



VANAIR®
MOBILE POWER SOLUTIONS®



EPEQ
Electrified Power Equipment

SHORE POWER CHARGER

EPEQ® Electrified Power Equipment®
120V AC to 48V DC Power Charger
Part Number: 6230003



USER GUIDE

OPERATION MANUAL AND SERVICE PARTS LIST KEEP THE MANUAL WITH THE VEHICLE

NOTE: Read this manual before installing, operating or servicing this equipment. Failure to comply with the operation and maintenance instructions in this manual will VOID THE EQUIPMENT WARRANTY.

This publication contains the latest information available at the time of preparation. Every effort has been made to ensure accuracy. Vanair® Manufacturing, Inc. reserves the right to make design change modifications or improvements without prior notification.

Making unauthorized modification to the system components WILL VOID THE WARRANTY! Always contact Vanair® before beginning any changes to the EPEQ® SHORE POWER charger.



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GENERAL INFORMATION

For parts, service or technical assistance, make sure you have the Serial Number and Model Number of the unit. Please record the information in the spaces below for future reference.

Serial Number:	
Model Number	

EPEQ® SHORE POWER CHARGER

The EPEQ® Shore Power Charger uses digital technology to provide accurate voltage and improved stability. This unit provides a 48V DC charge output for the ELiMENT™ battery using standard 110-120V AC input.

SAFETY:

The Shore Power charger provides the following built-in protections:

- Protects against over voltage
- Protects against over current.
- Protects against output short circuit.
- Protects against reverse voltage.
- High temperature protection.

FEATURES:

- Up to 91% efficiency.
- Works in a wide temperature range.
- Strong built-in protections.
- Built to withstand vibrations associated in vehicle mounted equipment.
- 100% Full load / aging test.

INSTALLATION

1. The housing of the Shore Power charger includes mounting holes to allow the unit to be mounted on a flat surface.
2. Charger mounting plate should be fixed in a horizontal position - allowing the fan and ventilation fins to face upward for best heat dissipation.

3. For proper cooling allow at least 4" (~10cm) clearance around the unit.
4. It is important that the location of the charger provides adequate ventilation for proper cooling.
5. Vents, fan and cooling fins should always remain unobstructed.
6. Do not mount in a sealed enclosure as it requires open air circulation for proper cooling. If enclosed - the heat generated by the charger would raise the temperature of the air being used to cool the unit.
7. Keeping the charger free from surface dust accumulation is important as dust can adversely affect heat dissipation.
8. Ensure the AC input voltage being provided to the charger falls within the allowed voltage requirements.
9. Be sure to connect the unit to a properly grounded outlet.
10. If an extension cord is required to reach an AC outlet - be sure to use a heavy duty cord that can handle the maximum input current of the charger. Keep any power extension cords as short as possible for best results.
11. The DC output cords are pre-wired and use the proper gauge to handle the 48V DC output voltage and current.
12. If the battery being charged is ever found to be damaged or abnormal - disconnect the charger from the battery immediately and contact Vanair® (or the battery manufacturer, if different).
13. Avoid placing the wiring harness where the wires can be damaged, pinched, or compressed. If there is damage to the wiring or wiring harness, replace immediately



14. Electric Shock Hazard. Do not open the Shore Power case. There are no user-serviceable parts inside and there is a risk of electric shock or damage to the equipment.

OPERATION

1. With the power off, plug the orange DC output connector to the matching orange DC connector on the ELiMENT™ Battery.
2. Plug in the Shore Power charger to start.

STATUS INDICATOR LIGHTS

INDICATOR STATE		
Standby/ No-load	●	Green on (with input, no trigger required on power up)
Standby/ No-load	● ●	Red & Green slow <i>flashing</i> (No output, requires trigger to power up)
Charging <80%	●	Red on
Charging >80%	●	Yellow on
Fully Charged	●	Green on
Protection Status*	● ● ●	Green - Red - Green <i>flashing</i> & pause for 4s

(*For Protection Status issues, see Troubleshooting Table below)

TROUBLESHOOTING

COMMON FAULT	SPECIFIC REASON
AC Power Anomaly	Error detected from input voltage, or gauge of power cord is too thin.
Abnormal Charger State	Shore Power charger is overheating.
Battery Abnormal	Output short-circuit; no battery detected; reverse polarity detected; low voltage of battery; or battery may be overheating

SOLUTIONS:

1. **Error input voltage:** check that AC input voltage conforms to required AC voltage.
2. **Wire gauge too thin:** change to proper wire gauge,
3. **Charger overheating:** Check for proper ventilation where the charger is located. Make sure there is 4" clearance around the charger. Check that the fan and ventilation fins are all are free from any obstruction. Make sure fan is running.
4. **Output short circuit:** Check wiring from DC power output terminal to battery, to make sure no short circuit condition exists.
5. **No battery detected or reverse battery condition:** Check battery connection, make sure battery is connected correctly. Positive (+) to positive (+), Negative (-) to negative (-).
6. **Low battery voltage:** Make sure battery being charged matches the voltage output of the charger.
7. **Battery overheating:** Make sure there is proper ventilation for the battery and the battery is not damaged or in an abnormal state.

SPECIFICATIONS

Working temperatures:

14°F to 113°F (-10°C to 45°C)

Storage temperatures:

-40°F to 158°F (-40°C to +70°C)

Relative humidity:

5% to 95%

Heat dissipation method:

Forced air cooling

Input voltage:

110V AC +/- 20% (88V - 132V AC)

Input frequency:

45Hz to 65Hz

**EPEQ® ELECTRIFIED POWER
EQUIPMENT™****EXCLUDES
ELiMENT™ BATTERY****VANAIR® VANTAGE
WARRANTY**

This limited warranty supersedes all previous Vanair® warranties and is exclusive with no other guarantees or warranties expressed or implied.

LIMITED WARRANTY—Subject to the expressed terms and conditions set forth below, Vanair® Mfg., Inc. ("Vanair"), of Michigan City, Indiana (USA), warrants to the original retail purchaser of new Vanair® equipment that such equipment is free from defects in materials and workmanship when shipped by Vanair®.

For warranty claims received by Vanair® within the applicable warranty periods described below, Vanair® will repair or replace any warranted equipment, parts or components that fail due to defects in material or workmanship or refund the purchase price for the equipment, at Vanair's discretion. Vanair® is not responsible for time or labor to gain access to the machine to perform work. **WARRANTY WILL BE VOID IF GENUINE VANAIR PARTS AND FLUIDS ARE NOT USED.**

Vanair® must be notified in writing within thirty (30) days of any such defect or failure. All warranty or returns must be pre-authorized in writing prior to performing warranty work. Call Vanair® for process and forms. Vanair® will provide instructions on the warranty claim procedures to be followed.

Warranty will commence upon receipt of the Warranty Registration Card. If the Warranty Registration Card is not received within six (6) months of shipment from Vanair®, the warranty commencement date shall be thirty (30) days from the date of shipment from Vanair®. Records of warranty adherence are the responsibility of the end user.

1. Inverters: 1 Year Parts / 1 Year Labor
2. Converters: 1 Year Parts / 1 Year Labor
3. Chargers: 1 Year Parts / 1 Year Labor
4. Electric Motors: 1 Year Parts / 1 Year Labor
5. EPEQ™ Lithium Welder: 1 Year Parts / 1 Year Labor
6. Alternators: 1 Year Parts / 1 Year Labor
7. Compressor Air End:
 - Rotary Screw: Lifetime with Vanair® Authorized Service Kits and Lubricants : 3 Years Labor
 - Reciprocating: 3 Years Parts / 1 Year Labor
 - Scroll: 1 Year Parts / 1 Year Labor
8. Hydraulic Pumps/Motors: 2 Years Parts / 1 Year Labor
9. 1 Year Parts/Labor on the following:
 - All electronics and controls including, but not limited to:
 - (i) I/O Boards
 - (ii) Modules
 - (iii) Panel Boxes
 - (iv) Instrumentation
 - (v) Clutches
 - (vi) Solenoids
 - (vii) Running Gear/Trailers
 - (viii) Cooler Cores and Fans
 - (ix) Battery Management Systems and Controllers

This Limited Warranty shall not apply to:

1. Consumable components, such as: shaft seals, valves, belts, filters, capacitors, contactors, relays, brushes, wire or parts that fail due to normal wear and use.
2. Items furnished by Vanair®, but manufactured by others, such as engines and trade accessories (these items are covered by the manufacturer's warranty, if any).
3. Equipment that has been modified by any party other than Vanair® or equipment which has not been used and maintained in accordance with Vanair's specifications.

4. Equipment which has been improperly installed and/or improperly operated, based upon Vanair's specifications for the equipment or industry standards.

5. Equipment installed by non-authorized or third party personnel. Vanair® products are intended for purchase and use by commercial/industrial users and persons trained and experienced in the use and maintenance of industrial equipment.

In the event of a warranty claim covered by this Limited Warranty, the exclusive remedies shall be, at Vanair's sole discretion: (i) repair; or (ii) replacement; (iii) where authorized in writing by Vanair® in appropriate cases, the reasonable cost of repair or replacement at an authorized Vanair® service facility; or (iv) payment of (or credit for) the purchase price (less reasonable depreciation based upon actual use) upon return of the equipment at the warranty claimant's risk and expense. Vanair® will pay standard ground freight for any warranty item shipped to and from Vanair® or (Vanair® designated facility) within the first year of the applicable warranty period. Any additional expedited freight cost is the responsibility of the purchaser.

TO THE GREAT EXTENT PERMITTED BY APPLICABLE LAW, THE REMEDIES PROVIDED HEREIN ARE THE SOLE AND EXCLUSIVE REMEDIES APPLICABLE TO THE VANAIR® EQUIPMENT. IN NO EVENT SHALL VANAIR® BECOME LIABLE FOR DIRECT, INDIRECT, SPECIAL, PUNITIVE, INCIDENTAL OR CONSEQUENTIAL DAMAGES (INCLUDING LOSS OF PROFIT OR LOST BUSINESS OPPORTUNITY), WHETHER BASED ON CONTRACT, TORT OR ANY OTHER LEGAL THEORY. IN NO EVENT SHALL VANAIR® BECOME OBLIGATED TO PAY MORE ON ANY WARRANTY CLAIM THAN THE PURCHASE PRICE ACTUALLY PAID BY THE ORIGINAL RETAIL PURCHASER.

THIS LIMITED WARRANTY IS MADE IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND/OR FITNESS FOR A PARTICULAR PURPOSE, OR ANY OTHER WARRANTY OR GUARANTY ARISING BY OPERATION OF LAW. ANY WARRANTY NOT EXPRESSLY PROVIDED HEREIN, IMPLIED WARRANTY, GUARANTY AND ANY REPRESENTATION REGARDING THE PERFORMANCE OF THE EQUIPMENT, AND ANY REMEDY FOR BREACH OF CONTRACT, IN TORT, OR ANY OTHER LEGAL THEORY WHICH, BUT FOR THIS PROVISION, MIGHT ARISE BY IMPLICATION, OPERATION OF LAW, CUSTOM OF TRADE, OR COURSE OF DEALING ARE EXCLUDED AND DISCLAIMED BY VANAIR®.

Some states in the United States of America do not allow limitations of how long an implied warranty lasts, or the exclusion of incidental, indirect, special or consequential damages, and as such, the above limitations and exclusions may not apply to you. This warranty provides specific legal rights. Other rights may be available to you, but may vary from state to state.

In Canada, legislation in some provinces provides for certain additional warranties or remedies other than as stated herein, and to the extent that they may not be saved, the limitations and exclusions set out forth above may not apply. This Limited Warranty provides specific legal rights, and other rights may be available, but may vary from province to province.

**ALL WARRANTY OR
RETURNS MUST BE
PRE-AUTHORIZED PRIOR
TO PERFORMING
ANY WARRANTY WORK.**

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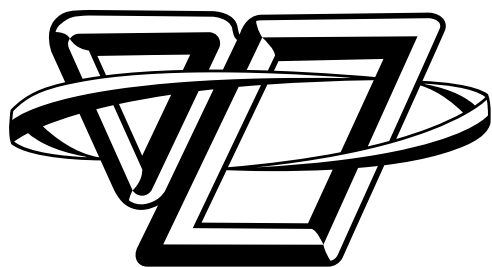
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