

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.

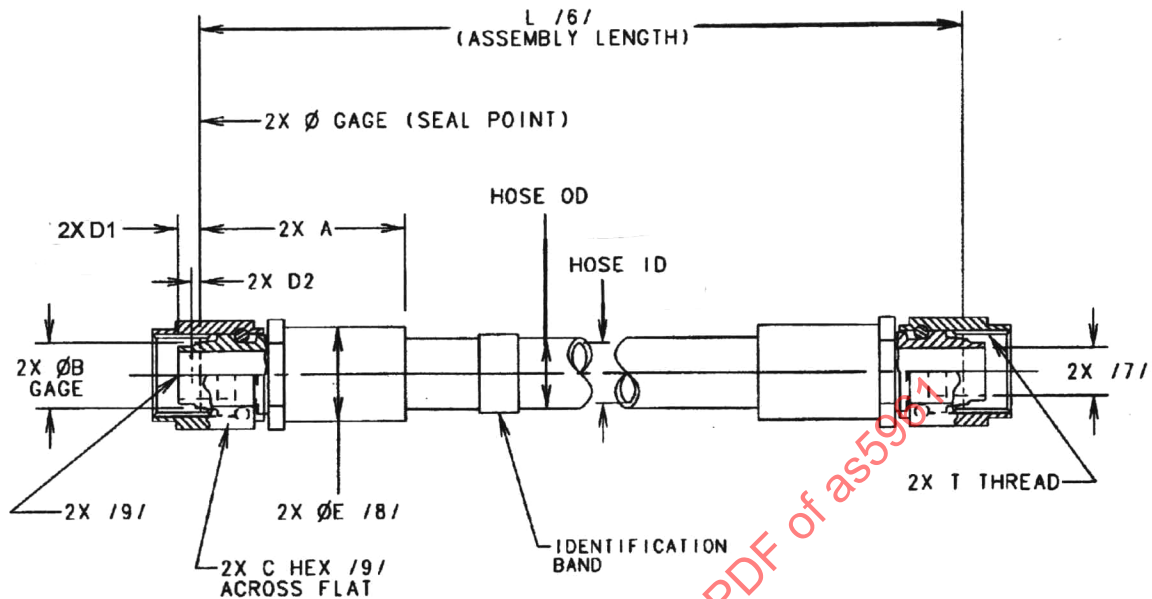


FIGURE 1 - HOSE ASSEMBLY DIMENSIONS

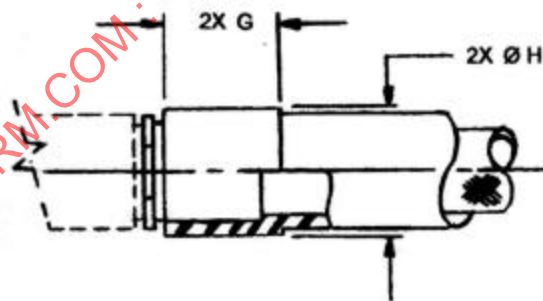


FIGURE 2 - INTEGRAL FIRESLEEVE CUFF / 13/

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 STRAIGHT**AS5961**
SHEET 1 OF 5

Copyright 2004 SAE International

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of SAE.

TO PLACE A DOCUMENT ORDER: Tel: 877-606-7323 (inside USA and Canada)
Fax: 724 776 0790

Tel: 724-776-4970 (outside USA)
Email: custsvc@sae.org

SAE WEB ADDRESS: <http://www.sae.org>

TABLE 1 - HOSE ASSEMBLY DIMENSIONS

HOSE ASSEMBLY AS5961 SIZE CODE	SIZE	FITTING TYPE /17/	THREAD T PER AS8879	A MAX	Ø B GAGE BASIC	C HEX	(D1) /9/	(D2) /9/	Ø E /8/ MAX	BALL SIZE MIN THRU IN /7/
E	.250	--		--	---	--	--	--	--	--
E	.250	S	.4375-28UNJEF-3B	2.64	.2930	.56	.16	.055	.88	.120
E	.250	E	.5625-24UNJEF-3B	2.74	.4120	.69	.16	.055	.88	.120
G	.375	R	.4375-28UNJEF-3B	2.90	.2930	.56	.16	.055	1.00	.120
G	.375	S	.5625-24UNJEF-3B	2.94	.4120	.69	.16	.055	1.00	.203
G	.375	E	.7500-20UNJEF-3B	3.07	.5600	.88	.19	.066	1.00	.203
H	.500	R	.5625-24UNJEF-3B	3.19	.4120	.69	.16	.055	1.20	.203
H	.500	S	.7500-20UNJEF-3B	3.32	.5600	.88	.19	.066	1.20	.297
H	.500	E	.8750-20UNJEF-3B	3.39	.6730	1.00	.20	.066	1.20	.297
J	.625	R	.7500-20UNJEF-3B	3.55	.5600	.88	.19	.066	1.41	.297
J	.625	S	.8750-20UNJEF-3B	3.62	.6730	1.00	.20	.066	1.41	.369
J	.625	E	1.0625-18UNJEF-3B	3.87	.8100	1.25	.23	.066	1.41	.369
K	.750	R	.8750-20UNJEF-3B	3.89	.6730	1.00	.20	.066	1.69	.369
K	.750	S	1.0625-18UNJEF-3B	3.95	.8100	1.25	.23	.066	1.69	.459
K	.750	E	1.3125-16UNJ-3B	4.06	1.0620	1.50	.30	.066	1.69	.459
M	1.000	R	1.0625-18UNJEF-3B	4.42	.8100	1.25	.23	.066	2.00	.459
M	1.000	S	1.3125-16UNJ-3B	4.54	1.0620	1.50	.30	.066	2.00	.675
M	1.000	E	1.6250-16UNJ-3B	4.64	1.3160	1.81	.30	.066	2.00	.675
N	1.250	--	--	--	--	--	--	--	--	--
N	1.250	S	1.6250-16UNJ-3B	4.72	1.3160	1.81	.30	--	2.25	.833
N	1.250	--	--	--	--	--	--	--	--	--

TABLE 2 - HOSE AND SLEEVE OUTSIDE DIAMETER /10/

SLEEVE CODE	SLEEVE MATERIAL	TEMP LIMIT °F	TOLERANCE	SIZE .250	SIZE .375	SIZE .500	SIZE .625	SIZE .750	SIZE 1.000	SIZE 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 .250	SIZE .375	SIZE .500	SIZE .625	SIZE .750	SIZE 1.000	SIZE 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	--

TABLE 5 - INTEGRAL FIRESLEEVE CUFF DIMENSIONS /13/

HOSE SIZE	G MAX	H Ø MAX
04	2.56	1.04
06	2.68	1.17
08	2.88	1.29
10	3.32	1.45
12	3.38	1.65
16	3.38	1.98
20	3.81	2.23

NOTES:

1. MATERIALS:

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

/2/ THIS HOSE ASSEMBLY SHALL BE QUALIFIED IN ACCORDANCE WITH PROCUREMENT SPECIFICATION AS5960. USERS OF THIS STANDARD SHALL PROCURE THE PRODUCT FROM ACCREDITED MANUFACTURERS, OR ACCREDITED DISTRIBUTORS, AS LISTED IN THE PERFORMANCE REVIEW INSTITUTE (PRI) QUALIFIED PRODUCTS LIST PRI-QPL-AS5960 FOR THIS STANDARD WHEN ISSUED. PRIOR TO PRI-QPL ISSUANCE, USERS OF THIS STANDARD ARE ADVISED TO CONTROL SOURCE APPROVAL(S) BY STANDARD PAGE SUPPLEMENT SHEET OR SIMILAR MEANS. WHEN ISSUED, REFER TO <http://www.pri.sae.org/as5960> FOR CURRENT PRI-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 "GAGE POINT". FOR LENGTH TOLERANCES SEE TABLE 3. TO CONVERT FROM "GAGE POINT" TO "GAGE POINT" TO "END TO END" MEASUREMENT, ADD TWO TIMES "D1" FOR NAS1760 END STYLE, OR TWO TIMES "D2" FOR AS4458 GLOBE SEAL 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 DEN6123 OR AS5827. STANDARD COUPLING NUTS SHALL BE IN ACCORDANCE WITH OR FUNCTIONALLY EQUIVALENT TO AS4370, AS1790, OR AS1792 EXCEPT FOR THREAD PITCH.
- /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.
- /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 THE FIBERGLASS, SHALL BE COATED WITH RTV SILICONE RUBBER.
- /13/ THE ENDS OF THE INTEGRAL FIRESLEEVE AND FITTING SOCKET/COLLAR MAY BE COVERED WITH A SILICONE CUFF OR MOLDED SILICONE AS REQUIRED TO COMPLY WITH /14/
- /14/ IDENTIFICATION MARKING: ADD "AS1055 TYPE IIb CLASS B-S/P" TO IDENTIFICATION MARKING TO SHOW LEVEL OF COMPLIANCE, "FIREPROOF" (15 MIN), WITH AS1055.
- /15/ INTEGRAL ABRASION SLEEVE SHALL FORM AN INTEGRAL PERMANENT PART OF THE HOSE AND SHALL TERMINATE A MAXIMUM OF .200 in FROM THE END OF THE COLLAR.
- /16/ THE SHRINK-ON POLYOLEFIN SLEEVE SHALL COVER THE ENTIRE HOSE AND A MINIMUM OF 50% OF THE COLLARS ON BOTH ENDS OF THE ASSEMBLY.
- /17/ JUMP SIZE CODE EXPLANATION:
- a. R-STEP DOWN 1 STANDARD LETTER SIZE PER TABLE 1 (REDUCED).
 - b. S-HOSE SIZE (NO REDUCTION OR EXPANSION)
 - c. E-STEP UP 1 STANDARD LETTER SIZE PER TABLE 1 (EXPANDED)
- NOTE: WHEN FITTING SIZE CHANGES EXIST, SPECIFY SMALLER FITTING PRIOR TO THE LARGER FITTING IN THE PART NUMBER.
- /18/ FITTING WEIGHTS ARE FOR REFERENCE ONLY.