



AEROSPACE STANDARD

AS2094™**REV. B**

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Superseding AS2094A

(R) Test Methods for Tube-Fitting Assemblies

RATIONALE

This document has been determined to contain basic and stable technology which is not dynamic in nature.

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FOREWORD

This document is equivalent to ISO 10583 except pressure class J, System Pressure Test, Torsion Test and Electrical Bonding Test added. This document has been prepared to standardize on the test methods for qualification of tube-fitting assemblies used in aircraft fluid systems. Compliance with these test methods is necessary for assemblies which are used in systems where a malfunction could affect the safety of flight.

1. SCOPE

This SAE Aerospace Standard (AS) specifies test methods for tube-fitting assemblies used in aircraft fluid systems in the following pressure classes: B (1500 psi or 10500 kPa), D (3000 psi or 21000 kPa), E (4000 psi or 28000 kPa), and J (5000 psi or 35000 kPa) and in temperature types I (-65 to 160 °F or -55 to 70 °C), II (-65 to 275 °F or -55 to 135 °C), and III (-65 to 400 °F or -55 to 200 °C) of AS2001.

This document applies each time that it is referred to in a procurement specification or other definition document.

Fluids and materials used for the tests are listed in Section 2.

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 (inside USA and Canada) or 724-776-4970 (outside USA), www.sae.org.

AS603 Impulse Testing of Hydraulic Hose, Tubing, and Fitting Assemblies

ARP1185 Flexure Testing of Hydraulic Tubing Joints and Fittings

ARP1870	Aerospace Systems Electrical Bonding and Grounding for Electromagnetic Compatibility and Safety
AS1055	Fire Testing of Flexible Hose, Tube Assemblies, Coils, fittings, and Similar System Components
AS1241	Fire Resistant Phosphate Ester Hydraulic Fluid for Aircraft
AS2001	Aerospace Fluid Systems and Components - Pressure and Temperature Classifications
AS4265	Impulse Testing of Hydraulic Tubing and Fittings, S-N Curve
MA2003	Rotary Flexure Testing of Hydraulic Tubing Joints and Fittings
MA2004	Thermal Shock Testing of Fluid System Piping and Fittings

2.1.2 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 D 471 Standard Test Fluids, Hydrocarbon

2.1.3 U.S. Government Publications

Available from the Document Automation and Production Service (DAPS), Building 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5094, Tel: 215-697-9495, <https://assist.daps.dla.mil/quicksearch/>.

MIL-C-81302	Cleaning Compound, Solvent, Trichlorotrifluoroethane
MIL-DTL-5624	Turbine Fuel, Aviation, Grades JP-4 and JP-5
MIL-PRF-5606	Hydraulic Fluid, Petroleum Base; Aircraft, Missile, and Ordnance
MIL-PRF-680	Degreasing Solvent
MIL-PRF-7808	Lubricating Oil, Aircraft Turbine Engine, Synthetic Base
MIL-PRF-83282	Hydraulic Fluid, Fire Resistant, Synthetic Hydrocarbon Base, Metric NATO Code Number H-537
MIL-STD-810	Environmental Engineering Considerations and Laboratory Tests
TT-I-735	Isopropyl Alcohol

2.2 Definitions

AMBIENT TEMPERATURE: Temperature in the test area or test chamber.

ROOM TEMPERATURE: Temperature in the test laboratory 59 to 95 °F (15 to 35 °C).

3. QUALITY CONFORMANCE INSPECTION PROCEDURES

Fitting components and assemblies shall be inspected using the normal tools and procedures.