



Technical Service Bulletin

Technical Service Bulletin: TSB190165

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Soot or Ice Deposits in the Intake Air Connection and Fault Codes: 1866, 3361, 3382, 3383, 3389, 7232, 7233 and/or 4729

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Warranty Statement

The information in this document has no effect on present warranty coverage or repair practices, nor does it authorize TRP or Campaign actions.

Contents

Product Affected

- B6.7 CM2350 B121B
- L9 CM2350 L116B
- L9 CM2350 L123B
- L9 CM2450 L126B

Issue

Symptom:

- Active or multiple inactive counts of Fault Codes: 1866, 3361, 3382, 3383, 3389, 7232, 7233 and/or 4729

Root Cause:

- Soot deposits in the intake air connection exhaust gas entrance ports are present and have affected EGR flow measurements.
- Soot deposits in the intake air connection exhaust gas recirculation (EGR) differential pressure horizontal and vertical ports are present and have affected EGR flow measurements.
- Icing/condensation in the intake air connection exhaust gas recirculation (EGR) differential pressure sensor or horizontal and vertical ports are present and have affected EGR flow measurements.

- Icing may **not** be present at the time of the repair, but presence of condensation/water droplets in the EGR Differential Pressure sensor indicates that icing of the sensor is the root cause of this issue.

Verification

- Active or multiple inactive counts of Fault Codes: 1866, 3361, 3382, 3383, 3389, 7232, 7233, and/or 4729.

Resolution

- Thoroughly clean the intake air connection exhaust gas entrance ports and exhaust gas recirculation (EGR) differential pressure horizontal and vertical ports. See Service Bulletin, Exhaust Gas Recirculation (EGR) System Intake Air Connection Inspection and Cleaning Guidelines, Bulletin 5579934. (</qs3/pubsys2/xml/en/bulletin/5579934.html>)
 - Care should be taken to follow all guidelines/examples of proper cleaning in Service Bulletin (</qs3/pubsys2/xml/en/bulletin/5579934.html>) (</qs3/pubsys2/xml/en/bulletin/5579934.html>). Insufficient cleaning has resulted in repeat occurrences of these fault codes.
- Inspect the intake air heater for carbon build up. See corresponding Service Manual. Reference Procedure 010-023 in Section 10.
- Inspect the EGR differential pressure sensor. See corresponding Service Manual. Reference Procedure 019-370 in Section 19.
 - If soot is found, gently wipe away with a clean towel. Be sure not to apply too much pressure on the sensor elements, as they can become damaged.
 - If ice or condensation is found (See Figure 1 below), gently wipe away with a clean towel. Be sure **not** to apply too much pressure on the sensor elements, as they can become damaged.
 - If the EGR differential pressure sensor meets specifications according to published troubleshooting, do **not** replace the EGR differential pressure sensor. Verify the EGR differential pressure sensor is properly oriented and placed as removed when installed on the intake air connection.
- Follow the “Conditions For Clearing The Fault Code” section in corresponding fault code overview to validate the repair.
 - Verify fault code is no longer active. If fault code is still active, reference the corresponding fault code troubleshooting tree.
 - If ice is the cause of fault code occurrence and the fault code was triggered during below freezing ambient conditions, direct the owner/operator to Service Bulletin, Operation of Diesel Engines in Cold Climates, Bulletin 3379009.
- Check ECM Calibration Revision History. Compare the ECM code and revision number in the ECM to the calibration revision listed in the ECM calibration revision history for this fault code. If a calibration update for this fault code is available, the ECM calibration revision must be that revision or higher.

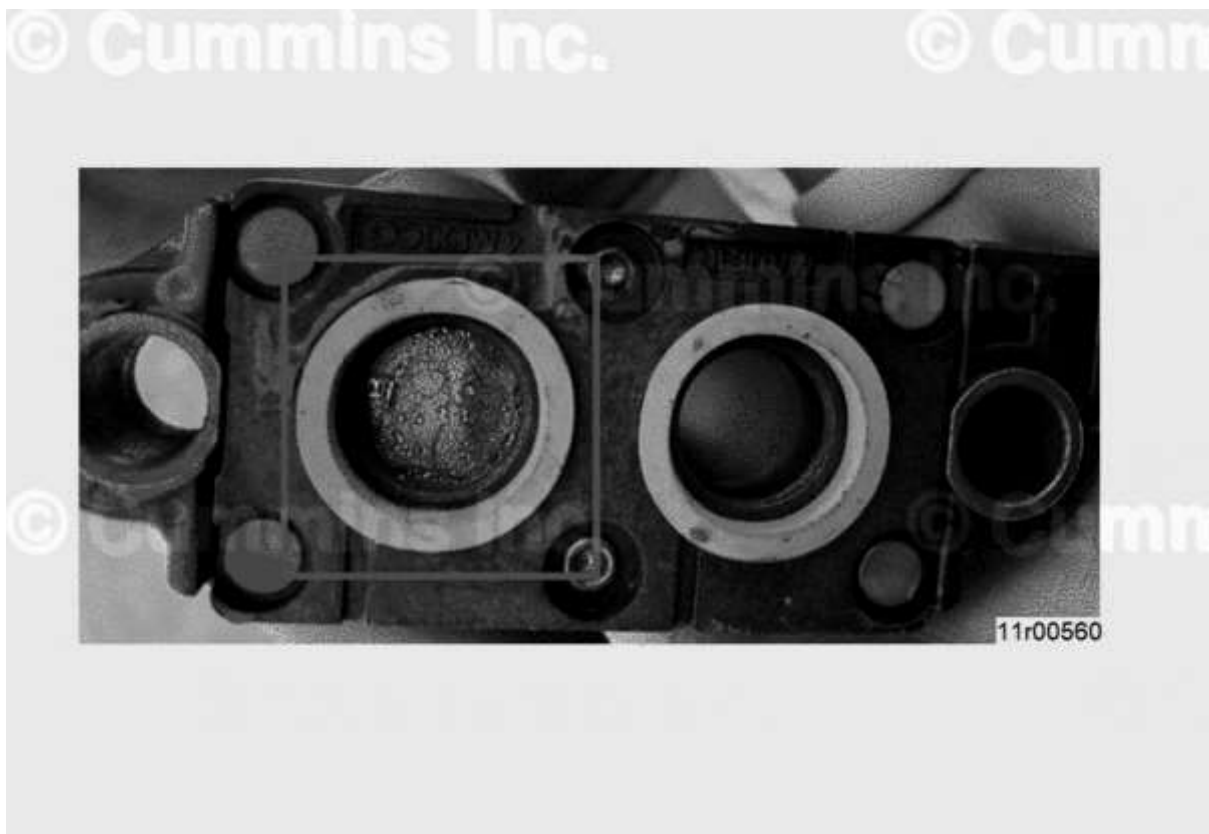


Figure 1, Condensation on the EGR Differential Pressure Sensor.

Document History

Date	Details
2019-9-20	Module Created
2020-6-1	Updated title, product affected, issue, verification, and resolution sections.
2020-9-22	Added FC7233.
2020-9-24	Updated text.
2020-9-28	Corrected title to include mention of ice.
2021-3-1	Added B6.7 CM2450 B155B and L9 CM2450 L126B.
2021-4-19	Added Fault Code 7232.
2023-5-22	Removed B6.7 CM2450 B155B.
2023-11-7	Non-Product Problem Solving (PPS)

Last Modified: 13-Nov-2023
