

## MAIB: Engine failure and subsequent fire

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The UK Marine Accident Investigation Branch (MAIB) has published its [Report 2/2021](#) into an engine failure and subsequent fire on the ro-ro cargo vessel *Finlandia Seaways* in April 2018

### What happened?

On 16 April 2018, the Lithuanian registered ro-ro cargo vessel *Finlandia Seaways* suffered a catastrophic main engine failure that caused serious structural damage to the engine and a fire in the engine room.

The vessel's third engineer, who was on duty in the engine room at the time, suffered serious smoke-related lung, kidney and eye injuries during his escape.

### What went wrong?

A main engine connecting rod broke.

Parts of the engine were thrown through the side of the crank case into the engine room, and a short but intense fire occurred.

Within 20 minutes the crew had conducted a muster, sealed the engine room, activated its carbon dioxide fixed fire-fighting system and extinguished the fire.

The third engineer was medevaced to hospital and made a successful recovery.

### What were the causes?

The MAIB investigation identified that the catastrophic engine failure had been initiated by the failure of **a single component** (IMCA emphasis) and found that the standard and management of maintenance carried out by the vessel operator's maintenance support contractor was a significant causal factor.

Other factors contributing to the engine failure included:

- Standards of maintenance management.
- Lack of appreciation of the importance of following the engine manufacturer's instructions for the removal and refitting of the piston pin bearing bushes.
- External oversight of the engine maintenance process.

The MAIB report further notes that:

- Although the CO2 fire-fighting system was activated successfully, the third

engineer was fortunate to have survived given that there were no emergency escape breathing devices on his escape route.

- In common with other accidents in which carbon dioxide has been released following a fire, the inability to confirm which gas bottles had discharged hampered re-entry to the engine room
- The voyage data recorder did not record the incident due to the uninterruptible power supply failing.

The full report can be [downloaded here](#).

Members may wish to review the following incidents, all three with causal factors being **single point failures**:

- Lost time injury (LTI) and restricted workday case (RWC) following failure of diving bell door system
- Power management system dynamic positioning (DP) incident
- Grounding of ro-ro freight vessel Seatruck Performance

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