FEDERAL SUPPLY CLASS
4720

RATIONALE

AS5956C HAS BEEN REAFFIRMED TO COMPLY WITH THE SAE FIVE-YEAR REVIEW POLICY.

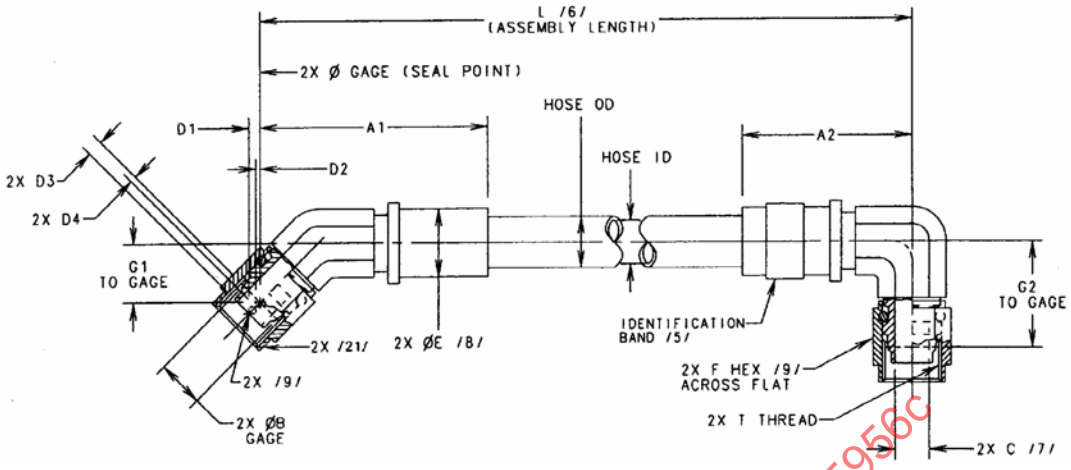


FIGURE 1 - FLARELESS HOSE ASSEMBLY, 45° TO 90° ELBOW

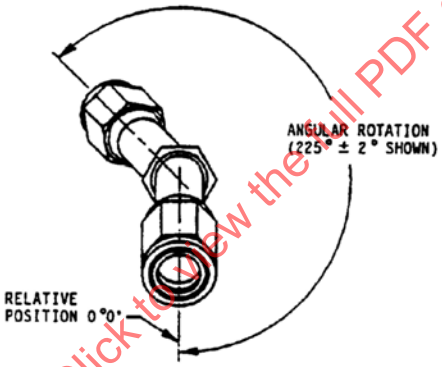


FIGURE 2 - FITTING ORIENTATION /17/

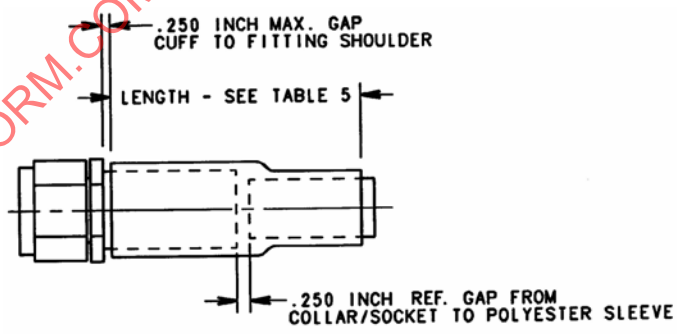
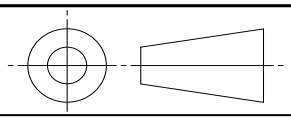


FIGURE 3 - POLYESTER ABRASION SLEEVE CUFF /20/

SAE values your input. To provide feedback on this Technical Report, please visit
http://www.sae.org/technical/standards/AS5956C

THIRD ANGLE PROJECTION



ISSUED 2004-12 REVISED 2007-07 REAFFIRMED 2013-01

CUSTODIAN: G-3/G-3D

PROCUREMENT SPECIFICATION: /2/ AS5951

SAE Aerospace
An SAE International Group

AEROSPACE STANDARD

HOSE ASSEMBLY, POLYTETRAFLUOROETHYLENE, PARA ARAMID REINFORCED, 275 °F, 5080 PSI, FLARELESS, TITANIUM FITTINGS, 45° TO 90°

TABLE 1 - HOSE AND FITTING DIMENSIONS

BASIC HOSE ASSEMBLY NO. AS5956 SIZE CODE	SIZE	REF THREAD T PER AS8879	HOSE ID MIN	A1 MAX	A2 MAX	REF B GAGE BASIC	C /7/ FITTING DIA. MIN.	REF /9/ D1	REF /9/ D2	REF /9/ D3	REF /9/ D4	E /8/ MAX	REF F HEX	G1 MIN	G1 MAX	G2 MIN	G2 MAX	ELBOW FITTING BALL SIZE MIN THRU /7/ IN
E	.250	.4375-28UNJEF-3B	.212	2.37	2.06	.2930	.133	.11	.038	.16	.055	.68	.56	.328	.458	.74	.87	.113
G	.375	.5625-24UNJEF-3B	.298	2.55	2.35	.4120	.226	.11	.038	.16	.055	.85	.69	.368	.498	.81	.94	.192
H	.500	.7500-20UNJEF-3B	.391	2.92	2.58	.5600	.330	.13	.046	.19	.066	.98	.88	.487	.617	.99	1.12	.281
J	.625	.8750-20UNJEF-3B	.485	3.53	3.16	.6730	.410	.14	.046	.20	.066	1.10	1.00	.509	.630	1.14	1.34	.349
K	.750	1.0625-18UNJEF-3B	.602	4.60	4.15	.8100	.510	.16	.046	.23	.066	1.40	1.25	.586	.786	1.33	1.55	.434
M	1.000	1.3125-16UNJ-3B	.852	5.53	5.00	1.0620	.750	.21	.046	.30	.066	1.80	1.50	.631	.831	1.57	1.77	.630

TABLE 2 - HOSE OR SLEEVE OUTSIDE DIAMETERS /10/
(DIAMETERS ARE MAXIMUM UNLESS OTHERWISE NOTED)

SLEEVE CODE	SLEEVE MATERIAL	TEMP LIMIT °F	SIZE .250	SIZE .375	SIZE .500	SIZE .625	SIZE .750	SIZE 1.000
-	(-) INDICATES HOSE ONLY NO SLEEVE (REF)	275	.420-.590	.525-.760	.750-.925	.870-.985	.980-1.180	1.264-1.580
G	FIRESLEEVE (AS1072 SIL-FG) (5 MIN) /11/ /12/ /13/	275	.97	1.15	1.38	1.5	1.75	2.06
F	ABRASION SLEEVE SHRINK-ON (POLYOLEFIN AS1073-CODE B) /18/	275	.65	.83	.99	1.06	1.26	1.67
K	INTEGRAL ABRASION SLEEVE (BRAIDED) POLYESTER	275	.495-.685	.600-.855	.825-1.020	.945-1.080	1.055-1.275	1.339-1.675

TABLE 3 - HOSE 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
50 in AND OVER	±1%

TABLE 4 - WEIGHTS /19/

HOSE OR SLEEVE CODE	HOSE, PART OR SLEEVE	UNITS	SIZE .250	SIZE .375	SIZE .500	SIZE .625	SIZE .750	SIZE 1.000
-	HOSE ONLY (SEE AS5951)	LB/IN	.010	.014	.020	.023	.032	.055
G	FIRESLEEVE AS1072 (5 min PER AS1055)	LB/IN	.016	.019	.028	.029	.037	.041
F	PROTECTIVE SLEEVE, SHRINK-ON (POLYOLEFIN AS1073, CODE B) /18/	LB/IN	.002	.003	.003	.003	.005	.007
NONE	FIRESLEEVE CLAMP	LB/EA	.019	.019	.019	.024	.024	.028
NONE	FITTING END (45°)	LB/EA	.069	.123	.189	.286	.684	1.273
NONE	FITTING END (90°)	LB/EA	.072	.129	.198	.300	.718	1.337
K	ABRASION SLEEVE POLYESTER WITH HOSE	LB/IN	.013	.017	.023	.026	.035	.058

TABLE 5 - CUFF LENGTH

HOSE SIZE	LENGTH (INCHES) ±.25
.250	2.50
.375	3.00
.500	3.75
.625	4.50
.750	5.50
1.00	6.75

NOTES:

1. MATERIALS:

   a. HOSE AND FITTINGS - PER AS5951.

   b. THE COLLARS MAY BE STAINLESS STEEL.

   c. SLEEVES - SEE APPLICABLE STANDARDS, TABLE 2.

/2/ PRODUCT SUPPLIED TO THIS SPECIFICATION SHALL BE ASSEMBLED BY AN ACCREDITED MANUFACTURER OR ASSEMBLING DISTRIBUTOR LISTED IN THE PERFORMANCE REVIEW INSTITUTE (PRI) QUALIFIED PRODUCTS LIST FOR PRI-QPLAS5951 FOR THIS STANDARD. SEE http://www.pri.sae.org/QPL/AS5951.pdf FOR CURRENT QPL ONLINE. NOTE THAT MANUFACTURERS AND ASSEMBLING DISTRIBUTORS ARE ACCREDITED BY PART NUMBER, SIZE AND MATERIAL ON THE PRI-QPL-AS5951.

3. CONSTRUCTION AND PERFORMANCE PER AS5951. FITTINGS SHALL BE PERMANENTLY ATTACHED TO HOSE.

4. OPERATING CHARACTERISTICS PER AS5951.

/5/ MARKING: MARKING SHALL BE PER AS5951 ON A STAINLESS STEEL BAND NOT OVER 1.0 IN WIDE OR ON THE COLLAR. IF A BAND IS USED, IT SHALL BE LOCATED OVER THE COLLAR. THE CHARACTERS SHALL BE A MINIMUM OF .06 IN HIGH. THE BAND SHALL BE SO DESIGNED AS TO REMAIN TIGHT ON THE COLLAR TO PREVENT RELATIVE MOVEMENT AND SHALL BE OF SUFFICIENT STRENGTH TO PREVENT REMOVAL BY HAND. MARKING BAND SHALL BE COVERED WITH TRANSPARENT POLYOLEFIN SHRINK SLEEVE PER AS1073 CODE A.

/6/ HOSE LENGTH: 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 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 D1 TO LENGTH "L" FOR NAS1760 END STYLES OR D2 TO LENGTH "L" FOR AS4458 GLOBESEAL END STYLES.

/7/ HOSE FITTING 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, COLLAR OR NIPPLE MAY EXCEED THIS DIMENSION.

/9/ FITTING ENDS MUST COMPLY WITH NAS1760, AS4458 OR EQUIVALENT. DIMENSION D1 APPLIES TO NAS1760 AND D2 APPLIES TO AS4458. FITTINGS SHALL MATE WITH EN6123 OR AS5827. COUPLING NUTS SHALL BE FUNCTIONAL EQUIVALENT TO AS4370 EXCEPT FOR THREAD AND WIRE GROOVE. THREADS AND WIRE GROOVE IN NUT, RETAINER WIRE AND FITTING END WIRE GROOVE SHALL BE COATED WITH AS5272 TYPE 1 SOLID FILM LUBRICANT.

/10/ CLAMP DIAMETERS: DIAMETERS ARE LISTED FOR CLAMP SELECTION. TUBULAR SLEEVES MAY NOT BE A PERFECT ROUND AND SHALL BE MEASURED WITH A DIAMETER MEASUREMENT TAPE.

/11/ OUTSIDE 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."

14. DIMENSIONING AND TOLERANCING: ASME Y14.5M-1994.

/15/ SAFETY WIRE HOLES LOCATION AND DIAMETER PER AS1043 AS FOLLOWS:

a. L = TWO OR THREE HOLES PER HEX SIZE PER AS1043

b. C = NO SAFETY WIRE HOLES

16. THIS PART STANDARD TAKES PRECEDENCE OVER AS5951 IN CASES OF CONFLICT.

/17/ THE FITTING 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 2). WHEN END FITTINGS ARE POINTED IN THE SAME DIRECTION, THIS DASH NUMBER SHALL BE 000.

/18/ THE SHRINK-ON POLYOLEFIN SLEEVE SHALL COVER THE ENTIRE HOSE AND A MINIMUM OF 50% OF THE COLLARS ON BOTH ENDS OF THE ASSEMBLY.

/19/ FITTING WEIGHTS ARE REFERENCE AND BULK HOSE AND SLEEVE WEIGHTS ARE MAXIMUM.

/20/ THE INTEGRAL POLYESTER ABRASION SLEEVE, CODE K, SHALL HAVE A SUPPORT CUFF IN ACCORDANCE WITH FIGURE 3. THE CUFF MAY BE CONTOURED AND HAVE A MINIMUM THICKNESS OF .10 INCHES. THE CUFF SHALL BE ADHERED TO THE FITTING COLLAR/SOCKET AND HOSE. THE CUFF MATERIAL SHALL BE A SILICONE MATERIAL THAT IS COMPATIBLE WITH AIRCRAFT FLUIDS.