



FINDINGS OF CONCERN

Marine Safety Unit Huntington

November 12, 2021
Barboursville, WV

Findings of Concern 006 - 21

VIBRATIONS LOOSEN FASTENERS, LEAD TO LOSS OF STEERING

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. During July 2021, the Coast Guard completed two investigations involving loss of steering on towing vessels that were caused by loose hardware in the steering hydraulic systems.

Contributing Factors and Analysis. In both investigations, the Coast Guard and vessel operator determined that vibrations during routine operations contributed to the loosening of steering system fasteners. The loosened fasteners, which were not normally required to be periodically examined for tightness, went undetected and ultimately progressed to the point where steering was lost.

Findings of Concern. Coast Guard investigators identified the following measures as prudent to mitigate the risks associated with the above identified contributing factors:

- Provide securing devices, i.e., lock nuts, double nuts, cotter pins, lock wire, welding nuts to bolts, on steering system fastening hardware, where space allows.
- Include inspection of steering system hardware for tightness at three months intervals as part of the required tests under 46 Code of Federal Regulations (CFR) 143.245.

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 Marine Safety Unit Huntington Investigations Division by phone at (304) 733-0198 or by email at Huntington2692@uscg.mil.