O-F-1044B
February 24, 1975
SUPERSEDING
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October 4, 1968

FEDERAL SPECIFICATION

FUEL, ENGINE PRIMER: COLD STARTING,

IN PRESSURIZED AND NONPRESSURIZED CONTAINERS

This specification was approved by the Commissioner, Federal Supply Service, General Services Administration, for the use of all Federal agencies.

1. SCOPE AND CLASSIFICATION

1.1 Scope. This specification covers one grade of cold starting primer fuel (ether) which is dispensed from the types and classes of dispenser listed in 1.2.1.

1.2 Classification.

1.2.1 Types and classes. The engine primer fuel shall be of the following types and classes as specified (see 6.2):

Type I - Pressurized cartridge unit - 5 grams (gm) of priming fuel.
Type II - Pressurized aerosol unit - 8 ounces avoirdupois (oz av) of priming fuel.
Type III - Pressurized disposable cylinder unit - 20.0 oz av of priming fuel.
Type IV - Nonpressurized bulk units.

Class 1 - Cartridge - 16 cubic centimeters (cu cm) of priming fuel.
Class 2 - Container - 12 cubic inches (in) of priming fuel.

2. APPLICABLE DOCUMENTS

2.1 The following documents, of the issue in effect on date of invitation for bids or request for proposal, form a part of this specification to the extent specified herein:

Federal Specifications:

PPP-B-566 - Boxes, Folding, Paperboard.
PPP-B-601 - Boxes, Wood, Cleated-Plywood

PPP-B-621 - Boxes, Wood, Nailed and Lock-Corner.
PPP-B-636 - Boxes, Shipping, Fiberboard.
PPP-B-676 - Boxes, Setup.
PPP-F-320 - Fiberboard; Corrugated and Solid, Sheet Stock (Container Grade), and Cut Shapes.

Federal Standard:

FED. STD. No. 123 - Marking for Domestic Shipment (Civil Agencies).

(Activities outside the Federal Government may obtain copies of Federal Specifications, Standards, and Handbooks, as outlined under General Information in the Index of Federal Specifications and Standards and at the prices indicated in the Index. The Index, which includes cumulative monthly supplements as issued, is for sale on a subscription basis by the Superintendent of Documents, U. S. Government Printing Office, Washington, DC 20402.

(Single copies of this specification and other Federal specifications required by activities outside the Federal Government for bidding purposes are available without charge from Business Service Centers at the General Services Administration Regional Offices in Boston, New York, Washington, DC, Atlanta, Chicago, Kansas City, MO, Fort Worth, Denver, San Francisco, Los Angeles, and Seattle, WA.

(Federal Government activities may obtain copies of Federal Specifications, Standards, and Handbooks and the Index of Federal Specifications and Standards from established distribution points in their agencies.)

Military Specifications :

MIL-P-116 - Preservation-Packaging, Methods of.
MIL-E-199 - Ether, Diethyl, Technical.

Military Standards:

MIL-STD-105 - Sampling Procedures and Tables for Inspection by Attributes.
MIL-STD-129 - Marking for Shipment and Storage.
MS39254 - Cylinder, Engine Starting (Engin Cold-Starting Aid).
MS51325 - Cartridge, Engine Starting (Engine Cold-Starting Aid).

(Copies of Military Specifications and Standards required by suppliers in connection with specific procurement functions should be obtained from the procuring activity or as directed by the contracting officer).

2.2 Other publications. The following documents form a part of this specification to the extent specified herein. Unless a specific issue is identified, the issue in effect on date of invitation for bids or request for proposal shall apply.

Department of Transportation

49 CFR 171-190 - General Information and Regulations

(The Code of Federal Regulations (CFR) and the Federal Register (FR) are for sale on a subscription basis by the Superintendent of Documents, U. S. Government Printing Office, Washington, DC 20402. Where indicated, reprints of certain regulations may be obtained from the Federal Agency responsible for issuance thereof.)

Federal Aviation Agency (FAA)

49 CFR 397 - Civil Air Regulations, Transportation of Explosives and Other Dangerous Articles.

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

Uniform Classification Committee, Agent

Uniform Freight Classification

(Application for copies should be addressed to the Uniform Classification Committee, ATTN: Tariff Publishing Officer, Room 1106, 222 South Riverside Plaza, Chicago, IL 60606.)

National Motor Freight Traffic Association, Inc., Agent

National Motor Freight Classification

(Application for copies should be addressed to the American Trucking Associations, Inc., ATTN: Tariff Order Section, 1616 P Street, N. W., Washington, DC 20036.)

3. REQUIREMENTS

3.1 Description. The containers of the primer fuel (hereinafter called primer fuel units) shall consist of a sealed, leak-free, container of flammable liquid, a compressed gas propellant, or a nonpressurized inert gas, as specified herein.

3.2 First article (preproduction model). The supplier shall furnish one or more primer fuel units as specified (see 6.2), of each type and class required and not less than 200 milliliters (ml) of primer fuel for examination and test within the time frame specified (see 6.2) to prove, prior to starting production, that his production methods and choice of design detail will produce primer fuel units that comply with the requirements of this specification. Examination and tests shall be as specified in Section 4 and shall be subject to surveillance and approval by the Government (see 6.3).

3.3 Material. Material shall be as specified herein. Material not specified shall be selected by the supplier and shall be subject to all provisions of this specification.

3.4 Primer fuel. The primer fuel shall consist of not less than 85 percent diethyl ether by volume conforming to MIL-E-199. All other components of the primer fuel shall be totally soluble in diethyl ether and combustible. All materials shall be stable in the primer fuel and shall not react chemically with the other primer fuel components or the propellant. The addition of a low temperature lubricant, with a pour point of minus 50° F or less will be permitted providing it does not constitute more than 0.75 percent of the total fuel mixture by volume. A dye may be used to color the primer fuel provided that it does not interfere with the requirements and tests in this specification.

3.4.1 Pour point. All nonvolatile components of the primer fuel shall have pour points below minus 50° F.

3.4.2 Water content. Water content of the primer fuel shall be at a level that prevents ice formation at minus 50° F.

3.4.3 Ash. The primer fuel shall leave not more than 0.001 gm of ash or incombustible residue per 50 ml of fuel after complete combustion.

3.5 Propellant. Unless otherwise specified herein, the propellant shall be carbon dioxide, nitrogen, argon, nitrous oxide, or a combustible hydrocarbon gas, such as ethylene.

3.6 Outage, pressure limits, and container specifications. In addition to the requirements specified herein, the primer fuel units shall be in a accordance with 49 CFR 171-190 and 49 CFR 397, for outage pressure limits and container specifications. Type II unit containers shall be in accordance with DOT Regulations, Container Specifications 2P or 2Q. The type III unit container shall be in accordance with DOT Container Specification 4B or 39.

3.7 Low and high temperatures. The primer fuel units shall withstand plus 155° F for 168 hours and minus 50° F for 144 hours without evidence of leakage, permanent deformation in excess of 5 percent, or malfunction.

3.8 Types and classes.

3.8.1 Type I. The cartridge for Type I primer fuel units shall conform to MS51325. The primer fuel unit shall contain a minimum of 5 gms of primer fuel. The primer fuel unit shall be charged with hydrocarbon gas propellant to a minimum effective pressure of 200 pounds per square inch (psi) at 70° F. The charged primer fuel unit shall be sealed by a metal to metal pressure crimped plug, or a pressure resistance welded cap with a center thickness equal to or less than the side wall of the cartridge.

3.8.1.1 Performance. When the cartridge is chilled to minus 50° F and punctured in the inverted position, Type I primer fuel units shall release a minimum of 5 gms of primer fuel and a minimum of 50 cu cm of propellant gas and primer fuel by volume at 70° F when tested as specified in 4.5.2.5.1.

3.8.2 Type II. The pressurized aerosol primer fuel unit shall include a valve assembly which shall operate single handed, including dip tube, a removable atomizing head, and a reusable cap for protecting the valve assembly during shipping and storage. The primer fuel unit shall be filled with a minimum of 8 oz av of primer fuel. The primer fuel unit shall be sealed by crimping the metal flange of the valve assembly over an elastomer onto the upper rim of the container to effect a sealed package. The primer fuel unit shall be charged with the selected propellant.

3.8.2.1 Performance. The primer fuel unit when chilled to minus 50° F shall ~~contain sufficient propellant to atomize 50 percent of the contained primer fuel~~ in continuing cycles of 5 seconds flow, followed by 5 seconds closed.

3.8.3 Type III. The cylinder for Type III primer fuel unit shall conform to MS39254. The cylinder shall be supplied with an auto-tire type valve assembly in a metal head, with welded and copper brazed seams or joints. The fill valve assembly shall be protected against damage in shipping and handling by a sealed throw-away covering. The cylinder shall contain 20 ounces, plus or minus 1/8 ounce, of primer fuel. (This weight does not include inert propellant gas.)

3.8.3.1 Safety valve. The safety valve shall start to relieve pressure between 375 psi and 650 psi.

3.8.3.2 Performance. With the cylinder unit in the inverted position and chilled to minus 50° F the propellant shall have a minimum pressure of 15 psi, after releasing 90 percent of the unit's contents in continuing cycles of 5 seconds of flow, followed by 5 seconds closed.

3.8.4 Type IV. The bulk units of primer fuel shall be packaged in metal containers sealed by a metal to metal weld, or by crimping the metal of a cap over an elastomer onto the rolled edge of the upper rim of the container to effect a leak-free package. The outage shall contain an inert gas.

3.8.4.1 Class 1. Class 1 units shall contain a minimum of 16 cu cm of primer fuel.

3.8.4.2 Class 2. Class 2 units shall contain a minimum of 12 cu in of primer fuel.

3.9 Marking. Marking shall be in accordance with MIL-STD-129 and shall include:

(a) Net weight or volume of primer fuel weight in ounces and grams or cu cm as applicable.
(b) Packaging data.
(c) The following notes (or similar notes approved by DOT regulations):

(1) DANGER - FLAMMABLE AND NOXIOUS; STORE IN VENTILATED AREA AWAY FROM FLAME, EXCESSIVE HEAT, AND ELECTRICAL ARC.
(2) NOTICE: BEFORE DISCARDING EMPTY CONTAINER, RELIEVE PRESSURE BY DEPRESSING VALVE CORE AND DISPERSING ALL GAS AND LIQUID. IF POSSIBLE REMOVE VALVE CORE. DO NOT INCINERATE.

For Type I and Type IV, Class 1 primer fuel units marking may be applied to the intermediate package.

3.10 Workmanship. Components and assemblies of the primer fuel units, including stampings, seals, and moldings, shall be clean and free from fins, sharp edges, defects, or other harmful foreign material that would impair the quality of the primer fuel or the function of the unit package as specified herein.

4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection. Unless otherwise specified in the contract or purchase order, the supplier is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified in the contract or order, the supplier 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 inspections are deemed necessary to assure supplies and services conform to prescribed requirements.

4.1.1 Material and component inspection. The supplier is responsible for insuring that components and materials used are in accordance with referenced specifications and standards.

4.2 Classification of inspections. Inspections shall be classified as follows:

(a) Preproduction inspection (see 4.3).
(b) Quality conformance inspection (see 4.4).
(c) Inspection of preparation for delivery (see 4.6).

4.3 Preproduction inspection.

4.3.1 Examination. The primer fuel units shall be examined as specified in 4.5.1. Presence of one or more defects shall be cause for rejection of all preproduction primer fuel units.

4.3.2 Tests. The primer fuel units shall be tested as specified in 4.5.2. Failure of any test shall be cause for rejection of all preproduction primer fuel units.

4.4 Quality conformance inspection.

4.4.1 Lot. For purposes of sampling and inspection, a lot shall consist of all primer fuel units, of one type and class, filled from one batch of primer fuel (dibutyl ether base) and offered for delivery at one time.

4.4.2 Sampling.

4.4.2.1 For examination. Sampling for examination shall be in accordance with MIL-STD-105, Inspection Level II.

4.4.2.2 For tests. Sampling for tests shall be in accordance with MIL-STD-105, Inspection Level S-1.

4.4.3 Examination. Samples selected in accordance with 4.4.2.1 shall be examined as specified in 4.5.1. AQL shall be 1.5 percent defective for major defects and 4.0 percent for minor defects.

4.4.4 Tests. Samples selected in accordance with 4.4.2.2 shall be tested as specified in 4.5.2.4 and 4.5.2.5. AQL shall be 1.5 percent defective.

4.5 Inspection procedure.

4.5.1 Examination. The primer fuel units shall be examined as specified herein, for the following defects:

Major

101. Leakage as determined by (sight, touch, or odor).
102. Container not as specified.
103. Valve assembly or sealing not as specified.
104. Net weight of contents not as specified.
105. Atomizing head missing or not as specified.
106. Protective cap or covering missing or not as specified.

Minor

201. Markings not as specified.
202. Workmanship not as specified.

4.5.2 Tests. DANGER: Cylinders contain ethyl ether under pressure and are highly flammable and toxic. Extreme care should be observed during testing.

4.5.2.1 Analysis of the primer fuel.

4.5.2.1.1 Test apparatus. Use a Perkin-Elmer #21 Infrared Spectrophotometer set at the 8.95 micron band from a 0.025 fixed thickness sodium chloride cell, or an equivalent analytical apparatus.

4.5.2.1.2 Analysis procedure. The primer fuel shall be analyzed as follows:

(a) Prepare an ether standard as a 100 percent level by taking 10 ml of U.S.P. reagent grade diethyl ether and dilute 1:25 with benzene or other suitable solvent and place in a stoppered 300 ml flask.
(b) Take a 10 ml portion of primer fuel from each sample unit and dilute 1:25 with solvent just prior to evaluation.

(c) Using the standard as a 100 percent reference, determine the percent of ether in each test sample by spectrographic evaluation.

An ether level of less than 85 percent by volume shall constitute failure of this test.

4.5.2.2 Nonvolatile components. Separation of nonvolatile components shall be as follows:

(a) Take a 100 ml sample of primer fuel and evaporate on a gum bath apparatus at room temperature with an air rate of 1 cu ft/min when sample is almost evaporated, increase the temperature to 212° F for 1/2 hour.
(b) Weigh residue and report in gms/100 ml.
(c) If residue is more than 1 gm/100 ml retain for the pour point test. (Note further spectrographic analysis can be performed on the residues for identification.)

4.5.2.2.1 Pour point analysis. Pour point analysis shall be conducted as follows:

(a) Prepare residue samples from 4.5.2.2 that exceed 1 gm/100 ml by chilling to minus 50° F for 4 hours.
(b) Rotate each sample in its evaporation container 90 degrees to its horizontal plane.

Failure of the residue to flow (by visual observation) within a 10 second period shall constitute failure of this test.

4.5.2.3 Moisture, solubility, and white ash. The moisture, solubility, and white ash test shall be performed as follows:

(a) Prepare a 50 ml sample of primer fuel from each test sample in a clean pre-weighed crucible.
(b) Chill for 4 hours in a cold box at minus 50° F plus or minus 5° F.
(c) Remove the samples one at a time from the cold box and observe over a black surface for ice crystals or undissolved solids through the bottom of the beaker.
(d) Transfer the examined 50 ml test sample to a weighed crucible; place in a ventilated hood and ignite; allow to burn until flame is naturally extinguished. Transfer the crucible to a muffle furnace until "ashing" is complete.

The presence of ice crystals, undissolved solids, or more than 0.001 gms of ash shall constitute failure of this test.

or minus 5° F and hold for 144 hours. Remove units one at a time, weigh, record, and return to the cold box for functional test.

(b) Calculate the loss of weight for each test unit and the percentage of weight loss against the specific net weight.

A loss greater than 2 percent of the specified net contents shall constitute failure of this test.

4.5.2.5 Functional. Test samples shall be those tested in 4.5.2.4.

4.5.2.5.1 Type I. The functional test for Type I primer fuel units shall be performed as follows:

(a) Chill units to minus 50° F plus or minus 5° F. Remove one at a time from the cold box (see 4.5.2.4.2 (a)) and, by puncturing the seal, release the contents of the unit into an inverted 100 cc cylinder over water at 70° F.
(b) Observe and record the volume of the displaced water.
(c) Weigh the empty cartridge test unit and calculate the weight of primer fuel contents for the test unit.

A total displacement of less than 50 cc of water volume or a net weight of less than 5 gms shall constitute failure of this test.

4.5.2.4 Leakage. The leakage test shall be performed as follows.

4.5.2.4.1 High temperature.

(a) Take each primer fuel test unit and identify, weigh, and record gross weight and specified net weight.
(b) Place test units in an oven or bath controlled at 155° F plus or minus 5° F and hold at temperature for 168 hours.
(c) Remove test units from the high temperature chamber and allow to stand at room temperature (70° F) for 4 hours plus or minus 1/2 hour.
(d) Identify each test unit and weigh. Record and calculate percentage of weight loss against the specified net weight for each test unit.

A loss in weight greater than 2 percent of net weight, or any permanent deformation in excess of 5 percent of the unit container shall constitute failure of this test.

4.5.2.4.2 Low temperature.

(a) Take the test units that have passed the high temperature part of

4.5.2.5.2 Types II and III. The functional tests for Type II and Type III primer fuel units shall be performed as follows:

(a) Chill test units in a cold box at minus 50° F plus or minus 5° F for not less than 24 hours.
(b) With primer fuel at minus 50° F plus or minus 5° F operate to expel the primer fuel for 5 second blasts with not less than 5 second intervals through an orifice (this primer fuel may be used for analytical tests). Continue this procedure until the unit no longer delivers primer fuel by propellant force.
(c) Weigh each unit, record, and calculate the expelled weight of primer fuel at minus 50° F.
(d) Allow test units to warm to room temperature for 4 hours and expel residual primer fuel in each unit.

Inability of any unit to expel less than 90 percent of its net weight at minus 50° F, any breakage of a unit, or any malfunction in operation of a unit shall constitute failure of this test.

4.5.2.6 Safety valve.

(a) Conduct test with dry inert gas or compressed air using apparatus capable of reading pressures within plus or minus 5 percent and of applying pressures as specified.
(b) Connect cylinder through inlet connection to test apparatus.
(c) Submerge cylinder in a metal container and fill with water up to at least the bottom of inlet valve fitting. (Caution: Do not stand or place face over top of test cylinder.)
(d) At pressure above 200 psi adjust rate of pressurization to not greater than 10 psi in 5 seconds.
(e) Relief pressure is that at which bubbles occur at a rate greater than one bubble per 5 seconds. Cylinder with questionable results shall not be retested.
(f) Nonconformance to 3.8.3.1 shall constitute failure of this test.

4.6 Inspection of preparation for delivery.

~~4.6.1 Quality conformance inspection of pack.~~

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

4.6.1.2 Sampling. Sampling for examination shall be in accordance with MIL-STD-105.

4.6.1.3 Examination. Samples selected in accordance with 4.6.1.2 shall be examined for the following defects. AQL shall be 2.5 percent defective.

107.	Materials, methods, and containers not as specified. Each incorrect material, method, or container shall be considered one defect.
108.	Number of units packaged together not as specified for Level A.
109.	Type I primer fuel units not preserved as specified for Level A.
110.	Intermediate packaging not as specified for Level A.
111.	Fiberboard boxes not waterproof sealed as specified for Level A.
112.	Closure and strapping not as specified for Level A.
113.	Marking illegible, incorrect or incomplete.

5. PREPARATION FOR DELIVERY

5.1 Preservation and packaging. Preservation and packaging shall be Level A, B, or C, as specified (see 6.2).

5.1.1 Level A.

5.1.1.1 Type I. Each Type I primer fuel unit shall be preserved in accordance with the requirements for use of P-19, as specified in MIL-P-116, by dipping the cartridges in batches and allowing to drain and dry. The preserved units shall be packaged in quantities of 10 or 12, as specified (see 6.2) in close-fitting partitioned boxes conforming to PPP-B-566 or PPP-B-676, style, type, and class optional. The box shall be closed and sealed in accordance with the appendix to the box specification.

5.1.1.1.1 Intermediate packaging. The cartons of pressurized cartridge units packaged as specified in 5.1.1.1 shall be intermediate packaged together in quantities of 50 cartons in a close-fitting box conforming to PPP-B-636, W5c, style optional, and the box waterproof sealed in accordance with the appendix to the box specification.

5.1.1.2 Type II. The pressurized aerosol units of primer fuel shall be packaged in quantities of 24 units in a close-fitting box conforming to PPP-B-636, W5c, style optional. The box shall have partitions, vertical fiberboard liners, and full size top and bottom pads. Fiberboard separators shall be placed between all layers of units. The cells formed by the partitions and separators shall contact all four sides of the units. When required to prevent movement of the aerosol units within the cells, additional cushioning shall be effected by the insertion of cellulose wadding or similar material. Liners, partitions, pads, and separators shall be formed from material conforming to PPP-F-320, Type CF, Grade W5c fiberboard. The box shall be waterproof sealed in accordance with the appendix to the box specification.

5.1.1.3 Type III. The pressurized disposable cylinder units of primer fuel shall be packaged in quantities of 24 each in a close-fitting box conforming to PPP-B-636, W5c, style optional. The separators, liners, and partitions forming cells for the cylinder units shall be as specified in 5.1.1.2. The box shall be waterproof sealed in accordance with the appendix to the box specification.

5.1.1.4 Type IV.

5.1.1.4.1 Class 1. The cartridge bulk primer fuel units shall be preserved, and packaged, and intermediate packaged as specified in 5.1.1.1 and 5.1.1.1.1.

5.1.1.4.2 Class 2. The containers of bulk primer fuel shall be packaged as specified in 5.1.1.2.

5.1.2 Level B. The priming fuel units shall be preserved and packaged as specified in 5.1.1 except that the boxes conforming to PPP-B-636, shall be Class Domestic, style optional and the fiberboard conforming to PPP-F-320 shall be Type CF, Class Domestic, same grade as the box. Closure of boxes shall be in accordance with Method II of the the appendix to PPP-B-636.

5.1.3 Level C. The primer fuel shall be packaged to afford protection against damage and deterioration during shipment from the supply source to the initial destination.

5.2 Packing. Packing shall be Level A, B, or C, as specified (see 6.2).

5.2.1 Level A. The primer fuel units of like description, packaged and intermediate packaged as specified in 5.1, shall be packed in boxes conforming to PPP-B-601, Overseas Type, Grade B, or PPP-B-621, Class 2. Closure and strapping shall be in accordance with the appendix of the applicable box specification.

5.2.2 Level B. Unless otherwise specified herein no further packing is required for Level B. When specified (see 6.2), the primer fuel units packaged as specified in 5.1 shall be packed as specified in 5.2.1 for Level A, except that the boxes shall be Domestic Class or Type.

5.2.3 Level C. The primer fuel units packaged and intermediate packaged as specified in 5.1 shall be packed to assure carrier acceptance and safe delivery to destination at lowest rates in compliance with Uniform Freight Classification rules or National Motor Freight Classification rules.

5.3 Marking. In addition to any special marking required by the procurement documents, marking of the interior packages and exterior shipping containers shall be in accordance with Fed. Std. No. 123 for civil agencies or MIL-STD-129 for military agencies, as applicable (see 6.2). Containers shall be in accordance with 49 CFR 171-190.

6. NOTES

6.1 Intended use. The engine primer fuel units are intended for use in low atmospheric temperatures as an aid for starting internal combustion engines. As specified, the unit may be used in hand operation, or shall be inserted into an approved dispensing mechanism for remote operation.

6.2 Ordering data. Purchasers should select the preferred options permitted herein and include the following information in procurement documents:

(a) Title, number, and date of this specification.
(b) Type and class of the primer fuel unit (see 1.2).
(c) Time frame required for submission of the preproduction model and number of primer fuel units to be furnished (see 3.2).
(d) Level of preservation and packaging and level of packing required (see 5.1 and 5.2).
(e) Applicable marking document (see 5.3).

6.3 Preproduction model. Any changes or deviations of production primer fuel units from the approved preproduction model during production will be subject to approval of the contracting officer. Approval of the preproduction model will not relieve the supplier of his obligation to furnish primer fuel units conforming to this specification.

6.4 Note. The detection of ether by odor in a storage area is an indication of container leakage. Proper ventilation shall be established and faulty containers removed from the area. (Ether fumes disperse rapidly in an agitated atmosphere, but in a stagnant environment they will establish an ignition trail along the ground level for unusual distances.)

MILITARY INTEREST:

Custodians:

Army - ME
Air Force - 68

Review activity:

Army - MR

User activity:

Navy - AS

CIVIL AGENCY COORDINATING ACTIVITIES:

GSA - FSS
DOT - SMS
DOD project No. 6850-0452

Preparing Activity:

Army - ME

Orders for this publication are to be placed with General Services Administration, acting as an agent for the Superintendent of Documents. See Section 2 of this specification to obtain extra copies and other documents referenced herein. Price 40 cents each.

STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

OMB Approval
No. 22-R255

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DOCUMENT IDENTIFIER AND TITLE O-F-1044B Fuel, Engine Primer: Cold Starting, In Pressurized and Nonpressurized Containers

NAME OF ORGANIZATION AND ADDRESS

CONTRACT NUMBER

MATERIAL PROCURED UNDER A

☐ DIRECT GOVERNMENT CONTRACT ☐ SUBCONTRACT

1. HAS ANY PART OF THE DOCUMENT CREATED PROBLEMS OR REQUIRED INTERPRETATION IN PROCUREMENT USE?
   A. GIVE PARAGRAPH NUMBER AND WORDING.

   B. RECOMMENDATIONS FOR CORRECTING THE DEFICIENCIES

2. COMMENTS ON ANY DOCUMENT REQUIREMENT CONSIDERED TOO RIGID

3. IS THE DOCUMENT RESTRICTIVE?

   ☐ YES ☐ NO *(If "Yes", in what way?)*

4. REMARKS

SUBMITTED BY *(Printed or typed name and address - Optional)*

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