



Countries: CANADA, UNITED STATES Document ID: IK2300028
 Availability: ISIS, Bus ISIS, NotSIR Revision: 0
 Major System: ELECTRIC VEHICLE Created: 4/9/2024
 Current Language: English Last Modified: 4/10/2024
 Other Languages: NONE Author: Josh Bowman
 Viewed: 82

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Coding Information

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Title: Electric Vehicle Air Compressor Over Voltage Conditions

Applies To: IC Bus® Electric CE Series & International® eMV™ Series

CHANGE LOG

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

04/10/2023 - Initial Article Release

DESCRIPTION

This document will guide the user through detecting an abnormal overvoltage condition of the high-voltage air compressor.

It has been found, there is an internal hardware concern with the printed circuit board (PCB) for the 2-1 Inverter causing a false overvoltage condition when heat is applied.

SYMPTOMS

Diagnostic Trouble Codes & Dashboard Indicator Lights:

DTC/Light	Description
SPN 1351 FMI 3	Air Compressor Status: Voltage Above Normal, or Shorted to High Source

Customer Observations or Concerns:

Air compressor stops functioning (can be intermittent)


SPECIAL TOOLS / SOFTWARE

Tool Description	Tool Number	Comments
EZ-Tech	N/A	Any supported EZ-Tech
Service Diagnostics Solutions (SDS)	Version 1.6.18 or higher	
NEXIQ USB-Link 2 or 3	NQ124032 or NQ121052	
Electric Vehicle "Y" Adapter Cable	08-801-01	Works with USB-LINK 2 or 3

SERVICE PARTS INFORMATION

Kit Description	Part Number	Quantity Required	Notes
MODULE , 2-IN-1 INVERTER	4209536C6	1	


DIAGNOSTIC STEPS

 **WARNING:**


To prevent property damage, personal injury, and / or death, park 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.

 **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 personal injury and / or death, always wear safe eye protection when performing vehicle maintenance.

 **WARNING:**


To prevent property damage, personal injury, and / or death, keep flames or sparks away from 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 or death, NEVER service a high-voltage vehicle without completing high-voltage safety training. Before working on vehicle, read and obey all High-Voltage Safety and Lock-Out Tag-Out procedures and information.

 **WARNING:**

To prevent personal injury or death, wear and use approved high-voltage Personal Protective Equipment (PPE) when near a high-voltage electric vehicle. Inspect PPE before use. Do not use gloves or other PPE with expired dates, holes, cracks or damage. NEVER touch energized orange high-voltage cables or high-voltage components without wearing approved high-voltage PPE.

 **WARNING:**

To prevent personal injury or death, read all information in the Safety Information and High-Voltage Safety sections of the service manual.

Step	Action	Decision
1	DIAGNOSTIC:	Yes. Proceed to step 2

	<p>Did the vehicle experience the high-voltage compressor shutting down?</p>	<p>No. No further action needed</p>
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Step	Action	Decision
2	<p>DIAGNOSTIC:</p> <p>Perform an SDS EV CAN Logging Session (JK4300025), Open a technical service case file and attach recording with all corresponding information such as fault codes and additional symptoms.</p>	<p>1. If air compressor voltage (EABC) is found abnormal (high), the 2-1 inverter will need to be flashed with an updated software from a Navistar field representative.</p> <p>If a representative is unable to be present within a reasonable time, the 2-1 Inverter will need to be replaced with the C6 version that contains the updated software.</p> <p>2. If compressor voltage is found normal, additional diagnostics will need to be performed.</p>

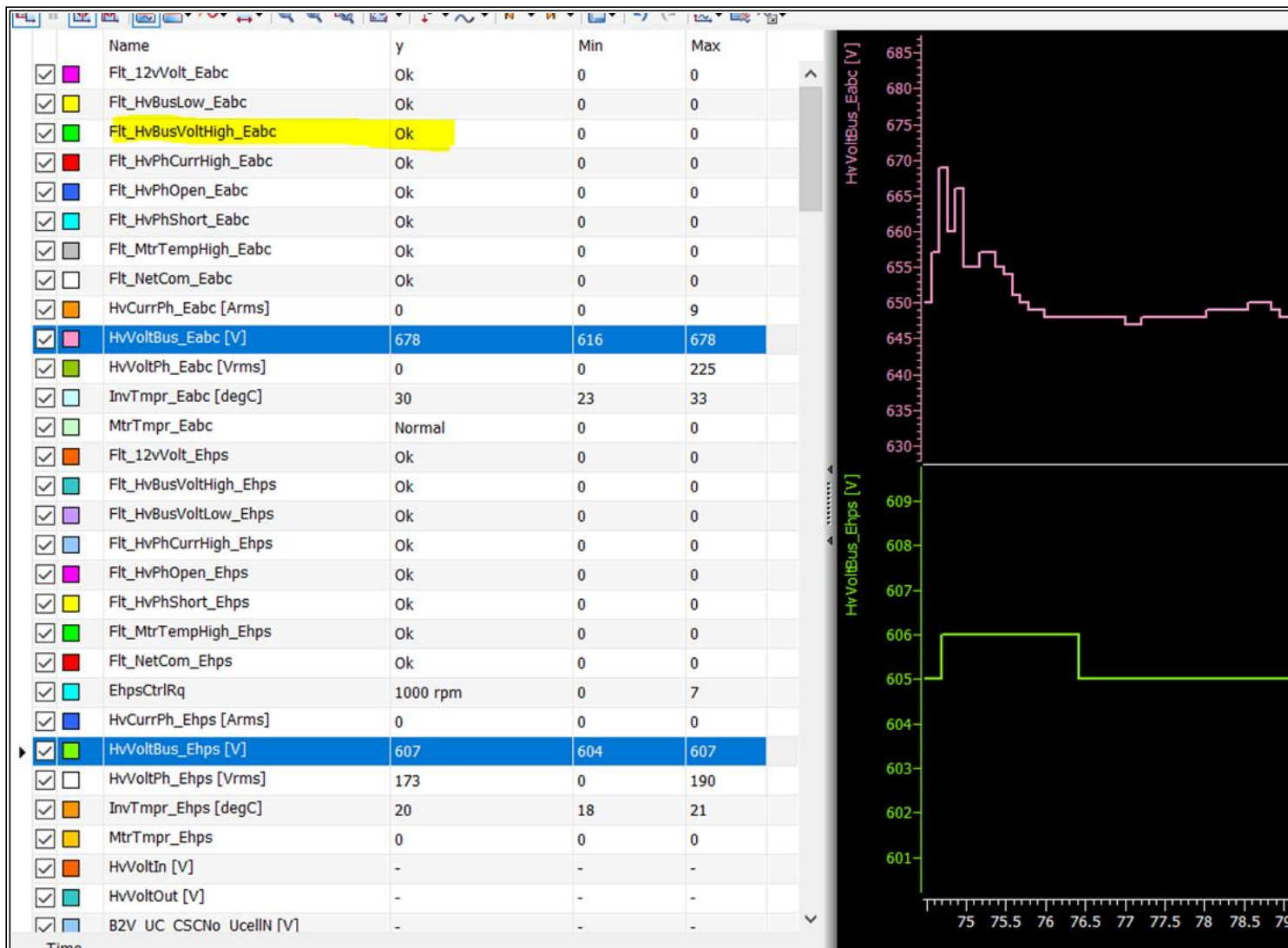


Figure 1: Example of Abnormal Air Compressor (EABC) Voltage

WARRANTY INFORMATION

Warranty Claim Coding:

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

Standard Repair Time(s):

Refer to the [SRT Manual](#) for Repair Times

OTHER RESOURCES

[Master Service Information Site](#)

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