

Air hose connection failure

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An air supply hose on an air-driven tugger winch snapped out under pressure from the cam lock adapter.

What happened?

A main deck air-driven tugger winch supplied through a 5cm air hose with a nominal pressure of 8 bar was connected by a cam lock coupling to the winch. This arrangement had been in place for several months.

Shortly after using the winch, the supply hose ejected from the cam lock adapter.



What went right?

When the crew heard the noise from the air in the tugger winch area, the air supply to the tugger was immediately turned off.

There were no crew members nearby; no-one was injured.

What went wrong?

- The wrong type of adapter had been installed on the air hose. Why this was, could not be determined.
- Investigators assumed that the final check to ensure that the work equipment could be operated safely had been not performed properly, since a pre-use visual check should have highlighted the issue.
- The “male thread” adapter was inserted inside the hose and had been tightened by a hose clamp using a “homemade” connection.
- Whip checks, also known as safety whiplash arresters, to prevent serious injury from hose or coupling failure were in place, but not installed correctly.

- A company internal safe use of work equipment assessment checklist had not been used and filled in as required.
- There was inadequate maintenance, control and supervision on materials and equipment used.

Actions

- The crew installed the correct type of coupling as an immediate corrective measure.
- Install “hose barb” type cam lock adapters according to the manufacturer hose couplings and accessories specifications.
- Always use whip checks at each hose connection and from equipment to hose to prevent serious injury from a hose or coupling failure.
- Ensure regular, adequately resourced, and planned maintenance of equipment.
- Re-emphasise the hazards of stored pressure.

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