

DTC	31, 32, 33, 34, 35	Height Control Valves, Exhaust Valve Circuit
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CIRCUIT DESCRIPTION

The ECU energizes the height control valve solenoid, 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 valve solenoid but also the exhaust valve solenoid which open the valve and discharge the compressed air in the pneumatic cylinder to the atmosphere.

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

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

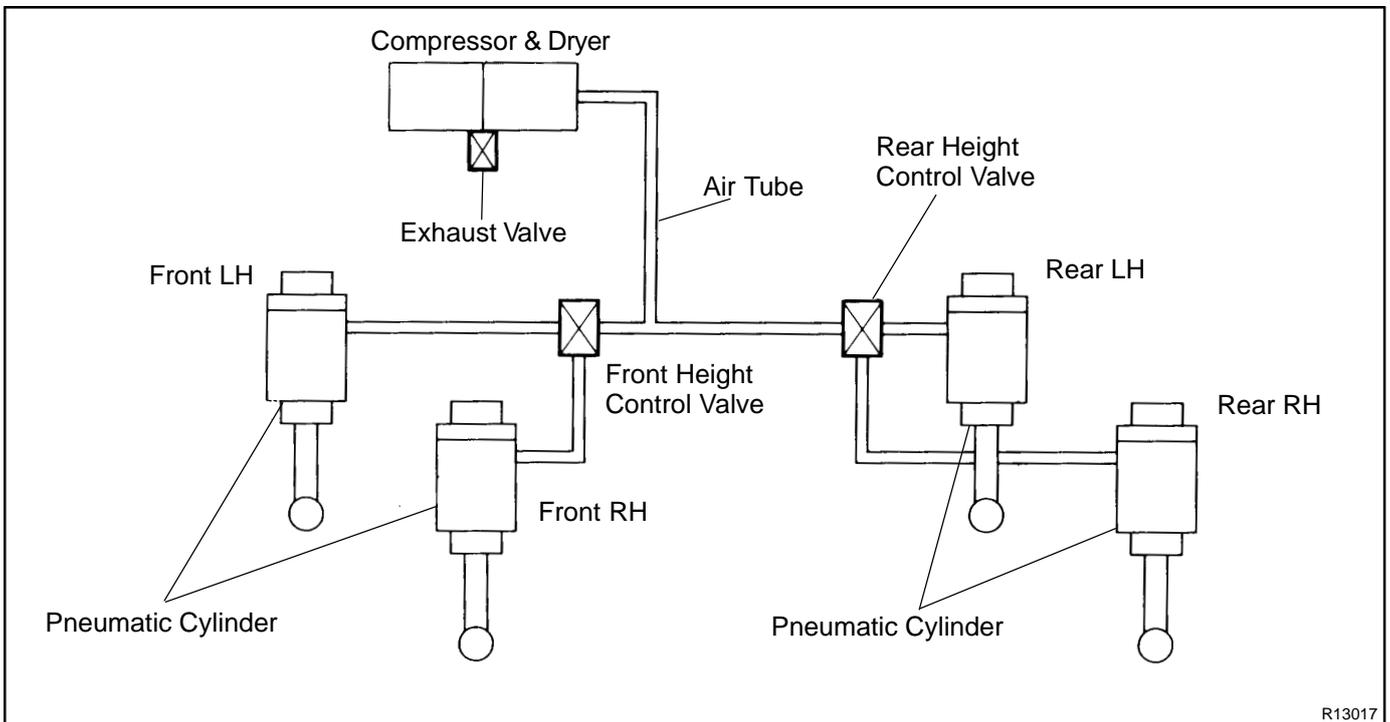
DTC No.	DTC Detecting Condition	Trouble Area
31, 32, 33, 34	Open or short circuit in height control valve circuit	<ul style="list-style-type: none"> • Harness or connector between ECU and height control valve • Height control valve • ECU
35	Open or short circuit in exhaust valve circuit	<ul style="list-style-type: none"> • Harness or connector between ECU and exhaust valve • Exhaust valve • ECU

HINT:

- Code 31 corresponds to the front RH height control valve circuit.
- Code 32 corresponds to the front LH height control valve circuit.
- Code 33 corresponds to the rear RH height control valve circuit.
- Code 34 corresponds to the rear LH height control valve circuit.

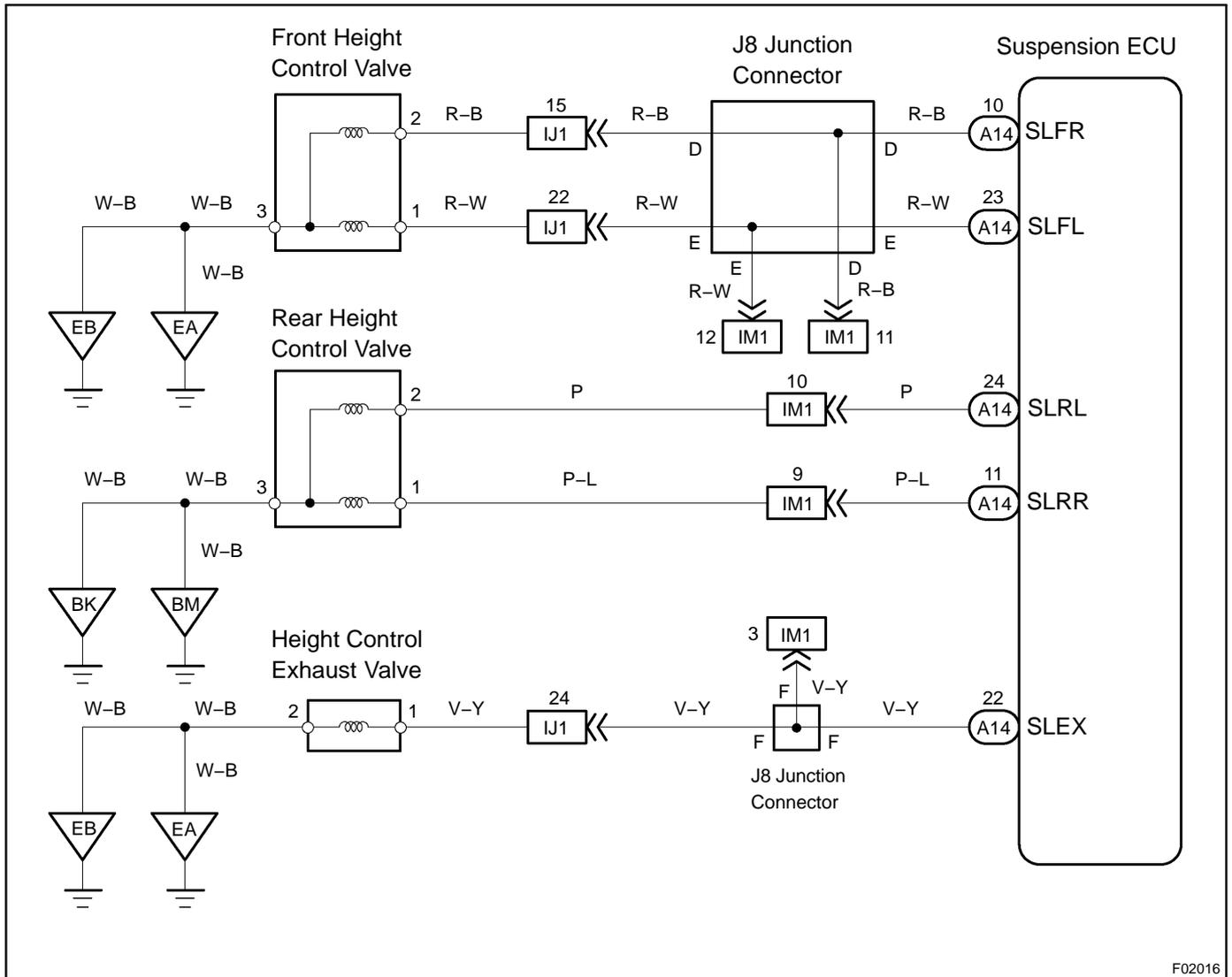
Once the ECU stores DTC 31, 32, 33, 34 or 35 in memory, vehicle height control is not carried out until a normal signal is input to the ECU from the height control valves and exhaust valve.

However, control is resumed if the ignition switch is turned off, then on again.



R13017

WIRING DIAGRAM



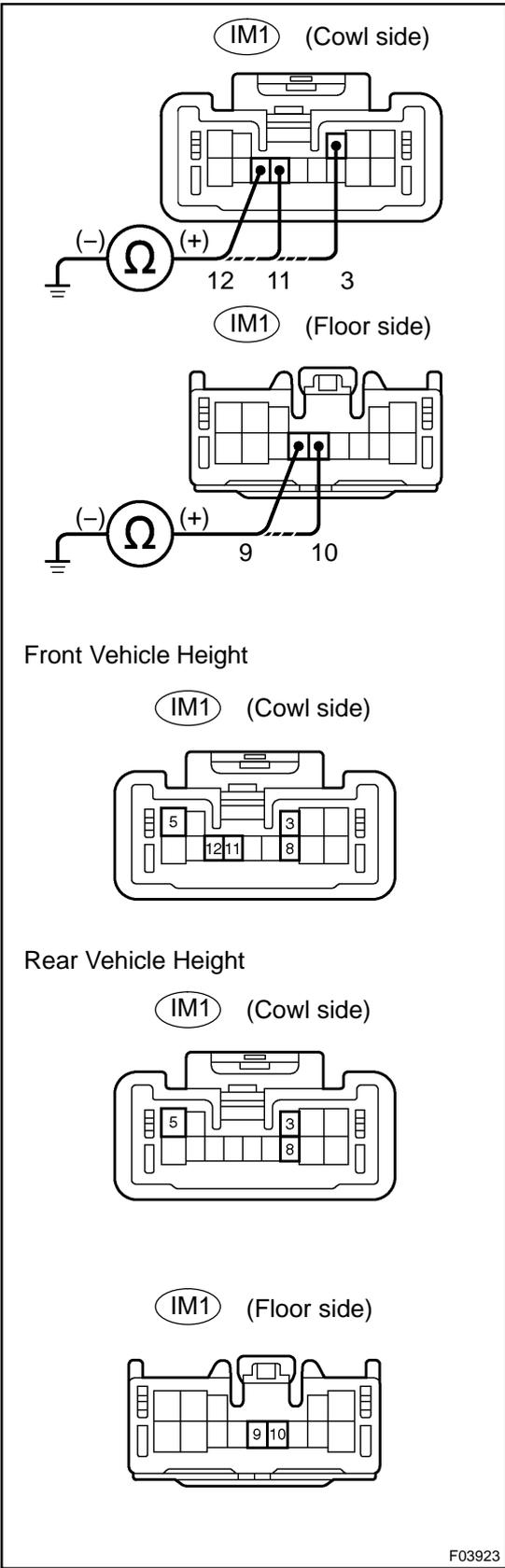
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INSPECTION PROCEDURE

HINT:

- Proceed with troubleshooting in accordance with the flow chart shown below, regardless of whether or not DTC 31, 32, 33, 34, or 35 is displayed.
- When DTC 31 is displayed, check the front RH height control valve circuit.
- When DTC 32 is displayed, check the front LH height control valve circuit.
- When DTC 33 is displayed, check the rear RH height control valve circuit.
- When DTC 34 is displayed, check the rear LH height control valve circuit.
- When DTC 35 is displayed, check the exhaust valve circuit.
- If DTC 74 (power source circuit) is displayed, perform inspection necessary for DTC 74 first (See page [DI-275](#)).

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



PREPARATION:

- (a) Remove the instrument panel box assembly, scuff plate and floor carpet (See page BO-83).
- (b) Disconnect the IM1 connector.

CHECK:

Measure the resistance between terminals of IM1 connector and body ground.

OK:

Terminal	Resistance
3 - Body ground	9 - 15 Ω
11 - Body ground	9 - 15 Ω
12 - Body ground	9 - 15 Ω
9 - Body ground	9 - 15 Ω
10 - Body ground	9 - 15 Ω

CHECK:

- (a) Turn the ignition switch ON.
- (b) Check the change in vehicle height when the terminals of the IM1 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 IM1 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 LEXUS hand-held tester.
(See operation's manual.)

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

*1: When the compressor motor, front and rear height control 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 positive voltage is not applied to terminal 3 of the height control connector.

2

**Check harness and connectors between suspension ECU and IM1 connector
(See page [IN-30](#)).**

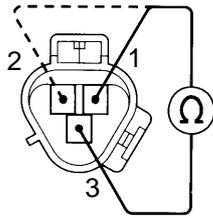
NG**Repair or replace harness or connector.****OK**

**Proceed to next circuit inspection shown on
problem symptoms table
(See page [DI-247](#)).^{*2}**

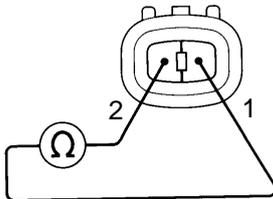
*2: When a problem cannot be found by performing the inspection in step 1 and 2, the circuit for the front and rear height control valves and exhaust valve can be judged NORMAL. However, if DTCs 31, 32, 33, 34, or 35 were displayed prior to step 1 and 2, check and replace the suspension ECU.

3 Check height control valve or exhaust valve.

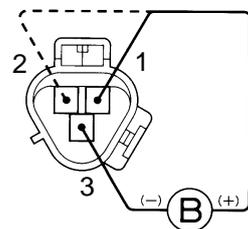
Height Control Valve



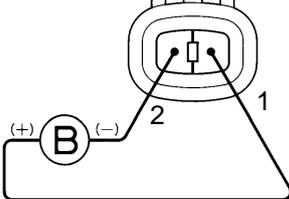
Exhaust Valve



Height Control Valve



Exhaust Valve



W 00336
W 00338
W 00337
W 00354

F00323

PREPARATION:

- 1. FOR THE FRONT HEIGHT CONTROL VALVE AND EXHAUST VALVE**
 - (a) Remove then front RH fender liner.
 - (b) Disconnect the valve connector.
- 2. FOR THE REAR HEIGHT CONTROL VALVE**
 - (a) Remove the luggage compartment trim front cover.
 - (b) Disconnect the valve connector.

CHECK:

Measure the resistance between terminals.

OK:

Valve	Terminals	Resistance
Front height control valve	1 - 3	9 - 15 Ω
Front height control valve	2 - 3	9 - 15 Ω
Rear height control valve	1 - 3	9 - 15 Ω
Rear height control valve	2 - 3	9 - 15 Ω
Exhaust valve	1 - 2	9 - 15 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 valve or exhaust valve.

OK

Check and repair harness and connectors between height control valve or exhaust valve and height control connector.