



UNITED STATES COAST GUARD
U.S. Department of Homeland Security

MARINE SAFETY ALERT
Inspections and Compliance Directorate

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Safety Alert 01-21

SEE-ME PFD LIGHT FAILURES DUE TO BATTERY ISSUES

In October 2020, Sector Los Angeles/Long Beach found eleven non-compliant SEE-ME 1.0 LED PFD lights (161.012/92/0). The bottoms of the lights were missing, cracked, or bulging. (Figure 1). The lights are manufactured by AOB Outdoor Products & Accessories, Inc. and may be labeled as Model 51150 or strobe Model 51152. These models use two customer-supplied AAA alkaline or lithium batteries; the affected lights all used alkaline batteries.

Causal analysis determined the following: The insulating seals at the end of the battery breached, allowing potassium hydroxide to escape and react with air in the device causing potassium carbonate to form. The leaks occurred due to either self-discharge, in which the stored charge was reduced due to an internal chemical reaction within the affected batteries, or the affected batteries surpassed the manufacturer's recommended storage life and/or storage conditions. No other failures of these models have been reported.

AOB recommends the use of Energizer Ultimate Lithium™ batteries, which are considerably more leak proof than alkaline batteries, outperform alkaline in extreme temperature conditions (-40°F to 140°F) and have a longer shelf life than alkaline batteries. Prior to storing the See-Me 1.0 PFD Light, users should remove depleted batteries and replace with new batteries to avoid degradation in storage due to a variety of chemical mechanisms.

The USCG recommends that users of any PFD lights store lights where they will not be exposed to extreme temperatures or salt water and that manufacturer-recommended batteries are used for optimal life of the equipment.



Figure 1: SEE-ME 1.0 LED PFD Light (161.012/92/0)

This safety alert was developed by the Coast Guard Office of Design and Engineering Standards and the Office of Investigations and Casualty Analysis. Any questions or comments regarding this equipment should be sent to: HQS-pf-flidr-CG-INV@uscg.mil.