



Technical Service Bulletin

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Intake Air Heater Stuck Relay and Intake Air Heater Damage: Fault Code 383	

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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.

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

Contents

Product Affected

- ISB6.7 CM2350 B101
- B6.7 CM2350 B121B
- B6.7 CM2450 B155B

Issue

Symptom:

- Fault code 383 is active
- Intake air heater malfunctions and engine has trouble starting

Root Cause:

- Intake air heater relay stuck closed leading to extended on-time of the heater. Units experiencing Fault Code 383 may have experienced extended on-time of the intake air heater with no air flow entering the system caused by a stuck relay, causing the air heater to overheat. The isolated power connection bar may expand and lift from the top surface of the intake manifold cover due to extended on-time (Figure 1). The isolated power connection bar may also become loose. The issue may progress and exhibit electrical arcing damage to the intake air heater internal joints (Figure 2), with potential for arcing to cause debris to drop into the intake system.

Verification

- Check the intake air heater relay. See corresponding Service Manual. Reference Procedure 019-642 in Section 19, making sure to actuate the relay ten times to check for sticking condition.
- Check vehicle history for dead battery and parasitic current draw within the previous twelve months.
- Inspect the insulated power connection bar for deformation. See Figure 1 below. Removal of the intake manifold cover is **not** necessary to inspect the insulated power connection bar.
- Check if the intake air heater power terminal can be moved by hand. See Figure 3 below.



Figure 1, Example View of Power Bar Deformation from Top Surface of Intake Manifold Cover.



Figure 2, Example of Arcing Damage on Internal Joints of Intake Air Heater.

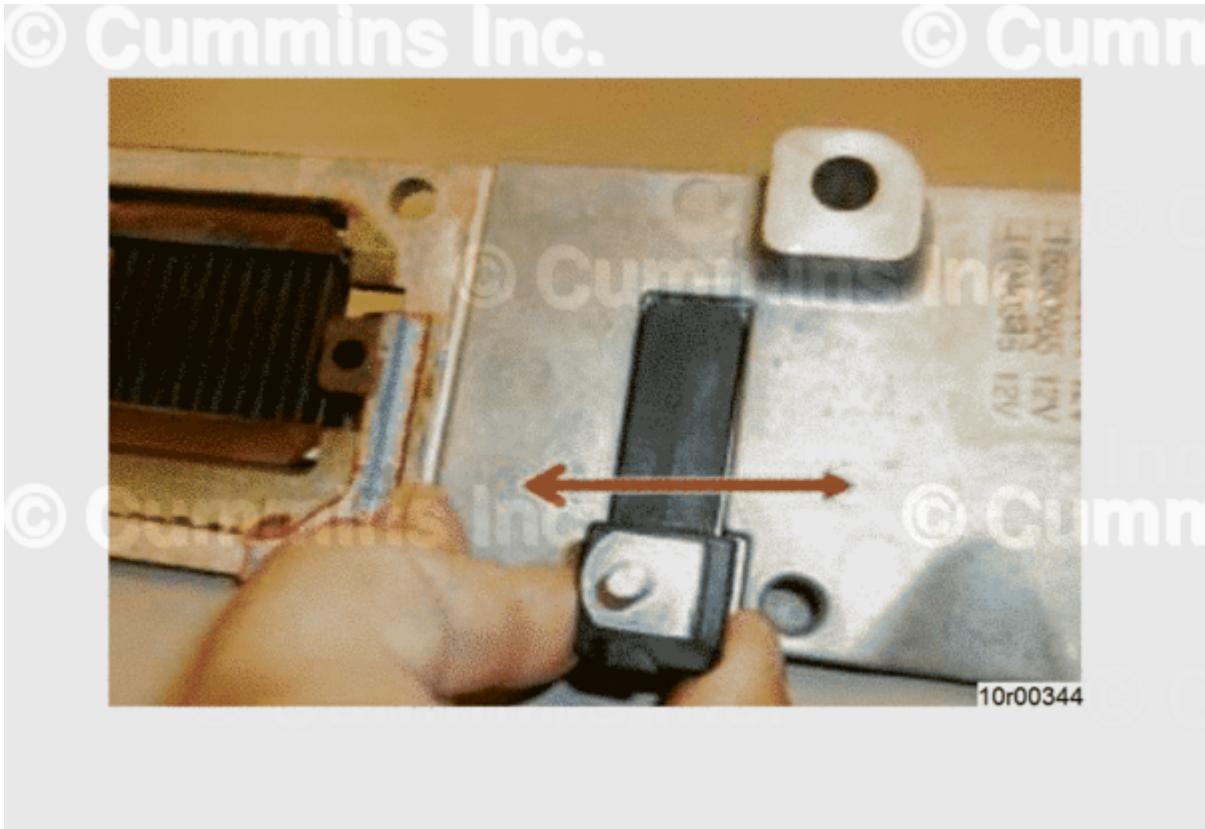


Figure 3, Any Movement of The Terminal Back and Forth As Shown is Unacceptable.

Resolution

- If the intake air heater relay is found stuck or out of specification, or the vehicle has a history of parasitic current draw leading to a dead battery within the last twelve months, inspect the intake air heater for damage.
- Any malfunction of the intake air heater associated with relay sticking is **not** covered under Cummins ® warranty.

Document History

Date	Details
2021-2-11	Module Created
2021-2-17	Corrected Product Affected.

Last Modified: 17-Feb-2021
