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Aerospace series — Tube fittings for fluid systems, 5 080 psi (35 000 kPa) — Qualification specification

Série aérospatiale — Raccordements de tubes pour les systèmes fluides, 5 080 psi (35 000 kPa) — Spécification de qualification

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/TC 20, *Aircraft and space vehicles*, Subcommittee SC 10, *Aerospace fluid systems and components*.

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Introduction

This International Standard establishes the basic performance for 5 080 psi (35 000 kPa) tube fitting assemblies used in aerospace fluid systems.

The test requirements are intended to satisfy the most strenuous demands encountered in a high-performance aircraft hydraulic system.

International Standards use the International System of units (SI); however, large segments of the aerospace industry make use of other measurement systems as a matter of common working practice.

All dimensions and units used in this International Standard are given in SI units, with other units also indicated for the convenience of the user.

The decimal sign used in International Standards is the comma (“,”); however, the comma is not used in common working practice with non-SI dimensions. Therefore, in common with many other aerospace standards, the decimal point (“.”) is used in this International Standard when providing dimensions in inch-pound units.

NOTE The use of non-SI units and the decimal point in this International Standard does not constitute general acceptance of measurement systems other than SI within International Standards.

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Aerospace series — Tube fittings for fluid systems, 5 080 psi (35 000 kPa) — Qualification specification

1 Scope

This International Standard specifies performance and quality requirements for the qualification and manufacture of standard tube fittings to ensure reliable performance in aircraft hydraulic 5 080 psi (35 000 kPa) systems.

This International Standard specifies baseline criteria for the design and manufacture of system fittings that are qualification tested on engines.

This International Standard covers fittings from size –04 to –20 used for the following:

— separable/permanent pipe end fittings;

— permanent connection fittings;

— separable connection fittings.

This International Standard covers fittings of the temperature types and pressure classes specified in ISO 6771.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 2685, *Aircraft — Environmental test procedure for airborne equipment — Resistance to fire in designated fire zones*

ISO 6772, *Aerospace — Fluid systems — Impulse testing of hydraulic hose, tubing and fitting assemblies*

ISO 6773, *Aerospace — Fluid systems — Thermal shock testing of piping and fittings*

ISO 7137, *Aircraft — Environmental conditions and test procedures for airborne equipment*

ISO 7257, *Aircraft — Hydraulic tubing joints and fittings — Rotary flexure test*

ISO 10583:1993, *Aerospace fluid systems — Test methods for tube/fitting assemblies*

EUROCAE ED-14E/RTCA DO-160E, Section 22, *Lightning Induced transient Susceptibility*

3 Requirements

3.1 Qualification

Fittings claiming conformity with this International Standard shall be representative of products, which have successfully met the requirements and have passed the tests in this International Standard.

3.1.1 Manufacturer qualification

Manufacturer approval shall be granted by purchaser qualification procedure.

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