

INCH-POUND

MIL-PRF-18458C  
5 July 2002  
SUPERSEDING  
MIL-G-18458B(SHIPS)  
19 March 1981  
(See 6.8)

## PERFORMANCE SPECIFICATION

### GREASE, WIRE ROPE - EXPOSED GEAR

This specification is approved for use by all Departments and Agencies of the Department of Defense.

#### 1. SCOPE

1.1 Scope. This specification covers corrosion resistant externally applied grease for use on wire ropes and exposed gears of hoists, winches, cranes, shovels, dredges, and other similar equipment.

1.2 Classification. Two types of grease are specified: a Type I for general application and an environmentally preferable Type II for applications where potential discharge to the environment is greater.

#### 2. APPLICABLE DOCUMENTS

2.1 General. The documents listed in this section are specified in sections 3 and 4 of this specification. This section does not include documents cited in other sections of this specification or recommended for additional information or as examples. While every effort has been made to ensure the completeness of this list, document users are cautioned that they must meet all specified requirements documents cited in sections 3 and 4 of this specification, whether or not they are listed.

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: Commander, Naval Sea Systems Command, ATTN: SEA 05Q, 1333 Isaac Hull Avenue, SE, Stop 5160, Washington Navy Yard DC 20376-5160, by using the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

AMSC N/A

FSC 9150

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.

2.2 Government documents.

2.2.1 Specifications, standards, and handbooks. The following specifications, standards, and handbooks form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those listed in the issue of the Department of Defense Index of Specifications and Standards (DoDISS) and supplement thereto, cited in the solicitation (see 6.2).

STANDARDS

FEDERAL

FED-STD-313 - Material Safety Data, Transportation Data and Disposal Data for Hazardous Materials Furnished to Government Activities

FED-STD-791 - Lubricants, Liquid Fuels, and Related Products; Methods of Testing

(Unless otherwise indicated, copies of the above specifications, standards, and handbooks are available from the Standardization Document Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094.)

2.2.2 Other Government documents, drawings and publications. The following other Government documents, drawings, and publications form a part of this document to the extent specified herein. Unless otherwise specified, the issues are those cited in the solicitation.

CODE OF FEDERAL REGULATIONS

29 CFR 1910 Subpart Z	- Toxic and Hazardous Substances
40 CFR 82	- Protection of Stratospheric Ozone
40 CFR 261	- Hazardous Waste Criteria
40 CFR 355 Appendices A and B	- The List of Extremely Hazardous Substances and Their Threshold Planning Quantities
40 CFR 372.65	- Specific Toxic Chemical Listings
40 CFR 761	- Polychlorinated Biphenyls

(Application for copies should be addressed to the Superintendent of Documents, Government Printing Office, Washington, DC 20402.)

NATIONAL TOXICOLOGY PROGRAM (NTP)

Latest Annual Report on Carcinogens, Summary, National Toxicology Program

(Applications for copies should be addressed to the U.S. Department of Health and Human Services, National Institute of Environmental Health Sciences, Public Information Office, P.O. Box 12233, MD B2-04, Research Triangle Park, NC 27709.)

OPNAVINST 5100.23E, Chapter 29 Occupational Reproductive Hazards

(Copy available from internet website: <http://www.navosh.net/>)

U.S. ENVIRONMENTAL PROTECTION AGENCY

EPA/600/4-90/027F - Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms

(Application for copies should be addressed to the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161.)

2.3 Non-Government publications. The following documents form a part of this document to the extent specified herein. Unless otherwise specified, the issues of the documents that are DoD adopted are those listed in the issue of the DoDISS cited in the solicitation. Unless otherwise specified, the issues of documents not listed in the DoDISS are the issues of the documents cited in the solicitation (see 6.2).

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

ANSI Z1.4 - Sampling Procedures and Tables for Inspection by Attributes (DoD adopted)

(Application for copies should be addressed to the American National Standards Institute, Inc., 11 West 42<sup>nd</sup> Street, 13<sup>th</sup> Floor, New York, NY 10036.)

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

- A 1008/A1008M - Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy and High-Strength Low-Alloy with Improved Formability, Standard Specification D 217 - Cone Penetration of Lubricating Grease, Standard Test Methods for (DoD adopted)
- D 770 - Isopropyl alcohol, Standard Specification for
- D 1748 - Rust Protection by Metal Preservatives in the Humidity Cabinet, Standard Test Method for (DoD adopted)
- D 2596 - Measurement of Extreme-Pressure Properties of Lubricating Grease (Four-Ball Method), Standard Test Method for (DoD adopted)
- D 4057 - Manual Sampling of Petroleum and Petroleum Products, Standard Practice for (DoD adopted)
- D 4177 - Automatic Sampling of Petroleum and Petroleum Products, Standard Practice for (DoD adopted)
- D 5864 - Determining Aerobic Aquatic Biodegradation of Lubricants or Their Components, Standard Test Method for
- D 6081 - Aquatic Toxicity Testing of Lubricants: Sample Preparation and Results Interpretation, Standard Practice for
- D 6139 - Determining the Aerobic Aquatic Biodegradation of Lubricants or Their Components Using the Gledhill Shake Flask
- G 152 - Operating Open Flame Carbon Arc Light Apparatus for Exposure of Nonmetallic Materials, Standard Practice for

(Application for copies should be addressed to the American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959.)

COORDINATING EUROPEAN COUNCIL

CEC L-33-A-93 - Biodegradability of Two-Stroke Cycle Outboard Engine Oils in Water

(Application for copies should be addressed to: CEC, Madou Plaza, Place Madou 1, B-1030 Brussels, Belgium.)

ORGANIZATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

OECD 301D - OECD Guideline for Testing of Chemicals: Ready Biodegradability: Closed Bottle Test

(Application for copies should be addressed to OECD Publications Service, 2 rue André-Pascal, 75775 Paris Cedex 16, France)

INTERNATIONAL AGENCY FOR RESEARCH ON CANCER (IARC)

International Agency for Research on Cancer (IARC) Monographs

(Applications for copies should be addressed to the WHO Publications Center, 49 Sheridan Avenue, Albany, NY 12210.)

2.4 Order of precedence. In the event of a conflict between the text of this document and the references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

3. REQUIREMENTS

3.1 Qualification. The grease furnished under this specification shall be products that are authorized by the qualifying activity for listing on the applicable qualified products list before contract award (see 4.2 and 6.3).

3.2 Material. The grease shall be a smooth, homogeneous, nontoxic mixture formulated to provide a lubricant suitable for the intended use (see 6.1). Both types shall be of such material as to not require additional container labeling in accordance with CFR, Title 29, Part 1910, Subpart Z.

3.2.1 Environmental, safety, and health requirements. Greases conforming to the specification shall not contain nor have the following materials purposely added to the product formulation.

3.2.1.1 Toxins and carcinogens. The materials used in the grease and for testing (see 4.3), and defined as known or suspected carcinogens in the following documents shall not exceed concentrations of 0.1% (by weight): Occupational Safety and Health Administration (OSHA) in 29 CFR 1910 Subpart Z (regulated carcinogens); International Agency for Research on Cancer (IARC) Groups 1, 2A, and 2B; and the latest annual report of the National Toxicology Program (NTP). The materials shall have no extremely hazardous substances (EHS) or toxic chemicals identified in 40 CFR 355, and 372, respectively. The grease shall have no adverse effect on the health of personnel when used for its intended purpose.

3.2.1.2 Reproductive hazards. The product shall not contain any reproductive hazards listed in OPNAVINST 5100.23E, Chapter 29 Appendix 29-B in concentrations equal to or greater than 0.1% (by weight). The most current version of the instruction can be obtained from the internet website: <http://www.navosh.net>.

3.2.1.3 Prohibited materials. The product shall not contain any 2,6-di-t-butylphenol, chlorinated compounds, or hydrolyzable chlorine derivatives. All derivatives or salts of barium, strontium, lead, and chromium, including chromates or dichromates, are also prohibited.

3.2.1.4 Other chemicals targeted by EPA. The grease shall not contain polychlorinated biphenyls (PCBs) in concentrations equal to or exceeding 50 parts per million (40 CFR 761); and other materials in concentrations that exceed 1.0% by weight including cyanide, and cyanide compounds, methyl ethyl ketone, methyl isobutyl ketone, and xylene (all isomers).

3.2.1.5 Hazardous waste. The greases shall not meet the definition of a hazardous waste as defined by the Resource Conservation and Recovery Act (40 CFR 261).

3.2.2 Recycled, recovered, or environmentally preferable materials. Recycled, recovered, or environmentally preferable materials should be used to the maximum extent possible, provided that the material meets or exceeds the operational and maintenance requirements and promotes economically advantageous life cycle costs.

3.3 Chemical and physical properties. Type I grease shall have the chemical and physical properties shown in Table I. Type II grease shall meet all the requirements of Type I grease and also the environmental requirements of Table II.

3.4 Toxicity. The grease shall have no adverse effect on the health of personnel when used for its intended purpose. (See 6.1 and 6.5).

TABLE I. Chemical and physical requirements and test methods for Type I and Type II.

Characteristics	Requirement	FED-STD-791 method no.	Non-government method no.	See section 4-paragraph number
Worked penetration	200-350 range		ASTM D 217	
Oil separation (%)	10 maximum	321 <u>1/</u>		
Load wear index	30 minimum		ASTM D 2596	
Salt spray	Pass	4001		4.4.2
Accelerated weathering	Pass		ASTM G 152, 153	4.4.3
Low temperature flexibility	Pass			4.4.4
Volatile matter (%)	2.0 maximum			4.4.5
Adhesiveness (%)	95 minimum			4.4.6

1/ Test shall be conducted at 65.5°C (150°F) for 50 hours duration.

TABLE II. Additional requirements and test methods for Type II.

Characteristics	Requirement	FED-STD-791 method no.	Non-government method no.	See section 4-paragraph number
Aquatic biodegradability (%)	80 minimum		CEC L-33-A-93 1/	4.4.7 2/
Acute toxicity, mysid shrimp, LL50 (ppm)	1000 minimum		EPA-600/4-90-027	4.4.8

1/ Coordinating European Council test, "Biodegradability of Two Stroke Cycle Outboard Engine Oils in Water"

2/ Acceptable alternatives to the test method and limit are  $\geq 60\%$  in 28 days by ASTM D 5864, ASTM D 6139, or OECD 301D test methods.

#### 4. VERIFICATION

4.1 Classification of inspections. The inspection requirements specified herein are classified as follows:

- (a) Qualification inspection (see 4.2)
- (b) Conformance inspection (see 4.3)

4.2 Qualification inspection. Type I grease qualification inspection shall consist of all of the tests specified in table I, and section 4.4 (except 4.4.7 and 4.4.8). Type II grease qualification inspection tests include all Type I grease tests plus those of Table II and paragraphs 4.4.7 and 4.4.8. A minimum sample size of 15.9 kg (35 lb) is required for qualification testing. (See 6.3)

4.3 Conformance inspection. Each sample selected as specified in 4.3.1 shall be tested as specified in Table I, except the salt spray and accelerated weathering need not be run. Failure of the samples in any of these tests shall be cause for rejection of the lot. Inspection shall be in accordance with method 9601 of FED-STD-791.

4.3.1 Sampling for conformance inspection. Samples for conformance inspections shall be taken in accordance with ASTM D 4057 and ASTM D 4177.

4.3.2 Sampling for examination of filled containers. A random sample of filled containers shall be drawn from each lot in accordance with ANSI Z1.4 to verify compliance with this specification regarding fill, closure, marking, and other requirements not involving tests.

4.3.3 Examination of filled containers. Samples shall be examined for defects of the container and the closure, for evidence of leakage, and for unsatisfactory markings; each sample-filled container shall also be weighed to determine the amount of the contents.

4.4 Test methods. Testing shall be in accordance with applicable test methods given in tables I and II and in 4.4.1 through 4.4.8.

4.4.1 Preparation of specimens for protection tests. Three specimen panels shall be prepared for each protection test.

4.4.1.1 Panel composition and size. Steel panels shall be fabricated from open hearth, cold finished, dead soft temper, low carbon steel conforming to ASTM A 1008/1008M. The panels shall be 5.08 by 10.16 by 0.32 cm (2 by 4 by 1/8 inch) conforming to those panels specified in ASTM D 1748.

4.4.1.2 Panel finishing and cleaning. The panel test surfaces shall be finished and cleaned as follows:

- (a) After rounding the edges of the panel and reaming out the holes used for suspension, wipe the surfaces as clean as possible using solvent-soaked rags.
- (b) Scrub the panel with clean cotton or surgical gauze swab in a beaker of hot non-aromatic petroleum solvent such as heptane.
- (c) Rinse in warm (21-27°C) [70-80°F] isopropyl alcohol, for at least 10 seconds and air-dry the panel. If required, use a vacuum desiccator and set it aside for later usage.
- (d) Buff the panel test surface with 240 grit aluminum oxide abrasive with plain or paper backing so as to produce a surface finish of 0.254-0.508 micrometers (10-20 micro inches) root mean square. The final abrasion marks shall be in the direction parallel to the length of the panel.
- (e) Wipe off superficial dust from the abrasion operation using a clean, dry absorbent tissue or cloth.
- (f) Scrub abraded face of panel thoroughly with a clean, lint free cloth until there is no dark stain on a clean section. Surgical gauze held in a blotter holder is convenient for this operation.
- (g) Spray the panel with hot, nonaromatic hydrocarbon solvent (e.g., heptane) using a wash bottle or a spray gun. Hold the panel in a rack at 20 degrees from the vertical. Direct the spray vertically downward on the panel, flushing the test surface progressively downward. Spray the test surface, back face and finally the test surface again.
- (h) Finally rinse the panel in fresh boiling isopropyl alcohol. Immerse the panel for at least 10 seconds to warm up to the solvent temperature prior to withdrawal. Rinsing operations shall be conducted under a hood for safety.
- (i) Permit the panel to dry and preserve it in a desiccator. Use the panel on the day of preparation.

4.4.1.2.1 Precautions in cleaning and finishing procedure.

- (a) In all stages of treatment, handling of equipment with bare hands shall be avoided. The panels shall be handled with hooks, forceps, or similar devices, care being taken to prevent contact of the panels with contaminated surfaces during the cleaning procedure.
- (b) The utensils and cloths used in the preparation of the panels shall be clean and free of contamination. Solvents shall be clean and renewed frequently.

4.4.1.3 Coating of test panels. The greases shall be applied to the panels with a spatula or other suitable tool, taking care to cover all surfaces with a uniform thickness of grease. The total volume of the grease shall be 1.0 + 0.05 milliliter (mL); actual measurement of grease quantity shall be by weight. The weight corresponding to 1.0 mL can be calculated from the density of the grease.

4.4.2 Salt spray test. Expose the grease coated panels to a 20 percent sodium chloride solution spray in a salt spray cabinet, in accordance with method 4001 of FED-STD-791, for 10 days plus or minus 1 hour. Remove the panels from the cabinet and rinse them in warm water to remove any remaining salt residue. Rinse the panels in hot, nearly boiling, nonaromatic hydrocarbon solvent (e.g., heptane) to remove the grease coating. Examine the panels visually; disregard any corrosion appearing on the outer 0.635 cm (1/4 inch) of the panels. The panels shall be considered passing if none of the

panels show more than three corrosion spots, each of which is not greater than 1 millimeter (mm) in diameter.

4.4.3 Accelerated weathering test. Three specimens prepared as specified in 4.4.1.3 shall be exposed in a single open-flame sunshine carbon-arc lamp apparatus in accordance with ASTM G 152 for 10 days plus or minus 1 hour. Black panel temperature shall be  $48.9^{\circ}\text{C} \pm 1.7^{\circ}\text{C}$  ( $120^{\circ}\text{F} \pm 3^{\circ}\text{F}$ ) during the light-on, without-water-spray period of the test cycle. Apparatus shall be operated 18 hours for each of the testing days. At the end of the exposure period, the panels shall be removed from the test equipment. Rinse the panels in hot, boiling, nonaromatic hydrocarbon solvent (e.g., heptane) and examine the panels as in 4.4.2. The panels shall be considered passing if none of the panels show more than three corrosion spots, each of which is not greater than 1 mm in diameter.

#### 4.4.4 Low temperature flexibility.

##### 4.4.4.1 Apparatus and material shall be as follows:

- (a) Brass strip, approximately 10.16 cm by 1.27 cm by 0.01778 cm (4 inch by 0.5 inch by 0.007 inch)
- (b) Strip coating apparatus as shown in Figure 1
- (c) Mandrel 3.81 cm (1.5 inch) in diameter
- (d) Constant temperature box maintained at minus  $6.67^{\circ}\text{C}$  ( $20^{\circ}\text{F}$ )

4.4.4.2 Procedure. Clean the brass strip with 240 grit abrasive paper the long way of the strip. Wash with non-aromatic petroleum solvent and dry. Clamp the strip between the top plate and bottom plate in the strip-coating apparatus. Coat the strip by spreading the grease over the surface of the thickness to 0.127 cm (0.05 inch) by drawing a knife-edge across the top of the grease well. Remove the strip from the coating apparatus. Place the strip and mandrel in the constant temperature box for 1 hour. With the bare metal next to the mandrel, bend the strip with a steady slow motion for 180 degrees around the mandrel in the box. Care must be taken to not touch the film before or during the test and complete the bending in not more than 2 seconds. Remove the bent strip from the box and examine the coating for cracks. Check for retained flexibility. The material shall be considered as meeting the requirement if the grease surface does not crack during this procedure.

4.4.5 Volatile matter. Approximately 2 grams (g) of the grease shall be weighed to the nearest milligram in a tared aluminum foil dish 5.0 cm (2.0 inches) in diameter. The dish shall be placed in an explosion-proof, gravity-convection oven maintained at  $105^{\circ}\text{C} - 110^{\circ}\text{C}$  ( $221^{\circ}\text{F} - 230^{\circ}\text{F}$ ) for a period of 3 hours. The volatile contents are determined from the resultant weight loss.

#### 4.4.6 Adhesiveness.

##### 4.4.6.1 Apparatus shall be as follows:

- (a) Disc and shaft as shown in Figure 2
- (b) Vertical shaft and motor assembly capable of rotating disc at  $150 \pm 10$  revolutions per minute (rpm)
- (c) Oven maintained at  $66.1^{\circ}\text{C} \pm 1.1^{\circ}\text{C}$  ( $151^{\circ}\text{F} \pm 2^{\circ}\text{F}$ )
- (d) Drip shield suitable for catching grease flung centrifugally from spinning disc

4.4.6.2 Procedure. Weigh the clean, dry disc and fill its concave side with the grease. Strike off level with a straight edge. Weigh disc and grease. Place the disc, with the grease side up, on the end of the shaft in

the oven at 66.1°C (151°F). Place the drip shield around the disc. After 15 minutes soaking at the test temperature, start the motor and run for 15 minutes. Remove the disc, cool and weigh with the grease remaining thereon. Calculate the percent of grease remaining on the disc. Perform this procedure in triplicate and report to the nearest 1 percent, the average percent remaining on the disc.

4.4.7 Aquatic biodegradability. If one of the acceptable alternative test methods (listed in note 2 of Table II) is used for biodegradability, report the standard method used.

4.4.8 Aquatic toxicity. In accordance with ASTM Standard Practice D 6081, prepare 4 water accommodated fractions (WAFs) for testing by loading 1000 ppm, 100 ppm, 10 ppm, and 1 ppm by weight of grease to equal volumes of seawater and stirring at a low speed (a vortex of 5% - 10% of sample height). These WAFs should then be subjected to a static, non-renewal, 48-hour mysid ((Mysidopsis) Bahia) acute toxicity test in seawater per EPA/600/4-90/027F.

## 5. PACKAGING

5.1 Packaging. For acquisition purposes, the packaging requirements shall be as specified in the contract or order (see 6.2). When actual packaging of material is to be performed by DoD personnel, these personnel need to contact the responsible packaging activity to ascertain requisite packaging requirements. Packaging requirements are maintained by the Inventory Control Point's packaging activity within the Military Department or Defense Agency, or within the Military Department's System Command. Packaging data retrieval is available from the managing Military Department's or Defense Agency's automated packaging files, CD-ROM products, or by contacting the responsible packaging activity.

## 6. NOTES

(This section contains information of a general or explanatory nature, which may be helpful but is not mandatory.)

6.1 Intended use. Type I or II wire rope and exposed gear grease is intended to provide lubrication and corrosion protection for running ropes and exposed gears. Type II provides an environmentally preferable formulation for applications where the potential for loss of lubricant to the environment is greater.

6.2 Acquisition requirements. Acquisition documents should specify the following:

- (a) Title, number, and date of this specification.
- (b) Type of grease (I or II).
- (c) Packaging requirements (see 5.1).
- (d) Issue of DoDISS to be cited in the solicitation, and if required, the specific issue of individual documents referenced (see 2.2.1).
- (e) Date of ordering and date of supply.
- (f) Quantity.
- (g) Whether a Material Safety Data Sheet is required.
- (h) Whether NEHC toxicity evaluation is required (see 6.5).

6.3 Qualification. With respect to products requiring qualification, awards will be made only for products which are, at the time of award of contract, qualified for inclusion in Qualified Products List, QPL-18458, whether or not such products have actually been so listed by that date. The attention of the contractors is called to these requirements, and

manufacturers are urged to arrange to have the products that they propose to offer to the Federal Government tested for qualification in order that they may be eligible to be awarded contracts or purchase orders for the products covered by this specification. Information pertaining to qualification of products may be obtained from the Naval Sea Systems Command, ATTN: SEA 05Q2, 1333 Isaac Hull Avenue, SE, Stop 5160, Washington Navy Yard DC 20376-5160.

6.4 Definitions.

6.4.1 Lot. For purposes of sampling, a lot consists of all grease manufactured in a single plant run (not exceeding 24 hours), through the same processing equipment, with no change in the ingredient materials.

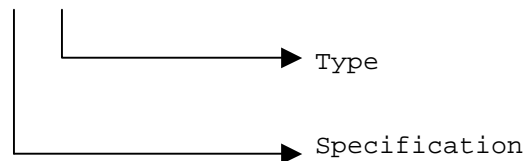
6.4.2 Bulk lot. An indefinite quantity of a homogenous mixture of grease offered for acceptance in a single, isolated container; or manufactured in a single plant run (not exceeding 24 hours), through the same processing equipment with no change in the ingredient materials.

6.4.3 Packaged lot. An indefinite number of drums or smaller unit containers of identical size and type, offered for acceptance, and filled with a homogenous mixture of grease manufactured in a single plant run (not exceeding 24 hours), through the same processing equipment with no change in the ingredient materials.

6.5 Toxicity evaluation. Questions concerning toxicity and requests for Health Hazard Risk Assessments (HHRA) should be addressed to Commanding Officer, Navy Environmental Health Center, 620 John Paul Jones Circle, Suite 1100, Portsmouth, Virginia 23513-2617, Attention: C.I.H./NEHC-34. NEHC requires sufficient information to permit a toxicological evaluation of the product. As a minimum, the information should include approximate percentages by weight of each ingredient in the product; identification of its pyrolysis products; and any such other information as may be needed to permit an accurate appraisal of any toxicity problems associated with the handling, storage, application, use, disposal, or combustion of the product. Upon receipt of the HHRA performed by NEHC, a copy should be provided to Commander, Naval Sea Systems Command, ATTN: SEA 05M, 1333 Isaac Hull Avenue, SE, Stop 5130, Washington Navy Yard DC 20376-5130.

6.6 Part or identifying number (PIN). The PINs to be used for wire rope and exposed gear grease acquired to this specification are created as follows:

Example: M 18458-1



6.8 Changes from previous issue. Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extent of the changes.

6.9 Local environmental regulations. If local environmental regulations are more stringent than those listed in the specification, local regulations will supersede those listed in the specification.

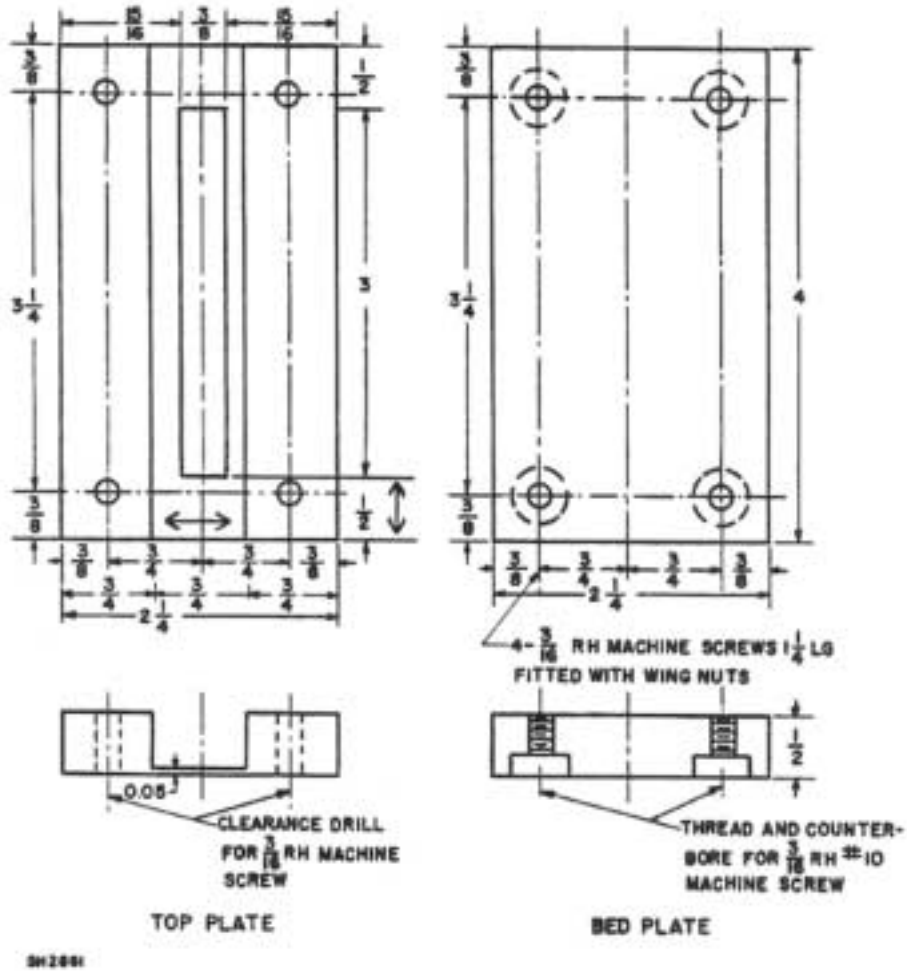
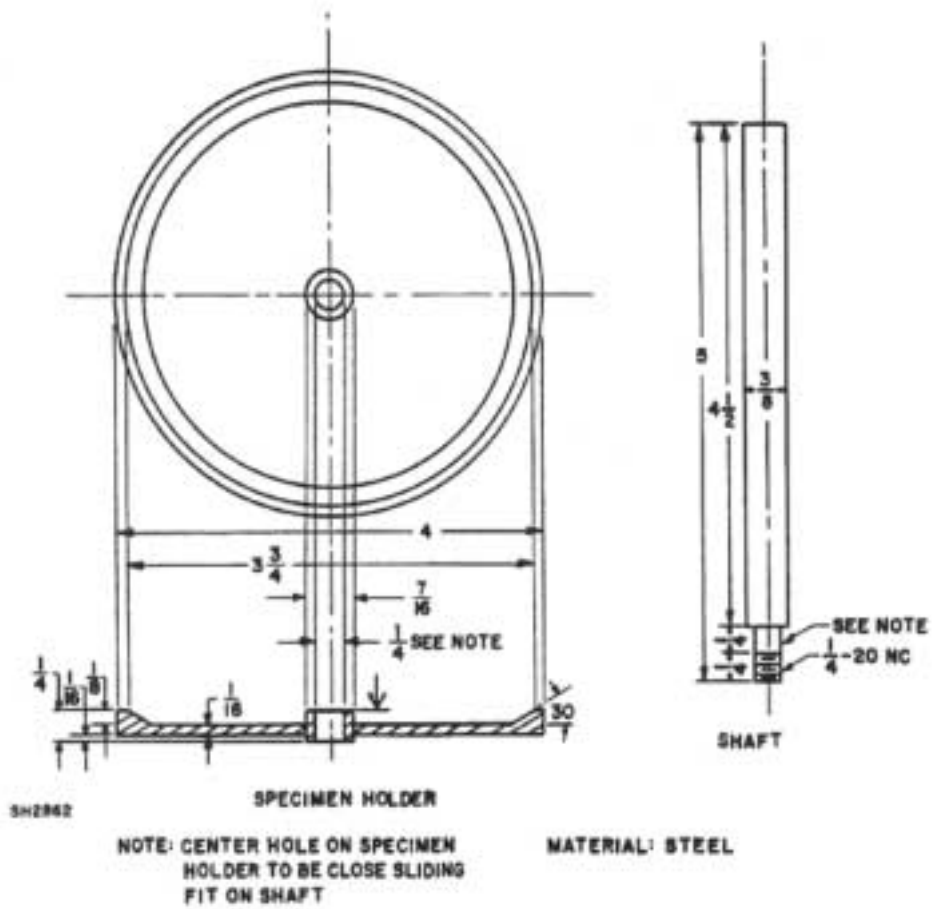


FIGURE 1. Strip coating apparatus for flexibility test.



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FIGURE 2. Apparatus for adhesiveness tests.

Custodians:  
 Army - AT  
 Navy - SH  
 Air Force - 03

Preparing activity:  
 Navy - SH  
 (Project 9150-1274)

Review activities:  
 Navy - AS, SA  
 Air Force - 11, 68, 99  
 DLA - GS, GS3, PS  
 CIV - 6FEE

# STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

## INSTRUCTIONS

1. The preparing activity must complete blocks 1, 2, 3, and 8. In block 1, both the document number and revision letter should be given.
2. The submitter of this form must complete blocks 4,5,6, and 7 and send to preparing activity.
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NOTE: This form may not be used to request copies of documents, nor to request waivers, or clarification of requirements on current contracts. Comments submitted on this form do not constitute or imply authorization to waive any portion of the referenced document(s) or to amend contractual requirements.

### I RECOMMEND A CHANGE:

1. DOCUMENT NUMBER  
MIL-PRF-18458C

2. DOCUMENT DATE (YYYYMMDD)  
5 July 2002

3. DOCUMENT TITLE: GREASE, WIRE ROPE - EXPOSED GEAR

4. NATURE OF CHANGE (*Identify paragraph number and include proposed rewrite, if possible. Attach extra sheets as needed*)

5. REASON FOR RECOMMENDATION

6. SUBMITTER

a. NAME (*Last, First, Middle Initial*)

b. ORGANIZATION

c. ADDRESS (*Include Zip Code*)

d. TELEPHONE (*Include Area Code*)  
(1) Commercial  
(2) DSN  
(*if applicable*)

7. DATE SUBMITTED  
(YYYYMMDD)

8. PREPARING ACTIVITY

a. NAME  
SEA 05Q

b. TELEPHONE (*Include Area Code*)  
(1) Commercial  
(202) 781-3726

(2) DSN  
326-3726

c. ADDRESS (*Include Zip Code*)  
Commander  
Naval Sea Systems Command  
ATTN: SEA 05Q  
1333 Isaac Hull Ave., SE, Stop 5160  
Washington Navy Yard DC 20376-5160

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Defense Standardization Program Office (DLSC-LM)  
8725 John J. Kingman Road, Suite 2533,  
Fort Belvoir, VA 22060-6221  
Telephone (703) 767-6888 DSN 427-6888