

INCH-POUND

MIL-PRF-25675C

26 NOVEMBER 1997

SUPERSEDING

(See 6.8)

PERFORMANCE SPECIFICATION  
VALVES, CHECK, MINIATURE, HYDRAULIC,  
AIRCRAFT AND MISSILE

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

## 1. SCOPE

1.1 Scope. This specification covers hydraulic, spring-loaded, normally closed aircraft and missile hydraulic system check valves with operating pressures up to 3,000 pounds per square inch (psi) and operating temperatures from -65° to 450°F.

1.2 Classification. There are two styles of check valve, flared and flareless, with seven sizes of each style designated by part number suffixes -4, -5, -6, -8, -10, -12, and -16. The flared and flareless check valves are shown in Figures 1 and 2, respectively. The check valve required should be identified in 6.2.

## 2. APPLICABLE DOCUMENTS

2.1 General. The documents listed in this section are cited 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 these lists, document users are cautioned that they must meet the requirements specified in the documents cited in sections 3 and 4 of this specification, whether or not they are listed.

### 2.2 Government documents.

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

## SPECIFICATIONS

### DEPARTMENT OF DEFENSE

MIL-H-5606	-	Hydraulic Fluid, Petroleum Base; Aircraft, Missile And Ordnance
MIL-H-83282	-	Hydraulic Fluid, Fire Resistant, Synthetic Hydrocarbon Base, Aircraft, Metric, NATO Code Number H-537

Beneficial comments (recommendations, additions, deletions) and any pertinent data that may be of use in improving this document should be addressed to: Oklahoma City Air Logistics Center/TICLA, 3001 Staff Drive, Suite 1AE1-101A, Tinker AFB, OK 73145-3036 by using the Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

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## STANDARD

## DEPARTMENT OF DEFENSE

MS33514 - Fitting End, Standard Dimensions for Flareless Tube Connection and Gasket Seal

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

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

## SOCIETY OF AUTOMOTIVE ENGINEERS (SAE)

SAE AS 4395 - Fitting Ends, Flared Tube Connection, Design Standard

(Application for copies should be addressed to 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, except for related associated specifications or specification sheets, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained. If there is a conflict between the contents of this specification and an associated specification or specification sheet, the associated specification or specification sheet will apply.

## 3. REQUIREMENTS

3.1 Qualification. The valve furnished under this specification shall be products that are authorized by the qualifying activity for listing on the applicable qualified products list before contract award (see 4.2. and 6.3).

3.2 Recycled, recovered, or environmentally preferable materials. Recycled, recovered, or environmentally preferable materials should be used to the maximum extent possible provided that the materials meet or exceed the operational and maintenance requirements, and promote economically advantageous life cycle cost.

3.3 Materials. All materials shall not produce toxic or deleterious fumes and shall be resistant to corrosion due to electrolytic decomposition, hydraulic fluids, salt fog, or any other conditions that may be encountered during operational use or storage.

3.4 Interface.

3.4.1 Dimensions. The weight and dimensions of the valve shall conform to Figure 1 and Figure 2.

3.4.2 Hydraulic fluid compatibility. The valve shall be compatible with hydraulic fluid conforming to MIL-H-5606 and MIL-H-83282 in a hydraulic system (see 6.4).

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3.4.3 Item identification. The valve shall be permanently and legibly marked with the following information:

- a. Manufacturer's name
- b. Manufacturer's CAGE code
- c. Manufacturer's part number (PN)
- d. National Stock Number (NSN)
- e. Date of manufacture

3.5 Environmental conditions. The valve shall operate under the following conditions:

- a. Temperature:  $-65^{\circ}$  to  $450^{\circ}\text{F}$ .
- b. Vibration: (1) a frequency between 20 and 90 Hz with a 0.05 double amplitude.  
(2) a frequency between 90 and 2,000 Hz with an acceleration of  $\pm 20g$ .

3.6 Performance.

3.6.1 Proof pressure. The valve shall withstand a proof pressure of 4,500 (+150, -0) psi at  $450^{\circ} \pm 5^{\circ}\text{F}$  in both the free-flow and reverse-flow directions.

3.6.2 Surge flow. The valve components shall withstand 25 flow cycles (see 6.5.4).

3.6.3 Leakage. When the valve is held in the horizontal or vertical position, the internal leakage rate of the valve shall not exceed the values specified in Table I with the pressure applied in the reverse flow direction.

TABLE I. Leakage

Pressure (psi)	Maximum leakage rate (drops per minute)
5	1
1,000 to 3,000	None

3.6.4 Checking time and cracking pressure. The checking time (see 6.5.1) of the valve shall not exceed 1.5 seconds. The cracking pressure (see 6.5.2) shall be between 2 and 8 psi.

3.6.5 Pressure drop. The pressure drop through the valve at rated flow shall not exceed 15 psi.

3.6.6 Endurance. The valve shall withstand 50,000 impulse cycles (see 6.5.5) at the rate of 30 to 100 cycles per minute (cpm) at a temperature of  $450^{\circ} \pm 10^{\circ}\text{F}$ .

3.6.7 Burst pressure. The valve shall withstand a maximum pressure of 7,500 psi.

3.6.8 Flexural strength. The valve shall withstand flexing (see 6.5.3) at  $450^{\circ} \pm 10^{\circ}\text{F}$ .

3.6.9 Repeated assembly. The valve shall be capable of repeated assembly and disassembly without affecting the performance or life of the valve.

3.6.10 Workmanship. The valve shall be constructed in accordance with commonly accepted industrial workmanship standards.

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## 4. VERIFICATION

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

- a. Qualification (see 4.2).
- b. Conformance inspection (see 4.3).

4.2 Qualification inspection. Qualification inspections shall be performed on two valves. One valve shall be subjected to tests indicated in 4.2.1 and the other valve to tests indicated in 4.2.2.

4.2.1 Minimum dimension test sample. One test sample shall be assembled of parts whose dimensions are at the minimum of the tolerance range. This test sample shall be subjected to the following tests in the following order:

- a. Examination of product (4.6.1).
- b. Leakage (4.6.4).
- c. Proof pressure (4.6.2).
- d. High temperature (4.6.11).
- e. Repeated assembly (4.6.16).
- f. Salt-fog (4.6.17).
- g. Final examination (4.6.18).

4.2.2 Maximum dimension test sample. The second test sample shall be assembled of parts whose dimensions are at the maximum of the tolerance range. This test sample shall be subjected to the following tests in the following order:

- a. Examination of product (4.6.1).
- b. Proof pressure (4.6.2).
- c. Surge flow (4.6.3).
- d. Repeated assembly (4.6.16).
- e. Vertical leakage (4.6.5).
- f. Checking time (4.6.6).
- g. Cracking pressure (4.6.7).
- h. Pressure drop (4.6.8).
- i. Low temperature (4.6.9).
- j. Intermediate temperature (4.6.10).
- k. High temperature (4.6.11).
- l. Endurance (4.6.12).
- m. Vibration (4.6.14).
- n. Flexural strength (4.6.15).
- o. Burst pressure (4.6.13).
- p. Final examination (4.6.18).

4.3 Conformance inspection. Each valve shall be subjected to the tests below:

- a. Examination of product (4.6.1).
- b. Proof pressure (4.6.2).
- c. Vertical leakage (4.6.5).
- d. Cracking pressure (4.6.7).
- e. Final examination (4.6.18).

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4.4 Inspection conditions.

4.4.1 Test fluid. The test fluid used during testing shall conform to MIL-H-5606 or MIL-H-83282. The test fluid shall be filtered continuously through a 15-micron absolute filter.

4.4.2 Temperature. Unless otherwise specified, the tests shall be performed at an ambient temperature of 70° to 90°F and a test fluid temperature of 70° to 110°F.

4.4.3 Valve axis position. Unless otherwise specified, tests may be made with the valve axis in either a horizontal or vertical position. For the vertical position the inlet port shall be positioned so that the force of gravity shall act with the valve checking action (i.e., direction of flow is up).

4.4.4 Immersion. Prior to performing any tests, except examination of product, the valve shall be immersed in 450° ± 5°F test fluid for 72 hours. All internal parts shall be in contact with the fluid during this period. After immersion, the valve shall remain in ambient temperature test fluid until ready for tests. The valve shall not be exposed to air for more than 24 hours between tests.

4.5 Requirements cross-reference matrix. Table II provides a cross-reference matrix of the section 3 requirements tested or verified in the paragraphs below.

TABLE II. Requirements cross-reference matrix

Requirement	Verification
3.1	4.2
3.3	4.6.1, 4.6.17, 4.6.18
3.4.1	4.6.1
3.4.2	4.6.1, 4.6.18
3.4.3	4.6.1
3.5	4.6.9, 4.6.10, 4.6.11, 4.6.14
3.6.1	4.6.2
3.6.2	4.6.3
3.6.3	4.6.4, 4.6.5
3.6.4	4.6.6, 4.6.7
3.6.5	4.6.8
3.6.6	4.6.12
3.6.7	4.6.13
3.6.8	4.6.15
3.6.9	4.6.16
3.6.10	4.6.1

4.6 Tests.

4.6.1 Examination of product. The valve shall be examined to determine compliance with materials, dimensions, markings, and weight.

4.6.2 Proof pressure. After the valve has reached 450° ± 5°F, the valve shall have flow applied in both the free-flow and reverse-flow directions at least 2 successive times in each direction. During each flow, a proof pressure of 4,500 (+150, -0) psi shall be applied and held for 2 minutes. For the reverse-flow direction, the poppet shall be unseated between applications of the proof pressure. There shall be no evidence of damage or deformation.

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4.6.3 Surge flow. The valve shall be disassembled and inspected for cracks, bulges, gouges, and other deformations and then reassembled. Pressure shall be applied to the valve and the valve pressure stabilized at 3,000 psi. Twenty-five flow cycles shall be applied to the valve. After completion of the 25 flow cycles, the valve again shall be disassembled. Any evidence of damage or deformation is a cause for rejection.

4.6.4 Leakage. The valve shall be held in both the horizontal and vertical positions and a reverse-flow pressure shall be applied to the valve for 30 minutes in each position. The leakage measurement period shall begin 2 minutes after pressure is applied, and the internal leakage shall not exceed the amounts indicated in Table I. Any evidence of external leakage throughout the pressure range, except a slight wetting at the seals insufficient to form a drop, is a cause for rejection.

4.6.5 Vertical leakage. The valve shall be held in the vertical position. Each pressure specified in Table I shall be applied in the reverse-flow direction for 5 minutes. The valve poppet shall be unseated between each pressure application. In each case, the leakage measurement period shall consist of the last 3 minutes of the 5-minute period. The rate of internal leakage shall not exceed the amounts specified in Table I. Any evidence of external leakage throughout the pressure range, other than a slight wetting at the seals insufficient to form a drop, is a cause for rejection.

4.6.6 Checking time. The valve shall be held in the vertical position and the valve poppet shall be mechanically actuated to its full open position against a test fluid static head of 5 psi. The valve then shall be allowed to check before the test fluid static head decreases to 1 psi. The checking time shall not exceed 1.5 seconds.

4.6.7 Cracking pressure. Pressure shall be applied gradually at the valve inlet in the free-flow direction beginning at 0 psi. Cracking pressure shall be between 2 and 8 psi.

4.6.8 Pressure drop. The valve shall be installed at a distance of 4-tube diameters downstream from a piezometer pressure pickup and a distance of 15-tube diameters upstream from the return pressure pickup. Pressure drop through the valve shall be measured at the rated flow. The temperature of the test fluid shall be maintained at  $100^{\circ} \pm 5^{\circ}\text{F}$ . The pressure drop through the valve shall not exceed 15 psi.

4.6.9 Low temperature. The valve shall be connected to a test fluid static head of 1 to 3 feet in the reverse-flow direction. If the valve contains nonmetallic parts other than static seals, the valve shall be maintained at a temperature not warmer than  $-65^{\circ}\text{F}$  for 72 hours. If all parts of the valve except static seals are metallic, this period shall be reduced to 24 hours. After this period, the poppet shall be actuated mechanically at least twice. At the end of this test, the valve shall be subjected to tests specified in 4.6.5 through 4.6.8.

4.6.10 Intermediate temperature. The valve shall be actuated by reverse-flow pressure at increments of  $40^{\circ}\text{F}$  to demonstrate that the valve operates satisfactorily across the test fluid temperature range of  $-65^{\circ}\text{F}$  to  $450^{\circ}\text{F}$ .

4.6.11 High temperature. With the temperature of the valve maintained at  $450^{\circ} \pm 10^{\circ}\text{F}$ , a test fluid static head of 1 to 3 feet on the valve, and the valve in the reverse-flow direction, the poppet shall be actuated mechanically at least twice. At the end of this test, the valve shall be subjected to tests specified in 4.6.5 through 4.6.8.

4.6.12 Endurance. While maintaining temperature of the test fluid at  $450^{\circ} \pm 10^{\circ}\text{F}$ , the valve shall be subjected to 50,000 impulse cycles at the rate of 30 to 100 cpm. During the 50,000 cycles, the peak pressure during pressure application in each cycle shall be  $4,500 \pm 150$  psi. Upon completion of the cycling, tests in 4.6.4, 4.6.6, and 4.6.7 shall be conducted. The temperature of the test fluid and valve shall then be lowered to  $-65^{\circ}\text{F}$  and the valve soaked for 5 hours. The valve again shall be subjected to tests in 4.6.4, 4.6.6, and 4.6.7.

4.6.13 Burst pressure. With the outlet port plugged and temperature of the test fluid at  $450^{\circ} \pm 10^{\circ}\text{F}$ , pressure shall be applied in the free-flowing direction at a maximum rate of 25,000 psi per minute until 7,500 psi is reached. The valve shall withstand 2 minutes at 7,500 psi. The valve shall neither rupture nor leak externally.

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4.6.14 Vibration. The valve shall be attached to a fixture capable of transmitting vibration. With the temperature of the test fluid at  $95^{\circ} \pm 15^{\circ}\text{F}$ , the valve shall be flow-cycled at 3,000 psi and the rated flow. While the valve is being cycled in this manner, it shall be vibrated as described in 4.6.14.1 and 4.6.14.2. All vibration measurements shall be taken at the valve. Following the vibration test, the valve shall be subjected to the test indicated in 4.6.4. This procedure shall be repeated for all three axes.

4.6.14.1 Resonance. Resonance shall be surveyed for 30 minutes, while the frequency of vibration is varied from 5 to 2,000 Hz, with one pass consuming 10 to 15 minutes (see Table III). This step shall be performed three times for each axis.

TABLE III. Vibration data

Frequency (Hz)	Displacement in double amplitude (inch) and Acceleration (g), if applicable
5-10	0.02
10-20	0.02 to 0.05 at $\pm 1g$
20-90	0.05
90-2,000	0.050 to 0.0001 at $\pm 20g$

4.6.14.2 Cycling. The valve shall be vibrated at resonant frequencies found in 4.6.14.1 and at the levels described in Table III for 100 minutes. After 50 minutes, the frequency shall be increased to 110% of the resonant frequency and flow-cycling shall be interrupted with pressure applied in the direction of checked flow (at the valve outlet). The valve then shall be tested as specified in 4.6.5. The frequency then shall be reduced to 90% of the resonant frequency with the flow-cycling interrupted and pressure applied in the direction of checked flow (at the valve outlet). Without changing the valve position, the valve again shall be tested as specified in 4.6.5. Flow cycling shall be resumed, resonant frequency returned, and the 100-minute vibration cycle completed.

4.6.15 Flexural strength. The valve shall be installed in a test setup similar to that shown in Figure 3. The test setup shall be capable of vibration with a pressure of 3,000 psi applied to the inlet and outlet side of the valve. The valve shall be vibrated at a frequency between 30 and 500 Hz for 10,000,000 cycles. The total stress level, which shall consist of the tensile bending stress plus the axial tension due to the working pressure, shall be 20,000 (+0, -10%) psi. This test shall be conducted with the hydraulic fluid temperature at  $450^{\circ} \pm 10^{\circ}\text{F}$ . Strain gages shall be placed  $180^{\circ}$  apart, on the periphery of the mounting tubes. Any mechanical failure of parts or leakage due to this test shall be cause for rejection. The test in 4.6.3 shall be performed at the conclusion of this test.

The length, L, shall be determined using the following equation:

$$L = \sqrt{\frac{12DEC}{S}} \quad (1)$$

where

L = total length (inches)

D = displacement due to vibration at the center of the check valve (inches)

E = modulus of elasticity (use 30,000,000 psi for corrosion-resistant steel)

C = one half of the tube outside diameter (inches)

S = stress in the tube at the strain gage (use 20,000 psi (+0, -10%) for corrosion-resistant steel)

4.6.16 Repeated assembly. A tube, sleeve, and nut (flared or flareless) shall be assembled to each end of the valve and disassembled eight successive times using the torque specified in Table IV. The valve then shall be subjected to the test indicated in 4.6.2.

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TABLE IV. Torque (inch-pounds)

Part number suffixes	Flareless nuts	Flared nuts
-4	125 ± 10	125 ± 10
-5	180 ± 10	180 ± 10
-6	230 ± 15	230 ± 15
-8	450 ± 20	450 ± 20
-10	650 ± 30	650 ± 30
-12	900 ± 45	900 ± 45
-16	1,200 ± 60	1,200 ± 60

4.6.17 Salt fog. The valve shall be subjected to an industrially acceptable salt fog test. Any evidence of corrosion or corrosion damage shall constitute a cause for rejection.

4.6.18 Final examination. After completion of the tests enumerated herein, the valve shall be examined for corrosion, deterioration, deformation, and mechanical failure.

## 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 materiel 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 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 or Defense Agency 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 may be helpful, but is not mandatory.)

6.1 Intended use. The check valves covered by this specification are intended for use in controlling the flow of hydraulic fluid in Type III aircraft and missile hydraulic systems, where the operating pressure does not exceed 3,000 psi and the temperature range is from -65° to 450°F.

6.2 Acquisition requirements. Acquisition documents must specify the following:

- a. Title, number, and date of this specification.
- b. Item identification.
- c. Size and style (see 1.2).
- d. Issue of the DoDISS to be cited in the solicitation, and if required, the specific issue of individual documents referenced (see 2.1).
- e. When first article is required (see 3.1).
- f. Data required.
- g. Packaging requirements (see 5.1).



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6.3 Qualification. The attention of the contractors is called to the requirements with respect to products requiring qualification. Awards will be made only for products which are, at the time of award of contract, qualified for inclusion in the Qualified Products List (QPL No. 25675) whether or not such products have actually been listed by that date. In order that the manufacturers may be eligible to be awarded contracts or purchase orders for the products covered by this specification, they are urged to arrange to have the products that they propose to offer to the Federal Government tested for qualification. Information pertaining to qualification of products may be obtained from Oklahoma City Air Logistics Center/TICLA, 3001 Staff Drive, Suite 1AE1-101A, Tinker AFB, Oklahoma 73145-3036.

6.4 Hydraulic Systems. MIL-H-8891, "Hydraulic Systems, Manned Flight Vehicles, Type III Design, Installation And Data Requirements For, General Specification For" is used for guidance on hydraulic systems.

6.5 Definitions.

6.5.1 Checking time. The time between the release of the poppet and the cessation of fluid flow.

6.5.2 Cracking pressure. The pressure at which the poppet is unseated allowing a flow of 2 drops per minute through the valve in the free flow direction.

6.5.3 Flexing. The back and forth motion induced by vibration.

6.5.4 Flow cycle. A flow cycle consists of a 5-second surge, an increase in pressure up to the maximum rated pressure, in free-flow and a 5-second surge in reverse flow.

6.5.5 Impulse cycle. Consists of rated flow through the valve followed by a reversal of the direction of flow and the application of maximum rated pressure.

6.6 Part or identifying number (PIN). The PIN to be used for valves acquired to this specification are created as follows:

M	25675-	X	X
Prefix for Military	Specification	Type	Size
Specification	Number	(blank) Flareless	See Figures 1 & 2
		F Flared	

6.7 Supersession information. This standard supersedes the following documents:

MIL-V-25675B dated 13 May 1968.

MS24423C dated 15 July 1988.

MS24593D dated 14 Feb 1986.

6.8 Changes from previous issues. Marginal notations are not used in the revision to identify changes with respect to the previous issue due to the extent of the changes.

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Custodians:

Army - AV

Navy - AS

Air Force - 99

Reviewer Activities:

Army - MI

DLA-CC

Preparing Activity:

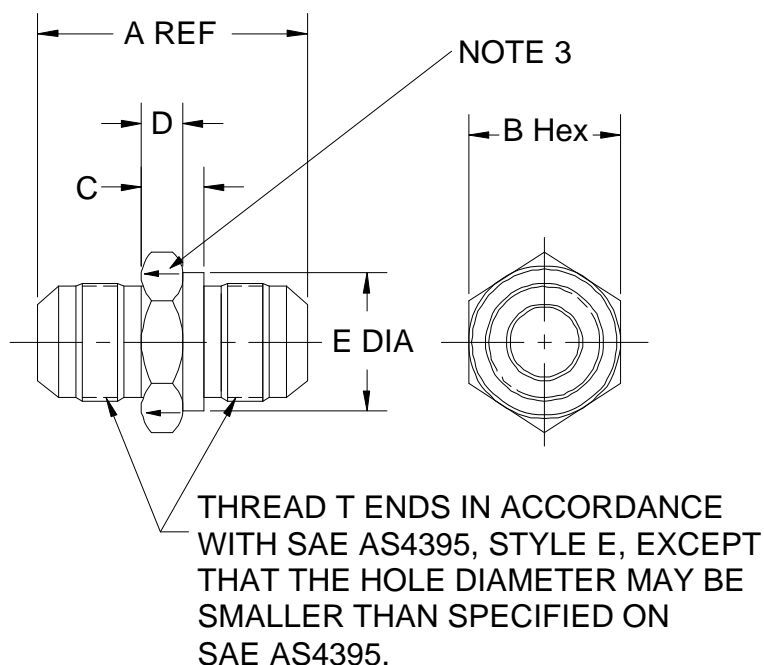
Air Force - 71

Agent Activity:

Air Force - 99

Project Number 4820-0751

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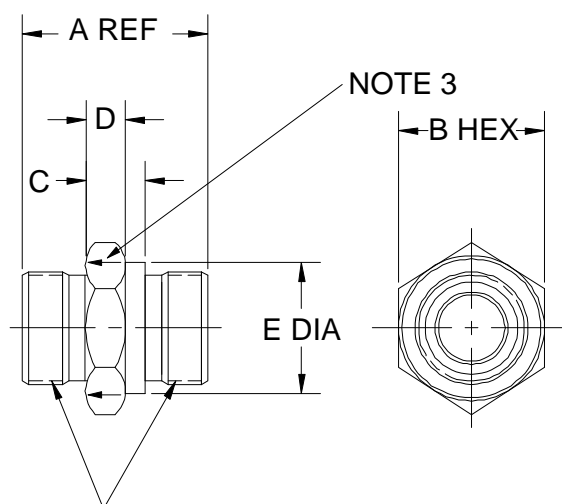
- NOTES: 1. DIMENSIONS IN INCHES
2. UNLESS OTHERWISE SPECIFIED,  
TOLERANCES: DECIMALS  $\pm 0.015$ .  
WEIGHT  $\pm 10\%$ .
3. DIRECTION OF FLOW ARROW SHALL  
BE ON ALTERNATING HEX FLATS.

Dash No.	Tube outer diameter	Thread T	A	B Hex		C	D	E DIA	Rated Flow gpm (Note)	Weight (lb)
-4	0.250	0.437-20 UNF-3A	1.538	0.688	+0.003 -0.004	0.438	0.219	0.678	1.2	0.070
-5	0.312	0.500-20 UNF-3A	1.538	0.750		0.438	0.219	0.740	2.3	0.078
-6	0.375	0.562-18 UNF-3A	1.581	0.813		0.469	0.250	0.803	3.5	0.104
-8	0.500	0.750-16 UNF-3A	1.814	1.000		0.500	0.281	0.990	6.0	0.183
-10	0.625	0.875-14 UNF-3A	2.047	1.125		0.531	0.312	1.115	10.5	0.234
-12	0.750	1.062-12 UN-3A	2.290	1.375	$\pm 0.016$	0.562	0.343	1.365	16.0	0.352
-16	1.000	1.312-12 UN-3A	2.884	1.625		1.062	0.375	1.615	29.0	0.580

Note : Based on flow at 0°F.

FIGURE 1. Flared tube check valve

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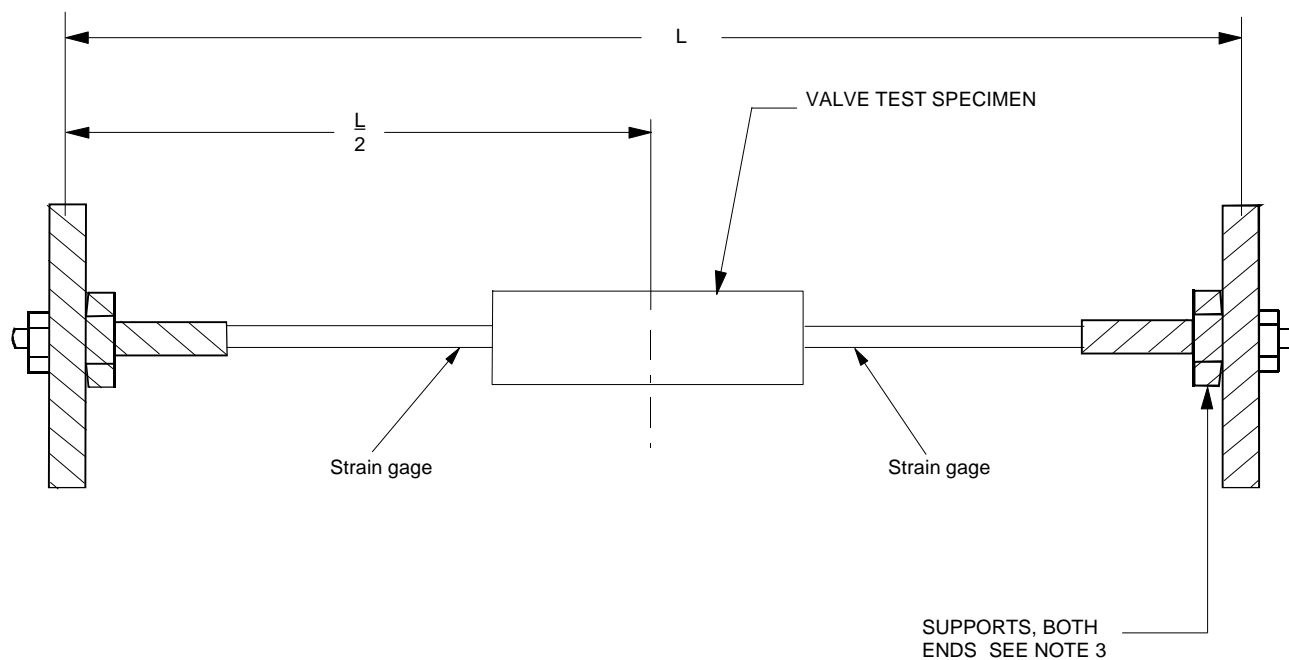
THREAD T ENDS IN  
ACCORDANCE WITH MS33514,  
STYLE E, EXCEPT THAT THE  
HOLE DIAMETER MAY BE  
SMALLER THAN SPECIFIED  
ON MS33514.

- NOTES: 1. DIMENSIONS IN INCHES.  
2. UNLESS OTHERWISE SPECIFIED,  
TOLERANCES: DECIMALS  $\pm 0.015$ .  
WEIGHT  $\pm 10\%$ .  
3. DIRECTION OF FLOW ARROWS SHALL  
BE ON ALTERNATING HEX FLATS.

Dash No.	Tube outer diameter	Thread T	A	B Hex		C	D	E DIA	Rated Flow gpm (Note)	Weight (lb)
-4	0.250	0.437-20 UNF-3A	1.344	0.688	+0.003 -0.004	0.438	0.219	0.678	1.2	0.062
-5	0.312	0.500-20 UNF-3A	1.344	0.750		0.438	0.219	0.740	2.3	0.069
-6	0.375	0.562-18 UNF-3A	1.407	0.813		0.469	0.250	0.803	3.5	0.092
-8	0.500	0.750-16 UNF-3A	1.624	1.000		0.500	0.281	0.990	6.0	0.162
-10	0.625	0.875-14 UNF-3A	1.781	1.125		0.531	0.312	1.115	10.5	0.207
-12	0.750	1.062-12 UN-3A	1.938	1.375	±0.016	0.562	0.343	1.365	16.0	0.312
-16	1.000	1.312-12 UN-3A	2.438	1.625		1.060	0.375	1.615	29.0	0.512
Note : Based on flow at 0°F.										

FIGURE 2. Flareless tube check valve

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- NOTE: 1. DIMENSIONS ARE IN INCHES.  
 2. TOLERANCES:  $\pm 1\%$   
 3. SUPPORTS SHALL PROVIDE FREE SWIVELING ACTION.

FIGURE 3. Flexural strength test setup

## 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-25675C

#### 2. DOCUMENT DATE (YYMMDD)

960517

#### 3. DOCUMENT TITLE

VALVES, CHECK, MINIATURE, HYDRAULIC, AIRCRAFT AND MISSILE

#### 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)*

- (1) Commercial  
(2) DSN *(if applicable)*

##### 7. DATE SUBMITTED (YYMMDD)

#### 8. PREPARING ACTIVITY

##### a. NAME

Harlena Edwards

##### b. TELEPHONE *(Include Area Code)*

(1) Commercial (2) DSN  
(405) 736-5960 336-5960

##### c. ADDRESS *(Include Zip Code)*

OC-ALC/TICLA  
3001 Staff Drive, Suite 1AE1-101A  
Tinker AFB, OK 73145-3036

##### IF YOU DO NOT RECEIVE A REPLY WITHIN 45 DAYS, CONTACT:

Defense Quality and Standardization Office  
5203 Leesburg Pike, Suite 1403, Falls Church, VA 22041-3466  
Telephone (703) 756-2340/2343 DSN 289-2340/2343