



# Technical Circular

No.: 006/2026

Date: 27<sup>th</sup> February 2026

## **Subject: Incidents & Casualties associated with the damage to Z-drive propulsion system**

1. This circular is issued to highlight the safety concerns arising from the incident of damage to Z-drive propulsion system. In the recent past, the vessel, during her port arrival, experienced low hydraulic pressure in one of the four Z-drive rudder propeller systems, resulting in its inoperative condition. Later investigation revealed that rudder propeller clutch system failure caused due to broken screws and damaged bearings, leading to loss of hydraulic pressure.

The incident led to reduced maneuverability due to inoperative Z-drive propulsion system, thereby raising concerns regarding the overall safety of the vessel and its crew.

The incident attributed to mechanical failure of clutch system components, with contributing factors including inadequate preventive maintenance, possible wear and tear, and insufficient pre-arrival system checks.

2. Based on key lessons learned from this incident, implementing the following measures can significantly mitigate the risk of recurrence:
  - a) Ensuring preventive maintenance of propulsion systems, in accordance with OEM recommendations, duly undertaken including all requisite OEM inspections and servicing are carried out in a timely manner and appropriately documented.
  - b) Ensuring crew training programs explicitly cover crew familiarity with emergency procedures for propulsion system failures and pre-arrival checks.
  - c) Undertaking mandatory pre-arrival checks as per safety management systems with emphasis to propulsion system associated hydraulic systems, clutch systems, and propulsion units and its monitoring to ensure effectiveness.
  - d) Strengthening maintenance planning and oversight so as to ensure timely procurement & replacement of critical spares.
  - e) Circulating lessons learned from similar incidents and near-misses across the fleet to reinforce awareness and prevent recurrence.
3. Owners & Managers are to take note of above in order that corrective actions can be taken to avoid similar situations in future.

**Enclosure:** Nil.



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