

PROBLEM SYMPTOMS TABLE

If a normal code is displayed during the DTC check but the problem still occurs, check the circuits for each problem symptom in the order given in the table below and proceed to the relevant troubleshooting page.

Symptom	Suspect Area	See page
Lighting up position of height control indicator light does not change according to operation of height control switch.	<ol style="list-style-type: none"> 1. Check that the height control switch is not "OFF". 2. Check the DTC. 3. Perform the INPUT SIGNAL CHECK. 	<p>–</p> <p>DI-208</p> <p>DI-208</p>
Vehicle height control function does not operate.	<p>When the followings 1. to 6. are all normal and the problem is still occurring, replace ECU.</p> <ol style="list-style-type: none"> 1. Check the power source circuit of the ECU. 2. Check if it is included in the inhibited conditions of the height control. (Rough road judgment, Diff. lock, etc.) 3. Check the indicator light. 4. Check the DTC. 5. Perform the HEIGHT CONTROL OPERATION TEST. 6. Perform the INPUT SIGNAL CHECK. 	<p>DI-294</p> <p>–</p> <p>DI-208</p> <p>DI-208</p> <p>DI-208</p> <p>DI-208</p>
Vehicle height control operates, but the vehicle height does not raise to "N" or "HI" position.	<ol style="list-style-type: none"> 1. Check that the loading weight does not exceed the pre-determined value. 2. Check if any heavy object such as a winch is installed. 3. Check that the fluid does not have a shortage. 4. Check the DTC. 5. Perform the INPUT SIGNAL CHECK. 6. Check the front and rear shock absorber fluid pressure. 7. Check the vehicle height. (Height control sensor link) 	<p>–</p> <p>–</p> <p>–</p> <p>DI-208</p> <p>DI-208</p> <p>SA-305</p> <p>SA-313</p>
Vehicle height raises, but vehicle height does not go down to "N" or "LO" position.	<ol style="list-style-type: none"> 1. Check that the vehicle weight is extremely light. 2. Check if there is anything caught in the absorber and coil spring. 3. Check the DTC. 4. Perform the INPUT SIGNAL CHECK. 5. Check the front and rear shock absorber fluid pressure. 6. Check the vehicle height. (Height control sensor link) 	<p>–</p> <p>–</p> <p>DI-208</p> <p>DI-208</p> <p>SA-305</p> <p>SA-313</p>
Vehicle height is extremely low when vehicle is parked.	<p>HINT:</p> <p>Vehicle height may go down because of the atmosphere temperature change when vehicle is parked.</p> <p>Check the fluid leakage of the gas chamber, shock absorber, etc. and if it is normal, replace the control valve assembly.</p>	<p>SA-305</p>
Vehicle leans to the right or left.	<ol style="list-style-type: none"> 1. Check if the luggage are loaded with a slant. 2. Check the DTC. 3. Adjust the vehicle height. 4. Check the front and rear shock absorber fluid pressure. 5. Check the control valve assembly. (Front and rear gate valve) 6. Check fluid clog in the fluid line and shock absorber, etc. 	<p>–</p> <p>DI-208</p> <p>SA-313</p> <p>SA-305</p> <p>DI-239</p> <p>–</p>

Vehicle height raise control requires a long time.	<p>HINT: Vehicle raise control may require a long time in case that the ambient temperature is -15°C (5°F) or less or the accumulation pressure of the height control accumulator is not completed.</p> <p>When the followings 1. to 6. are all normal and the problem is still occurring, replace the AHC pump & motor.</p> <ol style="list-style-type: none"> 1. Check that the loading weight does not exceed the pre-determined value. 2. Check that the vehicle weight is extremely light. 3. Check the DTC. 4. Check the front and rear shock absorber fluid pressure. 5. Check the vehicle height. (Height control sensor link) 6. Check that the fluid pressure of the height control accumulator is not lost. 	<p>–</p> <p>–</p> <p>DI-208</p> <p>SA-305</p> <p>DI-239</p> <p>–</p>
Vehicle height down control requires a long time.	<p>HINT: Vehicle height down control may require a long time in case that the ambient temperature is -15°C (5°F) or less.</p> <p>When the followings 1. to 3. are all normal and the problem is still occurring, replace the control valve assembly.</p> <ol style="list-style-type: none"> 1. Check that the vehicle weight is extremely light. 2. Check the front and rear shock absorber fluid pressure. 3. Check the vehicle height. (Height control sensor link) 	<p>–</p> <p>SA-305</p> <p>DI-239</p>
Vehicle leans to the front or rear.	<p>When the followings 1. to 4. are all normal and the problem is still occurring, replace the control valve assembly.</p> <ol style="list-style-type: none"> 1. Check that the height control switch is not "OFF". 2. Check fluid leakage. (Gas chamber, shock absorber, etc.) 3. Check the DTC. 4. Check the vehicle height. (Height control sensor link) 	<p>–</p> <p>SA-305</p> <p>DI-208</p> <p>DI-239</p>
Vehicle goes down leaning.	<p>When the followings 1. and 2. are all normal and the problem is still occurring, replace the control valve assembly.</p> <ol style="list-style-type: none"> 1. Check air leakage of the gas chamber. (Check the fluid level change of the reservoir tank.) 2. Perform the DAMPING FORCE CONTROLLING CONDITION CHECK. 	<p>SA-338</p> <p>DI-208</p>
Abnormal sound sounds from AHC system.	<p>When the followings 1. and 2. are all normal and the problem is still occurring, replace the pump attenuator.</p> <ol style="list-style-type: none"> 1. Check interference of the fluid line. 2. Check interference of the AHC pump & motor. 	<p>–</p> <p>–</p>
Vehicle ride is uncomfortable.	<p>HINT: Vehicle ride may be uncomfortable soon after the starting when the ambient temperature is -10°C (14°F) or less because the fluid viscosity is high.</p> <p>When the followings 1. to 7. are all normal and the problem is still occurring, replace shock absorber.</p> <ol style="list-style-type: none"> 1. Check the power source circuit of the ECU. 2. Check the DTC. 3. Perform the DAMPING FORCE CONTROLLING CONDITION CHECK. 4. Perform the INPUT SIGNAL CHECK. 5. Check resistance of the damping force control actuator. 6. Check air leakage of the gas chamber. (Check the fluid level change of the reservoir tank.) 7. Check the front and rear shock absorber fluid pressure. 	<p>DI-294</p> <p>DI-208</p> <p>DI-208</p> <p>DI-208</p> <p>DI-236</p> <p>SA-338</p> <p>SA-305</p>

Vehicle ride too soft.	<p>When the followings 1. to 5. are all normal and the problem is still occurring, replace the damping force control actuator or shock absorber.</p> <ol style="list-style-type: none"> 1. Check the power source circuit of the ECU. 2. Check the DTC. 3. Perform the DAMPING FORCE CONTROLLING CONDITION CHECK. 4. Perform the INPUT SIGNAL CHECK. 5. Check resistance of the damping force control actuator. 	<p>DI-294 DI-208 DI-208 DI-208 DI-236</p>
Vehicle steering roll is different from right and left turn.	<p>When the followings 1. to 7. are all normal and the problem is still occurring, replace the damping force control actuator or shock absorber.</p> <ol style="list-style-type: none"> 1. Check if the luggage are loaded with a slant. 2. Check the power source circuit of the ECU. 3. Check the DTC. 4. Perform the DAMPING FORCE CONTROLLING CONDITION CHECK. 5. Perform the INPUT SIGNAL CHECK. 6. Check resistance of the damping force control actuator. 7. Check air leakage of the gas chamber. (Check the fluid level change of the reservoir tank.) 	<p>- DI-294 DI-208 DI-208 DI-208 DI-236 SA-338</p>
Vehicle braking dive and starting squat are large.	<p>When the followings 1. to 5. are all normal and the problem is still occurring, replace the damping force control actuator or shock absorber.</p> <ol style="list-style-type: none"> 1. Check the power source circuit of the ECU. 2. Check the DTC. 3. Perform the DAMPING FORCE CONTROLLING CONDITION CHECK. 4. Perform the INPUT SIGNAL CHECK. 5. Check resistance of the damping force control actuator. 	<p>DI-294 DI-208 DI-208 DI-208 DI-236</p>
DTC check cannot be done.	<ol style="list-style-type: none"> 1. Check the height control OFF indicator circuit. 2. Check the Tc terminal circuit. 3. Check the power source circuit of the ECU. 	<p>DI-299 DI-306 DI-294</p>
INPUT SIGNAL CHECK cannot be done.	<ol style="list-style-type: none"> 1. Check the Ts terminal circuit. 2. Check the power source circuit of the ECU. 	<p>DI-308 DI-294</p>

CIRCUIT INSPECTION

DTC	C1711 / 11 to C1713 / 13	Height Control Sensor Circuit
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CIRCUIT DESCRIPTION

Inside each sensor, a brush integrated with the control sensor rotor shaft moves above the resistor, 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 indication the shaft rotation angle.

DTC No.	DTC Detecting Condition	Trouble Area
C1711 / 11 C1712 / 12 C1713 / 13	When the following condition is consisting and the abnormal signal continued for 1 sec. at the vehicle speed 8 km/h (5 mph) or more: Detecting the abnormal signal (Height control sensor terminal voltage of ECU is 0.3 V or less or 4.7 V or more) for every 0.01 sec. and that continued for 0.2 sec.	<ul style="list-style-type: none"> • Right front, left front, rear height control sensor • Each height control sensor circuit • Suspension control ECU

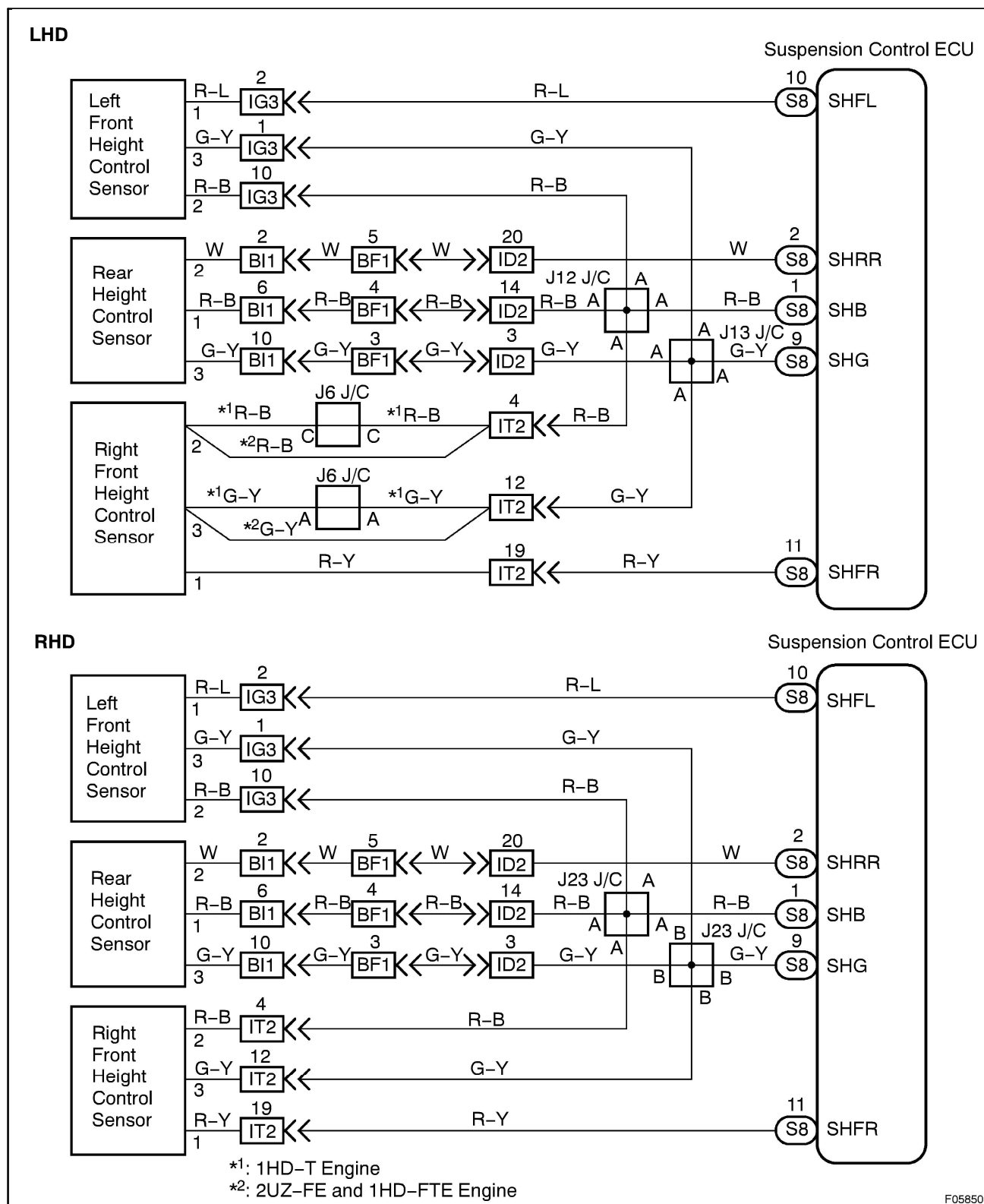
HINT:

- 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 rear height control sensor circuit.

Fail safe function:

If a trouble occurs in the height control sensor circuit, the height control is prohibited after the ECU has adjusted the vehicle height to the standard (fluid pressure correspond to the standard height).

WIRING DIAGRAM



INSPECTION PROCEDURE

1	Check output value of height control sensor.
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IN CASE OF USING HAND-HELD TESTER:**PREPARATION:**

- (a) Connect the hand-held tester to the DLC3.
- (b) Turn the ignition switch ON and push the hand-held tester main switch ON.
- (c) Select the DATALIST mode on the hand-held tester.

CHECK:

Check that the vehicle height value of the height control sensor displayed by the hand-held tester is changing when pushing the "UP" or "DOWN" button of the height select switch.

OK:

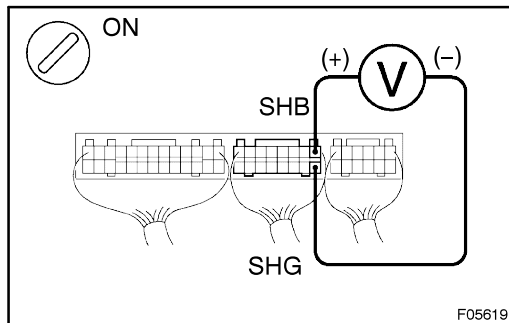
Vehicle height value must be changing.

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Go to step 2.

OK

Clear the DTC (See page DI-208).

**IN CASE OF NOT USING HAND-HELD TESTER:****PREPARATION:**

Remove the suspension control ECU with connectors still connected.

CHECK:

- (a) Turn the ignition switch ON.
- (b) Measure voltage between terminals SHB and SHG of suspension control ECU connector.

OK:

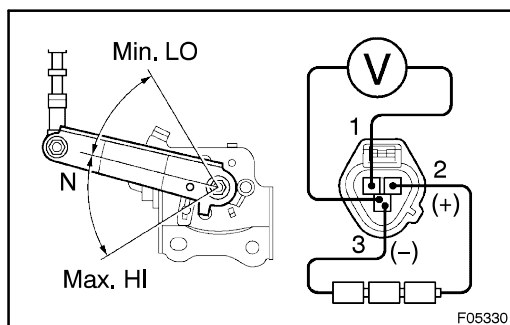
Voltage: Approx. 5 V

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Check and replace suspension control ECU.

OK

2 Check height control sensor.



FRONT HEIGHT CONTROL SENSOR

PREPARATION:

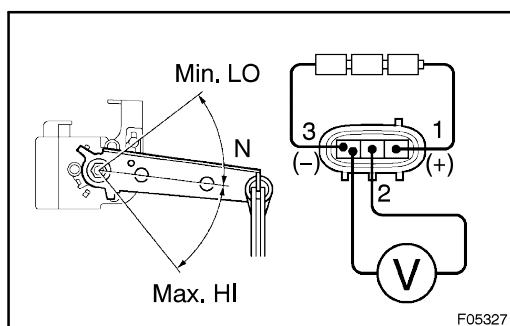
- Disconnect the height control sensor connector.
- Remove the height control sensor.

CHECK:

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

OK:

Sensor Link Position	Voltage
Max. HI	Approx. 4.05 V
N	Approx. 2.25 V
Min. LO	Approx. 0.45 V



REAR HEIGHT CONTROL SENSOR

PREPARATION:

- Disconnect the height control sensor connector.
- Remove the height control sensor.

CHECK:

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

OK:

Sensor Link Position	Voltage
Max. HI	Approx. 4.05 V
N	Approx. 2.25 V
Min. LO	Approx. 0.45 V

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Replace height control sensor.

OK

3	Check for open and short circuit in harness and connector between height control sensor, fluid pressure sensor, fluid temp. sensor and suspension control ECU (See page IN-35).
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Repair or replace harness or connector.

OK

Clear the DTC (See page DI-208).