DTC	P0420/94	CATALYST SYSTEM EFFCIENCY BELOW THRESHOLD(BANK1)

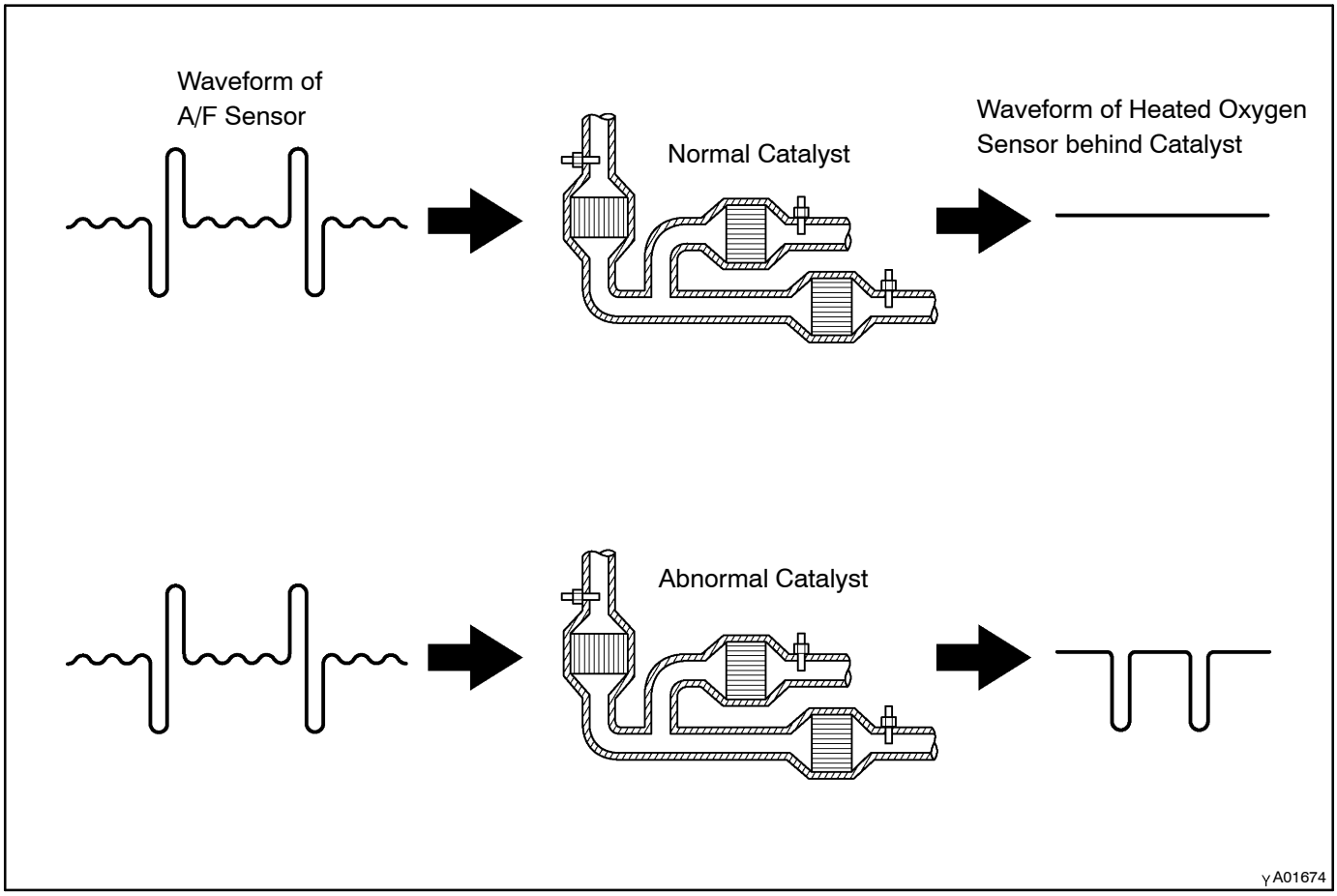
DTC	P0430/94	CATALYST SYSTEM EFFCIENCY BELOW THRESHOLD(BANK2)

CIRCUIT DESCRIPTION

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

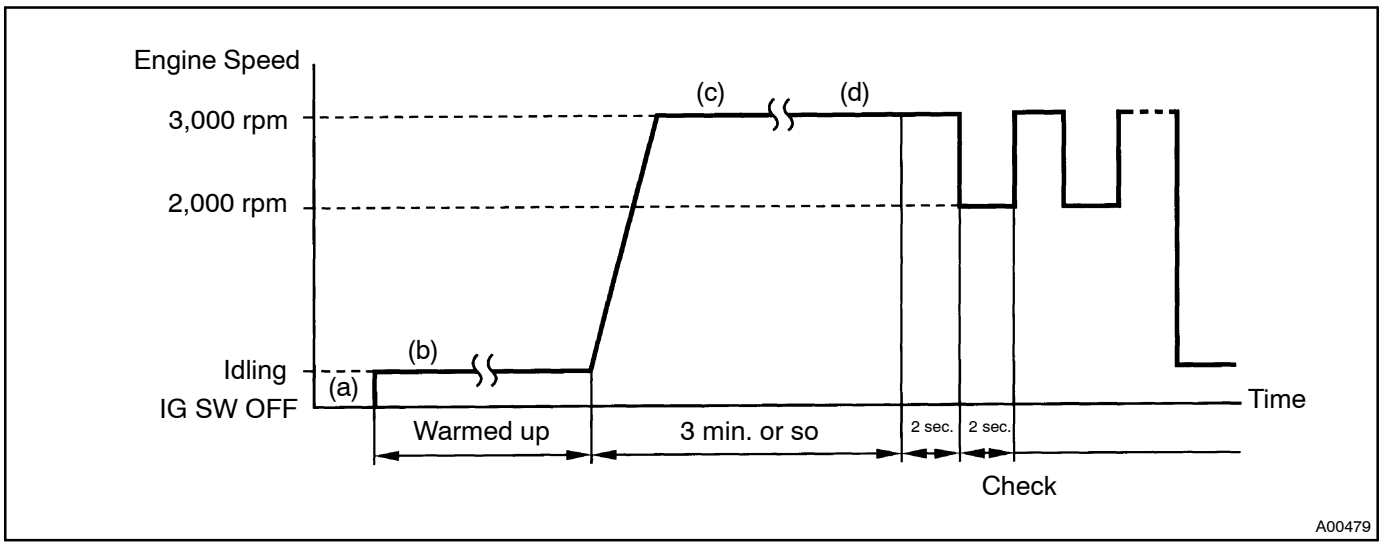
If the catalyst is functioning normally, the waveform of the heated oxygen sensor located behind the catalyst switches back and forth between rich and lean much more slowly.

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
P0420/94	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 converter
P0430/94	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 converter

CONFIRMATION ENGINE RACING PATTERN



(a) Connect the 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. 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)

(a) Read the DTC using the hand–held tester.

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 12–13)

NG → REPAIR OR REPLACE AIR FUEL RATIO SENSOR

OK

4	CHECK OXYGEN NO.2 SENSOR(BANK1 SENSOR2) (See page 12–13)

NG → REPAIR OR REPLACE OXYGEN NO.2 SENSOR

OK

REPLACE EXHAUST PIPE ASSY CENTER