



STAR ONLINE PUBLICATION



Case Number: S1518000022 (REV.B)

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Symptom/Vehicle Issue: Malfunction Indicator Lamp (MIL) Illumination And/OR Battery Drain. Diagnostic Trouble Codes (DTC's) P2609 – Intake Air Heater System Performance set.

Discussion: A small number of customers may experience a MIL illumination and/or a battery drain condition. Upon further investigation a technician may find Diagnostic Trouble Code (DTC) P2609 set in the Powertrain Control Module (PCM) memory.

In addition, you may receive a vehicle with an engine showing signs of engine damage due to foreign debris ingestion. Typically, on the #6 cylinder.

The most common cause of this DTC, and condition, is the Intake Heater Grid relay sticking on for an extended period of time. When the relay sticks on, it can overheat the heater element leading to the loosening of the retaining nut on the underside of the intake manifold cover plate. This leads to arching of the connection which will eventually cut through the stud causing it to drop into the intake manifold, and into the engine.

NOTE: The intake heater relay sticking may be intermittent, and may not be exhibiting the condition at the time of testing.

When repairing a vehicle with the above condition, in addition to replacing the relay, please inspect the intake heater grid assembly closely for signs of damage caused by the sticking relay. Please see the inspection guidelines below.

This document does not authorize warranty repairs. This communication documents a record of past experiences. STAR Online does not provide any conclusions about what is wrong with the vehicle. Rather, it captures all previous cases known that appear to be similar or related to the vehicle symptom / condition. You are the expert, and you are responsible for deciding on the appropriate course of action.

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Inspection Guidelines:

NOTE: You do not have to remove the grid heater element for the majority of the inspection procedure.

1. Inspect the grid heater power terminal located on the intake manifold cover for the plastic over-mold being deformed as well as the power feed cable for signs of terminal sealant flow from the terminal sleeve (See Figure 1 and 2).

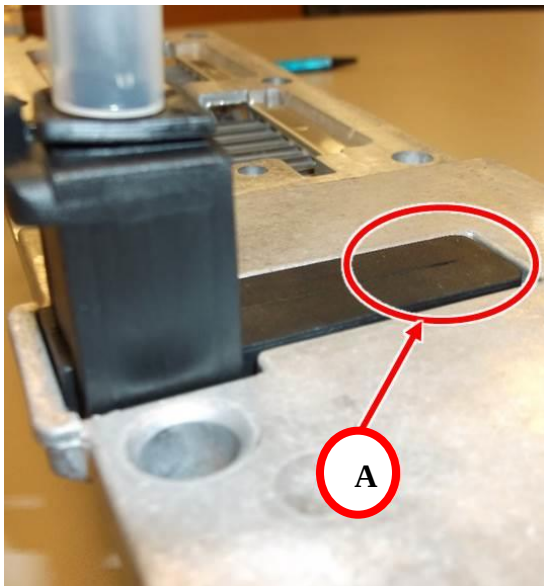


Figure 1

(a.) Good part. No deformation

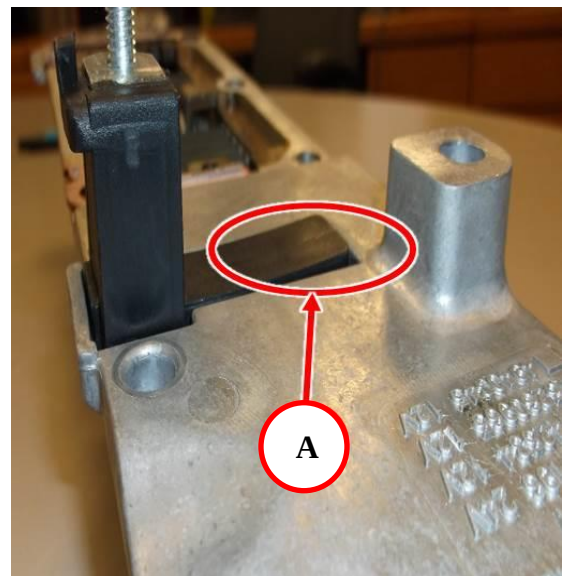


Figure 2

(a.) Failed part. Slight lifting of plastic

2. Check to see if the grid heater power terminal can be moved by hand (See Figure 3).

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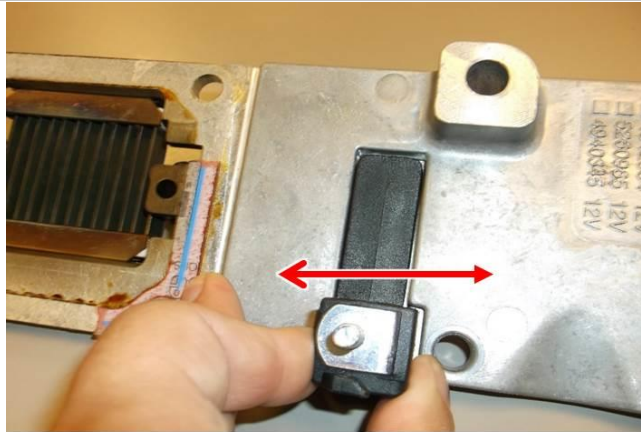


Figure 3

There should be NO movement of the terminal back and forth.

3. Was excess movement found in the terminal?
Yes>>> Proceed to step 4
No>>> The heater grid is not affected and this SOL Publication no longer applies.
Follow normal published diagnostics for the DTCs set
4. Remove the grid heater assembly and inspect the bolt on the bus bar for signs of arching and damage. See (**Figure 4**)

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Figure 4

If damage to the grid heater element was found, the grid heater relay has most likely stuck on recently causing failure of the grid heater element. Replace the intake grid heater assembly and grid heater relay as a set under normal warranty repair guidelines for relay replacement.

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