United States Coast Guard

Office of Investigations and Casualty Analysis

Safety Alerts, Safety Advisories, Lessons Learned

2008-2012

United States Coast Guard
Office of Investigations and Casualty Analysis

Safety Alerts, Safety Advisories, Lessons Learned
2008-2012

2012

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2009

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2008

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Maintaining vessel watertight integrity.

UNITED STATES COAST GUARD
U.S. Department of Homeland Security

MARINE SAFETY ALERT

Inspections and Compliance Directorate

December 31, 2012 Alert 05-12
Washington, DC

Pressure Switch Location for Fixed Fire Suppression Systems
Where's yours located?

This safety alert addresses the location of fire suppression system pressure switches aboard vessels. These critical components sense the activation of the system and then electrically secures the ventilation systems operating in the protected space. Securing the ventilation is essential in extinguishing a fire onboard a vessel. It assists in isolating the fire within the space, minimizes the introduction of additional oxygen to fuel the fire and prevents the loss of fire suppression agents from the space.

Recently, a vessel with an installed fixed CO_2 fire suppression system, suffered extensive damage due to a fire that started in the engine room. During the firefighting efforts the crew reported that the engine room ventilation could not be secured. A post casualty damage survey of the vessel revealed that the pressure switch used to secure the ventilation was located within the engine room. See the photograph of the damaged pressure switch at the right and new switch below.

Fixed CO_2 systems on inspected/regulated vessels need to be type approved and installed in accordance with applicable regulations; 46 CFR 25.30-15, 46 CFR Subpart 76.15, 46 CFR Subpart 95.15, 46 CFR 118.410, etc. These regulations require all controls and valves for the operation of the system to be outside the space protected, and notes they cannot be located in any space that might be cut off or made inaccessible in the event of fire in the protected spaces. The Coast Guard considers pressure switches that are used in such systems a "control."

For Uninspected Towing Vessels, 46 CFR 25.30-15 (b) requires installation in accordance with 46 CFR Subpart 76.15 and reiterates the location requirements.

The Coast Guard ***strongly reminds*** Owners and Operators of vessels with installed fixed fire suppression systems to ensure that these switches are properly located aboard their vessels. If the pressure switch or switches are located within the space being protected, they should be relocated by a properly trained fire suppression service technician. Doing so will assist in ensuring system functionality and accessibility in the event of an emergency. Failing to do so could have serious consequences to the vessel, its crew and the environment.

This safety alert is for informational purposes only and does not relieve any domestic or international safety, operational or material requirement. Developed by the Office of Commercial Vessel Compliance, Washington, DC. Questions may be addressed to CG-CVC-1@uscg.mil.

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UNITED STATES COAST GUARD

U.S. Department of Homeland Security

MARINE SAFETY ALERT

Assistant Commandant for Marine Safety, Security and Stewardship

October 4, 2012 Alert 3-12
Washington, DC

PROBLEM WITH MUSTANG INFLATABLE PFDS

The Coast Guard has become aware of certain Mustang Survival Inflatable PFDs with Hammar MA1 hydrostatic (HIT) inflation systems which may not inflate and require a new re-arm kit to properly inflate by manual or automatic activation. This safety alert identifies which products are affected. Certain inflatable PDFs may be subject to delayed or non-inflations. To determine if you are impacted please follow the instructions below.

USCG Approval	*Mustang Product*
N/A	MA7214 HIT inflatable re-arm kit
N/A	MA7218 HIT inflatable re-arm kit for LIFT
160.076/8611/0	MD0450 Inflatable Vest PFD with LIFT
160.076/5204/0	MD0451 Inflatable Vest PFD with LIFT (no harness)
160.076/5201/0	MD3183 Deluxe Inflatable PFD with HIT
160.076/8608/0	MD3184 Deluxe Inflatable PFD with HIT (with harness)
160.076/5300/0	MD3188 Inflatable Work Vest/PFD with HIT
160.053/116/0	MD3188 Inflatable Work Vest/PFD with HIT

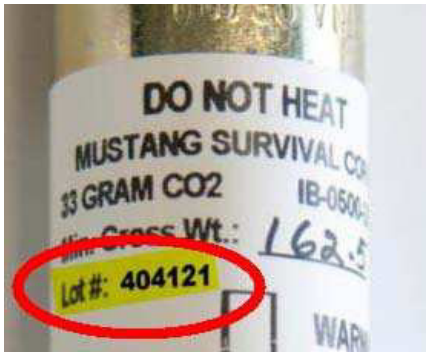
If you have a re-arm kit MA7214 or MA7218 you need only to check the lot number on the CO_2 cylinder label. If your CO_2 cylinder is marked with lot numbers 404121 or 404122 please contact Mustang Survival's customer service group at the number below.

If you have a PFD listed above refer to the sewn-in approval label to determine if it was "Made in Canada" and the "MFG DATE" is April or May 2012. If so, you will need to check the lot numbers of the CO_2 cylinder. The CO_2 cylinder lot number is visible through the yellow bladder fabric. Manually unpack your PFD by opening the zippers and unfolding your PFD. Find the CO_2 cylinder that is attached to the round inflator within the yellow bladder. Press the yellow bladder fabric against the cylinder to read the label to view the lot number through the fabric. If your CO_2 cylinder is marked with lot numbers 404121 or 404122, please contact Mustang Survival's customer service group for instructions and to arrange for a replacement inflator assembly.

All other CO_2 cylinder lot numbers are satisfactory. Repack your PFD so it is ready for use per the instruction manual. Mustang Survival Customer Service Group: 1-800-526-0532

Additional information is available at www.mustangsurvival.com/HIT. Please note the following photographs.

Photograph showing view of lot number through fabric.



Lot number on cylinder label.

This Safety Alert is provided for informational purposes and does not relieve any foreign or domestic requirement. Developed by the Lifesaving and Fire Safety Division, United States Coast Guard Headquarters, Washington, DC. For additional information contact Mr. Martin Jackson at Martin.L.Jackson@uscg.mil.

UNITED STATES COAST GUARD

U.S. Department of Homeland Security

MARINE SAFETY ALERT

Assistant Commandant for Prevention Policy

June 20, 2012 Alert 02-12
Washington, DC

OVERLOADED LIFTING GEAR ON FISHING VESSELS

Recently, several catastrophic failures of masts, booms, and lift cables have occurred on purse seine fishing vessels that have resulted in loss of life and severe injuries. Over the years many casualties have occurred onboard all types of fishing vessels attempting to haul in catches that exceeded the capacity of their winches, hoists, and associated equipment. These types of casualties are not unusual. This alert serves to remind all purse seine fishing vessel owners/operators and other fishing segments to ensure safe use of the haul equipment particularly matching the size and the capacity of the nets to the rated size and capacity of the winch/haul/hoist equipment, taking into account safety factors for various species, and other concerns such as the variable platform that a rolling fishing vessel and variable catch presents.

Owners / operators, and vessel *Insurers* must ensure that vessel winch, haul and hoist systems are not modified by crew members to increase the lifting capacity beyond the rated design which in some cases can be done very easily. Such boosting of hydraulic systems must be prohibited and certain components should be protected with special seals. The machinery should be properly maintained and records kept in a historical log. It is imperative that owners / operators ensure every load bearing structure and its associated components are maintained in original condition, that they will be operated as designed using all appropriate safety margins for anticipated working conditions. All such equipment will experience fatigue over time and as result must be inspected and monitored routinely. Bearings, limit switches, brakes, safety devices, sheaves, cables and other components, should be routinely inspected by certified organizations.

For owners / operators of purse seine and other fishing vessels, the Coast Guard strongly recommends:

- Know the design limits of load bearing structures and winches, hoist, and haul components;
- Ensure they are not modified by crew members; properly maintained; and are inspected and tested on a regular basis. Repair/replace components immediately when deficiencies are discovered;
- Evaluate and revise operational procedures as needed.

This Safety Alert is provided for informational purposes and does not relieve any foreign or domestic requirement. Please visit http://fishsafe.info for additional fishing safety information.

Distributed by the Office of Investigations and Analysis: Http://marineinvestigations.us
To subscribe: Kenneth.W.Olsen@uscg.mil

UNITED STATES COAST GUARD
U.S. Department of Homeland Security

MARINE SAFETY ALERT

Assistant Commandant for Marine Safety, Security and Stewardship

April 5, 2012 Alert 01-12
Washington, DC

Uninspected 6 or 12 pack Vessels – Rules Apply
Know Them!

The Coast Guard's Office of Auxiliary and Boating Safety has become aware of instances where recreational type boats are being manufactured and sold but do not meet federal construction requirements. In some cases persons holding Uninspected Passenger Vessel (UPV) Operator licenses are operating such vessels while carrying passengers for hire. This alert reminds UPV operators both six-pack and twelve pack, to ensure that they are aware that all vessels operated as UPVs are in compliance with the appropriate U.S. laws and regulations.

The laws applicable to UPVs are found at 46 USC 4105(a); recreational vessels are addressed in 46 USC Chapter 43. The regulations based on those laws are found in 33 CFR Parts 181 and 183 and are the minimum safety standards for recreational boat manufacturing and include the requirements for:

- certification
- identification of boats
- display of capacity information
- safe loading
- safe powering
- flotation requirements (for both inboard and outboard powered boats (including airboats))
- electrical systems
- fuel systems
- ventilation requirements
- start-in-gear protection
- navigation lights

It is the responsibility of U.S. Coast Guard licensed Masters that operate UPVs in passenger-for-hire operations to ensure compliance with all federal requirements applicable to the vessel.

Questions regarding this information may be addressed to Mr. Michael Jendrossek, Marine Investigator, (202) 372-1052 or michael.a.jendrossek@uscg.mil. Developed by the Office of Auxiliary and Boating Safety. This alert is provided for informational purposes only and does not relieve and domestic or international requirement. Distributed by the Office of Investigations and Analysis, USCG Headquarters, Washington, DC.

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UNITED STATES COAST GUARD
U.S. Department of Homeland Security

MARINE SAFETY ADVISORY

ASSISTANT COMMANDANT FOR PREVENTION POLICY

June 21, 2012
Washington, DC

Advisory 01 -12

Recommendations for Recreational Diving Operations Occurring from Commercial Passenger Vessels

This advisory is addressed to Passenger Vessel Operators, Owners and Crewmembers providing commercial transport and support services to recreational divers, and reminds them of safety responsibilities to themselves and their passengers. Additionally, this advisory is intended to provide recommendations and lessons learned from recreational diving casualty investigations, and promote awareness of industry best practices.

While recreational diving is not regulated by the Coast Guard, the USCG licensed Master of a commercial vessel transporting Divers / Passengers is ultimately responsible and accountable for vessel and passenger safety. Administrative action can be taken against an operator if his or her unsafe actions or decisions lead to an injury or fatality.

Due to an increase in the number of fatalities associated with passenger vessels supporting recreational diving activities, the Coast Guard believes there is a need for improved safety and performance in this area. Accordingly, the Coast Guard strongly recommends that passenger vessel operators performing dive site transit services and recreational diving operations develop and use daily operational and maintenance procedures that cover recreational dive evolutions which may include:

- Loading and stowing dive gear;
- Loading passengers;
- Transiting to dive site;
- Dive pre-brief and dive planning;
- Knowing dive site specific risks and hazards;
- Pre-dive equipment checks;
- Entering water;
- Boarding vessel;
- Accounting for all divers;
- Departing dive site;
- Returning to port;
- Unloading passengers;
- Unloading gear;
- Duties and responsibilities of crew members; and
- Accounting for the safe return of all divers and passengers.

Fueling, emergency, man-overboard, firefighting, evacuation and diver rescue / recovery procedures should be included. Each member of the organization should have access to the written procedures and be trained on them. Owners and operators of a vessel providing dive equipment to passengers

should maintain equipment as required by the equipment manufacturer and keep this information together with a record of periodic inspections and tests performed.

If the vessel provides a diving guide or dive master, or if one is provided by the excursion party, it is recommended that a planning and coordination meeting be held between all involved to ensure the highest level of safety. Additionally, procedures are recommended to address the operator's approved range of operations taking into account the operational limitations of the vessel, the environmental conditions reasonably expected, the number and experience range of diving passengers, and the duration of a typical excursion.

It is important to note that while the passenger safety orientation requirements in 46 CFR 185.506 and 46 CFR 26.03-1 do not specifically include recreational diving topics, it is considered a best practice to do so. Additionally, it is recommended that the vessel operators account for the following prior to permitting the divers to enter the water, regardless of the experience level of those involved:

- Diver responsibilities;
- Vessel and crewmember responsibilities;
- Estimated time on site;
- Dive site orientation and hazzards;
- Communication procedures between submerged divers and vessel;
- Emergency procedures for distressed or disabled divers;
- General safety considerations unique to the vessel; and
- Environmental conditions to be expected.

Passenger vessels providing commercial transport and support services to recreational divers may use special equipment to ensure the safety of passengers such as rescue points for distressed divers. These components should be properly maintained, sufficiently sized and strengthened to support all personnel involved in the retrieval of a distressed or incapacitated diver. Enhanced medical / first aid equipment, such as medical oxygen for injured divers may be carried onboard. This equipment should be inspected regularly to ensure it is adequate for service. A logbook of inspection, maintenance, service, and repair should be kept for reference.

The Coast Guard encourages Owners / Operators, industry experts and associations to work together to develop and share best practices for passenger vessels providing commercial transport and support services to recreational divers in order to minimize injuries and the potential for fatalities.

This advisory is provided for informational purposes only and does not relieve any domestic or international requirement. This document was produced in collaboration with the Office of Operating and Environmental Standards, Office of Commercial Vessel Compliance and the Office of Investigations and Analysis, U.S. Coast Guard Headquarters, Washington, DC.

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UNITED STATES COAST GUARD
U.S. Department of Homeland Security

MARINE SAFETY ALERT

Assistant Commandant for Marine Safety, Security and Stewardship

December 14, 2011 Alert 07-11
Washington, DC

Listen & Live / Develop & Follow Smart Safety Procedures

This alert reminds all maritime personnel of the dangers associated with working around or near moving machinery.

A recent marine casualty resulted in a death onboard a Great Lakes ore carrier. Two crewmembers had been working on clearing the vessel's sump pump bilge piping within a cargo conveyor belt tunnel. The piping ran vertically along the bulkhead adjacent to the conveyor belt. Because the clearance between the belt and piping was small, the crew had to step on a large pulley that was part of the system. Simultaneously, a shore-side contractor was working on the conveyor system in another part of the vessel and well removed from the crew working on the bilge piping.

Prior to undertaking the work, the person in charge and all involved working on or near the conveyor had taken some precautions to establish a sequence of audio alarms to use as an alert. It consisted of an initial alarm sounding the need to clear the belt, followed by another alarm notification five minutes later and just prior to starting of the conveyor.

While the crewmembers were working on the piping the initial alarm sounded and they removed their tools and got off of the belt. Shortly thereafter, one person went back on the belt to resume work. His co-worker emphatically told him to get off the belt several times but the he refused, stating that the audible tunnel alarm was not the conveyor belt alarm but rather a watertight door alarm which created a similar sound. The alarm sounded again, the belt started, and the crewmember was entangled in the conveyor system and killed.

In a very recent casualty another man was killed by entanglement with a conveyor system. Although this investigation is in its early stage it appears his arm was caught and severed within components of the conveyor. It is reported that no safety procedures existed pertaining to work on or around the conveyor system and that the deceased did not have a radio or other device to call for help.

Although the investigations are not yet complete and other causal factors may be discovered the Coast Guard **strongly recommends** that Owners/Operators, Classification Society Surveyors, vessel managers and those involved with the inspection of vessels to ensure that:

- regardless of how "its been done before," develop and implement operational, maintenance and repair procedures, including a focus on safety precautions for any element of vessel operations that presents a risk of injury or death;
- every crewmember working in remote spaces be provided with radio or similar communication devices to ensure instant communication with others onboard;
- effective lock out and tag out systems are utilized and involve all persons working on a particular system as responsible parties for the process and clearing;
- verbal acknowledgements from involved personnel of "All Clear" are required prior to the remote starting of any system when work is taking place on or near the system;

- work actually upon or near live machinery is prohibited while other work is being performed on the same machinery; and

For crewmembers, the Coast Guard **strongly recommends**:

- *Review frequently and ensure that safe work practices and procedures are always followed.*

- *If safe work procedures and safe working practices are not available request that they be developed. Study them, raise questions, don't embrace methods or procedures that present risk, even if it has always been done like that before.*

- *Listen to your shipmates when warnings of potential dangers are given.*

This Safety Alert is provided for informational purposes and does not relieve any foreign or domestic requirement. Developed and distributed by the USCG Office of Investigations and Analysis, Washington, DC. Questions may be addressed to HQS-PF-fldr-G-PCA@uscg.mil.

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UNITED STATES COAST GUARD
U.S. Department of Homeland Security

MARINE SAFETY ALERT

Assistant Commandant for Marine Safety, Security and Stewardship

November 29, 2011 Alert 06-11
Washington, DC

MUSTANG SURVIVAL PFD RECALL NOTICE

RECALL NOTICE ON MD2010 & MD2012 model 22LB Inflatable Personal Flotation Devices
(USCG approval nos. 160.076/8922/0 and 160.076/4028/0 respectively)

The United States Coast Guard **strongly urges** mariners and boaters alike to check their Mustang Survival PFDs. Mustang Survival is voluntarily recalling all model number MD2010 and MD2012 inflatable Personal Flotation Devices (PFD's) sold in the United States during 2011. To determine if you are impacted by this recall please reference the images below:

Image 1) Any inflatable product with multiple white sewn on safety labels on the **back is OK** and is not affected by this recall.

Image 2) If your inflatable does not have white sewn on safety labels, please check for model number MD2010 or MD2012 on the back of the PFD then refer to Image 3.

Image 3) MD2010/MD2012 models with an "MIT" *(Membrane Inflatable Technology)* stamp **(in black or color) above the CO2 cylinder is OK.**

BUT - Any MD2010/MD2012 missing the "MIT" stamp should be returned to Mustang

Image 1 Product with white labels are not part of this recall.	**Image 2** Check for the model number on the back of the PFD above the UL logo.	**Image 3** Any MD2010 or MD2012 with an "MIT" stamp is OK to use and does not need to be returned.
		

This recall is being issued for the inspection and repair of an inflator installation inconsistency that may prevent some units from fully inflating with CO2 (oral inflation functions normally). Mustang Survival has developed a solution that corrects any affected product and prevents re-occurrence of this issue. The inspection and repair can only be performed at a Mustang Survival factory.

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To subscribe: Kenneth.W.Olsen@uscg.mil

This recall notification is for only the MD2010 and MD2012 22LB buoyancy inflatable PFDs. No other Mustang Survival products are affected as they utilize different inflator mechanisms.

All MD2010 and MD2012 PFD's without the stamped MIT logo as shown in Image 3 (above) should be returned to Mustang Survival for inspection.

Distributors and consumers are urged to contact Mustang Survival's Customer Service department at 1-800-526-0532 between 7:30am and 4:30pm PST, Monday through Friday for specific shipping instructions. Mustang Survival will pay for all testing, repair and shipping costs. **Consumers should not return product to their dealer**. If you have questions, please access Mustang Survival's website at www.mustangsurvival.com/22lb-product-notice .

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UNITED STATES COAST GUARD
U.S. Department of Homeland Security

MARINE SAFETY ALERT

Assistant Commandant for Marine Safety, Security and Stewardship

September 20, 2011 Alert 05-11
Washington, DC

Parasailing Operations
Know your ROPES

A series of parasail incidents resulting in fatalities and injuries have occurred over the last few years. Several marine casualty investigations are ongoing and some are near completion. Common causal factors are being identified in addition to causal factors that are unique to a specific event. The Coast Guard believes that communication of known issues is essential in minimizing potential future casualties and **strongly reminds** parasail operators and those associated with the business of the following:

Remember that most parasail fatalities and injuries are related to the failure of the towline. Failures occur significantly below the rated towline strengths due to a variety of reasons that may include cyclic loading, long term exposure to environmental elements, the presence of knots, and overloading.

Observe and monitor weather conditions continuously. Most frequently increases in wind speed impact the relative speed against the chute and cause the overloading. As the wind speed doubles the load on the towline may quadruple. Monitor your VHF radio weather channel and learn to interpret the effect of wind speed on the water surface. Note the formation of squalls, thunderstorms, or when larger weather fronts are expected to pass through your operational area. Cease operations well before such weather features impact your operation.

Prepare for emergencies by having well documented procedures applicable to a variety of circumstances, normal operations and emergencies such as towline breaks, winch failures, propulsion failures, and other concerns that can impact your own or your passenger's safety. Regularly perform drills to ensure expert proficiencies in accomplishing all emergency or routine procedures.

Ensure that all of your equipment is properly maintained on a continuing basis. This includes the winch, and drive motor, hydraulic brakes, hoses and piping, spooling systems, and other tackle. Also check your chute, harness, and related components for stitching failures, degradation, and the need for general repairs. Immediately repair and correct identified problems.

Safety is up to you the Operator. ***The Coast Guard does not regulate or inspect parasail equipment or regulate parasail operations.***

The Coast Guard recognizes that there are *many other* issues associated with this sport and encourages owners and operators to work with each other and related industry associations to share best practices and develop safe operational standards to minimize potential injuries and deaths. Coast Guard Licensed Operators are *expected to provide an adequate level of care* during vessel operations. *Administrative action may be taken against the operator* if his or her unsafe actions or decisions lead to a casualty.

This alert is provided for informational purposes only and does not relieve and domestic or international requirement. Developed by the Office of Investigations and Analysis, USCG Headquarters, Washington, DC.

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UNITED STATES COAST GUARD
U.S. Department of Homeland Security

MARINE SAFETY ALERT

Assistant Commandant for Marine Safety, Security and Stewardship

May 20, 2011 Alert 04-11
Washington, DC

High Velocity Vent Valves, Vacuum Valves, P/V Valves

Simple to check, easy to maintain, don't let them be a problem again.

A recent marine casualty resulted in significant damage to tank structures, piping and components of a combination chemical / oil product carrier. Vessel-to-vessel loading operations were taking place at anchorage and one tank became over-pressurized. Subsequently, three cargo tanks and three ballast tanks on the ship suffered catastrophic structural failures that allowed hazardous cargo to migrate throughout those areas. This incident caused the vessel to list and created a very dangerous explosion hazard requiring costly and time-consuming lightering and repair operations. Additionally, it presented a hazard to the port and persons involved.

The investigation is nearly complete and investigators have identified several causal factors, one being the failure of the high velocity vent valve which did not open and prevent over pressurization of the tank while it was being filled.

The high velocity vent valve is part of the pressure / vacuum protection piping of the cargo tank. It prevents damage to cargo tanks by normally staying closed and only opening at a preset positive pressure. Large shipboard tanks can be easily damaged by relatively low pressures. Use of these valves minimizes such occurrences. Other benefits of the valve being in a closed position is that breathing of the tank is minimized thus preventing unwanted cargo vapor releases into the atmosphere, protecting the environment and limiting the loss of cargo due to vaporization. The valves are also equipped with flame screens to prevent explosions due to ignition. The vacuum breaker component of pressure / vacuum protection piping of the cargo tank similarly protects the tank by preventing excessive vacuum from being formed.

After this specific casualty, the high velocity vent valve of the tank being filled was found stuck closed and inoperable using the manual test lever. A valve for another tank was also found stuck. Scientific testing of the substance between the stuck valve disc and the seating surfaces indicated the presence of oxidized vegetable oil or fat likely from previous cargos. It appears doubtful that crewmembers exercised the valves prior to their cargo operations as per their operating procedure.

As a result of this casualty and others involving similar circumstances, the Coast Guard **strongly recommends** to vessel Owner / Operators, Crewmembers, Classification Society Inspectors, Vetting, and other inspection personal ensure that tank high velocity vent valves and vacuum valves, or combination pressure / vacuum valves are maintained in operating conditions at all times and are routinely checked as procedures require.

UNITED STATES COAST GUARD
U.S. Department of Homeland Security

MARINE SAFETY ALERT

Assistant Commandant for Marine Safety, Security and Stewardship

September 1, 2011 Alert 04-11
Washington, DC

MARINER'S SAFETY ENDANGERED

WHEN VHF RADIO DISTRESS ALERTS BY DIGITAL SELECTIVE CALLING (DSC) LACK LOCATION AND IDENTIFICATION INFORMATION

As the Coast Guard's new marine radio network Rescue 21 becomes operational throughout the U.S., rescue centers can now receive instant distress alerts from commonly used DSC-capable VHF marine radios. However, approximately 90% of VHF DSC distress alerts received by the Coast Guard do not contain position information, and approximately 60% do not contain a registered identity. The Coast Guard cannot effectively respond to a DSC distress alert sent from such a radio.

This means that search and rescue efforts may normally be suspended when:

- no communications with the distressed vessel can be established,
- no further information or means of contacting the vessel can be obtained from other sources, and
- no position information is known.

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HELP US HELP YOU

FIRST Obtain a Maritime Mobile Installation Identity (MMSI) and enter it into your radio. MMSI numbers are issued by the Federal Communications Commission if your vessel otherwise requires a station license, or BOATUS, (http://www.boatus.com/mmsi), Sea Tow (http://www.seatow.com/mmsi), or the U.S. Power Squadrons (http://www.usps.org/php/mmsi). Ensure any information originally provided is updated as changes occur. FCC regulations require that DSC-equipped radios "use MMSIs assigned by the Commission or its designees" (47 CFR 80.103(b)).

THEN Interconnect your radio to a GPS receiver using a two-wire NMEA 0183 interface on all DSC-equipped marine radios and on most GPS receivers. Instructions should be provided in the radio and GPS operators manual. Further information is provided and will be routinely updated in http://www.navcen.uscg.gov/?pageName=mtDsc.

Developed by the Spectrum Management and Telecommunications Policy Division (CG-652), United States Coast Guard Headquarters, Washington, DC. Questions should be directed to Mr. Russell Levin at (202) 475 3555 or Russell.S.Levin@uscg.mil.

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UNITED STATES COAST GUARD
U.S. Department of Homeland Security

MARINE SAFETY ALERT

Assistant Commandant for Marine Safety, Security and Stewardship

May 6, 2011 Alert 03-11
Washington, DC

PROVIDING CPR – NO TIME TO WASTE

This Safety Alert serves as a reminder to the international maritime community that *when it is necessary to provide a patient Cardiopulmonary Resuscitation (CPR) there is simply no time to waste.* Every second which passes affects the patient's chance of survival. According to the American Heart Association:

- Sudden cardiac arrest is most often caused by an abnormal heart rhythm called ventricular fibrillation (VF). Cardiac arrest can also occur after the onset of a heart attack or as a result of electrocution or near drowning. When sudden cardiac arrest occurs, the victim collapses, becomes unresponsive to gentle shaking, stops normal breathing and after two rescue breaths, still isn't breathing normally, coughing or moving.

- Effective bystander CPR, provided immediately after sudden cardiac arrest, can double or triple a victim's chance of survival.

- Effective bystander CPR helps maintain vital blood flow to the heart and brain and increases the amount of time that an electric shock from a defibrillator can be effective.

- Brain death starts to occur four to six minutes after someone experiences sudden cardiac arrest if no CPR or defibrillation occurs during that time.

- If bystander CPR is not provided, a sudden cardiac arrest victim's chances of survival fall 7 percent to 10 percent for every minute of delay until defibrillation.

- Few attempts at resuscitation are successful if CPR and defibrillation are not provided within minutes of collapse.

For additional information access the following websites:

American Heart Association http://www.heart.org **American Red Cross** http://www.redcross.org

Regardless of other CPR training requirements, such as basic safety training required by STCW-95 for certain mariners, the Coast Guard **strongly recommends** that all vessel owners and operators ensure each crew member is properly trained in CPR. Important changes to CPR procedures have taken place in late 2010.

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To subscribe: kenneth.w.olsen@uscg.mil

UNITED STATES COAST GUARD
U.S. Department of Homeland Security

MARINE SAFETY ALERT

Assistant Commandant for Marine Safety, Security and Stewardship

February 14, 2011
Washington, DC

Alert 02-11

Air Receivers and Relief Valves

A reminder that shouldn't be necessary!

This Safety Alert addresses safety issues relating to air receivers on Uninspected Towing Vessels (UTV), but may apply to air receivers on any vessel. Air receivers, regardless of specific use onboard a UTV, contain extreme amounts of potential energy; an uncontrolled release of this energy may lead to serious injury, death and catastrophic vessel damage. Although this issue involves basic safety and good marine practice, too many related problems have been recently discovered.

Not long ago, an air receiver unexpectedly ruptured with terrible results onboard an UTV on the Upper Mississippi River. A crewmember was seriously injured and paralyzed. Several causal factors were noted during the casualty investigation; the lack of a relief valve to protect the system and significant corrosion within the receiver. It's important to note that on unprotected systems, all it takes for the system to be over-pressurized is for the compressor's pressure switch/contactor or unloader to fail and not shut off the machine. Further, internal corrosion on aged tanks present a latent unsafe condition and may go unnoticed if not inspected. (Parted air receiver.)

As a result of this casualty and other similar incidents, the U. S. Coast Guard **strongly recommends** that UTV Owner/Operators, vessel engineers, insurance surveyors and other inspectors **ensure** that:

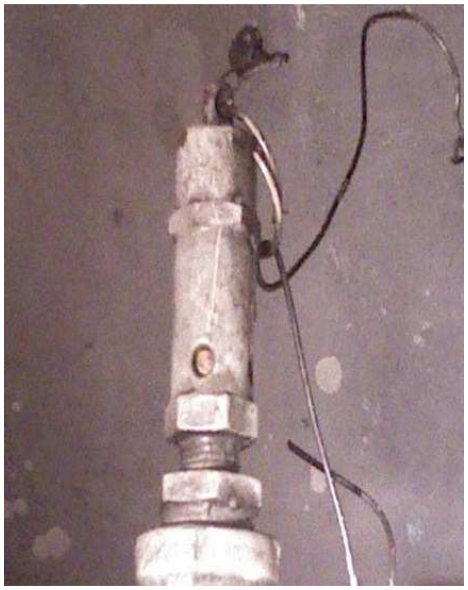
- A proper sized pressure relief device is installed on all air receivers. The pressure relief device should not be rated higher than the Maximum Allowed Working Pressure (MAWP) stamped on the air receiver's data plate;

- A data plate is attached to the receiver and pressure relief devices. If missing or damaged the UTV representative should provide evidence to prove the components were constructed to an approved standard. Otherwise this equipment should be taken out of service or replaced;

- The data plate associated with the receiver and pressure relief device remain unpainted and legible. Take care to minimize damage to the plates if paint needs to be removed. Pressure relief devices should not be painted as paint can interfere with the lifting of the valve. Those that are painted should be lift tested to ensure proper operation;

- Pressure relief devices are not capable of being isolated or their operation prevented by being wired or secured in a position that prevents the valve from opening;

RELIEF VALVES MUST NEVER BE SECURED IN THE CLOSED POSITION



- Each receiver is equipped with a drain valve to remove condensate and all crewmembers making rounds in the machinery space are instructed to drain the condensate as part of their regular machinery space duties;

- All repairs and alterations to air receivers and pressure relief devices are conducted by companies holding the National Board of Boiler and Pressure Vessel "R" Certificate for air receivers and the "VR" Certificate for pressure relief devices; and

- Owner/Operators establish maintenance programs based on the manufacturer's recommendations for such equipment that includes routine internal and external receiver inspections. External inspections should include surface examinations for evidence of deterioration such as cracks, blisters, corrosion erosion, dents, etc., with particular attention to the support attachments and welds.

Owner/Operators should be aware of these potential safety hazards and take proper action as needed. Failure to address these concerns could result in a hazardous condition, and the Coast Guard determining Operational Controls are necessary. If in doubt, contact your local Coast Guard office or the Towing Vessel National Center of Expertise at (270) 444-7715.

This safety alert is provided for informational purposes only and does not relieve any domestic or international safety, operational or material requirement. Developed by the Towing Vessel National Center of Expertise. Distributed by the U.S.C.G. Headquarters Office of Investigations and Analysis, Washington, DC. Questions may be addressed to HQS-PF-fldr-G-PCA@uscg.mil.

UNITED STATES COAST GUARD
U.S. Department of Homeland Security

MARINE SAFETY ALERT

Assistant Commandant for Marine Safety, Security and Stewardship

January 31, 2011 Alert 01-11
Washington, DC

INSPECTION OF FUEL OIL QUICK-CLOSING VALVES

U.S. Coast Guard Port State Control Officers (PSCOs) are discovering Fuel Oil Quick-Closing Valves (QCVs) intentionally blocked, modified, and poorly maintained preventing them from operating as designed during an emergency.

QCVs are positive shutoff valves on fuel oil systems serving to isolate fuel tanks in the event of a fire and also prevent "fueling" of a fire in circumstances where system piping and components are compromised. In some circumstances they could be the only means of securing the fuel to a flammable liquid fire. These valves are designed to be remotely operated. Inoperable QCVs create a very serious hazardous condition putting the vessel and its crew at greater risk in the event of a fire. Blocking or disabling these valves is unacceptable under any circumstance. It is absolutely critical that they operate correctly, are maintained, and ready for use at all times. Proper routine maintenance, and in some cases approved modifications and / or replacement of components may be necessary to ensure reliability of the remote operator and closure of the valve.

Owners /operators, vessel engineers, PSCOs, Class society and other machinery space inspection personnel must fully understand the critical nature and importance of QCVs and associated systems. Crewmember knowledge of testing, operation, maintenance and repair, in addition to related documentation and required spare parts are essential elements to evaluate during an inspection. International regulations require that positive shutoff valves located outside the fuel tank be capable of being closed from a safe position from outside the space concerned..

The U.S. Coast Guard **strongly recommends** that owners /operators, vessel engineers, PSCOs, Class society and other machinery space inspection personnel ensure:

a) The QCV operating system is capable of remotely closing all valves as designed; some systems close valves sequentially and others simultaneously.

b) There is a maintenance plan in place including technical manuals containing diagrams and information that describe the system components, required spare parts, operation, maintenance and repair.

c) That all engine department personnel can identify the location of each valve, the respective remote closure and how to close them locally and remotely in an emergency.

Note: During Coast Guard PSC Exams, vessel engineers should be able to explain maintenance requirements of the system, and provide operational test and maintenance records. Engineers should be able to describe how test the valves, reset them after closure, and understand their operational importance. Vessels with inoperable QCVs may be subject to an operational control.

This safety alert is provided for informational purposes only and does not relieve any domestic or international safety, operational or material requirement. Developed by the Office of Foreign and Offshore Vessel Compliance Division (CG-5432), United States Coast Guard Headquarters, Washington, DC.

Examples of QCVs held in the open position:

QCV blocked utilizing a bolt to hold in the open position. (Note: the painted portion on the bolt indicating possible long term condition.)

QCV blocked utilizing wire to hold closing weight up and the valve in the open position.

QCV blocked utilizing a wooden block to hold the valve in the open position.

Photos are courtesy of U.S. Coast Guard Sector New Orleans

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UNITED STATES COAST GUARD
U.S. Department of Homeland Security

MARINE SAFETY ADVISORY

Assistant Commandant for Marine Safety, Security and Stewardship

May 20, 2011 Advisory 02-11

Take the Search out of Search and Rescue
Upgrade to GPS enhanced EPIRBs

When Emergency Position Indicating Radio Beacons (EPIRB) are activated in emergency situations the system transmits vessel identification information to rescuers. Traditional EPIRBs rely on satellite Doppler Shift to identify the distress location. There are a wide variety of Coast Guard approved EPIRBs on the market but many do not have the most up-to-date feature: the ability to transmit the EPIRB's GPS location.

Several recent casualty investigations have revealed that EPIRB owners are largely unaware that rescue efforts are significantly improved and your vessel's location transmitted more quickly and accurately when distress signals are initiated by *GPS enhanced EPIRBs.* GPS enhanced EPIRBs normally save 30 to 100 minutes in obtaining an accurate location. This is a significant amount of time and may mean the difference between life or death in cold water situations where the survival rate is decreased as each minute passes. New GPS enhanced EPIRBs provide a location accurate within 100 meters in 50 to 120 seconds. The GPS enhanced EPIRB not only alerts immediately, but also directs rescuers to a more exact location, allowing helicopter flight time to be devoted to rescue operations rather than conducting search operations.

An illustration of the effectiveness of GPS enhanced EPIRBs was the March 23, 2008 sinking of the F/V ALASKA RANGER in the Bering Sea 120 miles west of Dutch Harbor with 47 people on board. The vessel's Category I EPIRB was not enhanced with GPS which resulted in a delay in analyzing the data. In contrast, a personal EPIRB carried by a fisheries observer on board was outfitted with GPS, and it took only 11 minutes to identify that EPIRB's distress location. Fortunately a distress call was also made using the single side-band radio and rescuers immediately responded.

Since May 30th 2008, the Commercial Fishing Safety Advisory Committee has recommended that all new EPIRBs installed onboard commercial fishing vessels include an integral GPS receiver to permit automatic inclusion of position in the distress alert.

The National Transportation Safety Board in their recent Marine Accident Brief on the sinking of the commercial fishing vessel LADY MARY recommended to the Federal Communication Commission that for commercial vessels required to carry 406-MHz EPIRBs, those EPIRBs be required to broadcast vessel position data when activated.

The Coast Guard **strongly urges** vessel Owner/Operators to replace and upgrade existing EPIRBs with GPS enhanced EPIRBs.

This advisory is for informational purposes only and does not relieve any domestic or international safety, operational or material requirement. Developed by the USCG 13th District Prevention Staff. Questions may be forwarded to HQS-PF-fldr-G-PCA@uscg.mil.

Distributed by: office of Investigations and Analysis Http://marineinvestigations.us
To subscribe: Kenneth.W.Olsen@uscg.mil

UNITED STATES COAST GUARD
U.S. Department of Homeland Security

MARINE SAFETY ALERT

Assistant Commandant for Marine Safety, Security and Stewardship

December 21, 2010 Alert 10(b)-10
Washington, DC

SIMPLE FAILURES RENDER CO2 SYSTEM INOPERATIVE

Safety Alert 2 of 2

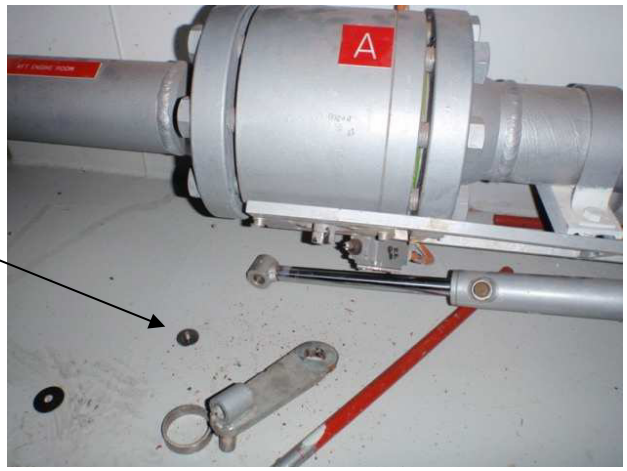
This safety alert addresses concerns discovered during an ongoing marine casualty investigation and may be of interest to Ship Builders, Classification Societies, Owner / Operators and others involved with vessel operations.

A machinery space fire onboard a relatively new vessel was effectively responded to and extinguished by the vessel's quick response team firefighters using portable extinguishing equipment. However, before it was declared completely extinguished and approximately five hours after the fire started, the master of the vessel made the decision to release CO2 from the vessel's fixed firefighting system. It failed to operate as designed. Subsequently, crewmembers were unable to activate it manually and CO2 was never directed into the machinery space.

The following issues pertaining to the CO2 system were discovered.

- Numerous piping and hose connections leaked extensively. When the system was activated, on scene video taken by the firefighters showed numerous leakages into the CO2 room. Post casualty, while pressure was still on the system, some of these leaks continued even after the connections were tightened. (Photograph at right.)

- The zone valve for the aft machinery space which admits CO2 from the bottle bank manifold to the space failed. Specifically, the ball valve's opening actuating arm fell off the valve when the gas powered piston actuator attempted to move it. The ball valve actuating arm was held in place by a very small machine screw and washer. When firefighters attempted to open the valve manually using the provided hardware it could not be moved. The valve was only able to be moved after the gas pressure was relieved from the inlet side of the valve. (Photograph at right.)



- Actuating arms to five of the six other zone valves were found loose. They were also attached by small machine screws. (Photograph at right.)

- Hemp type pipe sealant was used extensively on pipe threads throughout the system and in some instances seems to have entered the system. (Photograph at right.)

- Certain elements of the distribution manifold contained low points which allowed the accumulation of water within piping that could not be drained. Such a circumstance could cause corrosion that could possibly negatively effect operation of other components. (Photographs at right.)

- The CO2 system's pilot and co-pilot bottles did not appear to operate correctly according to the firefighters involved and thus had to be manually activated using the valve handles located on top of the cylinders. Additionally, during the event, the bank bottles were similarly activated due to the uncertainty of their release. At least one pilot bottle activation hose was reported to have leaked.

- The system had been recently serviced and inspected by an authorized service provider.

Because of these and other issues, the United States Coast Guard **strongly recommends** that Vessel Builders / Shipyards, Classification Societies, Insurers, Owners / Operators, System Service Personnel, and others involved with these systems:

- Carefully and critically review, routinely inspect and maintain, verify and test their Fixed Fire Fighting installations to ensure that they will operate correctly during an emergency.

Developed by the U.S. Coast Guard Headquarter's Office of Investigations and Analysis, Washington, DC. Questions may be addressed to HQS-PF-fldr-G-PCA@uscg.mil.

UNITED STATES COAST GUARD
U.S. Department of Homeland Security

MARINE SAFETY ALERT

Assistant Commandant for Marine Safety, Security and Stewardship

December 21, 2010 Alert 10(a) -10
Washington, DC

WRONG DIRECTIONS: A RECIPE FOR FAILURE

Safety Alert 1 of 2

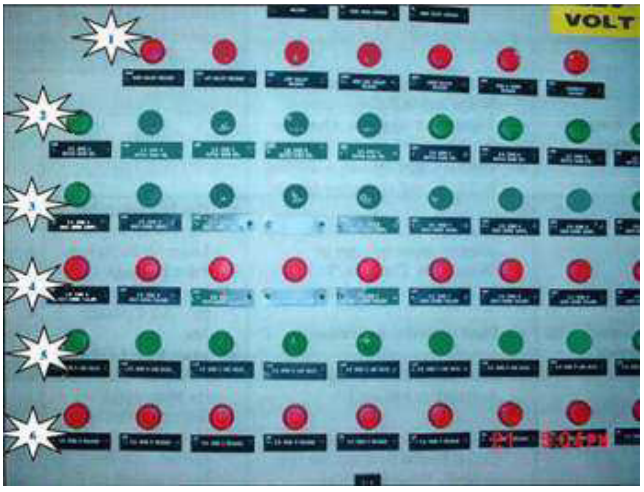
This safety alert addresses critical concerns uncovered during an ongoing marine casualty investigation and should be of vital interest to Ship Builders, Classification Societies, Owner / Operators and others involved with vessel operations.

A machinery space fire onboard a relatively new vessel was effectively responded to and extinguished by the vessel's quick response team firefighters using portable extinguishing equipment. However, before it was declared completely extinguished and approximately five hours after the fire started, the master of the vessel made the decision to release CO2 from the vessel's fixed firefighting system. It failed to operate as designed. Subsequently, crewmembers were unable to activate it manually and CO2 was never directed into the machinery space.

While the casualty investigation remains ongoing, the following issues were discovered that could have negatively affected the crew's emergency response and may have contributed to the CO2 system failure.

- Shipyard commissioning test procedures appear to differ from procedures documented in the vessel's Firefighting Instruction Manual (FIM). Commissioning procedures indicate that the discharge line selection to a specific protected zone should be made prior to releasing the gas contrary to the directions in the FIM.

- The FIM refers extensively to a Control Panel (left following image) that differs vastly from the one onboard the vessel (right following image).



- The FIM states that the CO2 Release station is on the Starboard side of the vessel when In fact it is located on the Port side.

- The FIM incorrectly uses the word “Pull” when it should read “Turn” in reference to the operations of valves.

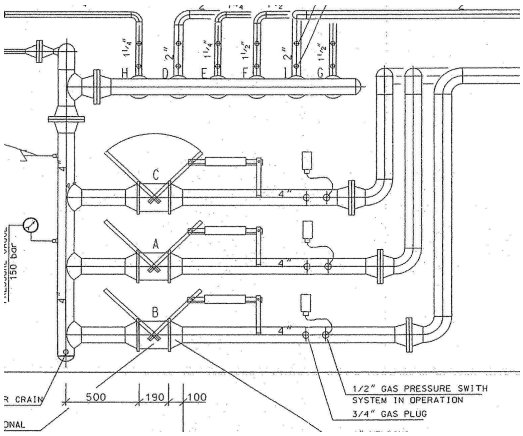
- The FIM contains the following confusing language “Once the fire has been extinguished make sure that the temperature has decreased before investigate the area same time is needed to wait hours.”

- The FIM references elements of an Emergency Shut Down (E.S.D.) graphic on numerous occasions. However, the graphic display was not found on the vessel.

- The FIM contains photographs of the internals of the CO2 release stations that appear to differ from actual CO2 release stations onboard the vessel.

- The CO2 release stations installed on the vessel have instructional placards that refer to elements of a completely different control panel then the one used onboard the vessel.

- Shipyard piping schematics and drawings do not appear to match the actual installation. The schematic at the right shows the “A valve” for the Aft Machinery Space in the center position vice the bottom position as it is installed on the vessel.



Because of these and other issues, the United States Coast Guard **strongly recommends** that Vessel Builders / Shipyards, Classification Societies, Insurers, Owners / Operators, System Service Personnel, and others involved with these systems:

- Ensure that all supporting documentation, piping schematics, plans, manuals, component labeling and instructions are consistent with each other and relevant to the systems, equipment, and components installed onboard the vessel.

Developed by the U.S. Coast Guard Headquarter’s Office of Investigations and Analysis, Washington, DC. Questions may be addressed to HQS-PF-fldr-G-PCA@uscg.mil.

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To subscribe: kenneth.w.olsen@uscg.mil

UNITED STATES COAST GUARD
U.S. Department of Homeland Security

MARINE SAFETY ALERT

Assistant Commandant for Marine Safety, Security and Stewardship

December 15, 2010 Alert 09-10
Washington, DC

TYPE I PERSONAL FLOTATION DEVICE STRAP CHECK

Recent Coast Guard inspections of Type I Personal Flotation Devices, (PFDs) in both adult and child size, identified a potential hazard that could prevent proper donning in the event of an emergency. The chest strap was threaded through the fixed "D" ring that the strap is intended to clip to when worn. *(Image left)*

It was discovered that several PFDs were assembled this way at the factory and if not corrected could create a hazardous condition during an emergency when they are donned.

Instead of the strap falling away, allowing the wearer to wrap it around him or her, the clip end of the strap could snag in the "D" ring preventing the wearer from getting it around their body. *(Following image)*

(*PFDs shown on this page are for example purposes only and are not Kent models.)*

Manufacturer, Models and Lot Numbers known to be affected:

Kent Adult Model 8830 (USCG Approval Number 160.055/184/0) in Lot 53W manufactured in October 2006

Kent Child Model 8820 (USCG Approval Number 160.055/150/0) in Lot 012T manufactured in March 2008

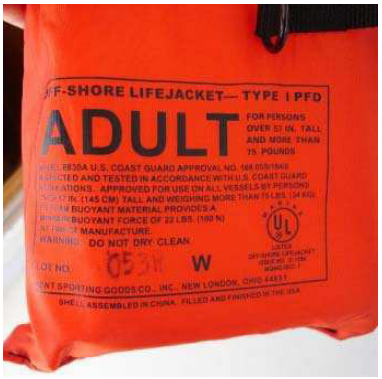
The Coast Guard **strongly recommends** that vessel owners/operators using the PFDs listed above check each lifejacket for proper routing of the strap. Completely unwrap the primary strap to ensure it is free and capable of being adjusted for any wearer. The strap of the lifejacket must not be threaded through the fixed "D" ring. If routing is satisfactory, the strap may be wrapped around the life jacket and clipped to the fixed "D" ring for storage. *(Right image)* If the strap is incorrectly threaded through the fixed "D" ring, the snap hook assembly should be carefully removed from the strap, the strap pulled out of the fixed "D" ring, and the snap hook assembly re-attached.

Vessel owners/operators are also encouraged as part of general preventative maintenance to verify that all their PFDs are in fully serviceable condition with an inspection of the straps, components, fabric and flotation material. Any significant deterioration in condition or poorly functioning hardware indicates a replacement is necessary.

Please contact the manufacturer representative at the address below if additional information is needed.

Kent Sporting Goods Co.
433 Park Avenue S.
New London, OH 44851
Mr. Wayne Walters
Phone: (706) 769-1682)
E-mail: WWalters@kentwatersports.com

Developed by the United States Coast Guard Headquarters Lifesaving and Fire Safety Division with assistance from the Office of Investigations and Analysis. Questions may be addressed to Mr. Martin L. Jackson: Martin.L.Jackson@uscg.mil. or 202.372.1391.



Kent Sporting Goods Lifejackets Shown Above

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UNITED STATES COAST GUARD
U.S. Department of Homeland Security

MARINE SAFETY ALERT

Assistant Commandant for Marine Safety, Security and Stewardship

September 30, 2010 Alert 8-10
Washington, DC

SHIP SECURITY ALERT SYSTEM (SSAS)
Is your system ready?

The U.S. Coast Guard **strongly recommends** that owners, operators and/or others involved with the technical examination and testing of a Ship Security Alert System (SSAS) fully understand the critical nature and importance of this system. A SSAS must be serviced and maintained in order to be fully operational in the event of an emergency.

Safety of Life at Sea (SOLAS), Chapter XI-2/6 mandates the carriage of shipboard equipment for sending covert alerts indicating the security of the ship in under threat or has been compromised (such as piracy, terrorism or armed robbery). SOLAS requires that the SSAS is capable of being activated from the navigation bridge and in at least one other location. The SSAS should conform to performance standards equivalent to those adopted by the International Maritime Organization (IMO).

An investigation into a recent Breach of Security (BOS) onboard a vessel operating overseas revealed that the system did not function properly. It was discovered that the primary activation button failed to send the BOS message and that when the secondary location activation button was depressed, not all critical data was transmitted. Under other circumstances, this type of failure could have been disastrous and resulted in significant harm to the crew.

Although the SSAS was serviced two days prior to the incident as a part of the annual Safety Radio Survey, records indicate that the technician did not have the proper testing equipment for the system on board and only an internal operational self-test was carried out and accepted. A complete SSAS survey with an external test would have indentified the system faults which then could have been corrected prior to the incident.

The SSAS survey should always be performed by a fully qualified technician who has adequate knowledge of the International Ship & Port Facility Security (ISPS) Code pertaining to SSAS, the SOLAS Convention and the IMO standards for SSAS. A technician's survey should involve checks for:

a) compliance with IMO performance standards,
b) a minimum of two activation points are provided,
c) transmission of the security alert is possible without an adjustment of the radio system,
d) transmission initiated by the SSAS activation points include a unique/identifier,
e) transmission includes the ship identity and current position associated with a date and time,
f) when activated, SSAS continues the alert until deactivated and/or reset,
g) SSAS is capable of being tested, and
h) SSAS power source is powered from the ship's main source of power and is also capable of operation from an alternate source of power.

The U.S. Coast Guard **strongly recommends** that owners and operators ensure that the SSAS survey completed on board involves the checks listed above and that if deficiencies are identified, they be corrected immediately.

This Safety Alert is provided for informational purposes only and does not relieve any mandates of domestic or international safety, operational or material regulations or standards. Developed by the Office of Vessel Activities (CG-543), Distributed by the Office of Investigations and Analysis (CG-545), United States Coast Guard Headquarters, Washington, DC. Questions may be addressed to LCDR James Fogle at James.T.Fogle@uscg.mil.

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UNITED STATES COAST GUARD
U.S. Department of Homeland Security

MARINE SAFETY ALERT

Assistant Commandant for Marine Safety, Security and Stewardship

August 28, 2010
Washington, DC

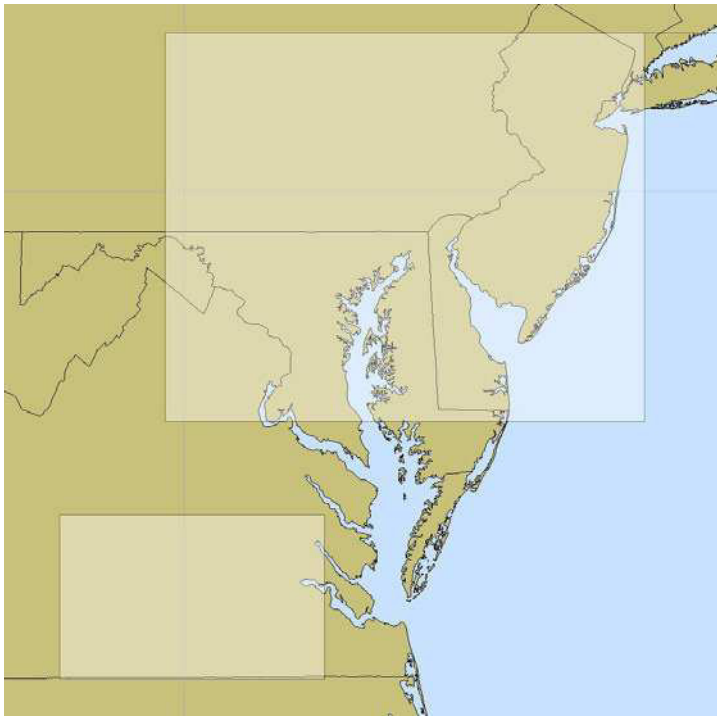
Alert 7-10

CAUTION TO AIS USERS

NAVIGATING THE JAMES RIVER, YORK RIVER, UPPER CHESAPEAKE BAY, DELAWARE BAY, NEW JERSEY SHORE, AND, NEW YORK HARBOR AND APPROACHES

YOU MAY BE INADVERTENTLY OPERATING ON DIFFERENT AIS CHANNELS

Between July 27 and August 19, 2010, while conducting development testing of its Nationwide Automatic Identification System (NAIS), the Coast Guard inadvertently tele-commanded most AIS users transiting the Eastern United States between lower Connecticut and North Carolina to switch to AIS frequencies other than the AIS default frequencies (161.975 MHz - Channel 87B - 2087 and 162.025 MHz - Channel 88B - 2088). As a result, those users within uniquely defined channel management regions (as shown in the picture) will neither see nor be seen by vessels operating on the default AIS channels when within these regions. Similarly, vessels operating on default frequencies will not see or be seen by those vessels that were inadvertently switched to other frequencies. No other AIS users or areas are impacted.



One of the lesser known and potent features of AIS is its ability to operate on multiple channels within the VHF-FM marine band. This frequency agility ensures AIS can be used even when the default channels are otherwise unavailable or compromised. In such conditions, competent authorities, such as the Coast Guard, can use an AIS base station to tele-command shipborne AIS devices to switch to other more appropriate channels when within defined regions of 200 to 2000 square nautical miles. This can be done automatically (and without user intervention) through receipt of the AIS channel management message (AIS message 22) or manually entered via the AIS Minimal Keyboard Display (MKD) or similar input device. Once commanded or manually entered, the channel management information will stay in memory for 5 weeks or until an affected vessel moves more than 500 nautical miles from the defined region. AIS channel management commands can only be manually overridden or erased by the user via the unit's channel (regional frequencies) management function[1] or automatically overridden via another channel management

message for the same defined region. Reinitializing or resetting your AIS or transmission channels will not necessarily reprogram your unit back to the default channels.

Commencing September 1st and continuing for the subsequent 5 weeks, the Coast Guard will broadcast new channel management messages that will tele-command all AIS users back to default channels. This broadcast will occur each hour between hh.05:30 and hh.05:59, but may change as needed. To ensure that these messages are received, they will be broadcast on Channel 70--Digital Selective Calling (DSC), which is also monitored by all type-certified shipboard AIS. While this will ensure all AIS users will get the message regardless of what AIS channel the unit is operating on, it could however cause a minor inconvenience to owners of older DSC radios who may receive an alert (tone) upon receipt of this message. It will have no other effect on DSC radios.

AIS users are encouraged to inform others whom they believe may be affected and are therefore not being seen by others. All AIS users are reminded to maintain their AIS in effective operating condition and to validate their AIS data prior to each voyage and as needed.

This safety alert is provided for informational purposes only and does not relieve any domestic or international safety, operational or material requirement. The Coast Guard has developed policy and procedures to ensure such inadvertent broadcast do not happen again and we apologize for any inconvenience this may have caused. For further information on AIS Channel Management or reprogramming your AIS read FAQ#19 at www.navcen.uscg.gov/?pageName=AISFAQ#19 or contact cgnav@uscg.mil. Developed by the Office of Waterways Management, U.S. Coast Guard Headquarters, Washington, DC.

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Office of Investigations and Analysis: http://marineinvestigations.us
To subscribe: kenneth.w.olsen@uscg.mil

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[1] The following settings, if found in your AIS Channel Management / Regional Frequency pane, should be overridden (as denoted) prior to navigating therein; if you do not find these settings / regions in this pane you are not affected and need do nothing.

Setting / Region X (MD, DE, PA, J, NY Area)
NE Corner: 41º 07.60 N, 073º 49.10' W (41.1266667 -73.8183333)
SW Corner: 38º 21.90' N, 078º 10.40 W (38.3650000 -78.1733333)
Channel 1/ A / AIS1: 1022 / Ch.22B [should be change to 2087 / 87B]
Channel 2 / B / AIS2: 2022 / Ch.22 [should be change to 2088 / 88B]

Setting / Region Y (VA Area)
NE Corner: 37º 42.00' N, 76º 43.80' W (37.7000000 -76.7300000)
SW Corner: 36º 32.00' N, 79º 8.00' W (36.5333333 -79.1333333)
Channel 1 / A / AIS1: 1027 / Ch.27B [should be change to 2087 / 87B]
Channel 2 / B / AIS2: 2006 / Ch.6 [should be change to 2088 / 88B]

UNITED STATES COAST GUARD
U.S. Department of Homeland Security

MARINE SAFETY ALERT

Assistant Commandant for Marine Safety, Security and Stewardship

June 9, 2010
Washington, DC

Alert 06-10

EXPLOSIVES SAFETY GUIDE
RECOGNIZE, RETREAT, REPORT

Just days ago, a 145 foot commercial fishing vessel operating in the vicinity of Hudson Canyon, located South of Long Island, New York dredged up 10 old (circa 1914) munitions canisters that contained mustard gas. One of the canisters broke open while it was being brought onboard the vessel and four crewmembers were exposed to the gas. They experienced chemical burns and respiratory problems. As a result of the exposure the boat was required to be decontaminated and therefore unable to fish for several days. Furthermore, its catch was seized.

Mustard Gas, also known as Sulfur Mustard, is a chemical weapon developed and used during World War I. It was delivered in liquid or gas form and caused blistering of the skin, eye irritation possibly leading to blindness, and severe lung injury if inhaled.

The incidental discovery of munitions at sea during fishing, scuba diving and other evolutions has been an occasional problem for decades. Any such discoveries, handling of and or landing of any unknown weaponry or components onboard vessels can have catastrophic results. To additionally complicate the situation, these items can be well encrusted with marine growth and barely recognizable. Thus, the discovery of any unknown / unidentifiable objects must be treated with extreme care and caution.

The U.S. Army Technical Center for Explosive Safety provides a Maritime Industry 3Rs Explosives Safety Guide at the following URL. http://aec.army.mil/usaec/cleanup/images/mmrp-maritime.pdf It emphasizes Recognizing, Retreating and Reporting when munitions (unexploded ordnance) are found and provides useful imagery to assist in identifying these objects.

In light of this recent event, the Coast Guard **strongly recommends** that

- any persons involved in commercial fishing industries and any similar activities, review and update navigational charts to ensure “Explosives Dumping Areas” are well marked and identified and that all vessel operators know to give these areas wide berth when towing gear,
- review 3R material from the URL above, and
- report any discovery immediately to the **National Response Center** at **1-800-424-8802 for proper response.** (Alternatively, the CG may be notified via channel 16.)

This safety alert is provided for informational purposes only and does not relieve any domestic or international safety, operational or material requirement. Please visit http://fishsafe.info for additional fishing safety information. Developed by the Office of Investigations and Analysis and Commercial Fishing Vessel Division, U. S. Coast Guard Headquarters, Washington, D.C.. Questions may be addressed to the sender.

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Office of Investigations and Analysis: http://marineinvestigations.us
To subscribe: kenneth.w.olsen@uscg.mil

UNITED STATES COAST GUARD
U.S. Department of Homeland Security

MARINE SAFETY ALERT

Assistant Commandant for Marine Safety, Security and Stewardship

May 27, 2010
Washington, DC

Alert 05-10

AIS TEXT MESSAGING CONCERNS: USAGE DURING NAVIGATION AND EMERGENCIES AND ENSURING ACCURATE AIS DATA

Automatic Identification System (AIS) is an internationally adopted radio-navigation protocol to exchange pertinent navigation-related information amongst its users, either afloat, ashore or airborne. AIS facilitates vessel traffic management while simultaneously reducing the need for voice radiotelephone transmissions. AIS provide vessel information, including the vessel's identity, type, position, course, speed, navigational status and other safety-related information. It receives automatically such information from similarly fitted ships; monitors and tracks ships; and exchanges data with shore-based facilities.

Usage During Navigation - AIS enhances user's situational awareness, and can mitigate risk of collision by providing vessels with more reliable information upon which to base their passing arrangements. This can be accomplished via an AIS safety related text message of up to 156 characters long. However, the Coast Guard **strongly reminds operators** that use of AIS text messaging does not relieve the vessel of other requirements, such as the Vessel Bridge-to-Bridge Radiotelephone regulations or of the requirements to sound whistle signals and display lights or shapes in accordance with the International or Inland Navigation Rules.

Usage During Emergencies - With respect to using AIS safety related text messages in emergency situations, **users must be aware** that they **may not be received, recognized or acted upon** as Global Maritime Distress Safety Systems (GMDSS) messages would be by the Coast Guard, other competent authorities or maritime first responders. Thus AIS must not be relied upon as the primary means for broadcasting distress or urgent communications, nor used in lieu of GMDSS such as Digital Selective Calling radios which are designed to process distress messaging. Nonetheless, AIS remains an effective means to augment GMDSS and provides the added benefit of being 'seen' (on radar or chart displays), in addition to being 'heard' (via text messaging) by other AIS users within VHF radio range.

Operators Must Ensure Accurate Data -The Coast Guard has noted a high percentage of inaccurate and improper AIS messaging data. AIS requires operators to routinely update their data as it relates to navigation status, draft, origination and destination ports, and eta. Other pertinent static data is to be maintained accurately. Dynamic Data, such as that from positioning sources like GPS via external sensors must always be operational, accurate and continuously updated. See http://www.navcen.uscg.gov/enav/ais/USA_AIS_Data_Entry_Guidance_v5.pdf for additional details. AIS is **only as good as the information provided and exchanged**, therefore, users must ensure their unit is always in effective operating condition and broadcasting accurate information.

This safety alert is provided for informational purposes only and does not relieve any domestic or international safety, operational or material requirement. Please visit www.navcen.uscg.gov/enav/ais/AISFAQ.htm for further information on AIS or on how to program and properly use AIS messaging. Developed by the Office of Waterways Management, U. S. Coast Guard Headquarters, Washington, D.C., cgnav@uscg.mil.

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Safety Alert

National Safety Alert No. 2
April 30, 2010

Safety Alert on the Deepwater Horizon Explosion and Fire Resulting in Multiple Fatalities and Release of Oil

On April 20, 2010, a loss of well control occurred and resulted in an explosion and fire on the Mobile Offshore Drilling Unit Deepwater Horizon. Eleven lives were lost in this incident and the MODU subsequently sank. As of the date of this safety alert the well has not been secured, and the resulting release of oil has been declared a spill of national significance with oil threatening sensitive coastlines and resources in the Gulf of Mexico.

At the time of the accident, the *Deepwater Horizon* was operating 52 miles from shore in 4,992 feet of water with a subsea BOP stack. After the Deepwater Horizon sank, ROV's confirmed that the riser was bent over and still attached to the BOP and that oil is flowing from leaks in the riser above the BOP. Numerous attempts to actuate the BOP have failed.

While the exact causes of this event are now under investigation, the tragic nature of this accident compels operators and drilling contractors to inspect their drilling equipment and review their procedures to ensure the safety of personnel and protection of the environment.

Therefore, MMS and the USCG issue the following safety recommendations to operators and drilling contractors:

1. Examine all well control equipment (both surface and subsea) currently being used to ensure that it has been properly maintained and is capable of shutting in the well during emergency operations. Ensure that the ROV hot-stabs are function-tested and are capable of actuating the BOP.
2. Review all rig drilling/casing/completion practices to ensure that well control contingencies are not compromised at any point while the BOP is installed on the wellhead.
3. Review all emergency shutdown and dynamic positioning procedures that interface with emergency well control operations.
4. Inspect lifesaving and firefighting equipment for compliance with federal requirements.
5. Ensure that all crew members are familiar with emergency/firefighting equipment, as well as participate in an abandon ship drill. Operators are reminded that the review of emergency equipment and drills should be conducted after each crew change out.
6. Exercise emergency power equipment to ensure proper operation.
7. Ensure that all personnel involved in well operations are properly trained and capable of performing their tasks under both normal drilling and emergency well control operations.

Both MMS and the USCG are conducting a joint investigation of the Deepwater Horizon accident. The findings and lessons learned will be documented in a report that will be made public as soon as possible.

For additional information contact Ms. Melinda Mayes (MMS – 703-787-1063) or Mr. Eric Christensen (USCG – 202-372-1210). For other Safety Alerts issued for OCS oil and gas activities, go to the MMS web site at **http://www.mms.gov/safetyalerts/**

UNITED STATES COAST GUARD

U.S. Department of Homeland Security

MARINE SAFETY ALERT

Assistant Commandant for Marine Safety, Security and Stewardship

April 28, 2010 Alert 04-10
Washington, DC

Watertight Doors – Close Them and Dog Them!

Not Actual Vessel

Recently a push boat operating "unfaced" (no barges attached) in the Houston Ship Channel flooded and sank while in the wake of tractor tug resulting in the death of the push boat crew and the narrow escape of two others. Although the investigation is not yet compete, it appears that the following occurred: The vessel's watertight doors leading to its engine room had each been pinned open. The push boat had very little freeboard and was fully loaded with fuel and water. As it took the wake of the tractor tug, the vessel listed to one side and down flooded the engine room through a watertight door. As it rolled to the other side, it took on more water, eventually sinking stern first and coming to rest on the bottom of the channel in an upright position. A person working in the engine room was trapped by the incoming water and drowned. Two others narrowly escaped death after being trapped in a berthing area for over 10 minutes, breathing only a pocket of air before taking dramatic efforts to reach the surface via a broken window.

Watertight doors have been the subject of three other safety alerts involving fishing vessels and offshore supply vessels. Despite these awareness efforts, despite certain vessels having stability requirements requiring closure of such doors well documented in stability letters, despite owners and operators knowing what constitutes "Good Marine Practice," and many other applicable regulations the Coast Guard continues to investigate casualties where the failure to keep closed or properly maintain watertight doors is determined to be a causal factor.

Watertight doors function to establish the watertight integrity of the vessel and must always be treated as such. Although an open or poorly maintained door may seem like an insignificant issue, when the right causal factors align, the door can become a death trap and result in terrible circumstances to a vessel and its crew. The Coast Guard **strongly recommends** to all operators of any vessel, underway, having watertight doors to:

CLOSE THEM and DOG THEM!

The Coast Guard also recommends that the attached related safety alerts be reviewed for additional information. This safety alert is provided for informational purposes only and does not relieve any domestic or international safety, operational or material requirement. Developed by the Office of Investigations and Analysis, United States Coast Guard Headquarters, Washington, DC. Questions can be addressed to Mr. Ken Olsen at 202.372.1037 or via the email address below.

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Office of Investigations and Analysis: http://marineinvestigations.us
To subscribe: kenneth.w.olsen@uscg.mil

UNITED STATES COAST GUARD

U.S. Department of Homeland Security

MARINE SAFETY ALERT

Assistant Commandant for Marine Safety, Security and Stewardship

November 19, 2008 Alert 12-08
Washington, DC

WATERTIGHT DOORS

This Safety Alert addresses the importance of properly maintaining and closing watertight doors. Unfortunately, marine casualties, often resulting in loss of life and property, continue to be linked to improperly maintained or closed watertight doors!

One of the contributory factors in a recent major marine casualty on an uninspected commercial fishing vessel was the failure to properly maintain and keep closed watertight doors on the vessel's weather deck. In this incident one watertight door was not properly dogged down, permitting it to open and let water flood a space below the main deck. Another watertight door on the vessel's main deck was not maintained and as a result, it leaked, permitting water to enter an adjacent space.

Over 42% of all marine casualties on fishing vessels involve flooding that in most cases could have been prevented or minimized by the proper use of watertight doors. Two safety alerts have been issued in the past two years emphasizing the importance of maintaining watertight doors and keeping them closed at all times while underway except when actually being used.

As a result of this incident and due to other related casualties, the U. S. Coast Guard **strongly recommends** vessel owners and operators to:

Regularly inspect the condition of all watertight doors on their vessels including the gasket and knife-edge to ensure that the doors close properly when dogged down securely. Watertight door gaskets should not be painted; any paint discovered on the gasket should be removed. Excessive gaps between the gasket ends should be avoided and repaired upon discovery;

Periodically perform either a chalk or light test on all watertight doors to ensure that the knife edge makes contact with the entire door gasket;

Ensure that all dogs or closing assemblies move freely and close securely. Routinely lubricate all watertight door fittings and hinges to ensure fluid operation; and

Ensure that vessel masters provide regular training on watertight door operation and maintenance to their crews. Watertight doors should be closed at all times while a vessel is underway except when transiting from space to space.

Please access http://marineinvestigations.us Safety Alerts > General Operations > "Securing Watertight Doors" and "Maintaining Vessel Watertight Integrity" for additional related information.

This safety alert is provided for informational purposes only and does not relieve any domestic or international safety, operational or material requirement. Developed by the Office of Investigations and Analysis, United States Coast Guard Headquarters, Washington, DC.

Office of Investigations and Analysis: http://marineinvestigations.us
To subscribe: kenneth.w.olsen@uscg.mil

UNITED STATES COAST GUARD
U.S. Department of Homeland Security

MARINE SAFETY ALERT

Assistant Commandant for Marine Safety, Security and Stewardship

May 9, 2008
Washington, DC

Alert 1-08

Maintaining Vessel Watertight Integrity

This Safety Alert addresses two issues: watertight integrity and high level bilge alarms.

Recently a marine casualty involving a fishing vessel in the Bering Sea resulted in multiple fatalities and complete loss of the vessel. A Marine Board of Investigation is currently examining the various circumstances surrounding the casualty. Although the investigation is not complete, testimony indicates the flooding of the vessel may have been exacerbated due to open or leaking watertight doors and other compartmental deficiencies which impacted the vessel's overall watertight integrity.

As a result of this and other similar casualties, the U. S. Coast Guard **strongly recommends vessel owners and operators:**

WATERTIGHT INTEGRITY

Ensure all watertight decks and bulkheads are inspected periodically to verify that there are no unprotected openings or improper penetrations that will allow progressive flooding and that closure devices (e.g. watertight doors, duct closures, etc.) are in place and in working order.

Ensure all crewmembers are familiar with the locations of the watertight doors (WTDs) and weather tight closures throughout their vessels. Knowing the locations of such WTDs and weather tight closures should be part of the crewmember vessel familiarization process.

Ensure WTDs and hatches are closed while at sea and as otherwise specified in the stability guidance provided to the master or individual in charge. The importance of keeping WTDs and hatches closed should be emphasized on a regular basis (e.g. at safety meetings). WTDs and hatches should be opened only briefly to allow passage and labeled appropriately to remind crewmembers to close them. If they must remain open to permit work, WTDs and hatches should be attended at all times so that they can immediately be closed. Any WTDs permitted to be open while the vessel is underway should be secured during drills to ensure they work properly.

Implement a WTD inspection program to ensure each WTD is regularly inspected and properly maintained. As part of the inspection of each WTD, the following should be examined: straightness of the knife edge; the door assembly for twisting or warp-age; evidence of loose, missing seized or damaged components; permanent set in gasket material, cracks in the gasket; gaps at gasket joints; paint, rust, or other foreign material on gaskets, knife-edges and working parts; binding and difficult operations; and loose or excessively tight dogs. Rotating spindles of the dog, handles and hinges, and other points of friction should be lubricated to prevent seizing and allow proper closure. If fitted, the spindle packing should also be examined.

Ensure watertight hatches, dogged manholes, bolted manhole covers, and access plates are given similar examinations, focusing on the sealing surfaces and the method by which the hatch is secured. Gasket materials should be replaced whenever they are found insufficient. Regardless of the type of hatch or access, every component that secures the device, such as dogs, wing nuts, or bolts should be inspected, lubricated and free, and repaired or replaced as necessary to ensure they operate properly. As with watertight doors, hatches and accesses should be labeled to indicate they remain closed while underway. Most importantly, all securing devices must be used when the hatch or access is closed. Improper closure of a hatch will not prevent flooding.

Ensure compartments and external hull structures fitted with ventilation ducts that have hinged covers with gaskets, hinges, sealing surfaces and securing mechanisms are regularly inspected and properly maintained (see above for guidance).

Ensure electrical cables and conduits, piping runs, remote valve actuators, and other components that penetrate watertight bulkheads, decks, and compartments are inspected frequently and properly maintained. Each may have a unique sealing method involving glands with packing assemblies, penetration seals, or other methods. Frequent inspection and proper maintenance of these various fittings and assemblies will assist in minimizing the possibility of progressive flooding.

BILGE AND HIGH WATER ALARMS

Ensure water accumulation is minimized and all spaces are kept dry unless permitted by the stability instructions provided to the master or individual in charge.

Ensure bilge high level alarms are arranged to provide the earliest warnings of abnormal accumulation. The high level bilge alarms should be set as low as possible to the deck or bilge well and positioned along the centermost area of the compartment or in a location at which the fluids will gravitate to first. In areas where bilge water routinely accumulates, the bilge high level alarms should be placed just above the point where under normal working conditions the accumulation would be pumped to a holding tank, overboard, or through an oily water separation system if required. Alarms may be fitted with short time delays to prevent nuisance alarms caused by the rolling and pitching of the vessel.

Ensure all crewmembers understand the importance of minimizing water in the bilges.

Provide the funding, labor, spare parts, and vessel availability necessary to ensure leakages stemming from machinery, equipment and other components are kept to a minimum at all times in accordance with good marine practice.

This safety alert is provided for informational purposes only and does not relieve any domestic or international safety, operational or material requirement. Developed and distributed by the Office of Investigations and Analysis, United States Coast Guard Headquarters, Washington, DC.

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United States Coast Guard
Marine Safety Alert
Assistant Commandant for Prevention
Department of Homeland Security

September 19, 2007 Alert 3-07
Washington, DC

SECURING OF WATERTIGHT DOORS WHILE UNDERWAY

This safety alert reiterates the need for vessel operators to ensure that watertight doors are always closed while underway, except when being used for access. This alert is the direct result of a collision between a 534' cargo ship and a 166' offshore supply vessel. The incident occurred on the Mississippi River, in a restricted visibility situation. As a result of the collision, the offshore supply vessel capsized and sank – the crew of five was lost.

During the ensuing investigation of this incident, evidence was uncovered that indicated the offshore supply vessel was operating with its watertight doors in the open position. This is a violation of 46 CFR 174.210(e), which states that the master must ensure that a watertight door is always closed, except when being used for access. Watertight doors are a critical part of a vessel's subdivision, and consequently a critical part of damage stability considerations, so the importance of keeping these closed is very obvious. This becomes even more critical on smaller ships, which may only have one or two watertight doors to prevent flooding the entire length of the ship.

Please, keep these doors closed!

The Office of Design and Engineering Standards, Naval Architecture Division (CG-3PSE-2) developed this alert. Questions pertaining to this safety alert may be addressed to LCDR Tracy Phillips at (202) 372-1373 or Tracy.Phillips@uscg.mil.

This material is provided for informational purposes only and does not relieve any existing domestic or international safety, operational or material requirement.

UNITED STATES COAST GUARD
U.S. Department of Homeland Security

MARINE SAFETY ALERT

Assistant Commandant for Marine Safety, Security and Stewardship

April 27, 2010
Washington, DC

Alert 03-10

Portable Generator use on Recreational Houseboats

Three persons recently died aboard a houseboat due to the use of a portable generator. They were overcome by carbon monoxide from a generator that was being operated in the engine compartment adjacent to the main cabin.

The nonoperational 1973 Gibson houseboat was anchored at the time of the casualty; a portable generator was being used to provide power for lights, as well as, charging batteries for the boat's bilge pumps. The generator was partially lowered into the houseboat's engine compartment alongside the remnants of the houseboat's inoperable main propulsion engine. Investigators concluded that the 3500 watt generator's exhaust permeated the houseboat's firewall (immediately aft of cabin) and bilge filling the cabin with carbon monoxide. The duration of exposure is unknown; however, autopsy reports of the deceased indicated that their carboxyhemoglobin (COhb) saturation levels were in excess of 60%.

The Coast Guard **strongly encourages** boaters to ensure proper ventilation to prevent the accumulation of combustion gases from any equipment. Generators, main engines, powered pumps, kerosene space heaters, barbeque grills, etc.., will create hazardous atmospheres if improperly maintained and if there is inadequate ventilation or if gasses can accumulate. Placement of such equipment on an open deck may not be adequate if the exhaust enters the vessel's cabin through other intakes. Accumulation of carbon monoxide can occur even outside of a boat in those areas between catamaran hulls or between boats tied together. Prolonged exposure regardless of location can be deadly.

To prevent accidental deaths as described in this casualty, the Coast Guard **urges** the use of carbon monoxide detectors for internal enclosed areas of boats, particularly sleeping quarters.

Access http://www.uscgboating.org/safety/carbon_monoxide.aspx for additional carbon monoxide prevention and other useful boating safety information.

This safety alert is provided for informational purposes only and does not relieve any domestic or international safety, operational or material requirement. Developed by the Boating Safety Division's Product Assurance Branch and distributed by the Office of Investigations and Analysis, United States Coast Guard Headquarters, Washington, DC. Questions can be addressed to Mr. Michael Jendrossek at (202) 372-1052 or michael.a.jendrossek@uscg.mil

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UNITED STATES COAST GUARD
U.S. Department of Homeland Security

MARINE SAFETY ALERT

Assistant Commandant for Marine Safety, Security and Stewardship

April 13, 2010 Alert 02-10
Washington, DC

DANGERS ASSOCIATED WITH AUTOMATIC CHANNEL SWITCHING ON DIGITAL SELECTIVE CALLING (DSC) EQUIPPED VHF MARINE RADIOS

It has come to the Coast Guard's attention that an *automatic channel switching* feature found on certain models of Digital Selective Calling (DSC) equipped VHF marine radios may create an unintended hazard by automatically switching from a working channel that might be in use at the time to Channel 16 when the VHF marine radio receives a DSC distress alert, distress alert acknowledgment or other DSC call where a VHF channel number has been designated. This could happen without a vessel/radio operator's immediate knowledge and could initiate an unsafe condition by which the vessel/radio operators would believe they were communicating on a working channel such as Channel 13 when, in fact, they were actually on Channel 16. Imagine a towboat operator on the lower Mississippi River making passing agreements on VHF channel 67 and then suddenly, without warning, not being able to quickly reestablish communications with those vessels because his/her radio automatically switched to Channel 16 instead.

Since this unsafe condition can happen at any time, the Coast Guard **strongly recommends** disabling the *automatic channel switching* feature when maintaining a listening watch or communicating on the designated bridge-to-bridge radiotelephone, or while monitoring the vessel traffic services (VTS) channel. Radios that lack the disabling feature should not be used for bridge-to-bridge or VTS communications.

The International Telecommunications Union Sector for Radiocommunications, Recommendation M.493-11 published in 2004 and later versions require DSC-equipped radios to provide for *disabling of this channel auto-switch feature.* In the United States, the Federal Communications Commission (FCC) requires all DSC-equipped radios certified after March 25, 2009 to meet this requirement. Manufacturers that do not provide a disable function are encouraged to do so and to inform their customers if means for correction exist. Updated information including a listing of manufacturers of radios believed to be affected by this Safety Alert will be posted as available at http://www.navcen.uscg.gov/marcomms/gmdss/dsc.htm .

The Coast Guard **strongly reminds** radio operators and other users to always ensure they are on the proper operating channel when communicating or maintaining watch, particularly with DSC-equipped radios capable of channel auto-switching.

This safety alert is provided for informational purposes only and does not relieve any domestic or international safety, operational or material requirement. Developed by the Spectrum Management and Telecommunications Policy Division (CG-652), United States Coast Guard Headquarters, Washington, DC. Questions should be directed to Mr. Russell Levin at (202) 475 3555 or Russell.S.Levin@uscg.mil.

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UNITED STATES COAST GUARD

U.S. Department of Homeland Security

MARINE SAFETY ALERT

Assistant Commandant for Marine Safety, Security and Stewardship

January 7, 2010
Washington, DC

Alert 01 -10

TERMINATION OF THE LORAN-C SIGNAL

Consistent with the Administration's pledge to eliminate unnecessary Federal programs and systems, the USCG broadcast of the Loran-C signal is going to be terminated.

Federal broadcast of the Loran-C signal will cease at 2000Z on 08 February 2010 with some exceptions, including the following five sites that are bound by bi-lateral agreements with either Canada (Caribou, ME; George, WA; Nantucket, MA; Shoal Cove, AK) or the Russian Federation (Attu, AK).

Mariners or other users of Loran-C are encouraged to shift to GPS navigation and plotting systems as soon as possible and not later than the termination date.

Questions regarding the information presented in this alert may be addressed to Bill Cairns of the U.S. Coast Guard Headquarters e-Navigation Division at 202.372.1557 or William.R.Cairns@uscg.mil.

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UNITED STATES COAST GUARD

U.S. Department of Homeland Security

MARINE SAFETY ADVISORY

Assistant Commandant for Marine Safety, Security and Stewardship

October 29, 2010 Advisory 01-10
Washington, DC

DISTRACTED OPERATIONS
Don't let it be you!

Throughout the United States, and across all transportation modes, safety initiatives are being established to address issues related to Distracted Operations. The Coast Guard recognizes the importance of this issue, understands the potential consequences caused by increased operational risk in marine operations, and is supportive of the goals and objectives of the U.S. Department of Transportation and other distracted driving safety initiatives.

With respect to vessel operations, the bridge team management approach to safe navigation is an essential element of risk management and safe vessel operations. The team approach to safe navigation requires the clear, frequent and accurate exchange of information between all crewmembers relative to the safe operation of the vessel. In other evolutions, such as discharging cargo, loading fuels, etc., full attention is required by all involved in order to prevent casualties or pollution incidents. Additionally, when mariners are navigating or working alone, the use of cellular or other devices unrelated to the operation at hand could impede the exchange of vital operational information, delay reaction time, or cause attention lapses of those involved which could result in unwanted circumstances having very serious consequences causing injuries and fatalities, material damage, and environmental impact.

NTSB findings in investigations involving other transportation modes have found that the use of cellular telephones and other wireless devices can degrade performance, slow response times, and increase attention lapses of those in safety-sensitive positions. A recent executive order signed by President Obama prohibits text messaging by federal employees, including contractors, when driving government vehicles or their privately owned vehicles on government business. Most states and the District of Columbia (DOC) have recognized the risk and banned texting while driving. Nine states and the DOC have banned the use of handheld cellular telephones while driving. Lastly, the United States Department of Transportation has established a national initiative focusing on Driving Distracted. (More information is available at http://distraction.gov.)

The potential risk associated with improper use of cellular telephones and other devices in the marine environment while navigating or performing other vessel functions should be apparent to vessel owners and operators.

Consequently, the Coast Guard **strongly recommends** vessel owners and operators to develop and implement effective operational policies outlining when the use of cellular telephones and other devices is appropriate or prohibited.

This advisory is for informational purposes only and does not relieve any domestic or international safety, operational or material requirement. Developed by the Headquarters Office of Investigations and Analysis. Questions may be forwarded to HQS-PF-fldr-G-PCA@uscg.mil.

UNITED STATES COAST GUARD

U.S. Department of Homeland Security

MARINE SAFETY ALERT

Assistant Commandant for Marine Safety, Security and Stewardship

December 18, 2009
Washington, DC

Alert 09-09

NAVIGATION LIGHTS - "MAINTAINING DISTINCTIVE CHARACTER"

The Coast Guard recognizes that many vessel owners choose to place of decorative lights onboard their vessels during the Holiday season. The Coast Guard **strongly reminds** vessel owners not to illuminate such lights during routine navigation unless operating in a Holiday boat parade or when the vessel is secured dockside. This issue was highlighted during a recent casualty whereby the owner of a passenger vessel had installed decorative Holiday type LED (Light Emitting Diode) lighting around the periphery of the vessel. The LEDs were contained in a clear flexible hose and securely attached. Near the bow of the vessel the lighting was adjacent and slightly above the port and starboard navigation lights. At night this installation, can impair the "distinctive character" of the navigation lights as set out in Rule 20 of the Navigation Rules. (Photograph below shows daytime view.)

Additionally, Rule 22 of Navigation Rules states that vessel sidelights have a two mile range for vessels 12 meters or more in length but less than 50 meters in length. In this particular casualty a side light navigation fixture was found installed on the passenger vessel that was stamped 1 nautical mile vice two miles. Vessel owners and operators and marine inspection personnel should ensure that the proper navigation lighting fixtures are installed, that all components operate correctly and that regulatory requirements with respect to Navigation Lighting are met.

This safety alert is provided for informational purposes only and does not relieve any domestic or international safety, operational or material requirement. This information does not assign culpability of any kind, to any involved party with respect to the aforementioned casualty. Developed by the Office of Investigations and Analysis, United States Coast Guard Headquarters, Washington, DC. Questions can be addressed to Mr. Ken Olsen at:

Kenneth.W.Olsen@uscg.mil.
Office of Investigations and Analysis:
http://marineinvestigations.us
To subscribe: kenneth.w.olsen@uscg.mil

UNITED STATES COAST GUARD
U.S. Department of Homeland Security

MARINE SAFETY ALERT

Assistant Commandant for Marine Safety, Security and Stewardship

November 30, 2009 Alert 08-09
Washington, DC

UNAPPROVED EPIRB BATTERY REPLACEMENTS

Fishing vessel safety staff in the Coast Guard's Seventh District has received at least three reports in the past few months regarding unapproved replacements of 406 EPIRB batteries by servicing companies having no association with the EPIRB manufacturer. These unauthorized battery installations would likely result in a failure of this critical item of lifesaving equipment, and as such are not in compliance with the operational readiness requirements of 46 CFR.

The following is a typical excerpt from an EPIRB manufacturer report:

> "The unit was opened and a foreign battery was found inside. The battery was built up using (manufacturer) fuses and wiring salvaged from the original (manufacturer) battery. They then covered their battery with the original (manufacturer) yellow heat shrink, (manufacturer) labels and taped it together. This was then covered with a black heat shrink wrap. The connections were soldered and not spot welded, as is required by the design and is performed in (manufacturer) production. The battery measured 8.7 volts. Our batteries read 9+ volts when they are new. This battery was installed one week prior to it being brought into (manufacturer).
>
> There was also evidence of water intrusion due to the crack in the top cap, which (servicing company) did not recognize as they are not trained in these matters.
>
> The EPIRB was condemned by (manufacturer) and the customer was notified when he came to pick the unit up."

Every approved (i.e., accepted by the FCC) EPIRB is tested during its approval process using a battery, or batteries, specified by the manufacturer. Approved EPIRBs come with a user's manual which describes battery maintenance and replacement procedures. In order for the EPIRB to remain within the conditions of its approval, the manufacturer's instructions in the user's manual must be adhered to. To ensure that replacement batteries are of the same type with which the EPIRB was approved, and are correctly installed, manufacturers typically specify that battery replacements only be done by the manufacturer or a manufacturer-approved shop.

Any modification or changes to an EPIRP must be made in accordance with the manufacturer. The use of alternative replacement parts or batteries is prohibited and may prevent the device from meeting lifesaving requirements. The Coast Guard **strongly reminds** EPIRB owners and servicing facilities to be aware of the compliance implications and potential for equipment failure stemming from any EPIRB modification or unauthorized battery replacement.

This safety alert is provided for informational purposes only and does not relieve any domestic or international safety, operational or material requirement. Questions regarding the information presented in this alert may be addressed to LCDR Vince Gamma of the U.S. Coast Guard Headquarters Lifesaving & Fire Safety Standards Division at 202.372.1396 or Vincent.A.Gamma@uscg.mil.

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UNITED STATES COAST GUARD
U.S. Department of Homeland Security

MARINE SAFETY ALERT

Assistant Commandant for Marine Safety, Security and Stewardship

November 16, 2009 Alert 07-09
Washington, DC

SAILBOAT RIGGING DANGERS

Recently in the Florida Keys, the standing rigging of a 60' inspected passenger carrying sailing catamaran failed, causing its rotating *wing spar* mast to collapse. Evidence suggests that the port shroud parted where it exits a swageless mechanical end fitting located on the upper mast at a common shrouds/stay connection. Although there were a number of passengers onboard at the time there were no resultant injuries. A six year review of Coast Guard casualty data shows 28 similar type casualties involving inspected sailing vessels. Of those 28, nine involved the failure of mast, spars and rigging components leading to dismastings; six of those involved sailing catamarans. Two separate catamaran dismasting resulted in two fatalities.

Common among the dismasting casualties was the failure of the mast's standing rigging. While this investigation is ongoing, initial forensic metallurgical analysis of the failed cable strands showed visual corrosion and evidence of fatigue failure. The shroud cable and swageless end fitting had been installed seven years prior.

The Coast Guard **strongly reminds** all commercial vessel owners/operators, especially those of passenger carrying sailing catamaran's of similar build, of their responsibility to maintain their vessels, associated equipment, systems and components in a satisfactory condition suitable for their employed service at all times. Owner and operators should not wait until regularly scheduled Coast Guard inspections to identify problems but should be ever vigilant and implement routine inspection, maintenance, and repair procedures in accordance with good marine practice and in alignment with applicable requirements. Owners and operators should consult the vessel manufacturer or other naval architecture, marine engineering services or qualified rigger regarding any concerns they might have regarding the regular flexing and working of their vessel's standing rigging

Inspection requirements for small passenger vessels are found in 46 CFR 175-185. Additionally, Coast Guard Sector Honolulu, by consensus with their local sail vessel industry, developed Inspection Note #13 that outlines an enhanced inspection regime for sailboat rigging, masts and associated components for their inspected small passenger sailing vessel fleet consisting almost entirely of catamarans. This information is useful to both marine inspection personnel and vessel owners/operators and is available by searching the web using the key words: "Sector Honolulu Inspection Note #13". Manufacturer published guidelines on mast and rigging system maintenance can be found in "Rigging Service Guidelines" http://www.navtec.net/docs/RiggingService.pdf published by Navtec Rigging Solutions. Practical standing rigging inspection information from a marine surveyor's perspective is available at http://www.dixielandmarine.com/yachts/DLrigprob.html.

This safety alert is provided for informational purposes only and operational or material requirement. This does not represent an official endorsement of Navtech Rigging Solutions, Dixieland Marine Inc, its services, products, or employees. Developed by the Office of Investigations and Analysis, United States Coast Guard Headquarters, Washington, DC. Questions can be addressed to Mr. Ken Olsen at the email address below.

Office of Investigations and Analysis: http://marineinvestigations.us
To subscribe: kenneth.w.olsen@uscg.mil

UNITED STATES COAST GUARD
U.S. Department of Homeland Security

MARINE SAFETY ALERT

Assistant Commandant for Marine Safety, Security and Stewardship

September 17, 2009
Washington, DC

Alert 07-09

DRUG TESTING REQUIREMENTS FOR CHARTER VESSELS
46 CFR Parts 4 and 16, 49 CFR Part 40, 33 CFR 95

The Coast Guard is **strongly reminding** the Charter Vessel Industry of their duties and obligations to meet federal drug testing regulations. Requirements for marine employers to have drug testing programs have been in effect since November 21, 1988. These requirements are applicable to all US flagged vessels in commercial service, regardless of vessel size or capacities, including what are commonly known as Six Pack Charter Vessels. The rule requires chemical testing of all crewmembers working in safety-sensitive positions whether or not those crewmembers possess merchant mariner credentials. The consequences for failing to comply with these requirements can be substantial and may involve the loss of a license or document, loss of a vessel or civil penalties at a rate of $5,500 per day per violation.

The rule applies to all commercial service vessels required to be operated by a US Coast Guard issued licensed individual, onboard any US flagged inspected and uninspected vessel on any route, commercial fishing vessels 200 GT or greater, and towing vessels 26 feet in length or longer. All crewmembers responsible for the safe operation and navigation of the vessel or those responsible for the safe handling of passengers in the event of an emergency must be tested.

Pre-employment drug testing is required prior to a person being placed in a safety sensitive position. Crewmembers are also subject to random drug testing at a minimum rate of 50% annually. Drug testing must also take place following a Serious Marine Incident. In these cases, anyone involved with the incident must be tested for evidence of drug and alcohol use. Additionally, testing may take place when a supervisor has reasonable cause of drug and alcohol use. Drug testing may also occur periodically when a USCG credentialed individual submits an original merchant mariner credential application, a reissuance, upgrade or endorsement. Please see the following attachment for additional basic information.

Detailed information about the Coast Guard's Drug and Alcohol Program and responsibilities of marine employers is available online and may be accessed at http://marineinvestigations.us > Drug and Alcohol Program. Questions regarding testing requirements may be directed to your Coast Guard District Drug and Alcohol Program Inspector or the Headquarters Drug and Alcohol Program Manager, Mr. Robert Schoening at 202.372.1033 or Robert.C.Schoneing@uscg.mil .

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Marine Employers Drug Test Program
Basic Regulatory Requirements

46 CFR Parts 4 & Part 16, 49 CFR Part 40, 33 CFR 95

Background: On November 21, 1988, a new regulation requiring chemical testing for all U.S. flagged vessels in commercial service was published in the Federal Register. This rule required chemical testing on all crewmembers working in a safety- sensitive positions. A crewmember is a documented or undocumented individual.

Applicability: Applies to all commercial service vessels required to be operated by a US Coast Guard issued licensed individual: All United States flagged inspected and uninspected vessels in commercial service on any route; Commercial fishing vessels 200 GT or greater; Towing vessels 26 ft length or longer.

Who must be tested? All crewmembers responsible for the safe operation and navigation of the vessel and those responsible for the safe handling of passengers in the event of an emergency.

When is Drug testing required? *Pre-employment:* Must take and pass a drug test prior to being placed in a safety-sensitive position. *Random:* All crewmembers are subject to random unannounced drug testing at a minimum rate of 50%. *Serious Marine Incident:* Marine employer shall take all practicable steps to have each individual engaged or employed on board the vessel who is directly involved in the incident chemically tested for evidence of drug and alcohol use. *Reasonable Cause:* To be conducted when there is a reasonable and articulable belief that individual has used a dangerous drug based on direct observation of specific, contemporaneous physical, behavioral, or performance indicators of probable use. Where practicable, this belief should be based on the observation of the individual by two persons in supervisory positions. *Periodic:* Testing conducted when an individual is required to take a drug test for a USCG credential transaction (i.e., original application, reissuance, upgrade or endorsement.

How to do testing? All tests have to be conducted in accordance 49 CFR 40 (Dept. of Transportation (DOT) procedures) Employers may manage your own program, or use the services of a drug test consortium or third party administrator.

Drugs that are tested for: Marijuana; Cocaine, Amphetamines, Opiates, and PCP.

Where does the testing take place? Testing takes place at laboratories accredited by Dept of Health and Human Services.

What type of specimen is provided for testing? Urine is the only accepted test specimen for drugs.

Who collects the specimen? Only Dept. of Transportation qualified collectors can collect the specimen and ship it to the testing laboratory.

What happens at the laboratory? The specimen will be analyzed using a two step testing process and will also do testing to make sure it is a valid urine specimen. If the specimen is not an acceptable specimen, it will be reported to the Medical Review Officer (MRO) as substituted, adulterated or invalid test result. The first test is an initial screen test and if negative, testing stops with the test result

reported to the MRO as negative. If the screen test is positive for one or more drugs, the specimen is tested using a confirmation test called GC/MS. This final test result is reported to the MRO.

Who is the MRO? A licensed physician (MD or DO) that is qualified to review drug test results from the laboratory. The MRO will contact and talk to the specimen donor for all non-negative drug test results and will report to the employer all negative and positive drug test results.

What does the marine employer do with the test results? If negative test result is obtained that person can be hired and no other action is required. If non-negative test result, the employer is required to immediately remove from safety-sensitive position. If a credentialed mariner, the employer must report the non-negative test result to Coast Guard.

Can I return this person to work? Only after the return-to-work requirements have been complied with.

Other requirements: Employee Assistance Program (EAP). This consists of an EAP Education Program and a Training Program. Several requirements contained here for education of the dangers of drug use; Distribution of informational materials; Display of a community hot-line assistance telephone number; Company Policy; Employee Drug Awareness; and Supervisor Training.

Records and Reporting: Program records are required to be maintained. The annual report includes the number of tests conducted annually by an employer. A Consortium or Third Party Administrator may perform these functions on behalf of a marine employer.

Potential Consequences: Potential consequences for failure to comply are: Letter of Warning; Do Not Sail Order; Civil Penalty $5,500 per day per violation; Loss of license or document; Loss of vessel.

Additional Questions:

Contact your District Drug and Alcohol Program Inspector or the Program Manager at Coast Guard Headquarters:

Robert C. Schoening
Phone:202-372-1033
Email: Robert.C.Schoening@uscg.mil
Web: Homeport.uscg.mil>Investigations

UNITED STATES COAST GUARD
U.S. Department of Homeland Security

MARINE SAFETY ALERT

Assistant Commandant for Marine Safety, Security and Stewardship

September 17, 2009
Washington, DC

Alert 06-09

PARASAILING INCIDENTS

Recently, two parasail vessel passengers lost their lives when the towline to which their parachute and harness were attached parted, causing the passengers and the parachute to descend. Subsequently, the two passengers were dragged along the water's surface by the parachute and ultimately were ensnared by the pilings and the structure of an ocean fishing pier. Although an investigation is underway and the causal factors surrounding this accident are being discovered, it appears that high winds and waves may have contributed to this casualty.

The Coast Guard **strongly reminds** the parasailing industry, its vessel owners, operators and shore side personnel to be vigilant in their observations of current and forecasted weather and sea conditions with particular attention paid to wind speed. Approaching weather patterns or squall lines present significant hazards to these operations due to sudden and dramatic shifts in wind direction, gusty winds, or even lightning. In a matter of a few short moments what is intended to be a pleasurable experience can become life threatening.

The Professional Association of Parasail Operators (PAPO) has developed and published parasail vessel Operating Standards and Guidelines for the safe parasail operations. These standards are available to PAPO members and the parasail industry. They can be obtained online at:

http://www.teampapo.org/documents/2006PAPOOSAG_000.pdf

This safety alert is provided for informational purposes only and does not relieve any domestic or international safety, operational or material requirement. This document does not represent an official endorsement of PAPO. Developed by the Office of Investigations and Analysis, United States Coast Guard Headquarters, Washington, DC. Questions can be addressed to Mr. Ken Olsen at the email address below or 202.372.1037.

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UNITED STATES COAST GUARD
U.S. Department of Homeland Security

MARINE SAFETY ALERT

Assistant Commandant for Marine Safety, Security and Stewardship

July 21, 2009
Washington, DC

Alert 05-09

INADVERTENT DISCHARGES OF MARINE FIRE EXTINGUISHING SYSTEMS

This Safety Alert addresses a critical problem involving ANSUL - High Pressure Carbon Dioxide fire extinguishing systems (Coast Guard Approval number 162.038/7). The Coast Guard has become aware of several instances where this particular fire extinguishing system has discharged without human intentional or accidental involvement.

The system manufacturer, ANSUL has identified the suspect CO2 cylinder valves as those having a date code between 10-07 and 06-08. This date code is located on a flat surface immediately above the threaded section which enters the cylinder and opposite the discharge outlet. See the attached ANSUL bulletin for important details.

The Coast Guard **strongly recommends** that owners and operators who have ANSUL High Pressure Carbon Dioxide Systems onboard their vessels and others who may own, sell or service these systems carefully follow the instructions on the attached ANSUL Bulletin.

This safety alert is provided for informational purposes only and does not relieve any domestic or international safety, operational or material requirement. Developed by the Office of Investigations and Analysis and the Office of Design and Engineering Standards, United States Coast Guard Headquarters, Washington, DC.

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Office of Investigations and Analysis: http://marineinvestigations.us
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One Stanton Street
Marinette, WI 54143-2542
715 735-7411
www.ansul.com

Bulletin

Bulletin No. 5559

DATE: July 16, 2009

TO: Authorized ANSUL® Marine High Pressure Carbon Dioxide System Distributors

FROM: Quality Assurance

SUBJECT: Inadvertent Discharges of Marine High Pressure Carbon Dioxide Systems

SPECIAL SAFETY ALERT

If you own, sell or service ANSUL® Marine High Pressure CO_2 Systems, please read and follow the instructions in this bulletin.

⚠ WARNING

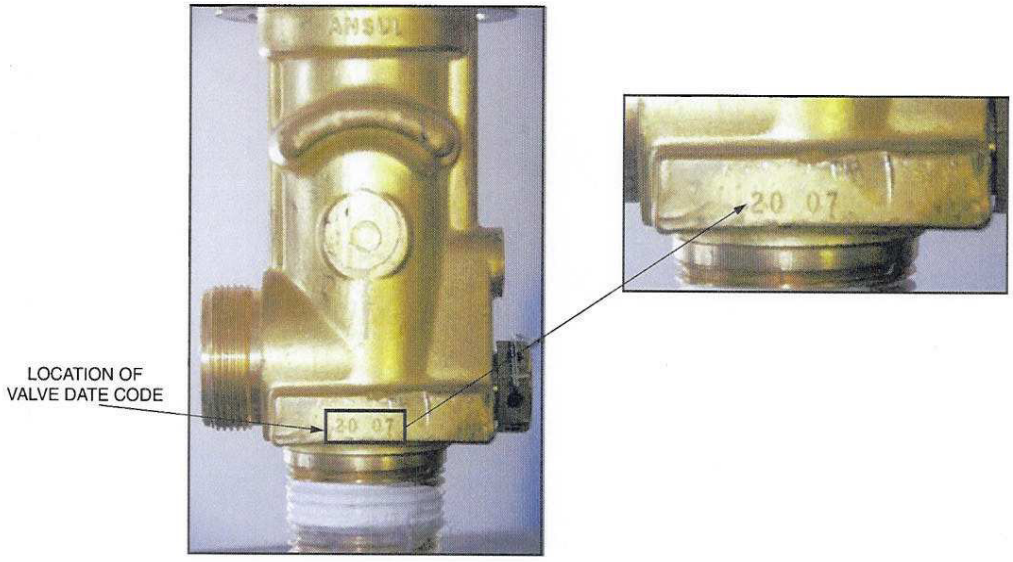
FAILURE TO READ AND FOLLOW THE INFORMATION IN THIS BULLETIN INCREASES THE RISK THAT A HIGH PRESSURE CO_2 SYSTEM MAY INADVERTENTLY DISCHARGE ON BOARD A SHIP.

We have received isolated reports of Marine High Pressure Carbon Dioxide Systems inadvertently discharging. In our review of the reported discharges, we have discovered that in some cases, an internal pressure vent on the cylinder valve may not be adequately venting pressure. Under certain conditions this may cause a cylinder in the system to actuate, which would then cause all cylinders on this specific system to actuate.

We have determined through internal testing that valves with the following date codes, if installed in marine applications, should be replaced:

Marine High Pressure CO_2 valves with a date code range of 10-07 to 06-08.

This date code range is conservative and may be further narrowed through additional testing. The date code is located on the flat opposite of the valve outlet. The date code represents the week and year the valve was manufactured.



Carbon dioxide cylinders which are installed, or could be installed on a ship with a valve date code between 10-07 and 06-08 **MUST** be identified. If you identify cylinders with valves in this date code range, please contact ANSUL Quality Assurance **IMMEDIATELY** for further information and authorization for replacement of these cylinders.

Your immediate attention is requested in order to avoid property damage or personal injury caused by an inadvertent discharge or an inoperative system.

If you have any questions regarding this bulletin, please contact ANSUL Quality Assurance at 1-800-862-6785 and press 4 for Quality Services or call 715-735-7411 ext. 73383

UNITED STATES COAST GUARD
U.S. Department of Homeland Security

MARINE SAFETY ALERT

Assistant Commandant for Marine Safety, Security and Stewardship

July 13, 2009 Alert 04-09
Washington, DC

EPIRB and PLB REGISTRATION

This Safety Alert addresses the importance of ensuring your Emergency Position Indicating Radio Beacon (EPIRB) and Personal Locator Beacon (PLB) are properly registered with the National Oceanic and Atmospheric Administration (NOAA).

One of the circumstances surrounding a recent major marine casualty involving an uninspected commercial fishing vessel was the improper registration of the vessel's EPIRB. The Unique Identification Number (UIN) entered into NOAA's registration database was different from the actual UIN programmed into the EPIRB by the manufacturer and transmitted to the Search and Rescue Satellite System after the vessel sank. The improper registration of this vessel's EPIRB delayed the notification to Search and Rescue personnel, and subsequently delayed the launching of rescue assets.

The Search and Rescue Satellite-Aided Tracking (SARSAT) System is composed of stationary and orbiting satellites. For any given location (outside of the Polar Regions), there is continuous coverage by a stationary satellite, and coverage by an orbiting satellite every 60 to 75 minutes on average (which includes the Polar Regions). The stationary satellites can receive all of the information transmitted by an EPIRB or PLB, but they are not capable of determining the position of the beacon unless the beacon has an optional GPS receiver (not all models carry this option). Normally, position identification is accomplished by the orbiting satellites. So, if a beacon is not equipped with the optional GPS, it could take up to 100 minutes for the orbiting satellites to identify the location of the beacon.

In the case of this casualty, the first notification was received by a stationary satellite soon after the vessel sank, but the orbiting satellites were not within range and the improper registration prevented the identification of the vessel's name, homeport and emergency contact information from being forwarded to the Search and Rescue authorities.

As a result of this incident NOAA has commenced an important safety initiative, emailing and mailing all owners/operators of EPIRBs and PLBs registered in the U.S. National Beacon Registration Database, and requesting that they follow the steps listed below. The U.S. Coast Guard supports this initiative, and **strongly recommends** all vessel owners and operators:

1. Confirm that current EPIRB and PLB registrations are correct. Cross-check that the UIN printed by the manufacturer on your EPIRB or PLB matches the UIN printed on the proof-of-registration decal sent to you by NOAA. The manufacturer-provided UIN is usually found on the exterior of the beacon, although in some cases the UIN is printed inside the beacon, under the beacon's battery. You can also cross-check that the above UINs match the NOAA registration database by visiting the National Beacon Registration website at: www.beaconregistration.noaa.gov and choosing one of the links for your existing beacon registration.

If any of the numbers or letters in the UINs are different, your beacon may not be registered properly and you should contact NOAA immediately at: (301) 817-4515 or 1-888-212-SAVE (7283).

2. Update EPIRB and PLB registrations if there are any changes to the vessel information, owner/operator information, emergency contact information, or if your registration information has expired. Registration data must be renewed every two years. Updates and renewals can be made using the same registration methods listed below.

3. Register new or previously unregistered EPIRBs and PLBs with NOAA via the internet at: www.beaconregistration.noaa.gov. *Note: Registration is mandatory and is required by Federal Regulation.*

   Alternatively, you can mail the registration form which can be found in the beacon's packaging, or downloaded from the beacon registration website provided above, to the following address:

   Beacon Registration
   NOAA/NESDIS,
   NSOF, E/SP3
   4231 Suitland Road
   Suitland, MD 20746

   The registration form can also be faxed to: (301) 817-4565.

If you have already received a registration safety notification from NOAA and responded accordingly, no further action is required until your next beacon renewal or update.

This safety alert is provided for informational purposes only and does not relieve any domestic or international safety, operational or material requirement. Developed by the Office of Design and Engineering Standards, United States Coast Guard Headquarters, Washington, DC and the NOAA Search and Rescue Satellite-Aided Tracking (SARSAT) Program Office, Suitland, MD.

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UNITED STATES COAST GUARD
U.S. Department of Homeland Security

MARINE SAFETY ALERT

Assistant Commandant for Marine Safety, Security and Stewardship

June 16, 2009
Washington, DC

Alert 03-09

Avoiding propulsion loss from fuel switching: American Petroleum Institute Technical Considerations

Ships switch fuel oil from residual fuels to distillate fuels in order to reduce emissions. The Coast Guard expects ships will switch fuel more frequently to comply with new emission reduction regulations. When switching fuel oil, some ships have experienced propulsion losses linked to procedural errors or fuel oil incompatibility.

API developed a paper titled "Technical Considerations of Fuel Switching Practices" that discusses problems that lead to propulsion loss while switching fuel. It is available at http://marineinvestigations.us >Safety Reports. This document may be useful to vessel owners, operators, and engineers interested in preventing fuel system failures and propulsion casualties while meeting current and future exhaust emission control requirements.

In order to prevent casualties associated with fuel oil switching, the Coast Guard **strongly recommends** that owner and operators:

- Consult engine and boiler manufacturers for fuel switching guidance;
- Consult fuel suppliers for proper fuel selection;
- Exercise tight control when possible over the quality of the fuel oils received;
- Consult manufacturers to determine if system modifications or additional safeguards are necessary for intended fuels;
- Develop detailed fuel switching procedures;
- Establish a fuel system inspection and maintenance schedule;
- Ensure system pressure and temperature alarms, flow indicators, filter differential pressure transmitters, etc.., are all operational;
- Ensure system purifiers, filters and strainers are maintained;
- Ensure system seals, gaskets, flanges, fittings, brackets and supports are maintained;
- Ensure a detailed system diagram is available;
- Conduct initial and periodic crew training;
- Complete fuel switching well offshore prior to entering restricted waters or traffic lanes.

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UNITED STATES COAST GUARD

U.S. Department of Homeland Security

MARINE SAFETY ALERT

Assistant Commandant for Marine Safety, Security and Stewardship

June 8, 2009 Alert 02-09
Washington, DC

Compact Fluorescent Lights

This Safety Alert serves to inform the maritime industry that energy saving Compact Fluorescent Lights (CFL) or lighting, sometimes known as radio frequency (RF) lighting devices may interfere with certain communications equipment. CFLs employ a RF lighting device to excite a gas inside a bulb in order to produce light.

The Federal Communications Commission (FCC) recognized the need for and adopted rules to control the harmful interference to radio communications services from these devices. During the rulemaking process the Coast Guard provided comments and recommended an advisory label for CFLs / RF lighting devices warning users about potential interference to communication services and particularly with respect to devices capable of producing emissions in the 0.45-30 MHz band. As a result, the FCC required manufacturers of CFLs to provide an advisory statement, either on the product packaging or with other user documentation, similar to the following: "This product may cause interference to radio communications and should not be installed near maritime safety communications equipment or other critical navigation or communication equipment operating between 0.45-30 MHz."

The Coast Guard has learned that CFLs have been installed on the navigation bridges of vessels and in other places capable of causing radio communications interference. Marine inspectors, vessel owners and operators **should be aware** of this potential safety hazard and take proper action as needed.

Below are examples of some compact fluorescent lights with different shapes and sizes.

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UNITED STATES COAST GUARD
U.S. Department of Homeland Security

MARINE SAFETY ALERT

Assistant Commandant for Marine Safety, Security and Stewardship

April 16, 2009
Washington, DC

Alert 01-09

Electrical Shock Hazards

Earlier this year an engineer working onboard a chemical tank ship was electrocuted. The incident occurred while several engineers were preparing to test a circuit breaker. The engineer apparently made contact with the unprotected stripped ends of a conductor plugged into a live 480 volt power supply on an electrical test bench. The investigation is currently ongoing and is examining the other circumstances surrounding the casualty. However, important safety concerns have been noted. This alert serves as a reminder to the maritime industry about the dangers of working with electrical equipment.

With respect to this casualty, the corded three-conductor power supply line being used to connect to the breaker, also called a pig tail, should not have been energized until it was connected. Further, depending on the type of equipment it was being used with, its ends should have had high voltage insulated alligator clips or it should have been wired securely into the electrical component prior to testing. Under no circumstances should the ends have been handled with the power turned on.

The Coast Guard ***strongly recommends*** that all vessel owners and operators ensure that:

1. Circuits are de-energized prior to performing any work whenever possible.
2. Employees having electrical maintenance and repair responsibilities are fully trained regarding all safety precautions needed when working with potential electrical hazards.
3. Individuals wear appropriate safety gear - insulated shoes, dry clothing, hard hat, rubber gloves, and other required protective equipment.
4. Appropriate supervision is provided.
5. Procedures for the use of test panels and connectors and are found in the Safety Management System or other operating manuals and readily available.
6. Safe electrical equipment inspection, maintenance and repair procedures are available and followed closely.
7. Test equipment is properly maintained according to original plans.
8. Tools used in the repair of live equipment are properly insulated.
9. Test benches are both properly insulated and grounded in the appropriate areas.
10. Flooring and other surrounding areas of test benches are properly insulated and dry.

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UNITED STATES COAST GUARD
U.S. Department of Homeland Security
MARINE INVESTIGATIONS
LESSONS LEARNED
Assistant Commandant for Marine Safety, Security and Stewardship

October 16, 2009
Washington, DC

Lessons Learned 01-09

SMALL FIRE / IMPORTANT LESSONS

This document presents recent lessons learned resulting from a casualty investigation and may be useful to vessel owners and operators in addition to marine inspection personnel.

Recently in the North East an 83 foot long passenger ferry which has the capacity to carry 306 persons experienced a small engine room fire. The vessel was just off its dock at the time the fire started and onboard were 110 persons. Because of the nearness to the dock, the vessel's Captain chose to disembark the passengers prior to manually activating the engine room CO2 system and closing the main fuel stop valve. The CO2 system extinguished the fire and when the local fire department arrived later they found the port main engine's exhaust insulation smoldering. Using a fire hose to cool the area they completely extinguished the fire. Although the casualty is still being investigated, it appears that the fire was caused by a leaking pipe fitting attached to the fuel oil filter of the center engine. Fuel sprayed from the rear of the center engine to the port main engine exhaust piping and ignited.

Polypropylene or PVC Components

The engine room utilized vents to provide air for the engines and cooling. There were no forced supply fans or exhaust systems. Slots in the ceiling at the outboard sides of the engine room, forward and aft, provided the openings to four ducts which contained dampers. The damper closed against the slotted opening located in the floor of the duct (ceiling of machinery space) when the CO2 system was activated. In normal circumstances, airflow from the outside could flow past a moisture eliminating filter, into the duct area, past the open damper, through the slot and into the engine room. Depending on weather conditions, air could enter one side of the vessel and exit the other. When the extinguishing system was activated, all the dampers closed properly. However, after the fire it was noted that several external moisture eliminator filters were extremely damaged. The photo above shows an undamaged moisture eliminating filter. The actual size of this filter is about five feet by fifteen inches.

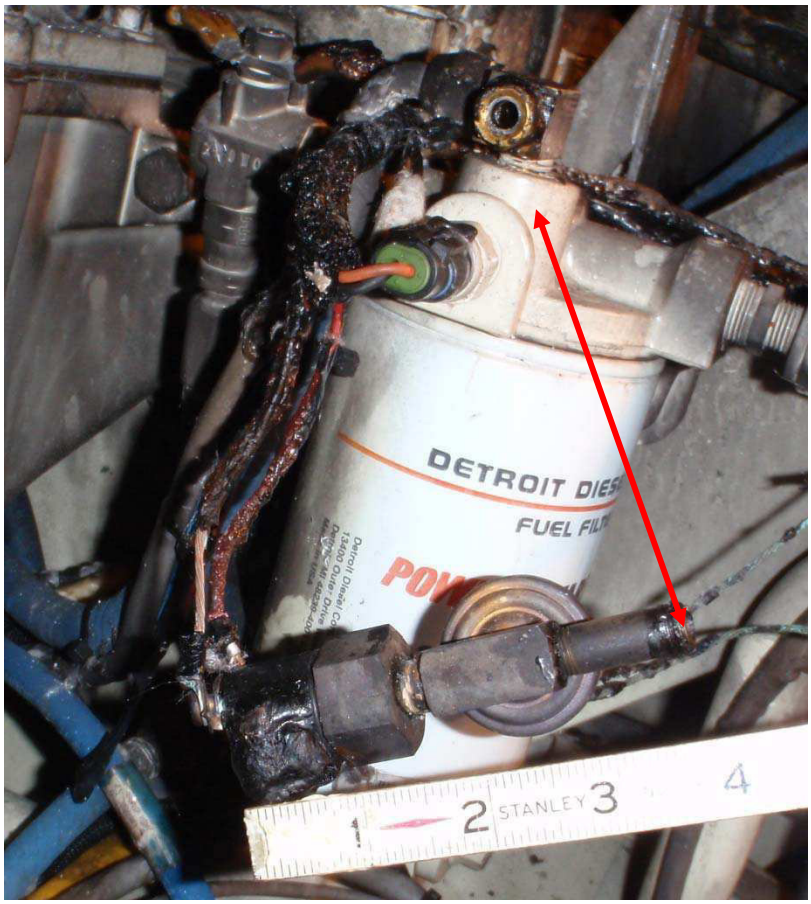
The following photo shows the melted moisture eliminating filter from the opposite side of the vessel. High temperature gases flowed through it during the fire causing it to overheat and deform prior to its respective damper closing. It fell on top of the damper after the damper had closed. The small fire in the engine room was about nineteen feet away on the other side of the vessel and aft. Investigators

noted that *if* the filter had melted and fallen on or into the slot of the duct before the damper closed, it is likely to have interfered with the damper operation and possibly have reduced the effectiveness of the CO2 system.

46 CFR 116.610 (b) applicable to this vessel, states that "a ventilation duct, and materials incidental to installation must be made of noncombustible material." 46 CFR 116.610(c) states that "combustibles and other foreign materials are not allowed within ventilation ducts. However metal piping and electrical wiring installed in a metal protective enclosure may be installed within ventilation ducts, provided that the piping or wiring does not interfere with the operation of fire dampers." Owners and operators of any type vessel, as well as those persons involved with the inspection of vessels should be aware of the potential risks associated with this and similar installations and are reminded that inspections of fire dampers should include observation of all related structure near dampers to ensure that the dampers will operate under fire conditions. These structures and any incidental materials should not be made of combustible material. On vessels with manual extinguishing systems, or those with manual dampers whereby when securing the ventilation time is of the essence, consideration needs to be given regarding the materials used should it be subjected to excessive heat carried by high temperature gases.

Failed Pipe Fittings

As stated previously, the investigation into this casualty is not yet complete. The components of the pipe fitting which failed are currently being examined by NTSB metallurgists. It is suspected however that the failed fittings may have been subjected to excessive vibration which could have caused the fracture. The original configuration was modified by adding a fitting that attached two additional sensors (for a total of four) to the fuel filter assembly and was subject to pressures up to 65 psig or greater. The assembly weighed 6.3 ounces and extended about 4 inches out of a reducing bushing that was threaded into the inlet fitting of the filter. Because of the location of the fire and oil soaked insulation it is



suspected that the fitting leaked first and did not immediately shear as shown in the photo at the right.

Owners and operators of any type vessel, as well as those persons involved with the inspection of vessels should be aware of the potential risks associated by adding components to an engine assembly and must take into account the effect of vibration on those components. If add–on components are discovered effort should be made to verify the adequacy and safety of the installation by consulting the engine manufacturers and designers.

In this instance an improved installation may have involved mounting the sensors directly to a stable surface and attaching the sensors to the filter inlet using a flexible hose.

Hot Spots

In a small engine room containing several engines and having a low overhead there are a number of locations that present enough heat to cause a fuel to flash and ignite other components. Turbocharger and exhaust piping insulation while serving to reduce heating of external areas also helps reduce the immediate availability of ignition hot spots. Care should be taken to ensure insulation wraps and blankets are kept tight and fastened in a manner to prevent dripping or spraying fluids from traveling to an exposed hot spot. Insulation seams should be made tight and where possible aligned in a manner to prevent pooling of fluid and to repel dripping. Likewise good marine practice may also dictate and ensure that braces which are welded directly to the exhaust pipe which serve as hangers or supports also be insulated. Heat conducting from the exhaust pipe to the brace could be substantial allowing the exposed bracket to become nearly as hot as the exhaust pipe. The brace in the photo above was only partially covered with the insulation that was wrapped around the exhaust pipe. As with the other concerns in this document, owners and operators of any type vessel, as well as those persons involved with the inspection of vessels should be aware of the potential risks associated with improper or inadequate installation of insulation.

Additional fire protection information is provided in 1) NVIC 9-97 “Guide To Structural Fire Protection” available http://www.uscg.mil/hq/cg5/nvic/pdf/1997/n9-97.pdf and 2) IMO Maritime Safety Committee MSC.1/Circ.1321 11 June 2009, “GUIDELINES FOR MEASURES TO PREVENT FIRES IN ENGINE-ROOMS AND CARGO PUMP-ROOMS.” Copies available upon request.

This document is provided for informational purposes only and does not relieve any domestic or international safety, operational or material requirement. Developed by the Office of Investigations and Analysis, United States Coast Guard Headquarters, Washington, DC. Questions can be addressed to Mr. Ken Olsen at kenneth.w.olsen@uscg.mil.

UNITED STATES COAST GUARD
U.S. Department of Homeland Security

MARINE SAFETY ALERT

Assistant Commandant for Marine Safety, Security and Stewardship

April 15, 2009
Washington, DC

Alert 09-08 (Update)

ELECTRONICALLY-CONTROLLED CARGO PUMP ENGINE COMPONENTS (UPDATE)

For many years, cargo pump engines on weather decks of Subchapter D & O tank barges had mechanical-type start and control systems. The installation of electronically controlled engines on tank barges since the 1990s has introduced non-approved electrical equipment associated with engine monitoring and control systems into hazardous locations (Class I, Division 1) on thousands of tank barges nationwide.

U.S. Coast Guard District Eight recognized this problem with John Deere manufactured engines and distributed enforcement guidance to their field units on November 22, 2005. Since then, John Deere has engineered retrofit packages for approximately 400 units and is currently seeking approval from the U.S. Coast Guard Marine Safety Center (MSC). Because of widespread use of electronically controlled engines, we suspect there may be other equipment currently in use that similarly is not designed or approved for hazardous locations. Other manufacturers of these engines will likely need to follow suit with their own retrofit packages.

46 CFR 111.105-31(1) defines Class I / Division 1 locations as any area located within 10 feet (3 meters) of a cargo tank vent outlet or ullage opening, or cargo pipe flange or valve on a tank barge that carries a flammable or combustible cargo with a flashpoint below 60 degrees C (140 degrees F). By regulations, electrical equipment located in hazardous locations must be approved intrinsically safe, explosion-proof, or purged and pressurized.

On John Deere electronically controlled cargo pump engines, electrical ignition sources were found in control panels, notification lights, alternators, batteries, computers, and associated wiring for engine sensors. Since new components are still being designed and tested, it may be some time before all electronic components on John Deere engines can be re-engineered and retrofitted for hazardous locations. Again, we suspect other makes of electronically controlled engines have the same issues.

John Deere has been working with the MSC on the approval of retrofit packages for their engines and has recently received approval for some models. Operators should contact their John Deere dealerships.

This safety alert is provided for informational purposes only and does not relieve any domestic or international safety, operational or material requirement. Developed by the Office of Domestic Vessel Activities (CG-5431), United States Coast Guard Headquarters, Washington, DC. Questions should be directed to LT James T. Fogle at (202) 372-1038 or james.t.fogle@uscg.mil.

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UNITED STATES COAST GUARD
U.S. Department of Homeland Security

MARINE SAFETY ALERT

Assistant Commandant for Marine Safety, Security and Stewardship

December 4, 2008 Alert 13-08
Washington, DC

VENTILATION CLOSURES FOR FIXED GAS FIRE EXTINGUISHING SYSTEMS ON SMALL PASSENGER VESSELS

This Safety Alert addresses the importance of ensuring proper operation and adequacy of ventilation closure devices for spaces protected by fixed gas fire extinguishing systems on small passenger vessels. Properly operating ventilation closures ensure the effectiveness of the vessel firefighting systems and minimize the spread of fire to other areas of the vessel.

Recent vessel casualty investigations conducted by the U.S. Coast Guard and the National Transportation Safety Board (NTSB) into fires aboard small passenger vessels have raised awareness for the need to properly inspect and test ventilation closures for spaces protected by fixed gas fire extinguishing systems.

Federal Regulations require provisions for closing all supply duct cowls or scoops and exhaust duct discharge openings in spaces protected by fixed gas extinguishing systems. All closure devices must be readily available and mounted in the vicinity of the vent. As part of each annual inspection, attending marine inspectors should ensure the adequacy and serviceability of these closure devices in accordance with the CG 840 inspection guide. While observing fire drills in spaces covered by fixed gas systems, marine inspectors should ensure the vessel crews are familiar with these devices and ensure they are utilized properly during the conduct of the drill.

Small passenger vessels built on or after March 11, 1996 and small passenger vessels constructed of wood or fiber reinforced plastic (FRP) must have approved fixed fire extinguishing systems in certain machinery, fuel tank, and storage spaces which are described in 46 CFR 181.400 and 46 CFR 118.400. Vessels of other than wood or FRP construction built prior to March 11, 1996 must have a fixed system in machinery and fuel tank spaces using gasoline or other fuels having a flash point of 110° F or lower, paint and oil rooms, and cargo spaces which are inaccessible during a voyage and used for combustible cargo.

The U.S. Coast Guard strongly recommends that owners and operators, as well as marine inspectors, ensure the adequacy and test the operation of all ventilation closures for spaces protected by a fixed fire extinguishing system including both manual and automatic devices. Automatic closures should be tested and serviced by a qualified servicing facility in conjunction with the servicing of the fixed fire extinguishing system.

The regulations governing ventilation closures for spaces protected by a fixed gas fire extinguishing systems are contained 46 CFR Parts 182.465(h) and 119.465(h). These regulations are available through the U.S. Government Printing Office (GPO) and may be downloaded without cost from the GPO's internet website http://www.gpoaccess.gov/index.html. A fixed gas fire extinguishing system installed but not required by regulation must still function properly including the operation of ventilation closure devices.

This safety alert is provided for informational purposes only and does not relieve any domestic or international safety, operational or material requirement. Developed by the Office of Vessel Activities, Domestic Compliance Division (CG-5431), United States Coast Guard Headquarters, Washington, DC. Questions should be directed to Lieutenant Commander David Webb at (202) 372-1216 or David.M.Webb@uscg.mil.

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UNITED STATES COAST GUARD

U.S. Department of Homeland Security

MARINE SAFETY ALERT

Assistant Commandant for Marine Safety, Security and Stewardship

November 19, 2008 Alert 12-08
Washington, DC

WATERTIGHT DOORS

This Safety Alert addresses the importance of properly maintaining and closing watertight doors. Unfortunately, marine casualties, often resulting in loss of life and property, continue to be linked to improperly maintained or closed watertight doors!

One of the contributory factors in a recent major marine casualty on an uninspected commercial fishing vessel was the failure to properly maintain and keep closed watertight doors on the vessel's weather deck. In this incident one watertight door was not properly dogged down, permitting it to open and let water flood a space below the main deck. Another watertight door on the vessel's main deck was not maintained and as a result, it leaked, permitting water to enter an adjacent space.

Over 42% of all marine casualties on fishing vessels involve flooding that in most cases could have been prevented or minimized by the proper use of watertight doors. Two safety alerts have been issued in the past two years emphasizing the importance of maintaining watertight doors and keeping them closed at all times while underway except when actually being used.

As a result of this incident and due to other related casualties, the U. S. Coast Guard **strongly recommends** vessel owners and operators to:

Regularly inspect the condition of all watertight doors on their vessels including the gasket and knife-edge to ensure that the doors close properly when dogged down securely. Watertight door gaskets should not be painted; any paint discovered on the gasket should be removed. Excessive gaps between the gasket ends should be avoided and repaired upon discovery;

Periodically perform either a chalk or light test on all watertight doors to ensure that the knife edge makes contact with the entire door gasket;

Ensure that all dogs or closing assemblies move freely and close securely. Routinely lubricate all watertight door fittings and hinges to ensure fluid operation; and

Ensure that vessel masters provide regular training on watertight door operation and maintenance to their crews. Watertight doors should be closed at all times while a vessel is underway except when transiting from space to space.

Please access http://marineinvestigations.us Safety Alerts > General Operations > "Securing Watertight Doors" and "Maintaining Vessel Watertight Integrity" for additional related information.

This safety alert is provided for informational purposes only and does not relieve any domestic or international safety, operational or material requirement. Developed by the Office of Investigations and Analysis, United States Coast Guard Headquarters, Washington, DC.

Office of Investigations and Analysis: http://marineinvestigations.us
To subscribe: kenneth.w.olsen@uscg.mil

UNITED STATES COAST GUARD

U.S. Department of Homeland Security

MARINE SAFETY ALERT

Assistant Commandant for Marine Safety, Security and Stewardship

November 18, 2008 Alert 11-08
Washington, DC

FISHING VESSEL STABILITY

This Safety Alert addresses the issue of unsafe loading practices onboard commercial fishing vessels.

One contributory factor in a recent major marine casualty on an uninspected commercial fishing vessel was improper loading of the vessel's fuel, water, fishing gear and catch. In this instance, the vessel's crew relied on an outdated stability book to determine the safe loading condition of the vessel. The stability book being used failed to account for heavy fishing equipment that had been removed from the vessel as well as new fish processing and equipment additions when it changed fishery operations.

As a result of this incident and due to other related casualties involving commercial fishing vessels, the U. S. Coast Guard **strongly recommends** vessel owners and operators to:

Review their stability book and ensure that it reflects the vessel's current design, equipment, and operations. Stability books, even when not required by regulation, should be maintained and used to ensure proper vessel loading. Many commercial fishing vessels are not required to be inspected or have load lines but still may have stability information that discusses how the vessel should be loaded and how fuel should be burned. If the vessel details provided in the stability book do not match the actual vessel, the recommended loading procedures in the outdated stability book could negatively alter the stability;

Conduct a new stability review when a vessel changes operations (e.g. new fisheries) if such operations are not already accounted for in the vessel's stability book. For example changing fishing operations from shrimp to King Crab may involve significant equipment changes on a vessel that results in a much greater load which could alter the vessel's stability;

Conduct a new stability review if significant weight changes are made to the vessel as a result of adding or removing equipment. For example, changing the material that fishing pots are composed of may change the weight of each pot. Depending on the type of fishing being conducted, hundreds of pots could be carried. The resulting weight difference and storage location of the pots could alter the vessel's stability;

Ensure that vessel masters and engineers are familiar with the contents of their vessel's stability book and understand how to use the loading information. Stability information is useless unless put into practice. Vessel masters and engineers must be familiar with this information to ensure that their vessel is loaded as designed at all times.

This safety alert is provided for informational purposes only and does not relieve any domestic or international safety, operational or material requirement. Developed by the Office of Investigations and Analysis, United States Coast Guard Headquarters, Washington, DC.

UNITED STATES COAST GUARD
U.S. Department of Homeland Security

MARINE SAFETY ALERT

Assistant Commandant for Marine Safety, Security and Stewardship

October 30, 2008 Alert 10-08
Washington, DC

NEW AUTOMATIC IDENTIFICATION SYSTEM (AIS) DEVICES MAY NOT BE DISCERNIBLE WITH OLDER AIS SOFTWARE

The U.S. Coast Guard is pleased to announce the availability of type-approved Automatic Identification System (AIS) Class B devices. These lower cost AIS devices are interoperable with AIS Class A devices and make use of expanded AIS messaging capabilities. Unfortunately, not all existing Class A devices are able to take full advantage of these new messaging capabilities. All existing AIS stations will be able to receive and process these new messages from a Class B device. However, they may not be able to display all Class B information on their Minimum Keyboard & Display (MKD) or other onboard navigation systems. In most cases, a software update or patch will be required to do so. Therefore, the **U.S. Coast Guard cautions new AIS Class B users to not assume that they are being 'seen' by all other AIS users** or that all their information is available to all AIS users. Further, the **U.S. Coast Guard strongly recommends that all users of out-dated AIS software update their systems as soon as practicable.**

The new Class B devices have the same ability to acquire and display targets not visible to radar (around the bend, in sea clutter, or during foul weather). They differ slightly in their features and nature of design, which reduces their cost and affects their performance. They report at a fixed rate (30 seconds) vice the Class A's variable rate (between 2-10 seconds dependent on speed and course change). They consume less power, thus broadcast at lower strength (2 watts versus 12 watts), which impacts their broadcast range; but, they broadcast and receive virtually the same vessel identification and other information as Class A devices, however, do so via different AIS messages.

Class A devices by design will receive the newer Class B AIS messages and their MKDs should display a Class B vessel's dynamic data (i.e. MMSI, position, course and speed), unfortunately, there are a few older models that do not. Although these older devices might not display the new AIS messages, they are designed—and tested—to receive and process these messages and make them available to external devices (e.g. electronic chart systems, chart plotters, radar) via a Class A output port. These external devices may also require updating in order to discern Class B equipped vessels.

AIS automatically broadcasts dynamic, static, and voyage-related vessel information that is received by other AIS-equipped stations. In ship-to-ship mode, AIS provides essential information that is not otherwise readily available to other vessels, such as name, position, course, and speed. In the ship-to-shore mode, AIS allows for the efficient exchange of information that previously was only available via voice communications with Vessel Traffic Services. In either mode, AIS enhances a user's situational awareness, makes possible the accurate exchange of navigational information, mitigates the risk of collision through reliable passing arrangements, facilitates vessel traffic management while simultaneously reducing voice radiotelephone transmissions, and enhances maritime domain awareness. The U.S. Coast Guard encourages its widest use.

The **U.S. Coast Guard advises mandated AIS users that Class B devices do not meet current AIS carriage requirements**—either the International Convention for the Safety of Life at Sea (SOLAS V/19.2.4) or U.S. regulations (33 CFR 164.46). The Coast Guard is in the process of expanding the current carriage requirements to include most self-propelled commercial vessels which navigate U.S. waters, and the use of Class B devices will be permissible on some of these commercial vessels. Prospective buyers, particularly those operating commercial vessels that are highly maneuverable, travel at high speed, or routinely transit congested waters or in close-quarter situations with other AIS equipped vessels should consider, albeit more expensive, AIS Class A devices in order to meet forthcoming requirements.

All users are reminded to maintain their AIS in effective operating condition at all times, including the information the AIS device broadcasts. Improper operation of AIS or inaccurate information could subject a person to civil penalties not to exceed $25,000 (46 USC §70119). For general information on AIS, carriage requirements, future AIS rulemakings and a listing of Coast Guard type-approved AIS Class A devices which require a software update in order to display AIS Class B information, visit http://www.navcen.uscg.gov/enav/ais .

This safety alert is provided for informational purposes only and does not relieve any domestic or international safety, operational or material requirement. Developed by the Office of Waterways Management, United States Coast Guard Headquarters, Washington, DC, cgnav@uscg.mil.

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UNITED STATES COAST GUARD
U.S. Department of Homeland Security

MARINE SAFETY ALERT

Assistant Commandant for Marine Safety, Security and Stewardship

October 23, 2008 Alert 9-08
Washington, DC

ELECTRONICALLY-CONTROLLED CARGO PUMP ENGINE COMPONENTS

For many years, cargo pump engines on weather decks of Subchapter D & O tank barges had mechanical-type start and control systems. The installation of electronically controlled engines on tank barges since the 1990s has introduced non-approved electrical equipment associated with engine monitoring and control systems into hazardous locations (Class I, Division I) on thousands of tank barges nationwide.

U.S. Coast Guard District Eight recognized this problem with John Deere manufactured engines and distributed enforcement guidance to their field units on November 22, 2005. Since then, John Deere has engineered retrofit packages for approximately 400 units and has gained approval from the U.S. Coast Guard Marine Safety Center for some engine models. Because of widespread use of electronically controlled engines, we suspect there may be other equipment currently in use that similarly is not designed or approved for hazardous locations. Other manufacturers of these engines will likely need to follow suit with their own retrofit packages.

46 CFR 111.105-31(1) defines Class I / Division 1 locations as any area located within 10 feet (3 meters) of a cargo tank vent outlet or ullage opening, or cargo pipe flange or valve on a tank barge that carries a flammable or combustible cargo with a flashpoint below 60 degrees C (140 degrees F). By regulations, electrical equipment located in hazardous locations must be approved intrinsically safe, explosion-proof, or purged and pressurized.

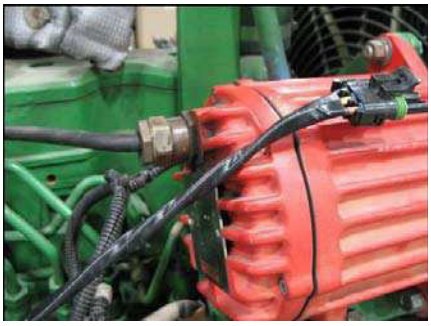
On John Deere electronically controlled cargo pump engines, electrical ignition sources were found in control panels, notification lights, alternators, batteries, computers, and associated wiring for engine sensors. Since new components are still being designed and tested, it may be some time before all electronic components on John Deere engines can be re-engineered and retrofitted for hazardous locations. Again, we suspect other makes of electronically controlled engines have the same issues.

Until complete retrofit packages are designed and approved for these engines, vessel operators and OCMIs should take immediate steps to eliminate the risk by ensuring all electrical components on tank barges are in sound and serviceable condition, and those components that that are not suitable for hazardous locations are replaced as soon as possible.

See the photographs below for examples of electrical components on electronically-controlled pump engines that should be examined, repaired or replaced. All electric starters should be removed and replaced with a hydraulic starter with a manual hand pump, or a pneumatic starter with the air compressor located in a non-hazardous location.

Alternators: If an alternator is used, it should be an approved flameproof or explosion proof alternator.

Typical flame proof /explosion proof alternator.



In some installations, cables between the alternator and battery were cut and a connector put in place to allow easier servicing. This alteration is not appropriate for hazardous locations. The cable seal on this alternator may not be the one approved for the alternator and may have to be examined.

Cable entries on flameproof or explosion proof enclosures require sealing fittings that are suitable for the enclosure.

Electronic displays should be enclosed in explosion proof enclosures.

Typical unacceptable electronic display. This is not in an explosion proof enclosure. The beacon installation shown here outside of the enclosure is also unacceptable.

Typical acceptable electronic display – This particular one was approved by the Marine Safety Center (John Deere Part No. RE531478)

Engine control units (ECU) should be installed in an explosion-proof enclosure or outside the hazardous zone.
On this particular ECU, a large hole was drilled in the bottom of the enclosure with multiple wiring harnesses coming into it and installed without any sealing compound installed in the cable gland. This is not acceptable in hazardous locations.

An acceptable engine control unit (ECU) enclosure is shown here with a sealing compound installed in a proper cable gland. Sealing compound poured in the conduit or cable seal fitting should surround each individual insulated conductor and the outer jacket of the cable, unless the cable is gas tight. Cables should be prevented from being pulled out of the conduit or cable seal fitting.

Batteries should be placed in explosion proof enclosures and should have an approved breather installed on top.

An acceptable battery installation as shown here, approved for this purpose should be the "sealed, gel or AGM" types.

This safety alert is provided for informational purposes only and does not relieve any domestic or international safety, operational or material requirement. Developed by the Office of Domestic Vessel Activities (CG-5431), United States Coast Guard Headquarters, Washington, DC. Questions should be directed to LT James T. Fogle at (202) 372-1038 or james.t.fogle@uscg.mil.

UNITED STATES COAST GUARD
U.S. Department of Homeland Security

MARINE SAFETY ALERT

Assistant Commandant for Marine Safety, Security and Stewardship

October 23, 2008 Alert 8-08
Washington, DC

INSPECTION OF FUEL OIL QUICK-CLOSING VALVES

The U.S. Coast Guard **strongly recommends** that owners and/or operators, vessel engineers, marine inspection personnel and others involved with the technical examination of machinery space equipment fully understand the critical nature and importance of fuel oil quick-closing valves (FOQCVs) and associated systems. FOQCV systems must be well maintained and tested in the same way they would be used in an emergency (e.g. close all valves on each system at the same time). Crewmember knowledge, testing, maintenance and repair, system operation and limitations, documentation, and spare parts are essential elements to review during an effective evaluation of an FOQCV system.

During a fire onboard the USNS SHUGHART on March 5, 2004, more than half of the FOQCVs failed to close properly, which prevented the ship's service generators from being secured. The investigators found that the valves had not been well maintained and the testing protocol used onboard the ship did not test the valves properly. During testing, valves were closed using a hydraulic hand pump system; the quantity of oil within the system should be sufficient to close all of them. However, there is no way to determine that the system contains enough oil to close all the valves, if prior to completing the testing some of the valves are reset!

International and domestic regulations require that positive shutoff valves located outside the fuel tank be arranged with a means to be closed remotely from outside the compartment. These positive shutoff valves may be valves that are remotely closed gradually (e.g. turning a mechanical reach rod) or power operated.

FOQCVs are positive shutoff valves and they may be the final means of securing the fuel to a flammable liquid fire. It is absolutely critical that the ability to close the valves be maintained at all times. The periodic maintenance necessary to ensure proper operation of the FOQCVs must be given the highest priority, and completed as required. Records of completed maintenance and testing should be kept on board the vessel.

Because FOQCVs and other positive shutoff valves on fuel tanks have the potential to prevent loss of life and/or critical equipment during a fire, the importance of verifying their proper operation can not be overstated. As a result of the USNS SHUGHART casualty, the U.S. Coast Guard Office of Systems Engineering developed recommended inspection procedures for the testing and operation of FOQCVs which follow. The U.S. Coast Guard **strongly recommends** that owners and/or operators, vessel engineers, marine inspection personnel and others ensure:

a) The valve operating system is capable of remotely closing all valves in the event of a fire. It is imperative the system is tested as designed. It may be designed to close valves sequentially or simultaneously. Also, there may be manual input such as a hydraulic hand pump operation required at the remote control station. There is no defined time limit to close the valve; the time required will depend on the size of the valve and the system design.

b) There should be technical manuals on board containing diagrams and information that describe the system components, recommended spare parts requirements, maintenance and operation. Schematics and drawings of the systems should also be available.

c) All machinery space workers should be able to identify the valves and how to close them locally and remotely in an emergency. They should be able to demonstrate substantial knowledge of the system, its importance and operation. Ship engineers should be familiar with the technical manual and the associated maintenance requirements for all of the system components.

During Coast Guard inspections, engineers should be able to explain to the marine inspector the important aspects of the manual, as well as the general maintenance requirements of the system and provide information as to when it was last performed. Further, they should be able to explain how the valves are reset following closure. A good test of a crew member's general knowledge of fire fighting would be to ask them details of the technical items noted above with an emphasis on why these valves are important.

The domestic regulations enforced by the U.S. Coast Guard for positive shutoff valves are contained in 46 CFR Part 56.50-60(d), Subparagraph 3. These regulations are available through the U.S. Government Printing Office (GPO) and may be downloaded without cost from the GPO's internet website http://www.gpoaccess.gov/index.html.

This safety alert is provided for informational purposes only and does not relieve any domestic or international safety, operational or material requirement. Developed by the Office of Domestic Vessel Activities (CG-5431), United States Coast Guard Headquarters, Washington, DC.

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UNITED STATES COAST GUARD
U.S. Department of Homeland Security

MARINE SAFETY ALERT

Assistant Commandant for Marine Safety, Security and Stewardship

September 19, 2008 Alert 7-08
Washington, DC

DANGER ALOFT

The U.S. Coast Guard **strongly encourages** that operators of vessels establish clear written guidelines and procedures for working aloft, require the use of safety harnesses, discourage and prohibit “rites of passage” such as described below. Going aloft to any height on any type of vessel is very serious and dangerous business, can be deadly and leaves no room for acts of daring or joking around!

We’re sadly reminded of that fact by the death of an 18 year old crewmember onboard a New England sailing vessel. This tall ship had embarked a group of students and set out for a beautiful day of sailing. About an hour into the cruise a crewmember slipped from the rigging and plummeted about 30 feet to the deck below sustaining terrible injury that resulted in his death.

Evidence in the casualty investigation indicated that this young man went aloft without permission, was unsupervised and alone and was participating in an informal rite of passage referred to in the tall ship community as “laying across the spring stay.” This involves crossing from one mast to another while hanging by your hands and feet on a wire called a “spring stay.”

The resultant Coast Guard casualty investigation concluded in part that, "The practice of laying across the spring stay is an extremely dangerous and unnecessary evolution, especially while the vessel is underway, and without a safety harness. Although crewmembers were not directed to use the spring stay, it appears the practice was not discouraged and was considered by some crewmembers as a daring accomplishment or rite of passage."

Further, the investigation concluded that:

- The policies regarding crew training for going aloft in the rigging onboard the vessel appeared to be “unstructured and loosely defined” relying primarily upon on-the-job type training with no written guidelines or procedures.

- The crewmember was not wearing any type of safety harness. This piece of safety equipment was neither required by regulation or by company policy and was not onboard the vessel at the time of the casualty.

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UNITED STATES COAST GUARD

U.S. Department of Homeland Security

MARINE SAFETY ALERT

Assistant Commandant for Marine Safety, Security and Stewardship

September 19, 2008
Washington, DC

Alert 6-08

COUNTERFEIT EMERGENCY ESCAPE BREATHING DEVICES (EEBDs)

The U.S. Coast Guard has recently learned that counterfeit Unitor model UNISCAPE 15H EEBD Emergency Escape Breathing Devices (EEBDs) are being sold to ship operators and placed onboard commercial vessels. The U.S. Coast Guard **strongly encourages** that all vessel owners and operators with EEBDs onboard carefully and thoroughly inspect them for authenticity. If any doubt exists as to the authenticity, they should immediately contact their emergency equipment vendors and / or the manufacturer for verification or replacement.

The number of fake units sold and currently onboard vessels is unknown and could be substantial. The fake reproduction will not fit over an individual's head and the automatic air release valve will not open. A crisis situation requiring the use of an EEBD will be severely compounded, potentially leading to death, should a crewmember inadvertently rely on a fake reproduction.

Differentiating factors:

An authentic Unitor UNISCAPE 15H is contained in a shiny PVC bag. When viewed from the front with the instruction icons upside down, the zipper opens from left to right, and at the most left section of the zipper is a two centimeter gap covered by a clear tab that has a button closure.

The **fake reproduction** is contained within a **dull canvas-like** material bag. When viewed from the front with the instruction icons upside down, the **zipper opens from right to left**, and at the most left section of the zipper there is no opening, although a tab made of what appears to be the same material of the bag is present with a button closure. This unit will not automatically activate.

Note: Authentic Unitor UNISCAPE 15H EEBDs are not permitted on U.S. flag vessels because they are not National Institute for Occupational Safety and Health certified.

This safety alert is provided for informational purposes only and does not relieve any domestic or international safety, operational or material requirement. Developed and distributed by the Office of Investigations and Analysis, United States Coast Guard Headquarters, Washington, DC.

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UNITED STATES COAST GUARD
U.S. Department of Homeland Security

MARINE SAFETY ALERT

Assistant Commandant for Marine Safety, Security and Stewardship

September 17, 2008 Alert 5-08
Washington, DC

PREVENTING ENGINE EXHAUST SYSTEM FIRES

This Safety Alert addresses the issue of preventing unwanted fires caused by high temperature components associated with turbochargers and engine exhaust systems in close proximity to combustible ship structures.

Two recent marine casualties involving inspected passenger vessels resulted in personnel injury, fire damage to machinery and ship structures, operational down time and lost revenues. In both cases, the vessels were recently re-powered with new turbocharged engines having exhaust systems designed to operate at higher temperatures than the previous engines. Investigations into each case identified common discrepancies as follows:

- Failure to properly insulate or shield combustible ship structures from engine exhaust systems in accordance with 46 CFR §182.430.
- Failure to properly submit documentation for plan review, which may have identified failures to comply with 46 CFR regulations.

As a result of these recent incidents and due to other related casualties involving small passenger vessels, the U. S. Coast Guard **strongly recommends** vessel owners and operators to:

Inspect vessel engine exhaust systems, machinery spaces, and exhaust compartments to verify that lagging and insulation are properly installed to shield hot surfaces and combustible materials. Proper insulation and shielding methods will help to prevent fires due to flammable and combustible liquids spraying onto hot surfaces (i.e. turbochargers, exhaust piping) and will prevent combustible surfaces (i.e. wood, fiberglass, FRP) from heating up to ignition temperatures due to close proximity to hot surfaces. Pay particular attention to areas where exhaust systems penetrate bulkheads and decks, making sure that combustible surfaces are properly shielded and/or insulated using non-combustible materials.

Ensure that proper submittals for plan review are made and documented with the local U.S. Coast Guard Sector Office of Prevention. Plan reviews are required whenever engines and/or propulsion systems are changed or modified. This includes re-engine projects where engines are not replaced in-kind, but with different types of engines or engine manufacturers.

This safety alert is provided for informational purposes only and does not relieve any domestic or international safety, operational or material requirement. Developed by the District 11 Prevention Division and distributed by the Office of Investigations and Analysis, United States Coast Guard Headquarters, Washington, DC.

UNITED STATES COAST GUARD
U.S. Department of Homeland Security

MARINE SAFETY ALERT

Assistant Commandant for Marine Safety, Security and Stewardship

September 5, 2008 Alert 4-08
Washington, DC

UNLICENSED TO DRIVE

The Coast Guard strongly reminds the towing industry of its responsibility to properly man their vessels with adequate numbers of qualified and licensed crewmembers.

Recently, a collision on the Mississippi river near downtown New Orleans between a Cargo Ship and a loaded oil barge being pushed by an Uninspected Towing Vessel (UTV) resulted in a major oil spill, significant environmental damage, a costly oil spill cleanup response, closed "The River" for six straight days, and caused significant economic loss to the local Louisiana economy.

The Commander, Eighth Coast Guard District, convened a formal investigation into the incident. While the investigation continues, the preliminary findings of this inquiry have revealed that the tug was operated solely by an individual who held a Coast Guard Apprentice Mate (Steersman) license and who was not authorized to independently direct its movement. An apprentice is strictly prohibited from operating a towing vessel unless in the presence of a properly licensed Master or Mate (Pilot). Coincidentally, just a few days prior to this incident another UTV was involved in a marine casualty that resulted in the sinking of the tug. The preliminary investigation into that incident revealed that the crewmember operating that vessel at the time of the casualty only held a Coast Guard Apprentice Mate license and similarly was not authorized to independently operate the tug.

Failure to properly man a vessel may result in significant penalties and fines, not to mention other, possibly more significant and costly civil litigation. Possible enforcement actions include issuing civil penalties, taking mariners who hold a Coast Guard issued credential (e.g. a license or merchant mariner's document) to a suspension and revocation hearing in order to suspend or revoke that credential, and/or refer a violation to the United States Attorney for criminal prosecution. The Coast Guard may also shut down the operation of vessel or facility, or prohibit a vessel from entering a particular port or place until such time a specific violation is corrected.

While the costs associated with the fines and penalties can be very severe, had this incident involved a collision with a small passenger vessel or ferry commonly known to transit in and around New Orleans this casualty may have had a much more severe outcome: a significant loss of life!

This safety alert is provided for informational purpose only and does not relieve any domestic or international safety, operational or material requirement. Developed and distributed by the Office of Investigations and Analysis, United States Coast Guard Headquarters, Washington, DC, and the Prevention Division, Coast Guard Atlantic Area.

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UNITED STATES COAST GUARD
U.S. Department of Homeland Security

MARINE SAFETY ALERT

Assistant Commandant for Marine Safety, Security and Stewardship

July 2, 2008 Alert 3-08
Washington, DC

Controllable Pitch Propeller Systems and Situational Awareness

A marine casualty in March of 2008 involving a fishing vessel in the Bering Sea resulted in multiple fatalities and complete loss of the vessel. A Marine Board of Investigation is currently examining the various circumstances surrounding the casualty. Although the investigation is not complete, safety issues associated with casualty have been identified that merit immediate public dissemination.

Based on the survivors' testimony, the crew experienced difficulty with launching and entering the three liferafts because the vessel was making considerable sternway when the order to abandon ship was issued. Evidence indicates the main engines were still running and the vessel was backing with significant astern pitch. Consequently, two of the liferafts quickly traveled forward past the bow of the vessel when they were launched. Attempts to retrieve the liferafts using the painter lines were unsuccessful. As a result, the majority of the crew members were forced to jump into the 34°F water and attempt to swim to the liferafts. Ultimately, only 22 members of the vessel's crew made it into the liferafts. All of these crew members survived. Of the other 25 crew members who never made it into a liferaft, four died and one remains missing.

The Coast Guard ***strongly recommends*** that owners, operators, and masters of vessels with controllable pitch propellers understand the design and operation of the system. This includes the primary and emergency sources of power for both the control and main systems, the location and procedures for using alternate control stations, and the locations of the emergency shutdowns. While controllable pitch propeller systems are generally designed and constructed to fail in the "as is" position, in hydraulic CPP systems, the actual blade pitch may change. In this case the vessel was making considerable sternway. This was not a unique occurrence. The MS EXPLORER also experienced this problem before it sank in November of 2007. Vessel operators, masters and crew members must be prepared to respond accordingly.

In light of this incident, vessel owners, operators, masters and crew members should also be mindful of the following safety issues:

1. Vessel masters and officers must maintain situational awareness at all times and understand the effects of their actions and decisions on the safety of their crew, especially during emergency situations involving flooding. This includes understanding what impact the vessel's speed, heading, heel, and trim will have on the crew as it abandons ship.

2. The master or individual in charge must evaluate the particular circumstances of each emergency situation (weather, seas, experience of crew, condition of vessel, etc.) and adjust emergency procedures accordingly to provide for the safety of his crew, vessel, and the environment.

3. All crew members should understand that immersion suits will affect their dexterity, limit mobility, and may make it more difficult to launch survival craft, particularly when the survival craft are covered with snow or ice. Crew members responsible for launching the survival craft should practice and be able to do so with their immersion suits on. Lifesaving gear should be kept free of ice and snow whenever possible.

4. When abandoning ship, crewmembers should make every effort to enter directly into a liferaft or lifeboat before entering the water. If crewmembers must enter the water, they should stay together and attempt to enter a liferaft, climb onto floating debris, or use any other means available to get themselves out of the water as soon as possible.

5. Emergency Drills should not be limited to routine procedures such as donning immersion suits. Emergency drills should ensure all crew members, including bridge and engine room personnel, understand and practice what to do in various emergency situations under actual conditions.

Additional information regarding emergency procedures for Commercial Fishing Vessels can be found at: http://www.fishsafe.info .

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UNITED STATES COAST GUARD

U.S. Department of Homeland Security

MARINE SAFETY ALERT

Assistant Commandant for Marine Safety, Security and Stewardship

June 26, 2008 Alert 2-08
Washington, DC

CHANTIX MEDICAL ADVISORY FOR MERCHANT MARINERS

On May 21, 2008, the Institute for Safe Medication Practices released a report on side effects and concerns associated with the use of Chantix (varenicline). Chantix is a medication used to help patients quit smoking. To date, over four million prescriptions have been written in the United States.

The Institute for Safe Medication Practices report states the following: There are immediate safety concerns about the use of Chantix among persons operating aircraft, trains, buses, and other vehicles, or in other settings where a lapse in alertness or motor control could lead to massive, serious injury. Other examples include persons operating nuclear power reactors, high-rise construction cranes or life-sustaining medical devices. Based on reports of sudden loss of consciousness, seizures, muscle spasms, vision disturbances, hallucinations, paranoia and psychosis, Chantix may not be safe to use in these settings. The extent to which Chantix has already contributed to accidental death and injury has not been fully investigated and reported. For additional information access - http://www.ismp.org/docs/varenicline Study.asp .

Although not specifically mentioned in the report, the maritime domain is one setting where lapses in alertness or motor control can have catastrophic results. The safety of the maritime community and the public, and the protection of the environment are paramount. Ensuring that medications prescribed do not put mariners and others at increased risk of injury or death is essential.

The Coast Guard reminds all maritime industry personnel that mariners should not perform a safety-sensitive function on any vessel while under the influence of any substance that may negatively impact their performance. To that end, mariners are strongly warned that some prescription medications, over-the-counter medications, vitamins and dietary supplements, alone or in combination with other substances, may adversely affect an individual's ability to perform critical functions and place the individual at risk of sudden incapacitation. Mariners should seek the advice of their healthcare provider before taking any medications, vitamins or dietary supplements.

If you are currently taking or have recently discontinued the use of Chantix, we strongly recommend that you consult with your healthcare provider to discuss potential side effects and your job performance requirements. You and your healthcare provider should be alert to and monitor for all physical and psychological changes that may affect your performance, both while taking this medication as well as during the withdrawal period. If you are experiencing any of the psychiatric, cardiologic, musculoskeletal or visual side effects associated with Chantix, you should immediately cease performance of all duties related to your mariner credentials and contact your healthcare provider.

Questions regarding this notice may be addressed to Lieutenant Junior Grade Elizabeth Braker, Medical Evaluation Branch, Coast Guard National Maritime Center at (304) 433-3656 or Elizabeth.L.Braker@uscg.mil.

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UNITED STATES COAST GUARD
U.S. Department of Homeland Security

MARINE SAFETY ALERT

Assistant Commandant for Marine Safety, Security and Stewardship

May 9, 2008
Washington, DC

Alert 1-08

Maintaining Vessel Watertight Integrity

This Safety Alert addresses two issues: watertight integrity and high level bilge alarms.

Recently a marine casualty involving a fishing vessel in the Bering Sea resulted in multiple fatalities and complete loss of the vessel. A Marine Board of Investigation is currently examining the various circumstances surrounding the casualty. Although the investigation is not complete, testimony indicates the flooding of the vessel may have been exacerbated due to open or leaking watertight doors and other compartmental deficiencies which impacted the vessel's overall watertight integrity.

As a result of this and other similar casualties, the U. S. Coast Guard **strongly recommends vessel owners and operators:**

WATERTIGHT INTEGRITY

Ensure all watertight decks and bulkheads are inspected periodically to verify that there are no unprotected openings or improper penetrations that will allow progressive flooding and that closure devices (e.g. watertight doors, duct closures, etc.) are in place and in working order.

Ensure all crewmembers are familiar with the locations of the watertight doors (WTDs) and weather tight closures throughout their vessels. Knowing the locations of such WTDs and weather tight closures should be part of the crewmember vessel familiarization process.

Ensure WTDs and hatches are closed while at sea and as otherwise specified in the stability guidance provided to the master or individual in charge. The importance of keeping WTDs and hatches closed should be emphasized on a regular basis (e.g. at safety meetings). WTDs and hatches should be opened only briefly to allow passage and labeled appropriately to remind crewmembers to close them. If they must remain open to permit work, WTDs and hatches should be attended at all times so that they can immediately be closed. Any WTDs permitted to be open while the vessel is underway should be secured during drills to ensure they work properly.

Implement a WTD inspection program to ensure each WTD is regularly inspected and properly maintained. As part of the inspection of each WTD, the following should be examined: straightness of the knife edge; the door assembly for twisting or warp-age; evidence of loose, missing seized or damaged components; permanent set in gasket material, cracks in the gasket; gaps at gasket joints; paint, rust, or other foreign material on gaskets, knife-edges and working parts; binding and difficult operations; and loose or excessively tight dogs. Rotating spindles of the dog, handles and hinges, and other points of friction should be lubricated to prevent seizing and allow proper closure. If fitted, the spindle packing should also be examined.

Ensure watertight hatches, dogged manholes, bolted manhole covers, and access plates are given similar examinations, focusing on the sealing surfaces and the method by which the hatch is secured. Gasket materials should be replaced whenever they are found insufficient. Regardless of the type of hatch or access, every component that secures the device, such as dogs, wing nuts, or bolts should be inspected, lubricated and free, and repaired or replaced as necessary to ensure they operate properly. As with watertight doors, hatches and accesses should be labeled to indicate they remain closed while underway. Most importantly, all securing devices must be used when the hatch or access is closed. Improper closure of a hatch will not prevent flooding.

Ensure compartments and external hull structures fitted with ventilation ducts that have hinged covers with gaskets, hinges, sealing surfaces and securing mechanisms are regularly inspected and properly maintained (see above for guidance).

Ensure electrical cables and conduits, piping runs, remote valve actuators, and other components that penetrate watertight bulkheads, decks, and compartments are inspected frequently and properly maintained. Each may have a unique sealing method involving glands with packing assemblies, penetration seals, or other methods. Frequent inspection and proper maintenance of these various fittings and assemblies will assist in minimizing the possibility of progressive flooding.

BILGE AND HIGH WATER ALARMS

Ensure water accumulation is minimized and all spaces are kept dry unless permitted by the stability instructions provided to the master or individual in charge.

Ensure bilge high level alarms are arranged to provide the earliest warnings of abnormal accumulation. The high level bilge alarms should be set as low as possible to the deck or bilge well and positioned along the centermost area of the compartment or in a location at which the fluids will gravitate to first. In areas where bilge water routinely accumulates, the bilge high level alarms should be placed just above the point where under normal working conditions the accumulation would be pumped to a holding tank, overboard, or through an oily water separation system if required. Alarms may be fitted with short time delays to prevent nuisance alarms caused by the rolling and pitching of the vessel.

Ensure all crewmembers understand the importance of minimizing water in the bilges.

Provide the funding, labor, spare parts, and vessel availability necessary to ensure leakages stemming from machinery, equipment and other components are kept to a minimum at all times in accordance with good marine practice.

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