
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 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 Restricted air supply to diver

What happened?

During a diver recovery drill, a contracted subsea company encountered significant issues that led to the standby diver momentarily losing his main air supply. This restriction in the air supply resulted in the diver going on bailout and the drill being aborted. Both divers were safely recovered to the surface.

What went right

Both divers worked together during the recovery to amend the issues after the incident. When the primary air supply was restricted, Diver 1 was attentive and assisted Diver 2. Both divers were recovered to the surface safely.

What went wrong

A review of both divers' videos showed difficulties in recovery, primarily caused by improper umbilical management and communications.

- **Human error:** Diver 2 moved his umbilical restriction from the handle of Basket-2 to the handle of Basket-1, leaving just 2m of slack between this connection and the ring on Basket-2 main wire. This led to his umbilical becoming strained between the baskets due to uneven recovery, causing a restriction in his main air supply;
- **Inadequate supervision:** The task plan for the drill lacked detailed and specific instructions, leaving gaps. That caused further issues when coupled with the umbilical placement, uneven recovery of the baskets, and communications issues;
- **Communication breakdown:** The placement of Diver 2 umbilical between the baskets was not apparent to the Diving Supervisor. The Diving Supervisor was unaware of the uncoordinated basket movement and there was inadequate communication between the divers and the diving supervisor, exacerbating the situation.



Subsea camera still of twisted umbilical

What were the causes of the incident?

- **Improper umbilical management:** Prior to the recovery of the divers, Diver 2 moved his umbilical restriction from the handle on Basket-2 to the handle on Basket-1. Leaving Diver 2 with his umbilical connecting between Basket-1 and the ring on Basket-2 wire, causing a strain on his umbilical when Basket-1 raised before Basket-2. This led to a kink in the umbilical resulted in the loss of the main air supply to the diver;
- **Communication issues:** There were initial misunderstandings between the divers and the diving supervisor regarding the issues, resulting in delays in levelling the baskets to remove the strain from Diver 2's umbilical;

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- **Coordination problems:** When the instruction was given to recover both baskets together, LARS-2 began lifting Basket-2 while Basket-1 was not lifted. This led to Diver 2 umbilical stretching between the two baskets as Basket-2 pulled it.

Lessons

Our member took the following lessons:

- **Communication:** Establish clear communication protocols before the operation and ensure all team members understand their roles and responsibilities. Ensuring that the crew understand their roles prevents misunderstandings and enhances overall coordination during operations;
- **Supervision:** Ensure adequate instructions, communications, and supervision during all operations. Particular attention should be paid during the planning, execution, and oversight of regular emergency drills;
- **Umbilical Management:** Proper umbilical management during all diving operations is critical. Poor umbilical management can lead to serious diver incidents and injuries;
- **Continuous Improvement:** Besides annual reviews, lessons learned from incident findings should be included in updates to operational procedures, manuals, and guidelines – helping to ensure that good practices are formally implemented and providing guidance to reduce potential risks in future operations.

Actions taken

- Ensure that lessons learnt is shared with the entire workforce and with IMCA;
- Reviewed and updated company diving procedures, training and diving manuals to include learnings outlined above.



Members may wish to refer to:

- [High potential near-miss: Failure of both divers’ breathing air supply and dive stage recovery winch](#)
- [Diver experienced an air flow restriction](#)
- [Near miss: diver reports tight gas](#)

2 LTI – crew member fell down open hatch

What happened

During mooring, a crew person was attempting to secure the rope on the aft section of the vessel. While performing this task, the person stumbled and fell into a hatchway which had been left open. The fall caused the individual to suffer three broken ribs, which led to a Lost Time Injury (LTI).

<p>Applicable Life Saving Rule(s)</p>	 <p>Bypassing Safety Controls</p>	 <p>Line of Fire</p>
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Right-hand image is a re-construction!

What went wrong

- Lack of communication: The engineer had failed to communicate the fact that the hatch was open and unprotected. No toolbox meeting had taken place to facilitate communication among crew members;
- There were no barriers nor warning signs;
- Inadequate hazard identification and risk management: No-one spotted this...crew members failed to identify and manage the risk. A toolbox meeting could have helped address this issue;
- Lack of toolbox meeting: Without a toolbox meeting, the crew couldn't discuss hazards, precautions, and communication strategies. Toolbox meetings should be considered essential for promoting safety awareness.

What can be done

- Discuss requirements for using barriers and warning signs when hazards are present, such as open hatches or other potential risks. Make sure signage and equipment are readily available on board to facilitate these safety measures;
- Ensure toolbox meetings are held before starting work, and that they focus on task-specific hazards, safety measures, and crew member responsibilities. Encourage open communication and active participation from everyone involved.

Members may wish to refer to:

- [Medical treatment: Person fell down unprotected hatch](#)
- [LTI: step into open deck hatch causes fall](#)
- [Crewman falls down open hatchway during simultaneous operations](#)

3 Fire in diesel generator following tests

What happened

There was a small fire in the engine room on a vessel in port. The incident occurred when a diesel generator was being maintained by a third-party maintenance team. On completion of a change of alternator bearings, the generator was tested at idling speed, and no problem was found. But when the generator was tested at operational speed, after a few minutes fire came out of the non drive end excitors. The alarm was raised; the diesel generator was brought to an emergency stop and the fire was put out with an extinguisher.



What went wrong

There was a misalignment of the internal cover of the non drive end bearing. This misalignment caused friction against the shaft and subsequent sparking. The root cause was considered to be insufficient supervision of the third-party personnel conducting the maintenance.

Lessons

- Whilst there was only a burnt alternator in this case, the potential was for the fire to have spread throughout the engine room;
- Ensure full and thorough supervision of the personnel of third-party contractors;
- Check carefully the status and readiness of any equipment after maintenance and test – in this case, it was as well that they tested it at operational speed rather than only when idling.

Members may wish to refer to

- [Engine room fire on a ferry \[bearing failure and a fire caused by friction\]](#)
- [Fire alarm activation in engine room](#)
- [Near Miss: Fire blanket caught fire during third-party hot work](#)
- [Small fire following hot work](#)

4 Chain caught and broke

What happened

Crew were removing a hydrogen gland from a generator using a lifting attachment, two chain falls, and an overhead crane. One of the chain fall's pull chains caught on a bolt and broke. The bolt was on the top of the generator and was there to hold a protective cover sheet in place. There were no injuries.

Applicable
Life Saving
Rule(s)



What went wrong

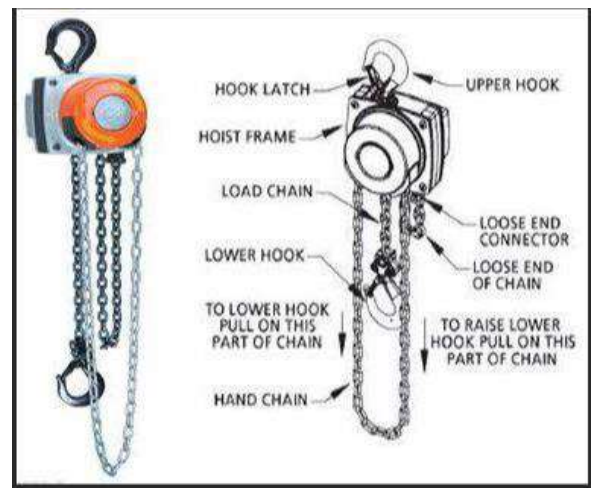
- There was a general job briefing done for the day's work, but not specifically for this task;
- The crew had started lifting the load with chain falls and were beginning to lift with the crane. There are two distinct lifts to be considered - the manual lift (with the chain fall) and the power lift (with the crane). The transition is the critical time;
- Everyone was focused on the load and **not watching** the chain falls or the crane.

Actions

- A Safety stand-down was held to discuss this incident with all involved and lessons from it were to be included in future training material for apprentices and new hires;
- Have an increased awareness of ensuring chains are free when moving loads;
- Keep the "bigger picture" in mind – don't get so focussed on the detail that something obviously potentially unsafe escapes your attention.

Members may wish to refer to:

- [Dropped load and failed chain](#)
- [Crewman fatally injured during mooring operations \[chain snapped\]](#)



- Near-miss: Safe use of chains in rigging

5 BSEE: Overhaul Ball falls to deck resulting in High Potential near miss

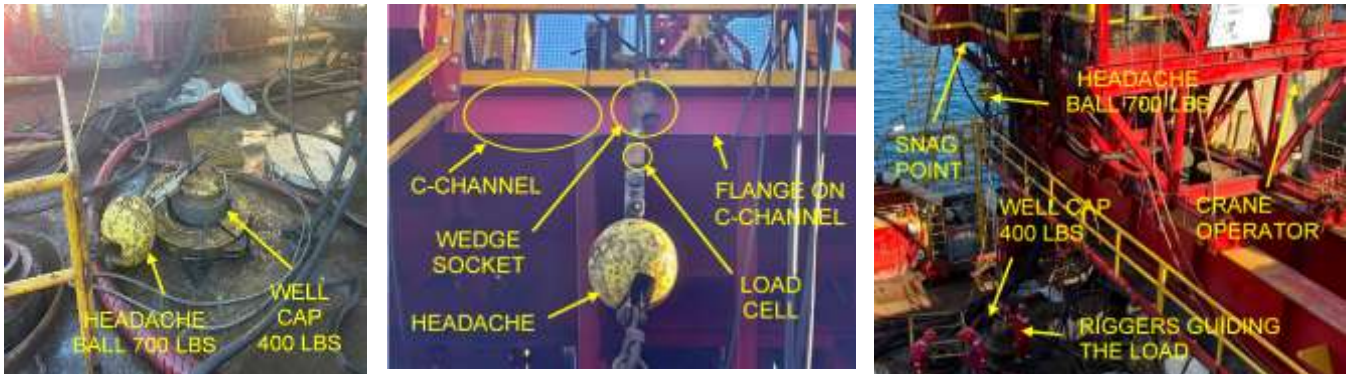
What happened

The United States Bureau of Safety and Environmental Enforcement (BSEE) has published [Safety Alert 460](#) relating to a dropped object during lifting operations. While conducting crane operations during decommissioning/well abandonment, a 350kg crane “headache ball” fell 8m to deck and landed less than 60cm from one of the riggers.

**Applicable
Life Saving
Rule(s)**



Safe
Mechanical
Lifting



A crane was moving a 200kg (400 lb) well cap when a wedge socket on the auxiliary line snagged on the flange of a C-channel located at the edge of the platform’s rig deck. The lift required running the crane’s auxiliary line within centimetres of the edge of the platform. It was a “blind lift,” directed by a rigger using radio communications. The rigger was standing on the pipe deck and had a clear view of the load, line, pedestal crane, and crane operator. His location put him approximately 9m from the load line.

The wedge socket above the headache ball snagged on the C-channel flange that ran across the length of the edge of the deck. This snag temporarily held all the weight of the load and rigging, resulting in a false reading on the auxiliary winch - the load cell sending a weight signal to the operator was *below* the snagged wedge socket.

The crane operator did not detect that the auxiliary winch was no longer holding the weight of the load. The rigger did not realize that the line had snagged on the C-channel and continued giving directions to keep lowering the load. As the load cell was positioned below the snag, there was no change in the load signal, even though the weight of the load was now being supported by the C-channel and not the auxiliary winch.

The rigger, not seeing any movement, repeated a request to lower the load. Because the crane operator could not see the winch drum behind the crane cab, he did not see that the load was not moving and responded that he was still lowering the load. As the crane operator continued to unwind the auxiliary line at the winch drum, the wedge socket slipped off the flange of the C-channel, releasing the snag. The headache ball fell 8m and hit the deck less than 60cm from one of the riggers guiding the load.

What went wrong?

BSEE identified several contributing factors

- The rigger and crane operator should have noticed the auxiliary winch was no longer detecting the weight of the load;
- The engineered controls (i.e., weight indicator) provided an inaccurate representation to the crane operator of the weight on the winch due to the wedge socket snagging *above* the load cell;
- The crane operator and rigger failed to recognize something was wrong after repeated requests to lower the load and after receiving the response that the line was being lowered and not seeing any movement in the load position;

- The rigger did not check the path of the auxiliary line for potential snags;
- The work team ought have noticed the potential hazards of working close to the C-channel at the edge of the platform rig, and should have recognized the potential snag points;
- No formal risk assessment was conducted. However, a review of the task was performed.

Lessons and actions

- Ensure a secondary device (e.g., weight indicator, camera) is accessible to detect any slack on the load line;
- Identify all potential rigging contact or snag points and include them in worksite instructions, risk assessments, and toolbox talks – particularly when working close to other equipment or structures;
- Ensure fully agreed, understood and practiced/tested communication between crane driver and rigging crew;
- Ensure a full and thorough lift plan is place before the job is started;
- What would **you** have done to avoid this situation? Discuss what key controls are in place to remove yourself and your team members from the potential “line of fire”.

Members may wish to refer to:

- [Snagged load, a sling snaps, dropped objects: persons injured](#) [*a focus on “snagging”*]
- [Near miss: winch wire snagged and released suddenly](#) [*The driller **failed to notice** that the winch wire had become snagged and continued to...*]
- [Snagged lift during deck cargo operations](#) (MSF)