

E-14-16

AS158A -84

20 June 1986

USE INSTEAD OF
MS27368

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Title of Document: Hose Assembly, Nonmetallic - 3000 PSI, TFE, Flared,
90° to 90°, Lightweight

Date of Specific Issue Adopted: March 1984

Releasing Industry Group: Society of Automotives Engineers, Inc.

NOTICE: The procurement document for this component is AS1339B.

NOTICE: When reaffirmation, amendment, revision, or cancellation of this standard is initially proposed, the industry group responsible for this standard shall inform the military coordinating activity of the proposed change and request their participation.

Custodians:

Army - ME
Navy - AS

Military Coordinating Activity:

Air Force - 11

(Project 4720-0674)

Reviewer Activities:

Army - AV, MI
Air Force - 99
DLA - CS

THIS DOCUMENT CONTAINS 1 PAGES.

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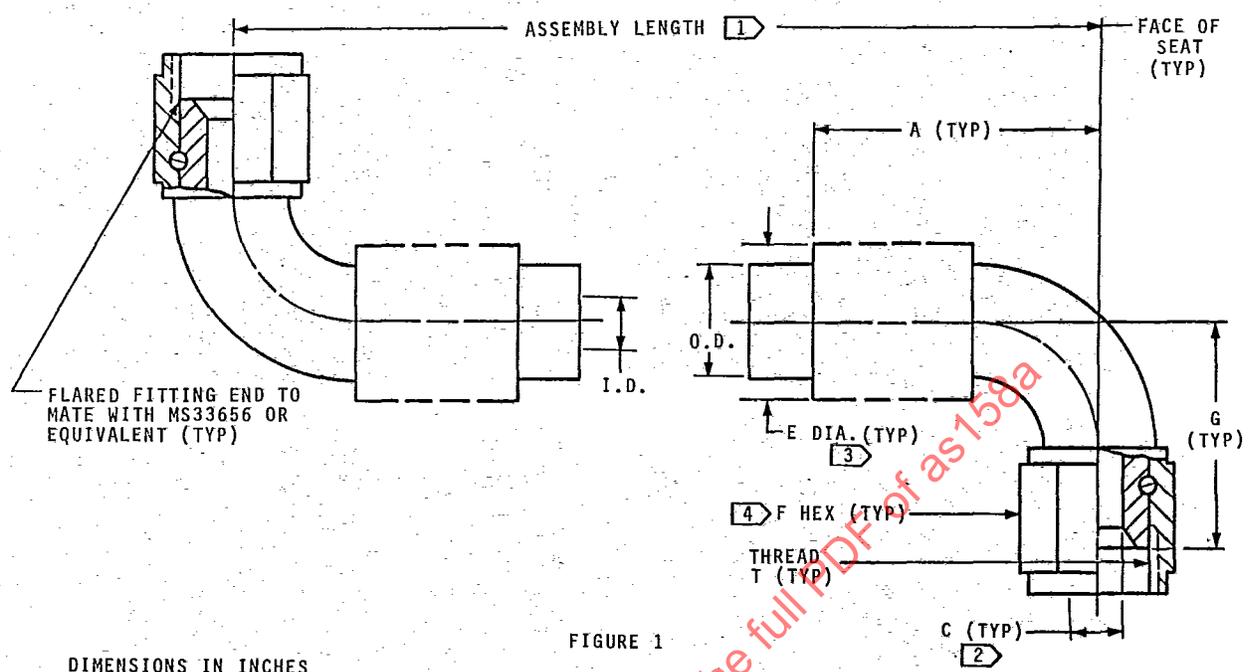
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DIMENSIONS IN INCHES

FIGURE 1

TABLE I

HOSE ASSEMBLY NO. AND SIZE CODE	SIZE REF	THREAD T PER MIL-S-8879 REF	I.D. MIN	A MAX	C (2) DRILL DIA MIN	E (3) DIA MAX WITHOUT SLEEVING	F HEX REF	G		BALL SIZE MIN THRU DIA (2)	
								MIN	MAX	MS19059 DASH NO.	DIA IN.
AS158E	1/4	.4375-20 UNJF-3B	.212	1.75	.135	.69	.56	.615	.740	4807	.109
AS158G	3/8	.5625-18 UNJF-3B	.298	2.00	.240	.80	.69	.830	.920	4812	.188
AS158H	1/2	.7500-16 UNJF-3B	.391	2.38	.340	.97	.88	.910	1.140	4816	.313
AS158J	5/8	.8750-14 UNJF-3B	.485	2.81	.410	1.11	1.00	1.110	1.310	4818	.375
AS158K	3/4	1.0625-12 UNJ -3B	.602	3.25	.510	1.38	1.25	1.340	1.500	4821	.469
AS158M	1	1.3125-12 UNJ -3B	.852	3.30	.760	1.66	1.50	1.805	1.865	4829	.719

SHEET COMPLETELY REVISED

1	A	2	A	3	A	4	---
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LIST OF ACTIVE SHEETS

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

SAE The Engineering Resource For Advancing Mobility
400 COMMONWEALTH DRIVE, WARRENDALE, PA 15096

AEROSPACE STANDARD
HOSE ASSEMBLY, NONMETALLIC, 3000 PSI, TFE, FLARED, 90° TO 90°, LIGHTWEIGHT

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TABLE II

SLEEVE CODE	SLEEVE MATERIAL	TEMP. LIMIT OF	TOLERANCE	HOSE OR SLEEVE OUTSIDE DIAMETER ⁵					
				HOSE SIZE					
				1/4	3/8	1/2	5/8	3/4	1
-	(--) INDICATES HOSE ONLY, NO SLEEVE (AS 1624)	400	MAX MIN	.390 .360	.490 .455	.615 .585	.730 .690	.990 .950	1.270 1.230
A	ABRASION SLEEVE TUBULAR (TFE-AS1291-CODE B) ⁶	400	MAX MIN	.500 .440	.600 .540	.730 .670	.840 .780	1.110 1.050	1.400 1.340
B	ABRASION SLEEVE COIL (NYLON AS1294) ⁷	275	MAX MIN	.450 .390	.550 .490	.695 .635	.810 .750	1.080 1.020	1.360 1.300
C	FIRE SLEEVE (AS1072 SIL-FG) (15 MIN) ⁸ ⁹ ¹³	400	MAX MIN	.625 .500	.750 .625	.875 .750	1.000 .875	1.250 1.125	1.500 1.375
D	ABRASION SLEEVE INTEGRAL SILICONE COMPOSITE ¹⁰ ¹⁴	350	MAX MIN	.500 .460	.600 .560	.700 .660	.830 .790	1.120 1.070	1.400 1.350
E	ABRASION SLEEVE SHRINK-ON (FEP) ¹¹	350	MAX MIN	.424 .374	.540 .480	.665 .615	.790 .730	1.070 1.010	1.350 1.290
F	ABRASION SLEEVE SHRINK-ON (POLYOLEFIN AS 1073 - CODE B) ¹¹	275	MAX MIN	.450 .400	.560 .505	.695 .645	.810 .750	1.080 1.020	1.360 1.300
G	FIRE SLEEVE (AS1072 SIL-FG) (5 MIN) ⁸ ⁹ ¹²	400	MAX MIN	.625 .500	.750 .625	.875 .750	1.000 .875	1.250 1.125	1.500 1.375
H	FIRE SLEEVE INTEGRAL SILICONE (15 MIN) (AS 1722) ¹³	400	MAX MIN	.660 .600	.745 .685	.895 .835	1.005 .945	1.220 1.160	1.515 1.455
J	FIRE SLEEVE INTEGRAL SILICONE (5 MIN) ¹²	400	MAX MIN	.660 .600	.745 .685	.895 .835	1.005 .945	1.220 1.160	1.515 1.455
K	INTEGRAL ABRASION SLEEVE (BRAIDED) POLYESTER ¹⁰	300	MAX MIN	.490 .444	.570 .535	.695 .650	.800 .760	1.070 1.030	1.350 1.310
L	ABRASION SLEEVE COIL (PTFE-AS1293) ⁷	400	MAX MIN	.500 .440	.600 .540	.730 .670	.862 .802	1.110 1.050	1.400 1.340

TABLE III

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) .500 INCH	(PLUS OR MINUS) .500 INCH
OVER 50 INCHES	(NOT LESS THAN) 1.000 INCH	(PLUS OR MINUS) 1 PERCENT

TABLE IV

HOSE OR SLEEVE CODE	HOSE OR TYPE SLEEVE	UNITS	MAXIMUM WEIGHT					
			HOSE SIZE					
			1/4	3/8	1/2	5/8	3/4	1
-	HOSE ONLY	LBS/IN	.009	.015	.020	.027	.055	.085
A	ABRASION SLEEVE (TFE-AS1291-B)	LBS/IN	.003	.004	.004	.005	.007	.009
B	ABRASION SLEEVE (NYLON AS1294)	LBS/IN	.001	.002	.003	.003	.004	.005
C	FIRE SLEEVE (15 MIN) AS1072	LBS/IN	.007	.009	.011	.012	.017	.021
D	ABRASION SLEEVE INTEGRAL WITH HOSE	LBS/IN	.012	.016	.024	.034	.067	.110
E	ABRASION SLEEVE (FEP)	LBS/IN	.002	.003	.003	.005	.006	.007
F	ABRASION SLEEVE (AS1073B)	LBS/IN	.002	.003	.003	.004	.005	.006
G	FIRE SLEEVE (5 MIN) AS1072	LBS/IN	.007	.009	.011	.012	.017	.021
H	FIRE SLEEVE INTEGRAL (15 MIN) WITH HOSE	LBS/IN	.019	.027	.035	.047	.099	.117
J	FIRE SLEEVE INTEGRAL (5 MIN) WITH HOSE	LBS/IN	.019	.027	.035	.047	.099	.117
K	ABRASION SLEEVE POLYESTER WITH HOSE	LBS/IN	.012	.016	.022	.030	.060	.090
L	ABRASION SLEEVE (PTFE-AS1293)	LBS/IN	.003	.004	.005	.005	.006	.007
NONE	FIRE SLEEVE CLAMP	LBS/EA	.025	.025	.025	.026	.026	.026
NONE	FITTING END (HOSE SIZE-90°)	LBS/EA	.075	.121	.207	.306	.584	.840

SHEET COMPLETELY REVISED

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

AEROSPACE STANDARD

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

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CONSTRUCTION AND PERFORMANCE: AS 1339. FITTINGS SHALL BE PERMANENTLY ATTACHED TO THE HOSE.

OPERATING CHARACTERISTICS: SEE AS 1339.

MATERIALS: HOSE AND FITTINGS - PER AS 1339.
SLEEVES - SEE APPLICABLE STANDARD, TABLE II

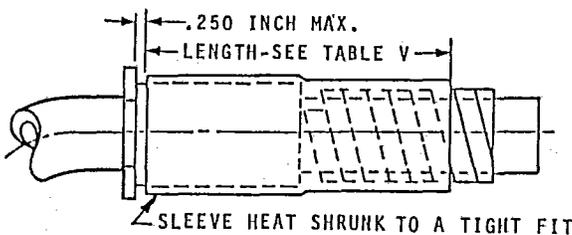
MARKING: MARKING SHALL BE PER AS 1339 ON A STAINLESS STEEL BAND NOT OVER 1.0 INCH WIDE, OR ON THE COLLAR. THE CHARACTERS SHALL BE A MINIMUM OF 1/16 INCH HIGH. THE BAND SHALL BE SO DESIGNED AS TO REMAIN TIGHT ON THE HOSE TO PREVENT RELATIVE MOVEMENT AND RESULTANT CHAFING. IT SHALL BE OF SUFFICIENT STRENGTH TO PREVENT REMOVAL BY HAND. HOSE ASSEMBLY DATE AND "PT" SYMBOL SHALL BE ELECTROETCHED ON THE BAND OR ON AN END FITTING OR A FIRE-SLEEVE CLAMP.

FLAG 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 "FACE OF SEAT" TO "FACE OF SEAT". FOR LENGTH INCREMENTS AND TOLERANCES SEE TABLE III
- 2 A TRUE CIRCULAR CROSS SECTION IS NOT REQUIRED THROUGH THE FITTING I.D. HOWEVER, THE APPLICABLE BALL DIAMETER LISTED IN TABLE I SHALL PASS THROUGH THE END FITTING AFTER IT IS ASSEMBLED TO THE HOSE.
- 3 DISTANCE ACROSS CORNERS OF THE COUPLING NUT MAY EXCEED THIS DIMENSION.
- 4 STANDARD COUPLING NUTS SHALL BE IN ACCORDANCE WITH MS21921 OR MS27073 AND MATE WITH MS33656 FLARED FITTING ENDS. NONSTANDARD COUPLING NUTS MAY BE USED PROVIDED THEY ARE DIMENSIONALLY AND FUNCTIONALLY EQUIVALENT AND PROVIDED THEY CANNOT BE REMOVED FROM THE FITTING. NUTS SHALL MEET TORQUE TEST REQUIREMENTS PER AS1339.
- 5 DIAMETERS ARE LISTED FOR CLAMP SELECTION. TUBULAR SLEEVES MAY NOT BE A PERFECT ROUND AND SHALL BE MEASURED WITH A DIAMETER TAPE RULE (OFTEN REFERRED TO AS A PI-TAPE).
- 6 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) CLASS 1 OR 2, COLOR CLEAR, PER TABLE V FIGURE 2.
- 7 COIL ABRASION SLEEVES, WHEN ASSEMBLED ON A STRAIGHT HOSE, SHALL HAVE AN AVERAGE GAP BETWEEN COILS NOT EXCEEDING .05 INCH. DISPLACEMENT OF THE COILS OF THE SLEEVE, CAUSING A GREATER GAP, SHALL NOT BE CAUSE FOR REJECTION IF THE COILS CAN BE REPOSITIONED TO MEET THE GAP REQUIREMENTS. ENDS OF THE COIL SLEEVE SHALL BE TERMINATED WITH A LENGTH OF HEAT SHRINKABLE SLEEVING IN ACCORDANCE WITH TABLE V AND FIGURE 2. CODE "B" (NYLON COIL) ABRASION SLEEVES SHALL BE TERMINATED WITH MIL-I-23053/5 CLASS 1 OR 3, COLOR BLACK. CODE "L" (COIL ABRASION) SLEEVES SHALL BE TERMINATED WITH MIL-I-23053/12A, CLASS 1, COLOR TRANSPARENT, PTFE. (OPTIONAL MIL-I-23053/11 (FEP) CLASS 1 OR 2, COLOR CLEAR).

TABLE V

HOSE SIZE	LENGTH (INCHES)
1/4 3/8	2.00 ± .25
1/2 5/8	2.50 ± .25
3/4 1	3.00 ± .25



6 7

FIGURE 2

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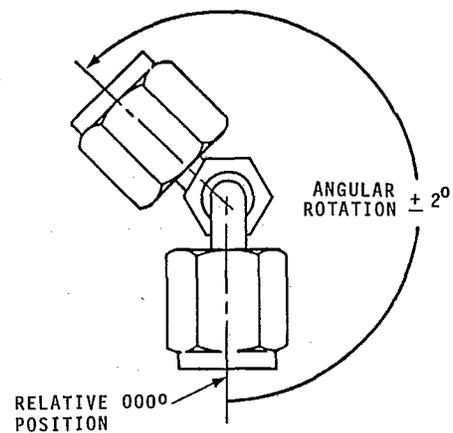


FIGURE 3

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

AEROSPACE STANDARD

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

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