FED. SUP. CL. 4720

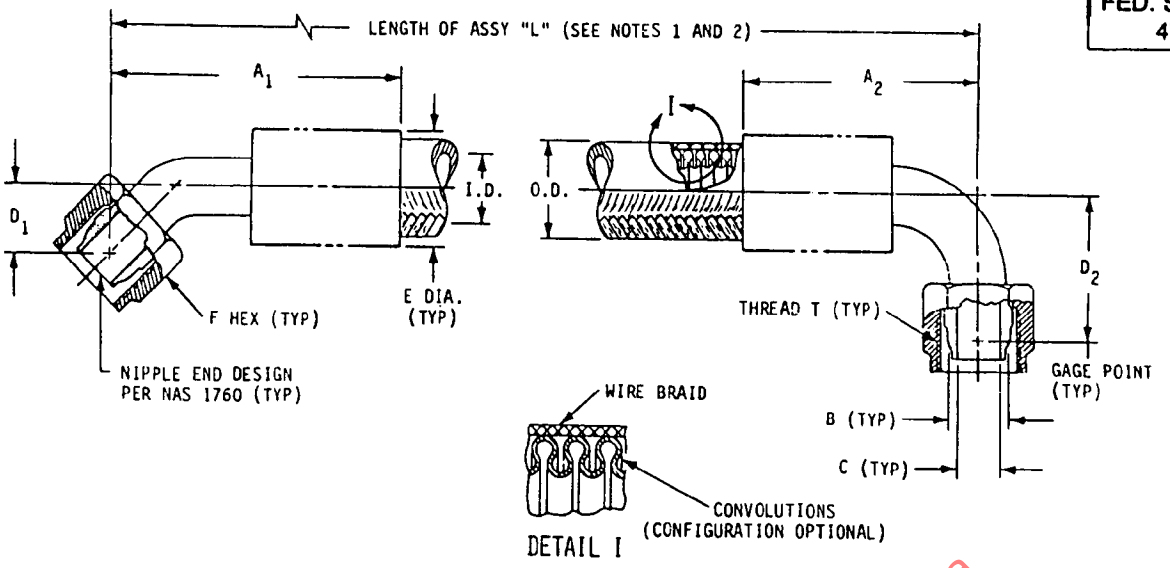

Figure 1.

TABLE I

HOSE ASSEMBLY NO. AND SIZE CODE	HOSE ASSEMBLY SIZE (REF)	THREAD T PER MIL-S-8879 (REF)	I.D. MIN	A1 MAX	A2 MAX	B GAGE DIA BASIC	C 5 DRILL DIA MIN
AS1637E	1/4	.4375-20 UNJF-3B	.270	1.52	1.24	.2930	.132
AS1637G	3/8	.5625-18 UNJF-3B	.355	1.93	1.63	.412D	.256
AS1637H	1/2	.7500-16 UNJF-3B	.510	2.16	1.85	.5600	.345
AS1637J	5/8	.8750-14 UNJF-3B	.60D	2.54	2.14	.673D	.430
AS1637K	3/4	1.0625-12 UNJ -3B	.765	2.87	2.07	.8100	.635
AS1637M	1	1.3125-12 UNJ -3B	.980	3.19	3.03	1.062D	.835
AS1637N	1-1/4	1.6250-12 UNJ -3B	1.220	4.02	3.89	1.3160	1.085
AS1637P	1-1/2	1.8750-12 UNJ -3B	1.4BD	4.57	4.15	1.565D	1.310

TABLE I (Continued)

HOSE ASSY NO. AND SIZE CODE	HOSE ASSY SIZE (REF)	D1 MIN	D1 MAX	C2 MIN	C2 MAX	E 6 DIA MAX WITHOUT SLEEVING	F HEX (REF)
AS1637E	1/4	.384	.454	.709	.779	* .55	.58
AS1637G	3/8	.509	.579	.961	1.031	.65	.69
AS1637H	1/2	.567	.637	1.115	1.185	.86	.88
AS1637J	5/8	.700	.77D	1.377	1.447	.95	1.00
AS1637K	3/4	.700	.77D	1.447	1.517	1.28	1.25
AS1637M	1	.901	.971	1.8BO	1.950	1.47	1.50
AS1637N	1-1/4	1.013	1.083	2.183	2.253	1.70	4.00
AS1637P	1-1/2	1.241	1.311	2.653	2.723	2.00	2.25

TABLE II

HOSE ASSEMBLY LENGTH	AVAILABLE INCREMENTS	TOLERANCE
UNDER 18 INCHES	(NOT LESS THAN) .125 INCH	(PLUS OR MINUS) .125 INCH
18 TO 36 INCHES	(NOT LESS THAN) .250 INCH	(PLUS OR MINUS) .250 INCH
36 TO 50 INCHES	(NOT LESS THAN) .50D INCH	(PLUS OR MINUS) .500 INCH
OVER 50 INCHES	(NOT LESS THAN) 1.000 INCH	(PLUS OR MINUS) 1 PERCENT

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SHEET	1	2	3	4
REV.	A	A	A	A

CUSTODIAN: SAE G-3/G-3D

PROCUREMENT SPECIFICATION: AS 620

SAE The Engineering Resource For Advancing Mobility®

400 COMMONWEALTH DRIVE, WARRENDALE, PA 15096

AEROSPACE STANDARD

HOSE ASSEMBLY, CONVOLUTED, TETRAFLUOROETHYLENE, FLARELESS, 45° TO 90°

AS1637

TABLE III

Ⓐ

HOSE OR COVER CODE	HOSE OR TYPE OF PROTECTIVE COVER	HOSE OR COVER O.D. ± .032 HOSE SIZE 1/4	3/8	1/2	5/8	3/4	1	1-1/4	1-1/2	UPPER TEMP. LIMIT °F
NONE	HOSE ONLY	.445	.555	.755	.850	1.060	1.270	1.526	1.790	400
B	SPIRAL ABRASION	.505	.615	.825	.935	1.140	1.330	1.630	1.890	275
D	INTEGRAL ABRASION [12]	.562	.688	.906	1.000	1.203	1.438	1.688	1.937	325
H	INTEGRAL FIRESLEEVE [7]	--	.830	1.010	1.170	1.360	1.510	1.750	2.000	400
N	FIRESLEEVE SIL/FG (AS 1072) [11]	.760	.870	1.030	1.130	1.370	1.630	1.870	2.130	400
K	INTEGRAL ABRASION (BRAIDED) POLYESTER	.500	.630	.840	.920	1.135	1.345	1.600	1.870	300

TABLE IV PHYSICAL REQUIREMENTS OF HOSE ASSEMBLIES

HOSE SIZE (REF)	OPERATING PRESSURE MAX. PSI	PROOF PRESSURE MIN. PSI	BURST PRESSURES ROOM TEMP MIN. PSI	BURST PRESSURES HIGH TEMP MIN. PSI	BEND RADIUS AT INSIDE OF BEND INCHES (HOSE ONLY)
-04	1000	2000	4000	2800	1.25
-06	1000	2000	4000	2800	2.25
-08	1000	2000	4000	2800	2.88
-10	1000	1800	3600	2500	3.00
-12	1000	1800	3600	2500	3.75
-16	1000	1800	3600	2500	5.00
-20	1000	1800	3600	2500	6.25
-24	750	1500	3000	2100	7.50

Ⓐ TABLE V NOMINAL WEIGHT

HOSE SIZE (REF)	HOSE ONLY LBS/IN.	HOSE WITH SLEEVING LBS/IN. SPIRAL ABRASION CODE B	INTEGRAL ABRASION CODE D	INTEGRAL FIRESLEEVE CODE H	TUBULAR FIRESLEEVE CODE N	POLYEST. ABRASION CODE K	45° END FITTING LBS EACH	90° END FITTING LBS EACH	HOSE LENGTH CORRECTION FACTOR-IN. [8] 45°	90°
-04	.007	.010	.012	--	.017	.008	.07	.07	.88	.61
-06	.010	.014	.017	--	.021	.012	.11	.12	1.18	.89
-08	.015	.020	.025	.032	.030	.018	.18	.20	1.41	1.10
-10	.020	.025	.030	.042	.035	.022	.29	.31	1.64	1.30
-12	.025	.030	.036	.050	.042	.026	.43	.45	1.82	1.50
-16	.030	.036	.050	.055	.054	.035	.65	.74	2.15	2.00
-20	.050	.060	.061	.070	.077	.045	1.09	1.20	2.32	2.01
-24	.060	.071	.075	.082	.107	.058	1.63	1.74	2.67	2.28

TABLE VI

HOSE SIZE	LENGTH (INCHES)
04 06	2.00 ±.25
08 10	2.50 ±.25
12 16	3.00 ±.25
20 24	3.50 ±.25

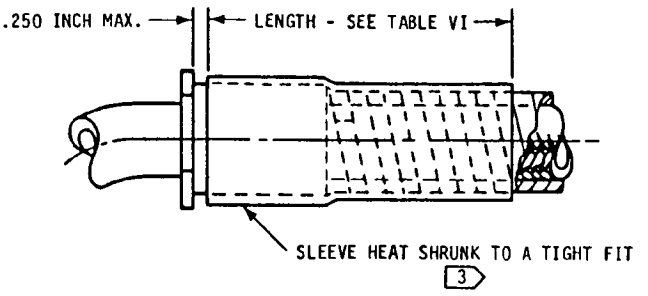

Figure 2

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CONSTRUCTION AND PERFORMANCE: THESE HOSE ASSEMBLIES SHALL MEET THE CONSTRUCTION AND PERFORMANCE REQUIREMENTS OF AS 620. FITTINGS SHALL BE PERMANENTLY ATTACHED TO THE HOSE.

RATED OPERATING CHARACTERISTICS: SEE AS 620

MATERIALS: HOSE AND FITTINGS - PER AS 620, TYPE II, CLASS 1 OR CLASS 2 AS SPECIFIED BY PART NUMBER.
SPIRAL ABRASION COVER - BLACK, NYLON COIL PER AS 1294.
INTEGRAL FIRESLEEVE COVER - RED OR BROWN, SILICONE.
INTEGRAL ABRASION COVER - BLACK, INTEGRALLY BONDED SILICONE COMPOSITE.
FIRE SLEEVE, TUBULAR - FIBERGLASS SILICONE PER AS 1072.
INTEGRAL ABRASION SLEEVE BRAIDED POLYESTER

MARKING: THE HOSE ASSEMBLIES SHALL HAVE ALL IDENTIFICATION MARKING AS REQUIRED BY AS 620, ELECTRO-ETCHED ON A STAINLESS STEEL BAND NOT MORE THAN 1.0 INCH WIDE. THE CHARACTERS SHALL BE A MINIMUM OF 1/16 INCHES HIGH. THE BAND SHALL BE TIGHT ON THE HOSE BUT WITHOUT PINCHING, AND SHALL BE PERMANENTLY ATTACHED. VARIABLE DATA, SUCH AS MANUFACTURING DATE AND "PT" SYMBOL MAY BE ELECTRO-ETCHED ON ONE END FITTING.

NOTES:

1. LENGTH "L" IS A FOUR DIGIT NUMBER OF WHICH THE FIRST THREE DIGITS DESCRIBE THE HOSE ASSEMBLY LENGTH IN WHOLE INCHES, AND THE FOURTH DIGIT, THE FRACTION OF AN INCH IN EIGHTS. LENGTH "L" IS MEASURED FROM "GAGE POINT" TO "GAGE POINT." SEE TABLE II FOR AVAILABLE LENGTH INCREMENTS AND TOLERANCES.

2. TO CONVERT "GAGE POINT" TO "GAGE POINT" TO "END" TO "END" MEASUREMENT, ADD TO "L" THE APPROPRIATE TABLE VIII CORRECTION FACTOR FOR EACH END FITTING.

(3) SPIRAL ABRASION COVER WHEN ASSEMBLED IN THE STRAIGHT CONDITION ON THE HOSE, SHALL HAVE AN AVERAGE GAP BETWEEN SPIRALS NOT EXCEEDING .05 INCH. DISPLACEMENT OF THE SPIRAL COVER, CAUSING A GREATER GAP, SHALL NOT BE CAUSE FOR REJECTION IF THE SPIRALS CAN BE REPOSITIONED TO MEET THE GAP REQUIREMENT. ENDS OF THE SPIRAL COVER SHALL BE TERMINATED WITH A LENGTH OF MIL-I-23053/5 BLACK POLYOLEFIN TUBING PER TABLE VI AND FIGURE 2.

4. INTEGRAL AND POLYESTER ABRASION COVER SHALL FORM AN INTEGRAL, PERMANENT PART OF THE HOSE AND SHALL TERMINATE A MAXIMUM OF .625 INCH FROM THE END OF THE END FITTING COLLAR.

(5) A TRUE CIRCULAR CROSS SECTION IS NOT REQUIRED THROUGH THE END FITTING. HOWEVER, THE APPLICABLE BALL DIAMETER LISTED IN TABLE VII SHALL PASS THRDUGH THE END FITTING AFTER END FITTING IS ATTACHED TO HOSE ASSEMBLY.

(6) DISTANCE ACROSS CORNERS OF COUPLINGS NUT MAY EXCEED THIS DIMENSION.

(7) ADD "AS 1055 TYPE IIb CLASS B-S/P" TO IDENTIFICATION MARKING TO SHOW LEVEL OF COMPLIANCE, "FIRE-PROOF" (15 MINTUES), WITH AS 1055.

(8) FOR EACH END FITTING, DEDUCT APPROPRIATE LENGTH FACTOR FROM HOSE LENGTH TO DETERMINE ASSEMBLY WEIGHT.

9. STANDARD COUPLING NUTS SHALL BE IN ACCORDANCE WITH MS21921 OR MS27073. NONSTANDARD COUPLING NUTS MAY BE USED BUT SHALL COMPLY WITH THE REQUIREMENT (b) OF NAS1760 FOR NONSTANDARD NUTS AND SHALL BE RETAINED BY THE END FITTING.

10. THE FITTINGS ORIENTATION DASH NUMBER IS A THREE DIGIT NUMBER DEFINING THE RELATIVE POSITION OF THE END FITTINGS IN 1° INCREMENTS. (EXAMPLE 090 = 90°). FITTING ORIENTATION SHALL BE MEASURED COUNTER CLOCKWISE FROM THE NEAREST END FITTING, WHICH SHALL BE IN THE RELATIVE 000° POSITION (SEE FIGURE 3). WHEN END FITTINGS ARE POINTED IN THE SAME DIRECTION, THIS DASH NUMBER SHALL BE ODD.

(11) THE CUT ENDS OF THE FIRESLEEVE SHALL BE COATED WITH RTV SILICONE RUBBER, PRIOR TO INSTALLATION, TO PREVENT WICKING OF FLUIDS. THE FIRESLEEVE ENDS SHALL BE SECURED TO THE HOSE ASSEMBLY END FITTINGS WITH CORROSIDN RESISTANT STEEL BANDS. AFTER INSTALLATION, CRACKS OR VOIDS IN THE FIRE SLEEVE, WHICH EXPOSE THE FIBERGLASS, SHALL BE COATED WITH RTV SILICONE RUBBER.

(12) THE CODE "D" BLACK SILICONE COMPDSITE ABRASION SLEEVE IS SUPERCEDED FOR NEW DESIGN BY THE IMPRDVED CODE "K" POLYESTER ABRASION SLEEVE.

13. DO NOT USE UNASSIGNED SIZE CODES OR COVER CODES.

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