



***FINDINGS OF CONCERN***

**Office of Investigations and Casualty Analysis**

January 5, 2023  
Washington, DC

Findings of Concern 001-23

***ENGINE ORDER TELEGRAPH (EOT) BELT PREVENTATIVE MAINTENANCE***

Purpose. The U.S. Coast Guard issues findings of concern to disseminate information related to unsafe conditions that were identified as causal factors in a casualty and could contribute to future incidents. Findings of concern are intended to educate the public, state, or local agencies about the conditions discovered so they may address the findings with an appropriate voluntary action or highlight existing applicable company policies or state/local regulations.

The Incident. An Engine Order Telegraph (EOT) transfer belt failure occurred aboard a 225-meter container ship whereby the ship was without normal propulsion control for approximately 30 minutes. Fortunately, the casualty occurred while the vessel was preparing to get underway rather than while transiting a busy traffic lane where maneuverability would have been critical to avoid risk of collision or grounding. The investigation into the incident revealed that inspection and replacement of the transfer belt was not included in the ship's preventative maintenance program and that the transfer belt was original and had been in service for approximately 15 years. The EOT transfer belt may be contained within a sealed component underneath the EOT control head and may not be included as an inspection or replacement item in the ship's preventative maintenance program. Because the potentiometer electronically controls the speed and direction of the engine, failure of the belt can render a vessel without normal propulsion control from the engine control room until the problem is diagnosed and a spare belt is installed. Propulsion control will be delayed longer if the crew struggles to diagnose the problem, or a replacement part is not on board.

Contributing Factors and Analysis. The contributing factors were:

- Age of the EOT transfer belt.
- Lack of preventative maintenance procedures for the inspection and maintenance of the EOT transfer belt.

Findings of Concern. Coast Guard investigators have identified the following measures for owners/operators of similar vessels to mitigate the risks associated with the contributing factors identified above.

- Perform immediate inspection of the EOT transfer belt.
- Update Safety Management Manuals, technical manuals, and/or preventive maintenance schedules to include regular inspection, maintenance, and/or replacement schedules, and

recommended spare part requirements. Specifically, review preventative maintenance procedures regarding the inspection and/or replacement of critical parts and components within their vessels' Engine Order Telegraph (EOT) control system.



Photo shows Engine Order Telegraph control head.

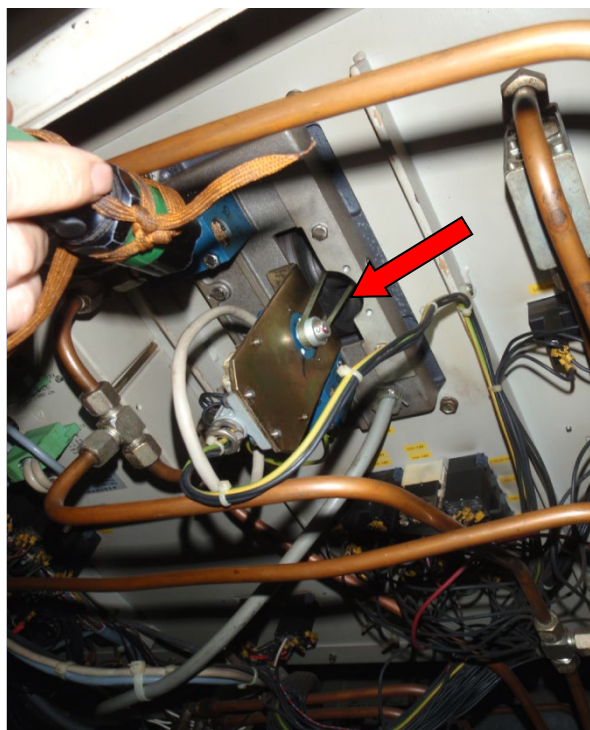


Photo shows location of transfer belt underneath EOT control head.

Closing. These findings of concern are provided for informational purpose only and do not relieve any domestic or international safety, operational, or material requirements. For any questions or comments please contact the Office of Investigations and Analysis, Investigations Division, Commandant (CG-INV-1), at (202) 372-1029 or by email to [CG-INV1@uscg.mil](mailto:CG-INV1@uscg.mil).