

July-September 2009

Submarine Division of the Naval Safety Center

FLASH



Submarines

Factual Lines About Submarine Hazards

Page	Article Name
1	Table of Contents
2	Proper Assembly Protects Your Equipment and Your Sailors
3	Mishap and Hazard Reporting
4	Mishap and Hazard Reporting (Cont.) / 688 Class Ventilation Fans 6 and 7 Shock Hazard
5	Hazardous Material Management / Damage Control
6	Damage Control (Cont.) / Safety Harnesses
7	Hail and Farewell / High Tech Resources / Flash Editor Comments
8	Effective COMNAVSAFECEN Submarine Safety Advisories / Points of Contact

Route for Safety's Sake!

CO ___ XO ___ NAV ___ ENG ___ CSO ___ SUPPO ___ MDR ___ DCA ___

Safety Officer ___ COB ___ EDMC ___ 3MC ___ CPO Quarters ___ Ship's DCPO ___

When reading through these articles, remember this is not an all inclusive list and there are many other issues that should be addressed with regard to each section's attribute checklist.

Each section owner is cautioned to review the Hazard Reviews and for further information or assistance in improving your safety and / or processes go to: <http://safetycenter.navy.mil/afloat/submarine/index.asp>

Warnings, Cautions and Notes

The Flash is a newsletter that provides safety-related information to the fleet. This information is a summary of research from selected mishaps and surveys done throughout the force. This data are provided to assist you in YOUR mishap prevention program and gives advance notice of other safety-related information. *This newsletter is NOT authoritative but will cite references when available.*

Proper Assembly Protects Your Equipment and Your Sailors

CDR Carville Webb

Too often you and I are finding equipment that has been improperly re-installed. Aside from the obvious issue of poor workmanship, is this problem causing injuries? The highest number of Web Enabled Safety System (WESS) injury reports that I see are associated with pinched, broken or de-gloved fingers and twisted or broken ankles, most are associated with ladder mishaps. Maybe there is a connection between poor assembly of equipment and injuries!

In FY09 100% of the submarines surveyed had ladders that were not properly mounted, did not have the correct assembly hardware or had loose treads. Nearly every 688 in the fleet requires weld repair to the weapons shipping hatch hull mount supporting the old man ladder rail due to the use of improper or loose hardware. Most Tridents' have missing or loose hardware for stanchions and safety netting used in the areas associated with the removed logistic escape trunk. Why are these issues occurring? Because, leadership is not following up on work when it is reported complete! I'm not talking about out of the way locations. The 688 weapons shipping hatch is the primary access that all hands use, and the Trident stanchion and netting issues are located directly next to the officer's study, wardroom and CPO quarters.

Like many others, when I walk the pier on my way to a submarine, I look for the telltale signs of leaders who accept poor standards: gear adrift (trip/fall hazards), watch stander professionalism (uniform, shack cleanliness & the lack of graffiti), brow installation (loose material trip hazards, cut hazards from tie wraps with sharp edges), shock hazards (poor condition or improperly run temporary services that fail due to brow movement) and topside stowage, paint and preservation. I check at the primary access ladder as I descend for looseness and improper assembly. By the time I reach the bottom of the ladder, I have subconsciously formed an opinion of the CPO and officer leadership.

Do you do the same thing when you visit a boat? Do you wonder if the poor readiness conditions noted on the one day that you visit are the standard? I recommend that all CPOs and officers stop walking around with blinders on, open your eyes to the problems and take action to correct them. When the crew notices that even small details of professionalism are important to you, it becomes important to them, Standards are maintained and Traditions are started! Now that's leadership!

Mishap and Hazard Reporting

LCDR Beals

In an effort to improve fleet mishap and hazard reporting, USFF released message 301655Z JUN 09 and COMPACFLT 262300Z JUN 09 and 262323Z JUN 09. These messages summarize the reporting requirements contained in OPNAVINST 5102.1D, NAVY AND MARINE CORPS MISHAP AND SAFETY INVESTIGATION REPORTING AND RECORD KEEPING MANUAL. The following information is provided to further aid you in determining whether a safety investigation report is required or not.

1. If there is a mishap that results in **>\$1 million in damage** to equipment, or causes a loss of life, or results in a total permanent disability the type commander (TYCOM) may convene safety investigation board (SIB) to investigate and report the mishap. The SIB's objective is to determine lessons learned for the fleet. This board is not the same as a Judge Advocate General (JAG) board and the information gathered by the SIB will not be shared with the JAG. SIB reporting requirements are listed in OPNAV INST 5102.1D, Chapter 6 and Figure 5-2. Commands are required to notify their chain of command and NSC within 8 hours of the mishap using voice or electronic means. Including COMNAVSAFECEN as an INFO addree on your OPREP-3 satisfies this requirement.
2. Additionally, a mishap that results in damage of **\$20,000 or more**; cases of grounding, collision, and flooding; and all shipboard fires, with a couple exceptions are reportable. Fires in trash cans in which there was no injury and the only thing burned was trash, and "arcing and sparking" that stops when you de-energize the circuit **are not reportable**. Reports are required when a Sailor uses a firefighting agent to fight a fire, and when you call an event a "fire" in your final OPREP-3/unit SITREP, are reportable. Finally, report all personnel injury that requires greater than basic first aid. The command is responsible to conduct a mishap investigation and report the mishap using Web Enabled Safety System (WESS) or message. The message template is located in OPNAV 5102.1D, Chapter 6 and Figure 5-2. These mishaps shall be reported within 30 days of the mishap.
3. Private motor vehicle-mishap investigation report (PMV-MIR) is submitted for accidents that result in death of a military member. They are investigated and reported by the parent command. Commands may download a PMV-MIR message template from our web site using the following link: <http://www.safetycenter.navy.mil/PMV/DEFAULT.HTM>
4. Hazard reports (hazrep) are submitted to inform the fleet of a hazardous condition or near miss that may be present on other submarines. The objective is to ensure all commands are made aware of a potential hazard as rapidly as possible. The command that discovers the hazard or has the near miss should submit the hazard report using the guidance located in OPNAV 5102.1D, Chapter 4 and Figure 5-2.
5. NSC continues to receive incomplete OPREP-3s. Chapter 2, section III, paragraph 8. requires commands to review the mishap reporting guidance (OPNAVINST 5102.1D) and determine if the mishap requires a report. Based on this determination, the command will

include one of the following three statements as a mandatory RMKS set in the final OPREP-3 message report:

MISHAP REPORT NOT REQUIRED, or
MISHAP REPORT TO FOLLOW, or
MISHAP REPORT SUBMITTED

6. Finally, we continue to receive casualty reports (CASREPs) that do not contain a statement regarding mishap report requirements. NWP 1-03.1 (NWP 10-1-10), Chapter 4, paragraph 4.3.7, Figure 4-9 (Order of Data Sets Summary) and Figure 4-10 (Sample Initial CASREP Requiring Parts), provide a "Conditional" data set to include a statement similar to the OPREP-3 requirements. See sheet 2 of 2 data set library figure 4-31.

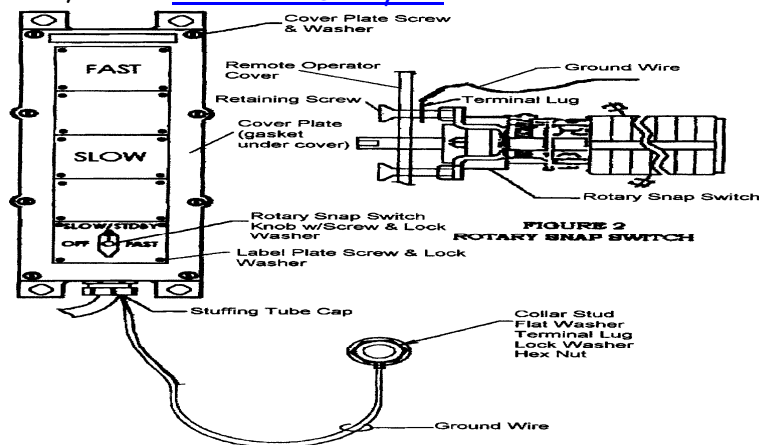
References: a. Navy and Marine Corps Mishap and Safety Investigation Reporting and Record Keeping Manual, OPNAVINST 5102.1D, b. Special Incident Reporting (OPREP-3 Pinnacle, OPREP-3 Navy Blue, OPREP-3 Navy Unit SITREP) Procedures, OPNAVINST 3100.6H, CH-1, c. NMP 1-03.1 (Previously NWP 10-1-10), Chapter 4.

688 Class Ventilation Fans 6 and 7 Shock Hazard

ETCS (SS) May

A number of 688 class boats have discovered voltage present on the shaft of the operating switches for ventilation fans 6 and 7. These controllers are of a different design than other fan controllers on board. The voltage may vary with switch position, but values of greater than 30 volts have been measured. A&I N3470 has been issued to eliminate this shock hazard.

A&I N3470, Install Ground Wires on Vent Fan 6 & 7 Remote Operators. This A&I is applicable to SSNs 688,690, 691, 698-701, 705, 706, 711, 713-715, 717, 719-725 and 750. Also, SSNs 751-773 that do not use rotary snap switches for ventilation fans 6 and 7. Ready for issue (RFI) material to accomplish the A&I became available in Feb 2009. This is a category B A&I which indicates that the fleet has two years from the time the material is made RFI to complete the alteration (Feb 2011). The A&I can be downloaded at the following SIRP website: <http://www.fleetforces.navy.smil.mil/comsubfor/N4/default.aspx> Direct questions or comments regarding the technical content of this A&I to the SSN 688 class planning yard: Earl Koepcke, phone (757) 688-2224. NAVSEA point of contact is: MR. Rick Kurek, (202) 781-1274, e-mail rick.kurek@navy.mil.



Hazardous Material Management

HMCS(SS/AW/SW) Bonneville

I continue to find out dated material safety data sheets (MSDS) and incomplete hazardous material (HAZMAT) inventories located in divisional binders during surveys. This is a two fold problem. First, the Submarine Hazardous Material Inventory and Management System (SHIMS) contains MSDS that are out of date and second SHIMS does not upload HAZMAT information from other supply management programs.

The current version of SHIMS must be loaded onto a stand alone computer system. Supply officers, HAZMAT Technicians and repair parts petty officers (RPPO) must work together to ensure all HAZMAT is entered into SHIMS. The supply officer provides each division with an inventory from SHIMS monthly, the RPPO updates the inventory and return it to the supply officer. The supply officer uses the updated inventory to update SHIMS. RPPOs and division officers ensure the correct MSDS is on hand during the inventory. The most up-to-date MSDS is obtained from the Hazardous Material Information Resource System (HMIRS) program which is maintained by supply. MSDS are manufacturer specific so you must have a MSDS for each HAZMAT item by manufacturer. If your MSDS is not available on HMIRS, contact the manufacturer and request a copy via fax or e-mail.

Mr. Ronald Waters at Naval Surface warfare Center, Carderock has developed a method to transfer HAZMAT data electronically from RSupply or OMMS-NG to SHIMS. This updating process takes Mr. Waters about eight dedicated hours to complete.

Mr. Waters groomed six submarines this year. Prior to the groom, there were an average of 238 known HAZMAT line items in SHIMS and after the groom the inventory reported the correct 416 HAZMAT line items. Of these, 96 HAZMAT items were not in the Submarine Material Control List (SMCL), making them PROHIBITED. This indicates that each submarine currently has an average of 178 items of HAZMAT that are not being tracked. Commands can call Mr. Waters at (301) 227-2744 to arrange a groom.

Additionally, the SMCL is missing many HAZMAT items that are used on board. Commands are required to submit a Request for Certification in accordance with Chapter 7 of the Submarine Atmosphere Control Manual to add HAZMAT to the SMCL.

References: OPNAVINST 5100.19E, Chapter B3 and Chapter D15 and Nuclear Powered Submarine Atmosphere Control Manual, NAVSEA S9510-AB-ATM-010

Damage Control

MMC (SS) Fannin

Drills are a part of a Sailor's life and we have a tendency to take them for granted. Everyone knows to sanitize an EAB mask after each drill, but some are unaware that each SCBA mask and second stage regulator, pressurized fire hose, and thermal imagers require post drill use PMS. Post drill day PMS can take anywhere from 2-4 hours to complete, it is the responsibility of the **Damage Control Petty Officer** and **Damage Control Assistant** to ensure the chain of command is aware of the amount of man hours required for each drill.

Most boats have received the Battelle lithium hydroxide (LiOH) curtain A&I, but may not have completed training on the proper use of this new survival equipment or completed the annual curtain inspection. Proper storage of the LiOH curtains is key to maintaining package

integrity as the packaging can be ripped easily. MIP 5940/001, MRC A-1 provides inspection procedures for the LiOH curtain kits and MIP 5940/001, MRC U-1 provides a repair procedure for torn kits.

INSURV inspections and Safety Surveys continue to find SCBAs which have the old style face piece. The old-style face piece is susceptible to cracking where the second stage regulator is inserted into the face piece. NAVSURFWARCEN PANAMA CITY FL MESSAGE 121457ZMAR03 provides directions on how to order the replacement face pieces. A copy of this message is available on the NAVSEA damage control website WWW.DCFP.NAVY.MIL. More information about the face pieces, including how to determine which style you have (old or new) can be found in MIP 5519/016, MRC M-1 and at the NAVSEA damage control website. Go to WWW.DCFP.NAVY.MIL and look for SCBA tip 012 and tip 025 (these tips are located by selecting "Equipment and Systems" and then selecting "Self Contained Breathing Apparatus/Index" links).

Submarines with effective damage control programs provide command level support for the DCPO, recognize the time and effort involved and importance of post drill situational PMS. Successful ship's DCPOs supervise and support divisional DCPOs through hands on training, monitoring during the completion of regular and situational DC equipment PMS. Additionally, the best practice programs include regularly scheduled divisional DCPO training, Damage control GMT, lessons learned and EDC1 equipment spot checks by senior members of the chain of command.

As an update to the flash article that was published Jul-Sept 08 on SCBA repairs. The web site that was listed in the flash has now changed to <http://phmsa.dot.gov/hazmat/regs/sp-a/approvals/cylinders>.

If you have any questions about these items or ideas for items to be submitted for the next *FLASH*, feel free to call or e-mail me using the contact information listed in FLASH.

Safety Harnesses

FTC (SS) CAHILL

Maintenance Requirement Card (MRC) for safety harnesses (parachute and cross-over type) MIP: 6231/001 MRC: S-1R contains requirements for marking harnesses and lanyards with the in-service date (month/year) using a permanent marker and logging these dates into a Fall Protection Equipment Log. In accordance with the PMS, "For initial in-service inspection, the harness must be permanently marked with a *date placed in service* in the month/year format and enter service date of harness into Fall Protection Equipment Log." Best practice for marking harnesses, safety and working lanyards is: hull number (e.g. 743) - division (e.g. WK01) - 001 (sequential numbering for all harnesses and lanyards) followed by the month/year the unit was placed in service. For example "743-WK01-001-07/07." The intent of the PMS card is to have the safety harness, safety lanyard, and working lanyard numbered together (e.g. all of the items would have been same serial number matching (e.g. 001 on the three items). If the initial in-service date is not known, mark the harness and lanyards with estimated in-service date or the current date. There are two active safety harness advisories on NAVSEASYSKOM message DTG 280905Z JUN 07 and DTG 151155Z OCT 08. These messages are available on our website under <http://www.safetycenter.navy.mil/afloat/submarine>.

Hail and Farewell!

MMC(SS) Ingram

First of all, we bid farewell to MMC (SS) Michael Lint. Thank you for all the work you have done and the numerous improvements you have spearheaded as the submarine deck and combat system subject matter expert.

I am MMC(SS) Ingram reporting from the USS Newport News (SSN-750). I look forward to providing the submarine fleet with the continued support and training to continue the mission of the Navy.

High Tech Resources

FTC (SS) Cahill

The main page at <http://www.safetycenter.navy.mil/index.asp> has podcasts and vodcasts for download. The links are located at the bottom of page under headings of "Latest podcasts" and "Latest vodcasts."

The podcast page is <http://feeds.feedburner.com/navalsafetycenternews>.

Some titles on the website are:

Music with a Safety Message: AO3 Wallen Sings to Save Lives

Music with a Safety Message: Chief B. Ware Sings to Save Lives

Episode of the Friday Funnies, "Which Way to Catalina"

Episode of the Friday Funnies, "The Jeep, the Grass Fire, and The Fish"

Episode of the Friday Funnies, "The All-Time Absolute Worst Butt Kit Ever Devised"

Archives of the Friday Funnies, "From Norfolk to Louisiana and (Almost) Back in a Weekend"

Archives of the Friday Funnies, "A Bee and the Hatchet"

Many more to choose from on the webpage

iTunes are also posted. Simply do a search for Naval Safety Center in the podcast section of iTunes or enter this URL using the advanced tab: <http://www.safetycenter.navy.mil/podcasts/nsc.xml>

YouTube: We are posting some of our videos on YouTube www.youtube.com (not available through NMCI). Again, the easiest thing to do is to search for "Naval Safety Center," and it will bring you to our page listing (channel).

Troop Tube: A relatively new commercial site (from the Military.com folks). Enter <http://www.trooptube.tv> click on "all videos," scroll down until you see a listing of options for Navy, and click on the "news" button. NMCI allows this connection.

FLASH Editor

FTC (SS) Cahill

We at the Naval Safety Center look forward to the fleet's questions and feedback. In the spirit of "**ASK THE FLASH**," we are opening the FLASH up for write in articles.

As a reminder, submit technical information using official ".mil" unclassified e-mail.

You can e-mail your article or ideas to: SAFE-submarines@navy.mil.

Effective COMNAVSAFECEN Submarine Safety Advisories

7-07 081545Z AUG 07

2007

Guidance on NAVSEA Approved Safety Harnesses and Climber Safety Sleeve Recall
Interim Aloft Procedures

3-08 211439Z OCT 08

2008

SCBA Repair Facilities

1-09 231743Z JAN 09

2009

Effective COMNAVSAFECEN Afloat Safety Advisories for Surface Ships and Submarines

3-09 081501Z Jun 09

Reporting Property Damage Mishaps

5-09 021320Z Jul 09

Heat Stress Clarification

To download advisories, you must be on a ".mil" domain terminal and have a PKI certificate. Go to our Naval Safety Center Website <http://www.safetycenter.navy.mil/index.asp>, on the left hand side of screen click DKO Secure Site. Click <https://www.us.army.mil/suite/page/418385> and this takes you to the log-in screen for DKO/AKO. Select our direct link <https://www.us.army.mil/suite/page/418385>. On the left bottom of webpage screen click on the file named Secure, Afloat, Messages, and Afloat Safety Advisories.

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