

RATIONALE

REVISED PROCUREMENT NOTE /2/, COUPLING NUT NOTE /9/, AND ADDED NOTE /21/ TO CONFORM TO CURRENT REQUIREMENTS.

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SAE AS5963

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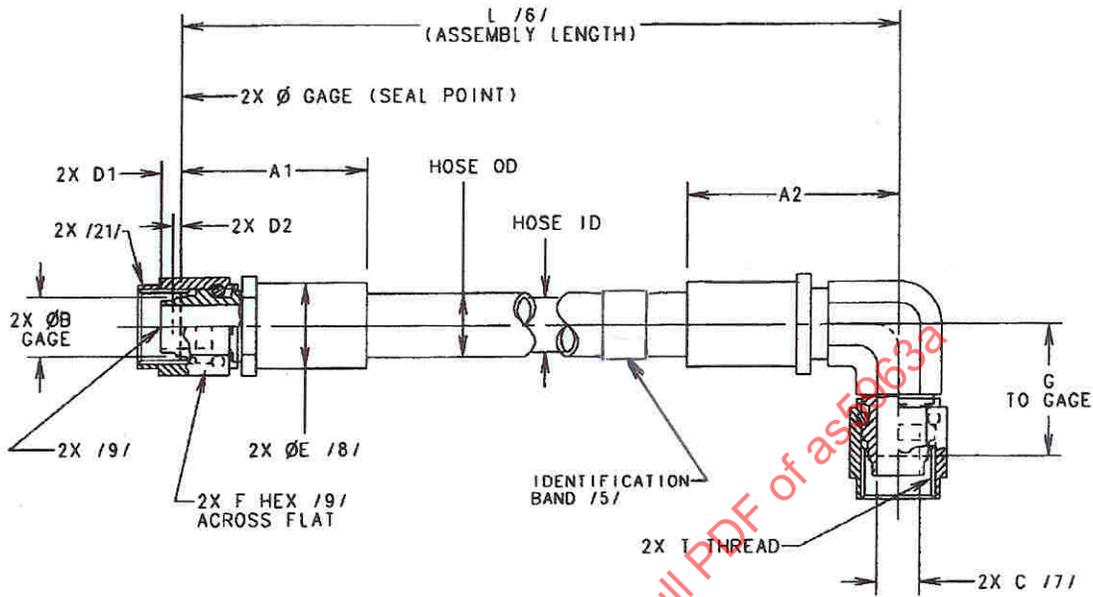


FIGURE 1 - HOSE ASSEMBLY DIMENSIONS

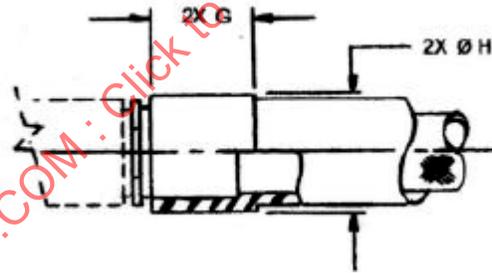
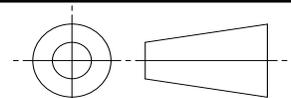


FIGURE 2 - INTEGRAL FIRESLEEVE CUFF /13/

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THIRD ANGLE PROJECTION



CUSTODIAN: SAE G-3/G-3D

PROCUREMENT SPECIFICATION: AS5960 /2/

SAE Aerospace
An SAE International Group

AEROSPACE STANDARD

HOSE ASSEMBLY, POLYTETRAFLUOROETHYLENE
CRES BRAID REINFORCED, 400 °F, 5080 PSI
FLARELESS, STRAIGHT TO 90° ELBOW

SAE AS5963
SHEET 1 OF 5

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TABLE 1 - HOSE ASSEMBLY DIMENSIONS

HOSE ASSEMBLY AS5963 SIZE CODE	SIZE	FITTING TYPE /17/	THREAD T PER AS8879	A1 MAX	A2 MAX	ØB GAGE BASIC	C HEX	(D1) /9/	(D2) /9/
E	.250	--	--	--	--	--	--	--	--
E	.250	S	.4375-28UNJEF-3B	2.64	2.78	.2930	.56	.16	.055
E	.250	E	.5625-24UNJEF-3B	2.74	2.84	.4120	.69	.16	.055
G	.375	R	.4375-28UNJEF-3B	2.90	2.99	.2930	.56	.16	.055
G	.375	S	.5625-24UNJEF-3B	2.94	3.05	.4120	.69	.16	.055
G	.375	E	.7500-20UNJEF-3B	3.07	3.14	.5600	.88	.19	.066
H	.500	R	.5625-24UNJEF-3B	3.19	3.30	.4120	.69	.16	.055
H	.500	S	.7500-20UNJEF-3B	3.32	3.39	.5600	.88	.19	.066
H	.500	E	.8750-20UNJEF-3B	3.39	3.46	.6730	1.00	.20	.066
J	.625	R	.7500-20UNJEF-3B	3.55	3.62	.5600	.88	.19	.066
J	.625	S	.8750-20UNJEF-3B	3.62	3.69	.6730	1.00	.20	.066
J	.625	E	1.0625-18UNJEF-3B	3.87	3.81	.8100	1.25	.23	.066
K	.750	R	.8750-20UNJEF-3B	3.89	3.94	.6730	1.00	.20	.066
K	.750	S	1.0625-18UNJEF-3B	3.95	4.05	.8100	1.25	.23	.066
K	.750	E	1.3125-16UNJ-3B	4.06	4.46	1.0620	1.50	.30	.066
M	1.000	R	1.0625-18UNJEF-3B	4.42	4.53	.8100	1.25	.23	.066
M	1.000	S	1.3125-16UNJ-3B	4.54	4.92	1.0620	1.50	.30	.066
M	1.000	E	1.6250-16UNJ-3B	4.64	5.12	1.3160	1.81	.30	.066
N	1.250	--	--	--	--	--	--	--	--
N	1.250	S	1.6250-16UNJ-3B	4.72	5.31	1.3160	1.81	.30	.066
N	1.250	--	--	--	--	--	--	--	--

TABLE 1 - HOSE ASSEMBLY DIMENSIONS (CONTINUED)

HOSE ASSEMBLY AS5963 - SIZE CODE	SIZE	FITTING TYPE /17/	E MIN	E MAX	ØF MAX /8/	FITTING BALL SIZE MIN THRU IN /7/	
						STRAIGHT	ELBOW
E	.250	--	--	--	--	--	--
E	.250	S	.74	.87	.88	.120	.113
E	.250	E	.81	.94	.88	.120	.113
G	.375	R	.74	.87	1.00	.120	.113
G	.375	S	.81	.94	1.00	.203	.192
G	.375	E	.99	1.12	1.00	.203	.192
H	.500	R	.81	.94	1.20	.203	.192
H	.500	S	.99	1.12	1.20	.297	.281
H	.500	E	1.14	1.34	1.20	.297	.281
J	.625	R	.99	1.12	1.41	.297	.281
J	.625	S	1.14	1.34	1.41	.369	.349
J	.625	E	1.35	1.55	1.41	.369	.349
K	.750	R	1.14	1.34	1.69	.369	.349
K	.750	S	1.35	1.55	1.69	.459	.434
K	.750	E	1.57	1.77	1.69	.459	.434
M	1.000	R	1.35	1.55	2.00	.459	.434
M	1.000	S	1.57	1.77	2.00	.675	.638
M	1.000	E	1.74	1.94	2.00	.675	.638
N	1.250	E	--	--	--	--	--
N	1.250	S	1.74	1.94	2.25	.833	.786
N	1.250	--	--	--	--	--	--

TABLE 2 - HOSE AND SLEEVE OUTSIDE DIAMETER /10/

SLEEVE CODE	SLEEVE MATERIAL	TEMP LIMIT °F	TOLERANCE	SIZE	SIZE	SIZE	SIZE	SIZE	SIZE	SIZE
				.250	.375	.500	.625	.750	1.000	1.250
-	(-) INDICATES HOSE ONLY NO SLEEVE (SEE AS5960) REF	400 °F	MAX MIN	.510 .450	.620 .560	.760 .700	.960 .835	1.120 .995	1.430 1.305	1.685 1.560
C	FIRESLEEVE (AS1072 SIL-FG) (15 MIN) /11/ /12/ /14/	400 °F	MAX MIN	.970 .810	1.090 1.000	1.220 1.060	1.500 1.260	1.590 1.470	1.950 1.780	2.190 1.940
F	ABRASION SLEEVE SHRINK-ON (POLYOLEFIN AS1073-CODE B) /16/	275 °F	MAX MIN	.560 .480	.700 .590	.910 .760	1.045 .895	1.205 1.080	1.530 1.370	1.785 1.660
H	FIRESLEEVE, INTEGRAL SILICONE (15 MIN) /14/	400 °F	MAX MIN	.815 .755	.940 .880	1.060 1.000	1.200 1.075	1.420 1.295	1.740 1.615	2.000 1.875
K	INTEGRAL ABRASION SLEEVE (BRAIDED POLYESTER) /15/	300 °F	MAX MIN	.590 .530	.710 .650	.860 .735	1.065 .885	1.205 1.130	1.530 1.405	1.815 1.690

TABLE 3 - HOSE ASSEMBLY LENGTH TOLERANCE

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 - WEIGHT (MAX)

HOSE OR SLEEVE CODE	HOSE OR TYPE SLEEVE	UNITS	SIZE	SIZE	SIZE	SIZE	SIZE	SIZE	SIZE
			.250	.375	.500	.625	.750	1.000	1.250
-	HOSE ONLY (SEE AS5960) REF	LB/IN	.022	.037	.046	.070	.105	.170	.220
C	TUBULAR FIRESLEEVE AS1072 (15 min)	LB/IN	.017	.020	.022	.030	.035	.040	.042
F	ABRASION SLEEVE (AS1073-CODE B)	LB/IN	.003	.004	.005	.006	.008	.010	.015
H	FIRESLEEVE INTEGRAL SILICONE ON HOSE (15 min)	LB/IN	.040	.060	.070	.095	.140	.220	.265
K	ABRASION SLEEVE, POLYESTER ON HOSE	LB/IN	.025	.040	.050	.070	.110	.180	.230
NONE	FIRESLEEVE CLAMP	LB/EA	.020	.025	.025	.025	.032	.032	.035
NONE	FITTING END (STRAIGHT) /17/ /18/	R LB/EA	--	.082	.137	.221	.270	.520	--
		S LB/EA	.052	.092	.162	.247	.296	.542	.850
		E LB/EA	.063	.114	.188	.300	.320	.645	--
NONE	FITTING END (90° ELBOW) /17/ /18/	R LB/EA	--	.106	.173	.274	.333	.646	--
		S LB/EA	.066	.116	.198	.300	.360	.670	1.030
		E LB/EA	.087	.147	.241	.426	.446	.870	--

TABLE 5 - INTEGRAL FIRESLEEVE CUFF DIMENSIONS /13/

HOSE SIZE	G MAX	H Ø MAX
04	2.56	1.08
06	2.68	1.20
08	2.88	1.40
10	3.32	1.61
12	3.38	1.89
16	3.38	2.20
20	3.81	2.45

NOTES:

1. MATERIALS:

- a. HOSE AND FITTINGS - PER AS5960.
- b. THE COLLARS/SOCKETS MAY BE STAINLESS STEEL.
- c. SLEEVES - SEE APPLICABLE STANDARDS, TABLE 2.

/2/ PROCUREMENT SPECIFICATION: AS5960 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-AS5960 FOR THIS STANDARD. SEE www.eauditnet.com FOR CURRENT QPL ONLINE.

3. CONSTRUCTION AND PERFORMANCE PER AS5960. FITTINGS SHALL BE PERMANENTLY ATTACHED TO HOSE.

4. OPERATING CHARACTERISTICS PER AS5960.

/5/ MARKING: MARKING SHALL BE PER AS5960 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.

/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 FRACTION OF AN INCH IN EIGHTHS. LENGTH "L" IS MEASURED FROM "GAGE POINT" TO "CENTERLINE OF 90° ELBOW". FOR LENGTH TOLERANCES SEE TABLE 3. TO CONVERT FROM "GAGE POINT TO CENTERLINE" TO "END TO CENTERLINE" MEASUREMENT, ADD "D1" FOR NAS1760 END STYLE, OR "D2" FOR AS4458 GLOBESEAL END STYLE, 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 AND NIPPLE OR SOCKET/COLLAR HEX MAY EXCEED THIS DIMENSION.

/9/ FITTING ENDS MUST COMPLY WITH NAS1760, AS4458, OR BE FUNCTIONALLY EQUIVALENT. DIMENSION D1 APPLIES TO NAS1760 AND D2 APPLIES TO AS4458. FITTINGS SHALL MATE WITH EN6123 OR AS5827. COUPLING NUTS SHALL BE FUNCTIONALLY 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/ DIAMETERS ARE LISTED FOR CLAMP SELECTION.

/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.