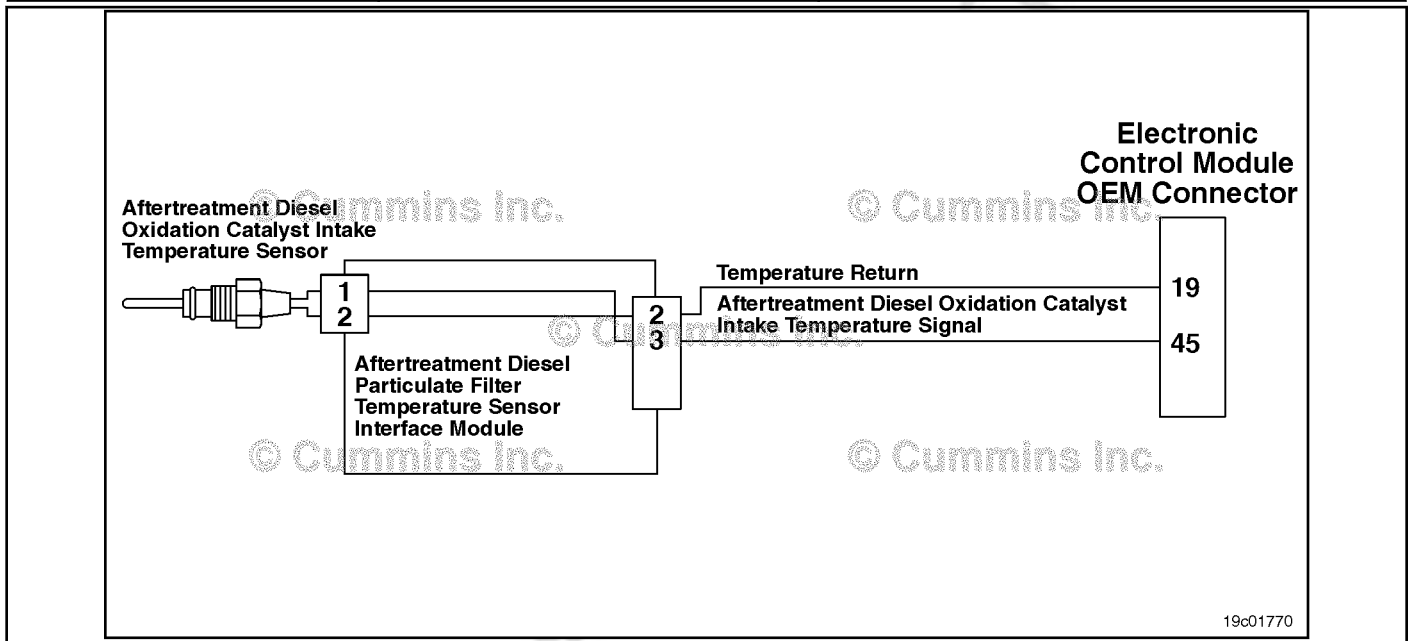


Fault Code 3251

Aftertreatment 1 Diesel Oxidation Catalyst Intake Temperature - Data Valid But Above Normal Operating Range - Moderately Severe Level

CODES	REASON	EFFECT
Fault Code: 3251 PID(P), SID(S): S326 SPN: 4765 FMI: 0/16 Lamp: Red SRT:	The diesel oxidation catalyst intake temperature sensor reading has exceeded the maximum temperature limit.	Active aftertreatment diesel particulate filter regeneration will be disabled.



Aftertreatment Diesel Particulate Filter Temperature Sensor Module

Circuit Description:

The aftertreatment temperature sensors are used by the engine control module (ECM) to monitor the engine exhaust temperatures in the aftertreatment system. The aftertreatment temperature sensors are thermistors and change resistance based on the temperature being measured. The ECM provides a 5 volt reference voltage to the sensor. The ECM monitors the change in signal voltage and converts this to a temperature value.

When the exhaust temperature is cold, the sensor or thermistor resistance is high. The ECM signal voltage **only** pulls down a small amount through the sensor to ground. Therefore, the ECM senses a high signal voltage or low temperature. When the exhaust gas temperature is hot, the sensor resistance is low. The signal voltage pulls down a large amount. Therefore, the ECM senses a low signal voltage, or a high temperature.

Component Location:

The aftertreatment diesel particulate filter outlet temperature sensor is located in the aftertreatment system. It is located at the outlet of the aftertreatment diesel particulate filter. Refer to the original equipment manufacturer (OEM) service manual.

Conditions for Running the Diagnostics:

This diagnostic runs continuously when the engine is running and active regeneration of the aftertreatment diesel particulate filter is **not** occurring.

Conditions for Setting the Fault Codes:

The ECM detects that the temperature at the diesel oxidation catalyst intake is greater than 687°C [1269°F] for 60 seconds.

Action Taken When the Fault Code is Active:

The ECM illuminates the red STOP ENGINE lamp immediately after the diagnostic runs and fails.

A default value for the aftertreatment diesel oxidation catalyst intake temperature sensor reading is used.

Active and stationary regeneration of the diesel particulate filter will be disabled.

The engine will be shut down if the Engine Protection Shutdown feature is enabled.

Conditions for Clearing the Fault Code:

- To validate the repair using a Diagnostic Road Test, utilize a route that incorporates both stop and go city type driving and steady state highway type driving. It may be necessary to load the unit for certain diagnostics in the ECM to run.
- To validate the repair using a Chassis Dynamometer, utilize a routine that incorporates acceleration and motoring events, steady state highway type operation, and load. This will simulate normal driving and allow the diagnostics in the ECM to run.
- The fault code status displayed by the recommended Cummins® electronic service tool or equivalent will change to INACTIVE immediately after the diagnostic runs and passes.
- The "Reset All Faults" command in the recommended Cummins® electronic service tool or equivalent can be used to clear active and inactive faults, as well as extinguish the MIL for OBD applications.

Shop Talk:

This fault code is logged when the ECM has detected a high temperature condition in the aftertreatment system and active regeneration of the aftertreatment diesel particulate filter is **not** occurring. The fault code indicates that a secondary fuel source is entering the aftertreatment system and is creating a temperature increase across the aftertreatment diesel oxidation catalyst and/or aftertreatment diesel particulate filter.

Possible causes of this fault code include:

Excessive engine oil or diesel fuel being introduced into the exhaust system from the engine

A damaged engine fuel injector causing unburned diesel fuel to enter the exhaust system

The aftertreatment diesel oxidation catalyst intake temperature sensor malfunctioned in-range

The aftertreatment diesel particulate filter intake temperature sensor malfunctioned in-range

The aftertreatment diesel particulate filter outlet temperature sensor malfunctioned in-range

An in-range engine sensor malfunction has occurred, causing excessive fuel to enter the exhaust system.

The aftertreatment system **must** be inspected after making the appropriate repair outlined in this fault code troubleshooting tree. Progressive damage to the aftertreatment system may have occurred. Remove the exhaust aftertreatment system from the vehicle to inspect it for potential damage and reuse. Refer to the OEM service manual.

Reference the appropriate OEM wiring diagram when troubleshooting circuits that utilize wiring supplied by the OEM.

Refer to Troubleshooting Fault Code 3251 .

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