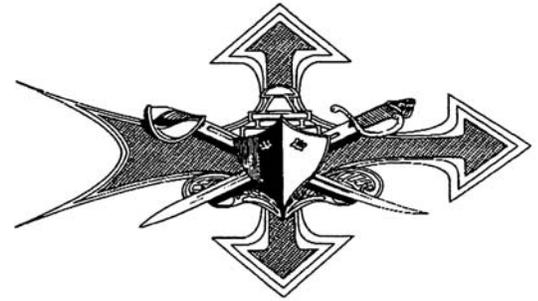


SHIPS' SAFETY BULLETIN

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Suggested routing should include CO, XO, department heads, division officers,
CMC, CPO mess, petty officers' lounge, work-center supervisors, and crew's mess.
Blanks provided for initials following review:

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PREPARING FOR COLD WEATHER

By BMCS Danny Tidwell
USS Carr

Few aspects of cold weather operation are as important as having a well indoctrinated crew. Everyone onboard, from the commanding officer to the newest seaman, must have a good understanding of the cold-weather environment he or she will face and what to expect in it.

Personal safety is of paramount importance. Freezing temperatures and icy decks compound the safety problems normally encountered onboard. An intensive safety campaign should be organized and executed to heighten everyone's concern for safety. All hands should be on the lookout for possible safety-related problems that should be brought to the attention of their supervisor.

Personnel need to follow all safety aspects of cold weather clothing, including their variety and use. Clothing acquired from cold weather clothing pools should be in sufficient quantity and properly sized to protect the crew adequately.

Most equipment used during UNREP operations is located on deck. Consequently,



both low temperatures and ice accumulation affect it. Ice- and snow-covered decks and hatches also cause problems during UNREPs. Among the most seriously effected UNREP equipment are winches, ram tensioners, sliding pad eyes, sheaves, and wire ropes. Other problems associated with the operation of UNREP equipment in very cold weather include hydraulic fluid, lube oils, and greases. These lubricants become thick and stiff at very low temperatures even when using recommended cold-weather material. This may cause some hydraulic winches, ram tensioners, and other hydraulic or pneumatic equipment to operate

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sluggishly and erratically. Winch sheaves may not turn freely due to stiff grease. Ice may cover the surface and get inside the mechanisms of the on-deck equipment. This may produce such problems as jammed sheaves, ice-fouled wire ropes and fittings, and frozen lines. Low temperatures reduce the performance of all batteries, including those used in pallet and forklift trucks. Operating time is shortened and more frequent recharging is necessary. Flashlight batteries will also have a shorter lifetime in cold weather. Chem-lites will lose intensity after an hour or two and may become useless at very low temperatures. Ice and snow covered decks may become too slippery for personnel and/or for the operation of pallet and fork lift trucks. Moisture in compressed air lines or other pneumatic equipment may freeze causing equipment damage or faulty operation due to flow blockages. Motors may overheat or burn up due to increased resistance. Natural fiber lines, such as cotton and hemp that soak up water, will be difficult to handle when the water freezes. Nylon and Dacron` lines, particularly the braided type, pick up more water but remain relatively easy to work.



Don't wait until the last minute to get ready for the cold. If you do, you and your gear may be all frozen up.

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It's Hunting Season!

By CDR Walter Banks
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It's hunting season! This is a great time of the year--maybe not for animals but certainly for the hunter!

For avid hunters who have honed their shooting skills at the outdoor shooting range, and have cleaned and oiled their rifles, it is time to celebrate the season. Like in all sports, hunters follow rules unique to their sport and they adhere to rules designed with safety in mind. Unlike participants in spectator sports, hunters take to the woods with guns in hand, and they are not alone out there. Thousands of hunters anticipate the hunting season's first day.

While thoughts of bagging a deer or turkey are foremost on hunters' minds, one must never forget a hunter's cardinal rule is hunting without getting hurt or hurting someone else. Hunting really can be one of the safest outdoor recreational activities. However, people do get hurt while hunting because they become accidentally involved in one or more of the following situations.

Most people are shot accidentally by ricocheting bullets because, unknown to the hunter, they are in the line of fire. Or anxious hunters accidentally fire their gun mistaking other hunters for prey.

It is hard to defend oneself against the first reason but easy to protect yourself from this one. Wear a bright orange vest or other brightly-

colored clothing. Sadly, some hunters refuse to wear an orange vest, or any safety gear, because they feel wearing it causes them to lose their edge by exposing their position to the game they're hunting.

We humans have the edge in hunting because of our thinking ability. Each hunter is responsible for taking the proper safety precautions for themselves and for fellow hunters. Danger lurks each time a hunter enters the woods or a hunting lodge. Remember that you are not the only one out there. Others are all around, camping or using something other than a firearm (perhaps cameras and binoculars) to "capture" animals. Always follow basic rules for whatever type of hunting you are doing. In case you forgot them during your off-season, here are some points to refresh your memory:

- Treat each firearm as if it were loaded.
- Always point your weapon in a safe direction.
- Always know what is down-range from your target.
- Do not have your finger on your trigger unless you are ready to fire.
- Always strap yourself into your stand before doing anything else.
- Never climb with any sort of weapon in hand, especially a loaded one.
- Use portable tree stands or inspect permanent ones before using them.
- Always climb with a safety belt and be extra careful when raising and lowering your weapons to and from the stand.

Of course, if you don't want to abide by these hunting rules and regulations, then it may be safer to skip the hunt and opt for the meat and poultry section at the supermarket; they offer a variety of game and poultry.

Happy hunting!

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VEHICLE SAFETY FOR WINTER CONDITIONS

By GSCS (SW) Joe Petraglia
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It's not too early to start thinking about what you need to do to your vehicle for winter conditions. Cold winter months bring different requirements for safe driving. During warmer months, we enjoy mostly sunny dry days. However, colder months can bring wet and slippery pavement due to rain, snow and ice, creating hazardous road conditions.



The designers of your vehicle know its calibrated set points, tolerances, and what is required to keep it running properly. So, your best defense in preparing for winter driving is to read your owner's manual and follow the maintenance schedule. This will keep your vehicle in operating condition and you can avoid extra time and money spent in the repair shop.

Here are some tips for preparing your vehicle for winter.

- Check the level of your antifreeze and freeze point with an antifreeze tester.
- Use low viscosity oil in sub-freezing temperatures to help your vehicle run better.
- Check the battery terminals to ensure they are clean and tight. If your battery

is more than a few years old, have it checked.

- Ensure the wiper blades are clean and in good condition. Also, fill the washer fluid and use fluid that does not freeze. A wiper blade in poor condition can scratch the windshield and create smearing and streaking.
- Maintain your gas tank at half full or above. The extra volume of gas can help reduce moisture problems in the fuel system. Also if you have to pull over for an emergency for an extended period of time, you can use the engine to provide heat.
- Conduct an operational check of the heating system. Ensure the air goes to where you select it to go. Not having warm air for defrosting the windshield can be detrimental to your driving safety.
- Keep a shovel and some sand or cat litter in the trunk. You never know when you may get stuck in snow.
- Ensure your tires are properly inflated.
- Keep a set of tire chains in your trunk if you live in an area of certain snowy conditions or you are traveling to an area of snowy conditions.
- Check the condition of all fluid containers, belts and hoses and replace them if necessary.
- When was the last time you had a tune-up? Faulty wiring, worn spark plugs or sticking choke or emission control devices can fail at the least expected time.
- Check the condition of door and window gaskets. Apply a thin film of silicone to prevent dry rot. Damaged gaskets can allow cold air into the vehicle.
- Check the air filter. These tend to get dirty in warmer months since there isn't much rain to keep dust and dirt down.
- Maintain an emergency/survival kit in your trunk – blankets, ice scraper,

flashlight, flares, booster cables, health food bars, bottled water, first aid kit, snow boots, gloves, a hat; and, it's always a good idea to carry a cell phone.

- Remove snow from lights and all windows so your vision is not obscured. Snow on top of your vehicle is also added weight.
- Plan your road trips accordingly and let others know of your travels. It's best to do your driving during the day since you are more likely to receive prompt assistance during the daytime.
- Keep abreast of weather reports.
- Be alert and anticipate the worst-case scenario.
- Drive at a safe distance of other vehicles.

These are just a few tips, not inclusive for safer driving during the winter months. We all appreciate the change in scenery when snow falls. But with it, brings on conditions not conducive with driving.

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Slippery When Wet!

By DCC(SW) Jake Speed
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During the past four years, there have been more than 160 reported mishaps of Sailors receiving injuries while transiting ladders. These reports range from sprained ankles to back injuries. Why do so many mishaps result from something as routine as climbing or descending ladders?

That's just it: They are ladders, not stairs, yet Sailors use them as stairs. Sailors in a hurry jump half way down the ladder, or carry boxes on the ladder where they can't see in front of them. The next thing you know, they are at the

bottom of the ladder with a sprained leg, back injury, or broken bone.

Shipboard ladders have a 50- to 60-degree incline (an angle much steeper than your “normal” home staircase). These ladders are transited more frequently; as such; they accumulate more wear and tear on treads and rungs than do the steps on normal household stairs.

Transiting shipboard ladders is a part of a Sailor’s daily routine. There’s no getting around using ladders; but, the following hints will help you avoid becoming another ladder-mishap victim.

- Use common sense! Don’t carry stores, supplies, or anything else that obstructs your field of vision while transiting ladders. Set down those two five-gallon cans of paint when using a ladder. So what does a Sailor do? Carry up one five-gallon can at a time? Get a couple of shipmates to stand at different points and hand the cans up or down like in a bucket brigade? We need to be specific here! Traveling up or down a ladder while not watching (or being able to see) your step is asking for trouble.
- Regularly inspect ladder rungs and treads, and the condition of the non-skid. If they are worn or are in poor condition or wet, you have a recipe for disaster and injury.
- Make sure PMS is being performed under DCPO PMS (MIP 6641/004 A-1/A-1R).
- Address ladder safety--how to ascend and descend-- during all new arrival indoctrinations, during visitor welcome-aboard presentations, and during safety stand-downs. Regularly address ladder safety in POD notes.
- Have proper stanchions and associated hardware installed. Ensure chains and pins are and in good working order.

- Hold onto ladder rails and chains when transiting ladders. Immediately secure ladders found with missing hardware, loose treads or worn non-skid, etc.
- Transit up or down one step at a time, and do not swing from the handrails, or slide down the ladder.
- During zone inspections and daily fire marshal inspections, QA the overall material condition of the ship’s ladders.

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Stearns and Mustang Abandon Ship Life Preservers

By LT William Thomas
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Recently, the Navy approved the Stearns and Mustang abandon-ship life preservers to replace the aging, grey colored abandon ship life preservers, commonly known as “rubber duckies.” The Naval Safety Center has noted several ships have started replacing the older abandon ship life preservers with the replacements.



For civilian use, the life preservers are probably good “as-is,” but in the Navy there are procedures one must follow before putting any equipment into service. There is required “start up (SU)” PMS contained in MIP 5832/016 for the Stearns and Mustang abandon ship life preservers. The SU-1 check for this MIP also references the A-1 check. Do not forget to submit an OPNAV 4790/CK if you are replacing the old abandon ship life preservers.

Here are some other things to keep in mind when shifting to the new abandon ship life preservers.

- The CO₂ inflation cylinder should be 33 grams.
- Some early models of the Stearns do not have a toggle on the buddy line. So you need to add one.
- Replace the green tab with copper-coated wire (NSN 9Z 6145-00-838-9444. (Fig. 1))



Figure 1

- On the current SFR, there is no requirement to add the dye-marker to the Stearns or Mustang abandon ship life preserver.
- Add anti-sabotage compound to retaining nut. (NSN 9Q 8030-01-163-3483.)

- Ensure all accessories are present and distress marker light has working batteries. (See Figure 2)



Figure 2

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Halocarbons Exist in Your Work Environment

By CDR Walter Banks
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During recent surveys I have noticed many ships have silenced their Freon leak-detector alarms without informing the department head or commanding officer. Several existing hazards involve Freon or halocarbons -- one is that of halocarbon vapors produced from Freon emissions.

Everyone must be aware of the inherent dangers of Freon-produced halocarbons. Freon is heavier than air. When it escapes from a pipe or drum, it forms an invisible stream and seeks the lowest level of the compartment. It then fills the space and replaces oxygen with dangerous halocarbons. Freon is odorless and tasteless and remains completely unnoticed while becoming an immediately dangerous to life or health (IDLH) hazard. Breathing the vapors can cause cardiac arrest from anoxia.

Among already existing, vigorous shipboard command training, ships also should include educational presentations making each crewmember aware of the dangers of halocarbons, Freon usage and leakage, Freon burn hazards (when it's in liquid form), and the dangers of asphyxiation associated with Freon. Section 550-3.7.6 of NSTM 550, *Industrial Gases-Generating, Handling, and Storage*, requires posting warning signs outside any space containing halocarbons.

Installed leak detectors and airflow monitors must be fully functional at all times. Space communication equipment must be in good working order. Supplemental exhaust ventilation should always be used when working with potential halocarbons. Make sure an emergency breathing device is available and use the two-man rule. NSTM 074 Volume 3, *Gas Free Engineering*, and NSTM 550, *Industrial Gases-Generating, Handling, and Storage* provides additional guidance.

One more halocarbon concern is that of installed airflow and halocarbon monitors. In 98 percent of safety surveys we conducted in 2003 we discovered ship's airflow monitoring systems were not functioning. Some systems were in cutout, audible alarms silenced, and power secured. These monitors are greatly affected by the run condition of the installed ship's ventilation system.

Many ships we visit have nonstandard-configured running ventilation: vents shut down, supply on slow, exhaust off, or vice versa. Many times, shipboard personnel adjust or alter installed ventilation system to fit individual needs. Adding to this recipe for disaster is the fact that the Freon-venting log (NSTM 516, *Refrigeration Systems*) for intentional and unintentional Freon venting usually is not used.

Starting and stopping installed ship's ventilation greatly affect proper monitor operation, requiring ship's force to constantly adjust the monitors to compensate for no or reduced airflow.

If all the above issues did not exist, the shipboard working and living environment would be much safer. Each of these issues result from lack of knowledge and training, and not enforcing written standard operating procedures.

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Calcium Hypochlorite Handling and Storage

By MM1 (SW) Karlus Smith
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During some recent afloat surveys, our Surveyors observed ship's force personnel using calcium hypochlorite (CaCl_2O_2) to clean shower stalls, urinals, and other areas. The use of calcium hypochlorite was not supervised adequately. As a result, the solution was not mixed to the safe and proper ratio; personnel were not wearing correct PPE. Calcium hypochlorite is a white powder, granule, or pellet with a strong chlorine-like odor. Calcium hypochlorite is an oxidizer and adherence to specific safety precautions for use and storage is mandatory.

When not used or stored properly, calcium hypochlorite will irritate skin, respiratory system and cause corrosion in the space it is being stored. Calcium hypochlorite when in contact with water will produce chlorine gas. Therefore, when handling calcium hypochlorite, wear a long-sleeved shirt with the sleeves rolled down and neoprene gloves to prevent skin contact. In poorly ventilated areas or if dust is evident, use a NIOSH/MSHA approved air purifying, dust, mist and particulate respirator. Where the potential for high exposure exists, such as clean-up after spilling or cleaning a calcium hypochlorite storeroom, use MSHA/NIOSH approved supplied-air respirator with a full facepiece operated in a pressure-demand or other positive-pressure mode. When

mixing calcium hypochlorite and handling calcium hypochlorite solution, make sure to wear eye goggles, in addition to a face shield, for face and neck protection, and a rubber apron.

Before working with calcium hypochlorite, you should be trained on its proper handling and storage. The following requirements apply when calcium hypochlorite is stored:

- Do not stow in machinery spaces, storerooms, flammable liquid stowage areas, berthing spaces, or oil and water test laboratory areas. Stowage shall not be in areas used for stowage of greases, oils, paints, or other combustible materials. Stowage shall be away from oil lines and other potential sources of combustible material, and at least 5 feet from any source or surface, which may exceed 60°C (140°F). Stowage areas shall not be subject to condensation or water accumulation.



- Ready-use stock of calcium hypochlorite that has been issued to medical and engineering departments shall be stowed in a locked box mounted on a steel bulkhead, preferably in the associated department's office space. A gray metal box labeled (with red letters on a white background: **HAZARDOUS MATERIAL, CALCIUM HYPOCHLORITE**), such as a first-aid locker, NSN 1H 2090-00-368-4792 is

recommended. Three 1/4-inch holes shall be drilled in the bottom of the box to release any chlorine products.

- No more than forty-eight six-ounce bottles (water purification and biological/chemical agent decontamination), thirty-six 3.75-pound bottles (sewage waste treatment) or no more than a seven-day supply shall be stowed in any individual locker or bin.
- Issue of calcium hypochlorite shall be made only to personnel designated by the medical officer or the engineer officer.



- Store oxidizers in their original containers. Make sure containers are tightly sealed.

These requirements do not include everything listed in NSTM 670, *Stowage, Handling, and Disposal of Hazardous General Use Consumables*. Review the NSTM requirements as well as PMS MIP 6521/601, Chapter 6 of NAVMED P-5010, and NSTM 533, *Potable Water Systems*, before handling or stowing calcium hypochlorite.

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