



Countries:	CANADA, UNITED STATES	Document ID:	IK0800484
Availability:	ISIS, FleetISIS	Revision:	0
Major System:	ELECTRICAL SYSTEM	Created:	2/20/2014
Current Language:	English	Last Modified:	2/27/2014
Other Languages:	NONE	Author:	Chris Moody
Viewed:	155		

[Less Info](#)

Hide Details

Coding Information

Copy Link 	Copy Relative Link 	Bookmark View My Bookmarks	Add to Favorites 	Print 	Provide Feedback 	Helpful 12	Not Helpful 0
----------------------	-------------------------------	--	-----------------------------	------------------	-----------------------------	--------------------------	-----------------------------

Title: Voltage gauge drops on start-up and for up to 3 mins(Cummins ISB)

Applies To: Cummins ISB

DESCRIPTION

Customer may state the voltage gauge reading drops to 12 volts or below after a Cummins ISB equipped vehicle starts when cold. This is due to the grid heater duty cycle which aids in warm up and smoke control of the engine when started cold.

The grid heater will come on at cold start in one of 3 duty cycles and draws about 200 amps when on:

40%

50%

100%

The duty cycle depends on the engine coolant and air temperatures.

INSPECTION STEP(s)

1. The service writer should verify the concern and confirm that normal charging voltage (approx. 13.8-14.2v) is achieved 2-3 mins after engine start-up. If charging system is operating properly, a repair order is not necessary because the condition is considered normal.

-do not proceed with troubleshooting unless the issue persists for more than 3 mins after start-up.

Additional Information

After a cold start, the cold starting aid could be activated during warm-up, which 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 is deactivated at vehicle speeds greater than 30 kph [18.6 mph]. The cold starting aid postheat 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] The postheat operation is turned OFF if the temperature is above this threshold. The actual duration is calculated by the ECM and is a function of engine speed, the average of the intake manifold temperature sensor and the coolant temperature sensor, and how quickly the engine warms. Post heat can be active at ambient temps up to 60 degrees F.

 Hide Details

Feedback Information

Viewed: 154

Helpful: 12

Not Helpful: 0

No Feedback Found