SONATA(NF) >2009 > G 2.4 DOHC > Engine > Engine Control > P2096 Post Catalyst Fuel Trim System too Lean (Bank 1) > General Information

General Description

In order to provide the best possible combination of drivability, fuel economy and emission control, the PCM uses a closed loop air/fuel metering system. The PCM monitors the HO2S signal voltage and adjusts fuel delivery based it in closed loop fuel control. Changes in fuel delivery will be indicated by the long-term and the short-term fuel trim values. The ideal fuel trim value is around 0%. The PCM will add fuel when the HO2S signal is indicating a lean condition. Additional fuel is indicated by fuel trim values that are above 0%. The PCM will reduce fuel when the HO2S signal is indicating a rich condition. Reduction in fuel is indicated by fuel trim values that are below 0%. The DTC relevant to fuel trim will be set when the amount reaches excessive levels because of a lean or rich condition.

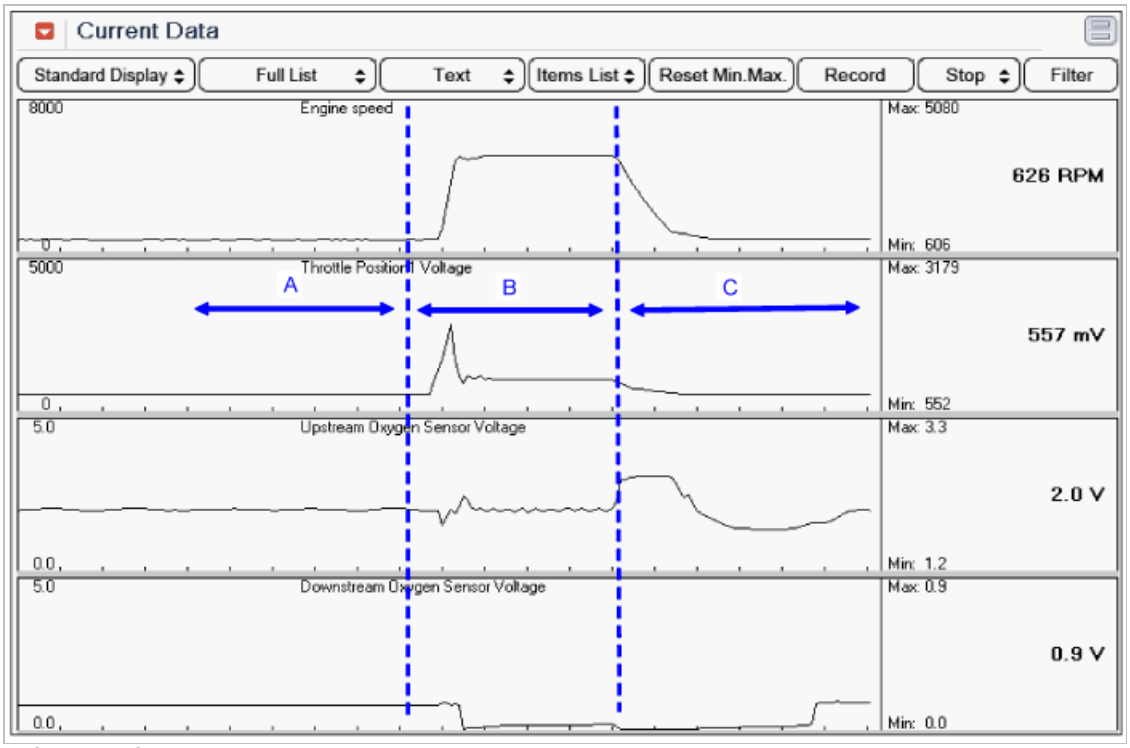
DTC Description

If the lambda controller reaches the maximum or minimum threshold, then feedback control is no longer possible and emissions will be increased. The PCM sets DTC P2096 if no proportional post catalyst fuel trim adaptation occurs for a defined time after the lambda controller has reached its maximum threshold.

DTC Detecting Condition

Item	Detecting Condition	Possible Cause
DTC Strategy	• Monitoring deviation of down HO2S feedback control	• Air leakage in exhaust System • HO2S • TWC
Enable Conditions	• Lambda control active • No relevant failure • Dynamic fuel trim is active • Canister purge valve not opening or closing	
Threshold Value	• Adaptation value > 630 msec.	
Diagnostic Time	• 60 sec.	
MIL On Condition	• 2 Driving Cycles	

Signal Waveform & Data



- Sector A : Signal Normal
- Sector B : Signal Fluctuation by rapid acceleration
- Sector C : Signal Recovery