

INCH-POUND

MIL-PRF-11588H

21 July 2009

SUPERSEDING

MIL-PRF-11588G

15 September 1996

## PERFORMANCE SPECIFICATION

### HOSE ASSEMBLIES, RUBBER, SYNTHETIC, LIQUID PETROLEUM FUELS, DISPENSING, COLLAPSIBLE, STANDARD AND LOW TEMPERATURE

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

#### 1. SCOPE

1.1 Scope. This specification defines the requirements for collapsible, synthetic rubber, discharge hose assemblies for use in all ambient temperatures between minus (-) 25 and plus (+) 160 degrees Fahrenheit (°F) for standard temperature hose and -60 and +95°F for low temperature hose.

1.2 Classification. The collapsible discharge hose assemblies will be of the following types, classes, sizes, and styles as specified (see 6.2):

Type I - Hose assembly, gasoline dispensing pump.

Class 1 - Coupling halves, quick-disconnect, cam-locking type, hose shank; female both ends.

Class 2 - Coupling halves, quick-disconnect, cam-locking type, hose shank; male both ends.

Class 3 - Coupling halves, quick-disconnect, cam-locking type, hose shank; female one end, male other end.

Comments, suggestions, or questions on this document should be addressed to U.S. Army Tank-automotive and Armaments Command, ATTN: RDTA-EN/DM/STND, MS# 268, 6501 E. 11 Mile Road, Warren, MI 48397-5000 or emailed to [DAMI\\_STANDARDIZATION@conus.army.mil](mailto:DAMI_STANDARDIZATION@conus.army.mil). Since contact information can change, you may want to verify the currency of this address information using the ASSIST Online database at <http://assist.daps.dla.mil>.

AMSC N/A

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Type II - Hose assembly, fuel trailer and carts.

- Class 1 - Coupling halves, quick-disconnect, cam-locking type, hose shank; female both ends.
- Class 2 - Coupling halves, quick-disconnect, cam-locking type, hose shank; male both ends.
- Class 3 - Coupling halves, quick-disconnect, cam-locking type, hose shank; female one end, male other end.

Type III - Hose assembly, fuel handling system.

- Class 1 - Coupling halves, quick disconnect, cam-locking type, hose shank; female one end, male other end.

Type IV - Hose assembly, aircraft refueling.

- Class 1 - Couplings, replaceable compression type, internal pipe threads both ends.
- Class 2 - Couplings, replaceable compression type, external pipe threads both ends.
- Class 3 - Couplings, replaceable compression type, internal pipe threads one end, external pipe threads other end.

#### Sizes

1.00 inch (in.)	2.00 in.
1.25 in.	2.50 in.
1.50 in.	3.00 in.
	4.00 in.

#### Styles

- ST - Standard temperature hose
- LT - Low temperature hose

## 2. APPLICABLE DOCUMENTS

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

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2.2 Government documents.

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

## SPECIFICATIONS

## FEDERAL

- A-A-52506 - Clamps, Hose, (Low Pressure)
- A-A-59326 - Coupling Halves, Quick-Disconnect, Cam-Locking Type

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

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

## DRAWINGS

## DEPARTMENT OF DEFENSE

- 13228E1768 - Gasket, Coupling Half, Arctic Service.

(Copies of this drawing are available from the U.S. Army Tank-automotive and Armaments Command, AMSTA-TR-E/BLUE, Warren, MI 48397-5000.)

2.3 Non-Government publications. The following documents form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those cited in the solicitation or contract (see 6.2).

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### AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

- D2137 - Standard Test Methods for rubber Property - Brittleness Point of Flexible Polymers and Coated Fabrics (DoD Adopted).
- D380 - Rubber Hose (DoD Adopted).
- D381 - Existent Gum in Fuels by jet Evaporation (DoD Adopted).
- D412 - Test Methods for Rubber Properties in Tension (DoD Adopted).
- D413 - Test Methods for Rubber Property - Adhesion to Flexible Substrate (DoD Adopted).
- D471 - Test Method for Rubber Property - Effect of Liquids (DoD Adopted).
- D746 - Brittleness Temperature of Plastics and Elastomers by Impact.
- D790 - Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials.
- D1053 - Rubber Property - Stiffening at Low Temperatures: Flexible Polymers and Coated Fabrics.

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

### AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

- ASQ CZ1.4 - Sampling Procedures and Tables for Inspection by Attributes (DoD Adopted).

(Application for copies may be obtained from the American National Standards Institute, 11 West 42nd Street, New York, NY 10036.)

### SOCIETY OF AUTOMOTIVE ENGINEERS (SAE)

- AS38404 - Couplings, Hose, Reattachable Screw-On

(Copies of the above documents can be found by sending a letter to the Society of Automotive Engineers, Inc., 400 Commonwealth Drive, Warrendale, PA 15096-0001.)

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

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## 3. REQUIREMENTS

3.1 First article. When specified (see 6.2), a first article sample shall be subjected to first article inspection in accordance with 4.2.

3.2. Materials. Materials not specified herein and on the drawing shall be selected by the contractor and shall be capable of meeting all the requirements specified herein (see 4.5.1). The use of recovered materials shall be made in compliance with regulatory requirements. Used, rebuilt or remanufactured components, pieces and parts shall not be incorporated in the hose and hose assembly.

3.2.1 Material deterioration prevention and control. The hose and hose assemblies shall be constructed from compatible materials, corrosion resistant or treated to provide protection against the various forms of corrosion and deterioration that may be encountered in operation and storage.

3.3 Design and construction. The hose assemblies shall consist of collapsible, reinforced, synthetic rubber hose with couplings or coupling halves at each end firmly banded to the hose with hose clamps (see 4.5.2).

3.3.1 Hose. The hose shall be of a compounded inner tube, synthetic fiber reinforcement, and a compounded cover that resists petroleum fuels. The length of the hose shall be actual length, + or - two percent (%), exclusive of couplings and will be in feet with the last number expressed in tenths of a foot (see 6.2), and the color shall be black unless otherwise specified (see 6.2).

3.3.2 Tube. The tube shall be oil resistant, smooth, free from pits and uniform thickness.

3.3.3 Cover. The cover shall be fuel, oil, abrasion, and hydrolytic stability resistant. The cover shall be uniform in thickness.

3.3.4 Ozone resistance. The cover shall be ozone resistant. The cover shall not show signs of cracking when subjected to the ozone test as specified in 4.5.2.1.

3.4 Couplings. The couplings described herein are illustrated in figure 1 and figure 2 (see 4.5.2).

3.4.1 Coupling halves. Coupling halves for types I, II, and III hose shall be in accordance with A-A-59326, type II or IV, Class A or equivalent, as applicable (see 1.2).

3.4.2 Coupling, reattachable, screw on. Couplings for type IV hose shall be in accordance with SAE AS38404, class 1, type I or II or equivalent, as applicable (see 1.2).

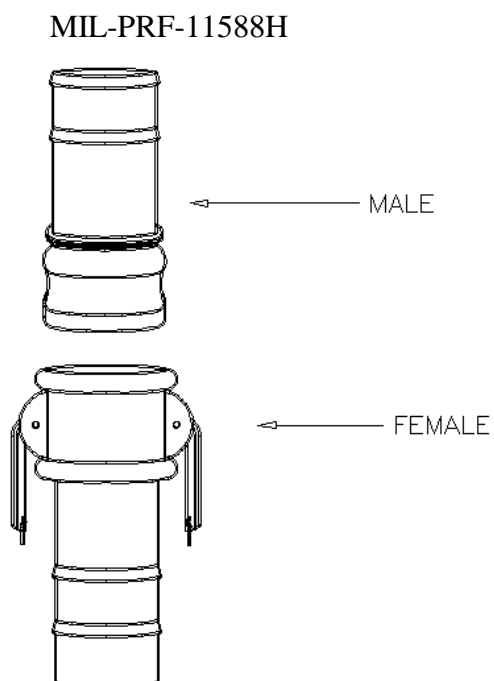


FIGURE 1. Coupling halves, quick disconnect, cam-locking type, hose shank.

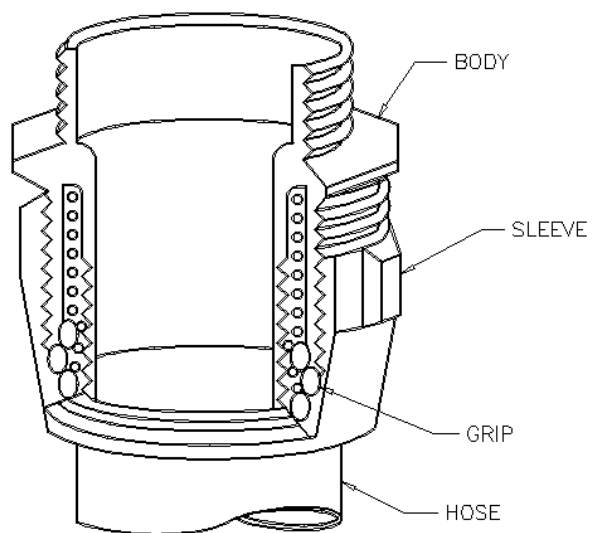


FIGURE 2. Coupling, replaceable compression.

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3.4.3 Coupling caps. Couplings used on types I, II and III hose assemblies shall be provided with the type IX dust cap or the type X dust plug conforming to A-A-59326. Couplings used on type IV hose assemblies shall be provided with protective, closed-end, reusable, threaded metal or plastic caps or plugs of suitable thickness and composition that shall not be affected by a hard-film corrosion-preventive compound. The caps and plugs shall be made captive to the couplings by means of a chain or similar attachment (see 4.5.2).

3.4.4 Hose clamps. Each cam-locking-type coupling half shall be banded to the hose with 2 hose clamps. The clamps shall conform to A-A-52506, type H. The hose clamps shall be non-reflective (see 4.5.2).

3.4.5 Size and weights. The hose shall be furnished in the diameters and weights shown in table I.

TABLE I. Diameters and weights.

Type	Inside diameter inches (in.) <u>1/</u>	Outside diameter inches (in.) (max)	Weight pounds/foot (lbs/ft)(max)
I and II	1.000	1.500	0.625
	1.250	1.750	0.875
	1.500	2.000	1.000
	2.000	2.500	1.125
	2.500	3.000	1.500
	3.000	3.500	1.750
	4.000	4.500	2.500
III and IV	1.000	1.563	0.750
	1.250	1.813	1.000
	1.500	2.063	1.125
	2.000	2.563	1.250
	2.500	3.063	1.750
	3.000	3.625	2.000
	4.000	4.750	2.625

1/  $\pm 0.063$  inches

3.4.6 Gasket. For the style LT hose, the gaskets normally supplied with quick-disconnect couplings shall be replaced with gaskets conforming to Drawing 13228E1768. Where tolerances could cumulatively result in incorrect fits, the contractor shall provide tolerances within those prescribed on the drawing to insure correct fit and operation.

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3.5 Performance characteristics.

3.5.1 Hydrostatic pressure. Each type of hose assembly shall withstand the following pressure in pounds per square inch gage [psig] as shown in table II. The hose with couplings attached shall not leak or show any imperfections (see 4.5.3).

TABLE II. Hydrostatic pressure.

Type hose assembly	In. size	Psig hydrostatic test pressure
I	All	100
II	All	175
III	1 thru 2.50	200
III	3	250
III	4	250
IV	1 thru 2.50	200
IV	3	250
IV	4	250

3.5.2 Length change and twist. The length of the hose shall not deviate + or - three % of the original length and shall not twist clockwise or counterclockwise more than 180 degrees (°) in 25 ft when tested (see 4.5.4).

3.5.3 Burst. Each type of hose assembly shall have a minimum burst pressure as shown in table III (see 4.5.5).

TABLE III Burst pressure.

Hose assembly type	Size I.D. (in.)	Psig (min) burst pressure	Psig working pressure
I	All	200	50
II	All	350	88
III	1 thru 2.50	400	100
III	3	500	125
III	4	600	150
IV	1 thru 2.50	400	80
IV	3	500	100
IV	4	600	120



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3.5.4 Tensile strength. The tensile strength of the tube shall not be less than 1250 pounds per square inch (psi) and the tensile strength of the cover shall not be less than 1000 psi (see 4.5.6 and 4.5.6.1). After immersion, the tensile of the tube and cover strength shall be not less than 600 psi or 40 percent of the original tensile strength.

3.5.5 Ultimate elongation. When tested as specified in 4.5.6, the ultimate elongation of the tube and cover shall be not less than 200% as specified in 4.5.6.1 or, when tested as specified in 4.5.6.2, shall be not less than 40% of the original elongation obtained before immersion.

3.5.6 Adhesion.

3.5.6.1 Original. The adhesion of the cross section of hose shall be at least 10 pounds (lbs) (see 4.5.6.3).

3.5.6.2 Adhesion after fill. After being exposed to aromatic hydrocarbon fluid (see 4.5.6.4), the adhesion of the cross section of the hose shall be at least 6 lbs.

3.5.7 Volume increase. The volume increase of the tube after immersion (see 4.5.7) shall not exceed 40%, and the volume increase of the cover shall not exceed 70%.

3.5.8 Low temperature flexibility.

3.5.8.1 Relative modulus. For style ST hose, the relative modulus for the inner tube and the outer cover shall be not greater than 5 times its value at room temperature (see 4.5.8.1).

3.5.8.2 Brittleness. For style LT hose, the low temperature brittleness shall be determined for the tube and cover material after fuel extraction at -60°F (-51°C). There shall be no evidence of cracking of the tube or cover material (see 4.5.8.2).

3.5.8.3 Modulus of elasticity. For style LT hose, the modulus of elasticity at -60°F (-51°C) for the tube and cover materials shall be less than  $1 \times 10^5$  psi for the tube and less than  $0.05 \times 10^5$  psi for the cover (see 4.5.8.3).

3.5.9 Existent gum content. The existent gum value shall not exceed 20 mg/100 mL (see 4.5.9).

3.5.10 Continuity wire. Each finished hose assembly shall display a continuous electrical circuit between the ends and couplings (see 4.5.10).

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3.5.11 Marking. Each length of hose shall be marked with the contractor's name or trademark, the quarter and year of manufacture, the type, the working pressure, and the words "Hose, liquid Petroleum Fuels, Dispensing, Collapsible, High Temperature " for Style ST Hose and "Hose, Liquid Petroleum for Fuels, Dispensing, Collapsible, Low Temperature" for style LT Hose. Each length of hose shall be marked with PIN number, when required (see 6.2). The hoses shall be marked with the manufacturer's standard working pressures for the specific type and size hose supplied, but shall not be rated less than the working pressures indicated in table III. In addition to the information, the type II hose assembly shall be marked with a longitudinal yellow stripe not less than 0.125 in. wide and extending the full length of the hose. The stripe shall be fabricated from the same basic material as the cover or material that is compatible with the cover and has a service life equal to the cover. The letters shall be branded or molded (either recessed or in relief) and shall be not less than 0.250 in. high for 1 in. I.D. through 2.5 in. I.D. hoses and shall be not less than 0.50 in. high for 3 in. I.D. through 4 in. I.D. hoses. Hoses shall be marked at 10 ft intervals provided that the pattern will be repeated every 5 ft or less. Letters shall be of a color contrasting the hose background color (see 4.5.2).

## 4. VERIFICATION

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

- a. First article inspection (see 4.2).
- b. Conformance inspection (see 4.3).

4.2 First article inspection. Unless otherwise specified (see 6.2), first article inspection shall be performed on each hose assembly when a first article sample is required (see 3.1). This inspection shall include the examination of 4.4 (see table IV) and the inspections of 4.5 (see table V).

TABLE IV. Classification of defects.

Category	Defect	Method of examination
<u>Major:</u>		
101	Length of hose not as specified (see 3.3.1).	SIE <u>1/</u>
102	Design and construction not as specified (see 3.3).	SIE
103	Diameter and weights not as specified (see 3.4.5).	SIE
104	Couplings not as specified (see 3.4).	Visual
105	Dust caps and plugs not made captive (see 3.4.3).	Visual
106	Hose clamps not as specified (see 3.4.4).	Visual
107	Identification marking missing, illegible or not as specified (see 3.5.11).	Visual

1/ SIE = Standard Inspection Equipment.

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TABLE V. Classification of inspections.

Title	Requirement	Inspection	First article	Conformance tests
Hydrostatic pressure	3.5.1	4.5.3	X	X
Length change and twist	3.5.2	4.5.4	X	X
Burst pressure	3.5.3	4.5.5	X	
Tensile strength, elongation and adhesion	3.5.4, 3.5.5, and 3.5.6	4.5.6	X	X
Volume increase	3.5.7	4.5.7	X	
Low temperature flexibility	3.5.8	4.5.8	X	
Existent gum content	3.5.9	4.5.9	X	
Continuity	3.5.10	4.5.10	X	X

4.3 Conformance inspection. Conformance inspection shall include the examinations of 4.4 and tests of 4.5.3, 4.5.4, 4.5.6, and 4.5.10.

#### 4.4 Examination.

4.4.1 Sampling. Sampling for inspection lot for conformance inspection shall be selected in accordance with ASQ Z1.4. Any redesign or modification of the contractor's standard to comply with specified requirements shall receive particular attention for adequacy and suitability. This element of inspection shall encompass all visual examinations and dimensional measurements of requirements of 3.3, 3.3.1, 3.4, 3.4.3, 3.4.4, 3.4.5, 3.5.11, and as listed in table IV. Noncompliance with any specified requirements or presence of one or more defects preventing or lessening maximum efficiency shall constitute cause for rejection.

#### 4.5 Method of inspection.

4.5.1 Materials. Conformance to 3.2 shall be determined by inspection of contractor records providing proof or certification that materials conform to requirements. Applicable records shall include drawings, specifications, design data, receiving inspection records, processing and quality control standards, vendor catalogs and certifications, industry standards, test reports, and rating data.

4.5.2 Defects. Conformance to 3.3, 3.3.1, 3.4, 3.4.3, 3.4.4, 3.4.5, 3.5.11, and shall be determined by examination for the defects listed in table IV. Examination shall be visual, tactile, or by measurement with SIE.

4.5.2.1 Ozone resistance. Samples of the cover shall be subjected to ozone resistance tests ASTM D1149, Method B, Procedure B1. On completion of the test, the samples shall be examined for visible cracking under a 7X lens.

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4.5.3 Hydrostatic pressure. To determine conformance to 3.5.1, each hose assembly shall be subjected to the pressure test as listed in table II and maintained for 30 seconds. The test shall be done in accordance with ASTM D380.

4.5.4 Length change and twist. To determine conformance with 3.5.2, the hose shall be laid out in a straight horizontal position, a measurement of the original length shall be made, after a pressure of 10 psig is applied and maintained. With a crayon or soft pencil, make a mark on the top surface of the hose cover at each end adjacent to the coupling. These marks are used as a means of measuring the amount of twist during the test. The pressure shall then be increased to 100 psig and held for 30 seconds. With the pressure still maintained, the final length measurement and final twist measurement shall be taken. The percent change in length shall be calculated as plus for increase and minus for decrease in length. Marking shall not deform or penetrate top surface of hose.

4.5.5 Burst pressure. A sample of not less than 3 ft or more than 6 ft shall be cut from the one length selected from each 100 lengths for burst and physical tests. The hose shall be subjected to a hydrostatic test pressure in accordance with table III. The pressure shall be supplied at a uniform rate sufficient to develop the test pressure in 10 seconds, +2 seconds. Nonconformance to 3.5.3 shall constitute failure of the test. The remaining section of hose from which the test sample has been taken shall be accepted as full length, provided the sample meets all the requirements of the specification.

4.5.6 Tensile strength, elongation, and adhesion. To determine conformance to 3.5.4, 3.5.5, and 3.5.6, tests for tensile strength, elongation, and adhesion shall be done in accordance with ASTM D412 and ASTM D413.

4.5.6.1 Tensile and elongation sample. The specimen shall be tested and cut from the "C" of ASTM D412. The tube shall be buffed to a minimum 0.05 in. thickness. Nonconformance to 3.5.4 and 3.5.5 shall constitute a failure of this test.

4.5.6.2 Tensile strength and ultimate elongation after immersion. To determine conformance to 3.5.4 and 3.5.5, the changes in the tensile strength and ultimate elongation after immersion of the specimen shall be determined in accordance with ASTM D471. The immersion medium shall be test fluid conforming to ASTM D471, reference fuel B. The temperature of immersion shall be  $158 \pm 3.6^{\circ}\text{F}$  ( $70 \pm 2^{\circ}\text{C}$ ) for style ST hose and  $73.4 \pm 3.6^{\circ}\text{F}$  ( $23 \pm 2^{\circ}\text{C}$ ) for style LT hose. The immersion time shall be 48 hours. The immediate deteriorated properties method shall be used.

4.5.6.3 Original adhesion test. A dry specimen of hose material shall be prepared in ring or strip form as described in ASTM D380. The adhesion shall be determined in accordance with the machine method of ASTM D413. Nonconformance to 3.5.6.1 shall constitute failure of this test.

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4.5.6.4 Adhesion after filling. A 12 in. length of the hose shall be suitably stoppered and filled with aromatic hydrocarbon fluid conforming to ASTM D471, reference fuel B, and maintained at a temperature of  $73.4 \pm 3.6^{\circ}\text{F}$  ( $23 \pm 2^{\circ}\text{C}$ ) for 48 hours. Ring specimens, as described in ASTM D413, shall be cut from the 12 in. piece of hose and tested in accordance with ASTM D413 (machine method) within 15 min after the removal of the test fluid. Nonconformance to 3.5.6.2 shall constitute failure of this test.

4.5.7 Volume increase. Volume increase test shall be determined in accordance with ASTM D471. the immersion medium shall be test fluid conforming to ASTM D471, reference fuel B. The immersion shall be  $73.4 \pm 3.6^{\circ}\text{F}$  ( $23 \pm 2^{\circ}\text{C}$ ) for 48 hours. Nonconformance to 3.5.7 shall constitute failure of this test.

4.5.8 Low temperature flexibility.

4.5.8.1 Relative modulus. To determine conformance to 3.5.8.1, the relative modulus test shall be made in accordance with ASTM D1053, method A, type B specimen, gaseous medium. The test temperature shall be  $-25.6 \pm 3.6^{\circ}\text{F}$  ( $-32 \pm 2^{\circ}\text{C}$ ). The exposure time shall be 7 days. Nonconformance shall constitute failure of this test.

4.5.8.2 Brittleness. To determine conformance to 3.5.8.2, fabricate ASTM slabs of tube and cover material (6 in. x 6 in. x .080 in.) per ASTM D2137. Condition samples in ASTM D471, reference fuel B, at  $73^{\circ}\text{F}$  ( $23^{\circ}\text{C}$ ) for 4 days. Remove the samples from the fuel and air dry them for 2 days at  $73^{\circ}\text{F}$  ( $23^{\circ}\text{C}$ ). Then oven-age the samples for 24 hours at  $130^{\circ}\text{F}$  ( $54^{\circ}\text{C}$ ). Test the samples after oven-aging in accordance with ASTM D746. Nonconformance shall constitute failure of this test.

4.5.8.3 Modulus of elasticity. To determine conformance to 3.5.8.3, the modulus of elasticity shall be determined at  $-60^{\circ}\text{F}$  ( $-51^{\circ}\text{C}$ ) per ASTM D790, method II, procedure B, on samples of tube and cover compounds after they have been conditioned in fuel, air dried and oven-aged as specified in 4.5.8.2. Nonconformance shall constitute failure of this test.

4.5.9 Existent Gum. To determine conformance to 3.5.9, a test sample of hose, not less than 14 in. long, shall be selected and the bottom plugged with a clean corrosion-resisting steel cylinder 2 in. long secured in place with a clamp. The sample shall be filled to within 2 in. of the top with test fluid conforming to ASTM D471, reference fuel B. The top end of the hose shall be plugged in a manner similar to the bottom. The sample shall then be stored in a vertical position for 7 days at an ambient temperature of  $100 \pm 2^{\circ}\text{F}$  ( $38 \pm 1^{\circ}\text{C}$ ). At the end of each 24 hours, the fuel in the sample shall be agitated for 5 min by moving the hose back and forth from a vertical to a horizontal position at a rate of 2 cycles per min. At the end of the 7-day storage period, the fuel shall again be agitated in the sample for 5 min and immediately removed from the hose. The removed fuel shall be tested for existent gum in accordance with the air-jet solvent wash method of ASTM D381. A blank shall be run on the test fluid at the same time and by the same method.

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The existent gum on the blank fluid shall be subtracted from the existent gum obtained from the test fluid removed from the hose. Nonconformance shall constitute failure of the test.

4.5.10 Continuity. Electrical continuity shall be tested for by means of an ohmmeter. Three sections of finished hose shall be coupled together and checked for electrical continuity for first article tests. One section of finished hose shall be used for sample test. Nonconformance to 3.5.10 shall constitute failure of this test. Test shall be conducted with hose length laid out flat on a non-conducting surface.

## 5. PACKAGING

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

## 6. NOTES

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

6.1 Intended use. The hose assemblies covered by this specification are intended for use in connection with dispensing liquid petroleum fuels as follows:

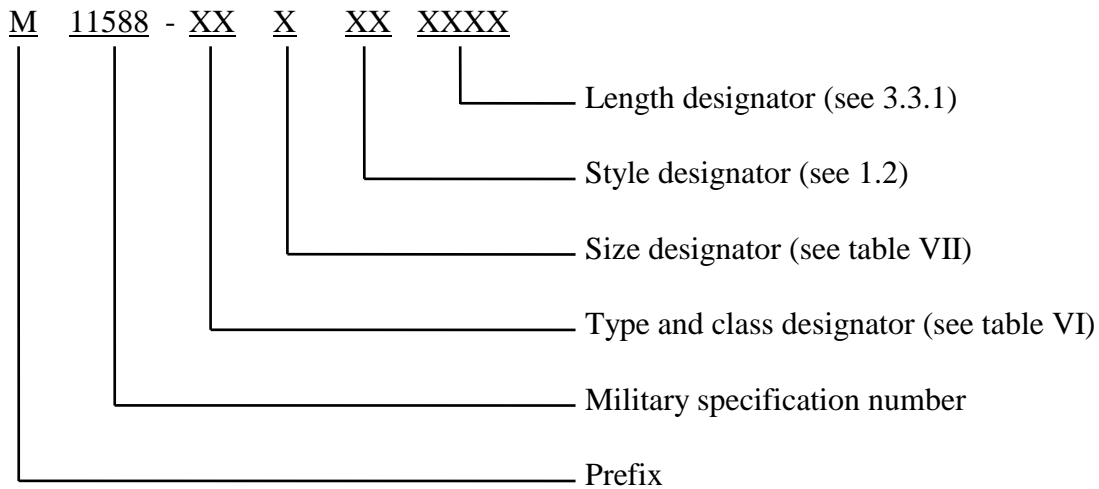
- Type I - Primarily for use with gasoline dispensing pumps.
- Type II - Primarily for use in fuel trailers and carts.
- Type III - Primarily for use with Marine Corps amphibious assault fuel handling systems capable of handling light petroleum fuels.
- Type IV - Primarily for use with air craft refuelers.

6.2 Acquisition requirements. Acquisition documents must specify the following:

- a. Title, number, and date of this specification.
- b. Type, class, size, and style of hose assembly required (see 1.2).
- c. Issue of DoDISS to be cited in the solicitation and, if required, the specific issue of individual documents referenced (see 2.2.1 and 2.3).
- d. When a first article is not required (see 3.1).
- e. Length of hose required (see 3.3.1).
- f. When the color of the hose is not black (see 3.3.1).
- g. When the PIN number will be branded on the length of hose (see 3.5.11).
- h. Packaging requirements (see 5.1).

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6.3 Part or identifying number (PIN). The PIN to be used for the hose assemblies acquired to this document are created as follows (see 6.2):



Example: M11588-01ALT500 - Hose assembly in accordance with MIL-PRF-11588, type I (gasoline dispensing pump), class 1 (coupling halves, quick-disconnect, cam-locking type, hose shank: female both ends), size 1 in., style low temperature, and length 50 ft.

6.3.1 Type and class. The hose assembly type and class are identified by a 2-digit code number as shown in table VI.

TABLE VI. Type and class.

Type				Class
I	II	III	IV	
01	02	03	04	1
05	06	--	08	2
09	10	--	12	3

6.3.2 Size. The hose assembly size is identified by a 1-letter symbol as shown in table VII.

TABLE VII. Size designator.

Symbol	Size
A	1-inch
B	1.25-inch
C	1.5-inch
D	2-inch

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TABLE VII. Size designator - Continued.

Symbol	Size
E	2.5-inch
F	3-inch
G	4-inch

6.4 Subject term (key word) listing.

Aircraft refueling  
Discharge  
Elastomeric  
Gasoline  
Oil

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

Custodians:

Army - AT  
Navy - MC

Preparing Activity:

Army - AT

(Project 4720-2009-017)

Review Activities:

DLA - CC

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <http://assist.daps.dla.mil>.