FEDERAL SUPPLY CLASS

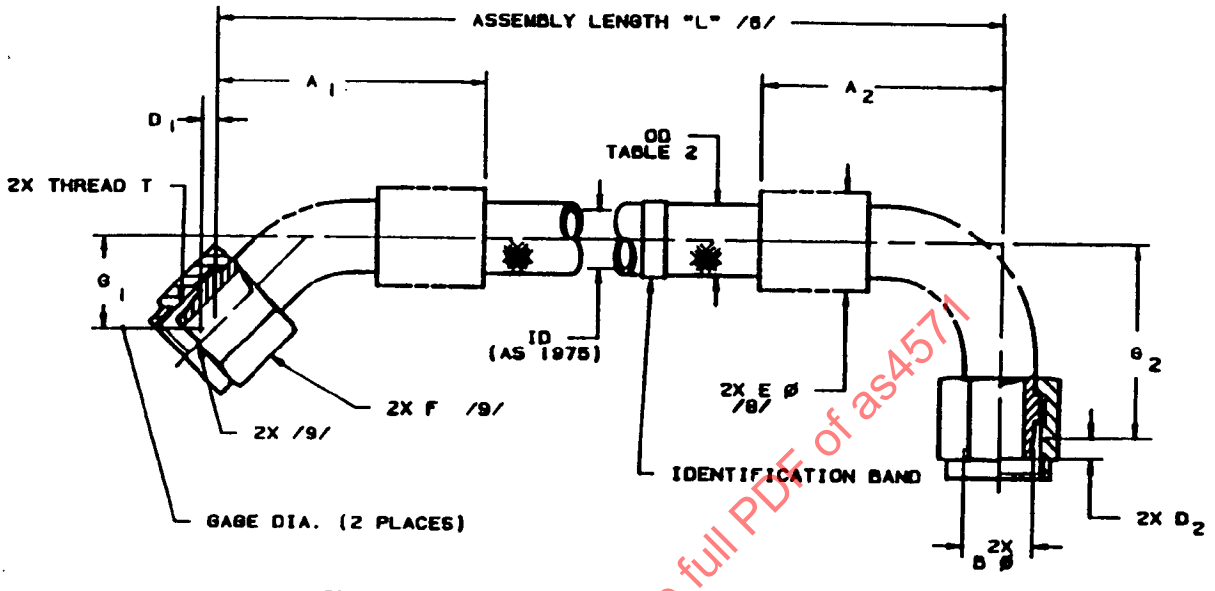

FIGURE 1 - HOSE ASSEMBLY, 45° ELBOW TO 90° ELBOW

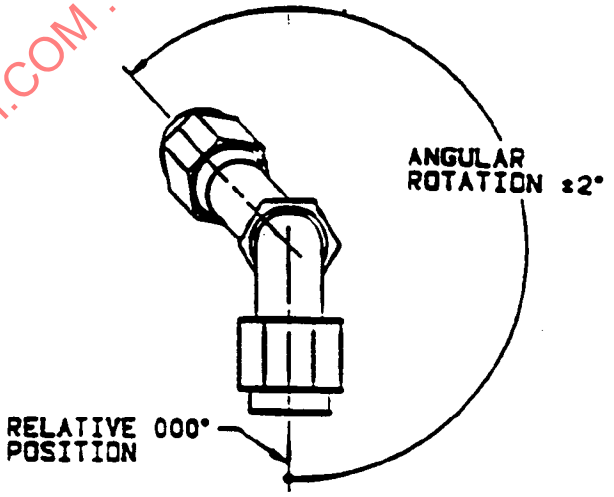

FIGURE 2

ISSUED 1992-06-22 REVISED

CUSTODIAN: SAE G-3/G-3D

PROCUREMENT SPECIFICATION: AS1975 /2/

SAE The Engineering Society For Advancing Mobility Land Sea Air and Space
INTERNATIONAL
400 Commonwealth Drive, Warrendale, PA 15096-0001

AEROSPACE STANDARD

HOSE ASSEMBLY, PTFE, ARAMID REINFORCED, STANDARD DUTY, 4000/3000 psi, 275 °F, TITANIUM FITTINGS, FLARELESS, 45° TO 90°

AS4571

90-1001A/EG

SAE INTERNATIONAL
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AEROSPACE STANDARD

HOSE ASSEMBLY, PTFE, ARAMID REINFORCED, STANDARD DUTY, 4000/3000 psi, 275 °F, TITANIUM FITTINGS, FLARELESS, 45° TO 90°

TABLE 1 - ASSEMBLY DIMENSIONS

HOSE ASSEMBLY NO. & SIZE CODE	HOSE SIZE	THREAD T PER MIL-S-8879 (REF)	ID MIN	A_1 MAX	A_2 MAX	B GAGE ϕ BASIC	D_1	O_2	E /8/ ϕ MAX WITHOUT SLEEVING	F HEX REF	G_1 MIN	G_1 MAX	G_2 MIN	G_2 MAX	BALL SIZE MIN THRU ϕ /7/ MS19059 DASH NO.	BALL SIZE MIN THRU ϕ /7/ DIA IN
AS4571E	.250	.4375-20UNJF-3B	.212	2.160	1.880	.2930	.11	.16	.69	.56	.350	.475	.645	.770	4807	.109
AS4571G	.375	.5625-18UNJF-3B	.298	2.460	2.180	.4120	.12	.16	.80	.69	.375	.500	.715	.840	4812	.188
AS4571H	.500	.7500-16UNJF-3B	.391	2.740	2.530	.5600	.13	.19	.97	.88	.435	.560	.845	.970	4816	.313
AS4571J	.625	.8750-14UNJF-3B	.485	3.785	3.375	.6730	.14	.20	1.15	1.00	.545	.670	1.085	1.210	4818	.375
AS4571K	.750	1.0625-12UNJ-3B	.602	4.065	3.940	.8100	.16	.23	1.38	1.25	.580	.705	1.275	1.400	4821	.469
AS4571M	1.000	1.3125-12UNJ-3B	.852	4.645	4.485	1.0620	.21	.30	1.66	1.50	.715	.840	1.500	1.625	4829	.719
AS4571N	1.250	1.5625-12UNJ-3B	1.100	5.585	5.225	1.3160	.03	.04	2.33	1.81	.750	.875	1.700	1.825	4834	.875
AS4571P	1.500	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD

TABLE 2 - HOSE OR SLEEVE OUTSIDE DIAMETER

SLEEVE CODE	SLEEVE MATERIAL	TEMP LIMIT °F	TOLERANCE	HOSE SIZE /10/ .250	HOSE SIZE /10/ .375	HOSE SIZE /10/ .500	HOSE SIZE /10/ .625	HOSE SIZE /10/ .750	HOSE SIZE /10/ 1.000	HOSE SIZE /10/ 1.250	HOSE SIZE /10/ 1.500
-	BRAIDED HOSE ONLY PER AS1975	275	MAX	.465	.555	.715	.920	1.075	1.365	1.660	TBD
			MIN	.405	.495	.655	.850	.995	1.285	1.580	TBD
A	FIRESLEEVE (AS1072 SIL F6) (5 min) /11/ /12/	275	MAX	.840	.970	1.150	1.380	1.590	1.750	1.950	TBD
			MIN	.658	.788	.968	1.198	1.318	1.568	1.768	TBD
B	FIRESLEEVE INTEGRAL SILICONE (5 min) /8/	275	MAX	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
			MIN								
C	PROTECTIVE SLEEVE SHRINK-DN (POLYOLEFIN AS1073, CODE B) /21/	275	MAX	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
			MIN								

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TABLE 3 - ASSEMBLY PROCUREMENT LENGTHS

HOSE ASSEMBLY LENGTH	AVAILABLE INCREMENTS	TOLERANCE
UNDER 18 in	(NOT LESS THAN) .125 in	±.125 in
18 THRU 36 in	(NOT LESS THAN) .250 in	±.250 in
OVER 36 THRU 50 in	(NOT LESS THAN) .500 in	±.500 in
OVER 50 in	(NOT LESS THAN) 1.000 in	±1%

TABLE 4 - MAXIMUM HOSE AND FITTING WEIGHTS

HOSE OR SLEEVE CODE	HOSE OR TYPE OR PART	UNITS	HOSE SIZE .250	HOSE SIZE .375	HOSE SIZE .500	HOSE SIZE .625	HOSE SIZE .750	HOSE SIZE 1.000	HOSE SIZE 1.250	HOSE SIZE 1.500
-	BRAIDED HOSE ONLY PER AS1975	LB/IN	.006	.008	.012	.020	.025	.040	.050	TBD
A	FIRESLEEVE AS1072 (5 min PER AS1055) /15/	LB/IN								
B	FIRESLEEVE INTEGRAL WITH HOSE (5 min PER AS1055) /15/	LB/IN								
C	PROTECTIVE SLEEVE SHRINK-ON (POLYOLEFIN AS1073, CODE B) /21/									
NONE	FIRESLEEVE CLAMP	LB/EA	.020	.020	.021	.021	.025	.025	.032	TBD
NONE	FITTING END (45°) TITANIUM /16/	LB/EA	.066	.110	.154	.297	.560	.730	1.125	TBD /9/
NONE	FITTING END (90°) TITANIUM /16/	LB/EA	.077	.121	.176	.297	.560	.820	1.250	TBD /9/

NOTES:

1. MATERIALS:
   a. HOSE AND FITTINGS PER AS1975
   b. SLEEVES - SEE APPLICABLE STANDARDS, TABLE 2

/2/ THIS HOSE ASSEMBLY SHALL BE QUALIFIED IN ACCORDANCE WITH PROCUREMENT SPECIFICATION AS1975. USERS OF THIS STANDARD ARE ADVISED TO CONTROL SOURCE APPROVAL(S) BY STANDARD PAGE SUPPLEMENT SHEET OR SIMILAR MEANS.

3. CONSTRUCTION AND PERFORMANCE PER AS1975. FITTINGS SHALL BE PERMANENTLY ATTACHED TO THE HOSE.
4. OPERATING CHARACTERISTICS PER AS1975.
5. MARKING SHALL BE PER AS1975 ON A STAINLESS STEEL BAND NOT OVER 1.0 in WIDE OR ON THE COLLAR. THE CHARACTERS SHALL BE A MINIMUM OF .06 in 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 FIRESLEEVE CLAMP. MARKING BAND SHALL BE COVERED WITH TRANSPARENT POLYOLEFIN SHRINK SLEEVE PER AS1073 CODE A.

/6/ LENGTH "L" IS A THREE DIGIT NUMBER OF WHICH THE FIRST TWO DIGITS DESCRIBE THE HOSE ASSEMBLY LENGTH IN WHOLE INCHES, AND THE FOURTH DIGIT, THE FRACTION OF AN INCH IN EIGHTHS. LENGTH "L" IS MEASURED FROM "GAGE DIAMETER" TO "GAGE DIAMETER". FOR LENGTH INCREMENTS AND TOLERANCES SEE TABLE 3. TO CONVERT "GAGE DIAMETER" TO "GAGE DIAMETER" TO "END TO END" MEASUREMENT, ADD "D_2" TO LENGTH "L".

/7/ A TRUE CIRCULAR CROSS SECTION IS NOT REQUIRED THROUGH THE FITTING ID. HOWEVER, THE APPLICABLE BALL DIAMETER LISTED IN TABLE 1 MUST BE CAPABLE OF PASSING THROUGH THE HOSE ASSEMBLY.

/8/ DISTANCE ACROSS CORNERS OF THE HEX MAY EXCEED THIS DIMENSION.

/9/ FITTING ENDS SHALL MATE WITH MS33514 FOR SIZES THROUGH -16 AND WITH AS4658 OR AS4659 IN SIZES -20 AND LARGER. -20 AND LARGER NUTS SHALL CONFORM TO AS4660 OR AS4702. STANDARD COUPLING NUTS SHALL BE IN ACCORDANCE WITH OR EQUIVALENT TO MS21921 OR MS27073. NUTS SHALL MEET TORQUE REQUIREMENTS PER AS1975.

/10/ 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).

/11/ THE TABLE 2 SLEEVE DIAMETERS FOR AS1072 SLEEVES APPLY WHEN THE SLEEVE IS COMPRESSED, OR CLAMPED, TO CONTACT THE HOSE. IN THIS CASE, A WRINKLE MAY OCCUR OVER APPROXIMATELY 10% OF THE SLEEVE CIRCUMFERENCE.

/12/ 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 FIRESLEEVE, WHICH EXPOSE THE FIBERGLASS, SHALL BE COATED WITH RTV SILICONE RUBBER.

/13/ THE ENO OF THE INTEGRAL FIRESLEEVE SHALL BE COVERED WITH SILICONE EXTENDING OVER THE ENO FITTING COLLAR.

/14/ ADD "AS1055 TYPE Ib CLASS A-S/P" TO IDENTIFICATION MARKING TO SHOW LEVEL OF COMPLIANCE, "FIRE RESISTANT 275 °F (5 min), WITH AS1055".

/15/ WHEN FIRESLEEVES ARE REQUIRED, WEIGHT LIMITS SHALL BE DEFINED BY THE PROCURING ACTIVITY.

/16/ TITANIUM PARTS MAY BE REPLACED WITH STAINLESS STEEL IF MAXIMUM WEIGHT FOR FITTING IS NOT EXCEEDED.

17. OIMENSIONING AND TOLERANC: ANSI Y14.5M.
18. THE FITTING'S ORIENTATION OASH NUMBER IS A THREE DIGIT NUMBER DEFINING THE RELATIVE POSITION OF THE ENO 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° PDSITION (SEE FIGURE 2). WHEN END FITTINGS ARE POINTED IN THE SAME DIRECTION, THIS DASH NUMBER SHALL BE 000.
19. LOCKWIRE HOLES LOCATION AND DIAMETER PER AS1043 CODED AS FDLLOWS:
    a. U = TWO HOLES 180° APART
    b. W = THREE HOLES 120° APART
20. THIS PART STANDARD TAKES PRECEDENCE IN CASES OF CONFLICT.