

INCH-POUND

MIL-PRF-52748F(AT)

8 December 1995

SUPERSEDING

MIL-N-52748E(ME)

5 February 1993

MIL-N-53093(ME)

7 February 1990

PERFORMANCE SPECIFICATION

NOZZLE, ADAPTER CLOSED-CIRCUIT TO GRAVITY FILL, STANDARD AND ARCTIC SERVICE

This specification is approved for use within U.S Army Tank-automotive and Armaments 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 two types of nonautomatic shut-off nozzles intended for adapting a closed-circuit reflueling (CCR) nozzle, conforming to MIL-N-52747 to perform conventional open port or gravity fill dispensing of liquid hydrocarbon fuels (see 6.1).

1.2 Classification. The nozzles will be of the following types as specified (see 6.2).

- Type I - Nozzle, adapter, closed-circuit to gravity fill, standard service.
- Type II - Nozzle adapter, closed-circuit to gravity fill, arctic service

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: U.S Army Tank-automotive and Armaments Command, ATTN: AMSTA-TR-F/BLUE, Warren, MI 48397-5000 by using the Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter

AMSC N/A

FSC 4930

DISTRIBUTION STATEMENT A Approved for public release, distribution is unlimited

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2. APPLICABLE DOCUMENTS

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

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 that issue of the Department of Defense index of Specifications and Standards (DODISS) and supplements thereto cited in the solicitation (see 6.2).

SPECIFICATIONS

DEPARTMENT OF DEFENSE

MIL-T-5624	- Turbine Fuel, Aviation, Grades JP-4, JP-5 and JP-5/JP-8 ST.
MIL-C-7024	- Calibrating Fluid, Aircraft Fuel System Components.
MIL-T-83133	- Turbine Fuel, Aviation, Kerosene Type, Grade JP-8.

STANDARDS

FEDERAL

FED-STD-595	- Colors used in Government Procurement.
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(Unless otherwise indicated, copies of the above specifications, standards, and handbooks are available from the Defense Printing Service Detachment Office, Bldg. 4D (Customer Service), 700 Robbins Avenue, Philadelphia, PA 191 11-5094.)

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

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AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

ANSI/ASM13 B11	- Unified Inch Screw Threads
ANSI/ASME B1.20 1	- Pipe Threads, General Purpose (Inch) (DoD Adopted).
AN SI/ASQC Z14	- Sampling Procedures and Tables for inspection by Attributes (DoD Adopted)

(Application for copies should be addressed to the American National Standards Institute, Inc. 1430 Broadway, New York, NY 10018)

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

3. REQUIREMENTS

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

3.2 Materials The contractor shall select the materials, but the materials shall be capable of meeting all of the operational and environmental requirements specified herein (see 4.6.1) Recovered materials shall be used to the maximum extent possible Material in contact with fuels must be fully compatible with those fuels. Such materials should neither degrade nor be degraded by fuel The use of copper, copper alloys or cadmium plating should be avoided

3.3 Design and construction. The nozzle shall consist of an inlet fitting, a main body containing a manually operated flow control valve, a control lever with a protective guard, a spout, and dust caps for the inlet fitting and spout The nozzle shall conform to the manufacturer's design and construction for a fluid dispensing nozzle except for the interface dimensions which shall conform to figures 1 and 3 for type I nozzle and figures 2 and 3 for type II nozzle and specified herein (see 4.6.2).

3.3.1 Construction. The nozzle shall meet the performance requirements specified in 3.4, as applicable, and shall withstand the strains, jars, vibrations, and other conditions incidental to shipping, storage, and service usage. The spout centerline shall be 135 ± 3 degrees from the inlet fitting centerline as shown in figures 1 and 2

3.3.2 Spout The spout shall be straight and shall be not less than 7 inches in length and not exceed 1.770 inches outside diameter

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3.3.3 Weight. The nozzle shall weigh not more than 3.25 pounds.

3.3.4 Hand control. Hold-open notches, lugs, lever supports shall not be used on the operating lever guard. It shall be necessary for the operator to hold the valve open by hand.

3.3.5 Operating lever and guard. The operator shall initiate and maintain flow through the nozzle valve while utilizing a minimum operator activated force.

3.3.5.1 Type I nozzle. The minimum clearances shall be a hand width of 5.0 inches and finger height of 2.0 inches, with the valve in the closed position as shown on figure 1. The guard shall protect the lever and valve-operating parts from damage.

3.3.5.2 Type II nozzle. The nozzle shall allow for handling and operation using an arctic mitten. The minimum clearances when gripping the handle shall be a hand width of 5.25 inches and finger height of 3.0 inches, with the valve in the closed position as shown on figure 2. Engagement and operation of the nozzle valve shall not be by squeezing an operating lever. The nozzle flow shall not be through a handle.

3.3.6 Threads. All pipe threads shall conform to AN SI/ASME B1 .20.1 and machine threads shall conform to ANSI/ASME B1.1.

3.3.7 Interchangeability. All components of any one nozzle shall be interchangeable with the like part of any other nozzle.

3.3.8 Dust cap. Each nozzle shall be equipped with close fitting dust cap for the spout and inlet fitting. The caps shall be of a standard design with dimensions as required to adequately protect the spout and inlet fitting. The caps shall be attached to the nozzle by means of a coated wire or sash chain. The connection between the cap and chain or wire shall be made using a swivel. The chain or wire shall have a working tensile strength of not less than 70 pounds (see 4.6.8). A spring shall be provided to maintain the caps in place over the nozzle inlet and spout tip. The spring shall be attached to the wire or to any two links of the chain in such a manner that would prevent the extension of the spring beyond its elastic limit, yet allow the caps to be snapped in place or removed from inlet and spout tip.

3.4 Performance. characteristics.

3.4.1 Hydrostatic strength. When tested as specified in 4.6.4, all parts of the nozzle which are subjected to pressure during normal operation, shall be capable of withstanding, without rupture or any deformation, a hydrostatic pressure of 150 pounds per square inch gauge (psig).

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3 4 2 Leakage When tested as specified in 4 6 5, there shall be no leakage past the valve seat or through the body or any of the joints or seals of the nozzle

343 Mechanical strength When tested as specified in 466, there shall be no evidence of damage that could result in malfunction or leakage

344 Capacity When tested in accordance with 467, the nozzle shall have a maximum capacity of not less than 50 gallons per minute (gpm).

345 Performance When tested as specified in 469, the nozzle shall show no evidence of leakage, pulsing of flow, cracking, sticking of the valve, valve chatter, or operating handle becoming inoperative

35 Marking for identification Each nozzle shall be permanently and legibly marked with the manufacturer's name, part number and Commercial and Government Entity (CAGE) number (see 4 6.2)

3 6 Cleaning treatment and finish The nozzle shall be cleaned, treated and finished in accordance with the manufacturer's standard commercial practice The visible components shall be green color no 34094 of FED-STD-595 (see 46.2 and 6.2). Mating surfaces and surfaces in contact with fuel shall not be painted The dyes used must be facie resistant when exposed to ultraviolet light.

37 Maintainability. The nozzle shall operate as specified herein without the need for scheduled servicing or adjustment (see 4.6.2).

38 Lubrication The nozzle shall operate satisfactorily without the use of lubricants (see 4 62)

3.9 Environmental.

3.91 Operating conditions The nozzle shall perform as specified herein, during, and after exposure to the following environments

- a Temperature range (see 4 6.9)
Type I -25 to +140°F
Type II. -60 to +95°F
- b Relative humidity Zero to 100 percent (see 46 12)
- c Salt spray Exposure 10 salt sea atmosphere (see 4611)

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- d. Sand and dust: (see 4.6.13)
 - Type I: Exposure to desert environment.
 - Type II: Exposure to dusty arctic environment.
- e. Fuel (see 4.6.10).

3.9.2 Storage.

3.9.2.1 Type I nozzle. The nozzle shall not be damaged by storage in any ambient temperature from -28 to +160 °F.

3.9.2.2 Type II nozzle. The nozzle shall not be damaged by storage in any ambient temperature from -65 to +145 °F.

3.10 Workmanship. The finished nozzle shall be internally and externally clean and free of sharp edges, burrs, cracks, chips, and gouges (see 4.6.2).

3.11 Government Loaded property. When specified (see 6.2), the property listed in table II in the quantities indicated will be loaned by the Government (see 6.3):

TABLE I. Government loaned property.

Item #	Description - Identification Quantity	National Stock Number (NSN)	Quantity
1	Closed - circuit refueling nozzle	4930-00-117-4726	1
2	Closed - circuit refueling nozzle	4930-01-194-2625	1
3	Closed - circuit refueling nozzle	4930-01-383-9467	1

4. VERIFICATION

4.1 Classification of inspection. 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 one or more nozzles when a first article sample is required (see 3.1). The actual quantity of nozzles to be inspected shall be as specified in the contract or order (see 6.2). This inspection shall include the examinations of 4.4 (see table II) and the tests 014.0.4.1 through 4.6.13 (see table III).

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4.3 Conformance inspection. Conformance inspection shall include the examinations of 4.4 and the tests of 4.5.

4.4 Examination.

4.4.1 Sampling. Sampling for examination and tests shall be in accordance with ANSI/ASQC 21.4. Sample size shall be determined by using AN SI/ASQC 21.4, table I and table H. Each sample selected shall be inspected as specified herein for the defects listed in table II. A lot shall be accepted when zero defects are found and rejected when one or more defects are found.

4.5 Tests.

4.5.1 Individual. Each nozzle shall be tested as specified in 4.6.5. Failure of the test shall be cause for rejection.

4.5.2 Sample. Samples selected in accordance with 4.4.1 shall be tested as specified in 4.6.4 and 4.6.6 through 4.6.8. Failure of any test shall be cause for rejection.

TABLE II. Classification of defects.

Category	Defect	Method of examination
Critical	None	
Major		
101	Any part missing or not of specified type or size (see 3.3).	Visual
102	Any part fractured, split, punctured, sprung, or malformed (see 3.3).	Visual
103	Any component that is inoperative or shall not function as specified (see 3.3).	Functional
104	Dimensions not as specified (see 3.3, 3.3.2, and 3.3.5).	SIE 1/
105	Weight not as specified (see 3.3.3).	Scale
106	Threads not as specified (see 3.3.6).	SIE
107	Parts not as specified for interchangeability (see 3.3.7).	Visual
108	Marking missing, incomplete, or not permanent (see 3.5).	Visual
109	Nozzles not finished as specified (see 3.6).	Visual
110	Maintainability not as specified (see 3.7).	Visual
111	Lubrication not as specified (see 3.8).	Visual
112	Workmanship not as specified (see 3.10).	Visual

1/ SIE = Standard Inspection Equipment.

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TABLE III. Classification of inspections

Title	Requirement	Inspection	First article	Quality conformance tests
Nozzle body hydrostatic test	3.4.1	4.6.4.1	X	X
Hydrostatic strength	3.4.1	4.6.4.2	X	X
Leakage	3.4.2	4.6.5	X	X
Mechanical strength	3.4.3	4.6.6	X	X
Flow capacity	3.4.4	4.6.7	X	X
Chain & Spring test	3.3.8	4.6.8	X	X
Performance	3.4.5	4.6.9	X	
Fuel & Extreme temperature test	3.9.1 & 3.9.2	4.6.10	X	
Accelerated corrosion	3.9.1	4.6.11	X	
Humidity	3.9.1	4.6.12	X	
Sand & dust	3.9.1	4.6.13	X	

4.6 Method of inspection.

4.6.1 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.

4.6.2 Defects. Conformance to 3.3, 3.3.6, 3.3.7, 3.5 through 3.8 and 3.10 shall be determined by examination for the defects listed in table II. Examination shall be visual, tactile or by measurement with SIE.

4.6.3 Test conditions.

4.6.3.1 Shelter. Unless otherwise specified herein, tests may be performed without shelter and at the climatic conditions existing at the place of the test.

4.6.3.2 Test fluid. Except as specified herein, all tests shall be conducted using a test fluid conforming to MIL-T-5624, grade JP-8: or MIL-C-7024, type 11 fluid. The test fluid temperature shall be between -25 and +140°F for type 1 nozzle and -60 to +95°F for type H nozzle. with the exception of the fuel resistance and extreme temperature test (see 4.6. 10)

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4.6.4 Hydrostatic tests.

4.6.4.1 Nozzle body hydrostatic test. The intent of this test is to ensure nozzle body integrity. The test is to be conducted before internal valve components are assembled into nozzle body. All external openings are to be blocked or plugged and the entire nozzle is to be subjected to a hydrostatic pressure of not less than 150 psig conforming to MIL-C-7024, type II fuel. Any evidence of leaking or cracking and nonconformance to 3.4.1 shall constitute failure of this test.

4.6.4.2 Hydrostatic strength. With the valve seat in the closed position, the nozzle shall be subjected to an internal hydrostatic pressure. The pressure shall be raised slowly to 150 psig in 30 psig increments. Each increment shall be held for 1 minute. Nonconformance to 3.4.1 shall constitute failure of this test. The leakage test of 4.6.5 shall be performed after the test.

4.6.5 Leakage.

4.6.5.1 Leakage with valve closed and outlet open. With the valve in the closed position, the outlet open, and the nozzle immersed in water, the nozzle poppet shall be subjected to 2 psig air pressure applied at the nozzle inlet. The air pressure shall then be increased to 30 psig and the nozzle checked for body and poppet leakage. Pressure shall be maintained for 2 minutes for quality conformance testing and 30 minutes for first article inspection. Nonconformance to 3.4.2 shall constitute failure of this test.

4.6.5.2 Interface leakage. The adapter as connected to the closed-circuit refueling (CCR) nozzle shall be pressurized with MIL-C-7024, type II fuel to a pressure of 30 psig. Pressure shall be maintained for 1 minute. There shall be no evidence of leakage at the interface surface between the poppet and the CCR nozzle. The test shall be conducted on each Government-loaned CCR nozzle (see 3.11). Nonconformance to 3.4.2 shall be constitute failure of this test.

4.6.6 Mechanical strength. Connect the nozzle to a CCR nozzle that is suitably restrained to prevent movement. Apply a load that will produce a 100 foot-pound bending load to act at the lock-lug plane on the nozzle inlet adapter. Hold the bending load for a minimum of five minutes. Leakage test 4.6.5 shall be repeated after this test. Nonconformance to 3.4.3 shall constitute failure of this test.

4.6.7 Flow capacity. The nozzle shall be subjected to a fluid flow test with an inlet pressure of 15 ± 0.5 psig. The inlet pressure shall be measured at a distance of 10 pipe diameters upstream of the nozzle inlet. Not less than 500 gallons shall be discharged through the nozzle in determining the flow in gallons per minute. Nonconformance to 3.4.4 shall constitute failure of this test.

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468 Chain and spring test The dust cap chain and spring assembly shall be subjected to a pull test of not less than 70 pounds Nonconformance to 3 3 8 shall constitute failure of this test

469 Performance The nozzle shall be installed in a test set-up which shall provide a regulated inlet pressure of 15 ± 2 psig under all flow conditions from no flow to the maximum flow rate The nozzle valve shall be cycled open and closed at a rate not faster than 6 cycles per minute. The test shall include 167 cycles each at maximum (50 gallon per minute (gpm)), intermediate (30 gpm), and low (approximately 8 gpm) flow rates at each of the following temperatures -25, -10, 0, +20, +40, +60, +80, +100, +120, and +140°F (see 39 1) No maintenance shall be performed on the nozzles during this test Nonconformance to 34.5 shall constitute failure of this test

4610 Fuel resistance and extreme temperature The test specified in 4610.1 through 46.105 shall be conducted in the sequence listed and each test shall follow immediately after the preceding test (see 391 and 3 9.2)

46101 Fuel soak. phase I The nozzle shall be maintained for a period of 96 hours in such a manner as to ensure complete contact of all nonmetallic parts with the fluid as would be expected under normal service conditions The fluid shall be MIL-T-83133, grade JP-8 fuel at a temperature of $160 \pm 4^\circ\text{F}$ for type I nozzle and $145 \pm 4^\circ\text{F}$ for type II nozzle. The nozzle shall be actuated once every 6 hours in a normal manner. After a minimum of 96 hours fuel soak, the nozzle shall be tested with the ambient air and test fluids at a temperature of $140 \pm 4^\circ\text{F}$ for type I nozzle and $95 \pm 4^\circ\text{F}$ for type II nozzle as specified in 46.5

4610.2 Drying cycle. phase I Drain all test fluid from the nozzle and allow it to dry for 24 hours in an ambient air temperature of $160 \pm 4^\circ\text{F}$ for type I nozzle and $145 \pm 4^\circ\text{F}$ for type II nozzle. The nozzle shall then be tested with the ambient air and test fluid at a temperature of $140 \pm 4^\circ\text{F}$ for type I nozzle and $95 \pm 4^\circ\text{F}$ for type II nozzle as specified in 4.6.5.

46103 Fuel soak. phase II Repeat 46101, except fuel soak period shall be 18 hours minimum

46104 Drying cycle. phase II Repeat 46102, except the drying period shall be 30 hours.

4610.5 Low temperature The nozzle shall be maintained for a period of 18 hours in such a manner as to ensure complete contact of all nonmetallic parts with the fluid as would be expected under normal service conditions The fluid shall be MIL-T-83133, grade JP-8 fuel at a temperature of $-28 \pm 4^\circ\text{F}$ for type T nozzle and $-65 \pm 4^\circ\text{F}$ for type H nozzle The nozzle shall be actuated once every 6 hours in a normal manner After a minimum of 18 hours fuel soak, the

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nozzle shall be tested with the ambient air and test fluid at a temperature of $-25 \pm 4^{\circ}\text{F}$ for type I nozzle and $-60 \pm 40^{\circ}\text{F}$ for type II nozzle as specified in 465 and 469 The personnel completing the test shall be clothed and equipped as they would be in a low temperature tactical situation

4611 Accelerated corrosion The nozzle shall be immersed in a solution of 3.5 percent by weight NaC 1 in distilled water. After immersion, the solution shall be drained and the nozzle shall be heated in an oven to a temperature of $130 \pm 5^{\circ}\text{F}$ for a period of not less than 1 hour. The immersion and heating cycle shall be repeated 50 times The nozzle shall not be operated at any time during the immersion cycles Immediately after completing the immersion cycles the nozzle shall be washed out with warm water to remove salt accumulation. The nozzle shall be dried, wet with fuel, and tested as specified in 4.64, 46.5, and 4.66. Corrosion of any part of the nozzle to a degree that affects performance (see 3 9.1) shall constitute failure of this test

4 6 1 2 Humidity. The nozzle shall be tested as follows

- a. Place the nozzle in the test chamber, adjust the temperature to $73 \pm 4^{\circ}\text{F}$ and the relative humidity to 50 ± 5 percent
- b. Maintain these conditions for 24 hours
- c. Adjust the chamber conditions to those given in table IV for the time 0000.
- d. Perform a 24 hour cycle with the time-temperature-humidity values specified in table IV.
- e. The nozzle shall be actuated once every 6 hours in a normal manner.
- f. Repeat steps d and e for a total of six, 24 hour cycles.
- g. Adjust the chamber to the conditions specified in step a and maintain for at least 24 hours.
- h. Test the nozzle as specified in 464, 465,46.6,4.6.7, and 4.6.8.

Nonconformance to 391 shall constitute failure of this test.

TABLE IV. Humidity test

Time	Temp (°F)	Relative Humidity (%) <u>1/</u>	Time	Temp (°F)	Relative Humidity (%) <u>1/</u>
0000	80	100	1200	94	75
0100	80	100	1300	94	74
0200	79	100	1400	95	74
0300	79	100	1500	95	74
0400	79	100	1600	93	76

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TABLE IV. Humidity test - Continued.

Time	Temp (°F)	Relative Humidity (%) 1/	Time	Temp (°F)	Relative Humidity (%) 1/
0500	78	100	1700	92	79
0600	78	100	1800	90	82
0700	81	94	1900	88	81
0800	84	88	2000	85	91
0900	87	82	2100	83	95
1000	89	79	2200	82	96
1100	92	77	2300	81	100

1/ For chamber control purpose, 100% RH implies as close as possible but not less than 95%.

4.6.13 Sard and dust. The nozzle shall be tested as follows:

- a. Place the nozzle in the test chamber, adjust the temperature to $73 \pm 4^\circ\text{F}$ and the relative humidity to less than 30 percent. (Maintain less than 30 percent relative humidity throughout the test.)
- b. Adjust the air velocity to $1750 \pm 175 \text{ ft/min}$.
- c. Adjust the dust feed control for dust concentration to $0.3 \pm 0.2 \text{ g/ft}^3$.
- d. Maintain condition of steps a through c for at least six hours.
- e. Stop the dust feed, reduce the air velocity to 300 ft/min and adjust the temperature to $140 \pm 4^\circ\text{F}$ for type I nozzle and $95 \pm 4^\circ\text{F}$ for type II.
- f. Maintain step e conditions until stabilization.
- g. Adjust the air velocity to that used in step b and restart the dust feed to maintain the dust concentration as in step c.
- h. Maintain conditions for at least six hours.
- i. Turn off all chamber controls and allow the nozzle to return to standard ambient conditions.
- j. Remove accumulated dust from the nozzle by brushing, wiping or shaking, taking care to avoid introduction of the additional dust into the nozzle. Do not remove dust by either air blasting or vacuum cleaning.
- k. Test the nozzle in accordance with 4.6.4, 4.6.5 and 4.6.6.

Nonconformance to 3.9.1 shall constitute failure of this test.

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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 that maybe helpful, but is not mandatory)

6.1 Intended use

6.1.1 Type I nozzle The nozzle covered by this specification is intended for adapting closed-circuit refueling nozzles to conventional open port refueling in a standard environment.

6.1.2 Type II nozzle The nozzle covered by this specification is intended for adapting closed-circuit refueling nozzles to conventional open port refueling in a low temperature (-60 °F) environment.

6.2 Acquisition requirements Acquisition documents must specify the following.

- a Title, number, and date of the specification
- b Type of nozzle 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 If first article samples are not required (see 3.1).
- e Quantity of nozzles for first article inspection (see 3.1).
- f Color (see 3.6)
- g When Government-loaned property is required (see 3.11).
- h Packaging requirements (see 5.1)

6.3 Government-loaned property The contracting officer should arrange to lend the property listed 3.1.1.

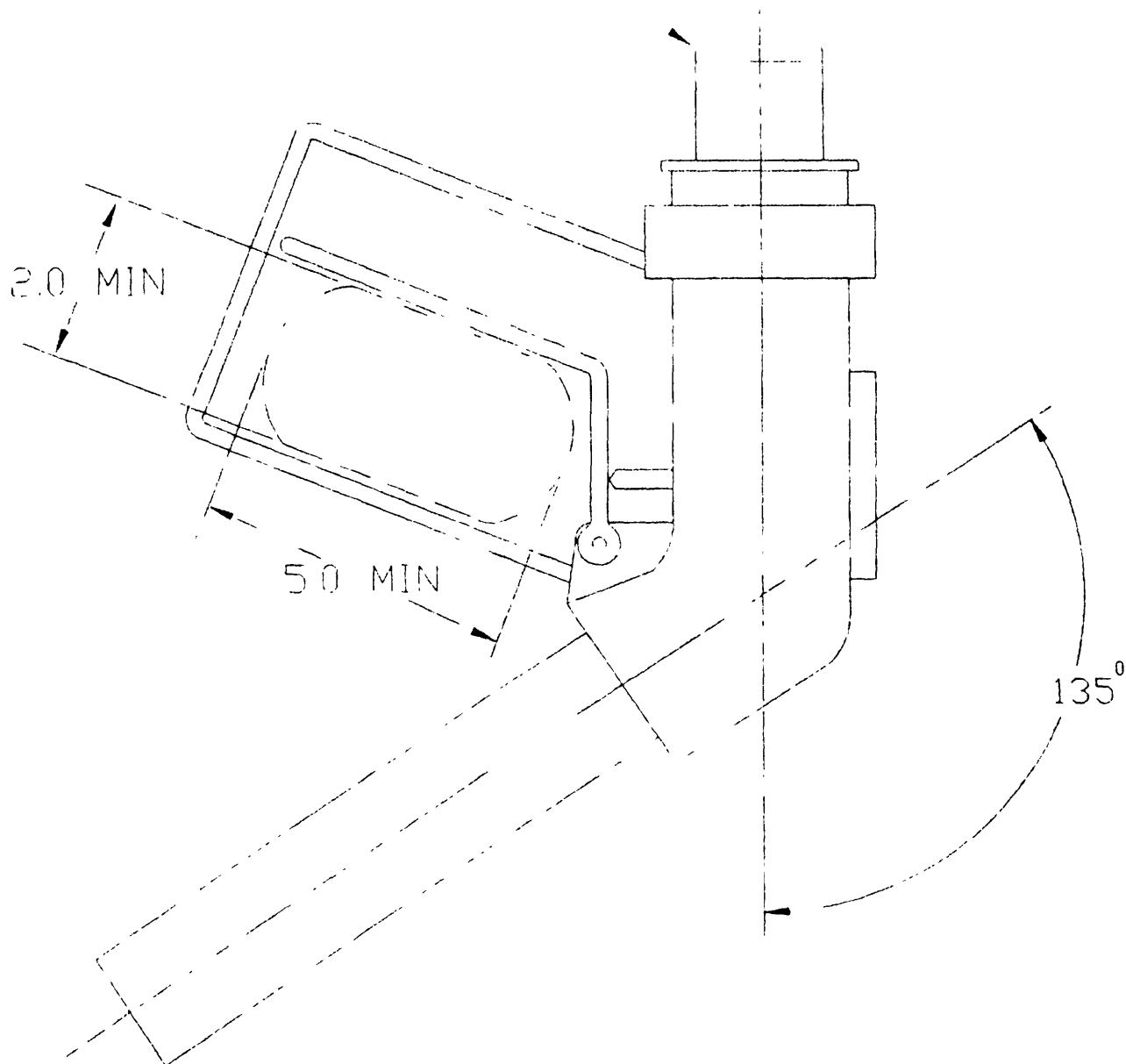
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64 Subject term (key word) listing

Dispensing system
Liquid hydrocarbon fuels dispensing
Nonautomatic fueling
Open port fueling
Refueling systems

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

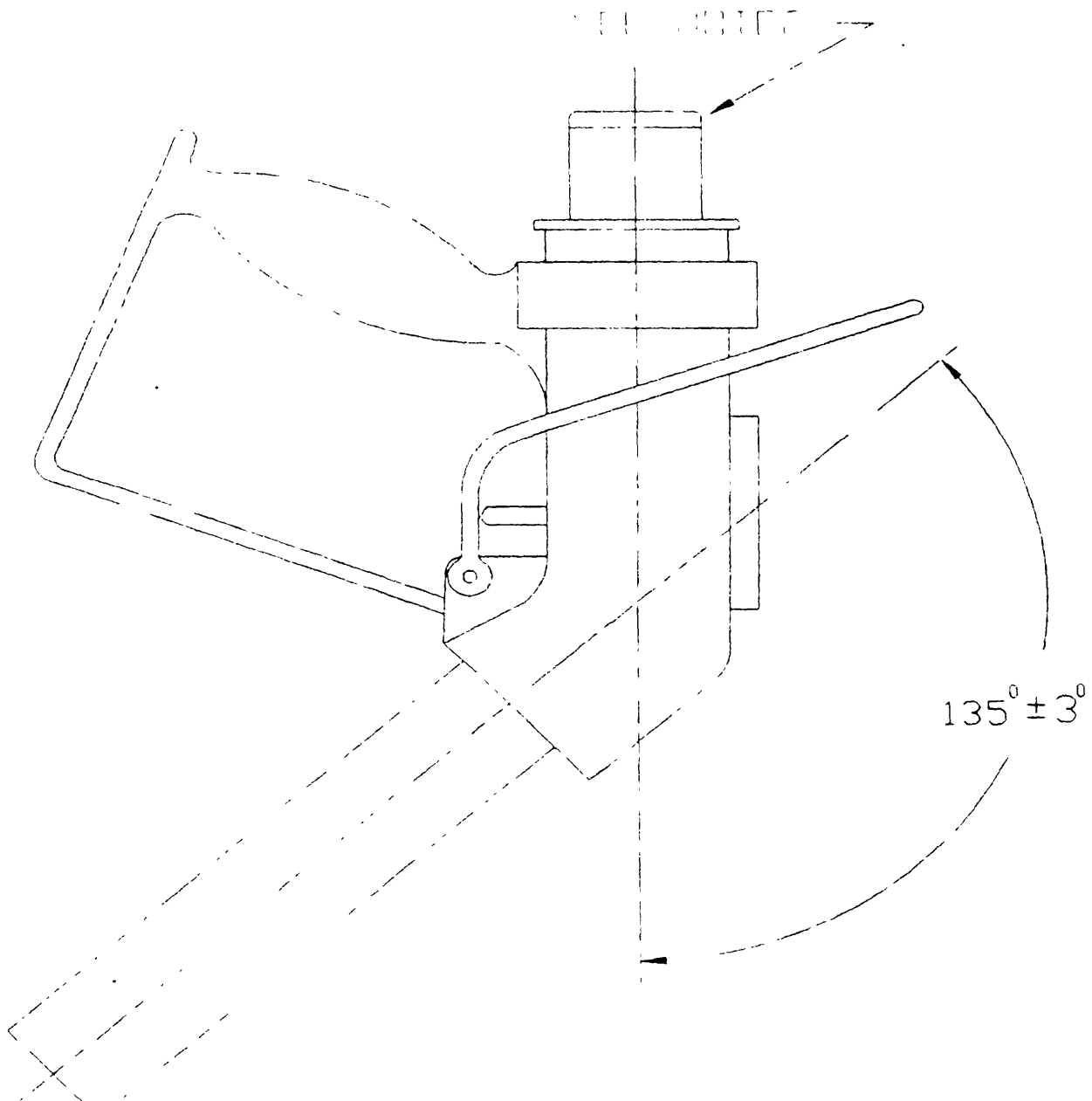
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**NOTES:**

1. Nozzle configuration is illustrative only.
2. See figure 3 for inlet fitting dimensions.
3. Unless otherwise specified, dimensions are in inches.

FIGURE 1. Type I nozzle.

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NOTES:

1. Nozzle configuration is illustrative only.
2. See figure 3 for inlet fitting dimensions.

FIGURE 2 Type II nozzle

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Custodian
Army - Air

Preparing Activity
Army - AT

Review Activity
Army- AV

(Project 4930-0001)

STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

INSTRUCTIONS

- 1 The preparing activity must complete blocks 1, 2, 3, and 8. In block 1, both the document number and revision letter should be given.
- 2 The submitter of this form must complete blocks 4, 5, 6, and 7.
- 3 The preparing activity must provide a reply within 30 days from receipt of the form.

NOTE: This form may not be used to request copies of documents, nor to request waivers, or clarification of requirements on current contracts. Comments submitted on this form do not constitute or imply authorization to waive any portion of the referenced document(s) or to amend contractual requirements.

I RECOMMEND A CHANGE:

1 DOCUMENT NUMBER
MIL-PRF-52748F(AT)

2 DOCUMENT DATE (YYMMDD)
951208

3. DOCUMENT TITLE

Nozzle, Adapter, Closed-Circuit to Gravity Fill, Arctic Service

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

5. REASON FOR RECOMMENDATION

6. SUBMITTER

a. NAME (Last, First, Middle Initial)

b. ORGANIZATION

c. ADDRESS (Include Zip Code)

d. TELEPHONE (Include Area Code)

7. DATE SUBMITTED
(YYMMDD)

(1) Commercial

(2) AUTOVON
(If applicable)

8. PREPARING ACTIVITY

a. NAME

b. TELEPHONE (Include Area Code)

(1) Commercial

(2) AUTOVON

(810) 574-8745

DSN 786-8745

c. ADDRESS (Include Zip Code)

Commander

U.S. Army Tank-automotive and Armaments
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Telephone (703) 756-2340 AUTOVON 289-2340

