SAE Aerospace
An SAE International Group

AEROSPACE STANDARD

SAE AS4444

Issued 1996-05
Reaffirmed 2013-01

Fittings, 24° Cone Flareless, Fluid Connection, 5000 psi

RATIONALE

AS4444 has been reaffirmed to comply with the SAE five-year review policy.

1. SCOPE:

1.1 Scope:

This SAE Aerospace Standard (AS) establishes the requirements for 24° cone flareless fluid connection fittings and nuts and bite type flareless sleeves (see Section 6) for use in aircraft fluid systems at an operating pressure of 5000 psi for the fittings and nuts and 3000 psi for the bite type sleeves.

1.2 Classification:

Fittings shall be furnished in the types and styles designated by the applicable AS, MS, NAS, or other engineering part standard drawings. This specification includes the same requirements for flareless fittings used with bite type sleeves that appear in MIL-F-18280 except for updated materials and process specifications and industry coordinated general improvements. It also includes requirements for machined acorn fitting ends. It is intended to serve as a procurement specification for the fittings described herein, and in Section 6. The requirements for bite type sleeves are given in AS4444/1.

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.

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SAE values your input. To provide feedback on this Technical Report, please visit
http://www.sae.org/technical/standards/AS4444

2.1.1 SAE Publications: Available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096-0001.

AMS 2486	Conversion Coating of Titanium Alloys, Fluoride Phosphate Type
AMS 2488	Anodic Treatment, Titanium and Titanium Alloys
AMS 2759	Heat Treatment, Steel Parts, General Requirements
AMS 2770	Heat Treatment of Wrought Aluminum Alloy Parts
AMS 4112	Aluminum Alloy Bars, Rods, and Wire, Rolled, Drawn, or Cold Finished 4.4Cu - 1.5Mg - 0.60Mn (2024-T6)
AMS 4124	Bars, Rods, and Wire, Rolled, Drawn or Cold Finished, 5.62N 2.5Mg 1.6Cu 0.23Cr
AMS 4134	Aluminum Alloy Die Forgings 4.4Cu - 0.85Si - 0.80Mn - 0.50Mg (2014-T4) Solution Heat Treated
AMS 4141	Forgings, Die, 5.6Zn - 2.6Mg - 7.6Cu - 0.23Cr, Solution and Precipitation Heat Treated
AMS 4928	Titanium Alloy Bars and Forgings, 6Al-4V, Annealed, 120,000 PSI (827 MPa) Yield
AMS 5639	Bars, Wire, Forgings, Tubing and Rings, 19Cr 10Ni Solution Heat Treated
AMS 5645	Bars, Forging, Tubing and Rings, 18Cr 10Ni 0.40Ti Solution Heat Treated
AMS 5648	Bars, Forgings, Tubing and Rings, 17Cr 12Ni 2.5Mo, Solution Heat Treated
AMS 5659	Bars, Wire, Forgings, Rings and Extrusions, 15Cr 4.5Ni 0.30 (Cb + Ta) 3.5Cu, Consumable Electrode Melted, Solution Heat Treated, Precipitation Hardenable
AMS 6370	Steel Bars, Forgings and Rings, 0.95Cr 0.20Mo (0.28-0.30C)
ARP603	Impulse Testing of Hydraulic Hose Tubing and Fittings Assemblies
ARP891	Determination of Aluminum Alloy Tempers Through Electrical Conductivity Measurements
ARP1185	Flexure Testing of Hydraulic Tubing Joints and Fittings
AS1241	Fire Resistant Phosphate Ester Hydraulic Fluid for Aircraft
AS1376	Alternate Dimensions, Center Body Section, Shape Fluid Fitting, Design Standard
AS4375	Fitting End, External Thread, Flareless Design Standard
AS4377	Fitting End, Bulkhead, Flareless, Design Standard
AS4444/1	Sleeve, Bite Type, 24° Cone Flareless Fitting
AS4458	Fitting End, Flareless, Blunt Nose, Design Standard
AS4658	Fitting End, External Thread, Short Flareless, Design Standard
AS4659	Fitting End, Bulkhead, External Thread, Short Flareless, Design Standard
AS4703	Fitting End, Acorn, Short Flareless, Design Standard
ARP4784	Performance and Evaluation Criteria, Surface Defects, Requirements for

SAE Dictionary of Aerospace Engineering

2.1.2 U.S. Government Publications: Available from DODSSP, Subscription Services Desk, Building 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5094.

QQ-A-225/6	Aluminum Alloy Bar, Rod, and Wire; Rolled, Drawn, or Cold Finished, 2024
QQ-A-225/9	Aluminum Alloy Bar, Rod, Wire and Special Shapes; Rolled, Drawn, or Cold Finished, 7075
QQ-A-367	Aluminum Alloy Forgings
QQ-P-35	Passivation Treatments for Corrosion Resisting Steel
QQ-P-416	Plating, Cadmium (Electro-deposited)
QQ-S-763	Steel Bars, Wire, Shapes and Forgings, Corrosion-Resisting
MIL-STD-12	Abbreviations for Use on Drawings, and in Specifications, Standards and Technical Documents
MIL-STD-1655	Fittings, Flareless, Classification of Defects of
MIL-H-5606	Hydraulic Fluid, Petroleum Base, Missile Ordnance Reviewer
MIL-H-6083	Hydraulic Fluid, Petroleum Base, For Preservation and Operation
MIL-H-6088	Heat Treatment of Aluminum Alloys
MIL-S-6758	Steel, Chrome-Molybdenum (4130) Bars and Reforging Stock (Aircraft Quality)
MIL-T-6845	Tubing, Steel, Corrosion-Resistant (S30400), Aerospace Vehicle Hydraulic System 1/8 Hard Condition
MIL-H-6875	Heat Treatment of Steels (Aerospace Practice, Process For)
MIL-A-8625	Anodic Coatings, for Aluminum and Aluminum Alloys
MIL-S-8879	Screw Threads, Controlled Radius Root with Increased Minor Diameter: General Specification For
MIL-F-18280	Fittings, Flareless Tube, Fluid Connection
MIL-L-46010	Lubricant, Solid Film, Heat Cured, Corrosion Inhibiting
MIL-H-46170	Hydraulic Fluid, Rust Inhibited, Fire Resistant Synthetic Hydrocarbon Base
MIL-H-83282	Hydraulic Fluid, Fire Resistant, Synthetic Hydrocarbon Base, Aircraft, Metric
FED-STD-595	Colors Used in Government Procurement
MS21932	Fitting End, Bolt Cluster Fitting, Single Port
MS21934	Fitting End, Bolt Cluster Fitting, Double Port
MS21935	Fitting End, Bolt Cluster Fitting, Double Port, Through, Flareless
MS33514	Fitting End, Standard Dimensions for Flareless Tube Connection and Gasket Seal
MS33515	Fitting End, Standard Dimension for Bulkhead Flareless Tube Connection

2.1.3 National Aerospace Standards Publications: Available from Aerospace Association of America, 1725 DeSales Street, N.W., Washington, DC 20036.

NAS1760	Fitting End, Flareless Acorn, Standard Dimensions for