

REV. C

SAE AS4627

FEDERAL SUPPLY CLASS 4720

RATIONALE

ADDED "K" CODE SLEEVE WITH CUFF.

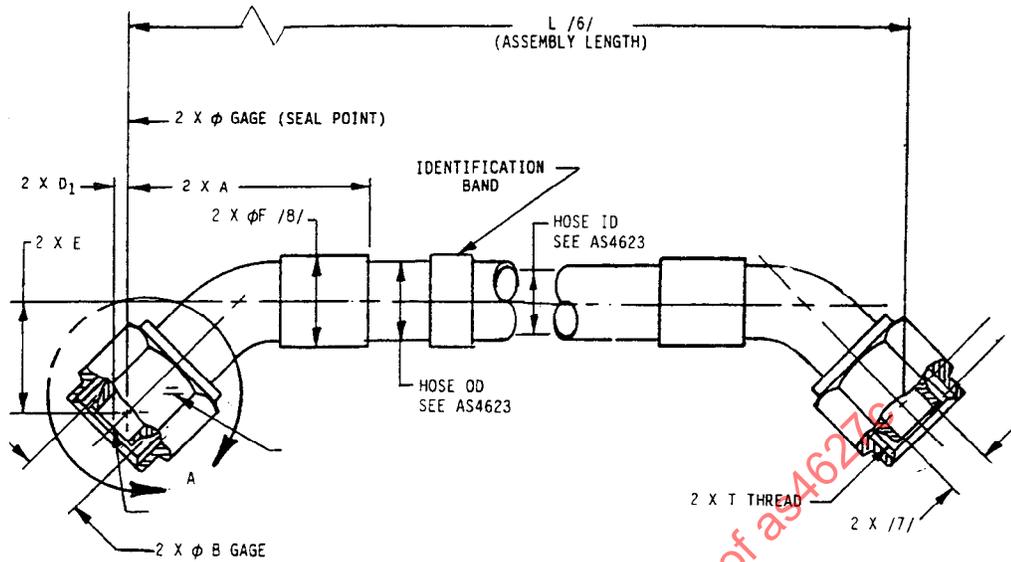


FIGURE 1 - HOSE ASSEMBLY, 45° ELBOW TO 45° ELBOW

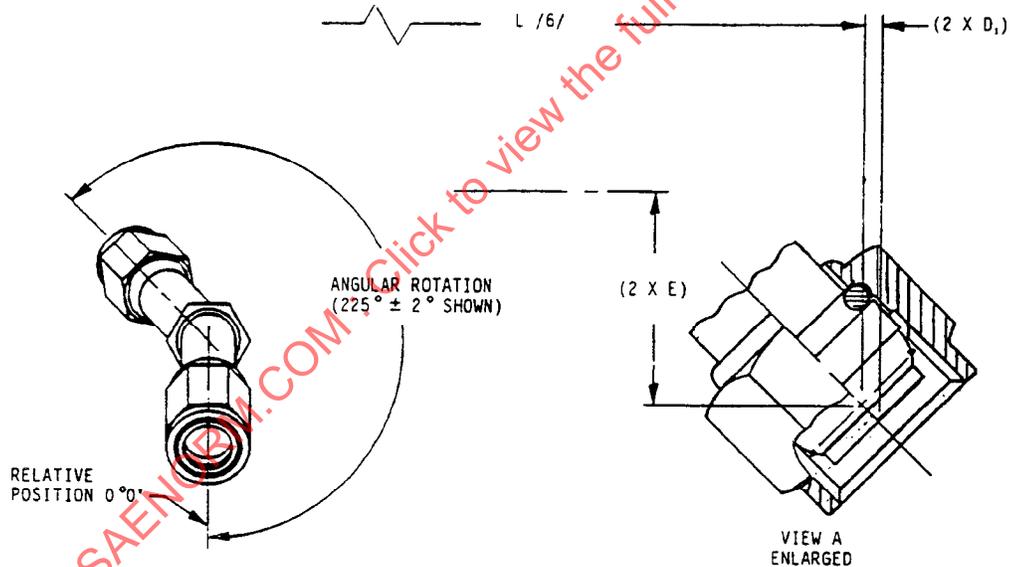
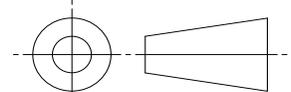


FIGURE 2 - FITTING ORIENTATION /19/

SAE values your input. To provide feedback on this Technical Report, please visit <http://www.sae.org/technical/standards/AS4627C>

THIRD ANGLE PROJECTION



CUSTODIAN: SAE G-3/G-3D

PROCUREMENT SPECIFICATION: /2/ AS4623

**SAE Aerospace**  
An SAE International Group

**AEROSPACE STANDARD**

HOSE ASSEMBLY, POLYTETRAFLUOROETHYLENE, PARA ARAMID REINFORCED, HEAVY-DUTY, 275 °F, 3000 PSI FLARELESS TITANIUM FITTINGS, INCLUDING JUMP SIZE, 45° TO 45°

**SAE AS4627**  
SHEET 1 OF 5

REV. C

SAE Technical Standards Board Rules provide that: "This report is published by SAE to advance the state of technical and engineering sciences. The use of this report is entirely voluntary, and its applicability and suitability for any particular use, including any patent infringement arising therefrom, is the sole responsibility of the user." SAE reviews each technical report at least every five years at which time it may be reaffirmed, revised, or cancelled. SAE invites your written comments and suggestions.

ISSUED 1992-06 REAFFIRMED 2004-06 REVISED 2009-03

TABLE 1 – HOSE AND FITTING DIMENSIONS

BASIC HOSE ASSEMBLY NO. 4627 SIZE CODE	SIZE	THREAD T PER AS8879	A MAX	B GAGE BASIC	(C) HEX	D <sub>1</sub>	E		F /8/ MAX	BALL SIZE MIN THRU /7/ IN
							MIN	MAX		
E	0.250	0.4375-20UNJF-3B	2.160	0.2930	0.56	0.11	0.475	0.350	0.69	0.109
G	0.375	0.5625-20UNJF-3B	2.460	0.4120	0.69	0.12	0.500	0.375	0.80	0.188
H	0.500	0.7500-16UNJF-3B	2.740	0.5600	0.88	0.13	0.560	0.435	0.97	0.313
J	0.625	0.8750-14UNJF-3B	3.785	0.6730	1.00	0.14	0.670	0.545	1.15	0.375
K	0.750	1.0625-12UNJ-3B	4.810	0.8100	1.25	0.16	0.705	0.580	1.38	0.469
M	1.000	1.3125-12UNJ-3B	5.540	1.0620	1.50	0.21	0.840	0.715	1.66	0.719
N	1.250	1.5625-12UNJ-3B	6.770	1.3160	1.81	0.03	0.875	0.750	2.32	0.875

TABLE 2 – HOSE OR SLEEVE OUTSIDE DIAMETERS /10/

SLEEVE CODE	SLEEVE MATERIAL	TEMP LIMIT °F	HOSE SIZE														
			0.250	0.375	0.500	0.625	0.750	1.000	1.250	1.500	1.750	2.000					
-	(-) INDICATES HOSE ONLY NO SLEEVE (SEE AS4623)	275	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
A	FIRE SLEEVE (AS1072 SIL-FG) (5 MIN) /11/ /12/ /13/	275	0.930/0.730	1.070/0.880	1.205/1.015	1.370/1.130	1.590/1.380	1.847/1.677	2.130/1.950								
B	ABRASION SLEEVE SHRINK-ON (POLYOLEFIN AS1073-CODE B) /20/	275	0.620/0.540	0.770/0.690	0.917/0.833	1.042/0.948	1.314/1.206	1.623/1.511	1.896/1.784								
K	INTEGRAL ABRASION SLEEVE (BRAIDED) POLYESTER /21/	275	0.555/0.635	0.675/0.755	0.840/0.920	0.935/1.025	1.205/1.305	1.502/1.602	1.775/1.875								

TABLE 3 – HOSE ASSEMBLY LENGTH TOLERANCES

HOSE ASSEMBLY LENGTH	TOLERANCE
UNDER 18 IN	± 0.125 IN
18 TO 36 IN EXCLUSIVE	± 0.250 IN
36 TO 50 IN EXCLUSIVE	± 0.500 IN
50 IN AND OVER	±1%

TABLE 4 – CUFF LENGTHS

HOSE SIZE	LENGTH (INCHES) ± 0.25
0.250	2.25
0.375	2.75
0.500	3.50
0.625	4.25
0.750	5.75
1.000	6.00
1.250	6.75

TABLE 5 – MAXIMUM HOSE AND FITTING WEIGHTS

HOST OR SLEEVE CODE	HOSE, PART OR SLEEVE	UNITS	HOSE SIZE 0.250	HOSE SIZE 0.375	HOSE SIZE 0.500	HOSE SIZE 0.625	HOSE SIZE 0.750	HOSE SIZE 1.000	HOSE SIZE 1.250
-	HOSE ONLY (SEE AS4623)	LB/IN	--	--	--	--	--	--	--
A	FIRE SLEEVE (AS1072 SIL-FG) (5 MIN) /15/	LB/IN	--	--	--	--	--	--	--
B	ABRASION SLEEVE (AS1073 - CODE B) /20/	LB/IN	0.0018	0.0018	0.0032	0.0032	0.0049	0.0082	0.0082
NONE	FIRE SLEEVE CLAMP	LB/EA	0.020	0.020	0.021	0.021	0.025	0.025	0.032
NONE	FITTING END (45 °) /15/	LB/EA	0.066	0.110	0.154	0.275	0.535	0.944	TBD /9/
K	ABRASION SLEEVE POLYESTER WITH HOSE /21/	LB/IN	0.013	0.017	0.023	0.026	0.035	0.058	0.078

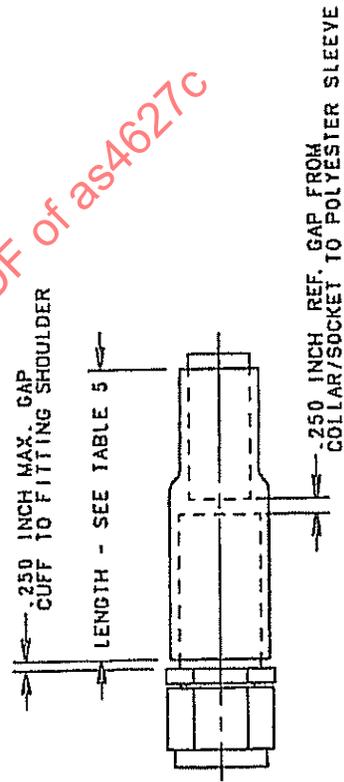


FIGURE 3 – POLYESTER ABRASION SLEEVE CUFF /21/

NOTES:

1. MATERIALS:

- a. HOSE AND FITTINGS - PER AS4623.
- b. THE COLLARS MAY BE STAINLESS STEEL /15/.
- c. SLEEVES - SEE APPLICABLE STANDARDS, TABLE 2.

/2/ PROCUREMENT SPECIFICATION: AS4623 EXCEPT AS SPECIFIED ON THIS STANDARD. PRODUCT SUPPLIED TO THIS SPECIFICATION SHALL BE MANUFACTURED AND ASSEMBLED BY AN ACCREDITED MANUFACTURER OR ASSEMBLED BY AN ACCREDITED DISTRIBUTOR LISTED IN THE PERFORMANCE REVIEW INSTITUTE (PRI) QUALIFIED PRODUCTS LIST (QPL) PRI-QPL-4623 FOR THIS STANDARD. SEE [www.eauditnet.com](http://www.eauditnet.com) FOR CURRENT QPL ON-LINE.

3. CONSTRUCTION AND PERFORMANCE PER AS4623. FITTINGS SHALL BE PERMANENTLY ATTACHED TO HOSE.

4. OPERATING CHARACTERISTICS PER AS4623.

/5/ MARKING: MARKING SHALL BE PER AS4623 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 PERMANENTLY MARKED 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/ HOSE LENGTH: 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 "GAGE DIAMETER" TO "GAGE DIAMETER". FOR LENGTH TOLERANCES, SEE TABLE 3. TO CONVERT "GAGE DIAMETER" TO "GAGE DIAMETER" TO "END TO END" MEASUREMENT, ADD TWO TIMES D<sub>2</sub> TO LENGTH "L".

/7/ HOSE ASSEMBLY INSIDE DIAMETER SHALL BE VERIFIED BY PASSING THE DESIGNATED, OR LARGER, SPHERICAL BALL PER TABLE 1 THROUGH THE HOSE ASSEMBLY.

/8/ DISTANCE ACROSS CORNERS OF COUPLING NUT MAY EXCEED THIS DIMENSION.

/9/ FITTING ENDS SIZE -4 THRU -16 MUST COMPLY WITH NAS1760; FITTINGS FOR HOSE SIZE -20 AND LARGER TO COMPLY WITH AS4703. FITTINGS SHALL MATE WITH AS33514 OR AS4375, FOR SIZES THRU -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 AS1790 OR AS1792.

/10/ CLAMP DIAMETERS: 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/ SLEEVE DIAMETERS: 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/ FIRESLEEVE: 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 FIBERGLASS, SHALL BE COATED WITH RTV SILICONE RUBBER.

/13/ IDENTIFICATION MARKING: ADD "AS1055 TYPE IIb CLASS A-S/P" TO IDENTIFICATION MARKING TO SHOW LEVEL OF COMPLIANCE, "FIRE RESISTANT 275 °F (5 min), WITH AS1055."

 An SAE International Group	<b>AEROSPACE STANDARD</b>	<b>SAE AS4627</b> SHEET 4 OF 5	<b>REV.</b> <b>C</b>
	HOSE ASSEMBLY, POLYTETRAFLUOROETHYLENE, PARA ARAMID REINFORCED, HEAVY-DUTY, 275 °F, 3000 PSI FLARELESS TITANIUM FITTINGS, INCLUDING JUMP SIZE, 45° TO 45°		