

IMCA Safety Flash 02/07 (updated – item 2 deleted)

March 2007

These flashes summarise key safety matters and incidents, allowing wider dissemination of lessons learned from them. The information below has been provided in good faith by members and should be reviewed individually by recipients, who will determine its relevance to their own operations.

The effectiveness of the IMCA safety flash system depends on receiving reports from members in order to pass on information and avoid repeat incidents. Please consider adding the IMCA secretariat (imca@imca-int.com) to your internal distribution list for safety alerts and/or manually submitting information on specific incidents you consider may be relevant. All information will be anonymised or sanitised, as appropriate.

A number of other organisations issue safety flashes and similar documents which may be of interest to IMCA members. Where these are particularly relevant, these may be summarised or highlighted here. Links to known relevant websites are provided at www.imca-int.com/links. Additional links should be submitted to webmaster@imca-int.com

I Galley Equipment Broke Free of Fastenings During Severe Weather

A member has reported an incident which occurred during a severe storm, whereby a grill fryer in the galley broke loose from its floor mountings and toppled over. A steward working in the vicinity had a narrow escape when the grill fryer just missed him. There were no injuries.



Grill fryer toppled over on floor of galley

The company took the following immediate actions:

- ◆ The galley was evacuated and the bridge was informed;
- ◆ An electrician was called to isolate the grill fryer;
- ◆ Following electrical isolation, the grill fryer was made safe by temporary sea-fastening until the weather abated and permanent repairs could be made.

During subsequent investigation, it was discovered that the grill fryer had been very poorly connected to the galley floor during the construction of the vessel. The securing bolts had only been screwed into the tiles and not into the steel of the deck.

The vessel crew subsequently checked all other galley appliances and found that they were all securely bolted to the floor. Once the weather had abated, the crew reinstalled the grill-fryer, ensuring that it was securely mounted on the floor.

3 Kirby Morgan Safety Bulletin – Helmet Shell Repair Caution

IMCA has been asked to publicise the attached safety bullet #1 of 2007 issued by Kirby Morgan Dive Systems Inc. entitled *Helmet Shell Repair Caution*.

4 Divex HSE Alert – Valve Seat Retainer

IMCA has been asked to publicise the attached HSE alert HSE001-2007 issued by Divex regarding problems with valve seat retainers.



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Safety Bulletin #1 of 2007. March 1, 2007 Helmet Shell Repair Caution

A KMDSI dealer recently received three SL-17B helmet shells for insert repair. Upon receipt it was noticed that the shells had been painted. Because there was no documentation of previous repair or refinishing, the dealer informed the customer that no work could be done until all the paint had been removed and a complete inspection performed.

A visual inspection inside of all three helmets showed an obvious irregular finish around the regulator mount area. Once the paint was removed around the irregular area it was noticed that the whole lower section of the helmet had been previously removed and replaced with non-laminate filler.



This is how the three stripped helmets appeared when they were received by the repair facility.

It was obvious that someone had performed extensive modifications to the helmets for some other use by completely changing the front end of the helmets. They then attempted to put the helmets back into their original configuration as SuperLite 17B's.

The company that purchased these used helmets was unaware that the helmets had been extensively modified, patched and painted to look as if original. The company assumed that they were in good condition especially because they had a good external finish.

These three helmets may not be the only ones that have been modified in this potentially dangerous way. Anyone noticing an irregular finish on the inside around the regulator mount as shown in the pictures, should not use the helmet and should immediately contact a KMDSI dealer or KMDSI. The helmets in question all came from the UK, however because of the international nature of commercial diving all users should use caution and carefully check any previously acquired used helmets.

Often Kirby Morgan helmets are painted by persons with good intentions, but who do not understand that when it comes time to replace an insert or repair fiberglass damage, all of the paint must be removed. This removal requires sanding, because chemical strippers will de-laminate the fiberglass. Sanding alone usually requires at least 2-3 hours work, thus greatly increasing the repair cost.



The interior of one of the painted helmets shows obvious sub-standard repair work.



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KMDSI has always discouraged painting of fiberglass helmets because there is no way of telling what lies beneath the finish. Refinishing should only be done by a specifically trained and certified KMDSI fiberglass technician. All repairs should be well documented, including pictures. Certified KMDSI fiberglass repair technicians will only use polyester gel-cote for refinishing and will only perform fiberglass repairs on helmets that have a record of repair, or only after removing any unauthorized coatings and performing a proper inspection.

In this time of high demand for helmets, unscrupulous people may try to sell patched up helmets. Some people even pose as KMDSI repair technicians and try to sell helmets that are outright dangerous. Buyers must beware! Always have the helmet checked out by a certified KMDSI technician before buying.

Please see the training and repair policies listed on the KMDSI and Dive Lab web sites for further information.



The unauthorized paint job on these helmets concealed repairs performed with sub-standard materials.

DIVEX HSE ALERT



HSE Alert No. HSE001-2007

Valve Seat Retainer

Part No: D1998

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DATE	21/02/07	COUNTRY:		LOCATION:	
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Divex has been advised of some problems which customers have experienced when using Ultraflow "balanced demand valve helmets" at the top end of the acceptable supply pressure range i.e 15-20 bar.

Symptoms reported include :-

- 1) technicians experiencing difficulty in setting up the regulators correctly,
- 2) the valve stem entering too far into the seat / seat retainer and sticking,
- 3) a reduction in flow from the regulator as the supply pressure was increased.

We have investigated the cause and have concluded that a batch of seat material which was at the bottom end of the acceptable hardness range is responsible for symptom 2.

It was found that a less than perfect glue joint was allowing supply gas behind the seat and causing the seat material to part company with the retainer adjacent to the bore. The seat then pushed the valve stem forward causing the roller lever to drop while maintaining a gas tight seal and is responsible for symptom 3.

Divex recommend that all valve seat retainers are tested as a matter of urgency as described below:-

- 1) Remove the regulator cover and diaphragm,
- 2) Connect a variable pressure breathing gas supply,
- 3) Adjust the supply pressure gradually from zero to 10 bar and note the amount of free play at the roller end of the roller lever.
- 4) Increase the supply pressure gradually to 20 bar and monitor the free play. An increase in the free play of up to 2mm indicates that the seat retainer is acceptable. If the increase is greater than 2mm then the seat retainer should be replaced with a new unit.

If, for operational reasons, it is not possible to conduct the above tests immediately then Divex recommends that the maximum supply pressure is limited to 12 bar until tests are completed.

