

## Near miss/positive: Internal O-ring seal found damaged on fuel system

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### What happened?

In a vessel alongside, a new fuel gas cylinder was connected to a gas-powered forklift truck.

When the delivery valve was opened gas leaked from the connection between the cylinder and the hose.

The cylinder was removed and the internal O-ring seal was found to be damaged.



Small LPG-powered forklift truck



Tank valve and fuel line



Internal O-ring

A replacement cylinder was brought to the forklift but before fitting it the crew member checked the condition of the O-ring and found that it too was damaged. Fortunately, a number of full spares are carried on board and one was found that was in good condition.

The two cylinders with faulty O-rings were returned to the supplier for fitment of the correct O-rings. The branch manager of the gas supply company was alerted to the incident. He was most concerned that the cylinders were delivered to a customer without proper examination of the O-rings. They took this as a serious quality control issue and apologised for the occurrence, eventually tracing the batch of refills to a particular time, place and person.

### What went right?

- Supplier was able to remedy a quality control issue.
- The two faulty cylinders were exchanged before the vessel sailed (after which time return and exchange would not be possible and cargo operations could have been jeopardised).
- Crew became aware that the fact that the gas cylinder was full did not guarantee it was in proper safe condition. They checked.

#### IOGP Life Saving Rules:



Bypassing safety controls

## Recommendations

- Closely examine exchanged or pre-used equipment for proper condition, especially where potentially hazardous materials or stored energy is concerned. **It always pays to check.**
- O-ring seals are small but vitally important components which should be treated with the greatest of respect.

Members may wish to refer to:

- Diving Bell TUP O-Ring Seal Damage
- Dangerous Modifications found within a gas valve unit room [US Coast Guard – an O-ring damaged on replacement]

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