

DTC	P0130	Oxygen Sensor Circuit Malfunction (Bank 1 Sensor 1)
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CIRCUIT DESCRIPTION

Refer to "Insufficient Coolant Temp. for Closed Loop Fuel Control" on page [DI-41](#).

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

HINT:

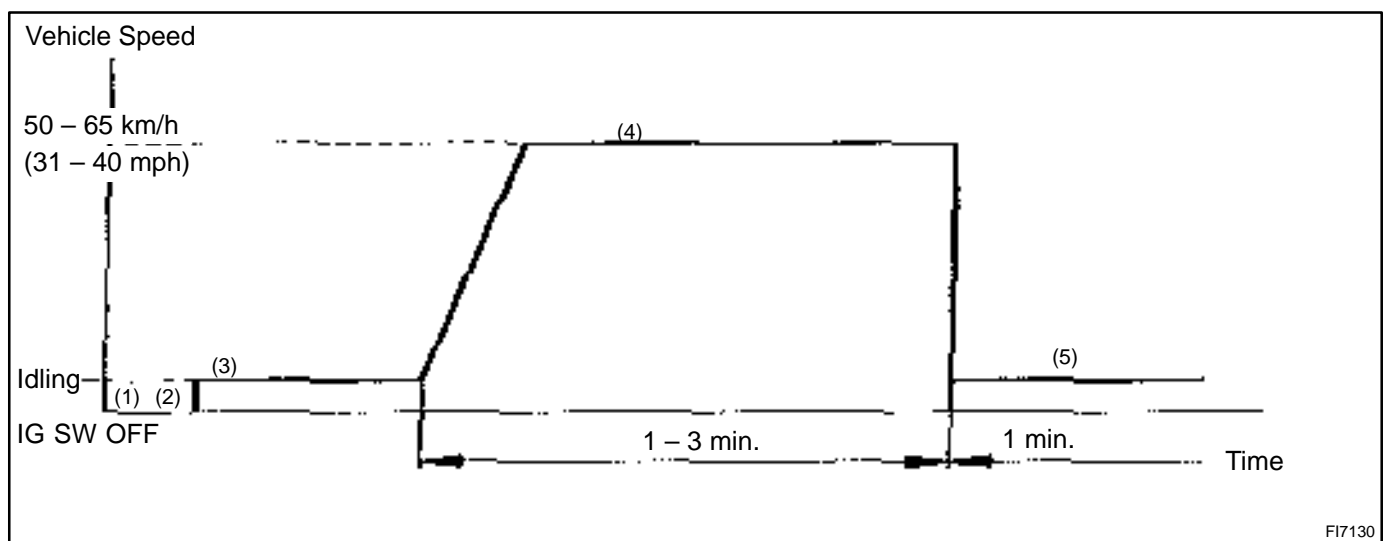
Sensor 1 refers to the sensor closer to the engine body.

The oxygen sensor's output voltage and the short-term fuel trim value can be read using the OBD II scan tool or TOYOTA hand-held tester.

WIRING DIAGRAM

Refer to page [DI-41](#) for the WIRING DIAGRAM.

CONFIRMATION DRIVING PATTERN



- (1) Connect the TOYOTA hand-held tester to the DLC3.
- (2) Switch the TOYOTA 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 oxygen sensor.
- (5) Idle the engine 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 TOYOTA 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 oxygen sensor (See page IN-27).
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Repair or replace harness or connector.

OK

2	Check for oxygen sensor data.
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PREPARATION:

- (a) Remove the fuse cover on the instrument panel.
- (b) Connect the OBD II scan tool or TOYOTA hand-held tester to the DLC3.
- (c) Warm up engine to normal operating temp.

CHECK:

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

RESULT:

Pattern	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-51](#)).

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3	Check output voltage of oxygen sensor during idling.
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PREPARATION:

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

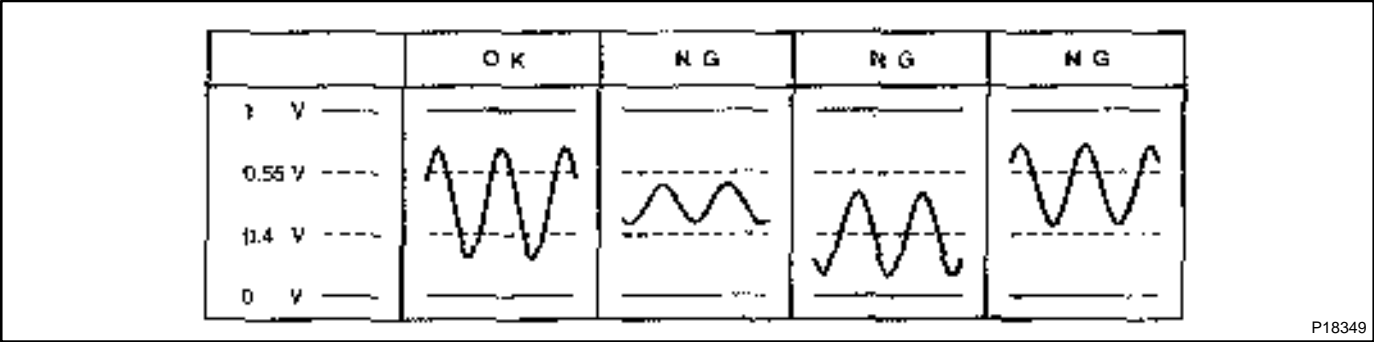
CHECK:

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

OK:

Oxygen sensor output voltage:

Alternates repeatedly between approx. 0.4 V and approx. 55 V (See these table):



OK

Perform confirmation driving pattern
(See page [DI-44](#)).

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Replace oxygen sensor.