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Coding Information

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Title: Air Conditioning Shuts Off During Full Throttle

Applies To: Electric CE Bus

CHANGE LOG

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

06/16/2023 - Initial Article Release

DESCRIPTION

This document will guide the user through understanding what may occur during a high power draw event on electric CE buses.

During full throttle maneuvers, it has been identified that the air conditioning may shut-off or quit working momentary. This happens because the VCU will restrict power available to the A/C system periodically when actual power exceeds available power. The VCU shutting down accessories is done as designed, and will be considered normal operation due to power management strategies.

Once the high-power draw event has concluded, the vehicle will resume normal operation with no further intervention needed.

SYMPTOMS

Diagnostic Trouble Codes That May Be Logged During Event:

DTC/Light	Description
SPN 444 FMI 1	(Proair Fault F111 FCMP) - Battery Potential / Power Input 2 : Data Valid But Below Normal Operational Range - Most Severe Level
SPN 444 FMI 18	(Proair Fault F117 FCMP) - Battery Potential / Power Input 2 : Data Valid But Below Normal Operating Range - Moderately Severe Level
SPN 520054 FMI 11	(Proair Fault F054 FCMP) - Front A/C Compressor Inverter Module: Relay Open : Root Cause Not Known
SPN 516454 FMI 11	(Proair Fault F054 RCMP) - Rear A/C Compressor Inverter Module: Relay Open : Root Cause Not Known
SPN 520117 FMI 18	(Proair Fault F117 RCMP) - Rear A/C Compressor Inverter Module High Voltage : Data Valid But Below Normal Operating Range - Moderately Severe Level
SPN 520111 FMI 1	(Proair Fault F111 RCMP) - Rear A/C Compressor Inverter Module High Voltage : Data Valid But Below Normal Operational Range - Most Severe Level

Customer Observations or Concerns:

Air conditioning will momentarily quit working
 ProAir controller (HMI) will show an error message on panel
 3 audible beeps may be heard

SPECIAL TOOLS / SOFTWARE

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

SERVICE PARTS INFORMATION

Kit Description	Part Number	Quantity Required	Notes
N/A	N/A	N/A	N/A

DIAGNOSTIC STEPS

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

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

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

WARNING! To prevent personal injury and / 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 and / 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 highvoltage cables or high-voltage components without wearing approved highvoltage PPE.

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

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

Step	Action	Decision

1	<p>DIAGNOSTIC:</p> <p>During a full throttle maneuver, did the air conditioning quit working?</p>	<p>Yes. If vehicle resumed operation as normal and no lamps were illuminated on the <u>cluster</u>, vehicle can remain in service.</p> <p>If vehicle illuminated lamps on the <u>cluster</u>, please open a technical service case file stating which DTC's are active.</p> <p>No. No further action is needed, return vehicle back to service.</p>
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WARRANTY INFORMATION

Warranty Claim Coding:

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

Standard Repair Times:

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

OTHER RESOURCES

[Master Service Information Site](#)

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