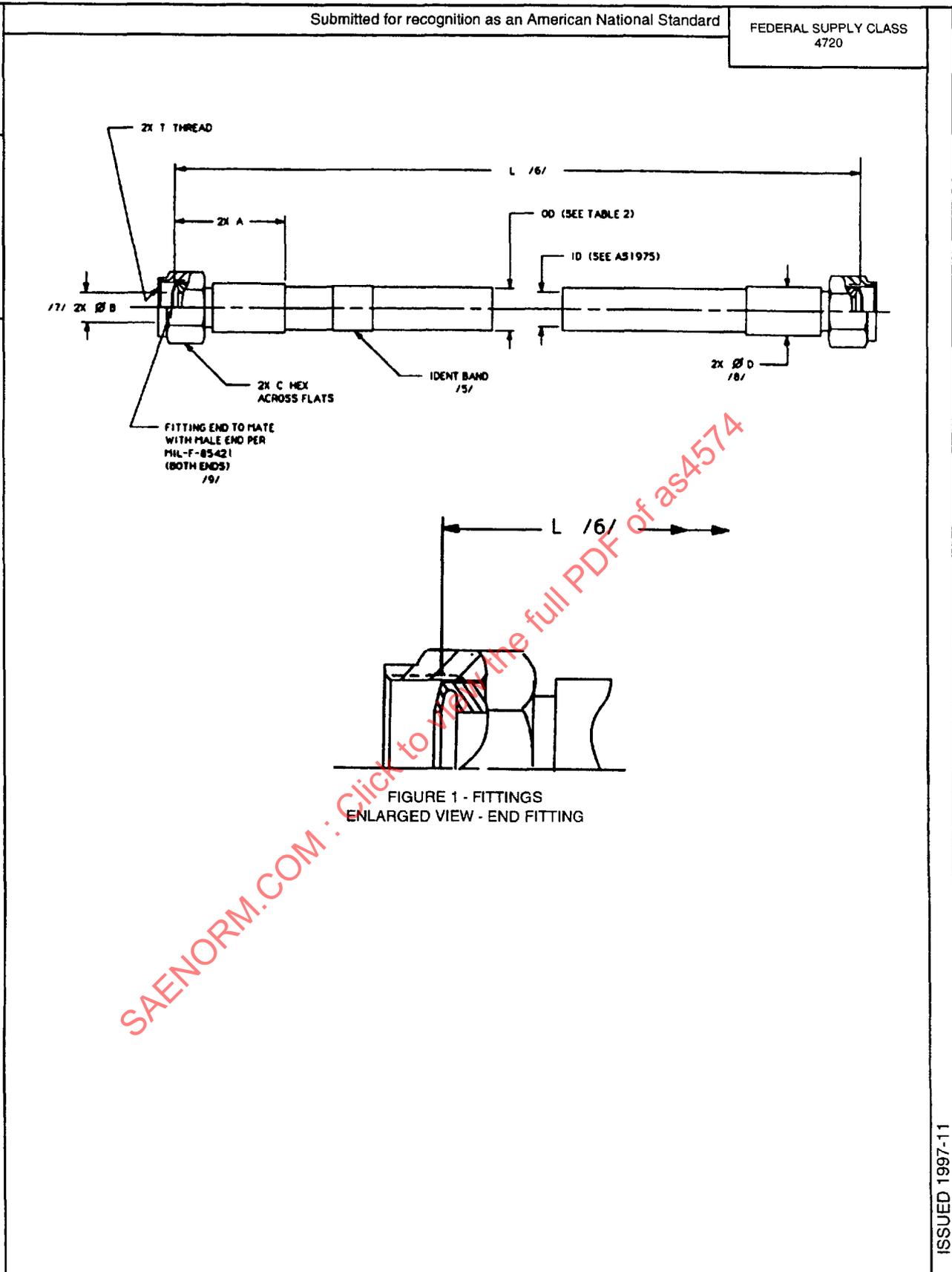


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ISSUED 1997-11

CUSTODIAN: SAE G-3/G-3D		PROCUREMENT SPECIFICATION: /2/ AS1975	
<p style="font-size: 8px;">The Engineering Society For Advancing Mobility Land Sea Air and Space INTERNATIONAL 400 Commonwealth Drive, Warrendale, PA 15096-0001</p>	AEROSPACE STANDARD		AS4574 SHEET 1 OF 5
	HOSE ASSEMBLY, PTFE, ARAMID REINFORCED STANDARD DUTY, 4000/3000 psi, 275 °F, TITANIUM FITTINGS, BEAM SEAL, STRAIGHT TO STRAIGHT		

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TABLE 1 - ASSEMBLY DIMENSIONS

HOSE ASSEMBLY NO. & SIZE CODE /22/	HOSE SIZE (REF)	/20/ FITTING TYPE (REF)	THREAD T PER MIL-S-8879 (REF)	ID MIN (REF)	A MAX	MIN FTG BORE DIA AFTER ASSEMBLY	C HEX (REF)	DIA MAX WITHOUT SLEEVING	D /8/	BALL SIZE THRU DIA /7/ MS19059 DASH NO.	BALL SIZE MIN THRU DIA /7/ IN
AS4574E	.250	S	.4375-24UNJ3-3B	.212	1.630	.135	.56	.69	.69	4807	.109
AS4574E	.250	E	.5625-20UNJ3-3B	.212	1.695	.135	.69	.69	.69	4807	.109
AS4574G	.375	R	.4375-24UNJ3-3B	.298	1.770	.135	.56	.80	.80	4807	.188
AS4574G	.375	S	.5625-20UNJ3-3B	.298	1.880	.240	.69	.80	.80	4812	.188
AS4574G	.375	E	.7188-20UNJ3-3B	.298	1.960	.240	.88	.80	.80	4812	.188
AS4574H	.500	R	.5625-20UNJ3-3B	.391	2.100	.240	.69	.97	.97	4812	.188
AS4574H	.500	S	.7188-20UNJ3-3B	.391	2.100	.340	.88	.97	.97	4816	.313
AS4574H	.500	E	.8438-18UNJ3-3B	.391	2.620	.340	1.00	.97	.97	4816	.313
AS4574J	.625	R	.7188-20UNJ3-3B	.485	2.690	.340	.88	1.15	1.15	4816	.313
AS4574J	.625	S	.8438-18UNJ3-3B	.485	2.690	.410	1.00	1.15	1.15	4818	.375
AS4574J	.625	E	1.000-16UNJ3-3B	.485	2.750	.410	1.13	1.15	1.15	4818	.375
AS4574K	.750	R	.8438-18UNJ3-3B	.602	3.240	.410	1.00	1.38	1.38	4818	.375
AS4574K	.750	S	1.000-16UNJ3-3B	.602	3.240	.510	1.13	1.38	1.38	4821	.469
AS4574K	.750	E	1.250-14UNJ3-3B	.602	3.320	.510	1.50	1.38	1.38	4821	.469
AS4574M	1.000	R	1.000-16UNJ3-3B	.852	3.810	.510	1.13	1.66	1.66	4821	.469
AS4574M	1.000	S	1.250-14UNJ3-3B	.852	3.810	.760	1.50	1.66	1.66	4829	.719

TABLE 2 - HOSE OR SLEEVE OUTSIDE DIAMETER

SLEEVE CODE /22/	SLEEVE MATERIAL	TEMP LIMIT °F	TOLERANCE		HOSE SIZE /10/		HOSE SIZE /10/		HOSE SIZE /10/		HOSE SIZE /10/	
			MAX	MIN	.375	.500	.625	.750	.920	1.075	1.365	1.285
-	(-) INDICATES BRAIDED HOSE ONLY PER AS1975	275	.465	.555	.465	.715	.495	.655	.850	.995	1.285	1.285
A	FIRESLEEVE (AS1072 SIL - FG) (5 min) /11/ /12/	275	.840	.970	.840	1.150	.970	1.150	1.380	1.590	1.750	1.750
B	FIRESLEEVE INTEGRAL SILICONE (5 min) /13/	275	.658	.788	.658	.968	.788	.968	1.198	1.318	1.568	1.568
C	PROTECTIVE SLEEVE SHRINK-ON (POLYOLEFIN AS1073 CODE B)	275	.493	.583	.427	.680	.517	.680	.880	1.115	1.411	1.319

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TABLE 3 - ASSEMBLY LENGTH TOLERANCES

HOSE ASSEMBLY LENGTH	TOLERANCE
UNDER 18 in	±.125 in
18 TO 36 in, EXCLUSIVE	±.250 in
36 TO 50 in, EXCLUSIVE	±.500 in
OVER 50 in	±1%

TABLE 4 - MAXIMUM HOSE AND FITTING WEIGHTS

HOSE OR SLEEVE CODE /22/	HOSE OR TYPE SLEEVE	UNITS	HOSE SIZE					
			.250	.375	.500	.625	.750	1.000
-	BRAIDED HOSE ONLY PER AS1975	LB/IN	.006	.008	.012	.020	.025	.040
A	FIRESLEEVE AS1072 (5 min PER AS1055) /15/	LB/IN	.012	.017	.018	.028	.030	.037
B	FIRESLEEVE INTEGRAL WITH HOSE (5 min PER AS1055) /15/	LB/IN						
C	PROTECTIVE SLEEVE SHRINK-ON (POLYOLEFIN AS1073, CODE B)	LB/IN	.001	.001	.001	.002	.002	.003
NONE	FIRESLEEVE CLAMP	LB/EA	.020	.020	.021	.021	.025	.025
NONE	FITTING END (STRAIGHT) TITANIUM /16/	LB/EA			.170	.210	.361	.452
		R	.044	.085	.194	.226	.369	.471
		S	.062	.121	.277	.309	.426	-
		E						

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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: 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 FOUR DIGIT NUMBER OF WHICH THE FIRST THREE DIGITS DESCRIBE THE HOSE ASSEMBLY LENGTH IN WHOLE INCHES AND THE FOURTH DIGIT, THE FRACTIONS OF AN INCH IN EIGHTHS. LENGTH "L" IS MEASURED FROM THE OUTER CORNER OF THE SEALING SURFACE TO OUTER CORNER OF SEALING SURFACE AS SHOWN IN FIGURE 1. FOR LENGTH TOLERANCES SEE TABLE 3.
- /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/ STANDARD COUPLING NUTS SHALL MATE WITH MIL-F-85421 FITTING ENDS. NONSTANDARD COUPLING NUTS MAY BE USED PROVIDED THEY ARE FUNCTIONALLY EQUIVALENT AND PROVIDED THEY CANNOT BE REMOVED FROM THE FITTING. NUTS SHALL MEET THE TORQUE TEST REQUIREMENTS PER AS1975 EXCEPT TORQUE VALUES SHALL BE PER MIL-F-85421. THE THREAD AND ALL INTERNAL SURFACES SHALL BE DRY-FILM LUBRICATED WITH MIL-L-46010 TYPE 1 COATING. ALL EXTERIOR SURFACES MAY BE DRY-FILM COATED.
- /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 CORROSION RESISTANT STEEL BANDS. AFTER INSTALLATION, CRACKS OR VOIDS IN THE FIRESLEEVE WHICH EXPOSE FIBERGLASS SHALL BE COATED WITH RTV SILICONE RUBBER.
- /13/ THE ENDS OF THE INTEGRAL FIRESLEEVE SHALL BE COVERED WITH SILICONE EXTENDING OVER THE END FITTING COLLAR.
14. ADD "AS1055 TYPE IIb 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. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M.
18. SAFETY WIRE HOLES LOCATION AND DIAMETER PER AS1043 CODED AS FOLLOWS:
 - a. U = TWO HOLES 180° APART
 - b. W = THREE HOLES 120° APART
19. THIS PART STANDARD TAKES PRECEDENCE IN CASES OF CONFLICT.
- /20/ JUMP SIZE CODE EXPLANATION:
 - a. R - STEP DOWN 1 STANDARD LETTER SIZE PER TABLE 1 (REDUCER)
 - b. S - HOSE SIZE
 - c. E - STEP UP 1 STANDARD LETTER SIZE PER TABLE 1 (EXPANDER)

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AEROSPACE STANDARD

HOSE ASSEMBLY, PTFE, ARAMID REINFORCED
STANDARD DUTY, 4000/3000 psi, 275 °F, TITANIUM
FITTINGS, BEAM SEAL, STRAIGHT TO STRAIGHT

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