

MIL-H-52112B (ME)  
25 April 1983  
SUPERSEDING  
MIL-H-52112A(ME)  
5 August 1974

MILITARY SPECIFICATION  
HEATING TORCH, EQUIPMENT  
WINTERIZATION, INSTANT LIGHTING

This specification is approved for use by the Mobility Equipment Research and Development Command, Department of the Army, and is available for use by all Departments and Agencies of the Department of Defense.

1. SCOPE

1.1 Scope. This specification covers a 50,000 Btu/hr gasoline-burning heating torch to ease the starting of internal combustion engines in ambient temperatures from plus 40° F to minus 65° F.

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

VV-G-1690	Gasoline, Automotive, Leaded or Unleaded.
PPP-B-601	Boxes, Wood, Cleated-Plywood.
PPP-B-636	Boxes, Shipping, Fiberboard.
PPP-B-640	Boxes, Fiberboard, Corrugated, Triple-Wall.
PPP-T-60	Tape: Packaging, Waterproof.

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: US Army Mobility Equipment Research and Development Command, ATTN: DRDME-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.

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MILITARY

- |             |  |
|-------------|--|
| MIL-P-116   | - Preservation Packaging, Methods of.  |
| MIL-B-121   | - Barrier Material, Greaseproofed, Waterproofed, Flexible.                                       |
| MIL-T-704   | - Treatment and Painting of Materiel.  |
| MIL-G-3056  | - Gasoline, Automotive, Combat.  |
| MIL-P-15024 | - Plates, Tags and Bands for Identification of Equipment.  |
| MIL-P-19834 | - Plates, Identification or Instruction, Metal Foil, Adhesive Backed, General Specification for. |

STANDARDS

MILITARY

- |              |   |
|--------------|---|
| MIL-STD-105  | Sampling Procedures and Tables for Inspection by Attributes.                      |
| MIL-STD-129  | Marking for Shipment and Storage.   |
| MIL-STD-130  | Identification Marking of U.S. Military Property.                                 |
| MIL-STD-810  | Environmental Test Methods.   |
| MIL-STD-1188 | Commercial Packaging of Supplies and Equipment.                                   |
| MIL-STD-1472 | Human Engineering Design Criteria for Military Systems, Equipment and Facilities. |

(Copies of specifications and standards required by manufacturers in connection with specific acquisition functions should be obtained from the contracting activity or as directed by the contracting officer.)

2.2 Other publications. The following document(s) forma 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.

SOCIETY OF AUTOMOTIVE ENGINEERS (SAE)

SAE Handbook

(Application for copies should be addressed to the Society of Automotive Engineers, 400 Commonwealth Drive, Warrendale, PA 15096.)

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

- |      |  |
|------|--|
| B26  | - Aluminum-Alloy Sand Castings.                            |
| B108 | - Aluminum-Alloy Permanent Mold Castings.                  |
| B221 | - Aluminum-Alloy Extruded Bar, Rod, Wire, Shape, and Tube. |

(Application for copies should readdressed to the American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103.)

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AMERICAN WELDING SOCIETY (AWS)

D1.1 - Structural Welding Code, Section 5, Qualification

(Application for copies should be addressed to the American Welding Society, 2501 N.W. Seventh Street, Miami, FL 33125.)

AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME)

Boiler and Pressure Vessel Code, Section IX, Welding Qualifications.

(Application for copies should be addressed to the American Society of Mechanical Engineers, 345 East 47th Street, New York, NY 10017).

(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 Description. The torch shall be as shown in figures 1 and 2 and as specified herein. The torch shall be a gasoline burning, open-flame type. The torch shall be portable and hand operated, consisting of a fuel tank, a hand operated air pump, a pressure gage, carrying handles, a burner, and burner controls. The torch without fuel shall weigh not more than 3.5 pounds. The fuel tank shall have an operating fuel capacity of approximately 1 pint.

3.2 First article (preproduction model). The contractor shall furnish one or more torches, as specified (see 6.2), for examination and testing 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 torches that comply with the requirements of this specification. Examination and tests shall be as specified in Section 4, and shall be conducted by the Government subject to surveillance and approval by the Government.

3.3 Materials. Recycled and recovered raw materials should be used to the maximum extent possible in lieu of virgin raw materials as long as these materials do not jeopardize the intended use and fully comply with all contract requirements. Materials used shall be free from defects which would adversely affect the performance or maintainability of individual components or the overall assembly. Materials not specified herein shall be of the same quality used for the intended purpose in commercial practice. None of the above shall be interpreted to mean that the use of used or rebuilt products will be allowed.

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### 3.4 Performance.

3.4.1 Capacity. The torch shall have an input capacity of not less than 50,000 Btu/hr based on the higher heating value of gasoline conforming to MIL-G-3056 and VV-G-1690 with the tank pressurized to 60 pounds per square inch (psi). The torch shall operate for 5 minutes with not more than 50 percent reduction in heating capacity without additional pumping at minus 25° F (see 4.5.2.3).

3.5 Operating conditions. The torch shall be capable of functioning as follows:

- a. Start and operate in an ambient temperature range of minus 65° F to plus 40° F (see 4.5.2.6 and 4.5.2.11).
- b. Start and operate in a wind velocity of 15 miles per hour (see 4.5.2.4).
- c. The torch shall ignite and operate at stable full capacity within 60 seconds when the tank is pressurized to 60 psi and the fuel tank is 2/3 full of fuel (see 4.5.2.3).

3.6 Tilted operation. The torches shall operate without failure in any plane at 45 degrees from the vertical (see 4.5.2.2).

3.7 Shock. When tested as specified in 4.5.2.5, the torch shall show no evidence of damage such as leakage, rupture, breaks, or irregular operation

3.8 Storage temperature. The torches shall not be damaged and their operation shall not be impaired by storage at an ambient temperature of plus 155° F for 4 hours each 24 hours, no solar radiation, and at minus 65° F for 6 hours each 24 hours, no solar radiation (see 4.5.2.10 and 4.5.2.11).

3.9 Salt fog and humidity. When tested as specified in 4.5.2.8 and 4.5.2.9, the torches shall show no evidence of deterioration, corrosion, or change tolerance limits of any internal or external parts which could prevent the unit from meeting operational, service or maintenance requirements, or shall show no evidence of peeling of paint, malfunctioning, leaks, or irregular operation.

3.10 Endurance. The torches shall be capable of operating for 200 hours (excluding time for refueling, pumping, and reignition) without any mechanical failure or clogging of the fuel generating member (see 4.5.2.7). The torches shall operate not less than 20 hours before cleaning of the jet is required.

3.11 Pressure fuel tank. The tank configuration shall be as shown in figure 1 and 2. The tank sides and bottom shall be fabricated from 6061-T6 aluminum per ASTM B221 and the head (top) shall be fabricated from 356.0-T6 aluminum per ASTM B26 or B108. The tank shall withstand 180 pounds per square inch (psi) internal pressure without leakage or rupture. The tank shall be provided with a false bottom which will contain high-mortality repair parts and special tools for cleaning the burner. The tank shall be equipped with an air pump, a pressure gage, carrying handles and burner.

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3.12 Handles. The handles shall be as shown on figures 1 and 2. The handles shall be permanently attached to the pressure fuel tank and shall be capable of being extended out from the tank for holding the torch during operation, or placed against the tank for storage. The size and shape of the handles shall conform to MIL-STD-1472 to afford gripping with arctic type mittens.

3.13 Air pump. The pump shall be a single-cylinder hand operated plunger type with a displacement of 3.75 cubic inches and capable of providing air to pressurize the pressure fuel tank to an operating pressure of 60 psi. The pump shall be designed with pressure limiting features which prevent the fuel tank from being pressurized to pressures greater than 75 psi. The pump shall not be adversely affected by the fuels or by periods of storage. The pump shall be mounted in the pressure fuel tank through the top with standard pipe thread fittings capable of hand-tightening. The diameter of the opening shall be 1-1/4 inches, which shall also serve as a filler cap and air pressure release. The pump handle shall be of such size and shape to assure ease of operation when arctic-type mittens are worn by the operator and for removal of the pump for fueling of the tank.

3.14 Burner. The burner shall be mounted on the tank. The burner shall consist of a fuel dip tube with clean out plug, air inlet opening with strainer, fuel control valve, air control valve, vapor generator, nozzle with clean out plug, and wind shield. The burner shall be instant lighting and shall be capable of being lighted by a small flame such as a match flame. During the starting cycle, the burner shall atomize the fuel-air mixture to provide a flame without sputtering smoke, or soot.

3.15 Fuel dip tube. The fuel dip tube shall extend from the fuel valve assembly down into the pressure tank. The dip tube shall have a clean out plug on the ends and shall extend to the bottom of the tank.

3.16 Fuel and air control valve. The fuel and air control valves shall be of the needle type. The valves shall be marked "FUEL" or "AIR" as applicable.

3.17 Pressure gage. Each torch shall be furnished with a pressure gage on top of the tank to indicate the tank air pressure. Safe working pressure and operating pressure range shall be indicated on the gage.

3.18 Treatment and painting. The portions of the torches normally painted shall be cleaned, treated, and painted in accordance with MIL-T-704, Type A. Nonpermissible galvanic couples (dissimilar metals) as defined in MIL-T-704 shall be insulated as specified in MIL-T-704.

3.19 Identification marking. The torches shall be identified in accordance with MIL-STD-130. The marking shall be applied to the torches on plates conforming to MIL-P-19834, Type II, Color Style II, with format configuration, and size in accordance with MIL-P-15024/6. The identification plate required herein may be combined with the instruction plate (see 3.20) to form one common data plate.

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3.20 Instruction plates. Each torch shall be equipped with instruction plates indicating safety precautions and all important procedures to be followed in assembling, operating or servicing the torch. The instructions shall include clearly detailed procedures for filling the fuel tank, pumping air pressure, and lighting and extinguishing the torch. The plates shall conform to MIL-P-19834, Type II, Color Style II, with size and configuration compatible with the torch.

3.21 Workmanship.

3.21.1 Metal fabrication. Metal used in fabrication shall be free from kinks and sharp bends. The straightening or material shall be done by methods that will not cause injury to the material. Corners shall be square and true. All bends shall be made with controlled means to insure uniformity of size and shape. Precaution shall be taken to avoid overheating. Heated steel shall be allowed to cool slowly. External surfaces shall be free of burrs, sharp edges and corners, except when sharp edges or corners are required or where they are not detrimental to safety.

3.21.2 Bolted connections. Boltholes shall be accurately formed and shall have the burrs removed. Washers or lockwashers shall be provided where necessary. Matching thread areas securing bolts conforming to SAE J429 or capscrews shall be of sufficient strength to withstand the tensile strength of the bolt. All fasteners shall be correctly torqued and shall have full thread engagement.

3.21.3 Riveted connections. Rivets shall fill the holes completely. The upset rivet heads shall be full, neatly made, concentric with the rivet holes, and in full contact with the surface of the member.

3.21.4 Jigs and fixtures. Shop-fabricated components shall be assembled in steel jigs or frames and joined while held in position. Jigs and frames shall be designed to minimize distortion.

3.21.5 Welders. Before assigning any welder to manual welding work covered by this specification, the contractor shall provide the contracting officer with certification that the welder has passed qualification tests as prescribed by either of the following listed codes for the type of welding operations to be performed and that such qualification is effective as defined by the particular code:

AWS D1.1 - Structural Welding Code, Section 5, Qualification.

ASME - Boiler and Pressure Vessel Code, Section IX, Welding Qualifications.

Contractors who only make horizontal welds need not qualify welders for "all position welding". Subject to approval by the Government, contractor's standard welder qualification may be substituted in lieu of the above codes provided that the contractor's procedure is equivalent to the above codes. The contractor shall be responsible for determining that automatic welder equipment operations are capable of producing quality welds.

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## 4. QUALITY ASSURANCE PROVISIONS

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

4.1.1 Component and material inspection. The contractor is responsible for insuring that components and materials used are manufactured, examined, and tested 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).
- co Inspection of packaging (see 4.6).

4.3 Preproduction inspection.

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

4.3.2 Tests. The preproduction torches shall be subjected to the tests specified in 4.5.2. Failure of any test shall be cause for rejection.

4.4 Quality conformance inspection.

4.4.1 Examination. Each torch shall be examined as specified in 4.5.1. Presence of one or more defects shall be cause for rejection.

4.4.2 Tests. Each torch shall be subjected to the tests specified in 4.5.2.1, 4.5.2.6, and 4.5.2.12. Failure of any test shall be cause for rejection.

4.5 Inspection procedure.

4.5.1 Examination. The torches shall be examined as specified herein for the following defects:

- 101. Weight not as specified (see 3.1).
- 102. Dimensions not as specified (see figure 1 and figure 2).
- 103. Material not as specified (see 3.3 and 3.11).
- 104. Parts or components not as specified or missing (see 3.12, 3.13, 3.14, 3.15, 3.16 and 3.17).

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105. Identification plates missing or not as specified (see 3.19).
106. Instruction plates missing or not as specified (see 3.20).
107. Treatment and painting not as specified (see 3.18).
108. Workmanship not as specified (see 3.21).

4.5.2 Tests.

4.5.2.1 Pressure. Remove the pressure gage. The fuel tank shall be hydrostatically pressurized to 180 pounds per square inch. The tank shall then be examined. Evidence of leaks, cracks, permanent deformation, or breakage shall constitute failure of this test.

4.5.2.2 Tilt angle. The torch shall be positioned with its base on a plane surface tilted at an angle of 45 degrees from horizontal. The torch filled with fuel to operating level, shall be operated at this 45 degree angle at maximum heat output for not less than one minute or until operation is stable. During the next one minute period, the torch shall be slowly rotated about its normally vertical axis (now positioned at 45 degrees) for one complete revolution. Leakage of fuel, failure to burn all fuel spray, flameout or other inability of the torch to operate while tilted at an angle of 45 degrees and rotated through one revolution shall constitute failure of this test.

4.5.2.3 Capacity. Conduct the capacity test at minus 25° F using gasoline conforming to MIL-G-3056. After the torch temperature has stabilized at minus 25°F, conduct the following test:

- a. The torch shall be filled with fuel to the operating level and pressurized by use of the hand operated pump to a pressure of 60 pounds per square inch. The torch shall be lighted and operated for 1 minute. At the completion of the 1 minute operation the torch shall be observed for sputtering, flameout, unburned fuel spray, and other indications of unstable operation.
- b. While maintaining a pressure of 60 pounds per square inch, operate the heater for a period of 15 minutes at maximum capacity. Measure the weight of fuel consumed during the 15 minute period and calculate the input capacity.
- c. The torch shall be pressurized to 60 pounds per square inch and operated for 5 minutes without pumping the air pump. At completion of the 5 minutes record the tank pressure and observe operation for indications of instability. Refuel the torch if necessary and repeat tests a. and b. above, except, the tank pressure shall be maintained at the level recorded after the 5 minute operation period.
- d. Repeat tests a., b., and c. above using leaded gasoline conforming to VV-G-1690.

Nonconformance to 3.4.1, 3.5, or any observed instability of operation shall constitute failure of this test.

Note: This test may be conducted concurrently with the low temperature storage and operation test specified in 4.5.2.11.



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4.5.2.4 Wind and low temperature. The torches, filled to operating level with either fuel, shall be stabilized at an ambient temperature of minus 65° F and a wind velocity of 15 miles per hour. Ignite the torch and operate for 15 minutes. After 15 minutes rotate the torch 360 degrees. Failure of the torch to ignite and continue to operate without sputtering, flameout, unburned fuel spray or other instability shall constitute failure of this test.

4.5.2.5 Shock. The torch, filled with fuel to operating level, shall be dropped six times on hard concrete from a height of not less than 18 inches. The torch shall be dropped with the base down at an angle from the horizontal of 0 degrees for the first drop and increasing by 5 degrees until all six drops have been completed. The torch shall be examined for damage. The pressure test specified in 4.5.2.1 shall be conducted. After completion of the pressure test, the torch shall be operated for 15 minutes. Nonconformance to 3.7 shall constitute failure of this test.

4.5.2.6 Operational. The torch shall be started in accordance with the operating instructions and shall be operated for not less than 15 minutes. Any visible evidence of sputtering, flameout, unburned fuel spray or instability shall constitute failure of this test. After the test is completed all unused gasoline shall be removed from the tank.

4.5.2.7 Endurance. The torch shall be operated for 200 hours actual operating time. The 200 hours "ON" time shall be accumulated in increments of 15 minutes each separated by not less than 15 minutes "OFF" time. The "OFF" time may be extended as necessary for compatibility with the duty hours of test personnel and for refueling and maintenance purposes. The torch shall be refueled and pumped during each "OFF" cycle. Operation of the torch shall be observed for sputtering, flameout, unburned fuel spray or other indications of instability. A log shall be kept of operating "ON" time, "OFF" time, operator observations, maintenance performed, maintenance manhours, parts replacement, and component failures. Nonconformance with 3.10 or observation of unstable operation shall constitute failure of this test.

4.5.2.8 Humidity. Conduct the humidity test as specified in MIL-STD-810, Method 507, Procedure I, except that the maximum temperature shall be 155° F. The torches shall not be operated during exposure. Nonconformance to 3.9 shall constitute failure of this test.

4.5.2.9 Salt fog. Conduct the salt-fog test as specified in MIL-STD-810, Method 509, Procedure 1. The torches shall not be operated during this exposure. Nonconformance to 3.9 shall constitute failure of this test.

4.5.2.10 High temperature storage. Subject the torch to the following temperature, and operate as indicated:

- a. An ambient temperature of plus 155° F for 4 hours, no solar radiation.
- b. Reduce the ambient temperature to plus 40° F. Operate the torch for not less than 1 hour.

Nonconformance to 3.8 shall constitute failure of this test.

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4.5.2.11 Low temperature storage and operation. Subject the torch to the following temperature, and operate as indicated:

- a. An ambient temperature of minus 65° F for 6 hours, no solar radiation. After exposure and while at this temperature, start the torch. After the torch operation has stabilized, operate the torch for 4 consecutive 15 minute periods separated by the minimum time required to refuel the torch. Observe the operation for sputtering, flameout, unburned fuel spray or other instability.
- b. If capacity tests are conducted concurrently with this test, raise the ambient temperature to minus 25° F and subject the torch to the tests specified in 4.5.2.3. If the capacity tests are conducted separately from this test, proceed to subparagraph c.
- c. Raise the ambient temperature to plus 80° F and examine all components for damage and deterioration.

Nonconformance to 3.5, 3.8, or 3.4.1 (if applicable), or operational instability shall constitute failure of this test.

4.5.2.12 Pump. The torch shall be filled with fuel to the operating level and pressurized by use of the hand operated pump to a pressure of 60 pounds per square inch. Further pressurization by use of the hand operated pump shall be attempted for 5 minutes. Inability of the pump to prevent fuel tank pressurization above 75 pounds per square inch shall constitute failure of this test.

#### 4.6 Inspection of packaging.

##### 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. Acceptable Quality Level (AQL) shall be 2.5 percent defective.

109. Materials and containers not as specified for level A or B. Each incorrect material or container shall be considered one defect.
110. Unprotected metal surfaces not coated with preservative and wrapped or covered as specified for level A or B.
111. Repair parts and maintenance tools not preserved as specified for level A or B.
112. Contents not immobilized within the boxes specified for level A or B.
113. Box not waterproof sealed as specified for level A.
114. Preservation and packing not in accordance with the referenced document as specified for commercial.
115. Quantities packed together exceed the weight or size limitations of the box for level B.
116. Marking missing, illegible, incorrect or incomplete for level A, B or commercial.

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## 5. PACKAGING

5.1 Preservation. Preservation shall be level A or commercial as specified (see 6.2).

5.1.1 Level A.

5.1.1.1 Unprotected surfaces. Unprotected metal surfaces of the torch requiring the application of a contact preservative in accordance with MIL-P-116, shall be coated with type P-7 preservative. The preservative shall conform to the applicable specification listed in and shall be applied in accordance with MIL-P-116. The coated surfaces shall be wrapped or covered with barrier material conforming to MIL-B-121, Type II, Grade A, Class 1 or 2. The material shall be secured in place with tape conforming to PPP-T-60, Type IV or be heat sealed as applicable.

5.1.1.2 Repair parts and maintenance tools. The preservative application criteria and applicable method(s) of preservation of MIL-P-116 shall be used to preserve repair parts and maintenance tools.

5.1.1.3 Consolidation. Each torch with any furnished repair parts and maintenance tools shall be consolidated together in a close fitting box conforming to PPP-B-636, W6c. The contents shall be immobilized within the box to prevent movement or damage by the use of corrugated fiberboard forms. Box closure and sealing shall be as specified for method V in the appendix to the box specification.

5.1.2 Commercial. Each complete torch shall be preserved in accordance with MIL-STD-1188.

5.2 Packing. Packing shall be level A, B or commercial as specified (see 6.2).

5.2.1 Level A. Torches preserved as specified in 5.1, shall be packed together in a close fitting box conforming to PPP-B-601, Overseas Type, style optional. Box closure and strapping shall be in accordance with the appendix to the box specification.

5.2.2 Level B. Torches preserved as specified in 5.1, shall be packed together in a close fitting box conforming to PPP-B-636, V3c, V11c, V13c, or V15c; or PPP-B-640, Class 2, style optional. The gross weight or size of each box shall not exceed the limitations of the applicable box specification. Box closure and strapping shall be in accordance with the appendix to the applicable box specification.

5.2.3 Commercial. Torches preserved as specified in 5.1, shall be packed-in accordance with MIL-STD-1188.

5.3 Marking.

5.3.1 Military. Marking for military levels of protection (level A or B) shall be in accordance with MIL-STD-129.

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5.3.2 Commercial. Marking for commercial packaging shall be in accordance with MIL-STD-1188.

## 6. NOTE S

6.1 Intended use. The torches are intended for use with engines in frigid zones of operation to make engine starting easier and quicker by warming oil pans, fuel systems, and other components. The torches may also be used to provide emergency spot heating on such components as brakes and track shoes.

6.2 Ordering data. Procurement documents should specify the following:

- a. Title, number, and date of this specification.
- b. Date of issue of DoDISS applicable and exceptions thereto (see 2.1.1).
- c. Time frame for submission of preproduction model and number of models required (see 3.2).
- d. Degree of preservation and degree of packing required (see 5.1 and 5.2).

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

6.4 Data requirements. The contracting officer should include requirements for such data as technical publications, instructional materials, illustrated parts listed, and contractor's maintenance and operation manual to be furnished with each torch.

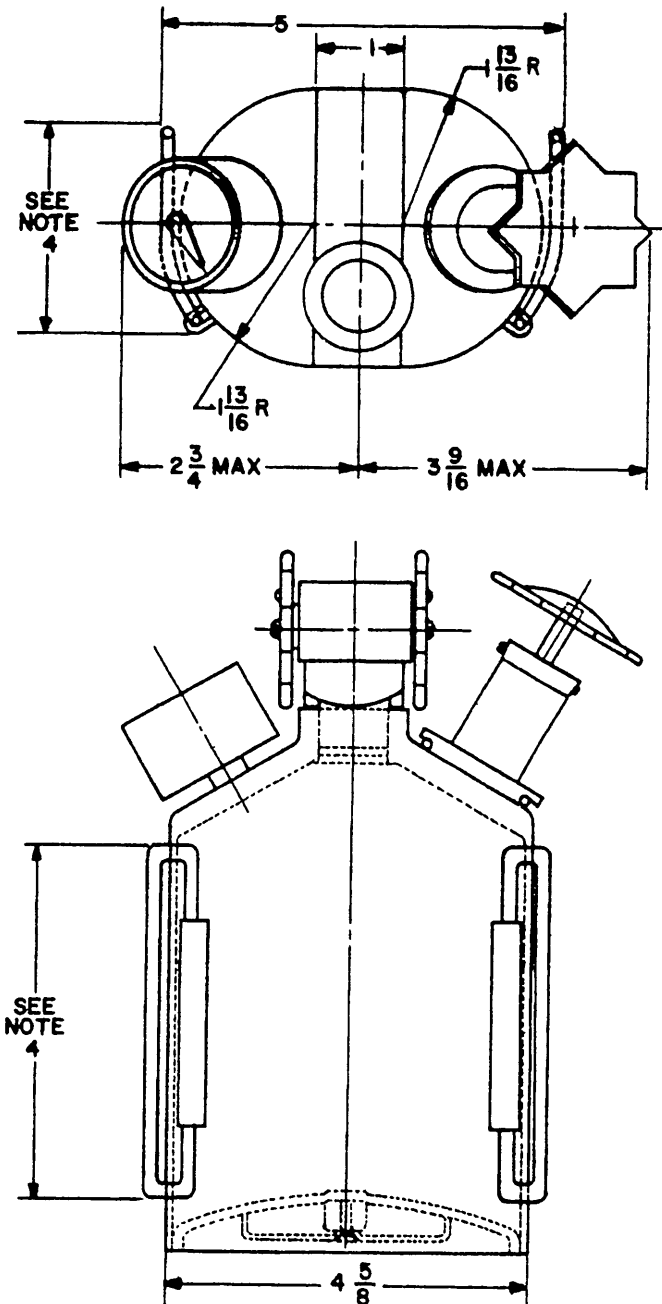
6.5 Provisioning. The contracting officer should include provisioning requirements for repair parts and maintenance tools as necessary (including any special tools), and instructions on shipment of torches.

Custodian:  
Army - ME

Preparing activity:  
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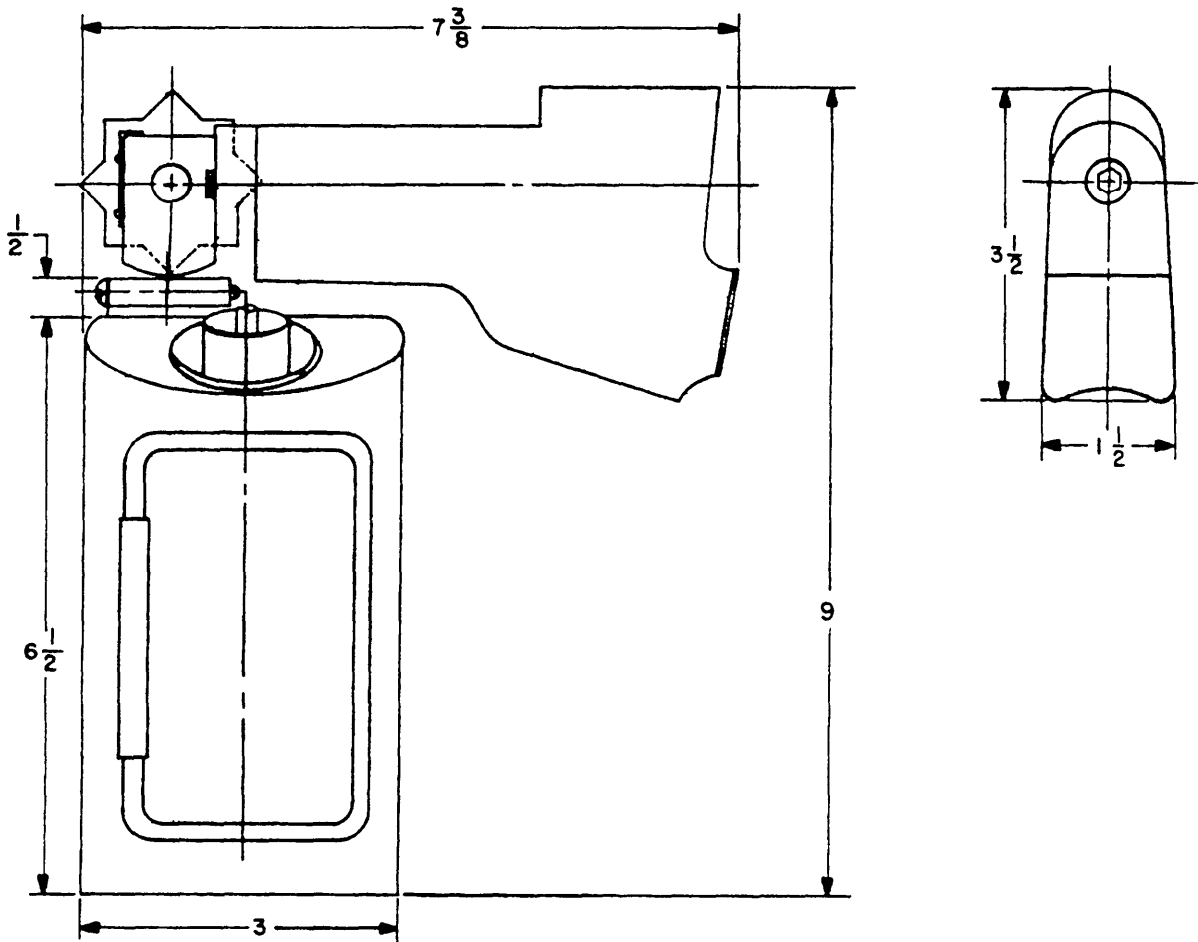
NOTES:

1. ALL DIMENSIONS ARE IN INCHES.
2. TOLERANCES ARE  $\pm \frac{1}{8}$  INCH.
3. COMPONENTS OMITTED FOR CLARITY.
4. HANDLE SIZE SHALL CONFORM TO MIL-STD-1472.

FIGURE 1. Heating torch, winterization.

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## NOTES:

1. ALL DIMENSIONS ARE IN INCHES
2. TOLERANCES ARE  $\pm \frac{1}{8}$  INCH
3. COMPONENTS OMITTED FOR CLARITY

FIGURE 2. Heating torch, winterization.

X-2805B-2

**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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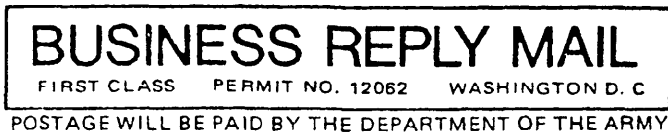
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DEPARTMENT OF THE ARMY

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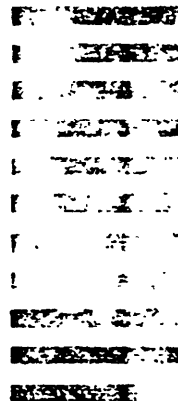
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## STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

(See Instructions - Reverse Side)

1. DOCUMENT NUMBER MIL-H-52112B(ME)		2. DOCUMENT TITLE Heating Torch, Equipment Winterization, Instant Lighting	
3a. NAME OF SUBMITTING ORGANIZATION		4. TYPE OF ORGANIZATION (Mark one)  <input type="checkbox"/> VENDOR  <input type="checkbox"/> USER  <input type="checkbox"/> MANUFACTURER  <input type="checkbox"/> OTHER (Specify): _____	
b. ADDRESS (Street, City, State, ZIP Code)			
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	
c. MAILING ADDRESS (Street, City, State, ZIP Code) - Optional		8. DATE OF SUBMISSION (YYMMDD)	