DI8CZ–01

CIRCUIT INSPECTION

DTC	C1711 / 11 to C1714 / 14	Height Control Sensor Circuit

CIRCUIT DESCRIPTION

Inside each sensor, a brush integrated with the control sensor rotor shaft moves above the resister, providing linear output. The resistance value between the brush and resistor terminal changes in proportion to the shaft rotation angle, so the fixed voltage applied to the resistor by the ECU is modified by the sensor and output to the ECU as a voltage indicating the shaft rotation angle.

DTC No.	DTC Detecting Condition	Trouble Area
C1711 / 11 C1712 / 12 C1713 / 13 C1714 / 14	With the ignition switch ON, a voltage of 4.7 V or more or 0.3 V or less at each height control sensor is detected for 1 sec.	• Right front, left front, right rear, left rear height control sensor • Each height control sensor circuit • Suspension control ECU

HINT:

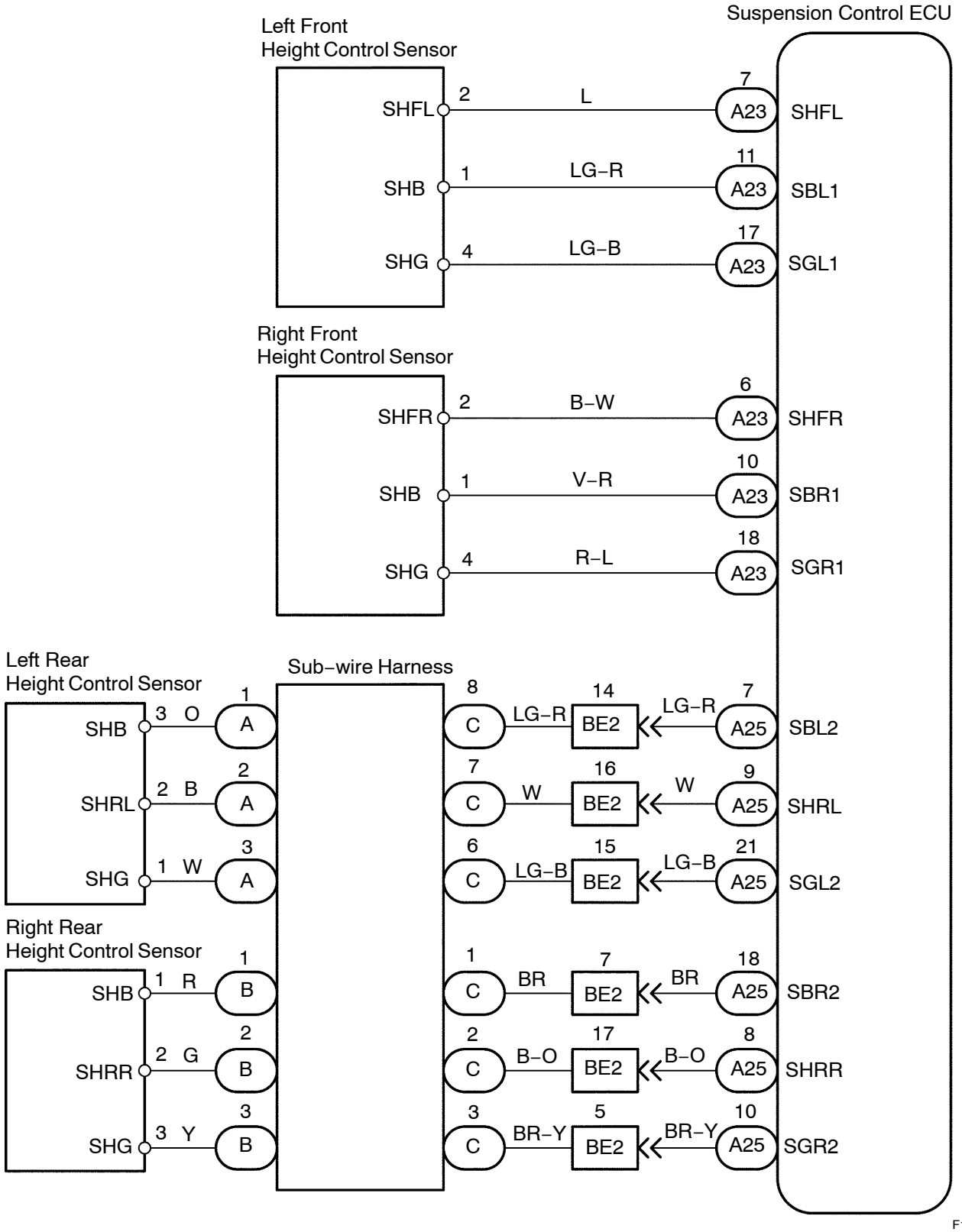
- Code C1711 / 11 corresponds to the right front height control sensor circuit.
- Code C1712 / 12 corresponds to the left front height control sensor circuit.
- Code C1713 / 13 corresponds to the right rear height control sensor circuit.
- Code C1714 / 14 corresponds to the left rear height control sensor circuit.

Once ECU stores DTC C1711 / 11, C1712 / 12, C1713 / 13 or C1714 / 14 in memory, vehicle height control and damping force control are not carried out until a normal signal is input to the ECU from the height control sensor.

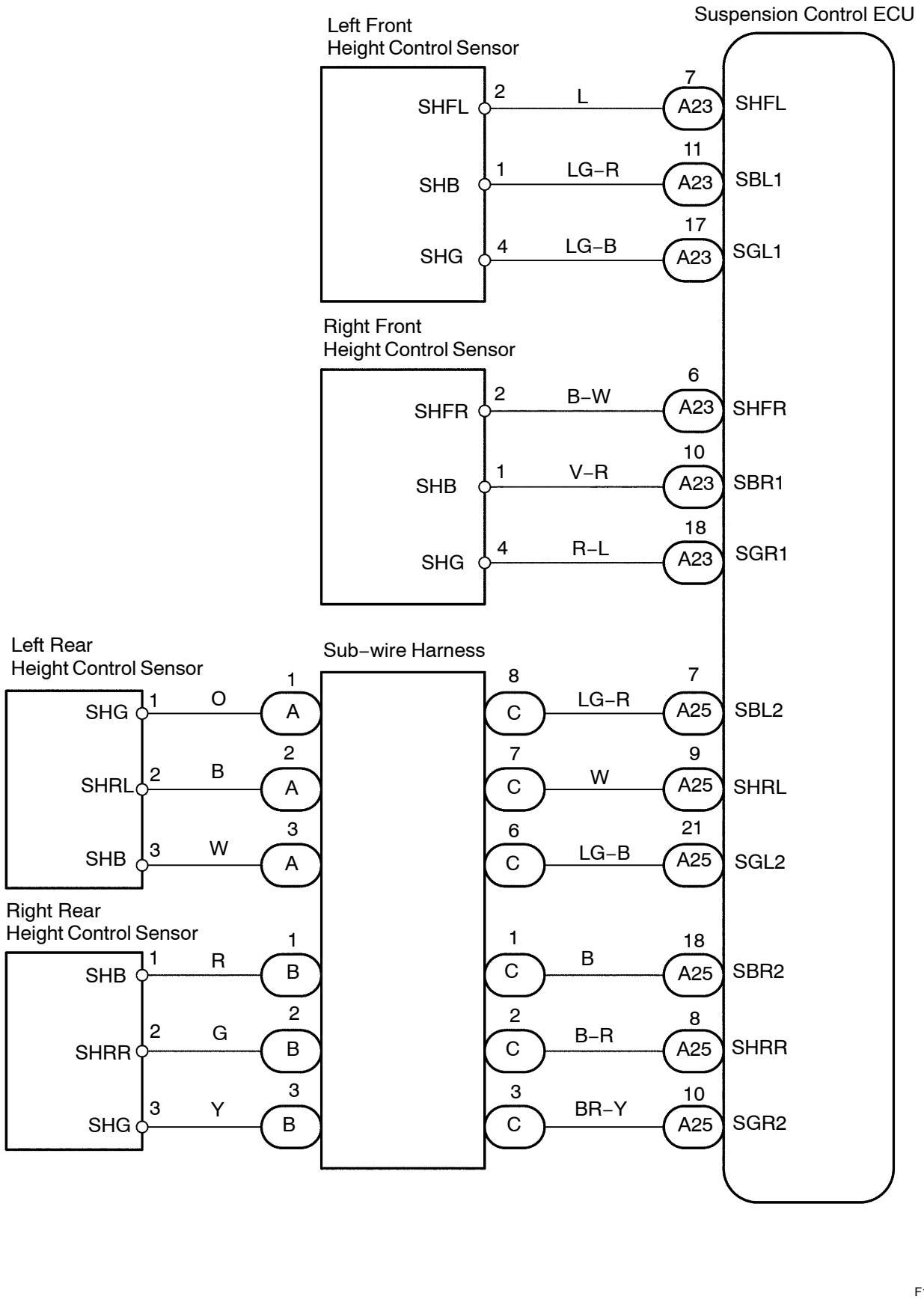
However, control is resumed if the ignition switch is turned OFF, then ON again.

WIRING DIAGRAM

LHD:



RHD:


Suspension Control ECU
Left Front
Height Control Sensor
SHFL
SHB
SHG
2
1
4
L
LG–R
LG–B
7
11
17
A23
SHFL
SBL1
SGL1
Right Front
Height Control Sensor
SHFR
SHB
SHG
2
1
4
B–W
V–R
R–L
6
10
18
A23
SHFR
SBR1
SGR1
Left Rear
Height Control Sensor
Sub–wire Harness
SHG
SHRL
SHB
1
2
3
O
B
W
1
2
3
A
A
A
8
7
6
C
C
C
LG–R
W
LG–B
7
9
21
A25
SBL2
SHRL
SGL2
Right Rear
Height Control Sensor
SHB
SHRR
SHG
1
2
3
R
G
Y
1
2
3
B
B
B
1
2
3
C
C
C
B
B–R
BR–Y
18
8
10
A25
SBR2
SHRR
SGR2
P
F10600

INSPECTION PROCEDURE

HINT:

- When DTC C1711 / 11 is displayed, check the right front height control sensor circuit.
- When DTC C1712 / 12 is displayed, check the left front height control sensor circuit.
- When DTC C1713 / 13 is displayed, check the right rear height control sensor circuit.
- When DTC C1714 / 14 is displayed, check the left rear height control sensor circuit.
- 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 height control sensor operation.**

PREPARATION:

(a) Connect the hand–held tester to the DLC3.
(b) Start the engine and push the hand–held tester main switch ON.
(c) Select the ACTIVE TEST mode on the hand–held tester.

CHECK:

Check whether or not the height control sensor operates to raise or lower the vehicle height with the hand–held tester.

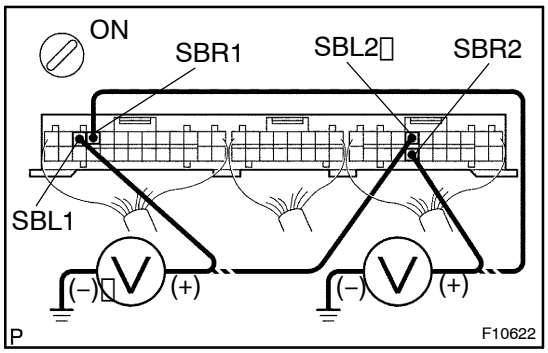
OK:

The height control sensor operates to raise or lower the vehicle height.

OK → **Proceed to next circuit inspection shown on problem symptoms table (See page DI–263).**

NG

2	**Check voltage between each of terminals SBR1, SBL1, SBR2 and SBL2 of suspension control ECU connector and body ground.**



PREPARATION:

Remove the suspension control ECU with the connectors still connected.

CHECK:

(a) Turn the ignition switch ON.
(b) Measure voltage between each of terminals SBR1, SBL1, SBR2 and SBL2 of the suspension control ECU connector and body ground.

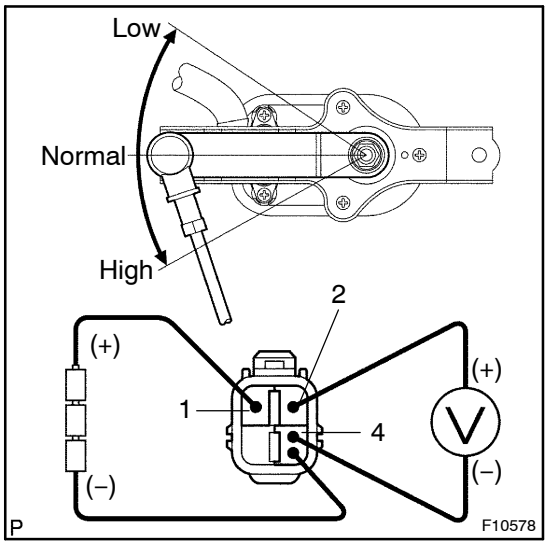
OK:

Voltage: 4.5 – 5.5 V

NG → **Check and replace suspension control ECU.**

OK

3	Check height control sensor.



Front height control sensor:

PREPARATION:

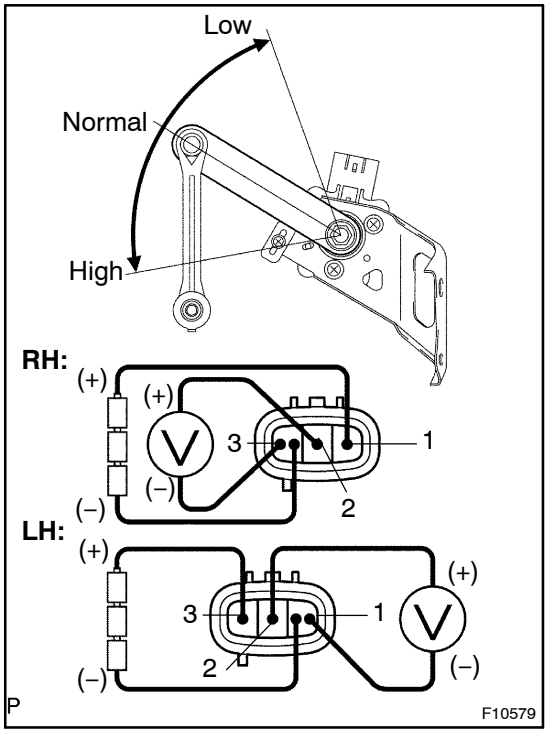
(a) Remove the front wheel and front fender liner.
(b) Disconnect the height control sensor connector.
(c) Remove the height control sensor (See page SA–133).

CHECK:

(a) Connect 3 dry batteries of 1.5 V in series.
(b) Connect terminal 1 to the batteries' positive (+) terminal, and terminal 4 to the batteries' negative (–) terminal, then apply voltage about 4.5 V between terminals 1 and 4.
(c) Check voltage between terminals 2 and 4 when the height control sensor link is slowly moved up and down.

OK:

Position	Voltage
High	Approx. 2.5 – 4.5 V
Normal	Approx. 2.5 V
Low	Approx. 0.5 – 2.5 V



Rear height control sensor:

PREPARATION:

(a) Remove the rear wheel.
(b) Disconnect the height control sensor connector.
(c) Remove the height control sensor (See page SA–136).

CHECK:

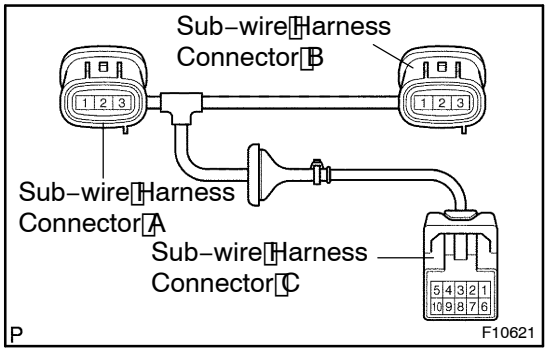
HINT:

For the LH, check the terminals which numbers are indicated inside the parentheses.

(a) Connect 3 dry batteries of 1.5 V in series.
(b) Connect terminal 1 (3) to the batteries' positive (+) terminal, and terminal 3 (1) to the batteries' negative (–) terminal, then apply voltage about 4.5 V between terminals 1 and 3.
(c) Check voltage between terminals 2 and 3 (1) when the height control sensor link is slowly moved up and down.

OK:

Position	Voltage
High	Approx. 2.5 – 4.5 V
Normal	Approx. 2.5 V
Low	Approx. 0.5 – 2.5 V



Rear sub–wire harness:

CHECK:

Check for open and short circuit in harness between each terminal of the sub–wire harness connectors.

OK:

Terminals	Specified condition
A1 – C8	Continuity
A2 – C7	Continuity
A3 – C6	Continuity
B1 – C1	Continuity
B2 – C2	Continuity
B3 – C3	Continuity

NG → **Replace height control sensor or sub–wire harness.**

OK

4 **Check for open and short circuit in harness and connector between suspension control ECU and height control sensor (See page IN–35).**

NG → **Repair or replace harness or connector.**

OK

Proceed to next circuit inspection shown on problem symptoms table (See page DI–263).