

# Voyage Data Recorders (VDR)

## Introduction

Gard Members and clients undoubtedly know the strength and capabilities of VDR technology and its assurance of preservation of ship's data. However, Gard experience a number of cases where vessels have been unsuccessful in both saving and retrieving vital VDR information. Failure to be able to produce VDR information may lead to counterparty allegations that might have been prevented and/or proceeded against in a less costly manner had it not been for the lack of VDR evidence. The purpose of this circular is to highlight the importance of knowing the VDR's capabilities and limitations, so that Members do not lose essential documentation and crucial evidence connected to an incident. This circular also aims to provide recommendations on familiarisation, drills, service and description in the SMS on when and how to use the VDRs.

## Data saving and retrieving challenges

In one recent case a large container vessel ran aground. On grounding, the "save" button on the VDR was pressed in accordance with the procedures, but three days later, when a shore technician was contracted to extract the VDR data recordings, it was found that the data had never been saved. It also turned out that the master was not familiar with the VDR and that he had never saved data before. The relevant VDR data from the incident had been lost.<sup>1</sup>



In general Gard has experienced that lack of understanding and limited in-depth knowledge of the equipment often lead to loss of VDR data even where the equipment is in full working order. Where the VDR information has been successfully preserved, the retrieving and downloading of the data often offers a challenge. Most VDRs require a manufacturer's technician to attend in order to download the data. The fact that there are numerous manufacturers and various model types requiring different software versions to be able to view the data make it difficult to retrieve the information and data. VDR systems also have a built-in alarm function that is automatically triggered in the event of a malfunction of the system, however, in some cases, we have experienced that the VDR alert function was not triggered by the hardware malfunction.

The VDR loop function may offer an option to retain data from a longer period of time than the 12 hour window required by the IMO performance standard. By adjusting this default the Master has an increased opportunity to preserve the data. Masters should be reminded that the records will be overwritten within the implemented time frame if the data is not promptly saved<sup>2</sup>.

## Recommendations

Regular service by approved service company. To ensure that the VDR is in full working order, tests should be conducted regularly by an approved service supplier to verify the accuracy, duration and recoverability of the recorded data. The contact details of technicians and manufacturer should be easy available. VDR Software should also be available at relevant location onboard/ashore.

Plan for onboard familiarisation and drills. Onboard drills should be undertaken regularly, ideally in combination with above mentioned regular service of the VDR unit, to verify that the bridge team is familiar with the procedures and the VDR equipment. Saving of data should be a part of the emergency response procedures and emergency drills.

<sup>1</sup> See Gard News 191, August/October 2008: [VDR data – Lost before it is found?](#) → more

<sup>2</sup> VDRs are required to maintain a record of all data for a minimum of 12 hours, although Class often requires 24 hours and many manufacturers provide a longer period, after which time the information will be overwritten.

## Your contacts

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Description of when and how to use

- It should be clearly stated in the company's procedures which types of incidents and near-misses that should be preserved for securing of evidence and sharing of lessons learnt. Owners/managers are also recommended to include such information in the emergency response section of the vessel's Safety Management System (SMS).
- A poster on the bridge positioned near the VDR equipment setting out the procedures, such as when and how to use the VDR (both saving and retrieving data), roles and responsibilities by the bridge team and a short user description.
- The data will often be saved in a format that is not readily accessible to a third party without the necessary software. Owners should check whether the information on their equipment can be readily downloaded or whether a manufacturer's technician will be needed. If a technician is required, he should be put on stand-by to attend a casualty as soon as possible after an incident to extract the necessary evidence. However, the emphasis should be on stopping the VDR overwriting data. Retrieval can always be done at a later stage.

Failure to retrieve VDR information may lead to counterparty allegations that might have been prevented and/or proceeded against in a less costly manner had it not been for the lack of VDR evidence.<sup>3</sup> One vessel may retrieve VDR data and might be in an advantageous position should the other vessel have none. Masters and their bridge team should therefore be familiar with the practicalities of data saving and data retrieving, both with regards to advantages and limitations as well as the importance of correct storage of data.

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<sup>3</sup> See Gard News 184, November 2006/January 2007: [Post-casualty loss prevention – What can you do to help?](#)

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