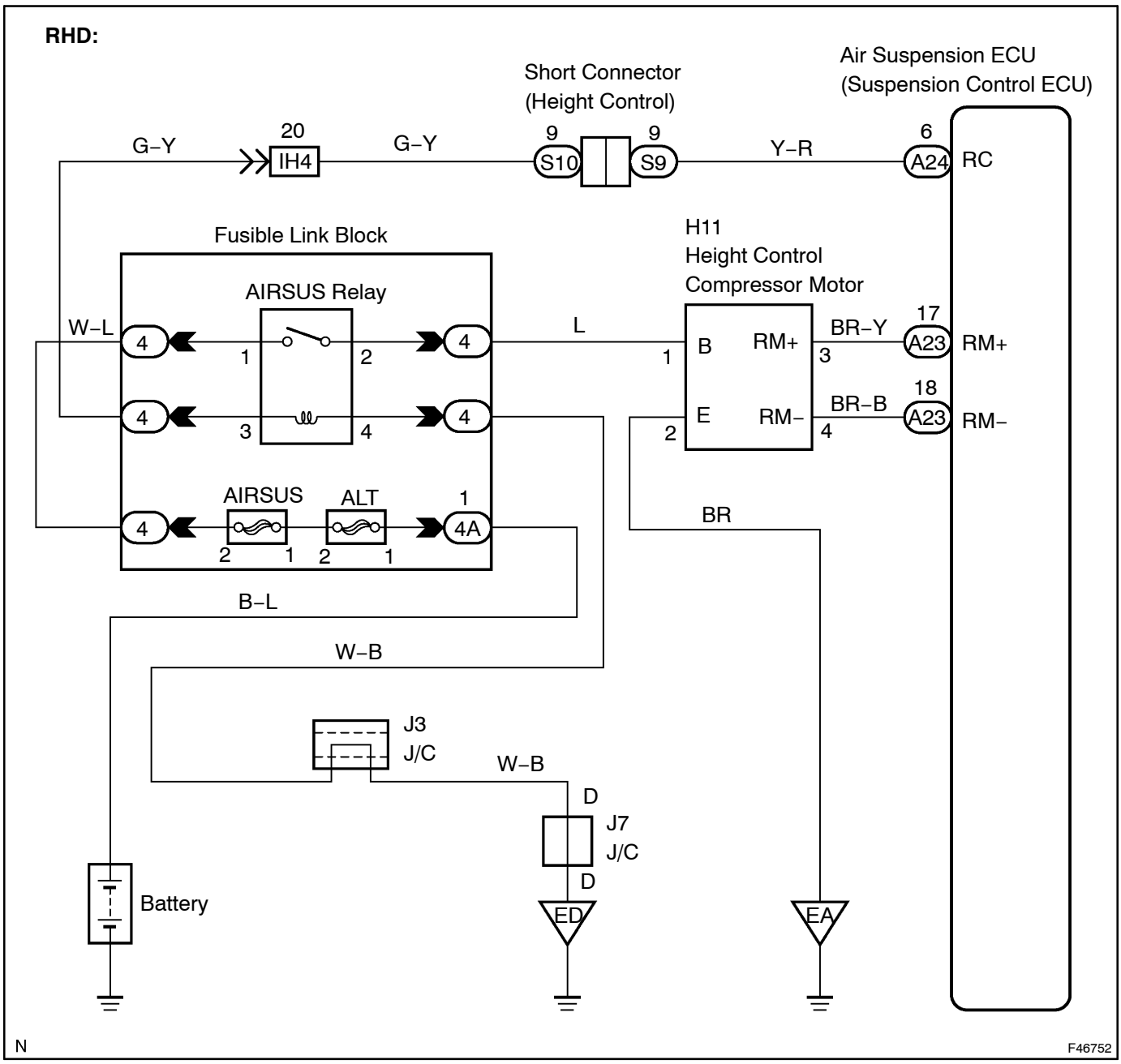
CIRCUIT DESCRIPTION

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

DTC No.	DTC Detecting Condition	Trouble Area
C1742	With the AIR SUS relay activated, a lock signal of the height control compressor motor is detected for 4 sec. or more.	• Height control compressor motor • Height control compressor circuit • Suspension control ECU • Height control solenoid valve is stuck

WIRING DIAGRAM




RHD:
Air Suspension ECU
(Suspension Control ECU)
Short Connector
(Height Control)
G–Y
20
IH4
G–Y
9
S10
9
S9
Y–R
6
A24
RC
Fusible Link Block
AIRSUS Relay
H11
Height Control
Compressor Motor
W–L
4
1
2
4
L
B
RM+
BR–Y
17
A23
RM+
3
4
4
3
4
4
E
RM–
BR–B
18
A23
RM–
1
2
4
AIRSUS
ALT
1
4A
2
1
2
1
BR
B–L
W–B
J3
J/C
W–B
D
J7
J/C
D
Battery
ED
EA
N
F46752

INSPECTION PROCEDURE

1	RECONFIRM DTC

(a) Check DTCs (see page 05–248).
(1) Confirm if DTC C1741 is recorded.
OK:
DTC C1741 is not output.

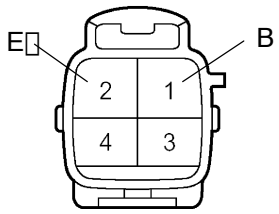
HINT:
If DTC C1741 (AIR SUS relay circuit) is displayed, carry out the inspection necessary (see page 05–294).

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

OK

2	INSPECT HEIGHT CONTROL COMPRESSOR MOTOR

Height Control Compressor Motor:



(a) Disconnect the height control compressor motor connector.
(b) Connect terminal 1 (B) to the battery positive (+) terminal, and terminal 2 (E) to the battery negative (–) terminal.
(c) Check the operating sound of the compressor motor.
OK:
Compressor motor operates.

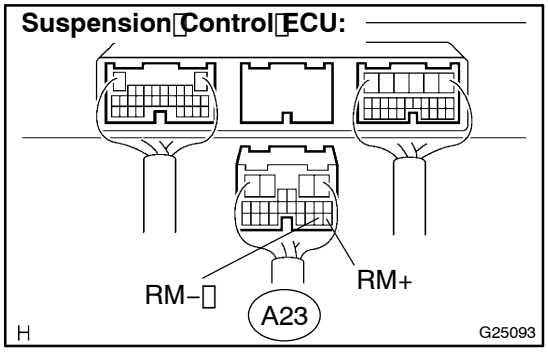
NOTICE:
- **Do not operate the height control compressor assy for 60 seconds or more.**
- **Since a short and a lock–up inside the height control compressor assy causes enormous current to flow, stop operation immediately when it does not rotate.**

HINT:
When a malfunction is found in the height control compressor motor, replace the height control compressor assy.

NG → **REPLACE HEIGHT CONTROL COMPRESSOR ASSY (SEE PAGE 25–9)**

OK

3	CHECK HARNESS AND CONNECTOR(SUSPENSION CONTROL ECU – HEIGHT CONTROL COMPRESSOR MOTOR) (SEE PAGE 01–44)



(a) Connect the height control compressor motor connector.
(b) Disconnect the suspension control ECU A23 connector.
(c) Measure the resistance according to the value(s) in the table below.

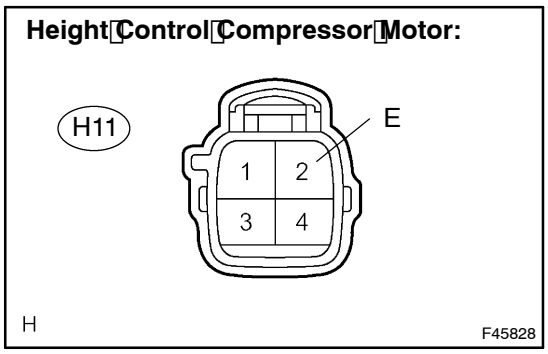
Standard:

Tester Connection	Specified Condition
A23–17 (RM+) – A23–18 (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) (SEE PAGE 01–44)



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

Standard:

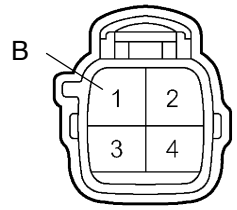
Tester Connection	Specified Condition
H11–2 (E) – Body ground	Below 1 Ω

NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

5	CHECK HARNESS AND CONNECTOR (HEIGHT CONTROL COMPRESSOR MOTOR – AIR SUS RELAY) (SEE PAGE 01–44)

Height Control Compressor Motor:

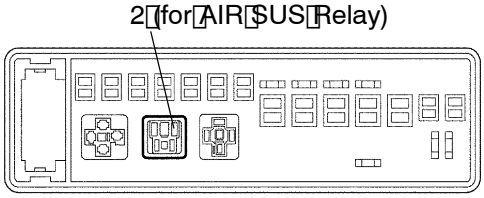


(a) Disconnect the AIR SUS relay from the fusible link block.
(b) Measure the resistance according to the value(s) in the table below.

Standard:

Tester Connection	Specified Condition
1 (B) – 2 (for AIR SUS relay)	Below 1 Ω
1 (B) – Body ground	10 kΩ or higher

Fusible Link Block Side:

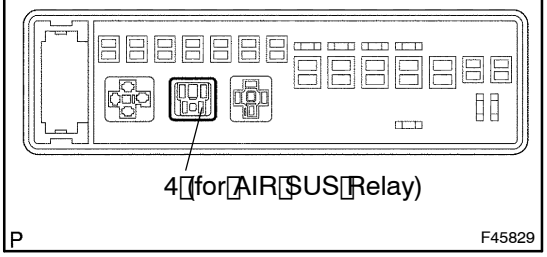


NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK

6	CHECK HARNESS AND CONNECTOR (AIR SUS RELAY – BODY GROUND) (SEE PAGE 01–44)

Fusible Link Block Side:



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

Standard:

Tester Connection	Specified Condition
4 (for AIR SUS relay) – Body ground	10 to 14 V

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

OK

7 INSPECT HEIGHT CONTROL SOLENOID VALVE

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

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 the operation sound of the height control solenoid valve when the solenoid is turned on through the ACTIVE TEST.
OK:
An operation sound is heard 1 second after the height control solenoid valve is turned on.

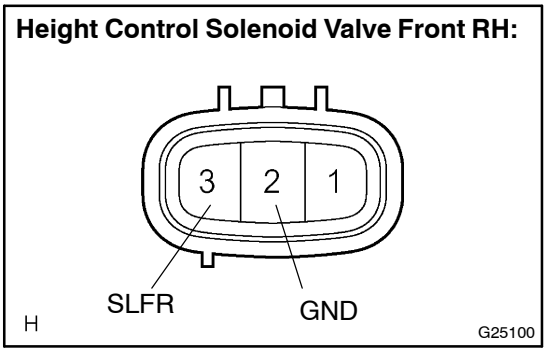
NG → **Go to step 8**

OK

Go to step 9

8 INSPECT HEIGHT CONTROL SOLENOID VALVE

Height Control Solenoid Valve Front RH:



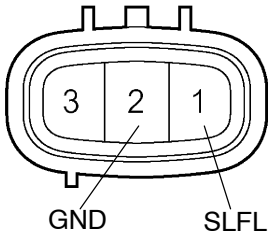
HEIGHT CONTROL SOLENOID VALVE FRONT RH:

(a) Disconnect the height control solenoid valve connector.
(b) Connect terminal 3 (SLFR) to the battery positive (+) terminal, and terminal 2 (GND) to the battery negative (–) terminal.
(c) Check the operating sound of the height control solenoid valve.
OK:
It should make an operating sound (click).
Result:

OK	A
NG	B

HINT:
When a malfunction is found in the front solenoid valve, replace the height control valve sub–assy No.1.

Height Control Solenoid Valve Front LH:



HEIGHT CONTROL SOLENOID VALVE FRONT LH:

(a) Disconnect the height control solenoid valve connector.

(b) Connect terminal 1 (SLFL) to the battery positive (+) terminal, and terminal 2 (GND) to the battery negative (–) terminal.

(c) Check the operating sound of the height control solenoid valve.

OK:

It should make an operating sound (click).

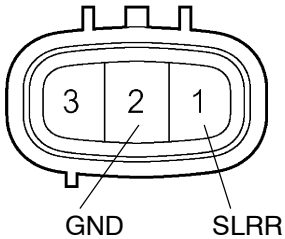
Result:

OK	A
NG	B

HINT:

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

Height Control Solenoid Valve Rear RH:



HEIGHT CONTROL SOLENOID VALVE REAR RH:

(a) Disconnect the height control solenoid valve connector.

(b) Connect terminal 1 (SLRR) to the battery positive (+) terminal, and terminal 2 (GND) to the battery negative (–) terminal.

(c) Check the operating sound of the height control solenoid valve.

OK:

It should make an operating sound (click).

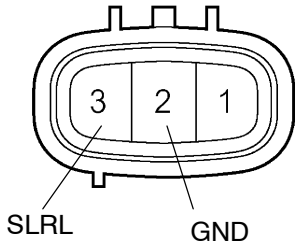
Result:

OK	A
NG	C

HINT:

When a malfunction is found in the rear solenoid valve, replace the height control valve sub–assy No.2.

Height Control Solenoid Valve Rear LH:



HEIGHT CONTROL SOLENOID VALVE REAR LH:

(a) Disconnect the height control solenoid valve connector.

(b) Connect terminal 3 (SLRL) to the battery positive (+) terminal, and terminal 2 (GND) to the battery negative (–) terminal.

(c) Check the operating sound of the height control solenoid valve.

OK:

It should make an operating sound (click).

Result:

OK	A
NG	C

HINT:

When a malfunction is found in the rear solenoid valve, replace the height control valve sub–assy No.2.

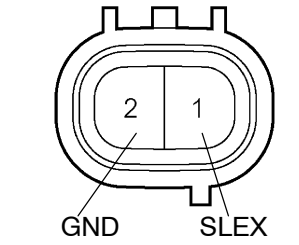
B → **REPLACE HEIGHT CONTROL VALVE SUB–ASSY NO.1 (SEE PAGE 25–17)**

C → **REPLACE HEIGHT CONTROL VALVE SUB–ASSY NO.2 (SEE PAGE 25–19)**

A

9 INSPECT EXHAUST SOLENOID VALVE

Exhaust Solenoid Valve:



(a) Disconnect the exhaust solenoid valve connector.

(b) Connect terminal 1 (SLEX) to the battery positive (+) terminal, and terminal 2 (GND) to the battery negative (–) terminal.

(c) Check the operating sound of the exhaust solenoid valve.

OK:

It should make an operating sound (click).

HINT:

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

NG → **REPLACE HEIGHT CONTROL COMPRESSOR ASSY (SEE PAGE 25–9)**

OK

10	INSPECT FOR CLOGGED AIR TUBE

(a) Check the air tube visually for a clog or damage (see page 25–4).

OK:

Air tube is not clogged or damaged.

NG → **REPAIR OR REPLACE AIR TUBE**

OK

REPLACE SUSPENSION CONTROL ECU (SEE PAGE 25–20)