

MIL-STD-1682/13(SH)
27 October 1976

MILITARY STANDARD

SHIPYARD INSPECTION AND CLEANING
PROCEDURES FOR SUBMARINES

PART 13

MISSILE COMPARTMENT
SSBN 608 CLASS



FSC 1905

MIL-STD-1682/13(SH)
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 608 Class
MIL-STD-1682/13(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.

MIL-STD-1682/13(SH)
27 October 1976

FOREWORD

This part provides inspection and cleaning procedures for the Missile Compartment aboard SSBN 608 Class submarines.

MIL-STD-1682/13(SH)
27 October 1976

CONTENTS

	<u>Page</u>
1. SCOPE	1
2. REFERENCED DOCUMENTS	1
3. DEFINITIONS	1
3.1 Clean	1
3.2 Landing or landed	1
4. REQUIREMENTS	1
4.1 Safety and precautions	1
4.2 Materials	2
5. INSPECTION AND CLEANING PROCEDURES	2
5.1 FBM MC inspection and cleaning	2

MIL-STD-1682/13(SH)
27 October 1976

1. SCOPE

1.1 This part provides inspection and cleaning procedures for the Missile Compartment (MC) aboard SSBN 608 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 scales, rust, grit, filings, and other foreign substances; and free of oil, grease, and other organic materials.

3.2 Landing or landed. Physical placement of equipment in specific 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.

MIL-STD-1682/13(SH)
27 October 1976

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) Lint-free cloth (NSN 7920-00-514-2420 or equivalent)
- (f) Masking tape (roll)
- (g) Thermometer
- (h) 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 equipment from installation until turnover to Ship's Force or prior to dock trials:

Missile junction boxes (MJBs)	Bulkhead 58 and aft target bar tooling scales
Guidance power supplies (GPSs)	1.2-KW rectifiers
Christy rectifiers	Missile power transfer panels
Guidance capsule junction box (JB)	Photoelectric auto collimator (PEAC) table and associated equipment
Gimbal assembly (GA) test stand	Alignment control console
Fire control (FC) switchboard	Alignment station selector panels
Polaris target card computer system (PTCCS)	Alignment drive motors
18-KW rectifiers	Alignment trolley and associated cables

MIL-STD-1682/13 (SH)
27 October 1976

Electronic assembly (EA) test stand	Breather valves
Launch control panel (LCP)	MT access door gasket and seats
Alarm monitoring panel	Muzzle hatch gasket and seats
Jettison panel	Mount tube/launch tube (MT/LT) upper seal
Automatic bus transfer (ABT) switch	

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

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

5.1.4 After landing first piece of support equipment and before equipment turn-on, daily perform 5.1.4.1 through 5.1.4.5.

5.1.4.1 Inspect MC and if cleaning is required, remove any accumulations of dust, dirt, chips, etc., from work surfaces, machined surfaces, exposed equipment, wireways, overheads, bulkheads, bilges, frame bays, decks, etc., using vacuum cleaner and soft cloth. Vacuum at least once each week.

5.1.4.2 Empty refuse containers.

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

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

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

5.1.5 After Test Instrumentation (TI) equipment is installed, perform 5.1.5.1.

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

MIL-STD-1682/13(SH)
27 October 1976

- (a) In port passageway from frame 71 along inboard side of TI equipment aft to crews' washroom. Arrange coated cloth (fire retardant curtains) in such a way as not to interfere with ventilation supplying cooling air to this equipment.
- (b) At overhead from 21'6" ABL deck and into frame bays to keep debris from falling down into IOA.
- (c) In crews' berthing area, curtain off TI equipment located in this area. Arrange coated cloth (fire retardant curtains) in such a way as not to interfere with ventilation supplying cooling air to this equipment.

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

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.

5.1.5.3 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.

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

WARNING

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.

MIL-STD-1682/13(SH)
27 October 1976

5.1.5.5 Check that TI equipment internal filters are installed. Place supplemental filter material, cheesecloth, etc., over ventilation fan intakes and outlets on TI equipment. Replace supplemental filter material if it becomes dirty.

Note: Supplemental filter material is to be used only when TI equipment is not operating.

5.1.6 After Launcher Support System, PTCCS MK 148, or TI equipment is energized to support Phase 3 testing, proceed as in 5.1.6.1.

5.1.6.1 Clean MC as follows on an as required basis, but at least as often as indicated.

- (a) Daily vacuum deck and any protective covering over equipment to remove accumulation of dust, dirt, and other foreign material.
- (b) Daily remove dust from work surfaces and equipment by using wiping cloths and/or vacuum cleaner.
- (c) Weekly vacuum to remove dust, dirt, or other foreign matter from accessible overhead areas, cable runs, and bulkheads.

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.
- (e) Damp mop deck and passageways where vacuum cleaner cannot clean adequately.
- (f) Daily in crews' berthing area and in the vicinity of TI equipment, vacuum deck and use wiping cloths and/or vacuum clean to remove dust and dirt from work surfaces and equipment. Also, weekly vacuum and wipe down accessible areas of the overhead, cable runs, and bulkheads.
- (g) Weekly, clean removable air filters in PTCCS MK 148 (one per computer, two in power area).

MIL-STD-1682/13 (SH)
27 October 1976

- (h) Twice weekly remove and ultrasonically clean TI internal filters. Two complete sets of filters are required to accomplish this preventive maintenance. (Refer to Note following 5.1.5.5.)

5.1.7 The shipyard shall maintain the IOA area environment and crews' berthing area where TI equipment is located, within the following conditions when TI stacks are operating:

Temperature: maximum 85° F/29.4° C
optimum 75° F/23.9° C

Relative Humidity: maximum 90%

5.1.8 If above temperature and humidity environmental requirements of 5.1.7 cannot be maintained, deenergize the TI System until these environmental requirements are restored and maintained.

5.1.9 Take temperature and humidity readings at the discretion of the Senior TI Contractor Representative. Take temperature and humidity readings between TI stacks 4, 5, 6, and 7 approximately 5 feet above the deck.

5.1.10 The ambient air temperature in the MK 148 PTCCS area shall be 85°F (29.4°C) or less if the computer is to be operated. Ensure there are no obstructions to the computer air inlets or exhaust vents.

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.

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

Preparing activity:
Navy - SH
(Project 1905-N006-13)

FOLD

COMMANDER
NAVAL SHIP ENGINEERING CENTER
CENTER BUILDING - SEC 6124
PRINCE GEORGES CENTER
HYATTSVILLE, MARYLAND 20782

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE \$300

POSTAGE AND FEES PAID
DEPARTMENT OF NAVY

DOD 316



COMMANDER
NAVAL SHIP ENGINEERING CENTER
CENTER BUILDING - SEC 6124
PRINCE GEORGES CENTER
HYATTSVILLE, MARYLAND 20782

FOLD