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Coding Information

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Title: No-Idle HVAC Run-Time Shorter than Expected - Bergstrom

Applies To: LT, HX Sleeper Models with 0016UZL or 0016VLN

CHANGE LOG

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

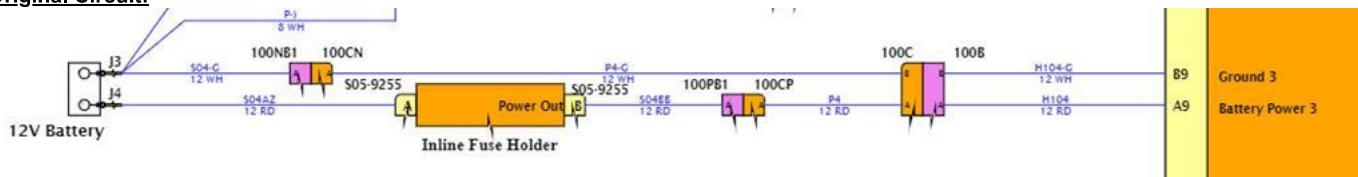
10/6/2023 - Initial Article Release

DESCRIPTION

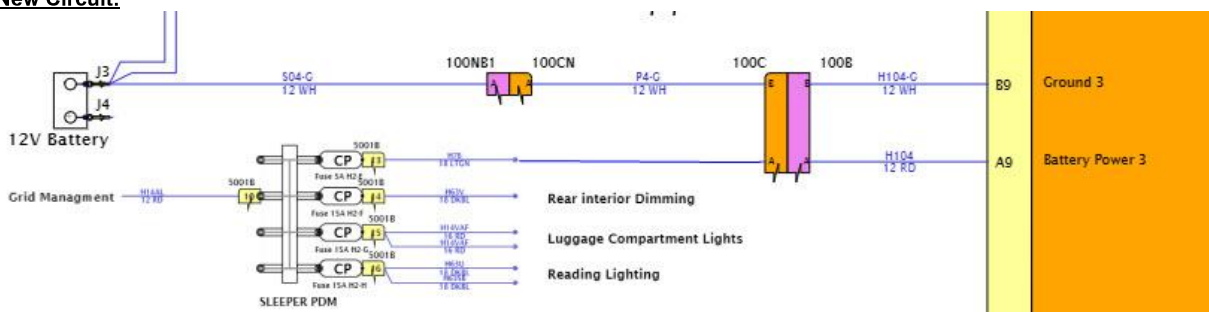
This document will guide the user through relocating the No-Idle system's voltage sense source from the battery to the interior sleeper PDM. This should only be completed when the symptom of shorter than expected run-time of the no-idle system is present, and excess voltage drop is found across the battery sense circuit.

This rework will reduce the amount of voltage drop seen across the voltage sense circuit, which provides a more accurate voltage reading to the No-Idle system controller.

Original Circuit:



New Circuit:



SYMPTOM(s)

Customer Observations or Concerns:

- Shorter than expected run-time of the no-idle system
- No-idle system turning off before auto start/stop can engage

Diagnostic Trouble Code(s) & Dashboard Indicator Light(s):

DTC/Light	Description
N/A	N/A

SPECIAL TOOL(s) / SOFTWARE

Tool Description	Tool Number	Comments	Instructions
N/A	N/A		

[Tools Resource Center](#)

SERVICE PARTS INFORMATION

Kit Description	Part Number	Quantity Required	Notes
CONNECTOR, ELECT, SEALED MALE 2-WAY	2031522C1	1	
TERMINAL, FEMALE	2031531C1	2	
TERMINAL	3768014C1	1	
3/8" RING TERMINAL	Source Locally	1	
WIRE, 12GA, RED	Source Locally	129	Inches
WIRE, 12GA, WHITE	Source Locally	121	Inches

DIAGNOSTIC STEP(s)

 WARNING:	
To prevent property damage, personal injury, and/or death, keep flames or sparks away from the vehicle and do not smoke while servicing the vehicle's batteries. Batteries expel explosive gases.	

 WARNING:	
To prevent property damage, personal injury, and/or death, remove the ground cable from the negative terminal of the battery box before disconnecting any electrical components. Always connect the ground cable last.	

 WARNING:	
To prevent personal injury and/or death, always wear safe eye protection when performing vehicle maintenance.	

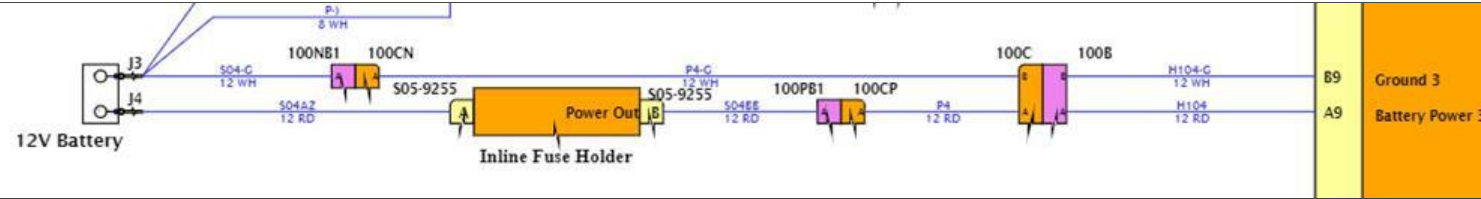
 WARNING:	
To prevent property damage, personal injury, and/or death, if the vehicle must be raised, do not work under the vehicle supported only by jacks. Jacks can slip or fall over.	



WARNING:

To prevent property damage, personal injury, and/or death, park the vehicle on a hard, flat surface, turn the engine off, set the parking brake, and install wheel chocks to prevent the vehicle from moving in either direction.

Step	Action	Decision
1	DIAGNOSTIC: Measure the voltage drop of the No-Idle battery sense circuit. (From Pin A9 at the No-idle system controller to B+ at the batteries) Reference JK0800523 - General Circuit Load Testing and Voltage Drop Test Is voltage drop excessive?	Yes. Greater than 0.5v of voltage drop Proceed to repair steps
		No. Less than 0.5v of voltage drop Refer to the appropriate service manual for diagnostics



REPAIR STEP(s)

- 1.) Assemble the overlay harness
 - The parts list is located in the "Service Parts Information" section above



Figure 1: Assembled Overlay Harness

INSTALLATION PROCEDURE:

- 1.) Locate the 100B/C No-Idle System controller power sense/ground connector (Figure 2)
 - Located under the bunk bed, at the passenger front corner



Figure 2: 100B/C No-Idle System controller power sense/ground connector

- 2.) Disconnect the 100B/C No-Idle System controller power/sense and ground connector
- 3.) Fold the male connector back and tape/secure to the harness
- 4.) Connect the overlay harness to the female side of the connector, then route the new harness to the left side sleeper fuse panel (Figures 3, 4, 5, and 6)



Figure 3: 100B/C Connector Connections



Figure 4: Routing of the 100B/C No-Idle System controller power sense/ground connector overlay

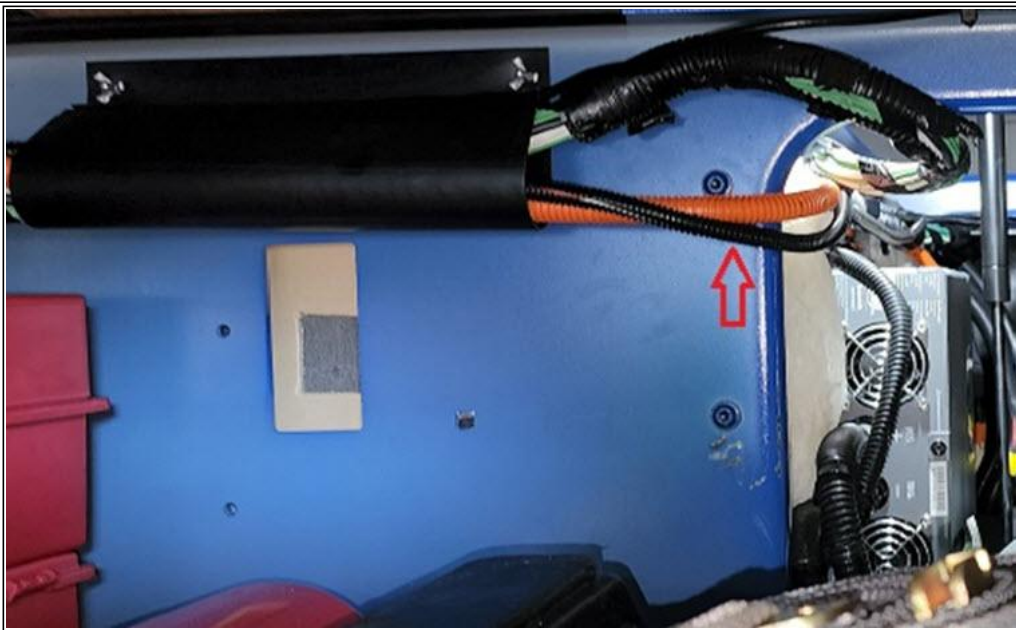


Figure 5: Routing of the 100B/C No-Idle System controller power sense/ground connector overlay



Figure 6: Routing of the 100B/C No-Idle System controller power/sense and ground connector overlay

5.) Connect the ground eyelet of the overlay harness to the sleeper ground stud (Figure 7)

- Located near the sleeper PDM



Figure 7: Sleep Ground Stud Connection

6.) Remove and position the fuse block to gain access to the terminal locks (Figures 8, 9)

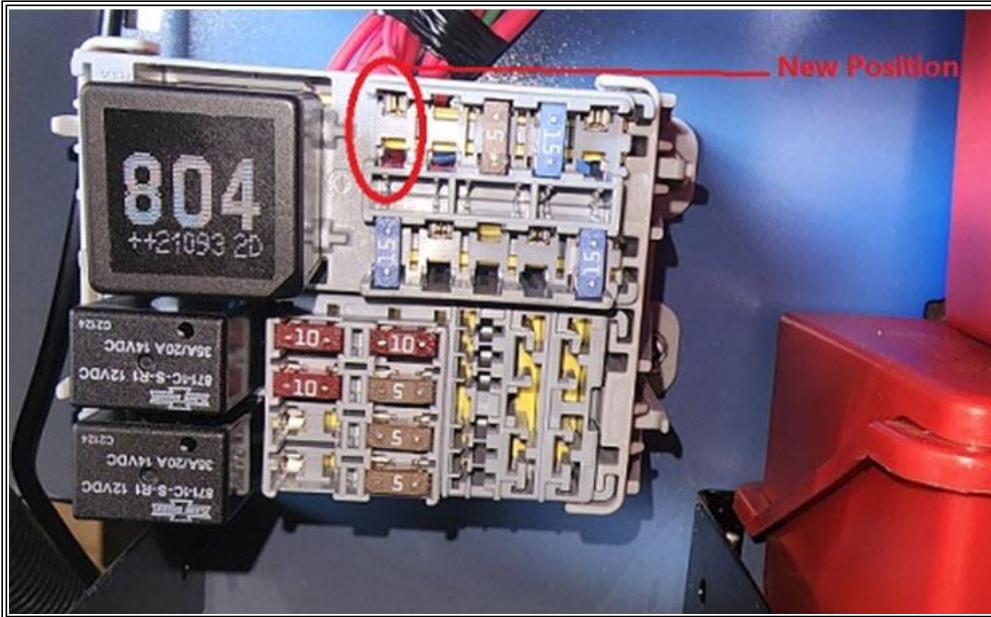


Figure 8: Sleeper PDM (5001B)

7.) Remove terminal lock (Figure 9)

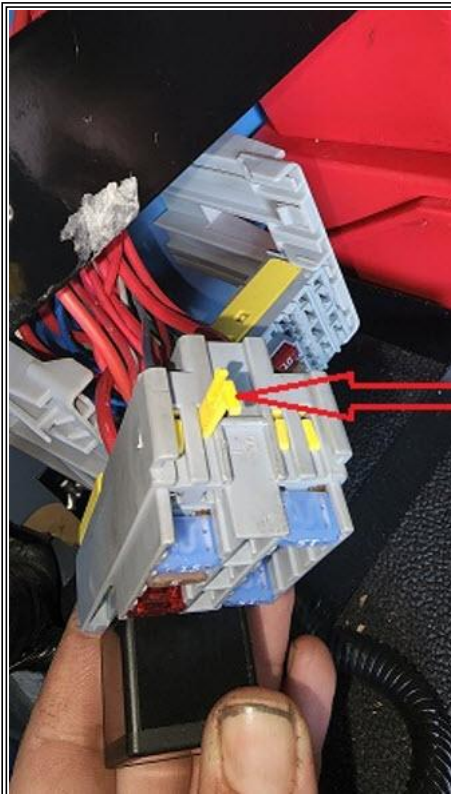


Figure 9: Sleeper PDM Terminal Locks

8.) Install overlay B+ terminal into cavity 12 of the sleeper PDM (Figure 10)

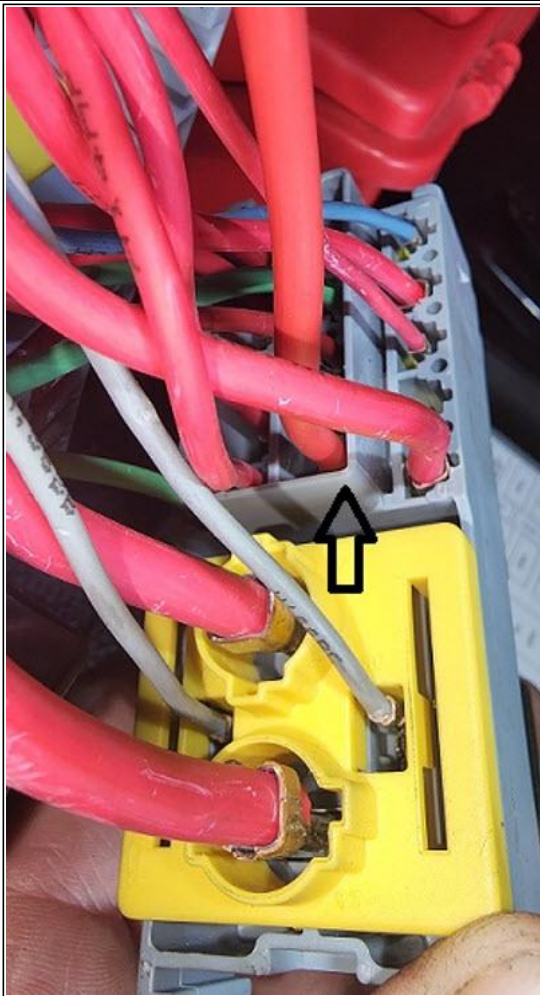


Figure 10: Overlay Harness Installed into Pin 13 of the Sleeper PDM (5001B). Fuse H2-E

9.) Reassemble the sleeper PDM assembly, then install a 10 amp mini fuse in PDM location H2-E (Figure 11)



Figure 11: Assembled Sleeper PDM - 10 amp Fuse Installed in H2-E

11.) Locate the original fuse holder in the auxiliary battery box



Figure 12: Auxiliary Battery Box - Fuse Removal

12.) Remove the original 10 amp fuse, reinstall the cap, then wrap the fuse holder cap with electrical tape



Figure 13: Fuse Holder - Fuse Removed, Cap Taped with Electrical Tape

13.) Test for proper No-Idle system operation

WARRANTY INFORMATION

Warranty Claim Coding:

Refer to the [Warranty Coding Manual](#) for Group and Noun Codes.

Standard Repair Time(s):

OTHER RESOURCES

[Master Service Information Site](#)

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