

# PRE-CHECK

## 1. DIAGNOSIS SYSTEM

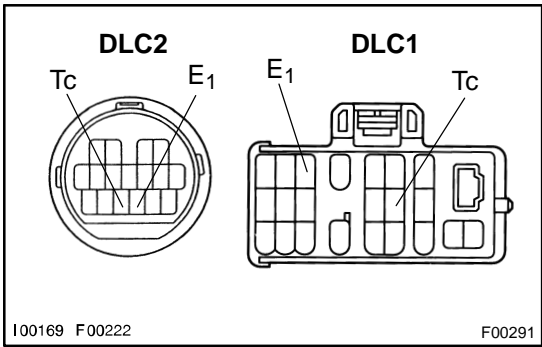
- (a) Check the indicator light.
  - (1) Turn ignition switch ON.
  - (2) Check that height control indicator lights come on immediately.

### HINT:

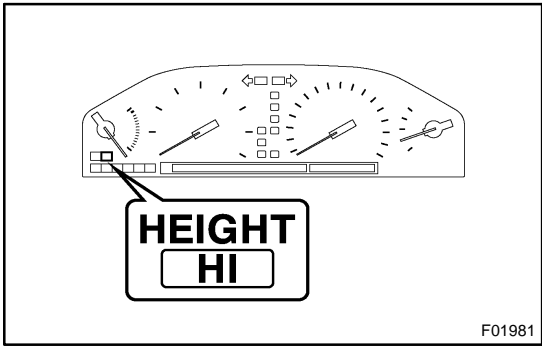
- When the height control switch is pressed to the "HIGH" side, the height control indicator light continues to light up.
- When the height control indicator light flashes at 1 second intervals, it indicates that the ECU stores the malfunction codes in memory.

If the following troubles occur in the indicator light check, proceed to check the corresponding circuit and carry out trouble-shooting.

Problem Symptom	Inspect Circuit	See page
<ul style="list-style-type: none"> <li>• Even though the height control SW is pushed to the NORM side, the height indicator light continues to light up</li> <li>• Even though the height control SW is pushed to the HIGH side, the height control indicator light do not light up</li> </ul>	<ul style="list-style-type: none"> <li>• Height Control Switch Circuit</li> </ul>	<p><a href="#">DI-293</a></p>



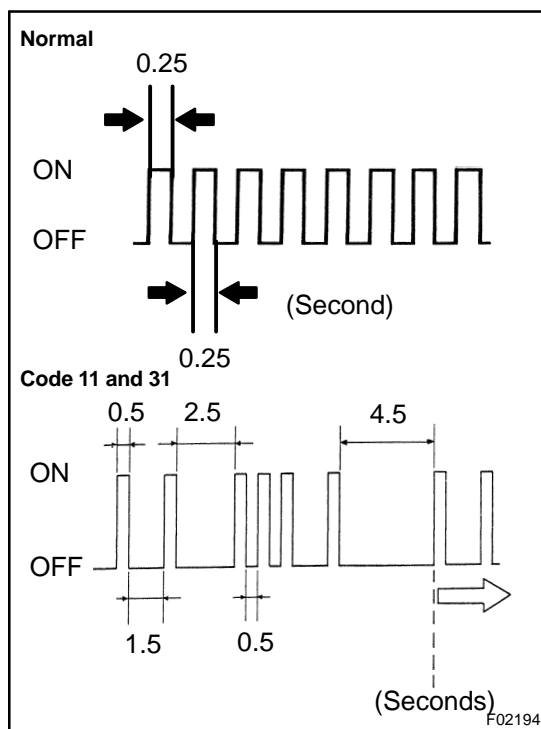
- (b) Check the DTC.
  - (1) Using SST, connect terminals between Tc and E<sub>1</sub> of DLC1 or DLC2.  
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  - (2) Turn ignition switch ON.



- (3) Read the DTC output by height control indicator light inside the meter.

### HINT:

- When the engine is not starting, DTC "73" is output. This is not abnormal.
- When a DTC is not output, check the Tc terminal circuit on page [DI-297](#).

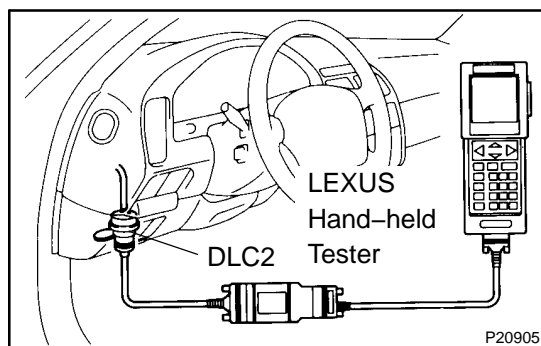


As an example, the blinking patterns for normal code, 11 and 31 are as shown on the illustration.

- (4) Check the malfunction using the code table on page [DI-242](#).
- (5) After completing the check, disconnect terminals Tc and E<sub>1</sub>, and turn off the display.

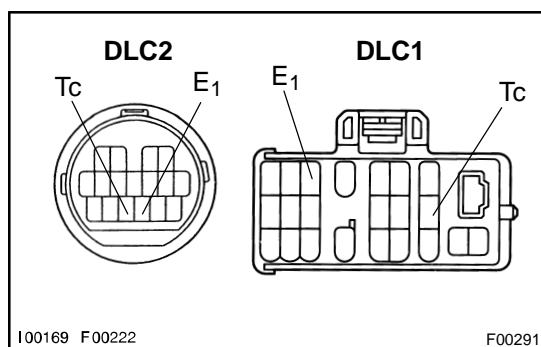
**HINT:**

In the event of 2 or more malfunction codes, indication will begin from the smaller numbered code and continue in order to the larger.



- (c) Using LEXUS hand-held tester, check the DTC.
  - (1) Hook up the LEXUS hand-held tester to the DLC2.
  - (2) Read the DTCs by following the prompts on the tester screen.

Please refer to the LEXUS hand-held tester operators manual.



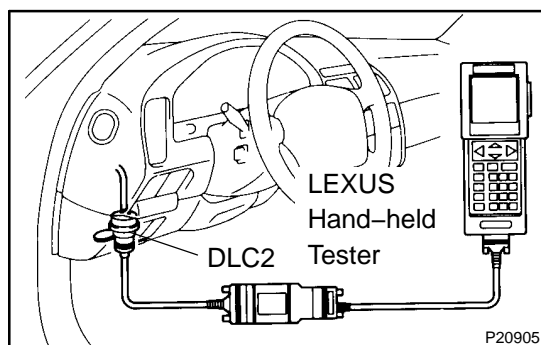
- (d) Cancelling the DTC.
  - (1) With the ignition switch ON, using SST, connect terminals Tc and E<sub>1</sub> of DLC1 or DLC2.

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  - (2) Depress the brake pedal 8 or more times within 3 seconds.

**NOTICE:**

By completing the above operation, the DTC of the ABS and TRAC will be cancelled out.



**2. ECU DATA MONITOR BY USING LEXUS HAND-HELD TESTER**

- (a) Hook up the LEXUS hand-held tester to the DLC2.
- (b) Monitor the ECU data by following the prompts on the tester screen.

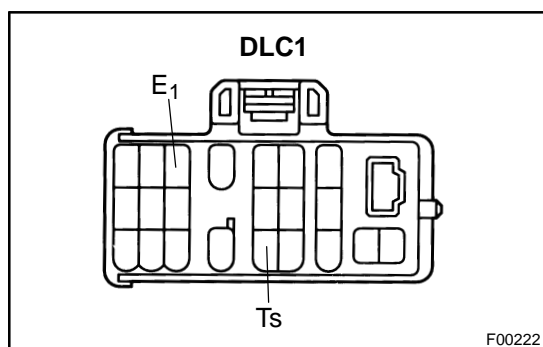
**HINT:**

LEXUS hand-held tester has a "Snapshot" function and record the monitored data.

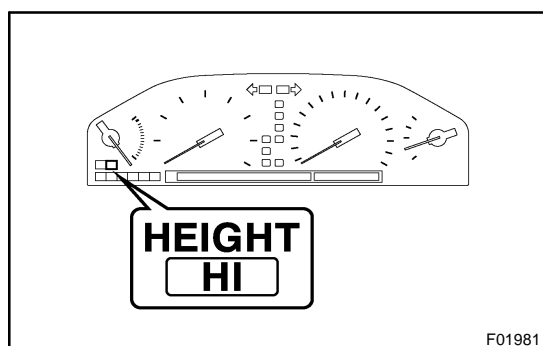
**3. INPUT SIGNAL CHECK (TEST MODE CHECK)****HINT:**

This function check if signals from the steering sensor and stop light switch etc. are being input normally to the ECU.

- (a) Turn the ignition switch OFF.
- (b) Set each of the check items in the table below to the condition in Operation (A).



- (c) Using SST, connect terminals Ts and E<sub>1</sub> of DLC1.  
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- (d) Turn ignition switch ON or engine is running.

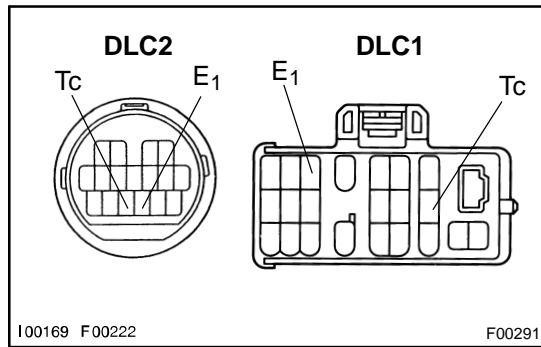
**HINT:**

- At this time the height control indicator light come on 2 seconds. After, this light flashes at 0.25 second intervals.
  - When the height control indicator is not flashes, check the Ts terminal circuit on page [DI-299](#).
- (e) Each of the check items is set to the condition in Operation (B).

**HINT:**

When operation of the check items, the height control indicator light come on 1 second.

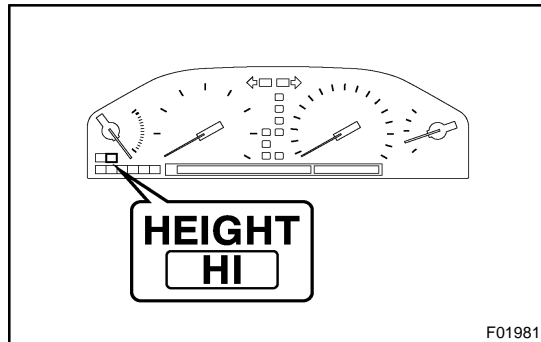
Check Item	Operation (A)	Operation (B)
Steering Sensor	Steering straight ahead	Steering angle 36° degrees or larger
Stop Light Switch	OFF (Brake pedal not depressed)	ON (Brake pedal depressed)
Door Courtesy Switch	OFF (All doors closed)	ON (Each door opened)
Throttle Position Sensor	Shift position N	N → D
Vehicle Speed Sensor	Vehicle speed below 12 mph (20 km/h)	Vehicle speed 12 mph (20 km/h) or higher
Height Control Switch	NORM position	HIGH position
Acceleration Sensor Front RH	–	Keep the vehicle still without any vertical movement for 1 second
Acceleration Sensor Front LH	–	Keep the vehicle still without any vertical movement for 1 second
Acceleration Sensor Rear RH	–	Keep the vehicle still without any vertical movement for 1 second



- (f) Using SST, connect terminal Tc and E<sub>1</sub> of DLC1 or DLC2.  
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HINT:

This should be done while you connect terminals Ts and E<sub>1</sub>.

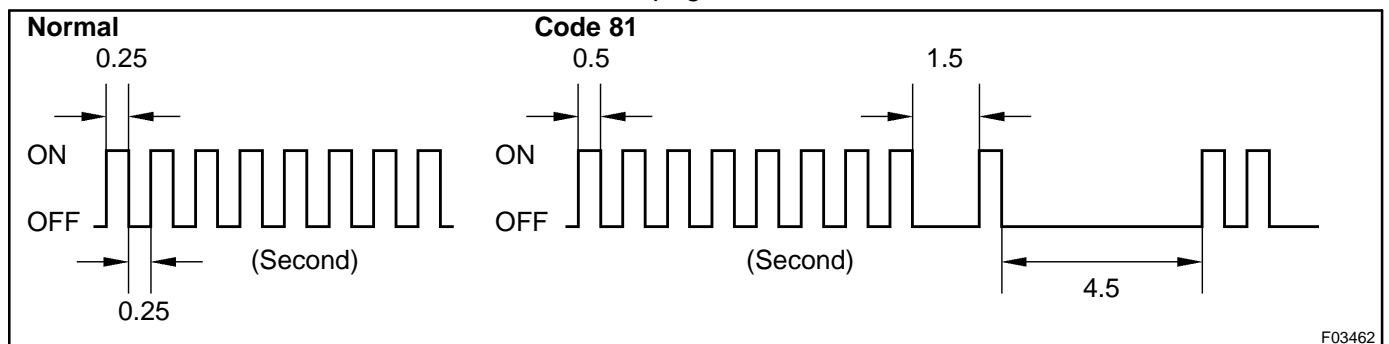


- (g) Read the test DTC output by "HEIGHT HI" indicator light.  
HINT:

- At the same time the DTC output by "HEIGHT HI" indicator light.
- When the DTC is not output, check the Tc terminal circuit on page [DI-297](#).

As an example, the blinking patterns for codes normal and 81 are as shown on the illustration.

- (h) Check the malfunction using the code table on the next page.



#### 4. DESERT FROM INPUT SIGNAL CHECK MODE

With the ignition switch OFF, disconnect the SST from DLC1 and then turn ignition switch ON.

## 5. TEST DTC CHART

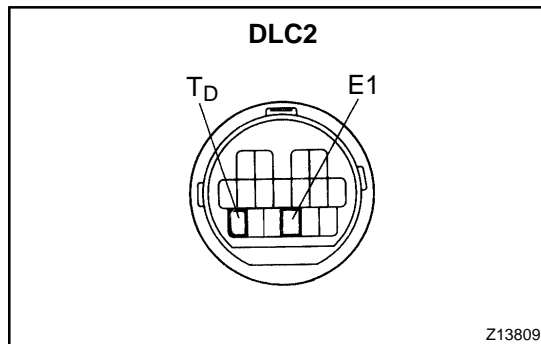
If a malfunction code is displayed during the test DTC check, check the circuit listed for that code. For details of each code, turn to the page referred to under the "See page" for respective "DTC No." in the DTC chart.

DTC No. (See Page)	Detection Item	Trouble Area
81 (DI-279)	Steering Sensor Circuit	<ul style="list-style-type: none"> <li>• Harness or connectors between ECU, steering sensor and body ground</li> <li>• Steering sensor</li> <li>• ECU</li> </ul>
82 (DI-283)	Stop Light Switch Circuit	<ul style="list-style-type: none"> <li>• Harness or connectors between ECU, stop light switch and body ground</li> <li>• Stop light switch</li> <li>• ECU</li> </ul>
83 (DI-286)	Door Courtesy Switch Circuit	<ul style="list-style-type: none"> <li>• Harness or connectors between ECU, door courtesy switch and body ground</li> <li>• Door courtesy switch</li> <li>• Body ECU</li> <li>• ECU</li> </ul>
84 (DI-288)	Throttle Position Sensor Circuit	<ul style="list-style-type: none"> <li>• Harness or connectors between ECU, ECM and body ground</li> <li>• ECM</li> <li>• ECU</li> </ul>
85 (DI-291)	Vehicle Speed Sensor Circuit	<ul style="list-style-type: none"> <li>• Harness or connectors between ECU and combination meter</li> <li>• Vehicle speed sensor</li> <li>• Combination meter assembly</li> <li>• ECU</li> </ul>
86 (DI-293)	Height Control Switch Circuit	<ul style="list-style-type: none"> <li>• Harness and connectors between ECU and switch, switch and body ground</li> <li>• Height control switch</li> <li>• ECU</li> </ul>
91 (DI-296)	Acceleration Sensor Front RH Circuit	<ul style="list-style-type: none"> <li>• Harness or connector between ECU and acceleration sensor</li> <li>• Acceleration sensor</li> <li>• ECU</li> </ul>
92 (DI-296)	Acceleration Sensor Front LH Circuit	
93 (DI-296)	Acceleration Sensor Rear RH Circuit	

## 6. VEHICLE HEIGHT CONTROL PROHIBITION AND ACTUATOR CHECK MODE

### HINT:

The vehicle height control prohibition and actuator check mode is activated as follows.



- (a) Using SST, connect between terminals T<sub>D</sub> and E<sub>1</sub> of DLC2.

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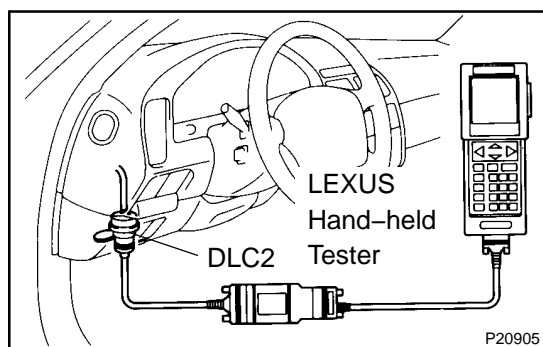
- (b) Turn the ignition switch ON.

### HINT:

- As you enter the mode, switch the suspension control actuator to soft for all 4 wheels.
- While in the mode, the height control indicator light blinks at 0.5 second intervals.

### NOTICE:

- Before jacking up the vehicle when the engine has been run, always first put the vehicle into this mode.
- If the vehicle height is particularly low when the vehicle is jacking down, return the vehicle height to the standard height either start the engine or using the height control connectors (See page [DI-259](#)), then move the vehicle.



## 7. REFERENCE VALUE OF ECU DATA

- (a) Hook up the LEXUS hand-held tester to the DLC2.
- (b) Monitor the ECU data by following the prompts on the tester screen.

Please refer to the LEXUS hand-held tester operator's manual for more information.

Item	Inspection Condition	Reference Value
FL VALVE FR VALVE RR VALVE	Set the height control switch to HIGH position from NORM	Switch valve(s) from the OFF to ON ones at least
FL HEIGHT FR HEIGHT RL HEIGHT RR HEIGHT	Set the height control switch to HIGH position from NORM	Height value increases Front value is 6 – 9 Rear value is 5 – 10
COMP MOTOR	Set the height control switch to HIGH position from NORM	Switchs from OFF to ON
EXHAUST VALVE	Set the height control switch to NORM position from HIGH	Switchs from OFF to ON
VEHICLE SPEED	During driving (Comparison with speedmeter)	No large differences
FL ACTUATOR FR ACTUATOR RL ACTUATOR RR ACTUATOR	Set the height control switch to NORM position	Damping force value Front value is 2 Rear value is 1
HEIGHT SWITCH	Operate the height control switch	The same as switch position
STOP LAMP	Press brake pedal	ON