P008C: FUEL COOLER PUMP CONTROL CIRCUIT OPEN

OVERVIEW

Severity	:	Medium
DIY Difficulty Level	:	Intermediate
Repair Cost	:	**$150 - 600**
Can I Still Drive?	:	**Yes** (Short-term only)

What Does The P008C Code Mean?

Trouble code P008C is one of several possible codes associated to diesel powered vehicles that indicates that the Powertrain Control Module (PCM) has detected a malfunction and with the operation of the Fuel Cooler Pump Control Circuit that is incorporated to facilitate the proper operation of a diesel engine.

The codes that are commonly associated to Fuel Cooler Pump Control Circuit malfunctions are P008D and P008E.

The purpose of the Fuel Cooler Pump Control Circuit is to control the operation of the fuel cooler pump. This feature is specific to diesel powered vehicles to cool the excess fuel prior to returning the fuel back to the fuel supply system. The fuel is cooled by the fuel cooler that operates in a similar manner to a radiator using coolant to remove heat from the fuel.

The pump is temperature controlled by the Fuel Cooler Pump Control Circuit that turns the pump on to route fuel through the fuel cooler assembly prior to returning the fuel back to the fuel tank. This process will vary based on the specific diesel powered vehicle and the fuel system configuration. The end result is the same providing optimum performance and protecting fuel system components.

Based of the specific diesel powered vehicle involved, various other codes may be activated by the PCM and illuminate the Check Engine Light as well.

Code P008C is set by the PCM when the Fuel Cooler Pump Control Circuit is open.

What Are The Symptoms Of The P008C Code?

Symptoms of a P008C engine code may include:

- Decreased engine performance
- Acceleration and idle surging
- Check Engine Light illuminated
- Increased fuel consumption
- Noise coming from the fuel cooler pump

What Are The Potential Causes Of The P008C Code?

Causes for this code may include:

- Defective fuel cooler pump
- Corroded or damaged connector
- Faulty or damaged wiring
- Faulty PCM

How Can You Fix The P008C Code?

Locate all of the components associated with the Fuel Cooler Pump Control Circuit. This will include the fuel cooler pump, the fuel cooler, the fuel cooler reservoir and the PCM on a simplex system. Once these components are located a thorough visual inspection should be performed to check all of the associated wiring and connectors for obvious defects such as scraping, rubbing, bare wires or burn spots. Signs of coolant leaks, level and condition of the fluid should also be included in this process.

Advanced Steps

The advanced steps become very vehicle specific and require the appropriate advanced equipment to perform accurately. These procedures require a digital multi meter and the specific technical references for the vehicle. Voltage requirements will very based of the specific year, model and diesel engine in the vehicle.

It is also help to check for technical service bulletins (TSBs) for your particular vehicle, as there may be a known issue and fix that can save you money and time during diagnosis.

Circuit Checks

Voltage requirements will vary based on the specific engine, the Fuel Cooler Pump Control Circuit

configuration and the components incorporated. Tech data should be referenced to obtain the correct voltage range for each component and the appropriate trouble shooting sequence. The correct voltage to a fuel cooler pump that is not operating is normally an indication of internal failure. A faulty fuel cooler pump may also make a squealing noise that will progress to the point that it may make a barking noise similar to a dog.

If this process identifies the absence of a power source or ground, continuity testing may be needed to check the condition of the wiring and connectors. Continuity tests are always performed with the power removed from the circuit and the normal readings should be 0 ohms of resistance unless otherwise specified by the technical data. Resistance or no continuity is an indication of faulty wiring or connectors that are shorted or open and must be repaired or replaced.

Severity Description

The severity of this code starts as moderate based on the specific malfunction and the severity level will progress. Hot fuel temperatures are not desirable and can cause excessive wear on fuel system components and excessive wear to internal engine components as well if not corrected in a timely manner.

Reference Sources

P008C: Fuel Cooler Pump Control Circuit Open, OBD-Codes.