MIL-V-25023B 17 AUGUST 1967

Superseding MIL-V-25023A 20 February 1962

MILITARY SPECIFICATION

VALVE, FUEL DRAIN, SELF-LOCKING

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

1. SCOPE

1.1 This specification covers self-locking fuel drain valves suitable for use in aircraft fuel systems. They are intended for use with hydrocarbon fuels only.

2. APPLICABLE DOCUMENTS

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

SPECIFICATIONS

<u>Federal</u>	
F-S-661 TT-S-735	Solvent, Dry-Cleaning Standard Test Fluids; Hydrocarbon
<u>Military</u>	
MIL-J-5161 MIL-G-5572 MIL-T-5624 MIL-S-7742	Jet Fuel, Referee Gasoline, Aviation: Grades 80/87, 100/130, 115/145 Turbine Fuel, Aviation, Grades JP-4 and JP-5 Screw Threads, Standard, Optimum Selected Series: General Specification for
MIL-F-18240	Fastener, Externally Threaded, 250° F, Self-locking Element for
MIL-N-25027	Nut, Self-Locking, 250° F, 450° F, and 800° F, 125 KSI FTU, 60 KSI FTU, and 30 KSI FTU
MIL-D-1000	Drawings, Engineering and Associated Lists
<u>STANDARDS</u>	
<u>Military</u>	
MIL-STD-129	Marking for Shipment and Storage

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MIL-STD-130	Identification Marking of US Military Property
MIL-STD-1&3	Specifications and Standards, Order of Precedence
יבו כשה פטי	for the Selection of Parts and Equipment, Procedures for Packaging and
MIL-STD-794	Packing of
MS20995	Wire, Lock
MS27262	Valve, Fuel Drain - Self-Locking, Flush Type,
	Installation of
MS29513	Packing "O" Ring Hydrocarbon Fuel Resistant
MS29528	Valve-Fuel Drain, Self-Locking, Poppet
MS29529	Valve-Fuel Drain, Self-Locking, Tank Mounted
MS29530	Valve-Fuel Drain, Self-Locking, Line Mounted
MS29571	Valve, Fuel Drain - Self-Locking, Flush Type
MS33 540	Safety Wiring, General Practices for
MS33586	Metals, Definition of Dissimilar
MS33588	Nuts, Self-Locking, Aircraft, Design and Usage,
	Limitations of

PUBLICATIONS

Air Force-Navy Aeronautical Bulletin

No. 438 Age Controls for Synthetic Rubber Parts

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

3. REQUIREMENTS

- 3.1 Qualification. The drain valves furnished under this specification shall be a product which has been subjected to and which has passed the qualification tests specified herein, and has been listed on or approved for listing on the applicable Qualified Products List.
- 3.2 <u>Materials</u>.- Materials and processes used by the manufacturer of fuel drain valves shall be suitable for the purpose, and shall conform to applicable Government specifications. Materials conforming to contractors specifications may be used provided the specifications are released by the Services and contain provision for adequate tests. The use of contractor's specifications will not constitute waiver of Government inspection, To assure satisfactory operation as herein defined, all materials used in the valve shall be sufficiently resistant to the fuels and fluids conforming to MIL-J-5161, MIL-G-5572, MIL-T-5624, and TT-S-735, having an aromatic content from 0 to 30 percent.
- 3.2.1 Metals.- All metals used in the construction of fuel drain valves shall be of a corrosion-resistant type or shall be suitably protected to resist corrosion during the normal service life of the valve. The use of dissimilar metals shall be avoided where practicable, or used in accordance with MS33586. The use of magnesium or any alloy thereof is prohibited.
- 3.2.2 <u>Casting</u>. Castings shall be clean, sound, and free from blowholes, porosity, cracks, and any other defects.

- 3.2.3 <u>Selection of materials</u>.— Specifications and standards for all materials, parts, and Government certification and approval of processes and equipment, which are not specifically designated herein and which are necessary for the execution of this specification, shall be selected in accordance with MIL—STD-143, except as provided in the following paragraph.
- 3.2.3.1 Standard parts. Standard parts (MS, AN, or JAN) shall be used wherever they are suitable for the purpose, and shall be identified on the drawing by their part numbers. Commercial utility parts such as screws, bolts, nuts, and cotter pins, may be used, provided they possess suitable properties and are replaceable by the standard parts (MS, AN, or JAN) without alteration, and provided the corresponding standard part numbers are referenced in the parts list and, if practicable, on the contractor's drawings. In the event there is no suitable corresponding standard part in effect on date of invitation for bids, commercial parts may be used provided they conform to all requirements of this specification.

3.3 Design and construction .-

- 3.3.1 <u>Design.</u>— The design of the valve shall be such that the actuating shaft will not be subjected to the valve inlet pressure when the valve is in the "OFF" position. Whenever practicable, the design shall be such that the inlet pressure will not tend to unseat the main seal. Valves shall conform to MS29528, MS29529, MS29530, or MS29571, as applicable.
- 3.3.1.1 Operation.— The drain valve shall be so designed as to permit ready operation by personnel wearing heavy gloves. No special tools shall be required for operation of the drain valve. A torque of not more than 10 pound-inches or a direct force, as applicable, for the push-pull type valve not exceeding 15 pounds for the $\frac{1}{2}$ -inch and $\frac{3}{8}$ -inch sizes, or 25 pounds for the $\frac{1}{2}$ -inch size, shall operate the valve. The operating force shall not exceed 10 pounds with a maximum torque of 10 pound-inches for MS29571 valves.
- 3.3.1.2 <u>Position indication.</u>— For valves other than poppet type, indication shall be provided for the open and closed position. The valve shall remain in either the full-open or full -closed position. Snap action shall return the valve to the closed position.
- 3.3.1.3 <u>Self-locking.</u>— The valve shall incorporate such provision that it cannot accidentally or under vibration be opened. This may be accomplished by spring-loading in the "OFF" position.
- 3.3.1.4 <u>Internal passages</u>.- Internal liquid passages shall be as large as possible, and entrance and exit holes shall be rounded and free from burrs in order to avoid restriction of the flow. The flush-mounted drain valve shall be designed to drain liquid to the level of the surface on which it is installed.
- 3.3.1.5 <u>Installation</u>.— Suitable means shall be provided for installing and removing the drain valve by use of standard tools. Installation for flush mounted drain valves shall be in accordance with MS27262.

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- 3.3.1.6 <u>Maintenance</u>. The flush-type drain valve shall be so designed as to permit changing of the poppet main "O" ring seal when installed in a full tank, A maximum lose of 30 cc of fuel shall be the total allowable for the exchange of this seal.
- 3.3.2 <u>Construction</u>. The valve shall be constructed to withstand the strains, jars, vibrations, and other conditions incident to shipping, storage, installation, and service use. Valves, other than the poppet type, shall be so constructed that adjustments, repairs, or replacements can be easily made by the personnel of operating units and overhaul bases.
 - 3.3.2.1 "O" rings.- All "O" rings shall conform to MS29513.
- 3.3.2.2 <u>Lubrication</u>.- The valve shall operate satisfactorily without the use of lubricants.
- 3.3.2.3 Fuel.- The valve shall operate satisfactorily with fuels conforming to MIL-G-5572 and MIL-T-5624.
- 3.4 <u>Interchangeability</u>.- All parts having the same manufacturer's part number shall be directly and completely interchangeable with each other with respect to installation and performance. Changes in manufacturer's part numbers shall be governed by the drawing number requirements of MIL-D-1000.
 - 3.5 Screw threads.- All threads shall be in accordance with MIL-S-7742.
- 3.6 Locking of parts.— All threaded parts shall be locked by safety wiring, by all-metal self-locking nuts conforming to MIL-N-25027 cottar pins, or other approved methods. Safety wire shall be installed in accordance with MS33540 and shall conform to MS20995. Self-locking nuts shall be used in accordance with MS33588. Self-locking nuts shall not be used where loosening or disengagement of the nut could result in the nut or other parts entering the fuel system. The use of lockwashers or staking is not permitted. All threaded locking elements shall conform to the torque test requirements of MIL-F-18240.
 - 3.7 Synthetic rubber parts.-
- 3.7.1 Marking and age controls.- Marking and age controls shall conform to ANA Bulletin No. 438.
- 3.7.2 <u>Serviceabilityy</u>.- AU synthetic rubber parts shall be readily replaceable with a minimum replacement of attaching parts.
- 3.8 <u>Performance</u>. The valves shall satisfy the performance requirements specified herein when subjected to tests specified in section 4.
- 3.9 Identification of product. The valve shall be marked for identification in accordance with MIL-STD-130. The identification data applied to the valve shall be as follows:

MS Part No.

Manufacturer's Part No.

Manufacturer's name or trademark

- 3.9.1 Accessibility. The part number shall, when practicable, be located to permit being read alter assembly in the complete unit.
- 3.9.2 use of AN or MIL designations. AN or MIL designations shall not be applied to a product, except for qualification test samples, nor referred to in correspondence, until notice of approval has been received from the activity responsible for qualification.
- 3.10 <u>Workmanship</u>, Attention shall be given to neatness and thoroughness of assembly, alignment of parts, tightness of assembly screws and bolts, marking of parts, painting, and removal of burrs and sharp edges.
- 3.10.1 <u>Cleaning</u>.- All parts shall be clean and free from dirt, sand, metal chips, and other foreign matter during and after assembly.

4. QUALITY ASSURANCE PROVISIONS

- 4.1 Responsibility for inspection. Unless otherwise specified in the contract or purchase order, the supplier is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified, the supplier may utilize his own facilities or any other commercial laboratory acceptable to 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.
- 4.2 <u>Classification of tests</u>. The inspection and testing of drain valves shall be classified as follows:
 - (a) Qualification inspection (4.3)
 - (b) Quality conformance inspection (4.4)

4.3 Qualification inspection.-

4.3.1 <u>Sampling instructions</u>.— The qualification inspection samples submitted shall consist of four fuel drain valves of each manufacturer's part number upon which qualification is desired. Two of these valves shall have been tested by the manufacturer in accordance with this specification prior to being forwarded to the testing facility. (Each MS part number shall be qualified separately.) These valves shall be accompanied by one complete set of detail and assembly drawings and a complete test report showing results of the manufacturers tests. These drawings shall be in accordance with MIL-D-1000. The test report shall indicate conformance with all requirements of this specification, referring specifically to the applicable paragraphs in the specification and shall include photographs showing any sign of deterioration, corrosion, or wear. Samples shall be forwarded to the activity responsible for qualification designated in the letter of authorization from that activity (see 6.3), plainly identified by securely attached durable tags marked with the following information:

Sample for qualification test VALVE, FUEL DRAIN, SELF-LOCKING

MS Part No.

Name of manufacturer

Submitted by (name) (date) for test in accordance with requirements of MIL-V-25023E under authorization (reference authorizing letter).

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4.3.2 <u>Tests</u>.- The qualification inspections of fuel drain valves shall consist of the following examinations and tests, in the order listed, as specified in 4.6 The qualification inspections may, at the option of the procuring activity, be supplemented with tests under actual or simulated service conditions.

	Tests		Samples
(a) (b) (c) (d) (e)	Examination of product Calibration Fuel resistance and extreme temp- erature Calibration Disassembly and inspection	$ \begin{pmatrix} (4.6.1) \\ (4.6.2) \\ (4.6.3) \end{pmatrix} $ $ \begin{pmatrix} 4.6.2 \\ (4.6.10) \end{pmatrix} $	Valve No. 1
(a) (b) (c) (d) (e) (f) (g) (h) (i)	Examination of product Calibration Endurance Contaminated fuel endurance Accelerated corrosion Water freezing Burst pressure Vibration Disassembly and inspection	(4.6.1) (4.6.2) (4.6.5) (4.6.6) (4.6.2) (4.6.8) (4.6.8) (4.6.9) (4.6.4) (4.6.10)	Valve No. 2

- 4.4 <u>Quality conformance inspection</u>.- Quality conformance inspection shall consist of individual tests and sampling tests.
 - 4.4.1 Individual tests. Each valve shall be subjected to the following tests:
 - (a) Examination of product (4.6.1)
 (b) Leakage (4.6.2.1.2)
- 4.4.2 <u>Sampling tests</u>. One valve shall be selected by the inspector from each lot of 100 or fraction thereof on the order and subjected to the burst pressure test (4.6.9) in addition to the individual tests specified in 4.6.
- 4.4.3 Rejection and retest. If any sample fails to meet the requirements of the sampling tests, the lot represented shall be rejected. Any valve failing to meet the requirements of the individual tests shall be rejected and returned at the contractor's expense, Valves which have been rejected may be replaced or repaired to correct the defects and resubmitted for all specified tests. Before resubmitting, full particulars concerning previous rejection and the action taken to correct the original defects shall be furnished the inspector. Valves rejected after retest shall not be resubmitted without the specific approval of the procuring activity.

4.5 Test conditions.-

4.5.1 <u>Cleaning</u>.- Prior to testing the valve, all internal parts normally in contact with the fuel shall be thoroughly cleaned to remove all lubricant and foreign matter.

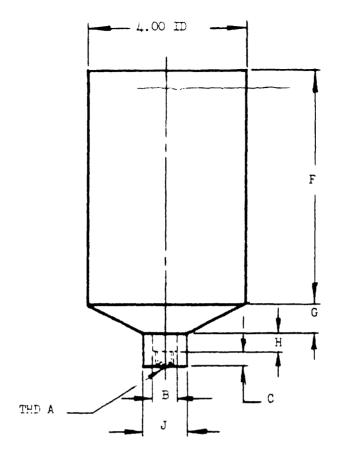
4.5.2 Test fluid. Unless otherwise specified, fuel in accordance with MIL-G-5572, grade 100/130 or grade 115/145; MIL-T-5624, grade JP-4; or TT-S-735, type I, shall be used for all tests. Any fluid complying with F-S-661 (or any ether fluid acceptable to the procuring activity) may be used as a substitute for the test fuel for all tests except wherein a specific fluid is specified.

4.6 Inspection methods.-

- 4.6.1 Examination of product.- Each valve shall be examined to determine conformance with all requirements of this specification for which there are no specific tests.
 - 4.6.2 Calibration .- The calibration test shall include the following tests.
- 4,6.2.1 Functional. This test shall demonstrate the ability of the valve to meet the design requirements specified in 3.3.1.1, 3.3.1.2, 3.3.1.5, and 3.3.1.6.
- 4.6.2.2.1 Flow, The valve shall be installed in a container conforming to figures 1, 2, or 3, as applicable. The Container shall be filled with type I, TT-S-735 fluid to the capacity shown, The valve shall be placed in the open position and the time started. Recording of the time shall stop when the flow breaks from continuous stream to drops. The time shall not exceed that shown on the table of the applicable figure.

4.6.2.1.2 <u>Leakage</u>.-

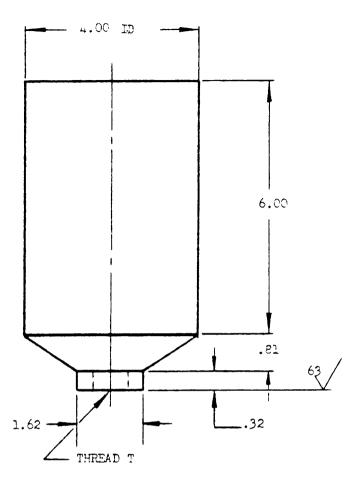
- 4.6.2.1.2.1 The fuel leakage test shall be conducted at pressures of 4 inches of fuel, 1 psi, 5 psi, and in increments of 5 psi up to 60 psi. When the pressure is applied to the drain inlet with the valve in the closed position, there shall be no leakage from any portion of the valve.
- 4.6.2.1.2.2 With the unit installed in a suitable setup such that the valve inlet port is submerged in fuel or ether suitable liquid, air pressure varying from 0- to 5-psi gage shall be applied to the valve outlet and exterior body of the valve with the valve in the closed position. There shall be no leakage ac any time from any portion of the valve. The test shall be repeated with the valve open and the outlet port plugged. There shall be no leakage from any part of the valve.
- 4.6.3 Fuel resistance and extreme temperature. The fuel resistance and extreme temperature tests shall be conducted in accordance with table I.
- 4.6.4 Vibration. The valve, in the closed position, shall be adequately mounted on the vibration device with fluid pressure applied to the inlet port and with the outlet port open, and subjected to the three vibration scanning cycle tests listed in table II. The test shall be conducted at room temperature. This test shall be repeated, using *-psi fluid pressure and 5-psi air suction in lieu of 60-psi fluid-pressure. There shall be no fluid leakage during the positive pressure tests, and air leakage shall not exceed 10 cc per minute of free air during the 5-psi air suction test. There shall be no evidence of damage to the valve or loosening of parts as a result of the test. After this test, the valve shall meet the requirements if the leakage test (4.6.2.1.2).



THREAD A	В	С	E	F	G	H	ø	CAPACITY	TIME TO DRAIN (SEC)
7/16-20 UNF-3B	.625	.312	4.00	6.00	.75	.50	1.00	1,000 cc	85
9/16-18 UNF-38	.750	.312							65
3/4-16 UNF-3B	.750	.375							25
1-1/16-12 UN-3B	1.250	.500	10.00	13.00	2.13	1.00	2.25	5 GAL.	75
1-5/16-12 UN-3B	1.500	.500							40
1-5/8-12 UN-3B	1.750	.500							33
1-7/8-12 UN-3B	2.000	.500							31

DIMENSIONS IN INCHES. TOLERANCES: 2-PLACE DECIMALS $\pm .03$, 3-PLACE DECIMALS $\pm .010$.

Figure 1. Flow test containers for MS29529 and MS29530 valves



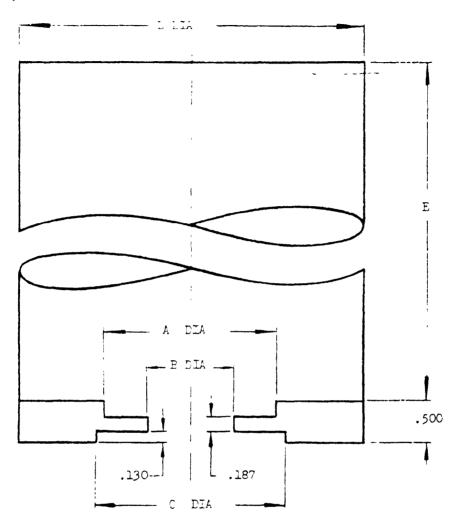
VALVE PART NO.	THREAD T	TIME TO DRAIN (SEC)
MS29528-1	7/16-20 UNF 3B	85
MS29528-2	9/16-18 UNF 3B	65
MS29528-3	3/4-16 UNF 3B	25

DIMENSIONS IN INCHES

TOLERANCES: 2-PLACE DECIMALS +.03 SURFACE TEXTURE: ASA B46.1 - 1962

Figure 2. Flow test container for MS29528 valves

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MS PART NO.	A	В	<u> </u>	D	E	TIME TO DRAIN (SEC)
1:529571-1	1.490	.875	1.525	4.00	6.00	30
1529571-2	1.900	1.187	1.837	1	1	75
1:529571-3	2.240	1.437	, 2.087	10.00	15.00	45
1529571	2.490	1.635	2.400	1		35

Figure 3. Flow test containers for MS29571 valves

TABLE I. Fuel resistance and extreme temperature test schedule

Test		Low Temperature			
Period 1/	Phase I, soak	Phase I, dry	Phase II,soak	Phase II, dry	Temperature
Component configuration	2/	Drained and blown dry, normal condition as would be expected under service conditions, ports open.		Drained and blown dry, normal condition as would be expected under normal service conditions, ports open.	Mounted as would be expected under normal service conditions.2
Test fluid	TT-S-735 type III.	None	TT-S-735 type III.	None	TT-S-735 type I.
Period dura- tion.	96 hours	24 hours	18 hours	30 hours	18 hours
Ambient and test fluid temperature.	158°+2° F or the normal operating temperature of the sys- tem in which the valve is used, which- ever is high- er.	Circulating air at 158°+ 2° F or the normal oper- ating temp- erature of the system in which the valve is used, which- ever is high er.	operating temperature of the system in which the valve is used, which ever is high-	Circulating air at 158°+2° F or the normal operating temperature of the sys- tem in which the valve is used, which- ever is high- er.	lower the fluid temperature to -67°±2° F, then maintain the fluid temperature at -67°±2° F for a minimum of 18 hours.
Operation or tests during period.	Actuate valve at least 5 complete cycles per day in a normal man- ner.	None	Actuate valve at least 5 complete cycles in a normal man- ner.	None	None
Operation or tests immed- iately after period.	Conduct leak- age test, using TT-S- 735 type III fluid.	(a) Actuate valve for 5 complete cy- cles. (b) Conduct leakage tests, using TT-S-735 type I fluid	Conduct leak- age test, using TT-S- 735 type III fluid.	(a) Actuate valve for 5 complete cycles. (b) Conduct leakage tests, using TT-S-735 type I fluid.	With temper- ature not higher than- 55° F, con- duct leak- age tests, using TT-S- 735 type I fluid.

^{1/} Each period shall follow immediately after the preceding one in the order noted.
2/ The component shall be maintained in such manner as to insure complete contact of all nonmetallic parts with the fluid as would be expected under normal service conditions.

TABLE II. Vibration test

Scanning cycle test	1	2	3
Axis of vibration	X	Y	2
Fluid pressure	60 psi	60 psi	60 psi
Scanning cycle time	15 min	15 min	15 min
Number of scanning cycles per test	2	2	2
Procedure	ducted on mutually pherein ref Zaxes; the ed as lyin of the valuable be unwith respefrequency cps with a amplitude 75 cps, an plied vibrant less to quency shad creased sufficients and the statements of the stat	on test shal the valve al erpendicular erred to as e X axis beig along cent ve. The free niformly incet to time the range from 1 mapplied do of 0.036 inced from there ation accelentan +10 g. It is similar that the ecomplished cycle time.	ong three axes X, Y, and ng defin- er line quency reased hrough a O to 500 uble h up to an ap- ration The fre- ry de- complete

4.6.5 Endurance.-

- 4.6.5.1 <u>Dry.-</u> The unit shall be dried thoroughly in an oven at 158° + F for four hours and then, in the dry condition, be subjected to 2,000 complete cycles of operation.
- 4.6.5.2 $\underline{\text{Wet.-}}$ The unit shall be moistened with fuel and subjected to 6,000 complete cycles of operation in order to pass fuel in the open position of each cycle.
- 4.6.5.3 <u>Recalibration.</u> Upon completion of the cycling operations, the valve shall be subjected to the calibration test (4.6.2). There shall be no adverse changes in performance as a result of the endurance test.

4.6.6 Contaminated fuel endurance .- Twenty gallons of fuel containing a quantity and type of contaminant conforming to table III, shall be fed at the average rate determined during tests under 4.6.2.1,1, through the valve. The valve shall be operated 8 cpm for 2,000 cycles. The fuel shall be agitated to keep the contaminant uniformly distributed in the circulating fuel. After this test, the valve shall be flushed out with clear fuel and drained and tested in accordance with 4.6.2.

Contaminant description	Particle size	Quantity
Prepared dust AC Spark Plug Co. Part No. 1543637 or equal Sharp silica sand Sharp silica sand	0-5 microns 12 ±2 percent 5-10 microns 12 ±3 percent 10-20 microns 14 ±3 percent 20-40 microns 23 ±3 percent 40-80 microns 30 ±3 percent 80-200 microns 9 ±3 percent 150-300 microns 300-420 microns	1.6 grams 0.2 gram 0.2 gram 0.2 gram

TABLE III. Contaminated fuel endurance test dust

- 4.6.6.1 Fibrous contaminant. The procedure of 4.6.6 shall be repeated except that:
 - (a.) The valve shall be operated 500 cycles.
 - (b) The contaminant shall consist of 0.01 gram of lint as collected by tumbling laundered cotton cloth in a tumbling machine (clothes drier).
- 4.6.7 Accelerated corrosion.— The valve closed and with open ports shall be immersed in a solution consisting of 24 percent by weight of sodium chloride in distilled water. After immersion, the solution shall be drained and the valve shall be neated in an oven to a temperature of 125° to 135° F for a period of not less than one hour. The immersion and heating cycle shall be repeated 50 times. The valve shall not be operated at any time during the immersion and heating cycles. Immediately after completing the immersion and heating cycles, the valve shall be washed out with warm water to remove salt accumulations, after which the valve shall be dried, wetted with fuel, and cycled once. '1' valve shall then be subjected to the calibration test (4.6.2). Corrosion of any part of the valve to a degree which affects performance shall be cause for rejection.
- 4.6.8 Water freezing.— Using the test setup used for the flow test the container shall be filled with water, the valve opened, and the water drained from the tank until approximately 1 inch of water remains. The valve shall be closed and the assembly placed in a test chamber for a period of 6 hours with the temperature maintained at 0° $\pm 10^{\circ}$ F. The valve shall then be removed from the test chamber, returned to normal temperature, and subjected to the functional test. Malfunction or damage as a result of this test shall be cause for rejection.

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- 4.6.9 Burst pressure .- With the valve in the closed position, it shall be subjected to a fuel pressure of 180 ±2 psi on the inlet port and the outlet open to atmosphere for a minimum period of 1 minute. There shall be no evidence of distortion or other damage to the valve. When the pressure is lowered to 60 psi, there shall be no evidence of external leakage from any portion of the valve.
- 4.6.10 <u>Disassembly and inspection</u>. The valve shall be disassembled and inspected. There shall be no evidence of major deterioration, corrosion, or undue wear.
- 4.6.11 Packaging, packing, and marking. Reparation for delivery shall be examined for conformance with section 5.

5. PREPARATIONS FOR DELIVERY

- 5.1 Reservation, packaging, and packing.- Reservation, packaging, and packing shall be in accordance with MIL-STD-794.
- 5.2 Marking of shipments. In addition to any special marking required by the contract or order, unit packages, intermediate packages, and shipping containers shall be marked in accordance with MIL-STD-129.

6. NOTES

- 6.1 intended use. The fuel drain valves covered by this specification are intended to drain fuel or water from low points in aircraft fuel systems. The valve discharge is intended to be vented to the atmosphere.
 - 6.2 Ordering data. Procurement documents should specify the following:
 - (a) Title, number, and date of this specification
 - (b) MS part number of valve required (see 3.3.1)
 - (c) Quantity
 - (d) Applicable levels of packaging and packing
- 6.3 <u>Qualification</u>. With respect to products requiring qualification, awards will be made only for such products as have, prior to the time set for opening of bids, been tested and approved for inclusion in the applicable Qualified Products List, whether or not such products have actually been so listed by that date. The attention of the suppliers is called to this requirement, and manufacturers are urged to arrange to have the products that they propose to offer to the Federal Government tested for Qualification in order that they may be eligible to be awarded contracts or orders for the products covered by this specification. The activity responsible for the Qualified Products List is Systems Engineering Group, Attn: SEJIF, Wright-Patterson Air Force Base, Ohio 45433, and information pertaining to qualification of products may be obtained from that activity.

6.4 <u>Definition</u>.-

6.4.1 <u>Cycle</u>.- A cycle is the operation of the valve from full closed to full open and return to full closed, or starting at full open to full closed and return to full open,

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Army - AV Navy - AS Air Force - 11

Reviewer activities:

Army - AV Navy - AS

Air Force - 11, 82

Preparing activity:
Air Force - 11

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