

IMCA Safety Flash 02/11

February 2011

These flashes summarise key safety matters and incidents, allowing wider dissemination of lessons learnt 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

1 Kirby Morgan SL 17C Partially Detached from Neck Dam

A member has reported that, following the investigation into a recent incident where a diver's hat (Kirby Morgan SL 17C) became partially detached from the neck dam, the contractor involved concluded that, rather than the securing pins becoming displaced during the dive, in all probability they were not secured at the beginning of the dive and that the fault lay with the checking and confirmation process rather than with the hardware.

Members are reminded that human errors cannot be eliminated and that robust checking, confirmation and supervising processes need to be in place to prevent these human errors becoming single point failures.

In particular it should be ensured that:

- ◆ The roles and responsibilities during any pre-dive 'dressing in' checks are clearly defined and all the personnel involved are clear regarding their individual roles and responsibilities;
- ◆ Dive supervisors give their full attention during the checks and, if necessary, temporarily suspend any parallel work to ensure the appropriate level of supervision is applied;
- ◆ Checklists are used 'actively' – that is, the person in charge (dive supervisor) reads out the appropriate checks, one at a time; the person carrying out the checks (diver/bellman/tender) completes the checks and confirms this back to the person in charge, also one at a time, who records that the check has been carried out;
- ◆ The diver who is being 'dressed in' should carry out a cross-check to help eliminate the potential for single point failure. In the specific case of the SL 17C, the diver can confirm by touch that the neck dam and yoke are in place and also that the pins are in the latched position (i.e. the pins cannot be rotated).

2 Serious Hand Injury During use of Deck Scaler

A member has reported an incident in which a crew member sustained a serious hand injury while using an air driven deck scaler during maintenance operations on deck. The crew member was wiping clean an area on the scaler to the rear of the motor when his glove became entangled in the drive belt and his fingers were subsequently trapped. The crewman sustained crush injuries to the tips of two fingers, and was medevaced for treatment and subsequent surgery. Fortunately no amputation resulted.



Figures – Deck scaling machine showing where person's glove was caught

An investigation in which the following was noted:

- ◆ The deck scaling machine had no 'dead man' type control;
- ◆ The physical barrier to injury offered by the installed guards on the deck scaler was defeated;
- ◆ Existing company procedures for the use of this air-driven device clearly state 'disconnect airline before any trouble shooting or maintenance'.

The incident highlighted the following:

- ◆ A design deficiency in the deck scaling machine;
- ◆ Failure to follow basic safe working practices.

The following actions were implemented:

- ◆ Further use of machines of this type was prevented until the suitability of appropriate control measures could be demonstrated. These included 'hard' barriers such as guarding and a dead man switch, and 'soft' barriers such as risk assessment and operating instructions;
- ◆ Further equipment was identified which may present a similar risk (guarding/dead man switch) i.e. drilling machines, lathes, bench grinders, etc. and actions identified which would appropriately manage the risk.

The manufacturer of the deck scaler was contacted to feedback concerns and highlight the lack of a 'dead man' switch on the device, and a swift and positive response was received from the manufacturer.

3 Service Bulletin

A member recently reported an electrical fire inside its self-propelled hyperbaric lifeboats (SPHL). Service Bulletin 2010IWP091 (issued by Steyr Motors) was distributed to users at request of Oceanwide Safety at Sea.

All users of SPHLs using Steyr Motors' integrated flywheel generators (IFG) should review the attached service bulletin.

**SERVICE BULLETIN**

SUBJECT	:	recommended exchange previous CCU version
ENGINE TYPE	:	all
EQUIPMENT	:	Integrated Flywheel Generator (IFG) regulator
VERSION	:	24VDC
DATE	:	September 28, 2010
SB No	:	SB2010IWP091

All STEYR MOTORS Integrated Flywheel Generators (IFG) are equipped with an electronic governor called the CCU. This CCU is 3 phase linked with the -bell housing containing- alternator which is generating an alternating current (AC). The CCU's positive and negative output sockets are twin galvanic separated terminals which should be singly or joint connected with a 24V battery group.



Image 1: main IFG parts

The main components are:
a) CCU (regulator)
b) permanent magnetic rotor
c) 3 phase coil



Image 2: new CCU (DC output)

The CCU, as shown in image 1, has been modified to meet nowadays requirements. For these are basically all terminals altered, the DC output into more robust terminals (see: image 2) and the input covered with a hood. (see: image 3)



Image 3: new CCU (AC input)



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Another visible modify is the material and color the cover is made of, this has been changed from black/anthracite synthetic (*image 1*) into metal with a light grey coating (*image 2, 3 & 4*).

Image 4: new CCU

JUSTIFICATION & RECOMMENDATION:

Due our policy to strive to let you deal with product improving modifications we recommend to exchange all 'old' type regulators. Swapping the previous ones for new types can be done without adaptations because of its compatibleness.

WAY OF ACTION:

- Observe your aboard installation and check if your system is equipped with a previous (*image 1*) regulator or the modified (*image 4*) CCU.
- When equipped with a former (*image 1*) version: inform your supplier
- Refer in all communication -preferable in written- to this Service Bulletin under mention of this Service Bulletin number.

With best regards, Iman-Padmos (COO tech)