



A MISSION CRITICAL ELECTRONICS BRAND

Troubleshooting Guide

for

IMPAC™

BY MISSION CRITICAL ELECTRONICS

I Idle
M Mitigation
P Power
A Automation
C Control

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Change Log

Revision	Revision Date	Description of Change
A	April 3, 2025	Initial release.
B	May 22, 2025	Added and rephrased various steps and notes.

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This document applies to the below application type.	
Chassis Make	Isuzu
Chassis Model	NPR
Chassis Year	2024 - 2025
ZeroRPM Product	IMPAC
ZeroRPM Software	PDM v01.01.03
	PLC v6.00.00
	HMI v06.01.02

SECTION 1: DESCRIPTION OF DOCUMENT

This document is intended to help technicians diagnose and troubleshoot technical issues involving the ZeroRPM IMPAC system. It assumes you have already read the IMPAC System Overview Guide (4806-00038) to gain a foundational understanding of the system and have activated the system according to the steps within the guide. It also assumes you have read the Frequently Asked Questions document (4806-00039) for additional context on the operation of the system.

If you are instructed to replace any components, refer to the Maintenance and Replacement Parts Guide (4808-00042).

All supporting documentation may be found by following [this link](#) or by scanning the QR code below.

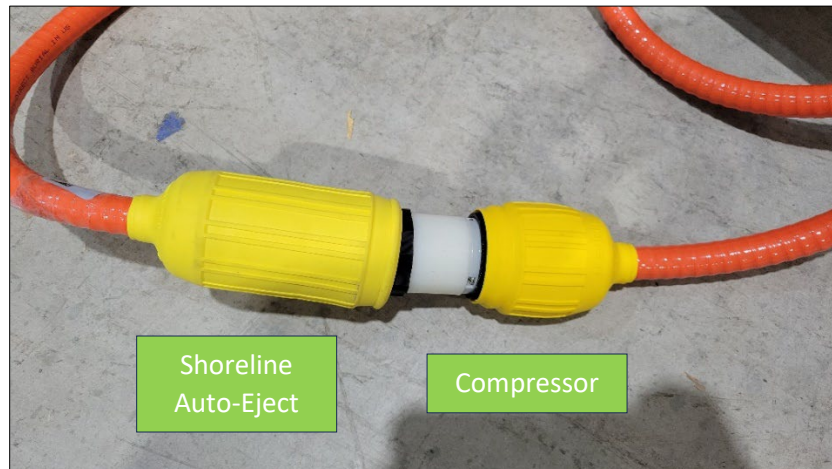


This is a living document. It will be updated as additional troubleshooting scenarios and user feedback are received.

SECTION 2: TROUBLESHOOTING SCENARIOS

2.1. Air Compressor Does Not Start

1. Before proceeding, verify the following:
 - a. Is the truck in Equipment Activation mode?
 - b. Did you press and hold the Air Compressor Request switch for one second?
 - c. Is the air compressor temperature 45°F or higher?
 - d. Is the 120V air compressor breaker in the ON position (not tripped) **and** does the red LED turn on when the Air Compressor Request switch is selected?
 - i. **If** the LED flashes, **then** continue to Step 2.
 - ii. **If** the LED remains off, **then** [contact ZeroRPM technical support at 1-855-937-6776](tel:1-855-937-6776).
 - iii. **If** the LED is solid red and the breaker is not tripped, **then** skip to Step 2c.
 - e. Is the manual switch on the compressor in the ON position?
 - f. Is the tank pressure below 90 PSI?
 - i. **If** the tank pressure is 90 PSI or higher, **then** bleed the tank below 90 PSI.
2. Flip the manual switch to the ON position, disconnect external shore power, and disconnect the air compressor from the PDM (in that order).
 - a. Bypass the IMPAC system by connecting the air compressor plug to the Shoreline Auto-Eject receptacle (pictured below).



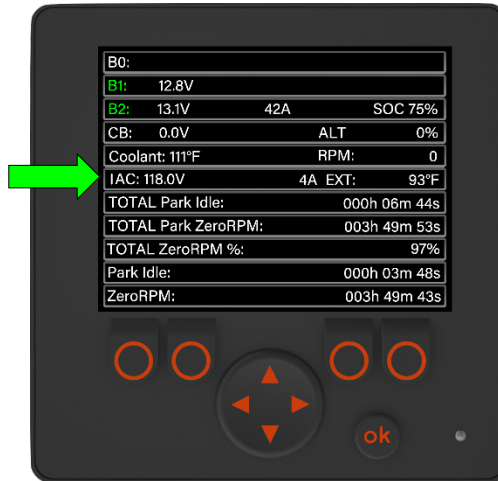
- b. Verify the compressor operates without tripping the wall breaker.
 - i. **If** the compressor does not trip the breaker but does not run either, **then** continue to Step 2c.
 - ii. **If** the compressor trips the breaker, **then** skip to Step 2d:
 - iii. **If** the compressor runs, **then** skip to Step 2e.
- c. **If** the air compressor does not operate, **then** perform the following:



The compressor carries high voltage. Failure to observe proper electrical safety procedures may result in death or injury.

- i. Remove the air compressor cap.
 - ii. Verify 120VAC is present at the compressor switch.
 - 1. **If** 120VAC is not present on the compressor switch, **then** unplug the air compressor plug from the shore power receptacle, **then** check for 120VAC on the shore power receptacle.
 - a. **If** 120VAC is present on the shore power receptacle but not on the compressor, **then** the ZeroRPM compressor harness must be replaced; see the IMPAC Maintenance and Replacement Parts Guide (4806-00042) for details.
 - 2. **If** 120VAC is present on the compressor switch while the switch is on, **then** reference the OEM compressor documentation to determine how to proceed.
- d. Test the air compressor with the OEM cordset (not supplied by ZeroRPM) to verify the compressor functions properly without tripping the breaker.
 - i. **If** the compressor functions without tripping the breaker, **then** continue to Step 2d-ii-1.
 - 1. **If** the compressor trips the breaker, **then** replace the compressor.
 - ii. Verify the connection between the compressor harness and the compressor is wired properly (including connection and torque).
 - 1. **If** the connection is faulty, **then** correct it and retest.
 - 2. **If** the connection is good, **then** replace the compressor harness.
 - a. **If** the replacement harness does not correct the issue, **then** replace the shore power harness.
 - b. **If** the issue persists, **then** contact ZeroRPM technical support at 1-855-937-6776.
- e. Once you have confirmed air compressor operation, restore the original air compressor and shore power connections to the PDM and continue to Step 3.

3. Verify the AC voltage on the primary information page reads 110VAC or higher while in Equipment Activation mode. To access the primary information page (pictured below), press and hold the OK button for approximately three seconds.



- a. **If** AC voltage is not displayed, **then** ensure the RJ45 data connector on the bottom of the inverter (pictured below, left) is properly seated and undamaged. The image below and the right shows a damaged RJ45 connector.



- If** voltage is not displayed, the RJ45 connector is seated properly, and the connector is undamaged, **then** [contact ZeroRPM technical support at 1-855-937-6776](tel:1-855-937-6776).
- If** the RJ45 connector is undamaged but is seated improperly, **then** remove it and reinsert it to ensure it is fully engaged.
- Insert the key into the ignition and remove it.
- Press and hold F1 below the green power icon on the IMPAC display. Wait for the icon to turn red and for the screen to power down.
- Reinsert the key and turn it to the Run position.
- Press and hold the Equipment Activation button and immediately remove the key from the ignition.
- If** the RJ45 connector is damaged, **then** the RJ45 connector must be replaced; see the IMPAC Maintenance and Replacement Parts Guide (4806-00042) for details.

- b. **If** 110VAC or higher is displayed, **then** perform a cold boot as follows:
 - i. Insert the key into the ignition and remove it.
 - ii. Press and hold F1 below the green power icon on the IMPAC display. Wait for the icon to turn red and for the screen to power down.
 - iii. Reinsert the key and turn it to the Run position.
 - iv. Press and hold the Equipment Activation button and immediately remove the key from the ignition.
 - c. **If** the problem persists, **then** [contact ZeroRPM technical support at 1-855-937-6776](tel:1-855-937-6776).
 - 4. **If** the IMPAC display shows the message, “Compressor Too Cold”, **then either** connect the vehicle to shore power **or** run the Webasto air heater to increase the internal compressor temperature.
 - a. **If** the Rolair compressor motor is warm but the message is still displayed, **then** visually inspect the 4-pin connector from the heater pad harness to the body harness (pictured below) for damage and/or a loose connection.

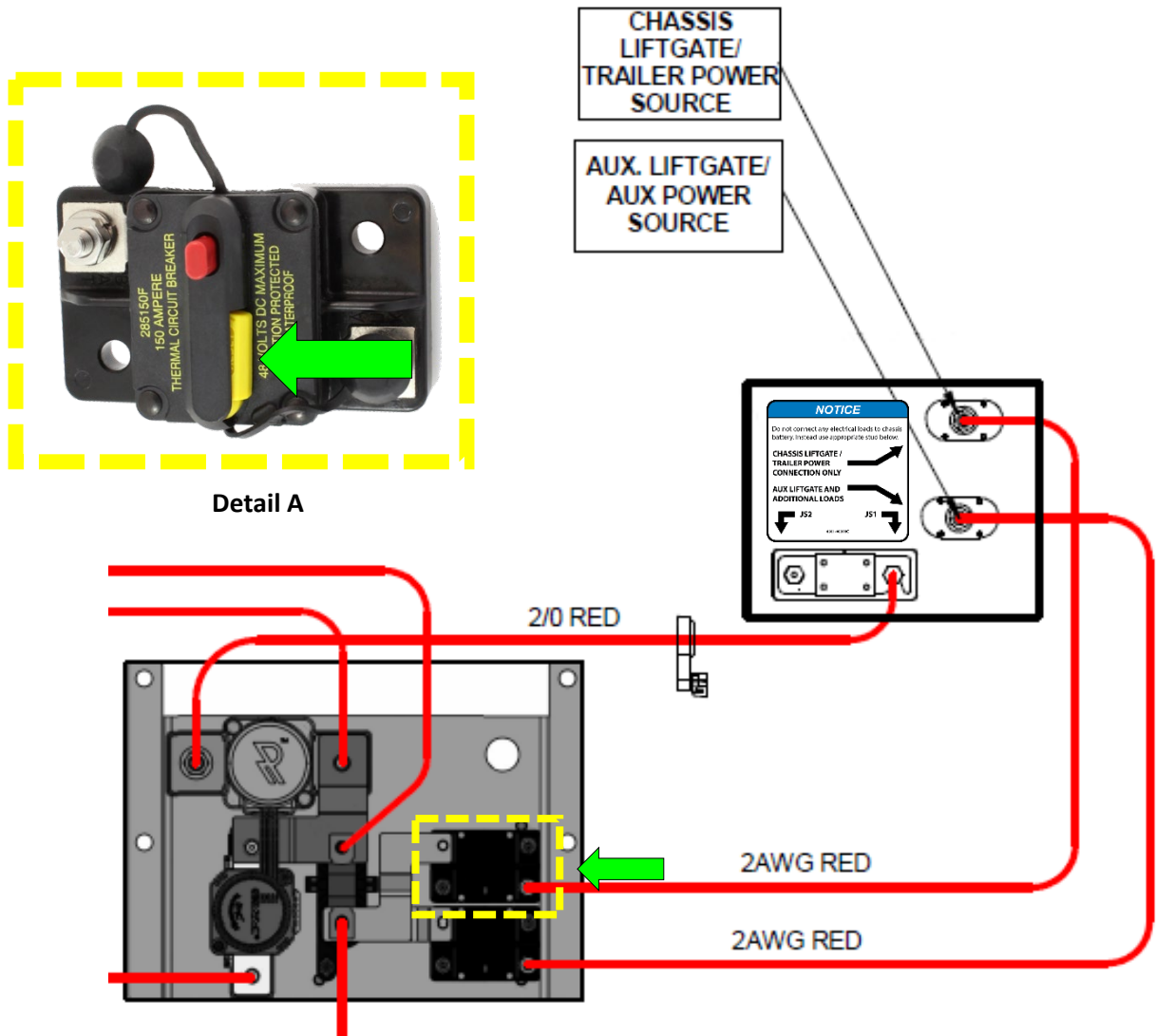


- i. **If** the connector is loose or disconnected, **then** ensure it is seated properly.
 - ii. **If** the heater harness or body harness is damaged, **then** it must be replaced; see the IMPAC Maintenance and Replacement Parts Guide (4806-00042) for details.
 - b. **If** the message is still displayed, **then** [contact ZeroRPM technical support at 1-855-937-6776](tel:1-855-937-6776).

5. **If** the IMPAC display shows the message, “Stall Protection Active”, **then either** connect the vehicle to shore power **or** run the Webasto air heater to increase the internal compressor temperature.
 - a. **If** the Rolair compressor motor is warm but the message is still displayed, **then** perform a cold boot as follows:
 - i. Insert the key into the ignition and remove it.
 - ii. Press and hold F1 below the green power icon on the IMPAC display. Wait for the icon to turn red and for the screen to power down.
 - iii. Reinsert the key and turn it to the Run position.
 - iv. Press and hold the Equipment Activation button and immediately remove the key from the ignition.
 - b. **If** the message is still displayed, **then** [contact ZeroRPM technical support at 1-855-937-6776](#).

2.2. Chassis Liftgate Does Not Operate

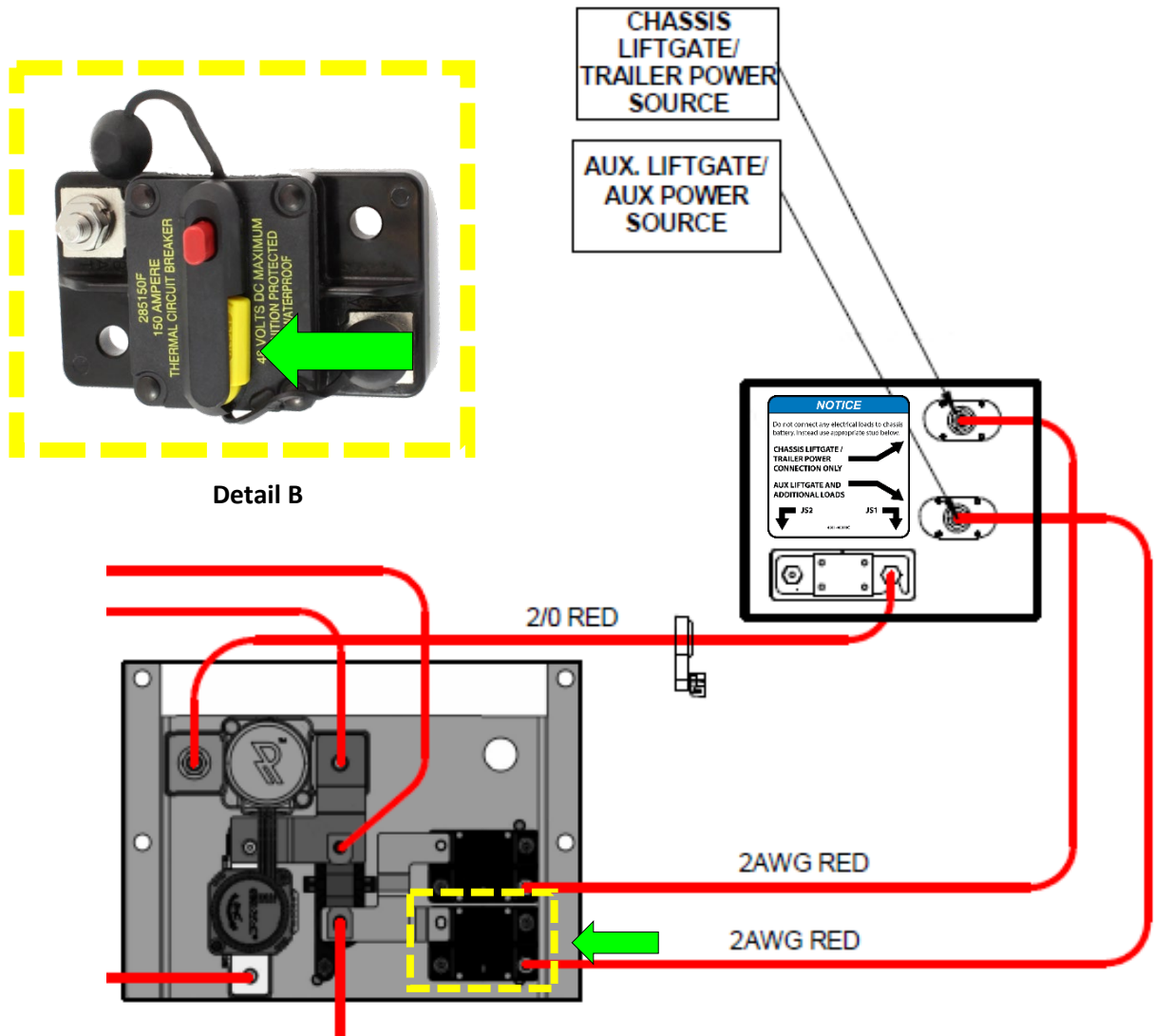
1. Before proceeding, verify the following:
 - a. Is the truck running **or** in Equipment Activation mode? This check ensures the battery voltage is high enough to operate the liftgate.
2. **If** the liftgate/trailer power source does not operate, **then** verify the top stud on the junction plate (pictured below) reads 12VDC.



- a. **If** 12VDC is present on the stud, **then** reference the OEM liftgate documentation to determine how to proceed.
- b. **If** 12VDC is not present on the stud, **then** inspect the top breaker on the lead-acid disconnect plate; see Detail A for reference.
 - i. **If** the swing arm is open, **then** push it back in until you hear a click.
 - ii. **If** the swing arm is closed, **then** check for 12VDC on the right side of the breaker.
 - 1. **If** 12VDC is not present on the right side of the breaker, **then** check for voltage on the left side.
 - a. **If** voltage is not present on either side of the breaker; **then** [contact ZeroRPM technical support at 1-855-937-6776](#).
 - b. **If** power is present on the left side but not the right, **then** the breaker must be replaced; see the IMPAC Maintenance and Replacement Parts Guide (4806-00042) for details.

2.3. Auxiliary Liftgate Does Not Operate

1. Before proceeding, verify the following:
 - a. Is the truck running **or** in Equipment Activation mode? This check ensures the battery voltage is high enough to operate the liftgate.
2. **If** the liftgate/trailer power source does not operate, **then** verify the top stud on the junction plate (pictured below) reads 12VDC.



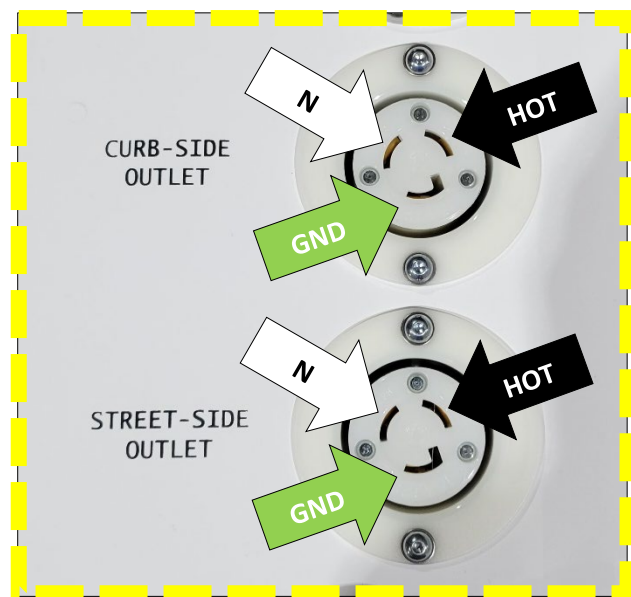
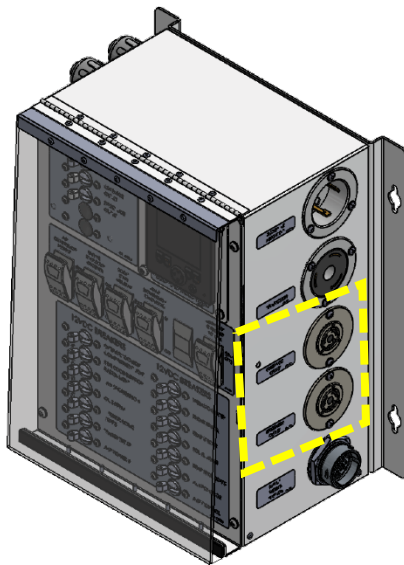
- a. **If** 12VDC is present on the stud, **then** reference the OEM liftgate documentation to determine how to proceed.
- b. **If** 12VDC is not present on the stud, **then** inspect the bottom breaker on the lead-acid disconnect plate; see Detail B for reference.
 - i. **If** the swing arm is open, **then** push it back in until you hear a click.
 - ii. **If** the swing arm is closed, **then** check for 12VDC on the right side of the breaker.
 - 1. **If** 12VDC is not present on the right side of the breaker, **then** check for voltage on the left side.
 - a. **If** voltage is not present on either side of the breaker, **then** [contact ZeroRPM technical support at 1-855-937-6776](#).
 - b. **If** power is present on the left side but not the right, **then** the breaker must be replaced; see the IMPAC Maintenance and Replacement Parts Guide (4806-00042) for details.

2.4. Curb-side/Street-side Outlet Not Working

WARNING

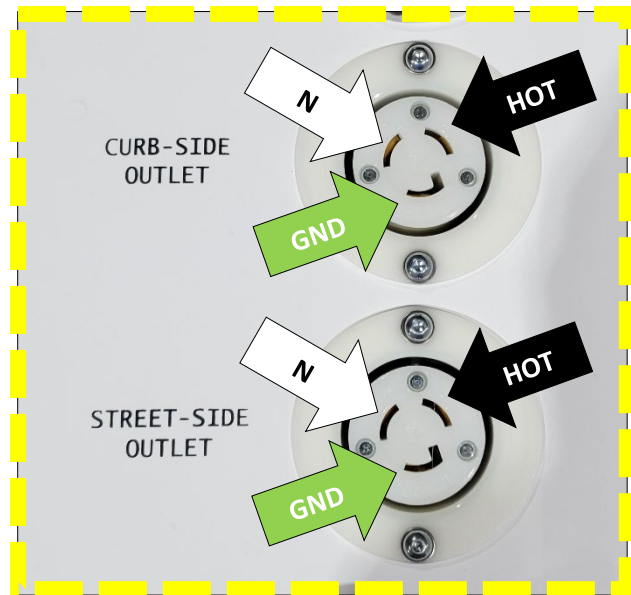
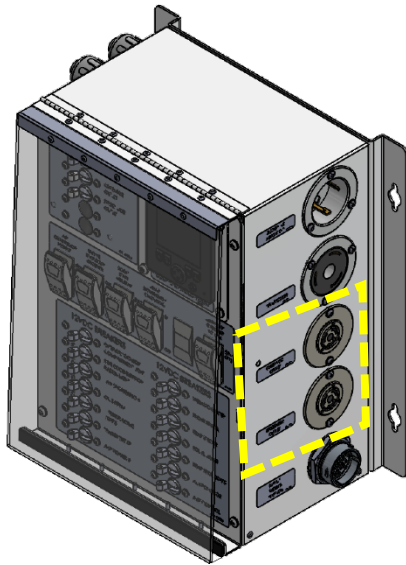
The IMPAC system carries high voltage. Failure to observe proper electrical safety procedures may result in death or injury.

1. Before proceeding, verify the following:
 - a. Is the truck running, **or** in Equipment Activation mode, **or** connected to shore power?
2. Verify the corresponding curb-side/street-side breaker is in the ON position.
 - a. **If** the red LED on the GFCI is illuminated, **then** unplug all connections from it and press the reset button on the GFCI.
 - i. **If** the GFCI does not reset, **then** the curb-side/street-side harness must be replaced; see the IMPAC Maintenance and Replacement Parts Guide (4806-00042) for details.
 - b. **If** the green LED on the GFCI is illuminated, **then** measure for 110VAC at the plug.
 - i. **If** 110VAC is present, **then** the failure is with the device you are connecting.
 - ii. **If** 110VAC is not present, **then** measure for 110VAC at the corresponding receptacle on the PDM.



1. **If** 110VAC is present at the receptacle on the PDM but not at the outlet, **then** the curb-side/street-side harness must be replaced; see the IMPAC Maintenance and Replacement Parts Guide (4806-00042) for details.
2. **If** voltage is not present at the PDM, **then** [contact ZeroRPM technical support at 1-855-937-6776](mailto:technical@zerorpm.com).

- c. **If** neither LED on the GFCI is illuminated, **then** measure for at least 110VAC at the plug.
 - i. **If** 110VAC is not present at the plug, **then** measure voltage at corresponding receptacle on the PDM.



1. **If** voltage is present at the PDM, **then** the curb-side/street-side harness must be replaced; see the IMPAC Maintenance and Replacement Parts Guide (4806-00042) for details.
2. **If** voltage is not present at the PDM, **then** [contact ZeroRPM technical support at 1-855-937-6776](mailto:technical@zerorpm.com).