



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

MARINE SAFETY ALERT

Inspections and Compliance Directorate

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Safety Alert 12-16

**Good Data Input Equals Good Data Output
Does your VDR work? Don't wait to find out!**

This safety alert reminds vessel owners and operators to periodically validate the proper operation of their vessel's Voyage Data Recorder (VDR). Annual certifications performed by equipment technicians in accordance with international Safety of Life at Sea (SOLAS) requirements may not be enough to ensure your best interests are met. Initial system testing may also be inadequate to detect installation and operational deficiencies. VDR data is extremely important to marine investigators during accident reconstruction. However, it can also be highly valuable to vessel owners and operators. Following an accident, VDR data can assist owners and operators evaluate the performance of shipboard personnel and vessel equipment, while also helping to determine causal factors related to an incident. This information can be essential for resolving damage claims arising from an accident. Periodic reviews of VDR data can also help detect unsafe practices and equipment problems before a marine casualty occurs.

Investigations into several recent groundings in the Pacific Northwest have revealed that the VDR equipment was not operating properly and not configured in accordance with SOLAS requirements. In one instance, over sixteen inputs were not recorded, likely due to improper initial programming of the unit. In another incident, personnel had difficulty accessing the information, possibly due to changes in a computer operating system. Although the data was eventually extracted, critical radar information was not captured. Other areas of concern established by casualty investigations over the years point to insufficient deck officer knowledge about the operation of the VDR and most importantly the method to capture the data immediately after an incident. If an owner or operator is uncertain about the functionality of a vessel's VDR, now might be the time to validate its performance.

Because of these recent incidents the Coast Guard **strongly recommends** that owners and operators of vessels equipped with VDRs take the following actions:

- Ensure Deck Officers understand VDR operation and know how to initiate the "Save Data" function immediately after an incident;
- Employ a qualified service engineer to perform line-by-line functionality validation of all the required inputs, their storage, data coverage timeframe, and ability of this data to be properly played back with the appropriate equipment, operating systems and software available. The line-by-line validation of VDR inputs, data storage and quality of data may be achieved through a download of the data, analysis, and playback on appropriate equipment. The service provider should also check and inspect all batteries, enclosures, location aid devices, and power supplies with their associated alarms in accordance with manufacturer instructions.
- Implement a company policy to periodically test the VDR (in addition to the required annual certification) to ensure complete operation of the system; and
- Incorporate the above recommendations in the vessel's Safety Management System and maintenance record keeping systems.

This safety alert is provided for informational purpose only and does not relieve any domestic or international safety, operational or material requirements. Developed by Marine Safety Unit Portland, Oregon Investigations Division and the Office of Investigations and Casualty Analysis. Questions or comments may be sent to HQS-PF-fldr-CG-INV@uscg.mil.
