

DTC	P0136/27	Oxygen Sensor Circuit Malfunction (Bank 1 Sensor 2)
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DTC	P0156/29	Oxygen Sensor Circuit Malfunction (Bank 2 Sensor 2)
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CIRCUIT DESCRIPTION

Refer to DTC P0130

DTC No.	DTC Detecting Condition	Trouble Area
P0136/27 P0156/29	Voltage output of the heated oxygen sensor (bank 1 sensor 2, bank 2 sensor 2) remains at 0.4 V or more or 0.5 V or less when the vehicle is driven at 30 km/h (19 mph) or more after the engine is warmed up. (2 trip detection logic)	<ul style="list-style-type: none"> Heated oxygen sensor

HINT:

- Bank 1 refers to bank that includes cylinder No. 1.
- Bank 2 refers to bank that does not include cylinder No. 1.
- Sensor 2 refers to the sensor farther away from the engine body.

WIRING DIAGRAM

Refer to on [page DI-51](#) for the WIRING DIAGRAM.

INSPECTION PROCEDURE

When using hand-held tester

Read freeze frame data using hand-held tester. Because freeze frame records the engine conditions when the malfunction is detected, when troubleshooting it is useful for determining whether the vehicle was running or stopped, the engine warmed up or not, the air-fuel ratio lean or rich, etc. at the time of the malfunction.

1	Are there any other codes (besides DTC P0136 or P0156) being output?
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YES

Go to relevant DTC chart ([See page DI-15](#)).

NO

2 Check for open and short in harness and connector between engine ECU and oxygen sensor (See page IN-29).

NG

Repair or replace harness or connector.

OK

3 Check the output voltage of oxygen sensor (bank 1, 2 sensor 2).

PREPARATION:

- (a) Connect the hand-held tester to the DLC3.
- (b) After warming up the engine, race engine at 2,500 rpm for 3 min.

CHECK:

Read voltage output of oxygen sensor (bank 1 sensor 2, bank 2 sensor 2) when engine suddenly raced.

HINT:

Perform quick racing to 4,000 rpm 3 min. using accelerator pedal.

OK:

Oxygen sensor output voltage: Alternates from 0.4 V or less to 0.5 V or more.

OK

Check that each connector is properly connected.

NG

Replace oxygen sensor.

When not using hand-held tester

1 Are there any other codes (besides code 27 or 29) being output?

YES

Go to relevant diagnostic trouble code chart (See page DI-15).

NO

Replace oxygen sensor.