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Countries:

Document ID: IK0800484

Availability: ISIS, Bus ISIS, FleetISIS, NotSIR

Revision: 6

Major System: ELECTRICAL SYSTEM

Created: 2/20/2014

Current Language: English

Last Modified: 5/16/2019

Other Languages: NONE

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Viewed: 3044

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Coding Information

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Title: Voltage gauge drops on cold engine start-up

Applies To: Cummins ISB, B6.7, ISL, or L9 equipped vehicles

CHANGE LOG

Please refer to the change log text box below for recent changes to this article:

05/16/2019 - Updated engines this applies to
 05/15/2019 - Updated engines this applies to
 11/27/2017 - Author updated for feedback purposes.
 07/13/2016 - Updated keywords.
 08/03/2015 - Author updated for feedback purposes.

DESCRIPTION

Customer may state the voltage gauge reading cycles down to 12 volts or lower after a Cummins ISB, Cummins B6.7, Cummins ISL or Cummins L9 equipped vehicle starts.

This is due to the grid heater duty cycle which aids in warm up and smoke control of the engine when started.

SYMPTOMS

Diagnostic Trouble Codes & Dashboard Indicator Lights:

DTC/Light	Description
Red Warning Light in Volt Gauge	

Customer Observations or Concerns:

- Low Voltage on Volt Gauge
- Red Warning Light in Volt Gauge

SPECIAL TOOLS / SOFTWARE

Tool Description	Tool Number	Comments	Instructions
Not Applicable			

INSPECTION

Verify the concern, and confirm that normal charging voltage(approx. 13.8-14.2v) is achieved and is stable 2-3 mins after engine start-up.

If charging system is operating properly, the voltage gauge operation during grid heater operation is considered normal.

DIAGNOSTICS

If the volt gauge issue persists for more than 3 mins after start-up, troubleshoot the charging system as outlined in [IK0800403](#)

ADDITIONAL INFORMATION

After a cold start, the cold starting aid may activate during warm-up, this is termed post-heat. The post-heat schedule is determined by the average of the intake manifold temperature sensor and the coolant temperature sensor at key ON.

Post Heat operates for a minimum of 30 seconds if the average of the intake manifold temperature sensor and the coolant temperature sensor is below 49°C [120°F]. There are 3 duty cycles of grid heater operation at 40%, 50% and 100% with duration varying based on the prior noted criteria. This will directly effect the cycling of the voltage gauge reading.

Post Heat operation is turned OFF after 3 minutes, when the above temperature threshold is reached, or at vehicle speeds greater than 30 kph [18.6 mph].

OTHER RESOURCES

- [Master Service Information](#)

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