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# AS157

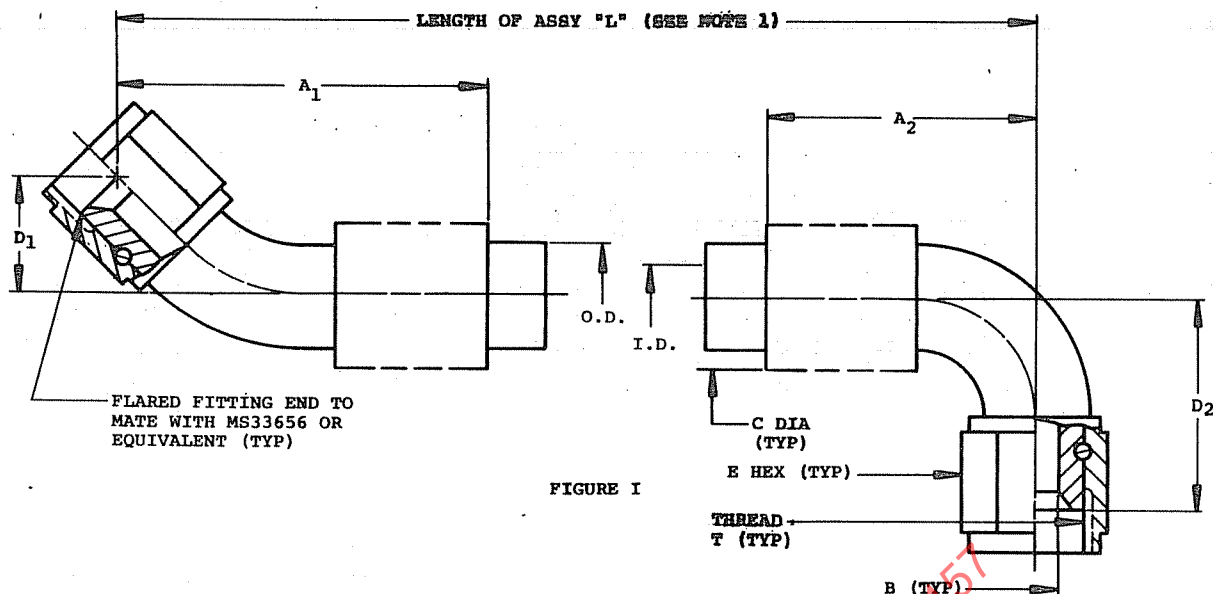


FIGURE I

TABLE I

HOSE ASSEMBLY NO. AND SIZE CODE	HOSE ASSEMBLY SIZE REF	THREAD T PER MIL-3-8879 REF	I.D. MIN	A1 MAX	A2 MAX	B MIN DIA THRU	C DIA MAX WITHOUT SLEEVING	D1		D2		E HEX REF
								MIN	MAX	MIN	MAX	
AS157E	1/4	.4375-20UNJF-3B	.212	2.08	1.75	.141	.69	.280	.451	.619	.740	.56
AS157G	3/8	.5625-18UNJF-3B	.298	2.29	2.00	.250	.80	.370	.563	.830	.913	.69
AS157H	1/2	.7500-16UNJF-3B	.391	2.61	2.38	.360	.97	.430	.645	.910	1.130	.88
AS157J	5/8	.8750-14UNJF-3B	.485	3.09	2.81	.455	1.11	.510	.666	1.110	1.304	1.00
AS157K	3/4	1.0625-12UNJF-3B	.602	3.44	3.25	.568	1.38	.590	.720	1.343	1.500	1.25
AS157M	1	1.3125-12UNJF-3B	.852			.760	1.66					1.50

TABLE II

HOSE ASSEMBLY LENGTH	AVAILABLE INCREMENTS	TOLERANCE
UNDER 18 INCHES	(NOT LESS THAN) 1/8 INCH	(PLUS OR MINUS) .125 INCH
18 TO 36 INCHES	(NOT LESS THAN) 1/4 INCH	(PLUS OR MINUS) .250 INCH
36 TO 50 INCHES	(NOT LESS THAN) 1/2 INCH	(PLUS OR MINUS) .500 INCH
OVER 50 INCHES	(NOT LESS THAN) 1 INCH	(PLUS OR MINUS) 1 PERCENT

TABLE III

SLEEVING CODE OR HOSE	TYPE OF SLEEVING OR HOSE	HOSE OR SLEEVE O.D. MAX HOSE SIZE						TEMPERATURE LIMIT
		1/4	3/8	1/2	5/8	3/4	1	
NONE	HOSE ONLY	.410	.540	.640	.745	.990		400°F
A	TUBULAR ABRASION (TFE)	.580	.678	.800	.850	1.184		400°F
B	SPIRAL ABRASION	.508	.612	.754	.847	1.080		275°F
C	FIRE SLEEVE	.875	.940	1.100	1.230	1.480		400°F
D	INTEGRAL ABRASION	.500	.625	.708	.832	1.112		400°F
E	SHRINK ABRASION (FEP)	.470	.600	.700	.805	1.050		400°F
F	SHRINK ABRASION (POLYOLEFIN)	.470	.610	.700	.815	1.050		275°F

PREPARED BY SAE COMMITTEE G-3, AEROSPACE FITTINGS, HOSE AND TUBING ASSEMBLIES

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## AEROSPACE STANDARD

HOSE ASSEMBLY, NONMETALLIC-3000 PSI, TFE, FLARED, 45° TO 90°, LIGHTWEIGHT.

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TABLE IV

HOSE SIZE (REF)	MAXIMUM WEIGHTS						
	HOSE LBS/INCH	SPIRAL SLEEVE LBS/INCH	TFE SLEEVE LBS/INCH	FIRE SLEEVE LBS/INCH	FIRE SLEEVE CLAMPS (LBS) EACH	STANDARD END FITTING (LBS) EACH	
						45°	90°
04	.010	.001	.003	.010	.025	.075	.075
06	.015	.002	.003	.014	.025	.121	.121
08	.021	.003	.004	.016	.025	.207	.207
10	.028	.003	.004	.017	.026	.306	.306
12	.055	.004	.006	.022	.026	.566	.584
16							

TABLE V

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

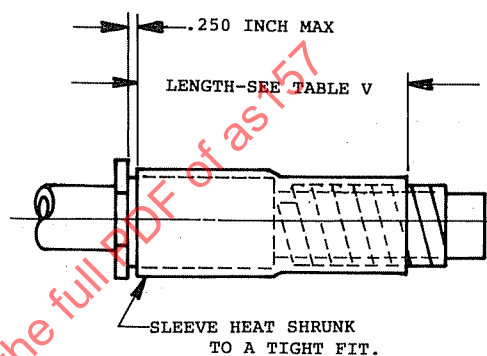


FIGURE 2

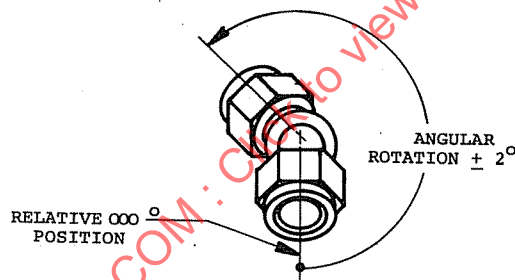


FIGURE 3.

**CONSTRUCTION AND PERFORMANCE:**

THESE HOSE ASSEMBLIES SHALL MEET THE CONSTRUCTION AND PERFORMANCE REQUIREMENTS OF AS 1339.  
FITTINGS SHALL BE PERMANENTLY ATTACHED TO THE HOSE.

**RATED OPERATING CHARACTERISTICS:** SEE AS 1339.

**MATERIALS:**

HOSE AND FITTINGS-PER AS1339.  
TUBULAR ABRASION SLEEVE (TFE) - BLACK, EXTRUDED SEAMLESS TFE TUBING PER AS 1291.  
SPIRAL ABRASION SLEEVE - BLACK, NYLON COIL PER AS1294.  
FIRESLEEVE - ASBESTOS, IMPREGNATED WITH SILICON RUBBER PER AS1072 "SIL" CODED.  
INTERGRAL ABRASION SLEEVE - BLACK, INTEGRALLY BONDED SILICON/TFE COMPOSITE.  
SHRINK ABRASION SLEEVE (FEP) - TRANSLUCENT, SHRINKABLE FEP TUBING PER MIL-I-23053/11.  
SHRINK ABRASION SLEEVE (POLYOLEFIN) - BLACK, SHRINKABLE POLYOLEFIN TUBING PER AMS 3587 OR MIL-R-46846 TYPE 5.

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HOSE ASSEMBLY, NONMETALLIC-3000 PSI, TFE,  
FLARED 45°, TO 90°, LIGHTWEIGHT

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## MARKING:

THE HOSE ASSEMBLIES SHALL HAVE ALL IDENTIFICATION MARKING AS REQUIRED BY AS1339, PERMANENTLY MARKED ON A PERMANENT STAINLESS STEEL BAND NOT MORE THAN 1.0 INCH WIDE OR ON THE END FITTING. THE CHARACTERS SHALL BE A MINIMUM OF 1/16 INCH HIGH. THE BAND SHALL BE SO DESIGNED AS TO REMAIN TIGHT ON THE HOSE TO PREVENT RELATIVE MOVEMENT AND RESULTANT CHAFING AND OF SUFFICIENT STRENGTH TO PREVENT REMOVAL BY HAND.

## NOTES:

1. LENGTH "L" IS A THREE DIGIT NUMBER OF WHICH THE FIRST TWO DIGITS DESCRIBE THE HOSE ASSEMBLY LENGTH IN WHOLE INCHES, AND THE THIRD DIGIT, THE FRACTION OF AN INCH IN EIGHTHS. LENGTH "L" IS MEASURED FROM "CONE SEAT" TO "CONE SEAT". SEE TABLE II FOR AVAILABLE LENGTH INCREMENTS AND TOLERANCES.
2. 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 COUNTERCLOCKWISE 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 000.
3. 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 CORROSION RESISTANT STEEL BANDS. AFTER INSTALLATION, CRACKS OR VOIDS IN THE FIRESLEEVE, WHICH EXPOSE THE ASBESTOS, SHALL BE COATED WITH RTV SILICONE RUBBER.
4. SPIRAL ABRASION SLEEVE, WHEN ASSEMBLED IN THE STRAIGHT CONDITION ON THE HOSE, SHALL HAVE AN AVERAGE GAP BETWEEN SPIRALS NOT EXCEEDING .05 INCH. DISPLACEMENT OF THE SPIRAL SLEEVE, 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 SLEEVE SHALL BE TERMINATED WITH A LENGTH OF MIL-I-23053/5 BLACK POLYOLEFIN TUBING PER TABLE V AND FIGURE 2.
5. TUBULAR ABRASION (TFE) SLEEVES SHALL HAVE AN I. D. NO GREATER THAN HOSE O.D. +.05 INCH. AXIAL MOVEMENT OF THE SLEEVE INSTALLED ON THE HOSE SHALL NOT EXCEED .05 INCH. ENDS OF THE TUBULAR SLEEVE SHALL BE TERMINATED WITH A LENGTH OF MIL-I-23053/11 (FEP) PER TABLE V AND FIGURE 2.
6. INTEGRAL ABRASION SLEEVE SHALL FORM AN INTEGRAL, PERMANENT PART OF THE HOSE AND SHALL TERMINATE A MAXIMUM OF .060 INCH FROM THE END OF THE END FITTING COLLAR.
7. SHRINK ABRASION SLEEVE (FEP) SHALL BE SHRUNK TO A SNUG FIT OVER THE HOSE AND END FITTING COLLARS.
8. SHRINK ABRASION SLEEVE (POLYOLEFIN) SHALL BE SHRUNK TO A SNUG FIT OVER THE HOSE AND END FITTING COLLARS.
9. DISTANCE ACROSS CORNERS OF COUPLING NUT MAY EXCEED THIS DIMENSION.
10. A TRUE CIRCULAR CROSS SECTION IS NOT REQUIRED WITHIN THE BENT TUBE ELBOW FITTING, HOWEVER, A BALL .031 INCH SMALLER THAN THE "B" MINIMUM THROUGH DIAMETER MUST PASS THROUGH THE ENTIRE ELBOW AFTER END FITTING IS ATTACHED TO HOSE ASSEMBLY.
11. DO NOT USE UNASSIGNED SIZE CODES OR SLEEVE CODES.
12. NON-STANDARD SWIVEL NUTS MAY BE USED PROVIDED THEY ARE DIMENSIONALLY EQUIVALENT TO A MS21921 OR MS27073 NUT FOR MATING WITH A MS33656 END FITTING AND CANNOT BE REMOVED FROM THE FITTING.

## EXAMPLE OF PART NUMBER:

AS157H242C270

ANGULAR ORIENTATION IN 1° INCREMENTS, 270°. (SEE NOTE 2 AND FIGURE 3)  
 SILICONE FIRESLEEVE. (SEE TABLE III) USE DASH (-) FOR UNSLEEVED HOSE  
 FRACTIONAL LENGTH IN EIGHTHS OF AN INCH, 1/4 INCH. (SEE NOTE 1)  
 LENGTH IN WHOLE INCHES, 24 INCHES. (SEE NOTE 1)  
 BASIC HOSE ASSEMBLY SIZE, 1/2 INCH. (SEE TABLE I)  
 BASIC HOSE ASSEMBLY PART NO.  
 HOSE ASSEMBLY, NONMETALLIC - 3000 PSI, TFE, FLARED  
 45° TO 90° LIGHTWEIGHT

PREPARED BY SAE COMMITTEE G-3, AEROSPACE FITTINGS, HOSE AND TUBING ASSEMBLIES

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HOSE ASSEMBLY, NONMETALLIC-3000 PSI, TFE,  
FLARED, 45° TO 90, LIGHTWEIGHT

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