P2432: SECONDARY AIR INJECTION SYSTEM AIR FLOW/PRESSURE SENSOR CIRCUIT LOW BANK 1

OVERVIEW

Severity	:	Medium
DIY Difficulty Level	:	Intermediate
Repair Cost	:	**$250-$400**
Can I Still Drive?	:	**Yes**

What Does The P2432 Code Mean?

OBD-II trouble code P2432 and related codes P2430, P2431, P2433, and P2434 are associated with the secondary air injection system air flow/pressure sensor circuit bank 1.

The purpose of the secondary air injection system air flow/pressure sensor circuit bank 1 is to reduce the amount of hydrocarbon exhaust emissions during engine start-up when the weather conditions are cold. The Power Control Module (PCM) activates the air pump to supply pressurized fresh air to accelerate the catalyst operation reducing the level of harmful exhaust gas.

This process also allows the engine to reach the normal operating temperature faster. The air system pressure sensor is used to monitor pressure at the air control solenoid valve inlet to open and close the valve at predetermined temperatures and pressures based on the manufacturers' recommendations.

When the PCM detects voltage or resistance within the secondary air injection system air flow/pressure sensor circuit bank 1, that is too low, below the normal range threshold, code P2432 will be set and the check engine light may be illuminated.

If your engine has more than one bank of cylinders, bank 1 is the bank of cylinders that contains cylinder #1.

What Are The Symptoms Of The P2432 Code?

Symptoms of a P2432 trouble code may include:

- Engine may stall at idle
- Engine may not start
- Secondary air injection system making noise
- Poor engine performance
- Check engine light illuminated

What Are The Potential Causes Of The P2432 Code?

Causes for this P2432 code may include:

- Defective secondary air injection pump
- Faulty one-way check valve
- Defective air control solenoid valve
- Defective air pressure sensor
- Faulty or damaged wiring
- Corroded, damaged or loose connector
- Defective PCM

How Can You Fix The P2432 Code?

The first step in the troubleshooting process for any malfunction is to research the Technical Service Bulletins (TSB's) for the specific vehicle by year, model and power plant. In some circumstances, this can save a lot of time in the long run by pointing you in the right direction.

Based on the specific vehicle, this circuit may incorporate several components including the secondary air injection pump, check valve, pressure sensor, air control valve and the PCM. Perform a thorough visual inspection to check the associated wiring for obvious defects such as scraping, rubbing, bare wires, or burn spots.

Next is to check the connectors and connections for security, corrosion and damaged pins. This process must include all wiring connectors and connections to all components including the PCM. Consult the specific tech data for the vehicle to verify the configuration of the circuit and confirm every component incorporated within the circuit which may include a fuse or a fuse-able link.

The check valve should be tested to ensure that the airflow is in one direction only. Ice in the secondary air injection pump during extremely cold weather conditions is an indication of a defective one-way check valve allowing condensation from the exhaust to enter the pump.

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 Checks

The reference voltage and the acceptable ranges may vary based on the specific vehicle and the circuit configuration. Specific technical data will include troubleshooting charts and the appropriate sequence to follow assisting you with an accurate diagnosis.

If this process identifies the absence of a power source or ground, continuity testing may be required to check the integrity of the wiring, connectors and other components. Continuity tests should always be performed with the power removed from the circuit and the normal readings for wiring and connections should be 0 ohms of resistance.

Resistance or no continuity is an indication of faulty wiring that is open, shorted or corroded and must be repaired or replaced.

Severity Description

The severity of this code can vary tremendously from moderate to severe depending on the specific symptoms of the malfunction. Several symptoms of this trouble code could make driving the vehicle extremely hazardous.

Reference Sources

P2432 Secondary Air Injection System Air Flow/Pressure Sensor Circuit Low Bank 1, OBD-Codes.