

FEDERAL SUPPLY CLASS
4720

AS651

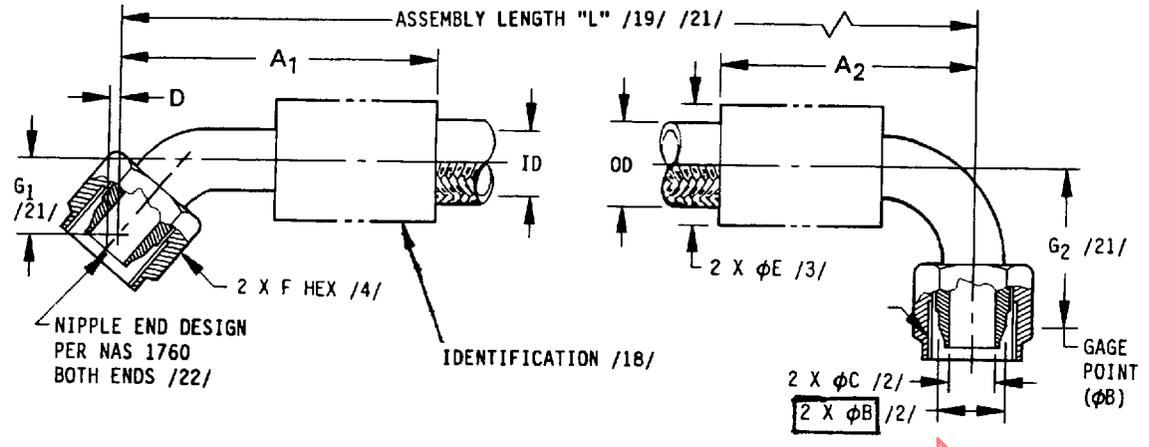


FIGURE 1 - HOSE ASSEMBLY

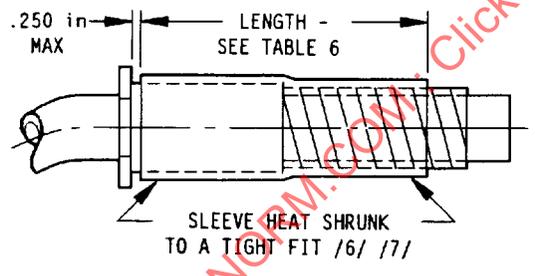


FIGURE 2 - ABRASION SLEEVE ATTACHMENT

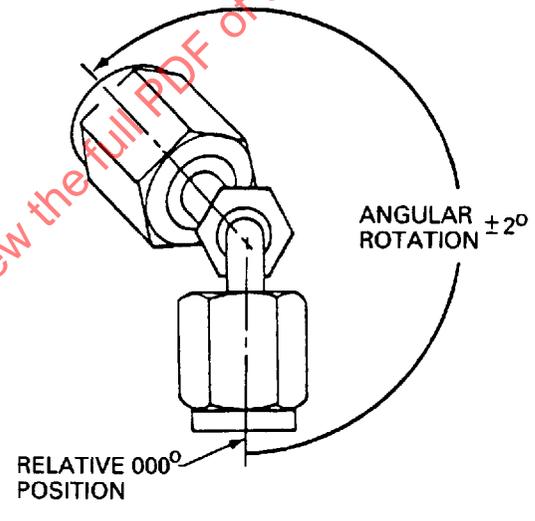


FIGURE 3 - FITTING ANGULAR POSITION /15/

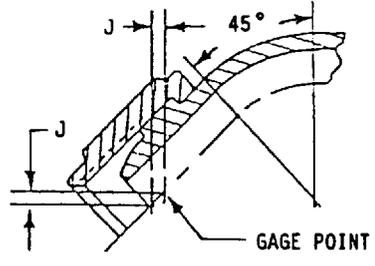
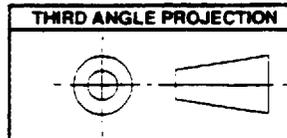


FIGURE 4 - SEE TABLE 7



CUSTODIAN: SAE 6-3/G-3D

PROCUREMENT SPECIFICATION: /14/ AS1946

SAE The Engineering Society
For Advancing Mobility
Land Sea Air and Space
INTERNATIONAL
400 Commonwealth Drive Warrendale PA 15096-0001

AEROSPACE STANDARD
HOSE ASSEMBLY, POLYTETRAFLUOROETHYLENE,
METAL BRAID, MEDIUM PRESSURE, FLARELESS,
45° TO 90°

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ISSUED 1994-02 REVISED

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TABLE 1 - DIMENSIONS

BASIC NUMBER AS651 SIZE CODE /26/	(NOMINAL TUBE DIA)	(T) THREAD PER MIL-S-8879	ID	A ₁		A ₂		B	C		E MAX WITHOUT SLEEVING /3/	(F) HEX ACROSS FLATS	G ₁		G ₂		BALL SIZE MIN THRU DIA /2/ MS19059 DASH NO.
				MIN	MAX	BASIC	MIN		MAX	MIN			MAX	MIN	MAX		
D	.188	.3750-24UNJF-38	.110	1.66	1.34	.2340	.049	.10	.49	.500	.352	.477	.636	.761	.049		
E	.250	.4375-20UNJF-38	.173	1.73	1.41	.2930	.094	.11	.55	.562	.360	.485	.643	.768	.094		
F	.313	.5000-20UNJF-38	.235	1.91	1.58	.3500	.156	.11	.63	.625	.387	.512	.730	.917	.156		
G	.375	.5625-18UNJF-38	.298	2.12	1.70	.4120	.219	.12	.70	.688	.464	.589	.836	1.023	.219		
H	.500	.7500-16UNJF-38	.391	2.38	1.96	.5600	.281	.13	.83	.875	.497	.744	.968	1.218	.281		
J	.625	.8750-14UNJF-38	.485	2.85	2.37	.6730	.375	.14	.97	1.000	.576	.822	1.279	1.529	.375		
K	.750	1.0625-12UNJ-38	.615	3.12	2.65	.8100	.500	.16	1.17	1.250	.582	.903	1.522	1.772	.500		
M	1.000	1.3125-12UNJ-38	.851	3.50	3.34	1.0620	.750	.21	1.52	1.500	.648	.976	1.541	1.859	.750		
N	1.250	1.6250-12UNJ-38	1.101	4.07	3.67	1.3160	.969	.21	2.00	2.000	.799	1.132	1.931	2.306	.969		
P	1.500	1.8750-12UNJ-38	1.344	4.60	4.19	1.5650	1.188	.26	2.28	2.125	.917	1.307	2.269	2.644	1.188		

TABLE 2 - TOLERANCES

HOSE ASSEMBLY LENGTH	TOLERANCE
UNDER 18 in	±.125 in
18 TO 36 in	±.250 in
36 TO 50 in	±.500 in
OVER 50 in	±1%

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TABLE 3 - HOSE AND SLEEVE CODES /1/

HOSE OR SLEEVE CODE	SLEEVE MATERIAL	TEMP. LIMIT °F
-	(-) INDICATES HOSE ONLY, NO SLEEVE (AS639)	450
A	ABRASION SLEEVE TUBULAR (PTFE - AS1291 - CODE B) /6/	450
B	ABRASION SLEEVE COIL (NYLON AS1294) /7/	275
C	FIRESLEEVE (AS1072 SIL-FG) (15 min) /8/ /9/ /13/	450
E	ABRASION SLEEVE SHRINK-ON (FEP) /11/	350
F	ABRASION SLEEVE SHRINK-ON (POLYOLEFIN AS1073 - CODE B) /11/	275
G	FIRESLEEVE (AS1072 SIL-FG) (5 min) /8/ /9/ /12/	450
H	FIRESLEEVE INTEGRAL SILICONE (AS1723) (15 min) /13/	450
J	FIRESLEEVE INTEGRAL SILICONE (5 min) /12/	450
K	INTEGRAL ABRASION SLEEVE (BRAIDED) POLYESTER /10/	300
L	ABRASION SLEEVE COIL (PTFE - AS1293) /7/	450

TABLE 4 - HOSE AND SLEEVE OUTSIDE DIAMETERS

HOSE OR SLEEVE CODE	TOLERANCE	HOSE SIZE /5/ .188	HOSE SIZE /5/ .250	HOSE SIZE /5/ .313	HOSE SIZE /5/ .375	HOSE SIZE /5/ .500	HOSE SIZE /5/ .625	HOSE SIZE /5/ .750	HOSE SIZE /5/ 1.000	HOSE SIZE /5/ 1.250	HOSE SIZE /5/ 1.500
-	MAX	.285	.343	.406	.469	.585	.687	.812	1.140	1.390	1.707
	MIN	.234	.304	.367	.430	.546	.641	.766	1.078	1.328	1.637
A	MAX	.390	.473	.524	.620	.715	.818	.955	1.295	1.550	1.841
	MIN	.320	.393	.454	.515	.645	.748	.870	1.210	1.450	1.771
B	MAX	.339	.409	.472	.535	.669	.767	.896	1.224	1.474	1.807
	MIN	.260	.330	.393	.456	.590	.681	.810	1.122	1.372	1.681
C	MAX	.692	.692	.780	.840	.970	1.090	1.220	1.590	1.900	2.190
	MIN	.533	.533	.598	.658	.778	.891	1.016	1.288	1.578	1.887
E	MAX	.301	.375	.438	.507	.635	.749	.887	1.228	1.440	1.761
	MIN	.248	.320	.383	.452	.578	.679	.811	1.146	1.358	1.667
F	MAX	.341	.411	.474	.547	.663	.769	.904	1.244	1.482	1.823
	MIN	.278	.348	.411	.484	.600	.699	.834	1.158	1.396	1.729
G	MAX	.692	.692	.780	.840	.970	1.090	1.220	1.590	1.900	2.190
	MIN	.533	.533	.598	.658	.778	.908	1.038	1.288	1.658	1.898
H	MAX	.641	.641	.704	.766	.891	1.016	1.141	1.454	1.704	2.016
	MIN	.537	.594	.657	.719	.844	.969	1.074	1.394	1.649	1.959
J	MAX	.641	.641	.704	.766	.891	1.016	1.141	1.454	1.704	2.016
	MIN	.532	.594	.657	.719	.844	.969	1.074	1.394	1.649	1.959
K	MAX	.378	.430	.499	.559	.665	.772	.887	1.210	1.460	1.782
	MIN	.320	.390	.450	.510	.625	.726	.841	1.148	1.398	1.712
L	MAX	.375	.445	.508	.571	.687	.789	.914	1.242	1.492	1.809
	MIN	.267	.333	.407	.470	.586	.681	.828	1.138	1.388	1.697

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45° TO 90°

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TABLE 5 - MAXIMUM WEIGHT

HOSE OR SLEEVE CODE OR FITTING	UNITS	HOSE SIZE .188	HOSE SIZE .250	HOSE SIZE .313	HOSE SIZE .375	HOSE SIZE .500	HOSE SIZE .625	HOSE SIZE .750	HOSE SIZE 1.000	HOSE SIZE 1.250	HOSE SIZE 1.500
-	LB/IN	.005	.007	.008	.010	.012	.016	.020	.045	.058	.074
A	LB/IN	.003	.004	.004	.006	.007	.008	.010	.014	.020	.031
B	LB/IN	.001	.001	.002	.002	.003	.004	.004	.005	.006	.009
C	LB/IN	.009	.009	.011	.012	.017	.018	.028	.030	.040	.037
E	LB/IN	.001	.002	.002	.002	.003	.004	.006	.007	.007	.008
F	LB/IN	.002	.001	.001	.002	.003	.003	.004	.006	.006	.007
G	LB/IN	.009	.009	.011	.012	.017	.018	.028	.030	.040	.037
H	LB/IN	.018	.018	.023	.024	.032	.038	.045	.079	.100	.124
J	LB/IN	.018	.018	.023	.024	.032	.038	.045	.079	.100	.124
K	LB/IN	.006	.009	.011	.014	.018	.022	.027	.051	.063	.081
L	LB/IN	.003	.004	.004	.005	.008	.009	.011	.018	.022	.028
FIRESLEEVE CLAMP	LB/EA	.015	.016	.018	.019	.021	.023	.025	.029	.033	.037
FITTING END 45° /26/	LB CLASS I	.051	.065	.080	.112	.172	.266	.360	.590	1.110	1.540
	EA CLASS II	--	--	--	.055	.080	.110	.165	.275	.470	.640
FITTING END 90° /26/	LB CLASS I	.053	.065	.080	.099	.231	.328	.425	.659	1.419	1.854
	EA CLASS II	--	--	--	.055	.080	.110	.165	.290	.485	.685

TABLE 6 - SLEEVE LENGTH

HOSE SIZE	LENGTH
.188, .250, .313, .375	2.00 ± .25
.500, .625	2.50 ± .25
.750, 1.000	3.00 ± .25
1.250, 1.500	4.00 ± .25

TABLE 7 - DIMENSION J (SEE FIGURE 4)

SIZE CODE	J
3	.060
4	.044
5	.041
6	.042
8	.045
10	.055
12	.049
16	.093
20	.064
24	.095