

Near miss: Diver reports tight gas

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Shortly before the start of diving operations, a diver reported that his gas was becoming tight, resulting in him having to switch to his bailout and return to the submersible diving chamber (SDC).

What happened?

SDC checks were completed by a diver who was new to the system; he was assisted by a diver who was familiar with the system. The full SDC checklist was used, covering:

- internal valve status and function
- electrical checks
- equipment checks.

On completion of checks, the Bellman was instructed by the Dive Supervisor to secure the gases before returning to the chamber system, as there was a two-hour delay.

Our member notes that securing internal valves when an SDC launch is delayed is a legacy practice to prevent gas usage via leaks through the panels or the diver's hats. The checklist does not cover this practice, thereby introducing reliance on the bellman to remember to put the gas on line prior to the diver locking out.

On returning to the SDC, the internal valves were not returned to their operational position as per the diving checklist.

Diver 1 locked out of the SDC and started to prepare diver 3's umbilical when his gas became tight. He informed the diving supervisors he was going onto bailout.

The diving supervisor informed the divers in the SDC that diver 1 was returning and asked them to check his surface gas supply.

Diver 1 came into the bell mouth and raised his head up out of the water line, by which time the bellman had opened the divers supply and onboard gas hull valves to give him surface gas again.

On confirmation of the diver's primary and secondary gases being online, diver 1 locked out again, followed by diver 2.

Our Member's summary

The practice of securing the SDC internal gas when there are known delays to locking off was adopted in the past due to system leaks and improper equipment stowage and securing; it is no longer considered good practice.

The purpose of the checklist is defeated if the valve status is changed after the

checklist is considered completed. Safety critical checklists can only be effective in reducing human error if used at the correct stage of the process.

Deviation from processes and procedures should be managed and communicated. In this case, the deviation should have been captured in the diving supervisors log or handovers and the checklist should have been repeated.

What lessons were learned?

- Checklists and procedures are critical for safe operations and should be followed.
- Any deviations from procedures and processes should be managed.
- If deviation becomes common practice, then the procedures or checklists should be formally reviewed and updated.
- If gas supplies are secured whilst the SDC is onboard, a complete SDC internal valve check should be performed to ensure status of all valves is correct before diving operations recommence.
- SDC internal checklists were updated to consider the scenario noted here.

Members are encouraged to continue to educate both new and experienced personnel on:

- the importance of following procedures and checklists
- the value in providing feedback on procedures and checklists
- use of the management of change (MOC) process for any deviations, regardless of how minor.

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