



Technical Service Bulletin

| | |
|--|-----------------------------------|
| Technical Service Bulletin: TSB200249 | Released Date: 21-Dec-2020 |
| Fault Code 2349 Caused by Poor OEM Power Supply or Return Connections | |

Fault Code 2349 Caused by Poor OEM Power Supply or Return Connections

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.

Information Only - OEM Related Matter Not Covered By Cummins® - Contact Appropriate OEM Dealer or OEM Representative For Additional Information

Contents

Product Affected

- X15 CM2450 X124B
- X15 CM2450 X134B

Issue

The EGR Valve Motor Circuit is sensitive to poor OEM power supply or return connections.

Symptom:

- Active or Multiple Inactive Counts of Fault Code 2349.
- Active or Multiple Inactive Counts of Fault Code 1228, 3389, 3382, 3361, and/or 125 may also be present.

Root Cause:

- Loose or disconnected battery cables
- Damaged, loose, or disconnected OEM power return (ground) connections
- Intermittent ECM power supply or return (ground) connection in J2 OEM – ECM Delphi® 96 Way Engine Control Module Connector

Verification

- Thoroughly inspect OEM power supply and return (ground) connections.
- Issues with these connections have been identified at various locations including:
 - Disconnected or loose battery cable connections. See equipment manufacturer service information. See corresponding Service Manual. Reference Procedure 013-009 in Section 13.
 - Broken or loose battery negative to chassis connection. See equipment manufacturer service information. See corresponding Service Manual. Reference Procedure 019-008 in Section 19.
 - Loose power supply return (ground) connection at the starter. See equipment manufacturer service information.
 - Poor electrical connections for unswitched power supply and return circuit at the J2 OEM – ECM Delphi® 96 Way Engine Control Module Connector. See equipment manufacturer service information. See corresponding Service Manual. Reference Procedure 019-087, 019-505 in Section 19.
- The above list is a guide of areas identified thus far but is **not** all-inclusive.
- Other areas exist for intermittent connections that may cause this or other circuit faults.
- For more information, see corresponding Service Manual. Reference Procedure 019-362 in Section 19.



Figure 1, Location of Loose Power Return (Ground) Connection at Starter that Resulted in Fault Code 2349.

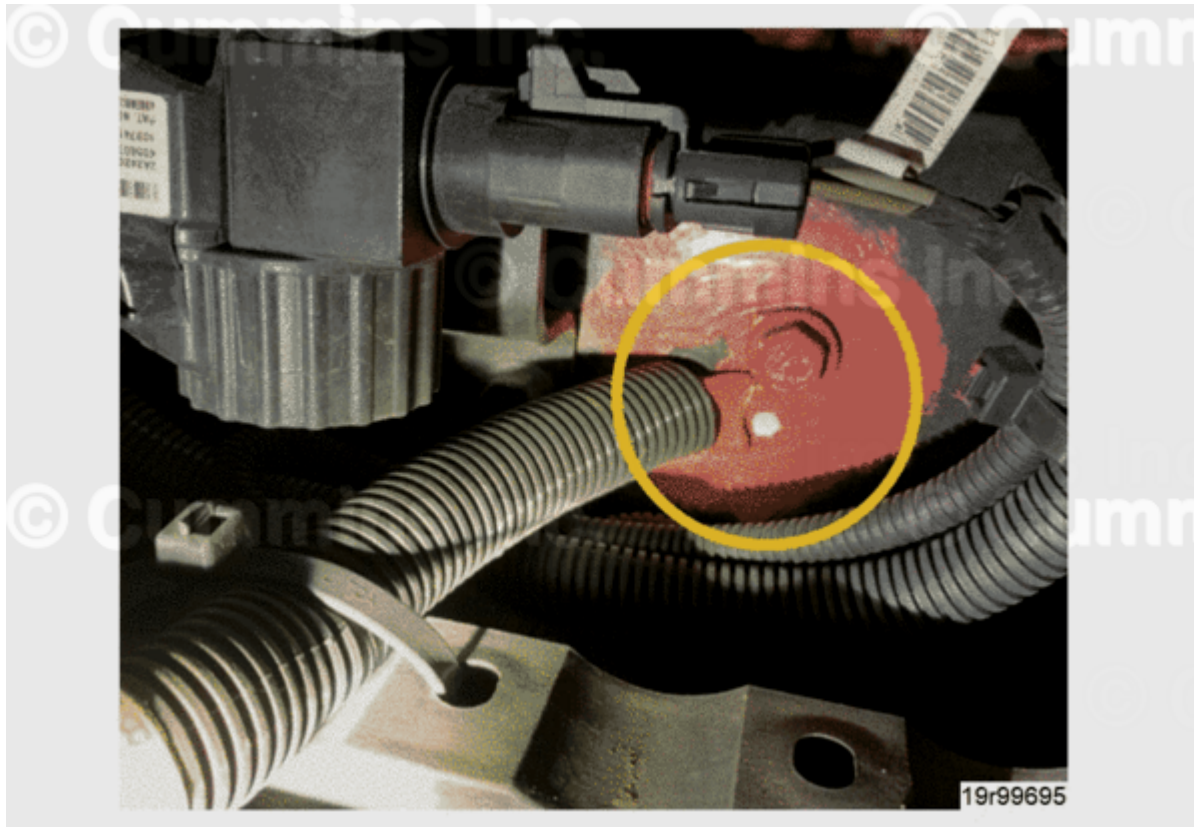


Figure 2, Example of Broken Power Return (Ground) Connection from Battery to Chassis that Resulted in Fault Code 2349.

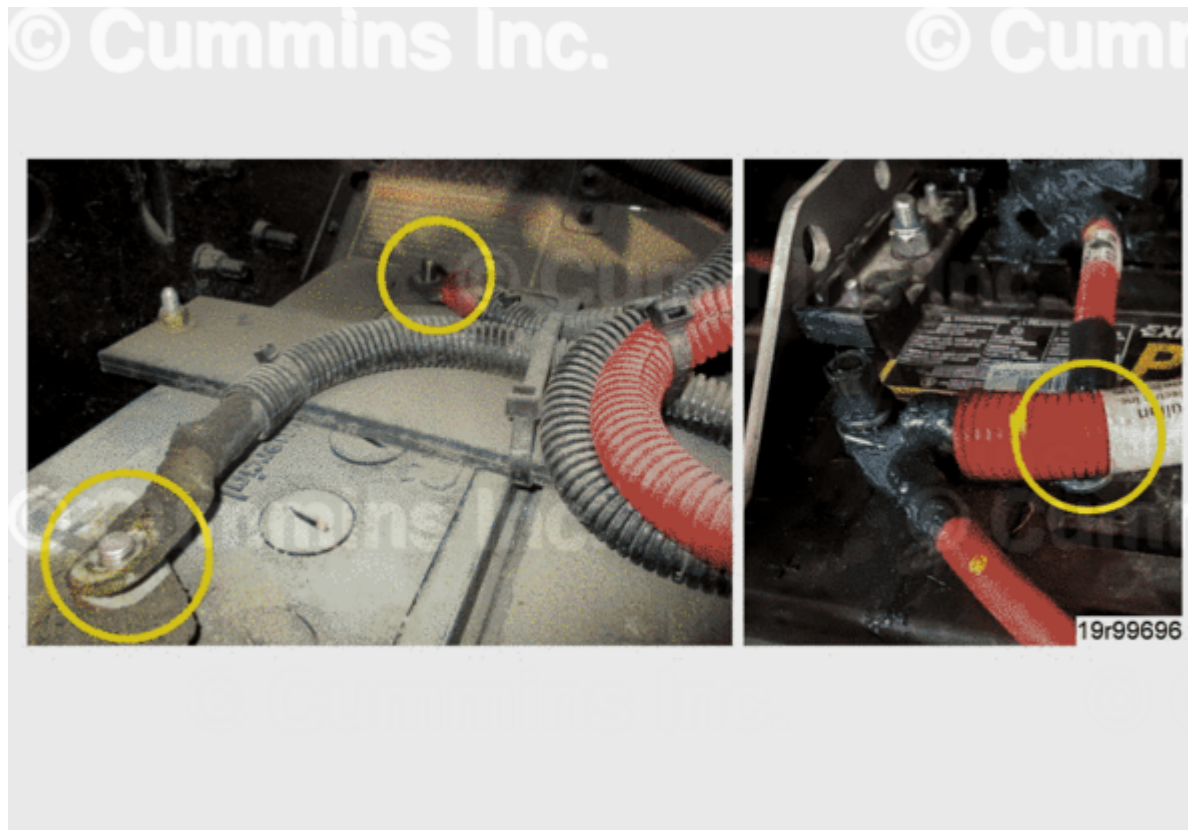


Figure 3, Two Examples of Loose or Disconnected Battery Cables that Both Resulted in Fault Code 2349.

Resolution

- If any issues are identified with OEM power supply, returns (grounds), or J2 OEM – ECM unswitched power supply connections, repair or replace as necessary. Reference Procedure 013-009 in Section 13; 019-008, 019-087, 19-505 in Section 19; and/or OEM Service Manual.
- Connect the recommended Cummins® electronic service tool or equivalent.
- Disable the fault code.
- Operate the engine within the "Conditions for Clearing the Fault Code" found in the Overview section of the troubleshooting procedure.
- Verify that the fault code is no longer active.
- Check ECM Calibration Revision History.

- Use the recommended Cummins® electronic service tool or equivalent to find the current ECM code and revision number in the ECM.
- Compare the ECM code and revision number in the ECM to the calibration revisions listed in the ECM Calibration Revision History Database for applicable changes related to this fault code.
- Reference ECM Calibration Revision History Database.
- If Fault Code 2349 returns, continue to follow published troubleshooting steps.

If all steps in troubleshooting tree have been completed and no root cause has been identified, follow the technical escalation process.

Document History

| Date | Details |
|------------|----------------|
| 2020-12-18 | Module Created |

Last Modified: 21-Dec-2020
