SOFTWARE & TECH

Detroit Diesel Sid 155 Fmi 0

PUBLISHED
November 25, 2026

REFERENCE
#1795581678329223

Understanding the Detroit Diesel SID 155 FMI 0 Diagnostic Trouble Code

If you work with heavy-duty trucks, buses, or industrial equipment powered by Detroit Diesel engines, you have likely encountered a diagnostic trouble code (DTC) that reads **SID 155 FMI 0**. This code can be alarming, especially if it triggers a check engine light or puts the vehicle into a derate mode. Understanding what SID 155 FMI 0 means, why it occurs, and how to resolve it is essential for keeping your equipment running efficiently and avoiding costly downtime.

In this comprehensive guide, we will break down every aspect of the **Detroit Diesel SID 155 FMI 0**code. We'll cover its definition, common causes, symptoms, diagnostic procedures, and repair solutions. Whether you are a fleet manager, a diesel mechanic, or an owner-operator, this article will give you the knowledge you need to tackle this DTC with confidence.

What Is SID 155 FMI 0? Decoding the Terminology

To fully grasp this code, it helps to understand the SAE J1939 standard used by Detroit Diesel engines. The code is composed of two parts:

- SID (System Identification) – This number identifies the specific subsystem or component that has reported a fault. For Detroit Diesel, SID 155 refers to the Turbocharger Boost Pressure Sensor circuit. In some engine configurations, it can also relate to the Variable Geometry Turbocharger (VGT) Actuator position sensor or the Intake Manifold Pressure Sensor. However, the most common assignment is the boost pressure sensor.
- FMI (Failure Mode Identifier) – This number indicates the type of fault. FMI 0 means "Data Valid but Above Normal Operational Range – Most Severe". In simpler terms, the sensor is sending a signal that is electrically valid (within normal voltage limits) but the actual measured value is higher than what the engine control module (ECM) considers acceptable. For a boost pressure sensor, this usually means the ECM is reading an abnormally high pressure from the intake manifold.

When the ECM detects this condition, it logs the **Detroit Diesel SID 155 FMI 0**code and may initiate protective measures such as derating engine power or illuminating the warning lamp.

Common Symptoms of SID 155 FMI 0

Recognizing the symptoms early can help you diagnose the problem before it leads to more serious engine damage. Drivers and technicians often report the following when this code is active:

1. Check Engine Light (CEL) or Amber Warning Lamp – The most obvious sign. The light may remain on solid or flash intermittently.
2. Engine Derate (Power Loss) – The ECM may reduce fuel injection to protect the engine, resulting in noticeably less power, especially under load or during acceleration.
3. Poor Fuel Economy – Because the engine is not operating at its optimal air-fuel ratio, fuel consumption

can increase.

4. Excessive Black Smoke – A high boost pressure reading can cause the ECM to over-fuel, leading to incomplete combustion and black smoke from the exhaust.
5. Hard Starting or Rough Idle – In some cases, the code may cause the engine to run unevenly at idle or struggle to start.
6. Erratic Turbocharger Operation – If the engine is equipped with a variable geometry turbo, you might hear unusual whining or fluttering sounds as the actuator tries to adjust based on false pressure readings.

Not all symptoms appear simultaneously. Some engines may only exhibit a warning light without any noticeable performance change, while others may go into a severe derate mode immediately.

What Causes the Detroit Diesel SID 155 FMI 0 Code?

The root cause of this code can vary, but most cases fall into one of the following categories:

1. Faulty Boost Pressure Sensor

The sensor itself may be sending an inaccurate high voltage signal, often due to internal failure, contamination, or damage. Over time, exposure to heat, vibration, and oil vapor can degrade the sensor's performance.

2. Wiring or Connector Issues

A short circuit to voltage (e.g., a wire pinched against a hot source) can cause the sensor signal to be artificially high. Loose or corroded connector pins may also create intermittent high readings.

3. Clogged or Restricted Intake/Exhaust System

If the air filter is severely clogged, or if there is an obstruction in the intake ductwork, the turbocharger will work harder to push air into the engine, resulting in higher-than-normal boost pressure. Similarly, a restricted exhaust (such as a blocked diesel particulate filter or a collapsed exhaust pipe) can increase backpressure and artificially raise boost readings.

4. Turbocharger Mechanical Issues

A sticking wastegate or a malfunctioning variable geometry actuator can cause the turbo to over-boost, leading to the high pressure signal. Worn turbo bearings or a damaged compressor wheel can also cause erratic pressure spikes.

5. ECM Software or Calibration Problems

In rare cases, the ECM may have outdated or incorrect software that misinterprets the sensor data. A reprogramming or calibration update from the manufacturer may resolve the issue.

6. Crankcase Ventilation Malfunction

A blocked crankcase breather can pressurize the crankcase and force oil into the intake system. This oil can coat the boost pressure sensor, causing it to read incorrectly high.

Diagnostic Procedure for SID 155 FMI 0

Before replacing any parts, a systematic diagnostic approach is essential. Using a professional-grade diagnostic tool (such as Detroit Diesel Diagnostic Link – DDDL) is highly recommended. However, basic electrical checks can also be performed with a multimeter. Follow these steps:

Step 1: Read and Record Freeze Frame Data

Connect the diagnostic tool and retrieve the freeze frame data associated with the code. Look for engine speed, load, boost pressure reading, and ambient conditions at the time the code was set. This helps pinpoint whether the high boost occurred under a specific condition (e.g., full throttle, cold start, etc.).

Step 2: Visually Inspect the Wiring and Connector

Locate the boost pressure sensor (typically mounted on the intake manifold or charge air cooler pipe). Check the connector for corrosion, bent pins, or moisture. Inspect the wiring harness for cuts, abrasions, or signs of melting near exhaust components.

Step 3: Check for DTCs Related to Other Sensors

Sometimes SID 155 FMI 0 is accompanied by other codes, such as SID 156 (Turbocharger Speed Sensor) or SID 147 (Intake Air Temperature Sensor). These can provide additional clues about a system-wide issue.

Step 4: Monitor Sensor Voltage with Key-On Engine-Off

With the ignition on and engine off, the boost pressure sensor should read atmospheric pressure (around 1.0 bar or 14.7 psi absolute). Using a scan tool, observe the sensor value. If it reads significantly higher (e.g., 2.0 bar), the sensor may be faulty. Alternatively, back-probe the signal wire and measure voltage – typically 0.5V at atmospheric pressure, rising to ~4.5V at full boost.

Step 5: Perform a Pressure Test

If the sensor appears normal, manually apply pressure using a hand-held vacuum/pressure pump to the sensor's port. Compare the scan tool reading to the applied pressure. A discrepancy indicates a defective sensor.

Step 6: Check for Leaks and Blockages

Inspect the entire intake system from air filter to intake manifold for leaks (which would cause low boost, not high) and blockages. For high boost, focus on the exhaust side: check for a stuck wastegate or restricted aftertreatment system.

Repair Solutions for Detroit Diesel SID 155 FMI 0

Once you have identified the root cause, the repair can range from simple cleaning to component replacement. Here are the most common solutions:

- Replace the Boost Pressure Sensor – This is the most frequent fix. Use an OEM or high-quality aftermarket sensor. Ensure the sensor is calibrated for your specific engine model (Series 60, DD15, DD13, etc.).
- Repair or Replace Wiring/Connector – Solder and heat-shrink any damaged wires. If the connector is corroded, replace it with a Deutsch-style connector. Apply dielectric grease to prevent future corrosion.
- Clear Intake/Exhaust Restrictions – Replace a clogged air filter. Clean or replace a blocked Diesel Particulate Filter (DPF) or Diesel Oxidation Catalytic (DOC) converter. Check for foreign objects lodged in the intake piping.
- Inspect Turbocharger Actuator – For VGT-equipped engines, perform a calibration of the actuator using the diagnostic tool. If the actuator is mechanically stuck or unresponsive, replace it.
- Update ECM Software – Contact your Detroit Diesel dealer for the latest calibration. Some early DD15 models had a known software issue that caused false high-boost codes.
- Check Crankcase Ventilation – If oil contamination is found on the sensor, clean or replace the crankcase breather filter and ensure the system is not over-pressurizing.

Preventing Future Occurrences of SID 155 FMI 0

Preventive maintenance is the best way to avoid encountering this code again. Follow these best practices:

- Replace the air filter at scheduled intervals, and inspect the intake system for leaks or damage.
- Perform regular turbocharger inspections, including checking for shaft play and actuator operation.
- Keep the engine coolant and oil in good condition to prevent sensor contamination from blow-by gases.

- Periodically clean the boost pressure sensor and its connector during major service intervals.
- Use only high-quality fuel and ensure the aftertreatment system is functioning properly to avoid excessive soot buildup.

Frequently Asked Questions about Detroit Diesel SID 155 FMI 0

Q: Can I drive with the SID 155 FMI 0 code active?

It depends on the severity. If the engine is derated significantly, driving may be unsafe, especially on highways or uphill grades. It is best to diagnose and repair the issue as soon as possible to avoid further damage to the turbo or engine.

Q: Is SID 155 FMI 0 the same for all Detroit Diesel engines?

The SID numbering can vary slightly between engine families and calibration versions. Always verify the code definition using the appropriate service manual for your specific model (e.g., DDEC III, IV, V, or DDEC 6).

Q: Will clearing the code fix the problem?

Clearing the code with a scan tool will turn off the check engine light temporarily, but if the underlying fault remains, the code will return. Only repairs should be considered a permanent solution.

Q: How much does it cost to fix SID 155 FMI 0?

The cost varies widely. A simple sensor replacement might cost $150–$300 including labor. If the turbo actuator or ECM reprogramming is needed, the cost could exceed $1,500. Diagnostic labor fees also add to the total.

Conclusion

The **Detroit Diesel SID 155 FMI 0**code is a clear indicator that the engine's boost pressure sensor is reporting a value above normal limits. While the code can be triggered by a simple sensor failure, it may also point

Related Articles

- **Are James Blunt And Emily Blunt Related**
  URL: https://signage.openstack.org/are-james-blunt-and-emily-blunt-related.pdf
- **Was Remember Me Based On A True Story**
  URL: https://signage.openstack.org/was-remember-me-based-on-a-true-story.pdf
- **Ess Employee Self Service Costco**
  URL: https://signage.openstack.org/ess-employee-self-service-costco.pdf
- **The Case For Christianity By Cs Lewis**
  URL: https://signage.openstack.org/the-case-for-christianity-by-cs-lewis.pdf

TOPIC INDEX

#detroit • #diesel • #sid • #155 • #fmi

DIGITAL EDITION

detroit-diesel-sid-155-fmi-0

DIGITAL EDITION

detroit-diesel-sid-155-fmi-0

DIGITAL EDITION

detroit-diesel-sid-155-fmi-0

DIGITAL EDITION

detroit-diesel-sid-155-fmi-0