

IMCA Safety Flashes summarise key safety matters and incidents, allowing lessons to be more easily learnt for the benefit of all. The effectiveness of the IMCA Safety Flash system depends on members sharing information and so avoiding repeat incidents. Please consider adding [safetyreports@imca-int.com](mailto:safetyreports@imca-int.com) to your internal distribution list for safety alerts or manually submitting information on incidents you consider may be relevant. All information is anonymised or sanitised, as appropriate.

## 1 Surface decompression near-miss

### What happened?

During surface decompression, following a SURDO2 42msw/40min dive, the depth of the chamber was unintentionally decreased from 12msw to 5msw forty minutes into the decompression. Immediately after this was discovered, Treatment Table 5 was initiated. The divers did not present any symptoms before, during or after the incident.

### What was the cause?

Investigation concluded that the two main causes of the failure were:

- The exhaust valve was not completely closed; no technical faults on the system;
- The dive supervisor running the decompression was teaching new divers chamber operation and got distracted. Under local regulations applicable in this incident, it is the supervisor who is responsible for running the chamber.

### Corrective action/lessons learned:

- The root cause was the dive supervisor running the decompression, without anyone supervising him (no human second barrier);
- Procedures/manuals were updated to highlight that a diver runs the chamber during decompression, and the dive supervisor controls the diver;
- The chamber panel was modified with a visual and non-mutable alarm for the venting;
- A visual alarm showing depth shallower than 12msw, and an additional camera for the SUPV to see the DDC chamber readings was installed.

Members may wish to refer to:

- [Dive bell gas loss during internal bell checks](#)
- [Uncontrolled decompression of diving bell](#)
- [Diver experienced an air flow restriction](#)
- [Learning outcomes from a real time diver recovery](#)



*Modification of panel*



*Depth less than 12msw, visual alarm*



*Exhaust valve open, visual and audible alarm*

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## 2 Near miss: grinder disc rotation set up in the wrong direction

### What happened

In preparation for a forthcoming dive a GR29 underwater grinder was requested to be set up by the topside technician to be used for left-handed cutting to assist in gaining access to the cut.

The diver, on receiving the left handed grinder, carried out pre-operational equipment checks, where it was identified that the disc rotation was found to be in the wrong direction. The operations were stopped.

### What went wrong

On investigation, it was identified that the GR29 grinder set up to be operated left-handed, was rotating in the opposite direction, leading to a risk in the cutting disc lock nut coming off. It was identified that the reversing spool had been re-orientated after discussions with onshore personnel.

The modified GR29 grinder was recovered to the surface and quarantined.

Operations continued with the confirmation that the original un-modified GR29 grinder was operational and the standard process of changing the handle and re-orientating the guard was continued.

### Actions

The company standard/recommended process for a change in orientation of the GR29 grinder is for the GR29 grinder handle to be re-positioned 180 degrees right/left and the GR29 grinder guard repositioned and the direction of rotation to remain unchanged.

Members may wish to refer to:

- Are YOU prepared to work safely videos:
  - [IMCA short video – watch your hands](#)

## 3 USCG: Exceeding electrical duty rating can lead to failure

The United States Coastguard (USCG) has published [Safety Alert 03-22](#) relating to the importance of verifying the condition and electrical duty ratings of the motor starter contactors in winch controllers for lifeboat and rescue boat launching appliances.

Applicable  
Life Saving  
Rule(s)



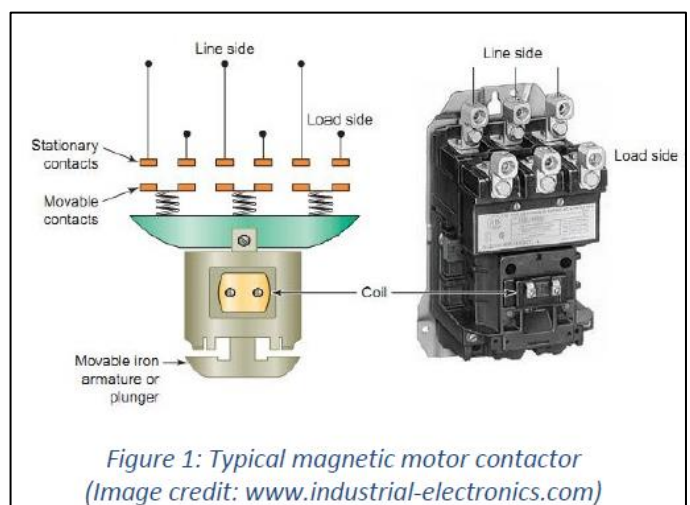
Energy  
Isolation

### What happened

There was a failure during the routine maintenance and recovery of a rescue boat, where the electrical motor contactor for the winch motor failed in an energized position (i.e. motor in an “on” or “hoist” condition). This failure occurred when the contactors fused together due to exceeded duty rating. Metallurgical/post-event analysis ruled out any other failures with the contactor. The hoist button, emergency stop and limit switch circuits all failed to stop the winch from hoisting.

### What went right?

Crew were able to secure electrical power via the 480-volt main breaker at the winch controller before the boat contacted the davit, avoiding serious damage and injury to personnel.



## What went wrong?

The USCHG noted that *analysis found that the contactors were not rated for intermittent cycling (start and stop sequences) of the winch and the contactor manufacturer had issued technical guidance on the issue of welded contacts. Intermittent cycling is a common practice during recovery of a lifeboat or rescue boat into the stowed position. A winch may be cycled after the boat has cleared the water to verify release gear condition prior to continued hoisting, possibly cycled several times during long hoists to reduce pendulum motions of the boat and cycled at approach to davit guides/stops. While commonly employed for a safe recovery process, intermittent cycling may exceed design and duty ratings of the electrical components.*

## Actions

The Coast Guard “strongly recommends that owners, manufacturers, operators and service providers, do the following:”

- Verify condition of winch motor contactors and replace any contactors that show signs of excessive wear, overheating, or welding;
- Verify the duty cycle ratings of lifeboat and rescue boat davit electrical components and compare those ratings to recommended and commonly-practiced boat recovery procedures/processes;
- Verify the design of the davit safety devices (i.e. emergency stop and limit switches) to see if they will secure electrical power to the motor in the event of welded contacts;
- Implement training for all personnel that operate the davits to ensure awareness related to electrical duty cycles and actions to isolate power in the event of a welded winch motor contactor.

Members may wish to refer to:

- [Failure of remote control/emergency stop on rescue boat winch](#)

## 4 Searchlight fell from vessel during heavy weather

### What happened

The starboard wing searchlight became detached from its mounting bracket in heavy weather, and fell directly into the sea, snapping the secondary tether that was in place.

### What went wrong

The secondary tether was jury rigged out of a whip-check designed to contain a parting airline; it was not designed to take any loads.

Applicable  
Life Saving  
Rule(s)



Bypassing  
Safety  
Controls



*Dropped Searchlight Following Heavy Weather*



*Remaining Searchlight with  
Additional Securing*

## What was the cause

Our member identified the following:

- Immediate Causes
  - Exposure to extreme weather
  - Dropped Object
- Underlying Causes
  - Inadequate safety controls
- Root Cause(s)
  - Improper safety securing device – Secured with whip check which is not designed to hold weight

Members may wish to refer to:

- [Near miss: Floor Plate fell from Main Mast during storm](#)
- [Flood light dropped to deck – corrosion](#)
- [High potential near miss: dropped object \(flood lamp\)](#)

## 5 MSF: Corrosion in fire-fighting equipment

### What happened

The Marine Safety Forum (MSF) has published [Safety Alert 22-09](#) relating to observations involving the CO2 firefighting system onboard a vessel. Significant corrosion was found during routine monthly inspection of the fixed CO2 system. This resulted in it not being possible to insert the safety pin to isolate the cylinder during any maintenance.

### What went wrong

See Photo A below, which shows the safety lever and pin, unable to be positioned correctly in line with the pinhole. In Photo B after corrective maintenance and repair, it can clearly be seen that the activator arm, and therefore the safety pin aligns with the hole and can now be set to isolation for maintenance if required.



Photo A

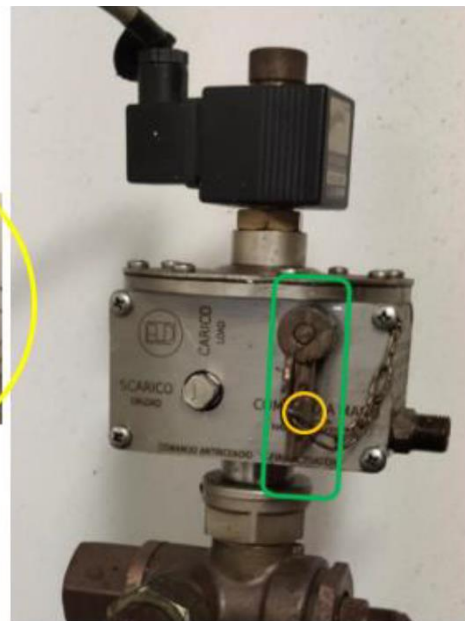


Photo B

The MSF notes that it cannot be stressed enough, that critical firefighting systems *must be maintained and checked correctly and in accordance with manufacturer's recommendations. This is to ensure that it is fit for purpose, and always ready to be activated or isolated correctly for vital maintenance.*

*The routine, regular maintenance of any safety critical system should be afforded the best attention, care and time as these may, if looked after correctly, save your life. Please show them the proper attention they deserve.*

Members may wish to refer to

- [MAIB: Blockage of fixed CO2 fire extinguishing system pilot hoses](#)
- [Hazard hunt: fire dampers and fixed firefighting systems](#)
- [Unexpected Release of Water During Annual Maintenance of CO2 Fixed Firefighting System](#)