



AEROSPACE RECOMMENDED PRACTICE

ARP907™

REV. A

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Superseding ARP907

Missile and Rocket Applications: Hose Assemblies, Flexible
Metal, High Pressure and High Temperature

RATIONALE

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1. SCOPE:

This recommended practice covers the requirements and qualification tests for two types of flexible all-metal hose assemblies intended for hydraulic use on missile and rocket applications at rated pressures of 4000 psi.

Type I -65° to +650 °F service temperature range

Type II -65° to +1000 °F service temperature range

2. APPLICABLE DOCUMENTS:

The following specifications, standards, drawings, and publications of the issue in effect on date of invitation for bid, form part of this specification to the extent specified herein. When the requirements of the specifications listed below conflict with the requirements of this specification, the requirements of this specification shall govern.

2.1 Specifications:

MIL-E-5272	Environmental Testing, Aeronautical and Associated Equipment (General Specification for).
MIL-H-5606	Hydraulic Fluid, Petroleum Base; Aircraft, Missile, and Ordnance.
MIL-L-6082	Lubricating Oil, Aircraft Reciprocating (Piston) Engine.
MIL-W-8611	Welding, Metal Arc and Gas, Steels, and Corrosion and Heat Resistant Alloys; Process for.

2.2 Standards:

MIL-STD-130	Identification Marking of U.S. Military Property.
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2.3 Publications:

AMS 2669*	Brazing - Silver, Flexible Metal Hose - 800 F Max Operating Temperature.
ARP602*	Hose Assemblies, Flexible Metal, Aeronautical, Medium Pressure.

3. REQUIREMENTS:

3.1 Qualifications:

Any hose assembly furnished under this specification shall be a product which consists of a metal pressure carrier and external wire reinforcement, with fittings suitable for use in missile and rocket systems at the applicable pressure and temperature per Table 1, and which has passed the basic qualification tests specified herein.

TABLE 1

HOSE SIZE NO.	HOSE NOMINAL ID (Inches)	HOSE BORE MINIMUM (Inches)	HOSE MAXIMUM OD (Inches)	FITTING BORE MINIMUM (Inches)	MINIMUM CENTERLINE BEND RADIUS FIXED POSITION (Inches)	WORKING PRESSURE MAXIMUM (psi)	BURST PRESSURE MINIMUM (psi)
-4	1/4	.230	.750	.146	3.50	4000	12,000
-6	3/8	.335	1.000	.271	5.50	4000	12,000
-8	1/2	.460	1.250	.365	6.50	4000	12,000
-10	5/8	.585	1.500	.455	8.00	4000	12,000
-12	3/4	.700	1.750	.568	9.75	4000	12,000
-16	1	.950	2.000	.778	13.00	4000	12,000

NOTE: Pressure data in Table 1 is based on operating temperatures of 650 °F and 1000 °F for Type I and Type II hose respectively.

3.2 Materials and Processes:

Materials and processes used in the construction of various types of hose assemblies enumerated in paragraph 1 shall be compatible with the operating conditions specified for the applicable type of hose assembly.

3.3 Design and Construction:

The hose assembly design and construction shall be such that the resulting assembly will perform in accordance with the requirements of this specification.

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