AEROSPACE INFORMATION REPORT

AIR797™	REV. F

Issued 1963-09
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Stabilized 2021-04

Superseding AIR797E

Hose Characteristics and Selection Chart

RATIONALE

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

STABILIZED NOTICE

This document has been declared “Stabilized” by the SAE G-3, Aerospace Couplings, Fittings, Hose, Tubing Assemblies Committee and will no longer be subjected to periodic reviews for currency. Users are responsible for verifying references and continued suitability of technical requirements. Newer technology may exist.

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1. SCOPE:

This document lists military and industry specifications and standards which are used in aerospace systems and for ground servicing equipment. The characteristic limitations of the hose, which are of major importance to designers, and the sizes in which the hoses are standard are shown. Revisions and amendments, which are current for these specifications and standards, are not listed.

2. REFERENCES:

The following publications form a part of this specification 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 specification and references cited herein, the text of this specification takes precedence. Nothing in this specification, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

Specific hose assembly (performance/procurement) specifications, bulk hose and assembly configuration standards are not listed in Section 2 but are the basis of the tables herein.

2.1 SAE Publications:

Available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096-0001.

AS150	Hose Assembly, Type Classification of, Basic Performance and Fire/Resistance
ARP600	Torque Determination, Method of
ARP603	Impulse Test Equipment for Hydraulic System Components
ARP605	Routine Inspection and Test Procedure for Refueling Hoses
AS611	Tetrafluoroethylene Hose Assembly Cleaning Methods
ARP908	Hose Fitting, Installation and Qualification Test Torque Requirement
AS1055	Fire Testing of Flexible Hose, Tube Assemblies, Coils, Fittings and Similar System Components
AIR1377	Fire Test Equipment for Flexible Tube and Hose Assemblies
ARP1569	Handling and Installation Practice for Aerospace Hose Assemblies

2.1 (Continued):

ARP1658	Visual Inspection Guide for Installed Hose Assemblies
AIR1698	Hose Assembly Identification Practices
AS1933	Age Controls for Hose Containing Age Sensitive Elastomeric Material
AIR2000	Aerospace Fluid System Standards, Metric National and International (Note: Provides Cross Reference AS/ARP to MA/ISO Documents for Hose, Hose Assemblies, and Related Items)
AIR4092	Investigation of PTFE "Melt" Phenomenon for High Pressure Hoses
AIR4918	Industry Practices and Guidelines for Selection of Coiled Tubes, Flex Hoses, Swivels and Extensive Fittings for Aircraft Fluid Systems

2.2 U.S. Government Publications:

Available from DODSSP, Subscription Services Desk, Building 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5094.

MIL-H-6002	Marking; Standard Hose, Aircraft
MS33620	Chart, Hose Selection
MIL-STD-1523	Age Controls of Age Sensitive Elastomeric Materials (Cancelled, see AS1933)

3. GENERAL:

3.1 See Tables 1 through 4 for military and SAE hose assemblies and military and SAE hose protective sleeves.

3.2 Classifications:

3.2.1 AS150 lists most military specification and industry specification aerospace hose assemblies assigning a "universal" type designation that may also be coded for fire resistance. Equivalency to DOT-FAA technical standard order (TSO) designation is also included.

3.3 Metric Hose Assemblies:

AIR2000 reflects metric and International Standard Organization (ISO) equivalent or similar hose assemblies.

3.4 Installation and Maintenance:

ARP1569 provides guidance for installation and routing while ARP1658 provides visual inspection guidance for hose assemblies.

4. NOTES:

4.1 The change bar (|) located in the left margin is for the convenience of the user in locating areas where technical revisions, not editorial changes, have been made to the previous issue of this document. An (R) symbol to the left of the document title indicates a complete revision of the document.

PREPARED BY SAE SUBCOMMITTEE G-3D, AEROSPACE HOSE OF
COMMITTEE G-3, AEROSPACE COUPLINGS, FITTINGS, HOSE, AND TUBING ASSEMBLIES

TABLE 1 - Military Hose Assembly Specification and Standards

Assembly Drawing or Procurement Specification	Hose/Hose Assembly Specification	End Fitting Drawing or Specification	Usage Media	Temperature Range	Sizes	Pressure (psig) Working	Pressure (psig) Proof	Pressure (psig) Burst	Impulse Life	Bend Radius (in)	Remarks
AN 6270	MIL-H-5593	MIL-A-38726	Gas	-65 to	-2	300	600	2 000			
Hose Assembly	Hose, Aircraft,	Adapter,	Water	+160 °F	-3	250	500	1 700	No	Not	
Detachable Swivel	Low Pressure,	Assembly,	Alcohol		-4	200	400	1 250	Life	Stated	
Fitting, Low	Flexible	reusable ...	Oil		-6	150	300	1 000	Test		
Pressure		MS27404			-8	150	250	750			
					-10	150	250	700			
MIL-H-8790	MIL-H-8788	MIL-F-8769	Hydraulic Oil	-65 to	-4	3000	8000	16 000	100 000 (1)	3	No Gas Test
Hose Assemblies,	Hose,	Fitting End,		+160 °F	-5	3000	7000	14 000	100 000	3.375	(1) -4 to -12, peaks 150%
Rubber,	Hydraulic	Attachable ...			-6	3000	7000	14 000	100 000	5	working pressure bent
Hydraulic	High Pressure	MS28760			-8	3000	7000	14 000	75 000	5.750	at 120 °F
High Pressure		MS28761			-10	3000	6000	12 000	50 000	6.500	(2) No impulse peaks,
(3000 psi)	Assy. Config.	MS28780			-12	3000	6000	12 000	35 000	7.750	straight
	MS28759	MS28781			-16	3000	5000	10 000	45 000 (2)	9.625	
	MS28762										
	MS28920										
	MS28921										
	MS28922										
	MS28923										
	MS28924										
MIL-H-8795	MIL-H-8794	MIL-A-5070	Hydraulic	-65 to	-3	3000	6000	12 000	200 000 (2)	3	No Gas Test
Hose Assemblies	Hose, Rubber,	Adapter, Hose	Fuel	+160 °F	-4	3000	6000	12 000	200 000	3	(1) The pressure based on
Rubber, Hydraulic	Hydraulic,	to Tube ...	Oil		-5	3000	5000	10 000	200 000	3.375	fuel, all others
Fuel and Oil	Fuel, and Oil				-6	2000	4500	9 000	200 000	4	based on hydraulic
Resistant	Resistant				-8	2000	4000	8 000	200 000	4.625	(2) -3 to -16, 125% peak,
					-10	1750	3500	7 000	200 000	5.500	bent
	Assy. Config.				-12	1500	3000	6 000	200 000	6.500	(3) -20 to -32, 100% peak
	MS28741 (Flare)				-16	800	1600	3 200	200 000	7.375	pressure straight
	AS1863 thru				-20	600	1250	2 500	200 000	9	
	AS1868				-24	500	1000	2 000	100 000	11	
	(Flareless)				-32	350	700	1 400	100 000	13.250	
					-40	200 (1)	300	1 000	100 000	24	
					-48	200 (1)	300	800	No Impulse	33	
MIL-H-22343	MIL-H-22343	MS90457	Oxygen,	-297 to	-4	None	450	4 500	None	2	Low Temp Flex Test
Hose Assembly			Liquid and	+260 °F	-5	Stated	450	3 500		2.500	Vibration Test
Metal	Assy. Config.		Gaseous		-6			3 500		3	
Liquid Oxygen	MS90457				-8			3 500		4	

TABLE 1 (Continued)

Assembly Drawing or Procurement Specification	Hose/Hose Assembly Specification	End Fitting Drawing or Specification	Usage Media	Temperature Range	Sizes	Pressure (psig) Working	Pressure (psig) Proof	Pressure (psig) Burst	Impulse Life	Bend Radius (in)	Remarks
MIL-H-25579	MIL-H-27267	MIL-F-27272	Fuel	-65 to	-3/-4	1500	3 000	12 000 (3)	100 000 (4&5)	2	Corrosion Tests
Hose Assembly	Hose, Tetrafluoro-	Field Attach.	Lube Oil	+450 °F	-4	1500	3 000	12 000	100 000	2	Conductivity Tests
Tetrafluoroethy-	ethylene, High	MS27053 thru	Water-Alcohol	(1)	-5	1500	3 000	10 000	100 000	2	(1) 400 °F for hydraulic
lene, High	Temperature	MS27060	Chemical	(2)	-6	1500	3 000	9 000	100 000	4	and pneumatic usage
Temperature,	Medium Pressure	MS27381 thru	Hydraulic		-8	1500	3 000	8 000	100 000	4.625	(2) 275 °F Alum. Figs.
Medium Pressure		MS27385	Pneumatic		-10	1500	3 000	7 000	100 000	5.500	-8 and larger
See Also AS1946	Assy. Config.				-12	1000	2 000	5 000	100 000	6.500	(3) Room Temp values
	MS8000 thru				-16Z	1250	2 500	5 000	100 000 (6)	7.375	(4) -3/-4 not for
	MS8009				-20Z	1000	2 000	4 000	100 000 (7)	11	hydraulic use
					-24Z	1000	2 000	4 000	100 000	14	(5) 125% peak at 400 °F
											bent
											(6) -16Z and larger,
											straight
											(7) -20Z and -24Z, 100%
											peaks
MIL-H-26499	MIL-H 26499	MIL-H-26499	Oxygen	-65 °F	-4	3500	7 000	14 000	50 000 (1)	4	(1) 100% peaks
Hose Assembly,				To Unstated							
Metal, Flexible				Max.							
Breathing Oxygen											
MIL-H-26626	MIL-H-26626	MIL-H-26626	Oxygen	-297 to	-5	500	1 000	2 200	None	6	Cold Flex Test
Hose Assembly,				+260 °F	-6	500	1 000	2 200		8	Leakage (A-U-W)
Tetrafluoroethy-	Assy. Config.				-8	500	1 000	2 200		9.250	Air (or Nitrogen) Under
lene	MS24548										Water
MIL-H-26633	MIL-H-26633	(MS28760 Type)	Oxygen	-65 to	-4 hose	3000	6 000	12 000	2000	3.250	(1) 100% peak pressure
Hose Assembly,				+160 °F	-5 end				(Amb.) (1)		cold flex test
Polytetrafluoro-											tensile test
ethylene, Oxygen											
MIL-H-26666	MIL-H-26666	(MS28760 Type)	Pneumatic	-65 to	-4	4000	8 000	16 000	1000 (1)	3.250	(1) 100% peak pressure
Hose Assembly			(Ground	+160 °F	-6	4000	8 000	16 000	1000	5.250	1000 cycles at
Pneumatic			Support		-8	4000	8 000	16 000	1000	6	room temp and
High Pressure			Equipment)		-10	4000	8 000	16 000	1000	6.750	1000 cycles at
Polyethylene			Not for Oxygen		-12	4000	8 000	16 000	1000	8	160 °F
MIL-H-27462	MIL-H-27462	MIL-H-27462	Pneumatic	-65 to	-4	8500	17 000	34 000	No	6	CANCELLED
Hose Assembly		(Pipe Threads)	(Ground	+160 °F	-6	8500	17 000	34 000	Life	7	
Pneumatic, High			Support		-8	8500	17 000	34 000	Test	10	
Pressure			Equipment)								
(8500 psi)											
CANCELLED,											
NOTICE 1											
MIL-H-38360	MIL-H-38360 see	MIL-H-38360 see	Hydraulic	-65 to	-4	3000	6 000	16 000	250 000 (1)	3.250	CANCELLED
Hose Assembly,	AS604 & AS1339	AS604 & AS1339	Pneumatic	+400 °F	-6	3000	6 000	14 000	250 000	5	(1) 150% peak pressure
TFE High Tempera-	See also			(3)	-8	3000	6 000	14 000	250 000	5.750	bent
ture Hydraulic	MIL-H-83298 (3)	See also			-10	3000	6 000	12 000	250 000	6.500	(2) Length end of nipple
and Pneumatic		MIL-F-83296 (3)			-12	3000	6 000	12 000	250 000	7.750	to end of nipple
Notice 1, Cancela-	Assy. Config.				-16	3000	6 000	12 000	250 000	9.625	(flareless)
tion. See AS604	MS27364 thru				-20	3000	6 000	12 000	250 000	12	(3) Pneumatic limit for
and AS1339 (2,3)	MS27374 (2)										field attachable
	CANCELLED										assemblies is +160 °F

TABLE 1 (Continued)

Assembly Drawing or Procurement Specification	Hose/Hose Assembly Specification	End Fitting Drawing or Specification	Usage Media	Temperature Range	Sizes	Pressure (psig) Working	Pressure (psig) Proof	Pressure (psig) Burst	Impulse Life	Bend Radius (in)		Remarks
MIL-H-38390	MIL-H-38390 (1)	(MS28760 Type)	Pneumatic (Ground Support Equipment)	-65 to +160 °F	-4	4000	8 000	16 000	2 000 (Amb.)	3.250	(1)	Chloroprene, or equivalent cover sleeve
Hose Assembly Tetrafluoroethylene Pneumatic High Pressure See also AS614					-6	4000	8 000	16 000	2 000	5.250		
					-8	4000	8 000	16 000	2 000	6		
					-10	4000	8 000	16 000	2 000	6.750		
					-12	4000	8 000	16 000	2 000	8		
MIL-H-83772 Hose Assembly Metal Cryogenic Liquid, Aircraft Servicing	MIL-H-83772	MIL-H-83772	Cryogenic Liquids Oxygen and Nitrogen	-320 to +500 °F	3/8	100	150	500	None	12	(1)	Nonvacuum Insulated
											(2)	.12 BTU/h F/ft of Length Maximum Thermal Conductivity
MIL-H-83796 Hose Assembly Rubber Lightweight Medium Pressure	MIL-H-83797 Hose, Rubber, Lightweight, Medium Pressure Assy. Config. MIL-H-83796/1 thru 9	MIL-H-83798/1 thru 9 Fittings, Rubber Hose ...	Aircraft Fuel Oil	-65 to +250 °F	-3	1000	3 000 (1)	6 000	None	1.75	(1)	All flanges to be tested at rated proof or 1500 psi whichever is less
					-4	1000	3 000	6 000		2.00		
					-5	1000	3 000	6 000		2.25		
					-6	1000	3 000	6 000		2.50		
					-8	1000	2 500	5 000		3.50		Vacuum Test
					-10	1000	2 500	5 000		4.00		Cold Flex Test
					-12	1000	2 000	3 750		4.50		Corrosion Test
					-16	750	1 500	2 500		5.50		
					-20	500	1 300	2 000		8.00		
					-24	250	800	1 750		9.00		
					-32	200	600	1 200		12.50		
MIL-H-85800 (AS) Hose Assemblies, Polytetrafluoroethylene, Aramid Fiber Reinforced 5000 and 8000 psi	MIL-H-85800	MIL-H-85800 (1)	Lubricant Fuel Hydraulic	-65 to +275 °F	-3	8000 (2)	16 000	28 000 (3)	200 000 (2)	2.5 (2)	(1)	Beam seal mates with MIL-F-85720/1
					-4	8000	16 000	28 000	200 000	3.00		
					-6	8000	16 000	28 000	200 000	5.00	(2)	Bend radius for 5000, and differs for 8000 psi
					-8	8000	16 000	28 000	200 000	5.75		
					-10	8000	16 000	28 000	200 000	6.50	(3)	Room temp. lower for 275 °F
					-12	8000	16 000	25 000	200 000	7.75		
					-14	8000	16 000	25 000	200 000	8.75		
					-16	8000	16 000	24 000	200 000	9.63		

TABLE 2 - SAE Hose Assembly Standards[1]

Assembly Drawing or Procurement Specification	Hose/Hose Assembly Specification	End Fitting Drawing or Specification	Usage Media	Temperature Range	Sizes	Pressure (psig) Working	Pressure (psig) Proof	Pressure (psig) Burst	Impulse Life	Bend Radius (in)	Remarks
AS604	AS604	AS604	Hydraulics	-65 to	-4	3000	6 000	16 000 (1)	250 000 (2)	3	(1) Room temp values.
Hose Assemblies			Lubricants	+400 °F	-6	3000	6 000	14 000	250 000	5	400 °F are lower
Aircraft and	Assy. Config.		Pneumatics	(4)	-8	3000	6 000	14 000	250 000	5.750	(2) 150% peaks following
Missiles, High	AS621 thru				-10	3000	6 000	12 000	250 000	6.500	50 h corrosion
Temperature,	AS626 (3) and				-12	3000	6 000	12 000	250 000	7.750	conditioning
High Pressure	AS627 thru				-16	3000	6 000	12 000	250 000	9.625	(3) Length gage point to
3000 psi	AS632 (37°)				-20	3000	6 000	12 000	250 000	12	gage point (flareless)
DODISS	and AS4352										(4) -20 only +275 °F
	thru AS4357										
	(Beam Seal)										
AS614	AS614	AS614	Hydraulics	-65 to	-4	4000	8 000	16 000 (1)	100 000 (2)	3	(1) Room temp values.
Polytetrafluoro-			Lubricants	+400 °F	-6	4000	8 000	16 000	100 000	5	400 °F are lower
ethylene	Assy. Config.		Pneumatics		-8	4000	8 000	16 000	100 000	5.750	(2) 150% peaks and bent
Heavy Duty,	AS4642 thru		(3)		-10	4000	8 000	16 000	100 000	6.500	(3) No gas test
High Temperature	AS4647 (Flare)				-12	4000	8 000	16 000	100 000	7.750	Note: Metric equivalent
High Pressure					-16	4000	8 000	16 000	100 000	9.625	MA614
4000 psi											
DODISS											
(MA614)											
AS620	AS620	AS620	Lubricant	-65 to	-4	1000	2 000	4 000 (1)	50 000 (2)	1.25	(1) Room temp values.
High Temperature			Fuel	+400 °F	-6	1000	2 000	4 000	50 000	2.25	400 °F are lower
Convoluted	Assy. Config.		Hydraulics		-8	1000	2 000	4 000	50 000	2.88	(2) Bent, 100% peaks
Polytetrafluoro-	AS1633 to		Pneumatics		-10	1000	1 800	3 600	50 000	3.00	(3) No gas test except
ethylene	AS1638 (Flareless)		(3)		-12	1000	1 800	3 600	50 000	3.75	Class 2
DODISS	AS4499 thru				-16	1000	1 800	3 600	50 000	5.00	Type II - Conductive
(MA2079)	AS4504 (Flare)				-20	1000	1 800	3 600	50 000	6.25	Innertube
					-24	750	1 500	3 000	50 000	7.50	Type I - Nonconductive
					-32	250	500	1 000	50 000	10.00	Innertube
					-40	100	200	400	50 000	12.50	Note: Metric equivalent
					-48	100	200	400	50 000	15.00	MA2079
					-64	100	200	400	50 000	24.00	
ARP824	ARP824	ARP824	Lubricant	Type I	-4	4000	10 000	12 000 (2)	75 000 (3)	3.50	(1) Type II only
High Temperature			Fuel	-65 to	-6	4000	10 000	12 000	75 000	5.50	(2) At 650 °F for Type I
High Pressure			Hydraulics	+650 °F	-8	4000	10 000	12 000	55 000	6.50	at 1000 °F for Type II
Aircraft,			Pneumatics	Type II	-10	4000	10 000	12 000	35 000	8.00	(3) 150% peaks bent
Flexible Metal			(4)	-65 to	-12	4000	10 000	12 000	35 000	9.75	(4) No gas tests
CANCELLED			Molten	+1000 °F	-16	4000	10 000	12 000	30 000	13.00	
1994-04			Salts (1)								
ARP907	ARP907	ARP907	Lubricant	Type I	-4	4000	10 000	12 000 (3)	10 000	3.50	(1) No gas tests
High Temperature			Fuel	-65 to	-6	4000	10 000	12 000	10 000	5.50	(2) Type II only
High Pressure			Hydraulics	+650 °F	-8	4000	10 000	12 000	10 000	6.50	(3) At 650 °F for Type I
Missile and			Pneumatics	Type II	-10	4000	10 000	12 000	10 000	8.00	at 1000 °F for Type II
Rockets			(1)	-65 to	-12	4000	10 000	12 000	10 000	9.75	
Flexible Metal			Molten	+1000 °F	-16	4000	10 000	12 000	10 000	13.00	
(In Review)			Salts (2)								

[1] "DODISS" indicates DoD acceptance and listing; "(DODISS)" indicates adoption requested.

TABLE 2 (Continued)[1]

Assembly Drawing or Procurement Specification	Hose/Hose Assembly Specification	End Fitting Drawing or Specification	Usage Media	Temperature Range	Sizes	Pressure (psig) Working	Pressure (psig) Proof	Pressure (psig) Burst	Impulse Life	Bend Radius (in)	Remarks
AS1227	AS1227	AS1227	Hydraulics	Class 1	-4	300	600	1 200 (1)	50 000 (2)	.50	(1) Burst is room temp
High Temperature Low Pressure Convoluted Tetrafluoroethylene			Fuels	-65 to +400 °F	-6	300	600	1 200	50 000	.75	(2) Peak is max. operating pressure
			Lubricants (3)		-8	250	500	1 000	50 000	1.00	
			Pneumatics	Class 2 -65 to +275 °F	-10	250	500	1 000	50 000	1.50	(3) Type I - Conductive Tube
					-12	200	400	800	50 000	2.00	
					-16	200	400	800	50 000	3.00	(3) Type II - Nonconductive Tube
					-20	150	300	600	50 000	4.00	
					-24	150	300	600	50 000	5.00	
					-32	150	300	600	50 000	6.00	
					-40	75	150	300	50 000	9.00	
					-48	50	100	200	50 000	12.00	
					-64Z	50	100	200	50 000	20.00	
AS1339	AS1624	AS1339	Hydraulics	-65 to +400 °F	-4	3000	6000	16 000 (1)	250 000 (2)	1.500	Conductivity Tests
Hose Assembly, Tetrafluoroethylene 400 °F, 3000 psi Lightweight (MA2007)	Hose Polytetrafluoroethylene (PTFE) Lightweight, 3000 psi, High Temperature, Hydraulic and Pneumatic		Pneumatics (4)		-6	3000	6000	14 000	250 000	2.500	(1) Room temp burst
					-8	3000	6000	14 000	250 000	2.875	(2) 150% peak pressure bent following 50 h corrosion conditioning
					-10	3000	6000	12 000	250 000	3.250	
					-12	3000	6000	12 000	250 000	4	
					-16	3000	6000	12 000	250 000	5	(3) Length gage point to gage point
											(4) See AIR4092 for application comments
											Note: MA2007 metric equivalent
	Assy. Config. AS115 thru 120 (NAS 1760 Flareless) (3) AS153 thru 158 (37 Flared) AS1909 thru AS1914 (Beam Seal)										
AS1424	AS1424		Pneumatic Systems	UP to 850 °F Continuous (1)	-4	2000 (3)	3000	8 000 (2)	(3)	2 (4)	(1) Short excursions to 1200 °F
Hose Assemblies, Metal Medium Pressure High Temperature	Assy. Config. AS136 to 141 (NAS 1760 Flareless)		Bleed Air Systems		-6	1600	2400	6 400		3	
					-8	1400	2100	5 600		4	(2) Pressure values are room temperature 850 °F pressure value are 65% of noted values
			Heavy Vent-lation System		-10	1200	1800	4 800		4.500	
					-12	1050	1575	4 200		5	
			Instrument Air Systems		-16	800	1200	3 200		6	
					-20	550	825	2 200		7	(3) 100% peak combined with 50,000 flexure cycles
											(4) Static (no flex)
											(5) See also MA2100 (ISO 7314)
AS1946	AS1946	AS1946	Fuel	-65 to +450 °F (1) (2)	-3	1500	3000	12 000 (3)	100 000 (4&5)	2	Corrosion Tests
Hose Assembly, Polytetrafluoroethylene (PTFE), Up to 450 °F (232 °C) and 1500 psi	Assy. Config. AS4006 thru AS4011 (Beam Seal) AS647 thru AS652 (Flareless)		Lube Oil		-4	1500	3000	12 000	100 000	2	Conductivity Tests
			Water-Alcohol		-5	1500	3000	10 000	100 000	2	(1) 400 °F for hydraulic and pneumatic usage
			Chemical		-6	1500	3000	9 000	100 000	4	
			Hydraulic		-8	1500	3000	8 000	100 000	4.625	(2) 275 °F alum, ftgs. -8 and larger
			Pneumatic		-10	1500	3000	7 000	100 000	5.500	
					-12	1000	2000	5 000	100 000	6.500	(3) Room temp values

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TABLE 2 (Continued)[1]

Assembly Drawing or Procurement Specification	Hose/Hose Assembly Specification	End Fitting Drawing or Specification	Usage Media	Temperature Range	Sizes	Pressure (psig) Working	Pressure (psig) Proof	Pressure (psig) Burst	Impulse Life	Bend Radius (in)	Remarks
(10 500 kPa) Procurement Specification (MA2126) (9)	AS633 thru AS638 (37°) in Work				-16Z -20Z -24Z	1250 1000 1000	2500 2000 2000	5 000 4 000 4 000	100 000 (6) 100 000 (7) 100 000	7.375 11 14	(4) -3 not for hydraulic use (5) 125% peak at 400 °F bent (6) -16Z and larger, straight (7) -20Z and 24Z, 100% peaks (8) Length gage to gage (9) See also MIL-H-25579 and MS8005 - MS8009 Note: MA2126 metric equivalent
AS1975 Hose Assemblies PTFE, Aramid Reinforced, 4000 psi, Hydraulic and Pneumatic (MA1975)	AS1975 Assy. Config. AS4568 thru AS4573 (Flareless) AS4574 thru AS4579 (Beam Seal) (in Work)	AS1975	Hydraulic Pneumatic	-65 to +275 °F	-4 -6 -8 -10 -12 -16	4000 4000 4000 4000 4000 4000	8 000 8 000 8 000 8 000 8 000 8 000	16 000 (1) 16 000 16 000 16 000 16 000 16 000	100 000 (3) 100 000 100 000 100 000 100 000 100 000	3.00 (2) 5.00 5.75 6.50 7.75 12.00	(1) 12 000 psi for high temperature (+275 °F) (2) Smaller (50%) bend radius for 3000 psi operating pressure (3) 250 000 cycles for 3000 psi operating pressure Note: Metric equivalent MA1975 (was MA2140)
AS4098 Hose Assembly, Polytetrafluoroethylene, Heavy Duty, Metallic Reinforced, 400 °F (204 °C), 5000 psi (34 500 kPa) Hydraulic and Pneumatic	AS4098	AS4098	Hydraulic	-65 to +400 °F	-4 -6 -8 -10 -12 -16	5000 5000 5000 5000 5000 5000	10 000 10 000 10 000 10 000 10 000 10 000	20 000 (1) 20 000 20 000 20 000 20 000 20 000	100 000 (2) 100 000 100 000 100 000 100 000 100 000	3 5 5.75 6.5 7.75 9.63	(1) High temp burst (min) 15 000 psi (2) 150% peak -12 and -16 may be tested with 90° bend, other 180°
AS4388 Hose Assembly, PTFE, Heavy Duty, -65 to 400 °F (-55 to 204 °C) 8000 psi (56 000 kPa) Hydraulic and Pneumatic	AS4388	AS4388	Hydraulic	-65 to +400 °F	-3 -5 -7 -9 -11 -13 -15	8000 8000 8000 8000 8000 8000 8000	16 000 16 000 16 000 16 000 16 000 16 000 16 000	28 000 (1) 28 000 28 000 28 000 28 000 28 000 28 000	200 000 (2) 200 000 200 000 200 000 100 000 100 000 100 000	3 5 6 7 9 11.5 14	(1) High temp burst (min) is 24 000 psi (2) Peak pressure 135%
AS4468 Hose Assembly, Lined Silicone, Potable Water	AS4468 Assy. Config. AS4469 thru AS4478 (NAS1760 Flareless) (2) AS4704 thru AS4706 and AS4796 thru AS4803 (AS1656 Fixed Cavity)	—	Potable Water	-65 to +160 °F	-04 -06 -08 -10 -12 -16	125 125 125 125 125 125	250 250 250 250 250 250	500 (1) 500 500 500 500 500		1.50 2.00 2.75 3.75 5.00 7.00	(1) Room temp burst (2) Length, gage point to gage point

[1] "DODISS" indicates DoD acceptance and listing; "(DODISS)" indicates adoption requested.

TABLE 2 (Continued)[1]

Assembly Drawing or Procurement Specification	Hose/Hose Assembly Specification	End Fitting Drawing or Specification	Usage Media	Temperature Range	Sizes	Pressure (psig) Working	Pressure (psig) Proof	Pressure (psig) Burst	Impulse Life	Bend Radius (in)		Remarks
AS4604 (1)	AS4604	AS4604	Hydraulic	-65 to +400 °F	-4	3000	6 000	16 000 (2)	50 000/	3	(1)	Heavy duty for rapid rate impulsing and/or torsional or longitudinal flexing
Hose Assembly, Polytetrafluoro-ethylene, CRES Reinforced, Heavy Duty, 400 °F, 3000 psi, Aircraft Hydraulic Systems	Assy, Config. AS4605 thru AS4610 (Flareless) AS4611 thru AS4016 (Flare) AS4617 thru AS4622 (Beam Seal)				-6	3000	6 000	14 000	1 000 000 (3)	5		
					-8	3000	6 000	14 000	50 000/	5.75		
					-10	3000	6 000	12 000	1 000 000	6.50		
					-12	3000	6 000	12 000	50 000/	7.75	(2)	High temp burst (min) is lower
					-16	3000	6 000	12 000	1 000 000	9.63		
					-20	3000	6 000	12 000	50 000/	12	(3)	50 000 cycles with torsion followed by 1 000 000 rapid rate cycles
									1 000 000			
									50 000/			
									1 000 000			
									50 000/			
									1 000 000			
AS4623 Hose Assembly, Polytetrafluoro-ethylene, Para Aramid Reinforced Heavy Duty, 275 °F, 3000 psi, Aircraft Hydraulic Systems	AS4623 Assy, Config. AS4624 thru AS4629 (Flareless) AS4630 thru AS4635 (Flare) AS4636 thru AS4641 (Beam Seal)	AS4623	Hydraulic	-65 to +275 °F	-4	3000	6000	16 000	(1) (2)	1.50	(1)	250 000 with final 50 000 including torsion followed by 1 000 000 rapid rate cycles
					-6	3000	6000	14 000		2.50		
					-8	3000	6000	14 000		2.88		
					-10	3000	6000	12 000		3.25		
					-12	3000	6000	12 000		4.00		
					-16	3000	6000	12 000		7.50	(2)	Peak pressure 150%
					-20	3000	6000	12 000		12.00		
AS4897 Hose Assembly, Polytetrafluoro-ethylene, Low Pressure, 450 °F and Fireproof (2)	AS4897	AS4897	Low Pressure Fuel, Lube Oil	-65 to +450 °F	-3	1600	2000	4000		.75	(1)	At 400 °F
					-4	1000	2000	4000		1.00	(2)	Similar to MIL-H-25579 or AS1946 except pressure, bend radius and inherent fire protection
					-5	800	1600	3200		1.25		
					-6	750	1500	3000		2.00		
					-8	750	1500	3000		2.00		
					-10	700	1400	2800		3.00		
					-12	600	1200	2400	100 000 (1)	4.50		
N/A	AMS 3380 Hose, Polytetrafluoro-ethylene Wire Reinforced	N/A	Fuel	-65 to +450 °F	-3	1500	3000	12 000 (1)	100 000 (2)	2	(1)	Room temperature
					-4	1500	3000	12 000	100 000	2	(2)	-3 to -16Z at 125% peak
					-5	1500	3000	(10 000	100 000	2		
					-6	1500	3000	8 000	100 000	4		See MIL-H-25579 or AS1946 for hose assemblies with similar hose characteristics
					-8	1500	3000	8 000	100 000	4.875		
					-10	1500	3000	7 000	100 000	5.500		
					-12	1000	2000	6 500	100 000	6.500		
					-16Z	1200	2400	5 000	100 000	7.625		
					-20Z	1000	2000	4 000	100 000	11.00		
					-24Z	1000	2000	4 000	100 000	14.00		

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TABLE 3 - Military Hose Protective Sleeve Standards and Specification[1]

Sleeve Drawing or Standards	Sleeve Specification	Sleeve Material	Usage Media	Temp Ranges	Sizes	Remarks
MIL-I-7444 Insulation Sleeving, Electrical, Flexible	MIL-I-7444	Vinyl Type I - Clear Type II - Color	Petroleum Base Fluids	Class 1 to 90 °F Class 2 to 67 °F To 212 °F	1/16 in ID increments From 5/16 to 2-1/2	
MIL-I-22129 Insulation Tubing, Electrical, Polytetrafluoro-ethylene, Nonrigid	MIL-I-22129	PTFE Natural color milky white to straw yellow	Excellent resistance to petroleum and synthetic hydraulic fluids, fuels, solvents, ozone, and most chemicals	-65 to +480 °F	Specify AWG-size (.010 to .347 in ID)	(1) Wall thickness varies by size, nominal .009 to .020 in
MIL-I-23053 Insulation Sleeving, Electrical, Heat shrinkable	MIL-I-23053/1	Polychloroprene black	Moderate oil, flex and ozone resistance	Class 1 (1) -67 to +194 °F Class 2 -94 to +250 °F	.250/.143 (2) to 4.000/2.280 in	(1) Not for new design (2) As furnished ID/after unrestricted shrink (3) Wall thickness (nom) .035 to .140, varies by size
	MIL-I-23053/2	Polyvinyl chloride flexible Class 1 - crosslinked Class 2 - noncrosslinked (colored)		-4 to +221 °F	.046/.023 (1) to 2.000/1.000 in	(1) As furnished ID/after unrestricted shrink (2) Wall thickness (nom) .020 to .050 Class 1 and 2 (3) Thin wall .014 to .034 Class 2 only
	MIL-I-23053/5	Polyolefin flexible crosslinked Class 1 - Flame resistant colored Class 2 - Flammable clear Class 3 - Highly flame resistant colored		Classes 1 and 2 -67 to +275 °F Class 3 -13 to +257 °F	.046/.023 (1) to 4.000/2.000 in	(1) As furnished ID/after unrestricted shrink (2) Wall thickness, .016 in to .055 in varies by size (3) Sizes in inches
	MIL-I-23053/11	Fluorinated ethylene propylene (FEP) noncrosslinked Class 1 - normal shrink Class 2 - high shrink	Excellent resistance to petroleum and synthetic hydraulic fluids, fuels, solvents, ozone, and most chemicals	-88 to +392 °F	(1) (3) .031/.027 to 4.300/3.500 (2) (3) .093/.056 to 2.000/1.200	(1) Class 1, heavy wall, .008 to .020 (2) Class 2, medium wall, .008 to .030 (3) As furnished ID/after unrestrained shrink (4) Sizes in inches

[1] Most are listed for "electrical" insulation in DODISS.