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REV.  
C

AS4503

FEDERAL SUPPLY CLASS

RATIONALE

AS4503C HAS BEEN REAFFIRMED TO COMPLY WITH THE SAE FIVE-YEAR REVIEW POLICY.

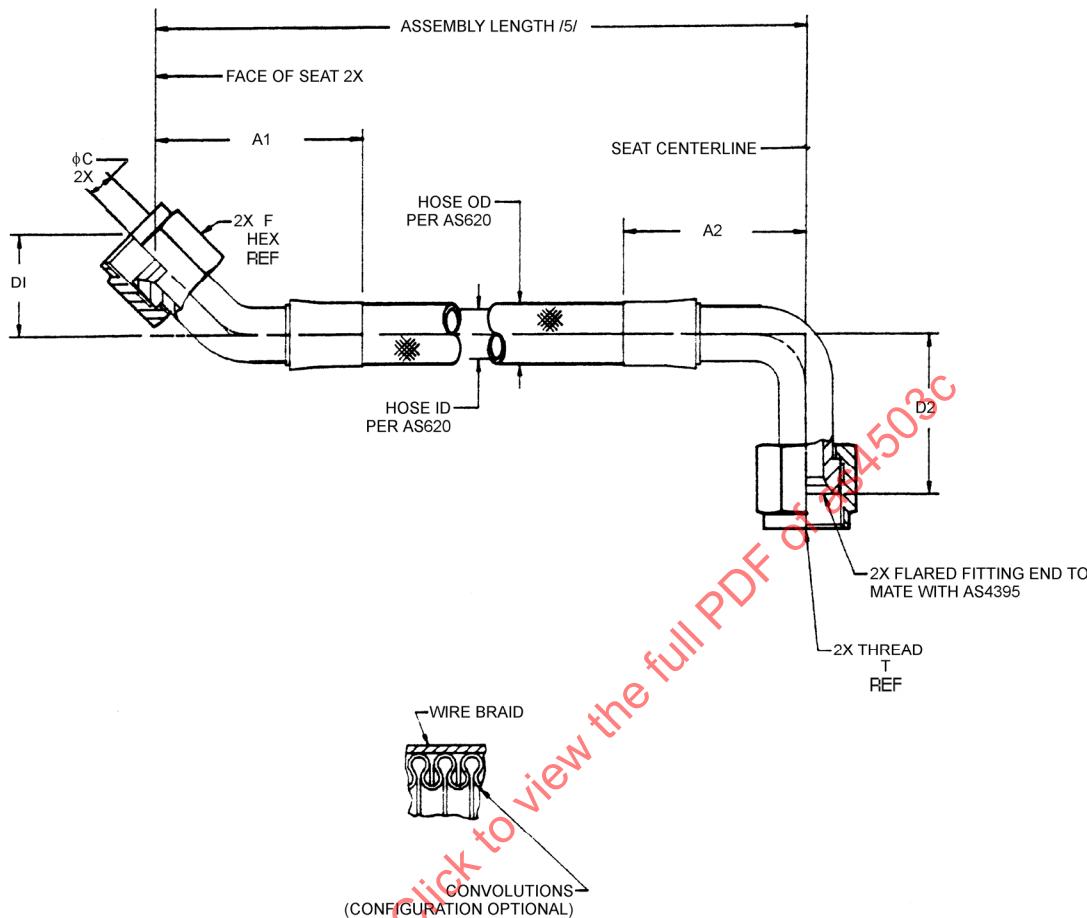


FIGURE 1 - HOSE ASSEMBLY

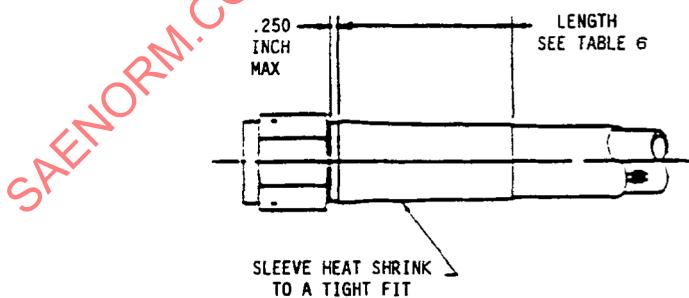
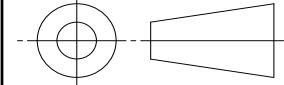


FIGURE 2 - SPIRAL AND POLYESTER ABRASION COVER /6, /7/

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THIRD ANGLE PROJECTION



CUSTODIAN: G-3/G-3D

PROCUREMENT SPECIFICATION: AS620 /2/



AEROSPACE STANDARD

HOSE ASSEMBLY, CONVOLUTED,  
POLYTETRAFLUOROETHYLENE, METALLIC REINFORCED  
CONDUCTIVE, FLARED, 45° TO 90°

AS4503  
SHEET 1 OF 6

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ISSUED 1991-12 REVISED 2007-04 REAFFIRMED 2015-04

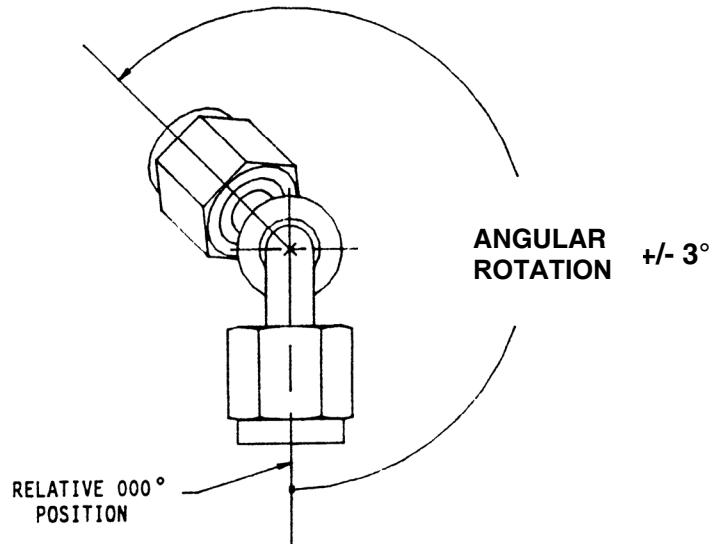


FIGURE 3 - FITTING ANGULAR ORIENTATION /15/

TABLE 1 - ASSEMBLY DIMENSIONS

HOSE ASSEMBLY AS4503 SIZE CODE	HOSE ASSEMBLY SIZE REF	THREAD T PER AS8879 REF	A <sub>1</sub> MAX	A <sub>2</sub> MAX	ØC /8/ MIN	D <sub>1</sub> MIN	D <sub>1</sub> MAX	D <sub>2</sub> MIN	D <sub>2</sub> MAX	ØE /9/ MAX WITHOUT SLEEVING	F HEX REF
E .250	.4375-20UNJF-3B	1.62	1.36	.132	.312	.382	.607	.677	.55	.56	
G .375	.5625-18UNJF-3B	1.86	1.56	.256	.436	.506	.855	.925	.68	.69	
H .500	.7500-16UNJF-3B	2.18	1.85	.345	.537	.607	1.072	1.142	.86	.88	
J .625	.8750-14UNJF-3B	2.42	2.19	.430	.608	.678	1.246	1.316	.95	1.00	
K .750	1.0625-12UNJ-3B	2.77	2.67	.635	.644	.714	1.370	1.440	1.28	1.25	
M 1.000	1.3125-12UNJ-3B	3.05	2.87	.835	.755	.825	1.673	1.743	1.47	1.50	
N 1.250	1.6250-12UNJ-3B	3.68	3.39	1.085	.894	.964	2.015	2.085	1.70	1.81	
P 1.500	1.8750-12UNJ-3B	3.95	3.65	1.310	1.016	1.086	2.335	2.405	2.00	2.12	
R 2.000	2.5000-12UNJ-3B	5.38	4.96	1.780	1.300	1.370	3.040	3.110	2.56	2.75	

TABLE 2 - ASSEMBLY LENGTH TOLERANCE

+.250/-125 in FOR LENGTHS UNDER 18 in  
 +.500/-250 in FOR LENGTHS FROM 18 to 36 in EXL.  
 +1.000/-500 in FOR LENGTHS FROM 36 to 50 in EXL.  
 +2%/-1% FOR LENGTHS 50 in AND OVER

TABLE 3 - HOSE OR COVER OUTSIDE DIAMETER

COVER CODE	HOSE OR TYPE OF PROTECTIVE COVER	HOSE SIZE										UPPER TEMP. LIMIT °F
		.250	.375	.500	.625	.750	1.00	1.25	1.50	2.00		
-	HOSE ONLY PER AS620	.413/.477	.523/.587	.723/.787	.818/.882	1.028/1.092	1.266/1.330	1.494/1.558	1.758/1.822	2.293/2.357	-	-
B REF	SPRAL ABRASION /7/	.505	.615	.825	.935	1.140	1.358	1.630	1.890	2.395	275	
H	INTEGRAL FIRESLEEVE /11/	.710/.760	.798/.862	.978/1.055	1.100/1.202	1.300/1.392	1.478/1.610	1.718/1.840	1.968/2.120	2.480/2.564	400	
N REF	FIRESLEEVE SIL/FG (AS1072) /11/ /12/ /13/	.900	1.030	1.150	1.380	1.590	1.800	2.060	2.320	2.740	400	
K	INTEGRAL ABRASION /8/ (BRAIDED) POLYESTER	.468/.532	.598/.662	.808/.872	.888/.952	1.103/1.167	1.313/1.405	1.568/1.632	1.838/1.902	2.370/2.452	300	
J	INTEGRAL FIRESLEEVE /14/	.653/.717	.763/.827	.963/1.027	1.058/1.122	1.268/1.332	1.498/1.562	-	-	2.480/2.564	400	

TABLE 4 - HOSE ASSEMBLIES PHYSICAL CHARACTERISTICS

HOSE SIZE REF	OPERATING PRESSURE MAX PSI	PROOF PRESSURE MIN PSI	BURST PRESSURES		BURST PRESSURES HIGH TEMP MIN PSI	BEND RADIUS AT INSIDE OF BEND INCHES (HOSE ONLY)
			ROOM TEMP MIN PSI			
E	1000	2000	4000		2800	1.25
G	1000	2000	4000		2800	2.25
H	1000	2000	4000		2800	2.88
J	1000	1800	3600		2500	3.00
K	1000	1800	3600		2500	3.75
M	1000	1800	3600		2500	5.00
N	1000	1800	3600		2500	6.25
P	750	1500	3000		2100	7.50
R	250	500	1000		700	10.00

TABLE 5 - WEIGHTS (NOM)

HOSE SIZE REF	HOSE ONLY LB/IN	HOSE WITH SPIRAL ABRASION COVER	HOSE WITH INTEGRAL FIRESLEEVE COVER	HOSE WITH TUBULAR FIRESLEEVE COVER	HOSE WITH POLYESTER ABRASION COVER	45° END FITTING LB EACH	90° END FITTING LB EACH
		CODE B LB/IN	CODE H & J LB/IN	CODE N LB/IN	CODE K LB/IN		
E	.010	.011	-	.018	.009	.06	.06
G	.010	.014	.028	.021	.012	.10	.12
H	.022	.020	.032	.030	.018	.18	.19
J	.020	.025	.042	.035	.022	.28	.30
K	.027	.032	.050	.044	.028	.40	.42
M	.040	.039	.055	.057	.038	.60	.66
N	.055	.060	.070	.077	.045	.96	1.00
P	.060	.071	.082	.107	.058	1.33	1.41
R	.090	.105	.129	.142	.100	2.40	2.46

TABLE 6 - SLEEVE LENGTH

REF HOSE SIZE	LENGTH (in)
E/G	2.00 ± .25
H/J	2.50 ± .25
K/M	3.00 ± .25
N/P	3.50 ± .25
R	4.00 ± .25

TABLE 7 - MINIMUM INSPECTION BALL SIZE  
FOR VERIFYING HOSE ASSEMBLY ID /8/

HOSE SIZE REF	ELBOW END FITTING DIA IN
E	.112
G	.218
H	.293
J	.366
K	.540
M	.710
N	.922
P	1.114
R	1.513

## NOTES:

1. MATERIALS: HOSE AND FITTINGS PER AS620, TYPE II, CLASS 1 OR 2, AS SPECIFIED BY PART NUMBER. CODE B, SPIRAL ABRASION COVER, BLACK NYLON COIL PER AS1294 CODE H AND J, INTEGRAL FIRESLEEVE, RED OR BROWN SILICONE CODE N, TUBULAR FIRESLEEVE, FIBERGLASS SILICONE PER AS1072 CODE K, INTEGRAL ABRASION SLEEVE, BRAIDED POLYESTER
- /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-QPL-AS620 FOR THIS STANDARD. SEE <http://www.pri.sae.org/QPL/as620.pdf> FOR CURRENT QPL ONLINE. NOTE THAT MANUFACTURERS AND ASSEMBLING DISTRIBUTORS ARE ACCREDITED BY PART NUMBER, SIZE AND MATERIAL ON THE PRI-QPL-AS620.
3. MARKING SHALL BE PER AS620 ON A STAINLESS STEEL BAND NOT OVER 1.0 in WIDE OR ON THE END FITTING 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 MOTION AND CHAFING. IT SHALL BE OF SUFFICIENT STRENGTH TO PREVENT REMOVAL BY HAND.
4. CONSTRUCTION AND PERFORMANCE PER AS620. FITTINGS SHALL BE PERMANENTLY ATTACHED TO HOSE.
- /5/ 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 IN FRACTION OF AN INCH IN EIGHTHS. LENGTH "L" IS MEASURED FROM "END" TO "END." SEE TABLE 2 FOR LENGTH TOLERANCES.