



YMMS: 2011 Freightliner M2 Series - M2-106
Engine: Cummins ISB6.7 CM2250 6 CYL
VIN: 1FVACWDT8BDBA0266

Apr 21, 2021

License:
Odometer:

CODE DESCRIPTION

CODES

- Fault Code: 693.
- PID(P), SID(S): P351.
- SPN: 1172.
- FMI: 2.
- Light: Amber.

CAUSE

Erratic, intermittent or incorrect data from turbocharger 1 compressor intake temperature. Turbocharger compressor intake temperature sensor detects too high or low temperature for operating conditions.

EFFECT

ECM uses default value for turbocharger compressor intake temperature.

CIRCUIT DESCRIPTION

This is a variable resistor sensor which measures temperature of air that enters compressor intake of turbocharger. Compressor intake temperature signal circuit receives 5 volts from ECM. ECM determines air temperature by monitoring change in voltage due to changes in sensor resistance.

COMPONENT LOCATION

In some Engines, combination compressor intake temperature/barometric pressure sensor, which is positioned in OEM intake air plumbing, is used instead of turbocharger compressor intake temperature sensor. See Wiring Diagram.

CONDITIONS FOR RUNNING DIAGNOSTICS

There are 2 components in this diagnostic, first part runs with Ignition turned on after a 10 hour cold soak Ignition off and second part runs constantly with Engine running.

CONDITIONS FOR SETTING FAULT CODES

Compressor intake temperature reading too high or too low for Engine running conditions detected by ECM.

ACTION TAKEN WHEN FAULT CODE IS ACTIVE

- ECM activates Amber Check Engine Light and/or MIL once diagnostic runs and fails.
- Used default value for compressor intake temperature reading.

CONDITIONS FOR CLEARING FAULT CODE

- For repair validation, start and idle Engine for 60 seconds. If Fault Code remains active, perform a 10 hour cold soak Ignition off, Ignition on so Ignition on part of diagnostic will run.
- Scan Tool displays Fault Code status, which will change to INACTIVE instantly after diagnostic runs and passes.
- ECM deactivates Amber Check Engine Light once diagnostic runs and passes.
- For OBD Engines, ECM deactivates MIL after 3 successive trips where diagnostic runs and passes.
- Use "Reset All Faults" command in Scan Tool to erase active and inactive Fault Codes, also deactivate MIL for OBD applications.

DIAGNOSTIC TIPS

Possible causes of Fault Code 693 are stuck in-range compressor intake temperature sensor, compressor intake temperature sensor signal or return lines have high resistance or ECM malfunction.

NOTE: For Fault Code Diagnostics, see Testing.