



AEROSPACE STANDARD

AS8775™**REV. A**

Issued 1998-07
Reaffirmed 2008-11
Revised 2026-02

Superseding AS8775

(R) General Specification for Military Aircraft and Missile Hydraulic System Components

RATIONALE

AS8775 has been updated to Revision A for the following reasons:

- a. Technical changes have been made, including additional requirements, and the addition of Appendices A and B.
- b. The Title and Scope have been revised.
- c. The references in the document have been updated.
- d. Editorial changes have been made to improve the readability of the document.

TABLE OF CONTENTS

1.	SCOPE.....	4
1.1	Product Classification.....	4
2.	REFERENCES.....	4
2.1	Applicable Documents	4
2.1.1	SAE Publications.....	4
2.1.2	ANSI Publications	6
2.1.3	ASME Publications.....	6
2.1.4	ASTM Publications.....	6
2.1.5	FAA Publications.....	6
2.1.6	ISO Publications.....	6
2.1.7	NAS Publications	6
2.1.8	RTCA Publications	7
2.1.9	U.S. Government Publications.....	7
2.2	Definitions	8
3.	REQUIREMENTS	9
3.1	Precedence	9
3.2	Materials.....	9
3.2.1	Metals.....	9
3.2.2	Nonmetallic Parts	10
3.2.3	Selection of Materials, Parts, and Processes	10
3.3	Design and Construction.....	10
3.3.1	General.....	10
3.3.2	Endurance	11
3.3.3	Environmental Requirements.....	11

SAE Executive Standards Committee Rules provide that: "This report is published by SAE to advance the state of technical and engineering sciences. The use of this report is entirely voluntary, and its applicability and suitability for any particular use, including any patent infringement arising therefrom, is the sole responsibility of the user."

SAE reviews each technical report at least every five years at which time it may be revised, reaffirmed, stabilized, or cancelled. SAE invites your written comments and suggestions.

Copyright © 2026 SAE International

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, or used for text and data mining, AI training, or similar technologies, without the prior written permission of SAE.

TO PLACE A DOCUMENT ORDER: Tel: 1-877-606-7323 (U.S. and Canada only)
Tel: 1-724-776-4970 (outside U.S. and Canada)
Fax: 724-776-0790
Email: CustomerService@sae.org
http://www.sae.org

SAE WEB ADDRESS:

Full document details: SAE AS8775A

For more information on this standard, visit
<https://www.sae.org/standards/content/AS8775A/>

Documents

Standard, visit Sharing Hub

3.3.4	Adverse Tolerance Conditions	12
3.3.5	Threads	12
3.3.6	Hydraulic Fluid	12
3.3.7	Fixed Orifices	12
3.3.8	Glands and Seals	13
3.3.9	Safetying	13
3.3.10	Retainer Rings or Snap Rings	13
3.3.11	Spring Pins	13
3.3.12	Reverse Installation	14
3.3.13	Structural Strength	14
3.3.14	Control Lever Robustness	14
3.3.15	Rated Flow	15
3.3.16	Pressure Drop at Rated Flow	15
3.3.17	Bleeding	15
3.3.18	Function-Adjustment Screws	15
3.3.19	Fluid Connections	15
3.3.20	Plugs	16
3.3.21	Alignment	16
3.3.22	Electrically Operated Components	16
3.3.23	Actuation above System Pressure	18
3.3.24	Differential Temperature	18
3.3.25	Reliability	19
3.4	Interchangeability	19
3.5	Lubricants	19
3.6	Weight	19
3.7	Finish	19
3.7.1	Surface Roughness	19
3.7.2	Coatings	19
3.8	Physical Defect Inspection	19
3.9	Special Tools	20
3.10	Identification of Product	20
3.10.1	Nameplate	20
3.11	Design Review	20
4.	QUALITY ASSURANCE PROVISIONS	20
4.1	Responsibility for Inspection	20
4.2	Classification of Tests	20
4.3	Qualification or First-Article Test Conditions	20
4.3.1	Test Hydraulic Fluid	20
4.3.2	Temperature Conditions	20
4.3.3	Filtration	21
4.3.4	Qualification of Similar Units	21
4.3.5	Applicable Tests	21
4.4	Quality Conformance Tests	21
4.4.1	Quality Conformance Test Conditions	21
4.5	Test Methods	22
4.5.1	Examination of Product	22
4.5.2	Immersion	22
4.5.3	Pressure Tests	22
4.5.4	Leakage Tests	23
4.5.5	Pressure Drop	23
4.5.6	Environmental Tests	23
4.5.7	Endurance	26
4.5.8	Impulse	27
4.5.9	Vibration, Shock, and Acceleration	27
4.5.10	Electrical Tests	27
4.5.11	Actuation above System Pressure	28
4.5.12	Reliability	28
4.5.13	Component Cleanliness	28



5.	PREPARATION FOR DELIVERY	29
5.1	Preservation, Packaging, and Packing	29
5.2	Marking of Shipment	29
5.3	Reinspection Marking.....	29
6.	NOTES	29
6.1	Revision Indicator.....	29
6.2	Dimensions Wording.....	29
APPENDIX A	EXAMPLE OF A DETAIL SPECIFICATION FOR MILITARY AIRCRAFT HYDRAULIC COMPONENTS	30
APPENDIX B	COMPONENT DESIGN CHECKLIST.....	35
Table 1	Metal plating types	9
Table 2	Environmental requirements	11
Table 3	Endurance test cycles	26

1. SCOPE

This Aerospace Standard (AS) provides the general requirements for hydraulic components that are used in military aircraft and missile hydraulic systems.

NOTE: AS8775 is intended for use on aircraft that utilize military hydraulic fluids (typically MIL-PRF-83282 and MIL-PRF-87257). AS4941 should be used for those military aircraft that utilize AS1241 hydraulic fluid (for example, military derivatives of civil aircraft or some new design military cargo aircraft) instead of AS8775.

1.1 Product Classification

Military aircraft and missile hydraulic systems in which components covered by this standard are to be used shall be of the following types, as specified below:

Type I - Fluid temperature range: -65 to +160 °F (-54 to 71 °C)

Type II - Fluid temperature range: -65 to +275 °F (-54 to 135 °C)

2. REFERENCES

2.1 Applicable Documents

The following publications form a part of this document to the extent specified herein. The latest issue of SAE publications shall apply. The applicable issue of other publications shall be the issue in effect on the date of the purchase order. In the event of conflict between the text of this document and 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.

2.1.1 SAE Publications

Available from SAE International, 400 Commonwealth Drive, Warrendale, PA 15096-0001, Tel: 877-606-7323 (U.S. and Canada only) or +1 724-776-4970 (outside U.S. and Canada), www.sae.org.

AIR4543	Aerospace Hydraulics and Actuation Lessons Learned
AMS2403	Plating, Nickel, General Purpose
AMS2404	Plating, Electroless Nickel-Phosphorous
AMS2447	Coating, Thermal Spray, High Velocity Oxygen/Fuel Process
AMS2448	Application of Tungsten Carbide Coatings on Ultra High Strength Steels, High Velocity Oxygen/Fuel Process
AMS2449	Grinding of HVOF Sprayed Tungsten Carbide Coatings Applied to High Strength Steels
AMS2460	Plating, Chromium
AMS-QQ-P-416	Plating, Cadmium (Electrodeposited)
ARP600	Torque Determination, Method of, for Tube or Hose End Fitting Connections, Flared, Flareless, or Miscellaneous Screw Thread Style
ARP994	Design of Tubing Installations for Aerospace Hydraulic Systems
ARP1383	Aerospace - Impulse Testing of Aerospace Hydraulic Components
ARP4386	Terminology and Definitions for Aerospace Fluid Power, Actuation and Control Technologies

ARP4754	Guidelines for Development of Civil Aircraft and Systems
AS210	Definition of Commonly Used Day Types (Atmospheric Ambient Temperature Characteristics Versus Pressure Altitude)
AS567	Safety Cable, Safety Wire, Key Washers, and Cotter Pins for Propulsion Systems, General Practices for Use of
AS603	Impulse Testing of Hydraulic Hose, Tubing, and Fitting Assemblies
AS1241	Fire Resistant Phosphate Ester Hydraulic Fluid for Aircraft
AS1300	Port - Ring Locked Fluid Connection Type, Standard Dimensions for
AS3509	Cable, Safety, Kit, Nickel Alloy, UNS N06600
AS3511	Cable, Safety, Kit, Corrosion Resistant Steel, UNS S30400
AS3618	Cable, Safety, Ferrule, Elongated, Corrosion and Heat Resistant Steel, UNS S32100
AS3619	Cable, Safety, Ferrule, Elongated and Kits, Nickel Alloy, UNS N06600
AS4059	Contamination Classification for Hydraulic Fluids
AS4536	Safety Cable Kit Procurement Specification and Requirement for Use
AS4875	Fittings, Straight Threaded Boss or Flanged, Fluid Connection, Procurement Specification
AS4941	Aerospace - General Requirements for Commercial Aircraft Hydraulic Components
AS5169	Fittings, Port Plug and Bleeder
AS5202	Port or Fitting End, Internal Straight Thread, Design Standard
AS5440	Hydraulic Systems, Military Aircraft, Design and Installation, Requirements for
AS8879	Screw Threads - UNJ Profile, Inch, Controlled Radius Root with Increased Minor Diameter
AS20659	Terminal, Lug, Crimp Style, Copper, Uninsulated, Ring Tongue, Type I, Class I, for 175 °C or 260 °C Total Conductor Temperature
AS33514	Fitting End, Standard Dimensions for Flareless Tube Connection and Gasket Seal
AS33515	Fitting End, Standard Dimensions for Bulkhead Flareless Tube Connections
AS40401	Solenoid, Electrical, General Specification for
AS50151	Connectors, Electrical, Circular Threaded, AN Type, General Specification for
AS85049/138	Connector Accessories, Electrical, Cap, Dust, Plastic, Category 9
AS85421/1	Fitting End, Standard Dimensions for Dynamic Beam Seal, Male
AS85421/2	Fitting End, Standard Dimensions for, Bulkhead, Dynamic Beam Seal, Male
AS85720/1	Fittings, Tube, Fluid Systems, Separable, High Pressure, Dynamic Beam Seal, Design Standard for Male End

2.1.2 ANSI Publications

Copies of these documents are available online at <https://webstore.ansi.org>.

ANSI C63.14 American National Standard Dictionary Of Electromagnetic Compatibility (EMC) Including Electromagnetic Environmental Effects (E3)

2.1.3 ASME Publications

Available from ASME, Two Park Avenue, New York, NY 10016-5990, Tel: 800-843-2763 (U.S./Canada), 001-800-843-2763 (Mexico), 646-616-3100 (outside North America), www.asme.org.

ASME B46.1 Surface Texture (Surface Roughness, Waviness & Lay)

ASME Y14.24 Types and Applications of Engineering Drawings

ASME Y14.34 Associated Lists

ASME Y14.35 Revision of Engineering Drawings and Associated Documents

ASME Y14.100 Engineering Drawing Practices

2.1.4 ASTM Publications

Available from ASTM International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA 19428-2959, Tel: 610-832-9500, www.astm.org.

ASTM B339 Standard Specification for Pig Tin

ASTM B545 Standard Specification for Electrodeposited Coatings of Tin

ASTM B633 Standard Specification for Electrodeposited Coatings of Zinc on Iron and Steel

ASTM B700 Standard Specification for Electrodeposited Coatings of Silver for Engineering Use

ASTM E1417/E1417M Standard Practice for Liquid Penetrant Testing

ASTM E1444/E1444M Standard Practice for Magnetic Particle Testing for Aerospace

2.1.5 FAA Publications

Available from Federal Aviation Administration, 800 Independence Avenue SW, Washington, DC 20591, Tel: 866-835-5322, www.faa.gov.

MMPDS Metallic Materials Properties Development and Standardization

2.1.6 ISO Publications

Copies of these documents are available online at www.iso.org/store.

ISO 18413 Hydraulic fluid power - Cleanliness of components - Inspection document and principles related to contaminant extraction and analysis, and data reporting

2.1.7 NAS Publications

Available from Aerospace Industries Association, 1000 Wilson Boulevard, Suite 1700, Arlington, VA 22209-3928, Tel: 703-358-1000, www.aia-aerospace.org.

NAS847 Caps and Plugs, Protective, Dust and Moisture Seal

NASM20995	Wire, Safety or Lock
NASM21209	Insert, Screw Thread, Coarse and Fine, Screw Locking, Helical Coil, Cres
NASM33537	Insert, Screw Thread, Helical Coil, Inch Series, Coarse and Fine Thread, Standard Assembly Dimensions for
NASM33540	Safety Wiring, Safety Cabling, Cotter Pinning, General Practices for
NASM33547	Pins, Spring, Functional Limitations of

2.1.8 RTCA Publications

Available from RTCA, Inc., 1150 18th Street NW, Suite 910, Washington, DC 20036, Tel: 202-833-9339, www.rtca.org.

RTCA DO-160 Environmental Conditions and Test Procedures for Airborne Equipment

2.1.9 U.S. Government Publications

Copies of these documents are available online at <https://quicksearch.dla.mil>.

MIL-A-8625	Anodic Coatings, for Aluminum and Aluminum Alloys
MIL-DTL-5541	Chemical Conversion Coatings on Aluminum and Aluminum Alloys
MIL-DTL-32119	Coatings, Electroless Nickel, Special Applications
MIL-DTL-38999	Connector, Electrical, Circular, Miniature, High Density, Quick Disconnect (Bayonet, Threaded, or Breech Coupling), Environment Resistant with Crimp Removable Contacts or Hermetically Sealed with Fixed, Solderable Contacts, General Specification for
MIL-HDBK-221	Fire Protection Handbook for U.S. Navy Aircraft Powered by Turbine Engines
MIL-HDBK-454	General Guidelines for Electronic Equipment
MIL-HDBK-704	Guidance for Test Procedures for Demonstration of Utilization Equipment Compliance to Aircraft Electrical Power Characteristics
MIL-M-7969	Motor, Alternating Current, 400 cycle, 115/200 Volt System, Aircraft, General Specification for
MIL-M-8609	Motors, DC, 28-Volt System, Aircraft, General Specification for
MIL-PRF-6083	Hydraulic Fluid, Petroleum Base, for Preservation and Operation
MIL-PRF-46170	Hydraulic Fluid, Rust Inhibited, Fire Resistant, Synthetic Hydrocarbon Base, NATO Code No. H-544
MIL-PRF-81322	Grease, Aircraft, General Purpose Wide Temperature Range, Nato Code G-395
MIL-PRF-81733	Sealing and Coating Compound, Corrosion Inhibitive
MIL-PRF-83282	Hydraulic Fluid, Fire Resistant, Synthetic Hydrocarbon Base, Aircraft and Missile, Metric, NATO Code Number H-537
MIL-PRF-87257	Hydraulic Fluid, Fire Resistant, Low Temperature, Synthetic Hydrocarbon Base, Aircraft and Missile
MIL-STD-129	Military Marking for Shipment and Storage
MIL-STD-130	Identification Marking of U.S. Military Property

MIL-STD-461	Requirements for the Control of Electromagnetic Interference Characteristics of Subsystems and Equipment
MIL-STD-704	Aircraft Electric Power Characteristics
MIL-STD-810	Environmental Engineering Considerations and Laboratory Tests
MIL-STD-889	Galvanic Compatibility of Electrically Conductive Materials
MS21344	Fittings - Installation of Flared Tube, Straight, Threaded Connectors, Design Standard for
NAVAIR 01-1A-17	Organizational, Intermediate and Depot Maintenance Aviation Hydraulics Manual

2.2 Definitions

ADVERSE TOLERANCE: This is the dimensional tolerance condition between two parts or a dimensional combination that is the least favorable for the nominal design operation.

COMPONENT: This is a part that provides a function to the hydraulic system when it is operated, such as a valve, actuator, accumulator, filter, reservoir, pump, manifold, or similar device.

NOTE: It is not a fluid conveyance device in a hydraulic system such as a fitting, pipe, hose, etc.

STANDARD COMPONENT: This is a component that is assigned a military or industry standard specification sheet part number.

STANDARD PART: This is a part per a military or industry standard with controlled interface dimensions and material strength and which is assigned a part number by the applicable standard; for example, MS, AS, AN, and NAS part numbers.

PURCHASING AGENCY: This is the organization that has the responsibility for the design and development of the hydraulic system that includes the components.

NOTE 1: Typically, the Purchasing Agency is an aircraft manufacturer, a Tier 1 system supplier, or a modification center.

NOTE 2: The Purchasing Agency is responsible for compiling the detail specifications.

SUPPLIER: This is the manufacturer of the component and will be responsible for the design, production, and qualification of the component.

NOTE: The Purchasing Agency shall approve the Supplier for the design, development, and manufacture of aerospace hydraulic components.

DETAIL SPECIFICATION: This is the document that includes the following:

- a. Technical requirements
- b. Acceptance and qualification test requirements
- c. Reliability requirements
- d. Packaging requirements

NOTE: An example of a detail specification is provided in Appendix A.

For other definitions and terms, refer to ARP4386.

3. REQUIREMENTS

NOTE: AS5440 includes additional component requirements which shall be incorporated into the component design.

3.1 Precedence

In the event of a conflict between the requirements in AS8775 and the component detail specification, the component detail specification shall take precedence.

3.2 Materials

Materials used in the manufacture of hydraulic components shall conform to applicable specifications. Materials conforming to the Purchasing Agency's specifications may be used, provided they are acceptable to the Purchasing Agency and contain provisions for adequate tests.

3.2.1 Metals

All metals shall be compatible with the fluid and intended temperature, functional, service, and storage conditions to which the components will be exposed. Metals shall be limited to those specified by the detail specification. The metals shall be corrosion-resistant or be suitably protected by the use of plating equivalent to those listed in Table 1 to resist corrosion which may result from such conditions as dissimilar metal combinations, moisture, salt spray, and high-temperature deterioration, as applicable.

Table 1 - Metal plating types

Plating	Specification
Cadmium plating	AMS-QQ-P-416, Type II, class 2
Chromium plating	AMS2460
Electroless nickel plating	MIL-DTL-32119, AMS2404
Nickel plating	AMS2403
Silver plating	ASTM B700
Tin plating	ASTM B545, ASTM B339
Zinc plating	ASTM B633

Where not indicated, the class or type is at the option of the Supplier, subject to approval by the Purchasing Agency. Dissimilar metals shall be protected per the guidance of MIL-STD-889.

Unless otherwise specified herein, the physical properties of all metals shall meet the minimum requirements of Metallic Materials Properties Development and Standardization (MMPDS).

3.2.1.1 Ferrous Alloys

Except for internal surfaces in constant contact with hydraulic fluid, ferrous alloys shall have a chromium content of not less than 12% or shall be suitably protected against corrosion as specified in Table 1. In addition, cadmium and zinc plating shall not be used for internal parts or on internal surfaces in contact with hydraulic fluid or exposed to its vapors.

The use of magnesium shall be subject to the approval of the Purchasing Agency for Type I components and shall not be used in Type II components.

3.2.1.2 Copper and Aluminum Alloys

All copper alloys except for bearing surfaces shall be suitably protected with a plating selected from Table 1, except that cadmium and zinc plating shall not be used in applications subject to abrasion. Other metallic platings, which shall have been demonstrated to be satisfactory to the Purchasing Agency, such as electrodeposited 85% tin and 15% cadmium alloy, may be used. All aluminum alloys shall be anodized per MIL-A-8625, Type II plating, except that in the absence of abrasive conditions, the anodize may be a Type I plating, where applicable, or may be a chemical film per MIL-DTL-5541.

3.2.1.3 High-Velocity Oxygen Fuel (HVOF) Thermal Spray Coatings

HVOF coatings shall be per AMS2447 or AMS2448, as applicable. Grinding of the coatings to obtain the required finish shall be per AMS2449.

3.2.1.4 Residual Magnetism

Parts made of material that is capable of retaining residual magnetism, but are not intended to function as magnets, shall be demagnetized sufficiently to prevent system or component malfunction, including malfunction due to accumulation of magnetic contaminants. Where a component or system is vulnerable to malfunction due to residual magnetism, the component detail specification shall specify the maximum allowable flux density.

3.2.1.5 Magnets

Permanent magnets and electromagnets shall be shielded where required to prevent system or component malfunction. The detail specification shall specify the maximum allowable flux density outside the shield.

3.2.2 Nonmetallic Parts

The use of nonstandard nonmetallic parts shall be subject to the approval of the Purchasing Agency for the specific application involved.

3.2.3 Selection of Materials, Parts, and Processes

Standard parts shall be used wherever they are suitable for the purpose and shall be identified on the drawing by their standard part numbers.

Non-aerospace parts, such as screws, bolts, nuts, and cotter pins, may be used provided:

- They possess suitable properties.
- They are replaceable by the standard parts without alteration.
- The corresponding standard part numbers are referenced in the parts list and, if practicable, on the Purchasing Agency's drawings.

In the event there is no suitable corresponding standard part in effect on the date of invitation for bids, non-aerospace parts may be used provided they conform to all requirements of this specification and the detail specification.

3.3 Design and Construction

3.3.1 General

The configuration, dimensions, and other details of the design of standard components shall conform to the applicable parts standards. Nonstandard components shall conform to the applicable Supplier's or Purchasing Agency's drawing as governed by AS5440.

The component shall not be sensitive to spatial orientation unless there are specific limits that shall be specified in the detail specification.

3.3.2 Endurance

Each component shall be designed such that it will operate satisfactorily throughout its operational lifetime.

The detail specification shall state the endurance requirements for each component. It shall define the predicted operation of the component over the life that has been declared for it including the following:

- a. The number of cycles of operation that it will be subjected to

NOTE: If the number of duty cycles is determined by expected usage, a safety factor should be applied to the number of cycles. The number of cycles multiplied by the safety factor shall then be compared to the number of generic cycles listed in Table 3 in 4.5.7.2, with the greater of the two used for qualification.

- b. The overall predicted duty cycle for the high- and low-pressure sides of the component
- c. The rate of operation (i.e., flow rates through the component) for each cycle
- d. The input and output strokes of the component (where applicable)
- e. Any external loads that the component may be subjected to
- f. The expected ambient and hydraulic fluid temperatures during the life of the component
- g. The fluid contamination levels

3.3.3 Environmental Requirements

Each component shall be designed to operate as intended under the environmental conditions specified in Table 2 without:

- a. Any time limitation unless allowed per MIL-STD-810 or the detail specification.
- b. Any impairment of function, change of adjustment, or uncommanded operations such as spool movements, switch operations, etc.

NOTE: Environmental conditions relating to temperature and pressure are defined in AS210 and should be utilized by the Purchasing Agency.

Table 2 - Environmental requirements

Environmental Condition	MIL-STD-810 Reference
High Temperature	501
Low Temperature	502
Temperature Shock	503
Contamination by Fluids	504
Rain/Waterproofness	506
Humidity	507
Fungus	508
Salt Fog/Corrosive Environments	509
Sand and Dust	510
Explosive Atmosphere	511
Acceleration	513
Vibration	514
Acoustic Noise	515
Shock	516
Gunfire Shock	519
Combined Environments	520
Icing/Freezing Rain	521
Freeze/Thaw	524



NOTE 1: The detail specification shall provide the specific requirements, including listing the procedures to be used for testing, and the applicability for each environmental condition.

NOTE 2: If there is a requirement for the component to operate under heavy rain, then RTCA DO-160, Section 10 - Waterproofness, Category S shall be called up in the detail specification.

NOTE 3: Consideration shall be given to calling up RTCA DO-160, Section 24 - Icing in place of MIL-STD-810 if the component is located in a severe environment. This is because the RTCA DO-160 test is a combined test of temperature and altitude in combination with the icing/freeze/thaw test.

3.3.3.1 Altitude

The performance of each component should not be affected by the change of altitude from sea level to the maximum altitude or vice versa as specified in the detail specification.

3.3.3.2 Ambient Temperature

The component shall be designed and so constructed to ensure its satisfactory operation throughout the ambient temperature range specified in the detail specification.

The following shall be noted in the detail specification:

- a. Cold soak conditions that will occur when the aircraft is parked in very cold weather conditions or during flight at high altitude if the component is installed in an unpressurized zone
- b. Hot soak conditions that will occur when the aircraft is parked in very hot weather conditions or if the component is installed in a zone that is subject to local high ambient temperatures; for example, in an engine nacelle

3.3.3.3 Combined Altitude and Humidity

If the component contains sealed cavities, the design shall take into account the effect of the combination of the variation of the aircraft altitude and humidity to ensure that the cavity sealing arrangement is adequate and is in accordance with the aircraft operation. The detail specification shall provide the specific altitude/humidity combinations that are to be considered in the design.

3.3.4 Adverse Tolerance Conditions

The component shall be capable of functioning when assembled with adverse tolerance parts without any degradation in component performance or life.

NOTE: The Supplier shall verify the compliance with this requirement by conducting an appropriate mathematical analysis, such as a tolerance stack-up analysis, a stress analysis, or a deflection analysis.

3.3.5 Threads

Straight threads shall conform to AS8879, Unified Fine Thread Series, classes UNJF-3A and UNJF-3B. Other thread types shall be subject to the approval of the Purchasing Agency.

Pipe threads shall not be used except for permanently installed plugs.

3.3.6 Hydraulic Fluid

The components shall be designed to operate with the hydraulic fluid defined by the Purchasing Agency. Typical fluids are MIL-PRF-83282 and MIL-PRF-87257.

3.3.7 Fixed Orifices

Fixed orifices shall be per AS5440.