

DTC	C1731/31	Front Height Control Gate Solenoid Valve Circuit Malfunction
DTC	C1732/32	Front Height Control Leveling Solenoid Valve Circuit Malfunction
DTC	C1733/33	Rear Height Control Gate Solenoid Valve Circuit Malfunction
DTC	C1734/34	Rear Height Control Leveling Solenoid Valve Circuit Malfunction
DTC	C1736/36	Accumulator Solenoid Valve Circuit Malfunction

DESCRIPTION

The control valve assembly consists of each front and rear leveling valve and gate valve. It performs the height control and connecting and disconnecting the fluid line of the right and left shock absorber by operating the solenoid valve ON and OFF with the control signal from the ECU.

DTC No.	DTC Detection Condition	Trouble Area
C1731/31	<p>When either of the following condition consisted 4 times continuously:</p> <ol style="list-style-type: none"> 1. When the condition that the B terminal voltage of ECU is more than 10 +- 0.5 V and the lower reaches voltage of the solenoid while it is in non-operation condition is less than 20% of the B terminal voltage continued for 20 +- 5 msec. 2. When the condition that the B terminal voltage of ECU is more than 10 +- 0.5 V and the lower reaches voltage of the solenoid while it is in operation condition is more than 80% of the B terminal voltage continued for 20 +- 5 msec. 	<ul style="list-style-type: none"> • Front gate valve solenoid • Suspension control ECU • Wire harness
C1732/32	<p>When either of the following condition consisted 4 times continuously:</p> <ol style="list-style-type: none"> 1. When the condition that the B terminal voltage of ECU is more than 10 +- 0.5 V and the lower reaches voltage of the solenoid while it is in non-operation condition is less than 20% of the B terminal voltage continued for 20 +- 5 msec. 2. When the condition that the B terminal voltage of ECU is more than 10 +- 0.5 V and the lower reaches voltage of the solenoid while it is in operation condition is more than 80% of the B terminal voltage continued for 20 +- 5 msec. 	<ul style="list-style-type: none"> • Front leveling valve solenoid • Suspension control ECU • Wire harness

DTC No.	DTC Detection Condition	Trouble Area
C1733/33	When either of the following condition consisted 4 times continuously: 1. When the condition that the B terminal voltage of ECU is more than 10 +- 0.5 V and the lower reaches voltage of the solenoid while it is in non-operation condition is less than 20% of the B terminal voltage continued for 20 +- 5 msec. 2. When the condition that the B terminal voltage of ECU is more than 10 +- 0.5 V and the lower reaches voltage of the solenoid while it is in operation condition is more than 80% of the B terminal voltage continued for 20 +- 5 msec.	<ul style="list-style-type: none"> • Rear gate valve solenoid • Suspension control ECU • Wire harness
C1734/34	When either of the following condition consisted 4 times continuously: 1. When the condition that the B terminal voltage of ECU is more than 10 +- 0.5 V and the lower reaches voltage of the solenoid while it is in non-operation condition is less than 20% of the B terminal voltage continued for 20 +- 5 msec. 2. When the condition that the B terminal voltage of ECU is more than 10 +- 0.5 V and the lower reaches voltage of the solenoid while it is in operation condition is more than 80% of the B terminal voltage continued for 20 +- 5 msec.	<ul style="list-style-type: none"> • Rear leveling valve solenoid • Suspension control ECU • Wire harness
C1736/36	When either of the following condition consisted 4 times continuously: 1. When the condition that the B terminal voltage of ECU is more than 10 +- 0.5 V and the lower reaches voltage of the solenoid while it is in non-operation condition is less than 20% of the B terminal voltage continued for 20 +- 5 msec. 2. When the condition that the B terminal voltage of ECU is more than 10 +- 0.5 V and the lower reaches voltage of the solenoid while it is in operation condition is more than 80% of the B terminal voltage continued for 20 +- 5 msec.	<ul style="list-style-type: none"> • Height control accumulator solenoid • Suspension control ECU • Wire harness

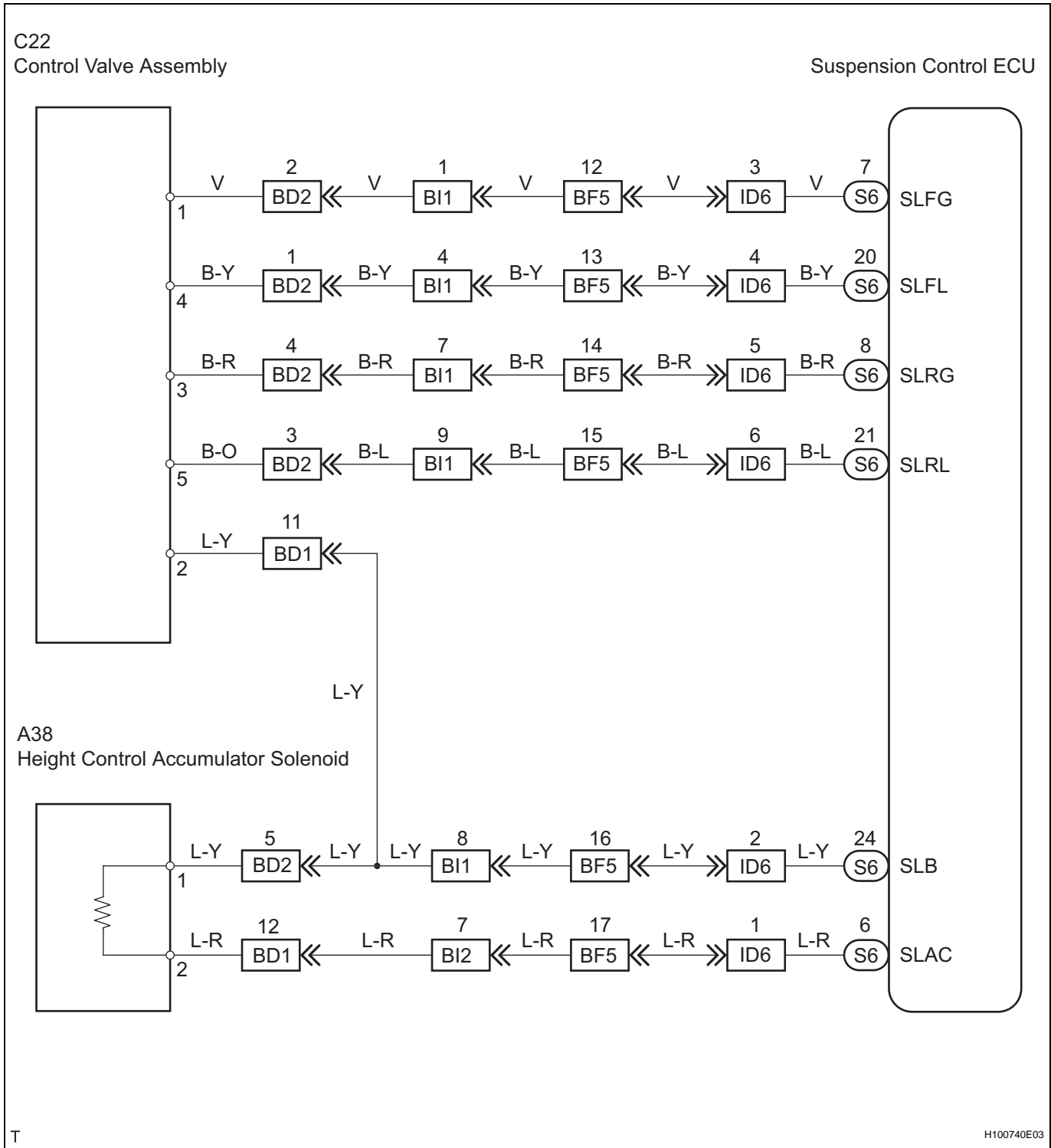
HINT:

- DTC C1731/31 corresponds to the front gate valve solenoid circuit.
- DTC C1732/32 corresponds to the front leveling valve solenoid circuit.
- DTC C1733/33 corresponds to the rear gate valve solenoid circuit.
- DTC C1734/34 corresponds to the rear leveling valve solenoid circuit.
- DTC C1736/36 corresponds to the height control accumulator solenoid circuit.

Fail-safe function:

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

WIRING DIAGRAM



HINT:

When using the intelligent tester, start from *1. When not using the intelligent tester, start from *2.

1	PERFORM ACTIVE TEST BY INTELLIGENT TESTER (CONTROL VALVE ASSEMBLY AND HEIGHT CONTROL ACCUMULATOR SOLENOID)*1
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- (a) Connect the intelligent tester (with CAN VIM) to the DLC3.

- (b) Start the engine and push the intelligent tester main switch ON.
- (c) Select the ACTIVE TEST mode on the intelligent tester.
- (d) Check that the operation sound of the solenoid or vibration of the control valve assembly and height control accumulator when operating the solenoid with the intelligent tester.

OK:

The operation sound of the solenoid should be heard or the vibration of the control valve solenoid or height control accumulator should be felt.

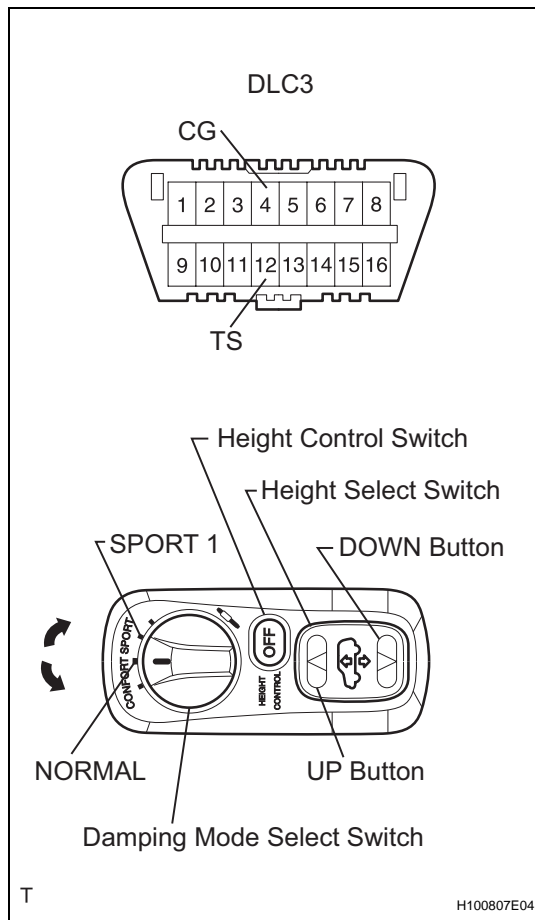
NG

Go to step 3

OK

REPLACE SUSPENSION CONTROL ECU

2 CHECK SUSPENSION CONTROL ECU*2



- (a) Using SST, connect terminals 12 (TS) and 4 (CG) of the DLC3.

SST 09843-18040

- (b) Push the DOWN button of the height select switch 5 times or more within 5 seconds after starting the engine.
HINT:

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

- (c) Perform each solenoid inspection by the switches of the following table, then check that the operation sound of the solenoid or the vibration of the control valve or height control accumulator.

Item	Damping mode select switch	Height control switch	Height select switch
Front leveling solenoid	SPORT 1 mode	-	Push UP button
Rear leveling solenoid	SPORT 1 mode	-	Push DOWN button
Front gate solenoid	SPORT 1 mode	Push and hold	Push UP button
Rear gate solenoid	SPORT 1 mode	Push and hold	Push DOWN button

Item	Damping mode select switch	Height control switch	Height select switch
Height control accumulator solenoid	NORMAL mode	-	Push UP button

OK:

The operation sound of the solenoid should be heard of the vibration of the control valve solenoid or height control accumulator should be felt.

OK → **REPLACE SUSPENSION CONTROL ECU**

NG

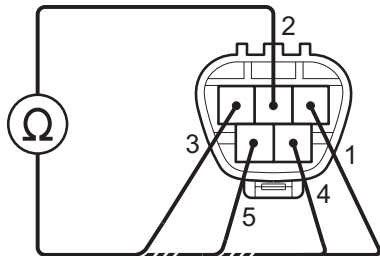
3 CHECK WIRE HARNESS (SUSPENSION CONTROL ECU - CONTROL VALVE ASSEMBLY AND ACCUMULATOR)

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

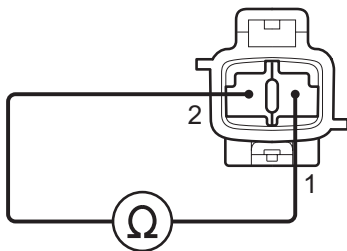
OK

4 INSPECT CONTROL VALVE SOLENOID AND HEIGHT CONTROL ACCUMULATOR SOLENOID

Control Valve Solenoid



Height Control Accumulator Solenoid



- (a) Disconnect the control valve connector.
- (b) Measure the resistance between terminals 2 and 1, 3, 4, 5 of the control valve connector.

Standard resistance

Tester Connection	Specified Condition
1 - 2	Below 1 Ω
2 - 3	Below 1 Ω
2 - 4	Below 1 Ω
2 - 5	Below 1 Ω

- (c) Disconnect the accumulator solenoid connector from the height control accumulator.
- (d) Measure the resistance between terminals 1 and 2 of the accumulator solenoid connector.

Standard resistance

Tester Connection	Specified Condition
1 - 2	Below 1 Ω

NG → **REPLACE CONTROL VALVE ASSEMBLY OR HEIGHT CONTROL ACCUMULATOR SOLENOID**

SC

OK

REPLACE SUSPENSION CONTROL ECU