MIL-P-46002B
9 March 1984
SUPERSEDING
MIL-P-46002A(MR)
20 December 1974

MILITARY SPECIFICATION

PRESERVATIVE OIL, CONTACT AND VOLATILE CORROSION-INHIBITED

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

1. SCOPE

1.1 Scope. This specification covers a volatile corrosion-inhibited oil for use in the preservation of materiel in enclosed systems (see 6.1).

1.2 Classification.

1.2.1 Grades. The volatile corrosion inhibited oil shall be of the following grades, as specified (see 6.2):

Grade 1 - light viscosity oil.
Grade 2 - medium viscosity oil.

2. APPLICABLE DOCUMENTS

2.1 Government documents.

2.1.1 Specifications and standards. Unless otherwise specified (see 6.2), the following specifications and standards of the issue listed in that issue of the Department of Defense Index of Specifications and Standards (DoDISS) specified in the solicitation form a part of this specification to the extent specified herein.

SPECIFICATIONS

FEDERAL

QQ-A-250/4 - Aluminum Alloy 2024, Plate and Sheet.
QQ-A-671 - Anodes: Cadmium.

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: USA Belvoir Research and Development Center, ATTN: STRBE-DS, Fort Belvoir, VA 22060 by using the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

FSC 9150

QQ-C-576	- Copper Flat Products with Slit, Slit and Edge Rolled, Sheared, Sawed or Machined Edges (Plate, Bar, Sheet, and Strip).
QQ-M-44	- Magnesium Alloy, Plate and Sheet (AZ31B).
TT-N-95	- Naphtha; Aliphatic.
VV-F-800	- Fuel Oil, Diesel.

STANDARDS

FEDERAL

FED-STD-791	- Lubricants, Liquid Fuels, and Related Products; Methods of Testing.
FED-STD-313	- Material Safety Data Sheet Preparation and the Submission of.

MILITARY

MIL-STD-105	- Sampling Procedures and Tables for Inspection by Attributes.
MIL-STD-290	- Packaging of Petroleum and Related Products.

(Copies of specifications, standards, drawings, and publications required by suppliers in connection with specific procurement functions should be obtained from the procuring agency or as directed by the contracting officer.)

2.2 Other publications. The following document(s) form a part of this specification to the extent specified herein. The issues of the documents which are indicated as DoD adopted shall be the issue listed in the current DoDISS and the supplement thereto, if applicable.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

A366	- Steel Sheets Carbon Cold-Rolled, Commercial Quality.
D91	- Precipitation Number of Lubricating Oils.
D92	- Flash and Fire Points by Cleveland Open Cup.
D97	- Pour Point of Petroleum Oils.
D130	- Copper Corrosion from Petroleum Products by the Copper Strip Tarnish Test.
D270	- Petroleum and Petroleum Products, Sampling.
D445	- Kinematic Viscosity of Transparent and Opaque Liquids (and the Calculation of Dynamic Viscosity).
D972	- Evaporation Loss of Lubricating Greases and Oils.
D1193	- Reagent Water.
D1748	- Rust Protection by Metal Preservatives in the Humidity Cabinet.

(The ASTM test methods and specifications listed above are included in various Parts of the Annual Book of ASTM Standards and are available individually. Application for copies should be addressed to the American Society for Testing and Materials, 1916 Race Street, Philadelphia, Pennsylvania 19103).

(Industry association specifications and standards are generally available for reference from libraries. They are also distributed among technical groups and using Federal agencies.)

2.3 Order of precedence. In the event of a conflict between the text of this specification and the references cited herein, the text of this specification shall take precedence.

3. REQUIREMENTS

3.1 First article. Preservative oil, contact and volatile corrosion-inhibited, furnished under this specification shall be a product which has passed the first article inspection requirements specified herein (see 4.5.1 and 6.4). When specified (see 6.4), the contractor shall furnish sample units for first article inspection and approval.

3.2 Material. Preservative oil, contact and volatile corrosion inhibited, shall be a fraction of petroleum containing whatever additives may be necessary to meet the requirements of this specification. The oil shall be free from offensive odors.

3.3 Physical and chemical requirements. The oil shall conform to the physical and chemical requirements specified in table I and in 3.4 through 3.6, when tested in accordance with the applicable methods in section 4.

Table I. Physical requirements.

Property	Value	
	Grade 1	Grade 2
Flash point, min.	115.5° C (240° F)	120° C (250° F)
Pour point, max.	-45.5° C (-50° F)	-23.5° C (-10° F)
Viscosity, centistokes		
at 100° C (212° F)	-	8.25 to 16.60
at 40° C (104° F)	11 min.	83.45 to 111.20
at -40° C (-40° F)	10,000 max.	
Evaporation loss		
Volatile matter, weight percent, max.	25	5
Viscosity change at 40° C (104° F), percent.	-5 to +20	-5 to +20

3.4 Precipitation number and hydrocarbon solubility.

a. At the end of the precipitation number test (see 4.8) the mean of the total volume of solid sediment at the bottom of the centrifuge tube shall not exceed 0.05 ml.

b. There shall be no evidence of stratification or separation of the oil or its additives from the test solution after 24 hours storage at 25° ± 3° C (77° ± 5° F). A slight suspension is permissible if recentrifuging does not increase the precipitation number or cause layer formation.

3.5 Copper strip corrosion. After testing as specified in 4.9, the copper strip rating shall not exceed 2c.

3.6 Corrosion inhibition.

3.6.1 Humidity cabinet protection. After testing the oil for 300 hours in the humidity cabinet as specified in 4.10.1, a total of not more than three corrosion dots, none of which exceeds 1 mm in length, width or diameter, shall be evident on the three sand-blasted steel test panels. Corrosion in excess of this amount shall be cause for rejection.

3.6.2 Vapor phase protection. After testing the oil as specified in 4.10.2, not more than three corrosion dots, none of which exceeds 1 mm in length, width or diameter, shall be evident on any of the test panels.

3.6.3 Vapor phase protection after exhaustion. After testing the oil as specified in 4.10.3, not more than three corrosion dots, none of which exceeds 1 mm in length, width or diameter, shall be evident on any of the test panels.

3.6.4 Acid neutralization. After testing the oil as specified in 4.10.4, combined total of not more than three corrosion dots, none of which exceed 1 mm in length, width or diameter, shall be evident on the test panels.

3.6.5 Water displacement and water stability. The oil, after storage in contact with water, shall satisfactorily displace water as evidenced by the absence of rust, mottling, or other abnormal surface strains on the test specimens when tested in accordance with 4.10.5.

3.6.6 Corrosion immersion. After 7 days exposure at 54° ± 3° C (130° ± 5° F) (see 4.10.6), the oil shall not produce corrosive effects as shown by weight gain or loss in excess of the following:

Metal	Milligrams per Square Centimeter
Aluminum	0.2
Steel	0.5
Copper	1.0
Magnesium	0.2
Cadmium	0.5

3.7 Workmanship. The finished oil shall be free from visible water, undissolved sediment and suspended matter, and shall be transparent and bright at the ambient temperature or at 21° C (70° F), whichever is higher.

4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection. Unless otherwise specified in the contract or purchase order, the contractor is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified in the contract or order, the contractor may use his own or any other facilities suitable for the performance of the inspection requirements specified herein, unless disapproved by the Government. The Government reserves the right to perform any of the inspections set forth in the specification where such inspectons are deemed necessary to assure supplies and services conform to prescribed requirements.

4.2 Lot.

4.2.1 Bulk lot. An indefinite quantity of a homogeneous mixture of oil 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.

4.2.2 Packaged lot. An indefinite number of 55-gallon drums or smaller unit containers of identical size and type, offered for acceptance, and filled with a homogeneous mixture of oil manufactured in a single plant run (not exceeding 24 hours), through the same processing equipment, with no change in the ingredient materials.

4.3 Sampling.

4.3.1 Sampling for examination of filled containers. Take a random sample of filled containers from each lot in accordance with MIL-STD-105 at inspection level II and acceptable quality level (AQL) = 2.5 percent defective.

4.3.2 Sampling for tests. Take samples for tests in accordance with ASTM D270.

4.3.2.1 First article sample. The first article sample shall be 5 gallons of the preservative oil formulation for which first article approval is sought. The sample shall be accompanied by a summary report for all of the requirements listed herein. First article samples shall be sent to a laboratory designated by the procuring activity or designated agent (see 6.4).

4.4 Inspection.

4.4.1 Inspection of material. Perform inspection of material in accordance with method 9601 of FED-STD-791.

4.4.2 Examination of filled containers. Examine samples taken in accordance with 4.3.1 for compliance with MIL-STD-290 with regard to fill, closure, sealing, and leakage. Reject any container having one or more defects or under the required fill. If the number of defective or underfilled containers exceeds the acceptance number for the appropriate sampling plan of MIL-STD-105, reject the lot represented by the sample.

4.5 Classification of tests.

a. First article inspection (see 4.5.1).
b. Quality conformance tests (see 4.5.2).

4.5.1 First article inspection. First article inspection shall consist of tests for all the requirements of this specification. Testing shall be performed in the contractor's plant, in a Government laboratory, or in a Government-approved laboratory, as specified by the procuring activity or its designated agent (see 6.4). When testing is performed by the contractor or by an independent laboratory, written certification, signed by a responsible officer of the firm involved, shall be furnished stating that the first article samples have met all of the requirements of this specification. In addition, the statement shall contain a laboratory report listing all of the tests performed, the results obtained, and product designation. Safety data sheets conforming to FED-STD-313 shall be submitted to the activity listed in 6.4 at the time of first article inspection.

4.5.1.1 Waiver of first article inspection. First article inspection may be waived at the option of the procuring activity when both of the following conditions have been met.

a. A first article sample of the product has passed all of the first article inspection requirements within the previous five years.
b. The contractor certifies in writing that the composition of the preservative oil is the same as the product which previously passed the first article inspection requirements.

4.5.2 Quality conformance tests. Tests shall consist of tests for all the requirements specified in section 3 except humidity cabinet protection (see 3.6.1).

4.6 Test methods. Perform tests and evaluations in accordance with 4.6 through 4.10, as applicable. Use reagent water meeting the requirements for type III of ASTM D1193. Use reagent-grade chemicals for all tests, except where otherwise specified.

Flash point ---------- ASTM D92

Pour Point ---------- ASTM D97

Viscosity ---------- ASTM D445

4.7 Evaporation test. Conduct this test at 100° C (212° F) in accordance with ASTM D972, with one exception use a 15.00 ± 0.05 g sample. After completing the test and determining the evaporation loss, evaluate the viscosity at 40° C (104° F). Calculate the percent of viscosity change based on the original viscosity of the oil.

4.8 Precipitation number and hydrocarbon solubility.

4.8.1 Precipitation number. Conduct this test in accordance with ASTM D91.

4.8.2 Hydrocarbon solubility. At the completion of the precipitation number test, store the sample for 24 hours at 25° ± 3° C (77° ± 5° F), then examine it for compliance with 3.4b.

4.9 Copper corrosion.

4.9.1 Copper strip corrosion. Prepare a blend composed of 5 percent by volume of the product (brand and grade) under test and 95 percent by volume of fuel oil, diesel conforming to VV-F-800. Subject this blend to the copper strip corrosion test (see ASTM D130). Perform the test at 100 ± 1° C (212° ± 2° F) for 6 hours ± 5 minutes in an oven with one exception: use 20 ml of the blend in a sample tube (25 by 150 mm) and 10 ml of the blend in another sample tube. Carefully immerse a polished copper strip partially in the tube containing 20 ml of the blend and carefully partially immerse another polished copper strip in the tube containing 10 ml of the blend. Place the tubes in the copper strip corrosion test bombs. After the test withdraw the copper strips, wash and examine them for evidence of corrosion or tarnishing. Then rate the appearance of the strips according to the ASTM Copper Strip Corrosion Standards. Either rating of the two strips shall not exceed 2c.

4.10 Corrosion inhibition.

4.10.1 Humidity cabinet protection. Conduct this test in accordance with ASTM A1748. using sand-blasted cold rolled SAE 1009 steel test panels conforming to ASTM A366. To detect any inhibitor build-up, clean the cabinet thoroughly when periodic testing of unhibited oil-coated panels show an increase in protective life.

4.10.2 Vapor phase protection.

4.10.2.1 Test panels. Prepare three panels measuring 16 x 51 x 3.2 mm (3 x 2 x 1/8 inch) of the same material and cleaned in the same manner as specified for the humidity cabinet (see 4.10.1).

4.10.2.2 Polishing test panels. Polish the unnumbered side of the test panels to a surface finish of 380 ± 130 mm (15 ± 5 μ inch) using a 280-grit aluminum oxide or silicon carbide abrasive, with either cloth or paper backing. Do not use "wet or dry", waterproof, or iron oxide abrasives. After abrading, clean the panels immediately, using the following procedure:

a. Wipe the abraded faces of the panels with clean surgical gauze to remove superficial dust.
b. Remove the remaining residue and contamination by holding the panels in a rack at 20 degrees from the vertical and spraying downward with naphtha. Flush the surfaces progressively downward, spraying first the test surfaces, then the backs of the panels and finally the test surfaces again.

c. Heat the panels in boiling naphtha for 5 to 10 minutes.
d. Rinse the panels in hot anhydrous methanol.
e. Inspect the panels carefully under a bright light to determine if any surface residues remain.
f. Desiccate the panels at 25° ± 3° C (77° ± 5° F) and place in test within 2 hours.

NOTE: Naphtha and methanol are flammable and toxic. Do not heat either solvent with an open flame. Avoid contact with skin and inhalation of vapors. Perform procedures under b, c, and d in an efficient laboratory hood.

4.10.2.3 Test apparatus. The test apparatus shall consist of a screw-top, wide-mouth jar, 100 mm (4 inch) in height and 90 mm (3.5 inch) in diameter, as illustrated in figure 1. Bend a length of stainless steel or monel metal into simple framework on which the steel panel can be suspended in a vertical position on one side of the jar. Remove any cardboard seal in the jar lid and replace it with several pieces of filter paper to provide an adequate seal. Use fresh filter papers for each test. The filter paper shall be of high quality, containing no more than a trace of acidic residues.

4.10.2.4 Cleaning of apparatus prior to test.

4.10.2.4.1 Jar lids.

a. Wash thoroughly in hot water-detergent solution.
b. Rinse with hot, running tap water followed by a rinse with reagent water.
c. Wipe dry with clean, absorbent tissue.

4.10.2.4.2 Jars, watch glasses and monel metal frameworks.

a. Rinse with solvent conforming to TT-N-95.
b. Soak in hot water-detergent solution for one hour, followed by a rinse with hot, running tap water.
c. Add 5 - 10 ml of concentrated hydrochloric acid to the jars, swirl and allow to stand for 1 hour.
d. Expose the monel metal framework to hydrochloric acid vapors and soak the watch glasses in the acid.
e. Soak in a hot water-detergent solution followed by a rinse with hot, running tap water.
f. Rinse with reagent water and dry with fresh, absorbent tissue.

4.10.2.5 Test procedure. Prepare three test assemblies for each oil to be tested. Weigh a quantity of oil, as listed in table II, onto a small, cleaned and tared watch glass, 51 to 64 mm (2.0 to 2.5 inch) diameter. The temperature of the oil and the test assemblies shall be 25° ± 3° C (77° ± 5° F) prior to the test.

Table II. Oil weight.

Oil	Oil weight, grams
Grade 1	2.5
Grade 2	4.0

Immediately after weighing, place the watch glass and oil in the test jar and add 50.0 ± 0.5 ml of reagent water. Place the lid on the jar, then swirl the jar and contents vigorously for one minute. Exercise care to prevent any of the mixture from splashing onto the inside of the jar lid. Mount the steel panel on the monel metal framework, place the panel in the jar and replace the jar lid immediately. Mount the panel so that the polished side faces the center of the jar. Maintain the temperature of the test unit at 25 ± 3° C (77° ± 5° F) for 10 to 15 minutes, place the unit in a mechanical convection oven at 54° ± 3° C (130° ± 5° F) for 16 hours, then expose it as follows:

6 hours at 4° ± 3° C (40° ± 5° F)
18 hours at 54° ± 3° C (130° ± 5° F)

Position the jars in the oven so that the polished surface of the panel is facing toward the direction of air flow. At the completion of the test, not more than three corrosion dots, none of which exceeds 1 mm in length, width or diameter shall be evident on any of the test panels. Disregard any corrosion appearing within 6 mm (1/4 inch) of any edge. Also disregard any surface stain that can be removed by absorbent tissue and naphtha.

4.10.3 Vapor phase protection after exhaustion.

4.10.3.1 Test panels. Three panels are required for this test. The panels shall measure 76 x 51 x 3.2 mm (3 x 2 x 1/8 inch), shall be of the same material and shall be cleaned in the same manner specified for the humidity cabinet protection test (see ASTM D1748).

4.10.3.2 Polishing test panels. Polish the test panels in accordance with the procedure specified for the vapor-phase protection test (see 4.10.2.2).

4.10.3.3 Test apparatus. Use the test apparatus specified for the vapor-phase protection test (see 4.10.2.3).

4.10.3.4 Cleaning of apparatus prior to test. Clean the test apparatus in accordance with the procedure specified for the vapor-phase protection test (see 4.10.2.4).

4.10.3.5 Test procedure. Evaluate a 15.00 ± 0.05 g sample at 100° C (212° F) in accordance with ASTM D972, except that the exposure period shall be 6 hours instead of the 22-hour period specified. At the completion of the test, transfer the sample to a glass container, stopper the container, and permit the sample to cool. Then evaluate the oil in accordance with the procedure specified for the vapor-phase protection test (see 4.10.2.5), using the quantity of oil specified in table III.

Table III. Oil weight.

Oil	Oil weight, grams
Grade 1	3.0
Grade 2	5.0

At the completion of the test, not more than three corrosion dots, none of which exceeds 1 mm in length, width or diameter, shall be evident on any of the test panels. Corrosion in excess of this amount shall be cause for rejection. Disregard any corrosion appearing within 6 mm (1/4 inch) of any edge. Also disregard any surface stain or film that can be removed with absorbent tissue and naphtha.

4.10.4 Acid neutralization.

4.10.4.1 Test panels. Three panels are required for this test. The panels shall measure 76 x 51 x 1.6 mm (3 x 2 x 1/16 inch), shall be of the same material and shall be cleaned and sand-blasted in the same manner specified for the humidity cabinet protection test (see ASTM D1748).

4.10.4.2 Test procedure. Using forceps, totally immerse each of three test panels for not more than one second in a 0.1 ± 0.01 weight percent aqueous hydrobromic acid solution. Without draining excess acid from the panel, immediately transfer the panel from the hydrobromic acid to a 400-ml beaker containing the sample of oil under test. Totally immerse the panel and remove it from the oil twelve times in 60 seconds. Change the position of the tips of the forceps for each immersion, to assure access of the oil to all surfaces of the panel. Set all three panels in a slotted wooden block support and store them at 25° ± 3° C (77° ± 5° F) for 4 hours. At the completion of the storage period, remove the coatings from the panels with naphtha and examine them. A combined total of not more than three corrosion dots, none of which exceeds 1 mm in length, width, or diameter shall be evident on the test panels. In evaluating the test results, disregard any corrosion or staining appearing within 3 mm (1/8 inch) of any edge of a panel or within 3 mm (1/8 inch) of the line of contact of a panel and the upper surface of the slot in the wooden block support.

4.10.5 Water displacement and water stability. Perform the test in accordance with method 3007 of FED-STD-791, with the following exception Round the edges and ream out the suspension holes of the panels in accordance with ASTM D1748 instead of JAN-H-792 as specified.

4.10.6 Corrosion immersion.

4.10.6.1 Test specimens. Make five test specimens, one each of metals conforming to the specifications listed below, and measuring 51 x 25 x 5.4 mm (2 x 1 x 1/4 inch).

Aluminum	QQ-A-250/4, Temper T-4
Copper	QQ-C-576
Cadmium	QQ-A-671
Magnesium	QQ-M-44
Steel	ASTM A366, class 1, commercial bright finish

4.10.6.2 Preparation of test specimens. Clean the five test specimens described in 4.10.6.1 in accordance with ASTM D1748. Polish the test specimens with a slow speed, horizontal, metallurgical polishing wheel. Do the final polishing with 280-grit silicon carbide or aluminum oxide paper moistened with naphtha. Hold the specimen in a suitable holder to avoid contact with the hands. Then clean the specimens with hot naphtha and rinse them in warm, anhydrous methanol. Rinse the magnesium specimen very briefly in the methanol. When the specimens are dry, store them in a desiccator and use them on the same day they were prepared.

4.10.6.3 Test procedure. Weigh each specimen and place it in a wide mouth jar approximately 76 mm (3 inch) in diameter and fitted with a screw cap. Use a suitable device or procedure to insure that the specimens do not touch each other. Cover the specimens with 300 ml of the test oil. Seal the jar and place it in an oven maintained at 54° ± 3° C (130° ± 5° F) for 7 days. On completion of the test, remove the compound and any corrosion products from the specimens by swabbing with naphtha, followed by methanol, using surgical gauze pads. Follow each swabbing operation with a rinse in a clean solvent. Reweigh the specimens and calculate the change in weight in milligrams per square centimeter.

4.11 Inspection of packaging.

4.11.1 Quality conformance inspection of pack.

4.11.1.1 Unit of product. For the purpose of inspection, a complete pack prepared for shipment shall be considered a unit of product.

4.11.1.2 Inspection of lot. The inspection lot shall be as defined in 4.2, packed for shipment.

4.11.1.3 Sampling. Samples for examination of packaging shall be selected at random from each inspection lot in accordance with the procedure prescribed in MIL-STD-105.

4.11.1.4 Examination. Samples selected in accordance with 4.11.1.3 shall be examined for defects listed below. AQL shall be 4.0 percent defective.

101. Unit container not as specified in MIL-STD-290.
102. Intermediate container, when required, not as specified in MIL-STD-290.
103. Quantity and arrangement of unit containers packed in intermediate containers not as specified in MIL-STD-290.

104. Quantity and arrangement of intermediate containers packed in exterior containers not as specified in MIL-STD-290.
105. Exterior container not as specified in MIL-STD-290.
106. Metal cans with protruding closures not protected as specified in MIL-STD-290.
107. Marking not as specified in MIL-STD-290 and herein.

5. PACKAGING

5.1 Unit, intermediate and exterior packing. Unit, intermediate and exterior packing shall be in accordance with MIL-STD-290, level B, level C or commercial as specified in 6.2, type and size of unit container shall be as specified (see 6.2).

5.2 Marking. Marking shall be as specified in MIL-STD-290 and herein.

5.2.1 Item description. Mark each unit, intermediate and exterior container as follows

PRESERVATIVE OIL, CONTACT AND

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5.2.2 Toxicity warning. Mark each unit, intermediate container as follows:

WARNING

Do not use this oil in food processing or handling equipment or surfaces that may contact foods. Do not allow the oil to contaminate foodstuffs. Provide/use appropriate personal protective equipment as designated by local hygiene, medical, and safety personnel.

6. NOTES

6.1 Intended use. The volatile corrosion inhibited lubricating oil covered by this specification is intended for use in the preservation of enclosed systems where the volatile components will provide protection above the oil level. It can also be effectively utilized as a contact preservative. This material is not to be used in the preservation of any engine fuel tank or fuel storage tank. A method of diesel engine preservation that has proved satisfactory is the alternate procedure as given in MIL-E-10062E, Engines: Preparation for Shipment and Storage of, 3.11.1.1, 4.3, 3.11.1.1.5, 3.11.1.1.6.1, 3.11.1.1.6.2, and 3.11.1.1.7.1. It is not intended for use as an operational preservative oil and should not be used in applications where elastomeric components are present. It is not effective unless an adequate reservoir of oil can be maintained. A minimum of 5 liters of grade 1 or 8.4 liters of grade 2 oil should be used for each cubic meter (1,000 liters) of volume to be protected (U.S. customary equivalents 5 fluid ounces of grade 1 or 8 fluid ounces of grade 2 for each cubic foot of volume.)

6.2 Ordering data. Procurement documents should specify the following:

a. Title, number, and date of this specification.
b. Grade of oil required (see 1.2).
c. Date of issue of DoDISS applicable and exceptions thereto (see 2.1.1).
d. Quantity of oil required. The unit of purchase is the U.S. Gallon (231 cubic inches) at 15.6° C (60° F).
e. Level of packaging and level of packing required (see 5.1).
f. Type and size of container (see 5.1).

6.3 Compatibility. The blending of different manufacturers' volatile corrosion inhibited oils procured in accordance with this specification is not recommended. The permissible variation in chemical composition of several manufacturers' products might cause serious compatibility problems.

6.4 First article inspection. Information and instruction regarding first article inspection under this specification may be obtained from the following activity: US Army Belvoir Research and Development Command, ATTN: STRBE-VF, Fort Belvoir, VA.

Custodian:
Army - ME
Navy - OS

Preparing activity:
Army - ME

Project 9150-0668

Review activities:
Army - MD, AL, AR
DLA - GS

User activity:
Army - AT

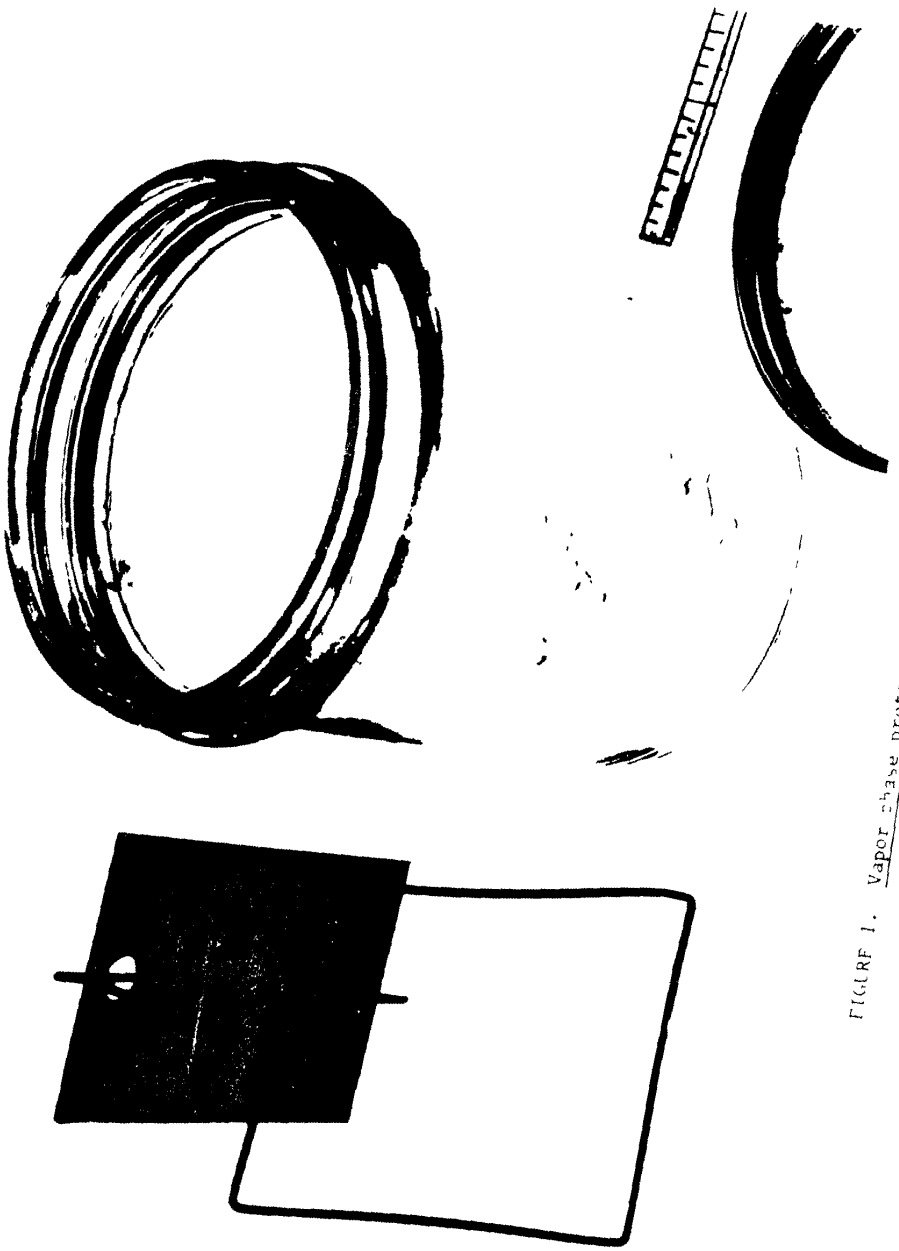

FIGURE 1. Vapor phase protective test apparatus

INSTRUCTIONS In a continuing effort to make our standardization documents better, the DoD provides this form for use in submitting comments and suggestions for improvements All users of military standardization documents are invited to provide suggestions. This form may be detached, folded along the lines indicated, taped along the loose edge *(DO NOT STAPLE)*, and mailed In block 5, be as specific as possible about particular problem areas such as wording which required interpretation, was too rigid, restrictive, loose, ambiguous, or was incompatible, and give proposed wording changes which would alleviate the problems. Enter in block 6 any remarks not related to a specific paragraph of the document If block 7 is filled out, an acknowledgement will be mailed to you within 30 days to let you know that your comments were received and are being considered

NOTE This form may not be used to request copies of documents, nor to request waivers, deviations, or clarification of specification 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

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STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

(See Instructions - Reverse Side)

1 DOCUMENT NUMBER	2 DOCUMENT TITLE
MIL-P-46002B	Preservative Oil, Contact and Volatile Corrosion-Inhibited

3a. NAME OF SUBMITTING ORGANIZATION	4 TYPE OF ORGANIZATION *(Mark one)*
	☐ VENDOR
b. ADDRESS *(Street, City, State, ZIP Code)*	☐ USER
	☐ MANUFACTURER
	☐ OTHER *(Specify)* _____

5. PROBLEM AREAS

a. Paragraph Number and Wording

b. Recommended Wording

c. Reason/Rationale for Recommendation

6. REMARKS

7a. NAME OF SUBMITTER *(Last, First, MI)* – Optional	b. WORK TELEPHONE NUMBER *(Include Area Code)* – Optional
8. MAILING ADDRESS *(Street, City, State, ZIP Code)* – Optional	9. DATE OF SUBMISSION *(YYMMDD)*

DD FORM 82 MAR 1426 PREVIOUS EDITION IS OBSOLETE

TO DETACH THIS FORM, CUT ALONG THIS LINE.)