

MIL-STD-1682/6(SH)
27 October 1976

MILITARY STANDARD

SHIPYARD INSPECTION AND CLEANING
PROCEDURES FOR SUBMARINES

PART 6

MISSILE COMPARTMENT
SSBN 616 AND 640 CLASSES



FSC 1905

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27 October 1976

DEPARTMENT OF THE NAVY
NAVAL SEA SYSTEMS COMMAND
WASHINGTON, D.C. 20362

Shipyards Inspection and Cleaning
Procedures for Submarines, Missile Compartment
SSBN 616 and 640 Class

MIL-STD-1682/2(SH)

1. This Military Standard is approved for use by Naval shipyards during overhaul and conversion periods for submarines.

2. Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: Commander, Naval Ship Engineering Center, Center Building, SEC 6124, Prince George's Center, Hyattsville, Maryland 20782 by using the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

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FOREWORD

This part provides inspection and cleaning procedures for the Missile Compartment aboard SSBN 616 and 640 Class submarines.

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1. SCOPE

1.1 This part provides inspection and cleaning procedures for the Missile Compartment (MC) aboard SSBN 616 and 640 Class submarines. The basic standard and this part are to be considered as an integral single document.

2. REFERENCED DOCUMENTS

2.1 This paragraph is not applicable to this standard.

3. DEFINITIONS

3.1 Clean. Clean is being free of all loose scale, rust, grit, filings, and other foreign substances; and free of oil, grease, and other organic materials.

3.2 Dewpoint. The temperature at which condensation first occurs when a vapor is cooled.

3.3 Landing or landed. Physical placement of equipment in specified location.

4. REQUIREMENTS

4.1 Safety and precautions.

Note: Listed below are warnings appearing in this procedure. All personnel involved in operating and maintaining equipment must fully understand the warnings.

4.1.1 Supplemental filter material used in this standard is a restricted use item and should be used only during construction and availability periods such as upkeep, conversion, and overhaul. Cyanide gas is generated when filter material burns; therefore, its use is prohibited at all other times.

4.1.2 Do not use flammable cleaning solvents or solvents in spray form.

4.1.3 Wear safety goggles while working with compressed air. Particles of dust, dirt, or other foreign material may be expelled at high velocity resulting in eye injury.

4.1.4 Observe safety precautions when spray painting, deck grinding, or heavy welding is in progress. Inhalation of toxic fumes or dust is hazardous to health.

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4.2 Materials.

4.2.1 Materials required to perform normal inspection and cleaning procedures are as follows:

- (a) Supplemental filter material (NSN 1G-9330-00-965-0481 or equivalent)
- (b) Coated cloth: fire retardant curtains (NSN 8305-00-082-5586/5587 or equivalent)
- (c) Portable vacuum cleaner (nonmetallic hose)
- (d) Assortment of wiping cloths
- (e) Thermometer
- (f) Cheesecloth

5. INSPECTION AND CLEANING PROCEDURES

5.1 FBM MC inspection and cleaning.

5.1.1 Where practicable, protective covers are required on, but are not limited to the following equipments from installation until turnover to Ship's Force or prior to dock trials:

Temperature monitoring power supply (TMPS)	Liquid spring leveling cylinders (LSLC)
Spare guidance and temperature monitor (SGTM)	MT access door gaskets and seats
Guidance checkout junction box (JB)	Integrated monitor panel (IMP)
Guidance checkout work bench	Launch control panel (LCP)
Station boxes	Hatch gasket and seat
Missile junction box (MJB)	Missile tube/launch tube (MT/LT) upper seal
ABT switches	All units on photoelectric auto collimator (PEAC) table
28.5-VDC rectifiers	FC SWBD
Breather valves	Alignment control

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5.1.2 Prior to landing any equipment, ensure that immediate vicinity and/or enclosure is vacuumed and wiped clean.

5.1.3 After landing first piece of launcher support equipment and before equipment turn-on, daily proceed as indicated in 5.1.3.1 through 5.1.3.4.

5.1.3.1 Inspect MC and clean as required, but at least once each week as determined by the cognizant Poseidon Task Group (PTG) member as follows:

- (a) Remove any accumulations of dust, dirt, chips, etc., from work surfaces, machined surfaces, exposed equipment, wireways, overheads, bulkheads, bilges, framebays, and decks, etc., using vacuum cleaners and materials as required.
- (b) Empty refuse containers daily.

5.1.3.2 Check that equipments exposed to possibility of damage, water leaks, hydraulic leaks, etc., are protected by suitable covers or padding.

5.1.3.3 Ensure that welding and grinding activities are isolated from MC sensitive areas by suitable containment.

5.1.3.4 Verify that all protective covers in 5.1.1 are in place (except where such equipment is uncovered for testing or operation). If no testing is being performed on that equipment, reinstall protective covers.

5.1.4 Perform the following after Test Instrumentation (TI) equipment is installed.

5.1.4.1 Isolate Instrument Operations Area (IOA) by arranging coated cloth (fire retardant curtains) at the following locations:

- (a) In port passageway from outboard of tube 10 to bulkhead at frame 85.
- (b) At overhead from 21'6" ABL deck and into framebays to keep debris from falling into IOA.

5.1.4.2 Vacuum to remove dust, dirt, or other foreign matter from accessible overhead areas, cable runs, and bulkhead.

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WARNING

Wear safety goggles while working with compressed air. Particles of dust, dirt, or other foreign material may be expelled at high velocity resulting in eye injury.

5.1.4.3 Clean inaccessible areas by using low-pressure air.

CAUTION

Use extreme care when damp wiping any equipment. Do not damp wipe switches, indicators, and lights. Moisture may cause equipment damage.

5.1.4.4 Dry wipe (damp if necessary) areas where vacuum cleaner cannot clean adequately.

5.1.4.5 Vacuum deck and passageways.

5.1.4.6 Maintain contamination seal for MT/LT upper seal in place at all times except when test fixture, Sabot ring, or closure is in use.

5.1.4.7 Fasten covers to LSLCs to protect lockout gear teeth and threads between lockout gear and end cap. Covers are to remain installed at all times except when AIM, ballast cans, or Sabots are to be installed in tube.

5.1.4.8 Install filters, supplemental filter material, cheesecloth, etc., at ventilation fan inlets and outlets, and clean or replace these filters as required.

5.1.5 After Launcher Support System or TI equipment is energized to support Phase 3 testing, proceed as follows.

5.1.5.1 Clean MC as follows on an as required basis, but at least as often as indicated below:

- (a) Vacuum deck and any protective covering to remove accumulation of dust, dirt, and other foreign material (daily).
- (b) Using wiping cloths and/or vacuum cleaner, remove dust from work surfaces and equipment (daily). Dispose of cloths after use.

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- (c) Vacuum to remove dust, dirt, or other foreign matter from accessible overhead areas, cable runs, and bulkheads (weekly).

WARNING

Wear safety goggles while working with compressed air. Particles of dust, dirt, or other foreign material may be expelled at high velocity resulting in eye injury.

- (d) Clean inaccessible areas by using low-pressure air (weekly).
- (e) Damp mop deck and passageways where vacuum cleaner cannot clean adequately.

5.1.5.2 The shipyard should maintain an MC environment with a temperature of less than 85°F/29.4°C and a humidity of less than 90% while the TI System is energized.

5.1.5.3 If above temperature and humidity environmental requirements cannot be maintained, the TI system shall be deenergized until such time that these environmental requirements are restored and maintained.

5.1.5.4 Take temperature and humidity readings at the discretion of the Senior TI Contractor Representative. Take temperature and humidity readings between TI stacks 7, 8, and 9 approximately 5 feet above the deck.

WARNING

Observe safety precautions when spray painting, deck grinding, or heavy welding is in progress. Inhalation of toxic fumes or dust is hazardous to health.

5.1.6 TI equipment will be secured when, in the opinion of the Senior Representative, spray painting, deck grinding, or heavy welding in the immediate vicinity would be detrimental to equipment operation. Spray paint or dust may clog air filters and cause overheating resulting in damage to the equipment. The equipment must be covered and protected from spray paint that may obliterate the control and display markings.

Preparing activity:
Navy - SH
(Project 1905-N006-6)

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