

<b>DTC</b>	<b>P0130</b>	<b>Heated Oxygen Sensor Circuit Malfunction (Bank 1 Sensor 1)</b>
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<b>DTC</b>	<b>P0150</b>	<b>Heated Oxygen Sensor Circuit Malfunction (Bank 2 Sensor 1)</b>
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## CIRCUIT DESCRIPTION

Refer to Insufficient Coolant Temp. for Closed Loop Fuel Control on page [DI-45](#).

DTC No.	DTC Detecting Condition	Trouble Area
P0130 P0150	Voltage output of heated oxygen sensor remains at 0.4 V or more, or 0.55 V or less, during idling after the engine is warmed up (2trip detection logic)	<ul style="list-style-type: none"> <li>• Heated oxygen sensor</li> <li>• Fuel trim malfunction</li> </ul>

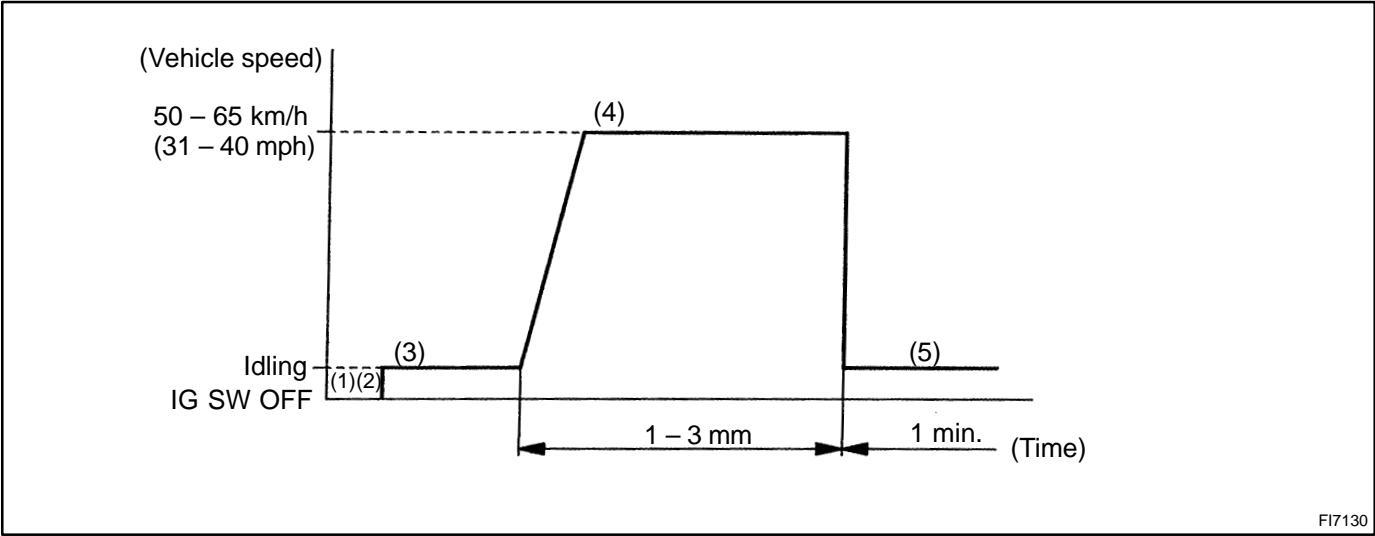
### HINT:

- Bank 1 refers to the bank that includes cylinder No.1.
- Bank 2 refers to the bank that does not include cylinder No.1.
- Sensor 1 refers to the sensor closer to the engine body.
- The heated oxygen sensor's output voltage and the short-term fuel trim value can be read using the OBD II scan tool or LEXUS hand-held tester.

## WIRING DIAGRAM

Refer to page [DI-45](#) for the WIRING DIAGRAM.

CONFIRMATION DRIVING PATTEN



- (1) Connect the LEXUS hand-held tester to the DLC3.
- (2) Switch the LEXUS hand-held tester from normal mode to check mode (See page DI-3).
- (3) Start the engine and warm it up with all accessory switches OFF.
- (4) Drive the vehicle at 50 - 65 km/h (31 - 40 mph) for 1 - 3 min. to warm up the heated oxygen sensor.
- (5) Let the engine idle for 1 min.

HINT:  
If a malfunction exists, the MIL will light up during step (5).

**NOTICE:**  
If the conditions in this test are not strictly followed, detection of the malfunction will not be possible.  
If you do not have a LEXUS hand-held tester, turn the ignition switch OFF after performing steps (3) to (5), then perform steps (3) to (5) again.

INSPECTION PROCEDURE

1	Check for open and short in harness and connector between ECM and heated oxygen sensor (See page IN-29).
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Repair or replace harness or connector.

OK

## 2 Check for heated oxygen sensor data.

### PREPARATION:

- (a) Connect the OBD II scan tool or LEXUS hand-held tester to the DLC 3.
- (b) Warm up engine to normal operating temperature.

### CHECK:

Read the heated oxygen sensor output voltage and short-term fuel trim.

### RESULT:

Pattern	Heated oxygen sensor output voltage	Short-term fuel trim
1	Lean condition (Changes at 0.55 V or less)	Changes at about +20 %
2	Rich condition (Changes at 0.4 V or more)	Changes at about -20 %
3	Except 1 and 2	

1, 2

Check fuel trim system (See page [DI-56](#)).

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## 3 Check the output voltage of heated oxygen sensor during idling.

### PREPARATION:

Warm up the heated oxygen sensor with the engine at 2,500 rpm for approx. 90 sec.

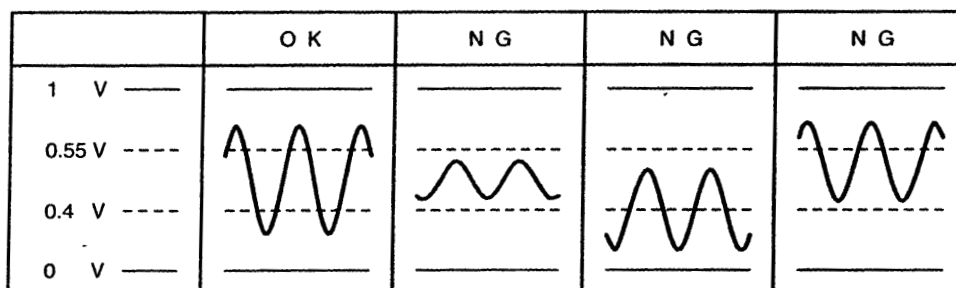
### CHECK:

Use the OBD II scan tool or LEXUS hand-held tester read the output voltage of the heated oxygen sensor during idling.

### OK:

Heated oxygen sensor output voltage:

Alternates repeatedly between less than 0.4 V and more than 0.55 V (See the following table).



P18349

OK

Perform confirmation driving pattern  
(See page [DI-48](#)).

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**Replace heated oxygen sensor.**

1997 LEXUS SC400/SC300 (RM513U)