

Emergency Lighting

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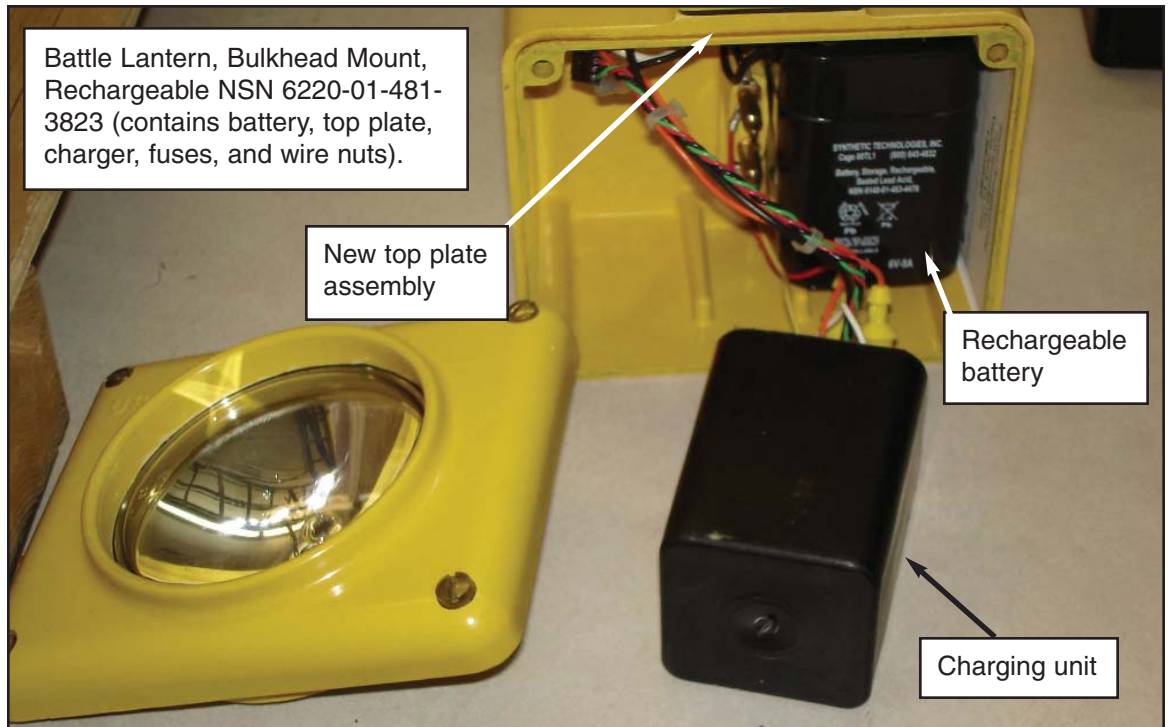


See what's new

Emergency lighting on your Coast Guard vessel has never looked so good. Recent advances in rechargeable batteries and light emitting diode (LED) lighting technologies have created a battle lantern that can stay illuminated for over 70 hours. These advances reduce maintenance intervals and use of consumable batteries (batteries can be changed yearly or greater, vice the current quarterly periodicity), which means more time and money to spend on other shipboard projects.

While not every vessel has the resources to acquire LED bulbs for their battle lanterns, the rechargeable battery element should be within everyone's resource funding. In the Naval Engineering Advisory ALCOAST 038 dated 26 JAN 05, rechargeable battle lanterns were discussed as providing a return on investment in as little as two years. This article will provide some clarity to what units can expect to receive if they order various rechargeable battle lantern components via the national stock system.

The simplest rechargeable lantern conversion is to remove both of the existing batteries and replace them with one rechargeable battery and recharging module (which is the same shape and space as the previously installed second battery). This conversion kit can be ordered via stock system with NSN 6220-01-481-3823. This stock number will provide all the components you need to convert an existing bulkhead mounted battle lantern, to a rechargeable battle lantern. The conversion to a rechargeable lantern takes on average about 30 minutes to complete. The three key components of the rechargeable lantern conversion kit are shown on the next page.



Some words of caution while migrating to a rechargeable lantern:

- While you have the unit disassembled, take an extra minute to replace the incandescent bulb. Incandescent bulbs are rated for 4.7 volts, and this matches the output of a standard battery after some time has elapsed (and the battery has lost some of its charge). Since the new rechargeable battery will carry a full charge all the time, this may cause in place bulbs to fail prematurely.
- Take caution and ensure that non-rechargeable batteries are NOT installed into a rechargeable battle lantern. This can lead to catastrophic failure.

If you would like to order a complete new rechargeable battle lantern (this includes the lantern case, bulb, lens, and above mentioned rechargeable components), use the following NSN: 6230-01-351-3875.

If your emergency lighting needs require portable battle lanterns, these are also available in the rechargeable configuration. The recharging unit requires 115 VAC, but incorporates a plug for your portable needs. Portable battle lanterns are not currently listed in the stock system, but can be purchased from a manufacturer (other distributors may exist):

Seacoast Development Corp
 1125 New Market Dr., Virginia Beach, VA 23464
 POC Breeze Stewart - Tel: 800-645-4832

SDG@High-performance.com

Military Part Number (MP/N): BLK-100.3 Conversion Kit to retrofit Portable Lanterns

The MP/N will provide similar components as the bulkhead mounted conversion kit, with the exception of a modified top plate to incorporate the 115 VAC plug.

The most energy efficient alternative in emergency lighting is the use of LED bulbs in the battle lantern. By utilizing this low power draw bulb, lanterns can shine for beyond 70 hours without draining the single rechargeable battery. In order to achieve this level of performance, the LED bulbs are actually a composite bulb consisting of four white LED bulbs in the white lantern and two red LED bulbs are used in red light lanterns. The photos below give an indication of how bright this configuration can be. However, this performance does have a drawback as the LED bulb conversion kit costs \$135 (for the 4 bulb assembly, \$131 for the 2 bulb assembly) via the stock system and does not include any components for the rechargeable battery feature. While this would preclude most units from completely outfitting their entire vessels with LEDs, the LEDs may be advantageous in critical lighting areas such as switchboards, high traffic areas or ladderwells. The NSN (National Stock Number) listed on the next page includes all parts necessary to retrofit the existing faceplate assembly only on all battle lanterns to accommodate the LED bulbs.

All of these options are in keeping with the battle lantern policy that was promulgated via Naval Engineering

Advisory ALCOAST 038 in Jan 05. Feedback from the fleet indicated that there was some confusion regarding what NSN would order what parts. Hopefully this article will serve as a good pictorial reference for all your future emergency lighting needs. For any additional questions, comments or feedback please contact the Office of Naval Engineering, Environmental Task Leader LTJG Jay Kime at 202-267-2003. Please visit the Naval Engineering Community in CGCentral for this article and any other Naval Engineering needs you may have. 🌐

