

Fittings, Lubrication

RATIONALE

Revise AS35411 Zinc and Zinc Nickel requirements. Revise hardness requirement for Type IV fittings.

1. SCOPE

This SAE Aerospace Standard (AS) covers the requirements for threaded lubrication fittings, straights and elbows, to be used for admitting and retaining lubricants supplied by pressure lubricating equipment.

1.1 Purpose

The purpose of this standard is to replace MIL-F-3541 with a document consistent with the performance requirements of the specification it supersedes.

1.2 Classification

Lubrication fittings covered by this standard shall be of the following types as specified:

1.2.1 Types

The types of lubrication fittings shall be as follows:

- a. Type I: See AS15001, surface check, 1/4-28 taper threads, carbon steel
- b. Type II: See AS15002, surface check, straight threads, carbon steel
- c. Type III: See AS15003, surface check, 1/8 pipe threads, carbon steel
- d. Type IV: See AS15004, surface check, 1/4-28 taper threads, Ni-Cu alloy
- e. Type V: See AS15005, throat or surface check, 1/8 pipe threads, Ni-Cu alloy
- f. Type VI: See AS15006, leak proof, 1/8 pipe threads, carbon steel
- g. Type VII: See AS15720, throat or surface check, 1/4-28 taper threads, corrosion resistant steel
- h. Type VIII: See AS15721, throat or surface check, 1/8 pipe threads, corrosion resistant steel

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2. 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 SAE Publications

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

ARP4784	Definitions and Limits, Metal Material Defects and Surface and Edge Features, Fluid Couplings, Fittings and Hose Ends
AS15000	Fitting End, Lubrication, Hydraulic - Design Standard
AS15001	Fitting, Lubrication, Hydraulic, Surface Check, .250-28 Taper Threads, Steel, Type I
AS15002	Fitting, Lubrication, Hydraulic, Surface Check, Straight Threads, Steel, Type II
AS15003	Fitting, Lubrication, Hydraulic, Surface Check, 1/8 Pipe Threads, Steel, Type III
AS15004	Fitting, Lubrication, Hydraulic, Surface Check, .250-28 Taper Threads, Nickel-Copper Alloy, Type IV
AS15005	Fitting, Lubrication, Hydraulic, Throat or Surface Check, 1/8 Pipe Threads, Nickel-Copper Alloy, Type V
AS15006	Fitting, Lubrication, Hydraulic, Leakproof, 1/8 Pipe Threads, Steel, Type VI
AS15720	Fitting, Lubrication, Hydraulic, Throat or Surface Check, .250-28 Taper Threads, Corrosion Resistant Steel, Type VII
AS15721	Fitting, Lubrication, Hydraulic, Throat or Surface Check, 1/8 Pipe Threads, Corrosion Resistant Steel, Type VIII
AMS-QQ-P-416	Plating, Cadmium (Electrodeposited)
AMS-QQ-S-763	Steel, Corrosion Resistant, Bars, Wire, Shapes, and Forgings
J476	Dryseal Pipe Threads
J864	Surface Hardness Testing with Files, Recommended Practice

2.2 ASQ Publications

Available from American Society for Quality, 600 North Plankinton Avenue, Milwaukee, WI 53203, Tel: 800-248-1946 (U.S. or Canada) or +1-414-272-8575 (International), www.asq.org.

ASQ Z1.4 Sampling Procedures and Tables for Inspection by Attributes

2.3 ASME Publications

Available from American Society of Mechanical Engineers, 22 Law Drive, P.O. Box 2900, Fairfield, NJ 07007-2900, Tel: 973-882-1170, www.asme.org.

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

2.4 ASTM Publications

Available from ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959, Tel: 610-832-9585, www.astm.org.

ASTM A 108 Standard Specification for Steel Bars, Carbon, Cold-Finished, Standard Quality

ASTM A 313 Standard Specification for Stainless Steel Spring Wire

ASTM A 582 Standard Specification for Free-Machining Stainless Steel Bars

ASTM B 166 Standard Specification for Nickel-Chromium-Iron Alloy (UNS N06600, N0606601, N06603, N06690, N06025, and N06045) Nickel-Chromium-Cobalt-Molybdenum Alloy (UNS N06617) Rod, Bar and Wire

ASTM B 633 Standard Specification for Electrodeposited Coatings of Zinc on Iron and Steel

ASTM E 18 Standard Test Methods for Rockwell Hardness and Rockwell Superficial Hardness of Metallic Materials

2.5 U.S. Government Publications

Available from the Document Automation and Production Service (DAPS), Building 4/D, 700 Robbins Avenue, Philadelphia, PA 19111-5094, Tel: 215-697-6257, <http://assist.daps.dla.mil/quicksearch/>.

MIL-PRF-10924 Grease, Automotive and Artillery

MIL-PRF-23827 Grease, Aircraft and Instrument, Gear and Actuator Screw, NATO Code Number G-354

QQ-N-281 Nickel-Copper Alloy Bar, Rod, Plate, Sheet, Strip, Wire, Forgings, and Structural and Special Shaped Sections

VV-G-632 Grease, Industrial, General Purpose

FED-STD-H28 Screw-Thread Standards for Federal Services

3. TECHNICAL REQUIREMENTS

3.1 Materials

Materials for the lubrication fittings shall conform to applicable specifications and shall be as specified herein.

3.1.1 Types I, II, III, and VI Fittings

3.1.1.1 Balls, Bodies, and Tips

Balls, bodies and tips shall be carbon steel conforming to any of the chemical compositions of ASTM A 108.

3.1.2 Types IV and V Fittings

3.1.2.1 Balls, Straight Bodies and Tips

Balls, straight bodies and tips shall be nickel-copper alloy conforming to QQ-N-281.

3.1.2.2 Springs

Springs shall be nickel-chromium-iron alloy conforming to ASTM B 166, UNS N06600, cold worked (as worked).