

DTC	P0420	CATALYST SYSTEM EFFICIENCY BELOW THRESHOLD (BANK1)
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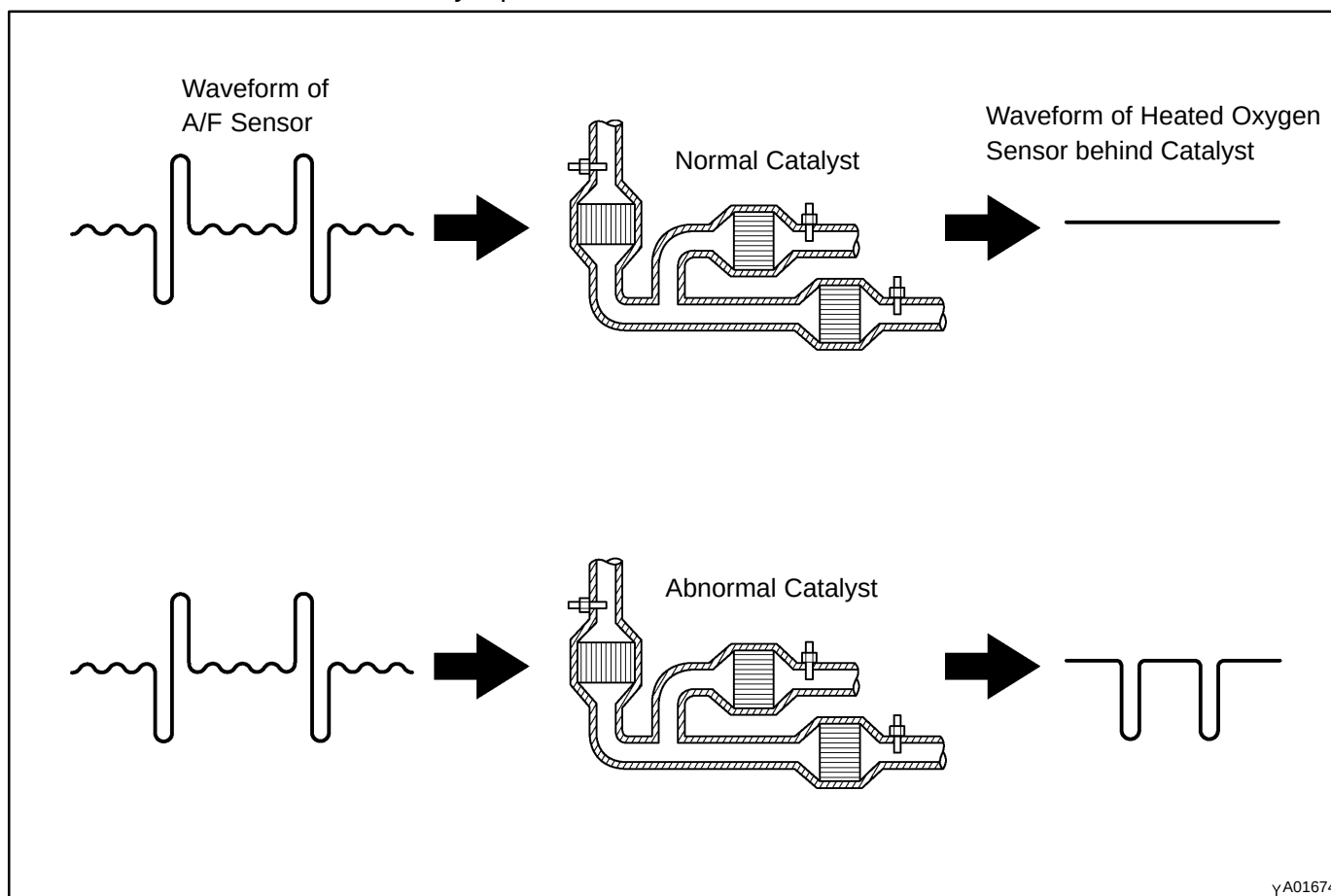
DTC	P0430	CATALYST SYSTEM EFFICIENCY BELOW THRESHOLD (BANK2)
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CIRCUIT DESCRIPTION

The ECM observes the waveform of the heated oxygen sensor located behind the catalyst to determine whether the catalyst performance has deteriorated.

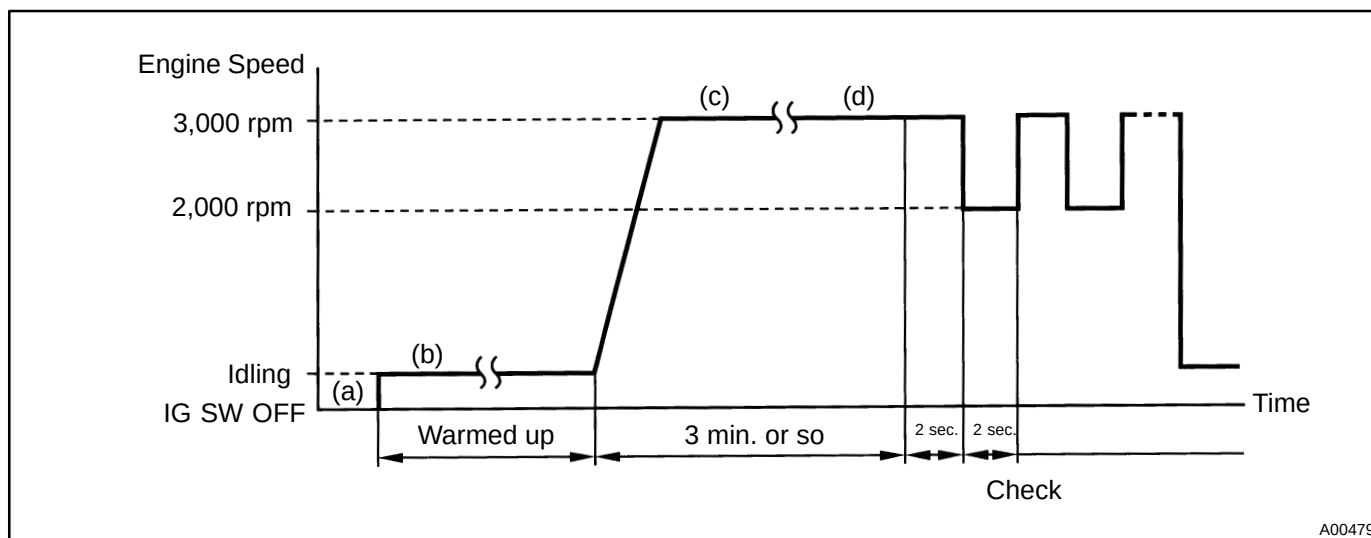
If the catalyst is functioning normally, the waveform of the heated oxygen sensor located behind the catalyst switches back and forth between rich and lean much more slowly.

When the waveform of the heated oxygen sensor located behind the catalyst alternates flutteringly between rich and lean, it indicates that catalyst performance has deteriorated.



DTC No.	DTC Detecting Condition	Trouble Area
P0420	After engine and catalyst are warmed up, and while vehicle is driven within set vehicle and engine speed range, waveform of heated oxygen sensor (bank 1 sensor 2) alternates flutteringly between rich and lean (2 trip detection logic)	• Gas leakage on exhaust system • A/F sensor (bank 1 sensor 1) • Heated oxygen sensor (bank 1 sensor 2) • Exhaust manifold
P0430	After engine and catalyst are warmed up, and while vehicle is driven within set vehicle and engine speed range, waveform of heated oxygen sensor (bank 2 sensor 2) alternates flutteringly between rich and lean (2 trip detection logic)	• Gas leakage on exhaust system • A/F sensor (bank 2 sensor 1) • Heated oxygen sensor (bank 2 sensor 2) • Exhaust manifold

CONFIRMATION ENGINE RACING PATTERN



- (a) Connect the OBD II scan tool or hand-held tester to the DLC3.
- (b) Start engine and warm it up with all the accessories switched OFF until the water temperature is stable.
- (c) Race the engine at 2,500 - 3,000 rpm for about 3 min.
- (d) When racing the engine at 3,000 rpm for 2 sec. and 2,000 rpm for 2 sec. alternately, check the waveform of the heated oxygen sensor (bank 1 sensor 2).

INSPECTION PROCEDURE

HINT:

Read freeze frame data using hand-held tester or OBD II scan tool. 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 was warmed up or not, the air-fuel ratio was lean or rich, etc. at the time of the malfunction.

1 CHECK OTHER DTC OUTPUT (BESIDES DTC P0420, P0430)

- (a) Read the DTC using the hand-held tester or OBD II scan tool.

YES

GO TO RELEVANT DTC CHART

NO

2 CHECK EXHAUST GAS LEAK

NG

REPAIR OR REPLACE

OK

3 CHECK AIR FUEL RATIO SENSOR (BANK1, 2 SENSOR1) (See page 12-1)

NG

REPAIR OR REPLACE AIR FUEL RATIO SENSOR

OK

4	CHECK OXYGEN NO.2 SENSOR (BANK1, 2 SENSOR2) (See page 12-6)
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NG	REPAIR OR REPLACE OXYGEN NO.2 SENSOR
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OK

REPLACE EXHAUST PIPE ASSY CENTER
