

<b>DTC</b>	<b>31 - 35</b>	<b>Height Control Solenoid Valves, Height Control Exhaust Valve Circuit</b>
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**CIRCUIT DESCRIPTION**

The ECU energizes the height control solenoid valve, which opens the valve and leads compressed air to the pneumatic cylinder, thus raising the vehicle height.

When lowering the vehicle height, the ECU energizes not only the height control solenoid valve but also the exhaust valve which open the valve and discharge the compressed air in the pneumatic cylinder to the atmosphere.

Front and rear height control valves have 2 solenoid valves to control right hand and left hand pneumatic cylinders separately.

The exhaust valve is located on the compressor unit, and has one valve only.

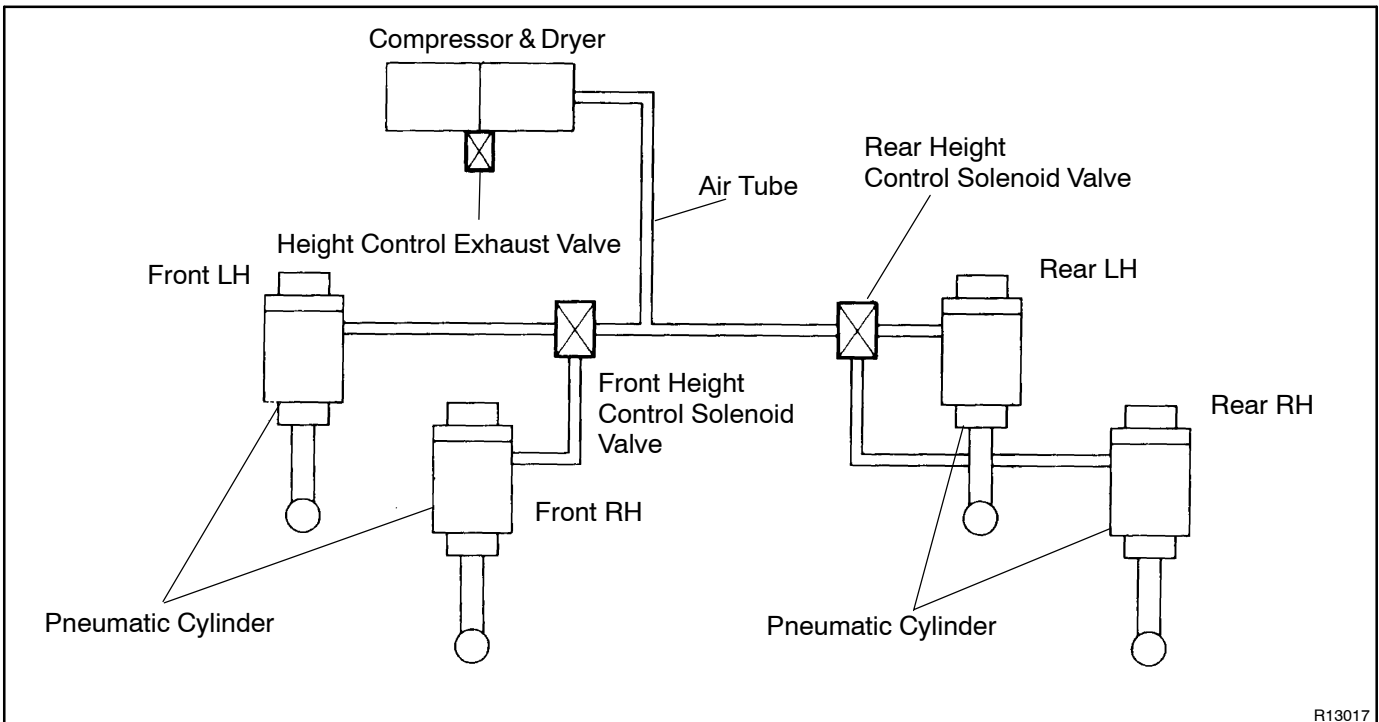
DTC No.	DTC Detecting Condition	Trouble Area
31 32 33 34	Either of the following 1. or 2. is detected: 1. With the height control solenoid valve (or exhaust valve) inactivated, when an open signal of valve is detected for more than 2 sec.	<ul style="list-style-type: none"> <li>• Right front, left front, right rear, left rear height control solenoid valves</li> <li>• Each height control solenoid valve circuit</li> <li>• Suspension control ECU</li> </ul>
35	2. With the height control solenoid valve (or exhaust valve) activated, a short signal of valve is detected 8 times successively for more than 0.1 sec.	<ul style="list-style-type: none"> <li>• Height control exhaust valve</li> <li>• Height control exhaust valve circuit</li> <li>• Suspension control ECU</li> </ul>

**HINT:**

- Code 31 corresponds to the right front height control solenoid valve circuit.
- Code 32 corresponds to the left front height control solenoid valve circuit.
- Code 33 corresponds to the right rear height control solenoid valve circuit.
- Code 34 corresponds to the left rear height control solenoid valve circuit.

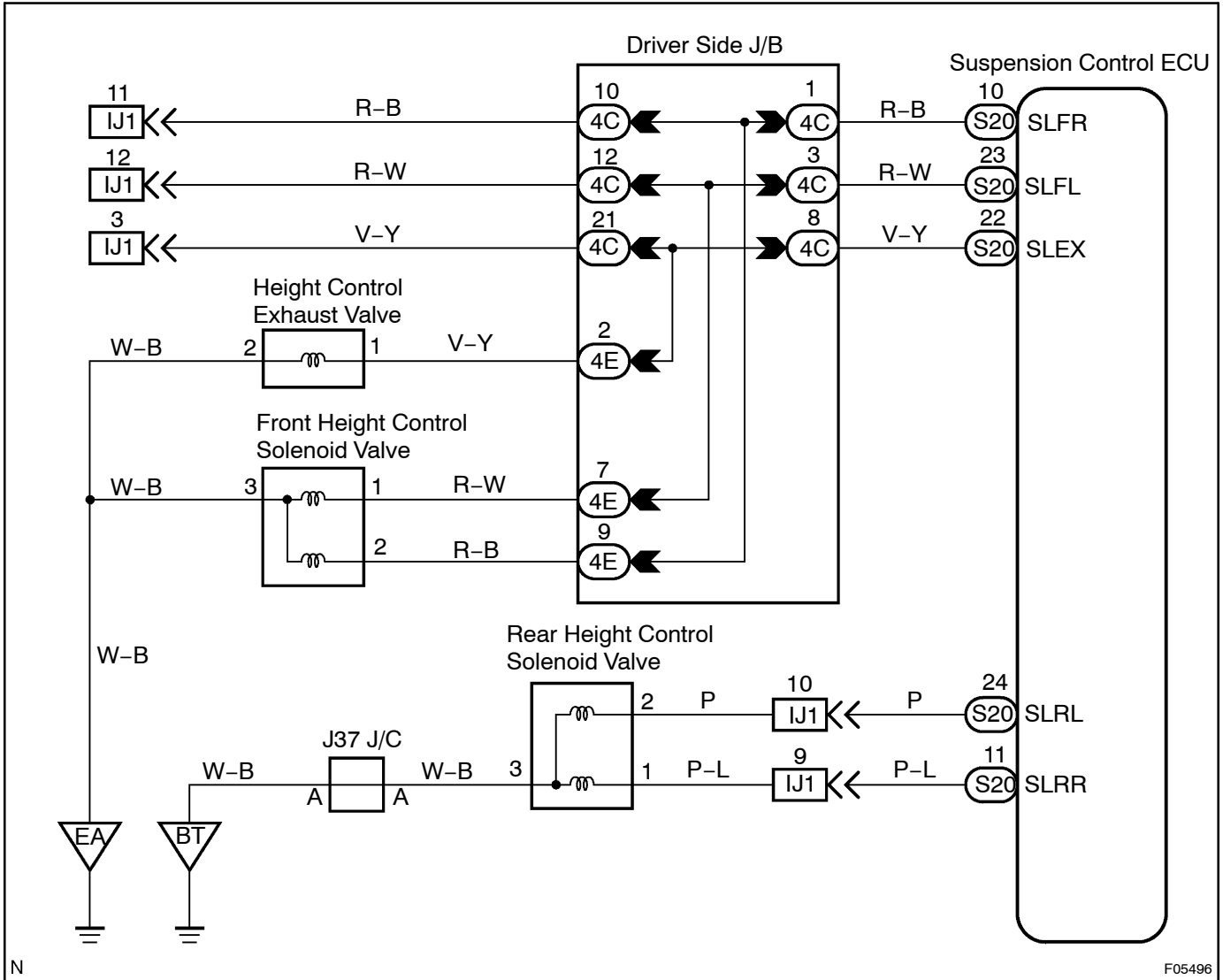
Once the ECU stores DTC 31, 32, 33, 34 or 35 in memory, vehicle height control is not carried out until a normal signal is input to the ECU from the height control solenoid valves and exhaust valve.

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



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# WIRING DIAGRAM



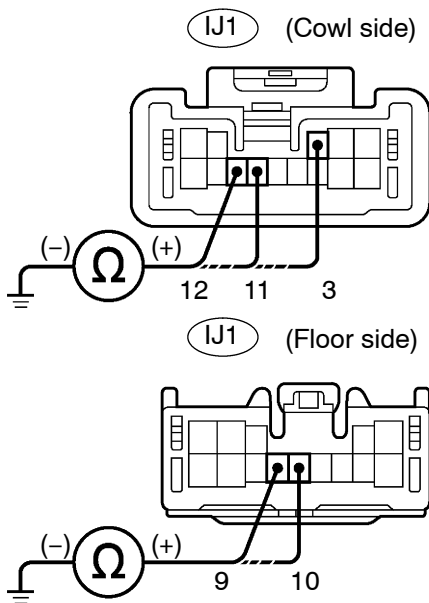
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## INSPECTION PROCEDURE

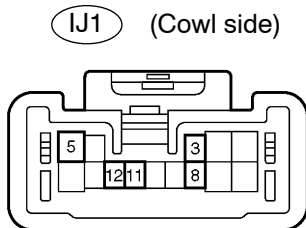
### HINT:

- Proceed with troubleshooting in accordance with the flow chart, regardless of whether or not DTC 31, 32, 33, 34, or 35 is displayed.
- When DTC 31 is displayed, check the right front height control solenoid valve circuit.
- When DTC 32 is displayed, check the left front height control solenoid valve circuit.
- When DTC 33 is displayed, check the right rear height control solenoid valve circuit.
- When DTC 34 is displayed, check the left rear height control solenoid valve circuit.
- When DTC 35 is displayed, check the height control exhaust valve circuit.
- If DTC 74 (power source circuit) is displayed, perform inspection necessary for DTC 74 first ([See page DI-119](#)).

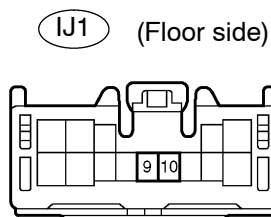
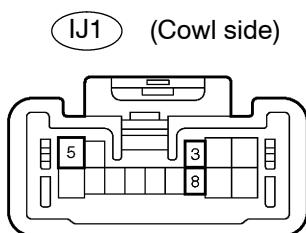
1 Does vehicle height change when terminals of height control connector are connected?\*1



Front Vehicle Height:



Rear Vehicle Height:



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**PREPARATION:**

- Remove the driver side scuff plate and pull out the floor carpet.
- Disconnect the IJ1 connector.

**CHECK:**

Measure the resistance between each terminal of IJ1 connector and body ground.

**OK:**

Terminal	Resistance
3 - Body ground	10 - 14 $\Omega$
11 - Body ground	10 - 14 $\Omega$
12 - Body ground	10 - 14 $\Omega$
9 - Body ground	10 - 14 $\Omega$
10 - Body ground	10 - 14 $\Omega$

**CHECK:**

- Turn the ignition switch ON.
- Check the change in vehicle height when the terminals of the IJ1 connector (cowl side) shown below are connected.

Front RH Vehicle Height	Terminal	Specified Condition
Raised	5 - 8 - 11	Continuity
Lowered	3 - 5 - 11	Continuity

Front LH Vehicle Height	Terminal	Specified Condition
Raised	5 - 8 - 12	Continuity
Lowered	3 - 5 - 12	Continuity

Rear RH Vehicle Height	Terminal	Specified Condition
Raised	5 - 8 - 10	Continuity
Lowered	3 - 5 - 10	Continuity

Rear LH Vehicle Height	Terminal	Specified Condition
Raised	5 - 8 - 9	Continuity
Lowered	3 - 5 - 9	Continuity

**OK:**

The vehicle height is raised or lowered as shown in the above table.

**NOTICE:**

- To protect the circuit, never connect terminals 3 and 5 of the J1 connector. If these terminals are shorted, replace the AIR SUS fuse.
- Do not operate the compressor if a valve is in the exhaust condition.
- Do not operate the compressor for more than 5 minutes.

**HINT:**

The checks can also be done with the hand-held tester. (See operation's manual.)

**NO****Go to step 3.****YES**

\*1: When the compressor motor, front and rear height control solenoid valves and exhaust valve are actuated directly with the height control connector, the ECU stores DTC 31, 32, 33, 34, 35 or 41 in memory. Furthermore, if the vehicle height is not raised or lowered in step 1, it may be possible that battery voltage is not applied to terminal 3 of the height control connector.

**2**

**Check for open and short circuit in harness and connector between suspension control ECU and J1 connector (See page N-30).**

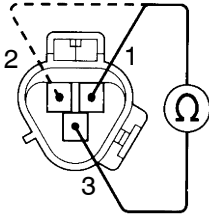
**NG****Repair or replace harness or connector.****OK**

**Proceed to next circuit inspection shown on problem symptoms table (See page DI-79).\***

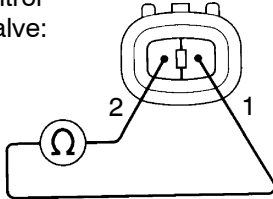
\*2: When a problem cannot be found by performing the inspection in step 1 and 2, the circuit for the front and rear height control solenoid valves and exhaust valve can be judged NORMAL. However, if DTCs 31, 32, 33, 34, or 35 were displayed prior to step 1 and 2, check and replace the suspension control ECU.

### 3 Check height control solenoid valve or exhaust valve.

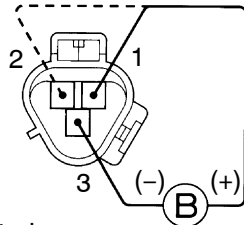
Height Control Solenoid Valve:



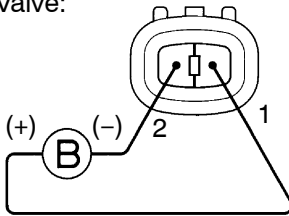
Height Control Exhaust Valve:



Height Control Solenoid Valve:



Height Control Exhaust Valve:



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W00338  
W00337  
W00354

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**PREPARATION:****Front height control solenoid valve and exhaust valve:**

- Remove the RH front wheel and front fender liner.
- Disconnect the valve connector.

**Rear height control solenoid valve:**

- Remove the luggage compartment trim front cover.
- Disconnect the valve connector.

**CHECK:**

Measure the resistance between terminals.

**OK:**

Valve	Terminals	Resistance
Front height control valve	1 - 3	10 - 14 Ω
Front height control valve	2 - 3	10 - 14 Ω
Rear height control valve	1 - 3	10 - 14 Ω
Rear height control valve	2 - 3	10 - 14 Ω
Exhaust valve	1 - 2	10 - 14 Ω

**CHECK:**

Check the operating sound of valves when battery positive voltage is applied to the terminals shown below.

Valve	Battery ⊕	Battery ⊖
Front height control valve	1	3
	2	3
Rear height control valve	1	3
	2	3
Exhaust valve	1	2

**OK:**

It should make an operating sound (click).

**NG**

**Replace height control solenoid valve or exhaust valve.**

**OK**

4 Check for open and short circuit in harness and connector between suspension control ECU and valve, valve and body ground (See page IN-30).

NG

Repair or replace harness or connector.

OK

Replace suspension control ECU.