IMCA Safety Flash 03/04

March 2004

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

1 Confined Space Entry

Keywords: Confined Space

IMCA has also been passed a copy of a safety alert produced by the United States Coast Guard relating to confined space entry, which follows.

2 Change to Ultraflow Regulator Diaphragm

Keywords: Regulator

IMCA has been asked to help make the offshore diving industry aware of a change to the Ultraflow Regulator Diaphragm – please see the following Divex Product Bulletin on the subject.

3 Divers' Umbilical Management

Keywords: Umbilical

IMCA has been made aware of a safety alert relating to divers' umbilical management produced by the Western Australia Department of Industry and Resources' Petroleum Division. The alert is reproduced in full in the following page.

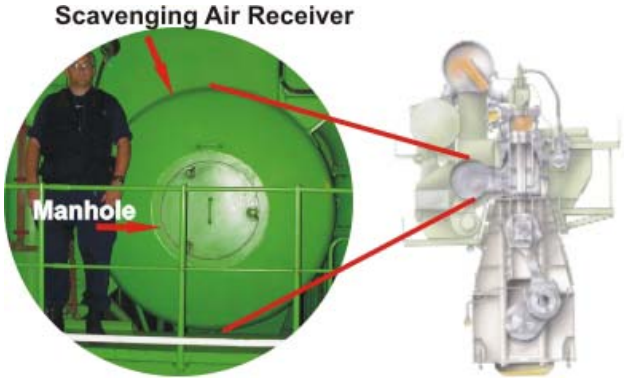
U.S. Department of Homeland Security
United States Coast Guard

Marine Safety, Security and Environmental Protection

SAFETY ALERT - CONFINED SPACE ENTRY

February 23, 2004 Washington, DC

Last Fall a foreign flagged containership during a coastwise voyage reported upon leaving port that the vessel's second engineer was missing. Despite an extensive search by the vessel's crew and officers, the individual was presumed to have gone ashore and missed the sailing. Upon arrival at the following port the individual was found deceased behind an access door to the main propulsion engine's scavenging air receiver.
The vessel was powered by a Burmeister & Wain, 9 cylinder two stroke engine that develops over fifty-five thousand horsepower. The engine's scavenging air space can be accessed by two manholes located on both ends of the scavenging air receiver.



These circular manholes are secured by three L-shaped dogs having an outer edge that is tightened against an inner circumferential lip on the edge of the access hole. Tightening is achieved by the use a handled fastener.

Dogs in latched position.

Coast Guard investigators determined that the engineer entered the scavenging air receiver alone. Although his reason for entering the receiver is not known, engine maintenance was performed in that space while at the first port and he may have returned to inspect the area for left behind tools and materials or to retrieve something. It appears that after his entry, the easily moved hinged / inward-opening door accidentally closed. Investigators believe that at that time, the upper left dog due to its weight and perhaps the vibration of the door as it closed, caused the dog to move allowing its edge to catch the circumferential lip at the opening. Once caught, even with the loosened fastener the door could no longer be opened from the inside of the receiver.

The second engineer was an experienced mariner. It was reported that he was trained and familiar with the vessel's confined space entry procedure. In all previous instances, he followed the procedures and safely performed maintenance inside the space. Unfortunately, on this occasion he entered without informing anyone or having an assistant stationed outside. Despite various searches by the crew within the machinery spaces and the main engine while the vessel was preparing to sail, he went unnoticed.

Mariners may on occasion not associate certain work areas as confined spaces and therefore not take the precautionary steps needed. Main engine crankcases, scavenging air spaces, exhaust ducting, boiler drums, furnaces, stack casings, condensers, sewage plant tanks and other systems, equipment, and components may present potential "confined space" type hazards.

A confined space may be defined as any location that, by design, has limited openings for entry or egress and is not intended for continuous human occupancy. This definition applies regardless of whether or not the atmosphere is explosive or toxic. See related US Department of Labor, Occupational Safety & Health Administration information by clicking here.

In this casualty, there was initially sufficient quantities of oxygen for the second engineer to breath, at least until the engine started causing the ambient environmental conditions inside the receiver to change dramatically and cause the fatality.

The Coast Guard **strongly recommends that:**

- All vessels complying with the International Safety Management Code (ISM) have a specific plan for entering confined spaces outlined within their Safety Management System.
- The confined space entry procedures include and identify various types of shipboard spaces such as those previously mentioned that could be encountered and which should be treated as confined spaces.
- Crew safety meetings address the identification of confined spaces and provide instruction on confined space entry procedures.
- Individual crewmembers that work in confined spaces review existing entry procedures and requirements regularly.
- All other vessels and maritime operations falling outside of ISM requirements develop and include in their marine safety programs similar confined space identification and entry procedures.

DIVEX PRODUCT BULLETIN

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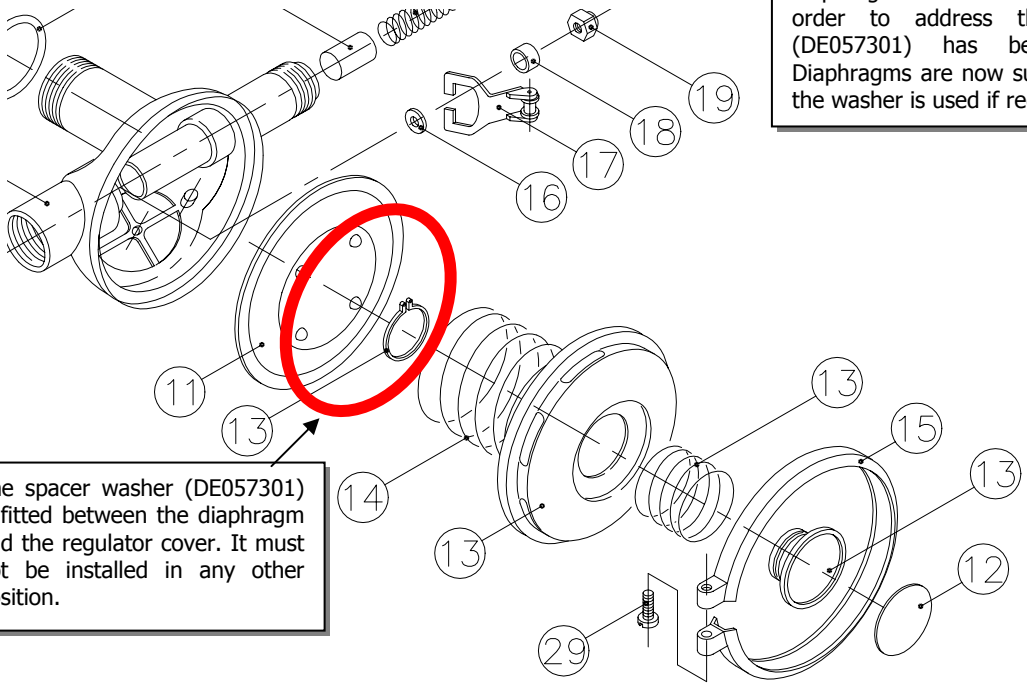
DE057 Diaphragm & Spacer Ring Set
Introduced August 2003

Due to small changes in component dimensions over recent years the "fit" of the Ultraflow regulator diaphragm DE057 has been seen to be variable. In order to address this issue a spacer washer (DE057301) has been introduced. All spares Diaphragms are now supplied c/w spacer washers and the washer is used if required.



The spacer washer (DE057301) is fitted between the diaphragm and the regulator cover. It must not be installed in any other position.

Small changes in component tolerances for parts used on the Ultraflow regulator assembly has resulted in some cases with the assembled regulator not having as secure a grip of the diaphragm between regulator body and the cover as is ideal.

Investigation of various options has determined that a spacer washer is the simplest & best solution to this issue.

Trained & competent service technicians can easily judge whether this spacer washer needs to be fitted.

The test is simple: when the regulator body/diaphragm/biasing spring/cover & clamp have been assembled and the clamp screw (#29 on diagram) tightened to the recommended torque setting of 8 inch /pounds.

If when holding the assembled regulator in one hand and holding around the clamp with the other and twisting, the clamp band can be turned without much effort by the technician then the washer should be fitted. If the clamp is secure without the washer being installed then it is not required. No tools should be used to grip either part.

Future supplies of the diaphragm will include a washer and an instruction guidance sheet.

Users who have purchased diaphragms over 12 past months have been advised of this change and a qty of "washers only" (part # DE057301) equal to the number of diaphragms purchased to date were sent with the notice advising change.

Should you have any queries on this matter you should contact:

Malcolm Cattanach: mcattanach@divex.co.uk

James Bruce/Bob Thomson: jbruce@divex.co.uk

SAFETY ALERT

Past and recent examples of umbilical damage, both offshore WA

DIVERS' UMBILICAL MANAGEMENT

A recent, potentially fatal incident offshore again highlights the need for diligent umbilical management by divers, tenders and supervisors. Improper umbilical management has resulted in fatalities.

Umbilicals are the diver's lifeline, in addition to breathing gas and communications, they provide:

- The means of locating a diver in an emergency
- Other essential services to the diver and critical information for the supervisor.

The umbilical may be the final communications link between the surface and the diver. Consideration in the project risk assessment must be given to the umbilical and the management of it.

Is the umbilical:

- Suitable for the tasks and project hazards
- Marked for monitoring the amount payed out
- Buoyancy suitable for the conditions
- Tender able to monitor and communicate with the diver by line pulls if required:-
    - Is a wet tender required
    - Are only weak links used to secure umbilical at the work site
    - Are the personnel competent for the conditions?

The ability of a diver and the dive team to manage the diver's umbilical is fundamental to controlling the inherent risks faced in underwater operations.

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