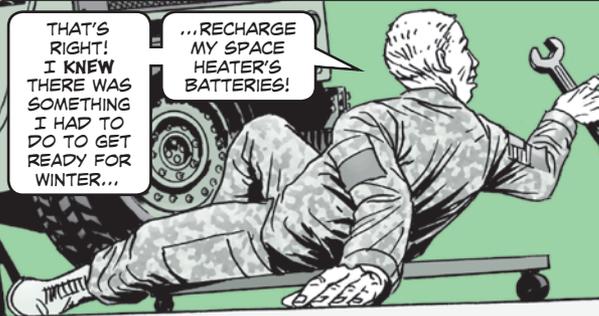
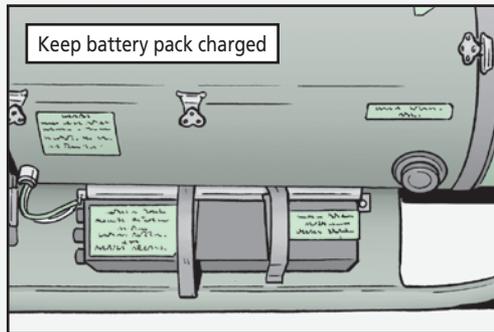


# RECHARGING BATTERY PACK IS REQUIRED!



Operators, every 6 months, recharge the battery pack, NSN 4520-01-493-2796, in your 35,000-BTU and 60,000-BTU convective space heaters. A discharged battery pack that sits around for a long time may be impossible to recharge. And replacing the pack costs more than \$900.

When you operate the convective space heater, the battery pack gets recharged by the thermoelectric generator (TEG) on the heater. That's fine during colder months when the heater's running a lot. But it's a different story during warmer months when the heater sits idle for a long time. That's when the pack typically goes uncharged.

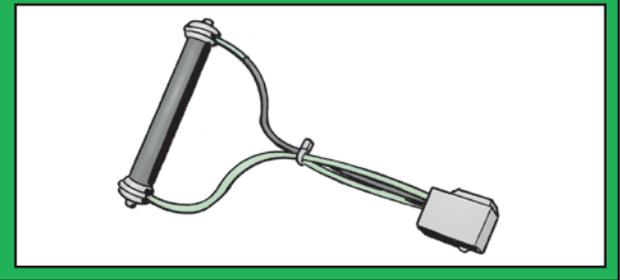


## Battery Pack Recharging Methods

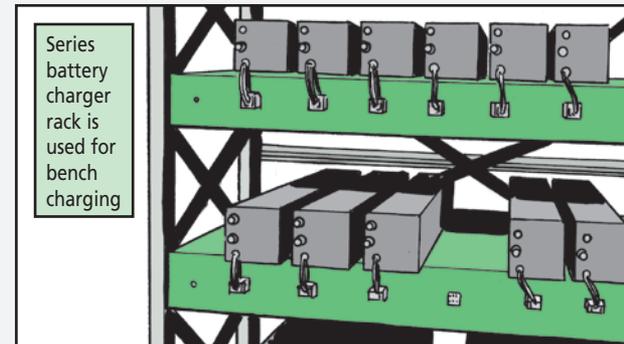
Here are five methods for recharging the battery pack...

- 1. During heater operation:** As mentioned before, you can recharge the battery pack by operating the heater. It usually takes about 30 minutes. If the pack is deeply discharged, or if you're recharging in cold weather, it will take longer.
- 2. Standard automotive tool set (SATS):** You can also use the SATS 12V battery charger, NSN 6130-01-500-3401, to recharge the heater's battery pack.
- 3. Commercial battery charger:** Or you can use a commercial 12V smart charger. A smart charger automatically shuts off when charging is complete. Don't use a manual charger. It could overcharge the pack and make it unserviceable.

All convective space heaters come with a battery charging adapter, NSN 4520-01-493-2810, that must be used with a commercial or SATS 12V battery charger. The adapter is a component of end item.



- 4. NATO charging system:** The NATO charging system, NSN 4520-01-533-0607, lets you charge the pack by connecting it to any vehicle outfitted with a 24V NATO adapter. The charging system can be directly attached to any 24V NATO slave receptacle. The charging system's battery connector fits onto the pack's connector. The NATO charging system is an additional authorized item. It's a complete charging system, not just a jumper cable. When the system is attached to the heater's battery pack and DC power, a small LED blinks to indicate that the pack is charging. When the pack is fully charged, the LED stops blinking and stays lit. The charging system can't be hooked up incorrectly and won't drain the vehicle battery below 18V.
- 5. Series battery charger rack:** The charger rack is used for bench charging the battery packs. The rack has three charging trays that allow you to charge a total of 18 packs at one time.

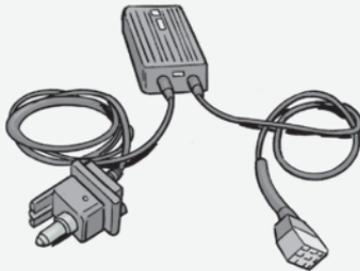


The rack isn't in the Army supply system. It's a commercial item available through HDT Global. The HDT part number is 301-H003005. To order, call HDT Global at (800) 969-8527, or email: [sales@hdtglobal.com](mailto:sales@hdtglobal.com)



## Battery Pack Charging Tips

- **Keep the pack fully charged.** The convective space heater battery pack works the same as a vehicle battery. The heater uses the pack to start itself. Then, during operation, the heater recharges the pack. If the pack becomes discharged, recharge it right away. Storing a discharged pack will shorten its life and degrade its performance. Later, you may not be able to recharge it. **Charge the pack every 6 months while it's in storage.**
- **Charging under normal conditions:** If the pack has recently been discharged, it can usually be recharged in about an hour or two. It will take longer if the air is cold (20°F or less).
- **Use a 110VAC to 12VDC commercial smart charger.** You can also use the NATO charging system. Attach the charger to the pack like it says in TM 10-4520-262-12&P (35K BTU) and TM 10-4520-264-12&P (60K BTU). When recharging the pack under normal conditions, check the pack's standing voltage with a multimeter every 30 minutes.
- **Charging when the pack is in a deeply discharged condition:** If the pack is deeply discharged (less than 11.5V), it will take longer to recharge, usually about 24 hours. Use a commercial 12V smart charger. Attach the charger to the pack like it says in the TMs and start charging. Every 4 hours, check the pack's standing voltage with a multimeter to find out if it's fully charged.



NATO charging system connects to vehicle's 24V NATO adapter

## Battery Pack's Standing Voltage

To check the standing voltage, disconnect the pack from the charger. Let it stand disconnected for 30 minutes. Then check the voltage with a multimeter. If the standing voltage is not at 100 percent of charge, reconnect the pack to the charger and continue charging.

After you disconnect the pack from the charger, the first voltage reading will be higher than normal. The voltage will decrease slowly, then stabilize at the standing voltage. If, after charging the pack, the standing voltage will not stabilize, the battery pack isn't working.

THIS TABLE RELATES BATTERY PACK STANDING VOLTAGE TO THE PERCENT OF CHARGE IN THE PACK.

Percent of charge in pack	Voltage reading
80	12.4 - 12.5
90	12.5 - 12.6
100	12.6 - 12.7

IN OTHER WORDS, IF THE MULTIMETER READS THE VOLTAGE BETWEEN 12.4V AND 12.5V, IT MEANS THE PACK IS 80 PERCENT CHARGED.

