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REV.
C

AS4503

FEDERAL SUPPLY CLASS

RATIONALE

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

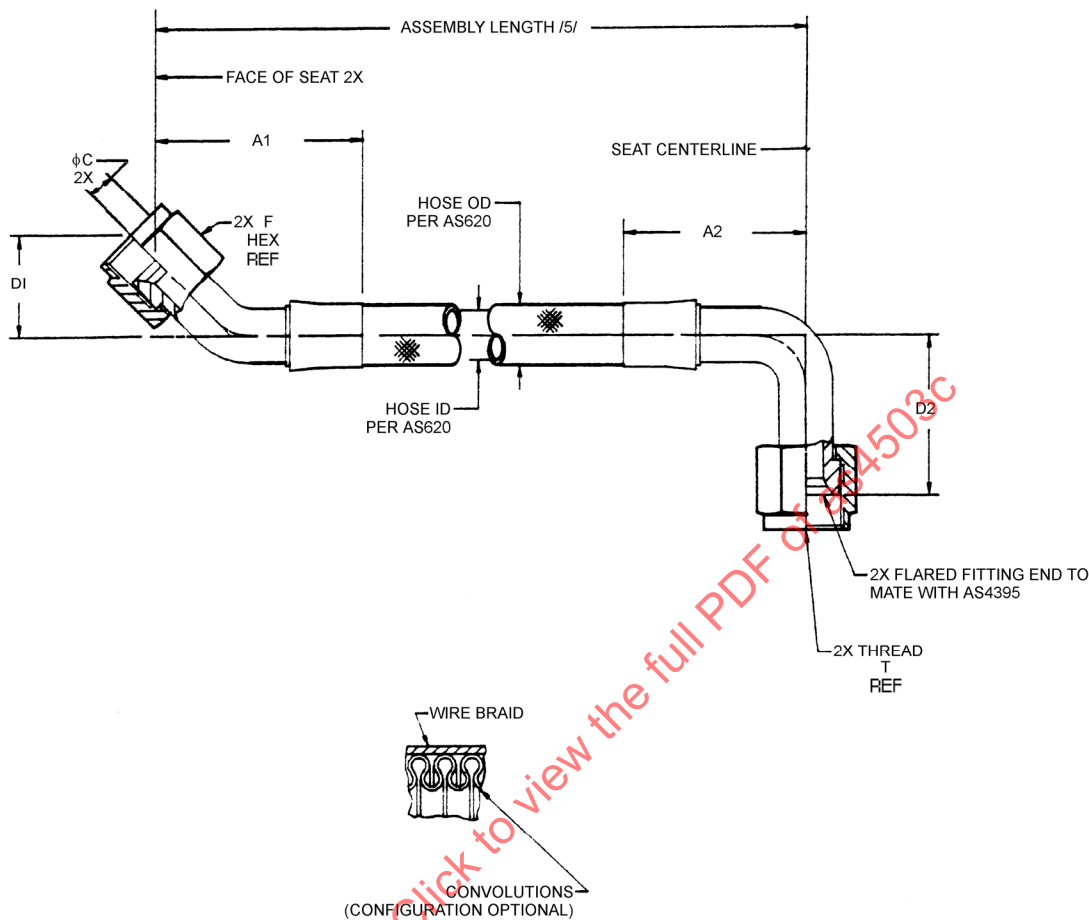


FIGURE 1 - HOSE ASSEMBLY

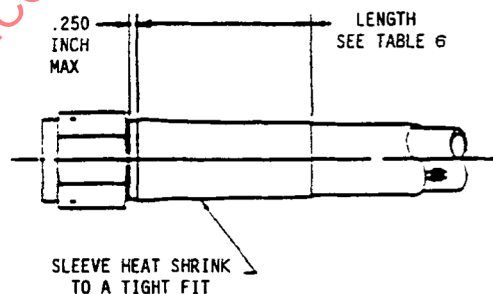
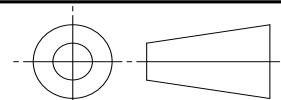


FIGURE 2 - SPIRAL AND POLYESTER ABRASION COVER /6/, /7/

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

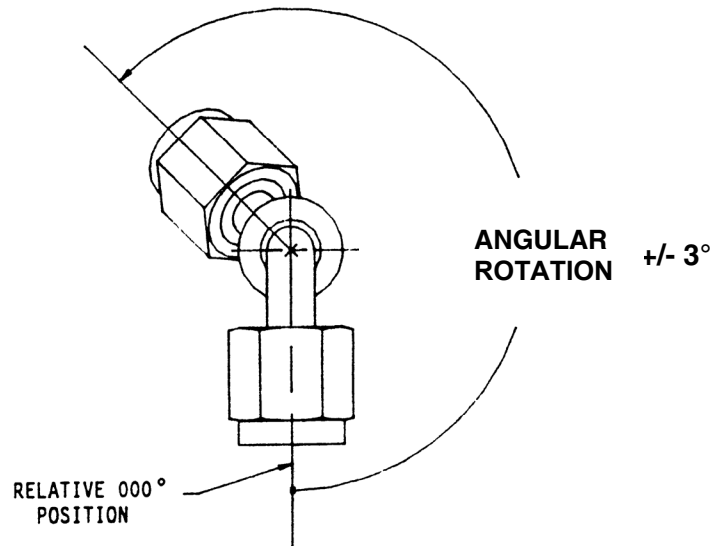


FIGURE 3 - FITTING ANGULAR ORIENTATION /15/

TABLE 1 - ASSEMBLY DIMENSIONS

HOSE ASSEMBLY AS4503 SIZE CODE	HOSE ASSEMBLY SIZE REF	THREAD T PER AS8879 REF	A ₁ MAX	A ₂ MAX	ØC /8/ MIN	D ₁ MIN	D ₁ MAX	D ₂ MIN	D ₂ MAX	ØE /9/ MAX WITHOUT SLEEVEING	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

		HOSE SIZE									UPPER TEMP. LIMIT
COVER CODE	HOSE OR TYPE OF PROTECTIVE COVER	.250	.375	.500	.625	.750	1.00	1.25	1.50	2.00	°F
—	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	SPIRAL 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	BEND RADIUS
			ROOM TEMP MIN PSI	HIGH TEMP MIN PSI	AT INSIDE OF BEND INCHES (HOSE ONLY)
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 WITH SPIRAL ABRASION COVER	HOSE WITH INTEGRAL FIRESLEEVE COVER	HOSE WITH TUBULAR FIRESLEEVE COVER	HOSE WITH POLYESTER ABRASION COVER	45° END FITTING	90° END FITTING
HOSE SIZE REF	HOSE ONLY LB/IN	CODE B LB/IN	CODE H & J LB/IN	CODE N LB/IN	CODE K LB/IN	LB EACH	LB EACH
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 INSITTUTE (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.

**AEROSPACE STANDARD**

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

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