

IMPROVEMENTS TO IDLE FREE'S eAPU®



IDLE FREE SYSTEMS® HAS MADE IMPROVEMENTS TO THE eAPU®

WHY:

- Anti-icing is widespread and extremely corrosive to external truck components, including APUs
 - A liquid brine solution (Calcium Chloride or Magnesium Chloride) is applied to roads prior to a storm
 - These chemicals are much more corrosive than de-icing chemicals
- We listened to fleet managers, dealers and drivers to gain an understanding of the needs and issues facing our customers

IMPROVEMENTS

1. Harness Upgrades
2. Electrical Component Upgrades
3. Compressor Mounting Upgrades
4. Battery Cable Connections Upgrade
5. Frame Upgrades
6. Fuse Holder & Battery Separator Upgrades

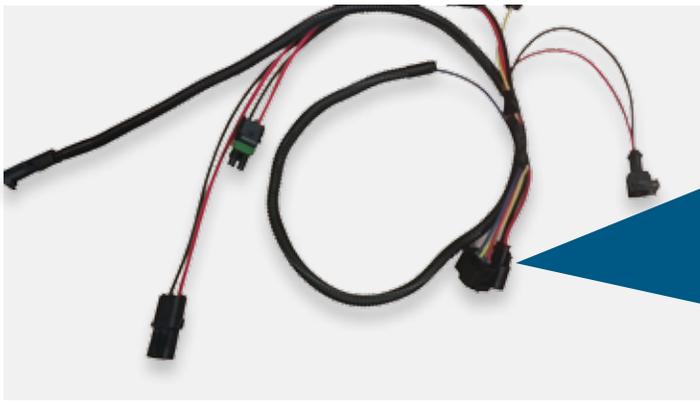


IMPROVEMENTS TO IDLE FREE'S eAPU®

IMPROVEMENTS

Harness Upgrades:

- Created 4 separate harnesses in order to use only the connection points required for specific system requirements.
 - Compressor harness
 - 2 DC harnesses
 - Coolant heater harness
- Benefits:** Reduce corrosion and eliminate unnecessary connection points



Electrical Component Upgrades:

Upgrade	Benefit
Run capacitor: sealed connectors	Reduce corrosion
Start capacitor: sealed connectors	Reduce corrosion
Low pressure switch: changed from 120 VAC to 12 VDC, sealed connectors	Reduce GFCI trips, compressor start issues and start capacitor wear. Reduce corrosion
Condenser fan: added a second pressure switch and a delay shut-off timer	The condenser fan will not run for more than 15 minutes after system shutdown.
Fuses: replaced the 3-place fuse holder with individual harness fuses	Provides better fuse protection



3

Compressor Mounting Upgrades:

- Replace mounting feet with new isolators
- **Benefit:** reduce compressor mount failures such as broken brackets



4

Battery Cable Connections Upgrade:

- Replaced standard battery cable with a sealed battery cable gang
- **Benefit:** Reduce corrosion of positive battery posts

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Frame Upgrades:

- Added requirements for perpendicularity and masking the threads before powder coating
- **Benefit:** enables proper and secure mounting

6

Fuse Holder & Battery Separator Upgrades:

- Addition of sealed enclosures
- **Benefit:** reduce corrosion



AUXILIARY POWER UNIT MODELS



	SERIES 1000	SERIES 2000	SERIES 3000	SERIES 4000
Size	L 30.85" x W 20.24" x H 26.7"	L 22" x W 20.24" x H 17"	L 20.79" x W 15.18" x H 18"	L 27.6" x W 32.5" x H 28.6" dimensions include battery box
Required Frame Rail Clearance	24"	24"	18"	0"
12V DC to 120V AC Inverter	1500W, pure sine wave inverter			
Mounting Location	Mounts on the frame rail of the truck	Mounts on the frame rail of the truck	Mounts on the frame rail of the truck	Mounts behind the cab
Batteries	4 AGM	4 AGM, separate battery box	4 AGM, separate battery box	4 AGM, patent-pending battery box
Air Conditioning	Standard: 7,500 BTU's	Standard: 7,500 BTU's	Standard: 7,500 BTU's	Standard: 7,500 BTU's
Heat	Standard: 17,000 BTU's	Standard: 17,000 BTU's	Optional	Optional
Power Converter/ Battery Charger	Standard	Standard	Standard	Standard
Shore Power	Standard	Standard	Standard	Standard
Reefer Link	Optional	Optional	Optional	Optional

Recommended Alternator Requirements:

- 25 additional AMPs of alternator capacity per each AGM battery in your APU. (In most cases, a 270 AMP truck alternator will suffice)
- The alternator have remote voltage reading capability

9700 West 74th Street, Eden Prairie, MN 55344
 Phone: 952-941-9700 ▪ Toll-Free: 800-328-6108 ▪ Fax: 952-941-2285
 sales@phillipsandtemro.com ▪ customerservice@phillipsandtemro.com

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