AEROSPACE STANDARD

AS150™ **REV. F**

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Superseding AS150D

(R) Hose Assembly, Type Classifications of, Basic Performance and Fire Resistance

RATIONALE

Remove reference to Periodic Fire Tests.

1. SCOPE

This SAE Aerospace Standard (AS) establishes Type classification for those hose assemblies commonly used in aerospace fuel, lubricating oil, and hydraulic fluid systems.

1.1 Purpose

The purpose of this document is to create a common Classification (Type) system for the aforementioned hose assemblies. This is to facilitate determining comparability within a Type, offer a consolidated listing of active hose assembly types with performance references including fire resistance properties.

1.2 Product Classification

Hose assemblies are classified (type) (see Figure 1 for examples).

1.2.1 Basic Performance (Using Roman Numerals)

Each basic type is identified by performance in accordance with a military, SAE, or other industry specification(s) based upon pressure rating, temperature rating, and application(s).

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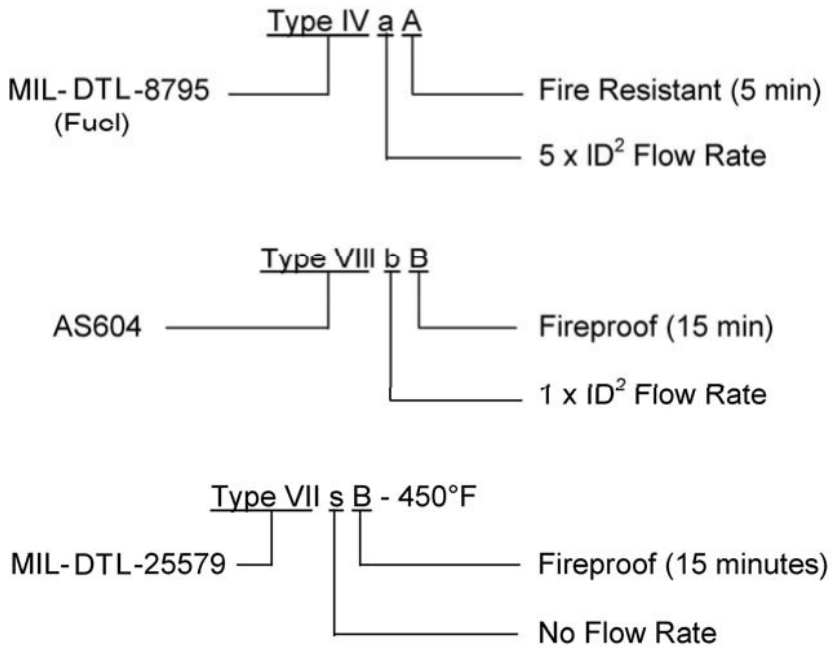

Figure 1 - Type classification, examples

1.2.2 Fire Resistance (If Applicable)

1.2.2.1 Suffix using lowercase Letters "a", "b", or "s" to indicate fluid flow rate:

a. "a" indicates a fluid flow rate of 5 x ID^2 [generally fuel and lube oil applications]

b. "b" indicates a fluid flow rate of 1 x ID^2 [generally hydraulic (pressure and return) applications]

c. Special "s" designates no flow but fluid filled

d. No suffix indicates no requirement/qualification for fire resistance

NOTE: TSO-C75 lists various flow rates based on type, size, and pressure (see 3.2).

1.2.2.2 Suffix using upper case letters "A" or "B" to indicate fire test duration requirement (if applicable):

a. "A" indicates AS1055 Class A (5 minutes) fire resistant (same as fire resistance of TSO-C53a and TSO-C75)

b. "B" indicates AS1055 Class B (15 minutes) fireproof

c. No suffix indicates no requirement/qualification for fire resistance

1.2.3 Identification must include, as minimum:

a. AS150 "Type_" (per Table 1)

b. Flow "a", "b", or "s", if fire resistant (If applicable)

c. Duration code "A" or "B" (If applicable)

d. Example "Type IaB"

1.2.4 A further special case is a single performance (pressure rating) standard, such as AS1227 or MIL-DTL-25579, with two or more temperature classes. The temperature limit must be stated.

1.3 Application

Section 6 describes the shortcomings of current classification systems in adequately providing for the variety of hose (assembly) materials, operating pressures, temperatures, and fire resistance.

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.

2.1.1 SAE Publications

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

AS604 Hose Assembly, Polytetrafluoroethylene, Metallic Reinforced, 3000 psi, 400 °F, Hydraulic, Heavyweight

AS614 Hose Assembly, Polytetrafluoroethylene, Metallic Reinforced, 4000 psi, 400 °F, Heavy Duty, Hydraulic and Pneumatic

AS620 Hose Assemblies, Convoluted Polytetrafluoroethylene Metallic Reinforced, High Temperature, Medium Pressure, Aircraft

AIR797 Hose Characteristics and Selection Chart

AS824 Hose Assemblies, Flexible Metal, High Pressure and High Temperature

AS1055 Fire Testing of Flexible Hose, Tube Assemblies, Coils, Fittings and Similar System Components

AS1072 Sleeve, Hose Assembly, Fire Protection

AS1227 High-Temperature, Low Pressure Hose Assembly, Convoluted Polytetrafluoroethylene, for Aerospace

AS1339 Hose Assembly, Tetrafluoroethylene, 400 °F, 3000 psi, Hydraulic, Lightweight

AS1424 Hose Assemblies, Metal, Medium Pressure, High Temperature

AIR1569 Handling and Installation Practice for Aerospace Hose Assemblies

AS1946 Hose Assembly, Polytetrafluoroethylene, Metallic Reinforced, Up to 1500 psi and 450 °F, Hydraulic and Pneumatic

AS1975 Hose Assemblies, Polytetrafluoroethylene, Aramid Reinforced, 4000lbf/in^2 (27 500 kPa), Hydraulic and Pneumatic

AS4098 Hose Assembly, Polytetrafluoroethylene, Heavy Duty, Metallic Reinforced, 400 °F (204 °C), 5000 psi, Hydraulic and Pneumatic