Examples of this include:

- low fuel pressure (fuel pump, fuel filter, fuel leaks, restricted fuel supply lines)
- fuel injector concerns

ADAPTIVE FUEL DIAGNOSTIC TROUBLE CODE (DTC) DIAGNOSTIC TECHNIQUES > EXHAUST SYSTEM LEAKS

In this type of condition, the engine runs rich of stoichiometry (14.7:1 air to fuel ratio) because the fuel control system is adding fuel to compensate for a perceived (not actual) lean condition. This condition is caused by the heated oxygen sensor (HO2S) sensing the oxygen (air) entering the exhaust system from an external source. The PCM reacts to this exhaust leak by increasing fuel delivery. This condition causes the exhaust gas mixture from the cylinder to be rich.

Examples of this include:

- exhaust system leaks upstream or near the HO2S
- cracked or leaking HO2S boss

ADAPTIVE FUEL DIAGNOSTIC TROUBLE CODE (DTC) DIAGNOSTIC TECHNIQUES > DTCS P0172 AND P0175 SYSTEM TOO RICH DIAGNOSTIC AIDS

> *NOTE: If the system is rich at certain conditions, then the LONGFT PID would be a negative value at that airflow, indicating that decreased fuel is needed.*

System rich concerns are caused by fuel system concerns, although the MAF sensor and base engine (for example, engine oil contaminated with fuel) should also be checked.

ADAPTIVE FUEL DIAGNOSTIC TROUBLE CODE (DTC) DIAGNOSTIC TECHNIQUES > AIR MEASUREMENT SYSTEM

With this condition, the engine runs rich or lean of stoichiometry (14.7:1 air to fuel ratio) if the PCM is not able to compensate enough to correct for the condition.

ADAPTIVE FUEL DIAGNOSTIC TROUBLE CODE (DTC) DIAGNOSTIC TECHNIQUES > FUEL SYSTEM

With this condition, the engine runs rich of stoichiometry (14.7:1 air to fuel ratio), if the PCM is not able to compensate enough to correct for the condition. This situation causes a fuel delivery system that is delivering excessive fuel to the engine.

Examples of this include: