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Our file / Notre référence

623-08/10
M10W0102

SEP 23 2010

Mr. David Hahn
CEO, British Columbia Ferry Services Inc
1112 Fort Street
Victoria, British Columbia
V8V 4V2

Dear Sir :

RE : Marine Safety Information Letter No. 08/10 -Emergency response during pitch control malfunction.

On 03 August 2010, while approaching its dock at Village Bay, Mayne Island, B.C., the British Columbia Services Vessel Ferry *Queen of Nanaimo* experienced a control malfunction of the port controllable pitch propeller. While trying to slow the vessel down the vessel instead sped up and struck the innermost wing walls of the dock at a speed of 6 knots. Three passengers suffered injury and were evacuated immediately for shore side medical assistance. There was damage to the berth wing walls and to the bow door of the vessel (TSB Occurrence No. M10W0102).

Information obtained by the TSB indicates that the pins securing the control linkage to the control post of the oil distribution (OD) box dropped out, resulting in a loss of bridge propeller control. This resulted in the propeller locking up in the full ahead position.

The 'wrong way' alarms on the bridge console for the pitch control system compare telegraph position to pitch control linkage position. There is no 'wrong way' alarm to indicate a difference in bridge control order and actual pitch response. As a consequence, the officer of the watch (OOV) did not immediately know that he did not have astern thrust available, or that attempting to increase the astern shaft RPM with bridge control was resulting in inadvertently applying further ahead thrust. In this instance the Master did place the port control head into the idle rpm / zero pitch position upon noticing that he was not getting the desired response. Though procedures exist for changing over to engine telegraph in the event of such malfunctions, they are not readily available for reference during such emergencies, nor were they used. The principles of the pitch control system, and how to deal with malfunctions, are

not covered in the OOW' familiarization process, nor are they part of the Master's clearance procedures. The OOW may not be aware of the concept that response to a pitch control failure can inadvertently lead to increasing shaft RPM with the pitch in the wrong direction, resulting in the vessel speeding up as opposed to slowing down during a malfunction.

This information is being provided so that you may take whatever measures are considered appropriate in the circumstances. We would appreciate being advised of any actions taken in light of this occurrence.

Yours sincerely,



Yvette Myers ^v
Director of Investigations - Marine

cc. Transport Canada

BACKGROUND INFORMATION

TSB Occurrence No: M10W0102

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cc. Mr. Donald Roussel
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TYPES OF TSB SAFETY COMMUNICATIONS

GENERAL

The purpose of a safety communication is to ensure that identified risks are communicated to those persons or organizations best able to effect change to convince them to take remedial action.

OCCURRENCE BULLETINS

An occurrence bulletin is a formal, written, safety communication used to inform regulatory or industry stakeholders of potential operational or technical concerns that were uncovered by the TSB's initial examination of the circumstances surrounding an occurrence. Bulletins contain only factual information.

SAFETY INFORMATION LETTERS

Safety information letters are generally concerned with safety deficiencies posing relatively low risks, and are used to inform regulatory or industry stakeholders of unsafe conditions that do not require immediate remedial action. Safety information letters are used to pass information for the purposes of safety promotion or to support or clarify issues that are being examined by a stakeholder.

SAFETY ADVISORY LETTERS

Safety advisory letters are concerned with safety deficiencies that pose low to medium risks, and used to inform regulatory or industry stakeholders of unsafe conditions. A safety advisory letter suggests remedial action to reduce risks to safety.

SAFETY CONCERNS

Safety concerns focus on an identified unsafe condition for which there is insufficient evidence to validate a systemic safety deficiency. However, the risks posed by this unsafe condition warrant highlighting. A safety concern provides a marker to the industry and the regulator that the Board has insufficient information to warrant further recommendations at this time; however, as more data and analysis become available, the Board will return to this unsafe condition if it is not readily redressed.

SAFETY RECOMMENDATIONS

The *Canadian Transportation Accident Investigation and Safety Board Act (CTAISB Act)* makes specific provision for the Board to make recommendations to correct identified safety deficiencies. Recommendations are used to address those systemic safety deficiencies posing the highest risks to the transportation system and, therefore, warranting the highest levels of regulatory and corporate attention.

RESPONSES TO TSB SAFETY COMMUNICATIONS

The *CTAISB Act* requires that federal ministers provide formal responses as to actions taken or planned in response to TSB recommendations. The Act does not mandate responses by other stakeholders to whom Board recommendations are issued. Notwithstanding, these stakeholders are requested to provide a response, and normally do so.

Although responses to other forms of safety communications are not requested or expected, the TSB often receives responses to safety advisory and safety information letters, and the substance of these responses are reflected in the Board's investigation report.