

MIL-V-81940A  
31 January 1978  
SUPERSEDING  
MIL-V-81940(AS)  
1 June 1973

## MILITARY SPECIFICATION

### VALVE, SAMPLING AND BLEED, HYDRAULIC, TYPE II SYSTEMS

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

#### 1. SCOPE

1.1 Scope. This specification covers a hydraulic sampling and bleed valve and is suitable for use as specified in 6.1, and the applicable specification sheet.

1.2 Classification. Hydraulic sampling and bleed valves shall be of the following type and class:

Type II (MIL-H-5440) - For  $-65^{\circ}\text{F}$  to  $+275^{\circ}\text{F}$  fluid temperature range.  
Class 3000 (MIL-H-5440) For operating pressures up to and including  
3,000 pounds per square inch (psi).

#### 2. APPLICABLE DOCUMENTS

- \* 2.1 Issues of documents. 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

##### Federal

PPP-B-566	Boxes, Folding, Paperboard
PPP-B-636	Box, Shipping, Fiberboard
PPP-B-676	Box, Setup

- \* Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: Engineering Specifications and Standards Department (Code 93) Naval Air Engineering Center, Lakehurst, N.J. 08733, by using the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

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## SPECIFICATIONS (Continued)

Military

MIL-P-116	Preservation, Methods of
MIL-B-117	Bag, Sleeve and Tubing, Interior Packaging
MIL-H-5440	Hydraulic Systems, Aircraft, Types I and II, Design, Installation, and Data Requirements For
MIL-C-5501	Cap and Plug, Protective, Dust and Moisture Seal
MIL-H-5606	Hydraulic Fluid, Petroleum Base, Aircraft, Missile and Ordnance
MIL-H-6083	Hydraulic Fluid, Petroleum Base, for Preservation and Operation
MIL-H-8775	Hydraulic System Components, Aircraft and Missiles, General Specification For
MIL-H-25475	Hydraulic System, Missile, Design, Installation, Tests and Data Requirements, General Requirements For
MIL-H-46170	Hydraulic Fluid, Rust Inhibited, Fire-Resistant, Synthetic Hydrocarbon Base
MIL-F-81836	Filter and Disposable Element, Fluid Pressure, Hydraulic, 3 Micron Absolute
MIL-H-83282	Hydraulic Fluid, Fire Resistant Synthetic Hydrocarbon Base, Aircraft
MIL-V-81940/1	Valve, Sampling and Bleed, Hydraulic, Type II Systems

## STANDARDS

Military

MIL-STD-105	Sampling Procedures and Tables for Inspection by Attributes
MIL-STD-129	Marking for Shipment and Storage

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## STANDARDS (Continued)

Military (Continued)

MIL-STD-130	Identification Marking of US Military Property
MIL-STD-794	Parts and Equipment, Procedures for Packaging and Packing of
MIL-STD-810	Environmental Test Methods
MS21344	Fitting, Installation of Flared Tube, Straight Threaded Connectors, Design Standard for

(When requesting applicable documents, refer to both title and number. Copies of unclassified documents may be obtained from the Commanding Officer, Naval Publications and Forms Center, 5801 Tabor Avenue, Philadelphia, Pennsylvania 19120. Requests for copies of classified documents should be addressed to the Naval Publications and Forms Center, via the cognizant Government representative.)

- \* 2.2 Other publications. The following documents form a part of this specification to the extent specified herein. Unless otherwise indicated, the issue in effect on date of invitation for bids or request for proposal shall apply.

Society of Automotive Engineers

ARP 598	Procedure for the Determination of Particulate Contamination of Hydraulic Fluids by the Particle Count Method
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(Application for copies should be addressed to the Society of Automotive Engineers, 400 Commonwealth Drive, Warrendale, PA 15096.)

National Aerospace Standards Association, Inc.

NAS 1638	Cleanliness Requirements of Parts Used in Hydraulic Systems
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(Application for copies should be addressed to the National Aerospace Standards Association, Inc., 1321 Fourteenth St., N.W., Washington, D.C. 20005.)

National Fluid Power Association

NFPA T2.9.6	Method for Calibration of Liquid Automatic Particle Counters using "AC" Fine Test Dust.
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(Application for copies should be addressed to the National Fluid Power Association, P.O. Box 49, Thrensville, Wisconsin 53092.)

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### 3. REQUIREMENTS

3.1 Specification sheet. The individual part requirement shall be as specified herein and in accordance with the applicable specification sheet. In the event of conflict between the requirements of this specification and the specification sheet M18940/1A, the requirements of the specification sheet shall govern.

3.2 Qualification. The valve furnished under this specification shall be a product which is qualified for listing on the applicable Qualified Products List at the time set for opening of bids (see 4.4 and 6.3). In addition, the retention of the qualification for the valve on the applicable Qualified Products List shall be dependent on periodic verification of continued compliance with the requirements of this specification (see 4.3(a)(1)).

3.3 General specification. The requirements of MIL-H-8775 apply as requirements of this specification with the exception and additions specified herein. When the two specifications conflict, this specification shall govern.

#### 3.4 Materials.

3.4.1 Compatibility. The valve shall be constructed of materials that will not adversely affect or be affected by hydraulic fluid conforming to MIL-H-5606, MIL-H-6083, MIL-H-83282 and the test fluids included herein.

3.4.2 Fungi nutrients. Materials which are not nutrients for fungi shall be used wherever possible. Where fungus-nutrient materials must be used, they shall be treated with a fungicidal agent acceptable to the procuring activity.

#### 3.5 Design and construction.

3.5.1 Sampling and bleed valves, for hydraulic systems conforming to MIL-H-5440 and MIL-H-25475, shall be designed and constructed as specified herein and in the applicable specification sheet. The valve shall be capable of withstanding 2,000 hours of operation at 275°F fluid and ambient temperature. The manufacturer shall verify compliance with this requirement by analysis.

\* 3.5.2 The valve shall be designed to withstand all the structural loads imposed by the functional test requirements of this specification. In addition, the valve shall be of such strength and rigidity as to withstand the wrench loads required for making tube connections in accordance with MS21344.

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3.5.3 The internal configuration of the valve shall be such that the minimum restriction in the flow path shall be 500 microns. The manufacturer shall verify compliance with this requirement by providing adequate detail drawings.

3.6 Performance. The valve shall perform satisfactorily when subjected to the tests specified under the applicable subparagraphs of 4.7 as specified in 4.4.2.

3.7 Identification of product.

- \* 3.7.1 Markings. Each valve shall be clearly and permanently identified by steel stamping or by a permanently attached nameplate conforming to MIL-STD-130. The following information shall be provided.

VALVE, SAMPLING AND BLEED

M81940/ (Insert slash number of specification sheet and designation for fitting end.)

Mfr. P/N

Mfr. S/N

Mfr. name

3.8 Part numbering of interchangeable parts. The manufacturer's part number and drawing number shall be the same.

3.9 Workmanship. All details of workmanship shall be of a sufficiently high grade to insure proper operation.

#### 4. QUALITY ASSURANCE PROVISIONS

4.1 General. The quality assurance provisions shall be in accordance with MIL-H-8775 and as specified herein.

- \* 4.2 Responsibility for inspection. Unless otherwise specified in the contract, the contractor is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified in the contract, the contractor may use his own or any other facilities suitable for the performance of the inspection requirements specified herein, unless disapproved by the Government. The Government reserves the right to perform any of the inspections set forth in the specification where such inspections are deemed necessary to assure supplies and services conform to prescribed requirements.

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- \* 4.3 Classification of tests. The inspection and testing of valves shall be classified as follows:

(a) Qualification tests (4.4)

(1) Retention of qualification. Retention of qualification consists of a periodic verification to determine compliance of the qualified product with the requirements of this specification (see 3.2 and 4.4.3.)

(b) Quality conformance inspection (4.5)

4.4 Qualification tests.

4.4.1 Valve.

4.4.1.1 Samples for qualification tests shall consist of two specimens of each valve upon which qualification is desired.

4.4.1.2 The specimens shall be assembled of parts which conform to manufacturer's drawings.

4.4.1.3 The manufacturer shall provide calculations showing that adequate clearance of moving parts is provided at  $-65^{\circ}$  and  $+275^{\circ}\text{F}$ , using the most adverse dimensions. The room temperature reference point shall be  $70^{\circ}\text{F}$ .

4.4.2 Tests. The qualification tests shall consist of the tests specified under 4.7, conducted on the applicable specimens, in the order specified in Table I.

4.4.3 Retention. The retention of qualification shall consist of periodic verification to determine compliance of the qualified valve with the requirements of this specification. Verification shall be conducted at intervals not exceeding 2 years.

4.5 Quality conformance inspection. Quality conformance inspection shall consist of the following:

(a) Individual inspection (4.5.1)

(b) Sampling tests (4.5.2)

4.5.1 Individual inspection. The individual inspection, specified in Table II, shall be conducted on each valve in that order. Any valve containing a defect shall be rejected.

- \* 4.5.2 Sampling tests. A sample shall be selected from each inspection lot (see 4.5.3) in accordance with MIL-STD-105 using special inspection level S-1 with no rejects allowed. The sample valve shall be unpacked and the sampling tests, specified in Table II, shall be conducted on each valve in that order.

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TABLE I. Qualification Tests

Tests	Reference
Valve cleanliness	4.7.1.1
Valve sampling efficiency	4.7.1.2
Valve sampling efficiency (dirty system)	4.7.1.3
Proof pressure	4.7.2
Leakage	4.7.3
Leakage (capped valve)	4.7.4
Valve operation	4.7.5
Extreme temperature	4.7.6
Impulse	4.7.7
Vibration	4.7.8
Burst pressure	4.7.9

TABLE II. Quality Conformance Tests

Individual test	Reference
Examination of product Proof pressure at room temperature	(See MIL-H-8775) 4.7.2
Sampling tests	Reference
Valve cleanliness	4.7.1.1
Leakage	4.7.3

4.5.3 Inspection lot. For purposes of quality conformance inspection, a lot shall be defined as all units of product manufactured under essentially the same conditions and offered for acceptance at one time.

4.5.4 Report of failure of sampling test. When a valve fails to pass a sampling test, the entire lot represented shall be rejected. All failures of the tested units shall be reported immediately by telephone or message. Full particulars concerning previous similar failures, the current failures and action taken to correct the defects shall be submitted to the procuring agency in writing. The lot represented by the unsatisfactory sample shall not be resubmitted until approval of resubmission has been issued by the procuring agency.

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#### 4.6 Test conditions.

- \* 4.6.1 Test fluid. Unless otherwise specified, the hydraulic fluid used for all tests shall conform to MIL-H-5606 (with no free water). For quality conformance tests, hydraulic fluid conforming to MIL-H-6083 or MIL-H-46170 may be used.
- \* 4.6.1.1 Test fluid cleanliness. For quality conformance tests and critical qualification tests the test fluid shall be precleaned to a cleanliness level equal to Class 1 of NAS 1638.
- \* 4.6.1.2 Test fluid filtration. Unless otherwise specified, the test fluid shall be continuously filtered through a 3-micron absolute filter conforming to MIL-F-81836 or a filter with equivalent efficiency during testing.

4.6.1.3 Test fluid temperature. Unless otherwise specified, the actual temperature of the test fluid shall be  $100^{\circ} \pm 10^{\circ}\text{F}$ .

4.6.2 Temperature. Unless otherwise specified, the tests shall be conducted at a room temperature of  $70^{\circ}$  to  $90^{\circ}\text{F}$ , measured within 12 inches of the test sample.

#### 4.7 Test methods.

##### 4.7.1 Valve characteristics.

4.7.1.1 Valve cleanliness. The test fluid in the Figure 1 system shall be precleaned in accordance with paragraph 4.6.1.1. The valve shall be removed from its packaging and immediately installed in the Figure 1 system. Flow shall be adjusted to 5 gpm through the system with 400 psi maintained on the valve. The valve shall be uncapped, actuated and 200 ml flushed through the valve sampling port. With the valve kept in an open position, 100 ml of fluid shall be collected in a precleaned bottle. The bottle shall be removed from the fluid stream prior to shutting the valve. The fluid shall be analyzed in accordance with SAE ARP 598 or with an automatic particle counter that has been calibrated using National Fluid Power Association Standard T2.9.6. The amount of contaminant shall not exceed Class 1 of NAS 1638.

4.7.1.2 Valve sampling efficiency. The clean-up filter in the Figure 1 system shall be bypassed. Standardized fine air cleaner (A-C) test dust shall be added to the system until a contamination level of between Class 6 and 8 of NAS 1638 is obtained. The fluid sample for the above shall be drawn from the open port shown in Figure 1. Flow shall be adjusted to 5 gpm with 400 psi maintained on the valve. The valve shall be uncapped, actuated and 200 ml flushed through the valve sampling port. With the valve kept in an open position 100 ml of fluid shall be collected in a precleaned bottle. The bottle shall be removed from the



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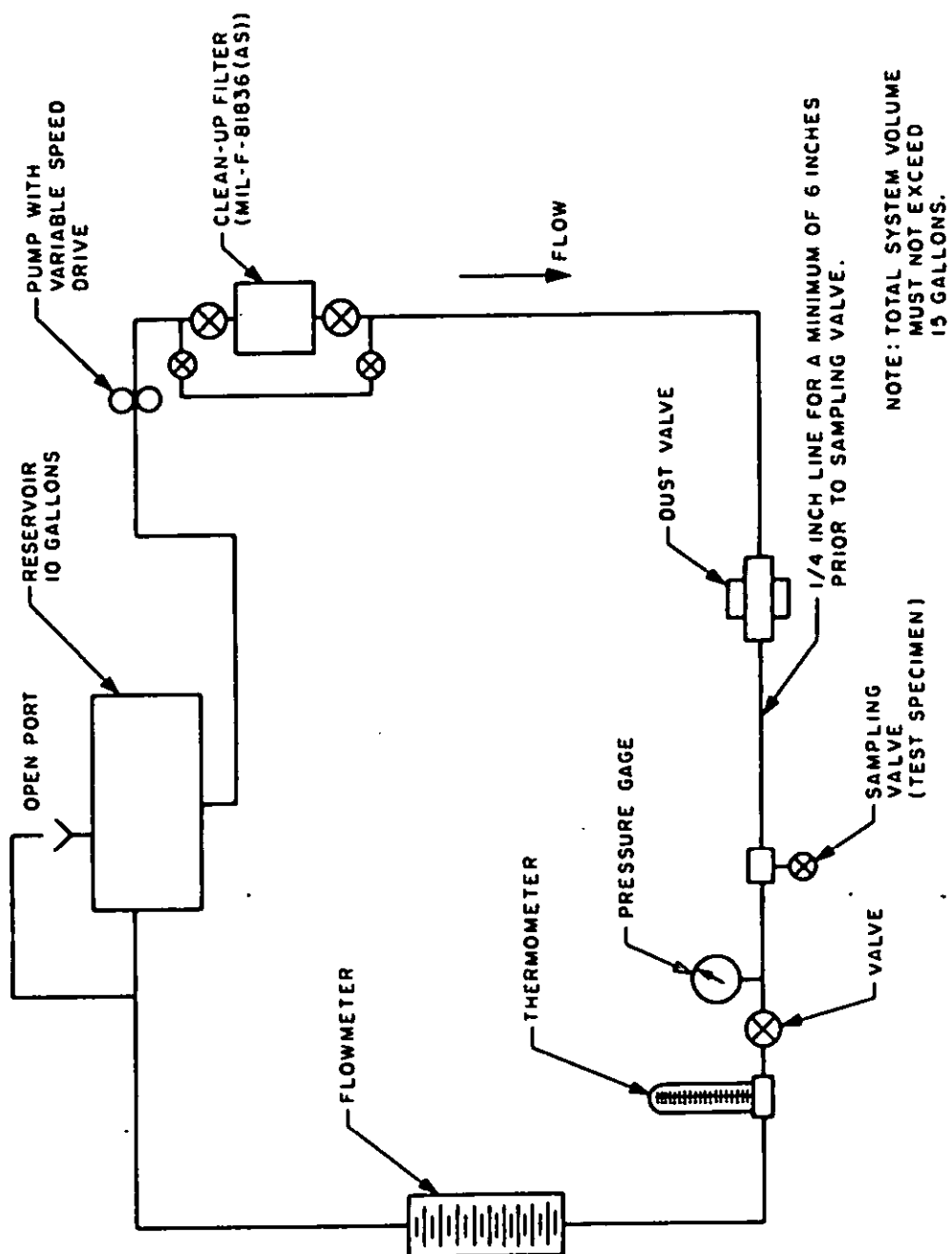


FIGURE 1. Typical setup for determining sampling valve characteristics.

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fluid stream prior to shutting the valve. The fluid shall be analyzed in accordance with SAE ARP 598 or with an automatic particle counter that has been calibrated using National Fluid Power Association Standard T2.9.6. The particle count for each size range shall be within 80% of the open port sample count.

4.7.1.3 Valve sampling efficiency (dirty system). The test specified in paragraph 4.7.1.2 shall be repeated except that standardized coarse air cleaner (A-C) test dust shall be added to the system until a contamination level of Class 12 or greater is obtained. Flow through the sampling valve shall be continuous with no plugging occurring. Five 100 ml samples shall be collected. The sampling valve flow rate shall be as specified in paragraph 4.7.5. The test shall be repeated after 12 hours without any cleaning up of the test system.

4.7.2 Proof pressure. The valve shall withstand proof pressure as specified herein without evidence of permanent deformation, malfunction, or external leakage. The valve shall be filled with test fluid and maintained at 275°F for 72 hours for qualification test only. Proof pressure of 6,000 psi shall then be applied at least twice at 275°F and held for 2 minutes at each application. The pressure shall be reduced to zero applications. The activity responsible for qualification shall have the prerogative to conduct additional tests to validate compliance of the valve with the longevity requirements specified in 3.5.1, and verify the manufacturer's analysis. For quality conformance testing, proof pressure (6,000 psi) shall be applied at least twice at room temperature and held for 2 minutes at each application. The pressure shall be reduced to zero between pressure applications.

4.7.3 Leakage. The valve shall be uncapped and subjected to 3,000 psi. The valve shall be actuated and a 100 ml sample of fluid collected. The valve knob or button shall be released and allowed to close by itself. The 3,000 psi pressure shall be maintained for 2 hours. There shall be no leakage emitted from the valve. The test shall be repeated at 5 psi. The valve shall automatically and immediately close in each case and no leakage shall occur.

4.7.4 Leakage (capped valve). The valve with cap installed shall be subjected to 3,000 psi. The valve shall be held in an open position for 2 hours. A mechanical means can be used to hold the valve open. There shall be no leakage emitted from the valve, or from behind the push button or knob.

4.7.5 Valve operation. The valve shall be installed in the Figure 1 system. Flow shall be adjusted to 5 gpm with 3,000 psi maintained on the valve. The valve shall be uncapped and the valve actuated to a full open position. The force or torque, as applicable, required to actuate the valve fully shall be measured and shall not exceed the value specified on the specification sheet. The valve knob shall be opened fully and a 100 ml sample of fluid collected. The valve shall be

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allowed to close. The flow rate shall be between 100 and 1500 milliliters per minute. The maximum velocity existing from the discharge port shall be 30 ft. per second at the full open position. The valve shall be actuated 100 times with 100 ml of fluid collected each time. The valve shall be tested for leakage in accordance with 4.7.3. The above test shall be repeated with 50 psi maintained on the valve.

#### 4.7.6 Extreme temperature.

4.7.6.1 Low temperature. The valve shall be uncapped and subjected to  $-65^{\circ}$  to  $-70^{\circ}\text{F}$  for 24 hours. During this period the valve shall be filled with fluid. With fluid and ambient temperature maintained at  $-65^{\circ}$  to  $-70^{\circ}\text{F}$  the tests specified in paragraph 4.7.3 and 4.7.4 shall be conducted. There shall be no leakage emitted from the valve.

\* 4.7.6.2 High temperature. The valve shall be subjected to a temperature of  $275^{\circ} \pm 5^{\circ}\text{F}$  for 24 hours. During this period the valve shall be filled with fluid. With fluid temperature maintained at  $275^{\circ} \pm 5^{\circ}\text{F}$  the test specified in paragraph 4.7.3 and 4.7.4 shall be conducted. There shall be no leakage emitted from the valve.

4.7.7 Impulse. The valve shall be subjected to 100,000 impulse cycles, 25,000 at a fluid temperature of  $275^{\circ}\text{F}$  and 75,000 at a fluid temperature of  $225^{\circ}\text{F}$ . Each impulse cycle shall consist of a pressure rise from zero to 3,000 psi and drop to zero. During each pressure increase, a peak surge pressure of 1.43 to 1.57 times the working pressure, as shown by an oscillograph, shall be obtained. Cycling shall be performed at a rate of 300 cycles per minute (cpm) maximum. There shall be no evidence of external leakage or structural failure during the performance of this test. See Figure 2 for impulse curve. The actual impulse pattern shall be recorded and reported.

\* 4.7.8 Vibration. A sinusoidal vibration test shall be conducted on the valve at room temperature in each of the valve three mutually perpendicular axes. One of these axes shall be that which is parallel to the valve poppet axes.

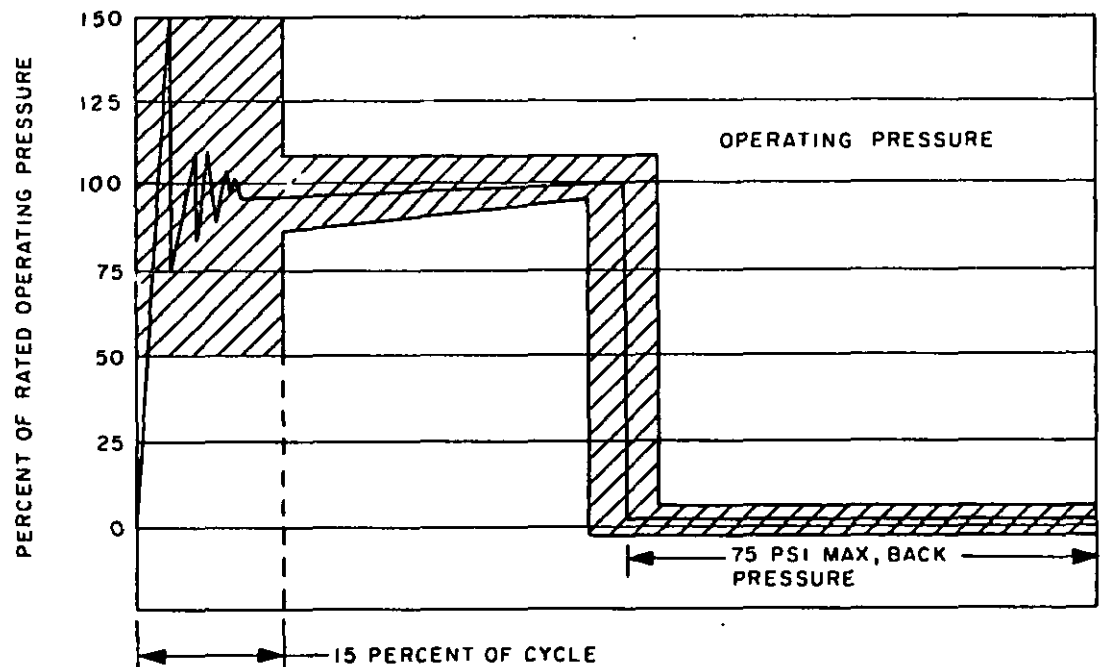
The valve shall be mounted on a resonance-free fixture for test. The vibration input accelerometer shall be mounted on the fixture close to the mounting point of the valve to the fixture. A second accelerometer shall be mounted directly on the valve for monitoring resonant frequencies.

The rate of change of frequency shall be logarithmic.

#### Vibration Tolerances

Amplitude	$\pm 10\%$
Frequency	$\pm 2\%$
Acceleration	$\pm 10\%$

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THE CURVE SHOWN ABOVE IS THE APPROXIMATE PRESSURE-TIME CYCLE DETERMINED TO BE OF PROPER SEVERITY FOR IMPULSE TESTING. ALTHOUGH IT IS MANDATORY ONLY THAT PRESSURE PEAK RISES TO 150 PERCENT OF THE OPERATING PRESSURE AT SOME POINT PRIOR TO LEVELING OFF AT RATED PRESSURE, IT IS CONSIDERED HIGHLY DESIRABLE THAT THE PRESSURE-TIME CURVE BE CONFINED TO THE SHADED AREA INDICATED. ONE VERY DESIRABLE BENEFIT TO BE GAINED IN THIS MANNER IS THAT RESULTS OF TESTS PERFORMED ON DIFFERENT TEST MACHINES WILL BE MORE NEARLY COMPARABLE.

INITIAL RATE OF RISE PRESSURE APPLICATION TO BE 200,000-300,000 PSI PER SECOND.

FIGURE 2. Impulse curve.

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The following tests shall be conducted:

(a) Resonance search. Resonant frequencies of the filter assembly shall be determined by varying the frequency of applied vibration slowly through the range specified in Table III, Part 1, at reduced levels but with sufficient amplitude to excite them. This shall be repeated for each of the three axes.

(b) Resonance dwell. The valve shall be vibrated along each axis at the four most severe resonant frequencies (determined in the resonance search) for 30 minutes at each resonance. The vibration levels and test times shall be per Table III, Part 1.

(c) Cycling test. The valve shall be vibrated along each axis in accordance with the test levels, frequency range and times from Table III, Parts 1 and 2. The frequency of applied vibration shall be swept over the frequency range of 5 to 2000 to 5 Hz logarithmically. The time to sweep from 5 to 2000 to 5 Hz shall be approximately 20 minutes. If a change in the resonant frequency occurs during the test, its time of occurrence shall be recorded and immediately the frequency shall be adjusted to maintain the peak resonance condition. The final resonant frequency shall be recorded.

TABLE III. Test Procedure and Time Schedule

	Vibration Level	Frequency Band, Hz				
Part 1	0.1 inch double amplitude	5 to 14				
	1.0 g	14 to 23				
	0.036 inch double amplitude	23 to 74				
	10.0 g	74 to 2000				
Part 2	0.2 inch double amplitude	5 to 10				
	1.0 g	10 to 18				
	0.06 inch double amplitude	18 to 81				
	20.0 g	81 to 2000				
Vibration Time Schedule - (Time Per One Axis)						
Part 1	Number of Resonances	0	1	2	3	4
	Total Vibration Time at each Resonance	0	½ hr	1 hr	1½ hr	2 hr
	Cycling Time	2 hr	1½ hr	1 hr	½ hr	0
Part 2	30 minutes cycling per axis - no resonance dwell					

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(d) Following the vibration test the valve shall be subjected to the leakage test specified in 4.7.3 and 4.7.4. There shall be no leakage emitted from the valve.

4.7.9 Burst pressure. Pressure shall be applied with a hand pump at a maximum rate of increase of 25,000 psi per minute until the specified burst pressure of 12,000 psi is reached. The valve shall show no leakage in the form of drops or rupture of internal or external parts at this pressure when held for 2 minutes. The pressure may be increased above that specified during qualification tests in order to secure data on actual burst pressure. The test shall be conducted at 275oF after a 5-hour soak at 275oF with the valve filled with test fluid.

4.8 Preservation, packaging, and marking. Preparation for delivery shall be examined for conformance to section 5.

## 5. PREPARATION FOR DELIVERY

5.1 Preservation and packaging. Preservation and packaging shall be in accordance with MIL-STD-794, level A only.

5.1.1 Cleaning. Prior to preservation, the valve shall be cleaned ultrasonically (or equivalent method) until free from all metal chips, grit, dirt, and other foreign matter. The cleaning method utilized shall not have deleterious effects on any material (e.g., metals, plastics, elastomers, etc.). Care shall be taken after cleaning to insure that the valve is not contaminated prior to or during preservation or packaging.

\* 5.1.2 Preservation. The valve shall be flushed and filled 80 to 90 percent with hydraulic fluid conforming to MIL-H-6083, or MIL-H-46170 prefiltered through a filter assembly conforming to MIL-F-81836, or a filter with equivalent efficiency and sealed with metal closures conforming to MIL-C-5501. The valve shall then be placed within a heat-sealed bag conforming to MIL-B-117, Type I, Class E.

5.1.3 Packaging. Each valve in its sealed bag shall be cushioned and snugly packaged within a carton or box conforming to PPP-B-566, or PPP-B-676.

5.2 Packing. Packing shall be in accordance with MIL-STD-794, level A, B or C, as specified in the contract or order (see 6.2). Exterior containers shall contain identical quantities and, as far as practical, shall have the minimum cube and tare consistent with the protection required.

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- \* 5.2.1 Level A. Each valve packaged as in 5.1.3 shall be packed in a snug-fitting fiberboard container conforming to PPP-B-636, weather resistant. Containers shall be closed and sealed as specified in the appendix of PPP-B-636.
- \* 5.2.2 Level B. Each valve packaged as in 5.1.3 shall be packed in a snug-fitting fiberboard container conforming to PPP-B-636, domestic. Containers shall be closed and sealed as specified in the appendix of PPP-B-636.
- \* 5.3 Marking of shipments. Interior packages and exterior shipping containers shall be marked in accordance with MIL-STD-129 and, in addition, shall include the following:

M 81940/ (Insert slash number of specification sheet and designation  
for fitting end)  
Month and year of manufacture  
Style and size

## 6. NOTES

- \* 6.1 Intended use. The valve covered by this specification is intended for use in aircraft and missile hydraulic systems covered by MIL-H-5440 and MIL-H-25475, and operating with hydraulic fluid conforming to MIL-H-5606 or MIL-H-83282 at nominal operating pressures of 3,000 psi.
- \* 6.2 Information for the contracting officer. Contracts or orders should specify the following:
  - (a) Title, number, and date of this specification.
  - (b) Applicable specification sheet part number.
  - (c) Applicable levels of preservation, packaging, and packing and type of preservation fluid (see section 5).
- 6.2.1 Procurement requirements.
- \* 6.2.2 Contract data requirements. Items of deliverable data required by this specification are cited in the following paragraphs:

<u>Paragraph</u>	<u>Data Requirement</u>	<u>Applicable DID</u>
4.5.4	Report of failure of Sampling Test	DI5299A

Such data will be delivered as described on approved (numbered) DID's (Data Item Description/DD Form 1664) when specified on DD Form 1423 (Contract Data Requirements List) and incorporated into the applicable contract.

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6.3 Qualification. 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 the Naval Air Systems Command, Attn: AIR-530312, Department of the Navy, Washington, D.C. 20360; however, information pertaining to qualification of products may be obtained from the Commanding Officer, Naval Air Development Center, Attn: 60611, Warminster, Pennsylvania 18974.

- \* 6.4 Changes from previous issue. The margin of this specification is marked with an asterisk to indicate where changes (additions, modifications, corrections, deletions) from the previous issue MIL-V-81940 were made. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations and relationship to the last previous issue.

## Custodians:

Army - AV  
Navy - AS  
Air Force - 11

## Preparing activity:

Navy - AS  
(Project No. 1650-0332)

## Reviewer activities:

Navy - SH  
Air Force - 71

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**INSTRUCTIONS:** In a continuing effort to make our standardization documents better, the DoD provides this form for use in submitting comments and suggestions for improvements. All users of military standardization documents are invited to provide suggestions. This form may be detached, folded along the lines indicated, taped along the loose edge (**DO NOT STAPLE**), and mailed. In block 5, be as specific as possible about particular problem areas such as wording which required interpretation, was too rigid, restrictive, loose, ambiguous, or was incompatible, and give proposed wording changes which would alleviate the problems. Enter in block 6 any remarks not related to a specific paragraph of the document. If block 7 is filled out, an acknowledgement will be mailed to you within 30 days to let you know that your comments were received and are being considered.

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

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## STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

(See Instructions - Reverse Side)

1. DOCUMENT NUMBER

2. DOCUMENT TITLE

3a. NAME OF SUBMITTING ORGANIZATION

4. TYPE OF ORGANIZATION (Mark one)

☐ VENDOR☐ USER☐ MANUFACTURER☐ OTHER (Specify): \_\_\_\_\_

b. ADDRESS (Street, City, State, ZIP Code)

## 5. PROBLEM AREAS

a. Paragraph Number and Wording:

b. Recommended Wording:

c. Reason/Rationale for Recommendation:

## 6. REMARKS

7a. NAME OF SUBMITTER (Last, First, MI) - Optional

b. WORK TELEPHONE NUMBER (Include Area Code) - Optional

c. MAILING ADDRESS (Street, City, State, ZIP Code) - Optional

8. DATE OF SUBMISSION (YYMMDD)