

DTC	21, 22, 23, 24	Suspension Control Actuator Circuit
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## CIRCUIT DESCRIPTION

ECU sends a signal to suspension control actuator to drive the rotary valve of the shock absorber changing the shock absorber damping force. A suspension control actuator is fitted to each pneumatic cylinder. The actuator is driven electromagnetically by step motor so that it can accurately follow the driving conditions that change frequently.

DTC No.	DTC Detecting Condition	Trouble Area
21, 22, 23, 24	Open or short circuit in suspension control actuator circuit	<ul style="list-style-type: none"> <li>• Harness or connector between ECU and suspension control actuator</li> <li>• Suspension control actuator</li> <li>• ECU</li> </ul>

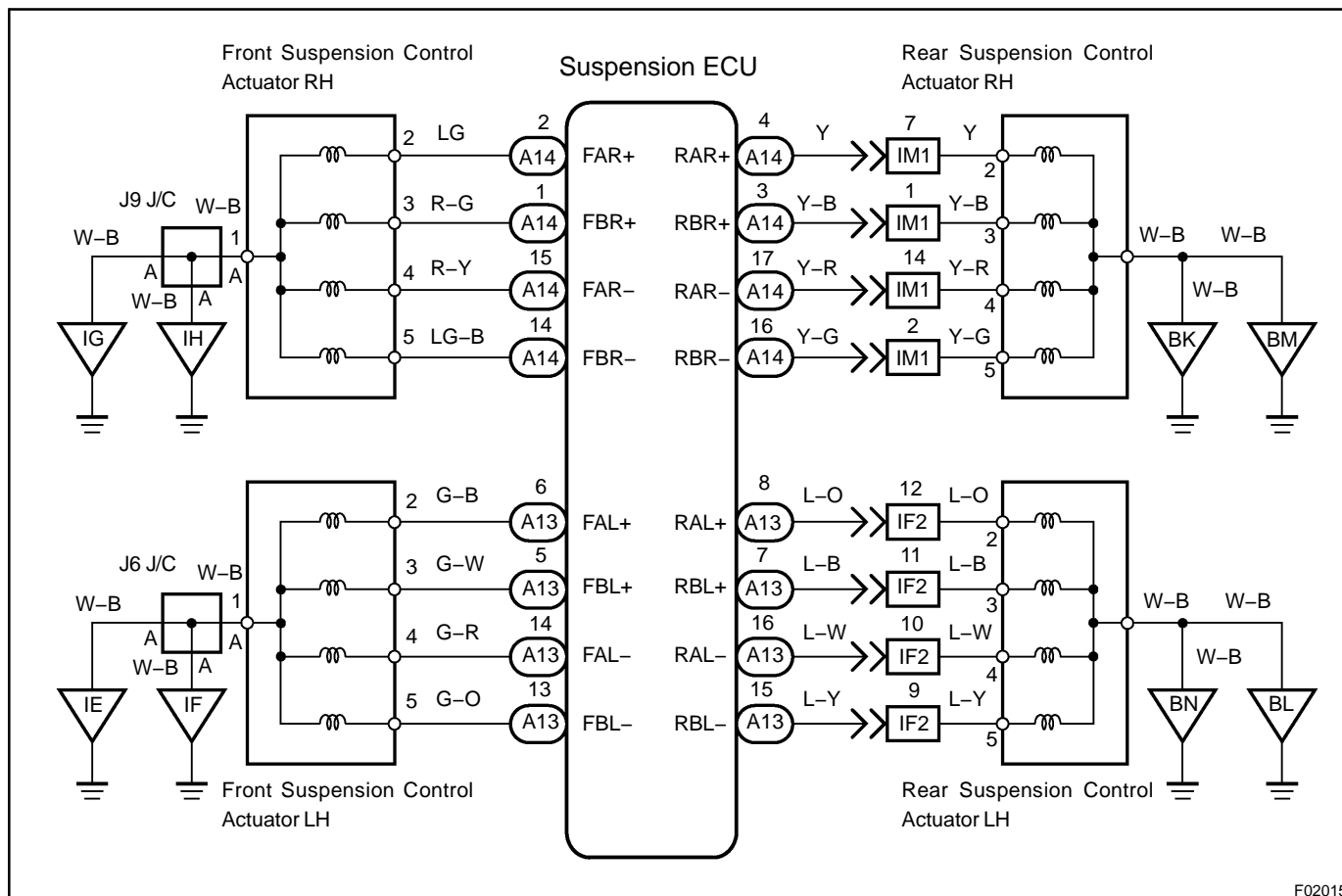
### HINT:

- Code 21 corresponds to the front RH suspension control actuator circuit.
- Code 22 corresponds to the front LH suspension control actuator circuit.
- Code 23 corresponds to the rear RH suspension control actuator circuit.
- Code 24 corresponds to the rear LH suspension control actuator circuit.

Once the ECU stores DTC 21, 22, 23, or 24 in memory, damping force is not carried out until a normal signal is input to the ECU from the suspension control actuator.

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

## WIRING DIAGRAM



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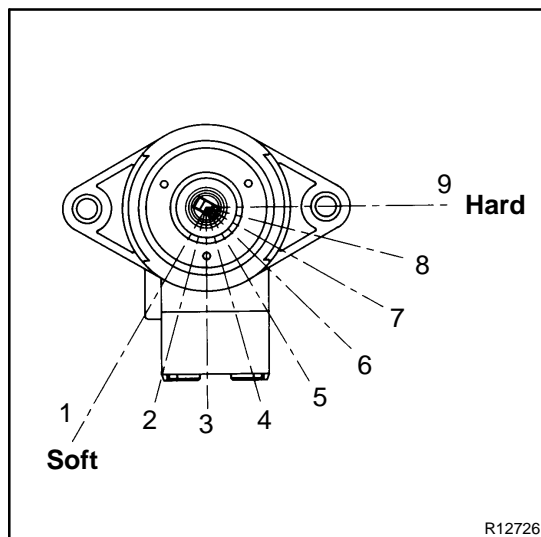
## INSPECTION PROCEDURE

### HINT:

- When DTC "21" is displayed, check the front RH suspension control actuator circuit.
- When DTC "22" is displayed, check the front LH suspension control actuator circuit.
- When DTC "23" is displayed, check the rear RH suspension control actuator circuit.
- When DTC "24" is displayed, check the rear LH suspension control actuator circuit.
- When DTC 21, 22, 23, and 24 displayed, perform inspection step 2.

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### Check operation of suspension control actuator.



### PREPARATION:

#### FOR THE FRONT SUSPENSION CONTROL ACTUATOR

- Remove the actuator cover and actuator.
- Turn the ignition switch ON.
- Connect the terminals  $T_D$  and  $E_1$  of the DLC2.

#### FOR THE REAR SUSPENSION CONTROL ACTUATOR

- Remove the rear seat and package tray trim.
- Remove the actuator cover and actuator.
- Turn the ignition switch ON.
- Connect the terminals  $T_D$  and  $E_1$  of the DLC2.

### CHECK:

Check that the suspension control actuator is driven 1 step further toward the hard side each time the height control switch is pushed on the HIGH side.

### OK:

The actuator operates.

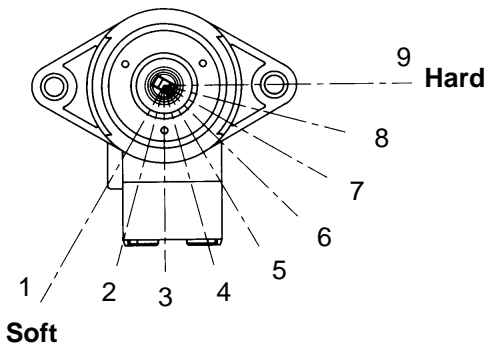
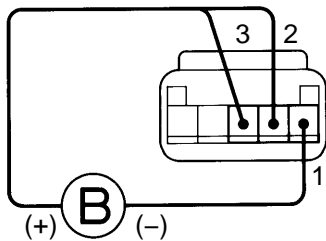
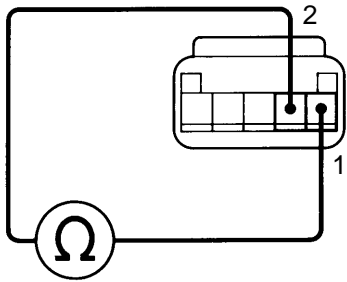
OK

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

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# Check suspension control actuator.



W00334  
W00333  
R12726

F00321

## **PREPARATION:**

### **FOR THE FRONT SUSPENSION CONTROL ACTUATOR**

- (a) Remove the actuator cover and actuator.
- (b) Disconnect the actuator connector.

### **FOR THE REAR SUSPENSION CONTROL ACTUATOR**

- (a) Remove the rear seat and package tray trim.
- (b) Remove the actuator cover and actuator.
- (c) Disconnect the actuator connector.

## **CHECK:**

Measure resistance between terminals of suspension control actuator connector shown below.

## **OK:**

Terminals	Resistance
1 – 2	14.7 – 15.7 Ω
1 – 3	14.7 – 15.7 Ω
1 – 4	14.7 – 15.7 Ω
1 – 5	14.7 – 15.7 Ω

## **CHECK:**

- (a) Using a screwdriver, located output shaft of the actuator in soft position.
- (b) Check that the suspension control actuator is driven 1 step further toward the hard side when battery positive voltage is applied to the terminals of suspension control actuator connector shown below.

## **OK:**

Battery ⊕	Battery ⊖	Position
2 and 3	1	Soft 1 → 2
3 and 4	1	2 → 3
4 and 5	1	3 → 4
5 and 2	1	4 → 5
2 and 3	1	5 → 6
3 and 4	1	6 → 7
4 and 5	1	7 → 8
5 and 2	1	8 → 9 Hard

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Replace suspension control actuator.

OK

3	Check harness and connectors between suspension ECU and actuator, actuator and body ground (See page <a href="#">IN-30</a> ).
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**NG****Repair or replace harness or connectors.****OK**

**Proceed to next circuit inspection shown on problem symptoms table (See page [DI-247](#)).<sup>\*1</sup>**

<sup>\*1</sup>: However, when DTC 21, 22, 23 or 24 is displayed, check and replace suspension ECU.