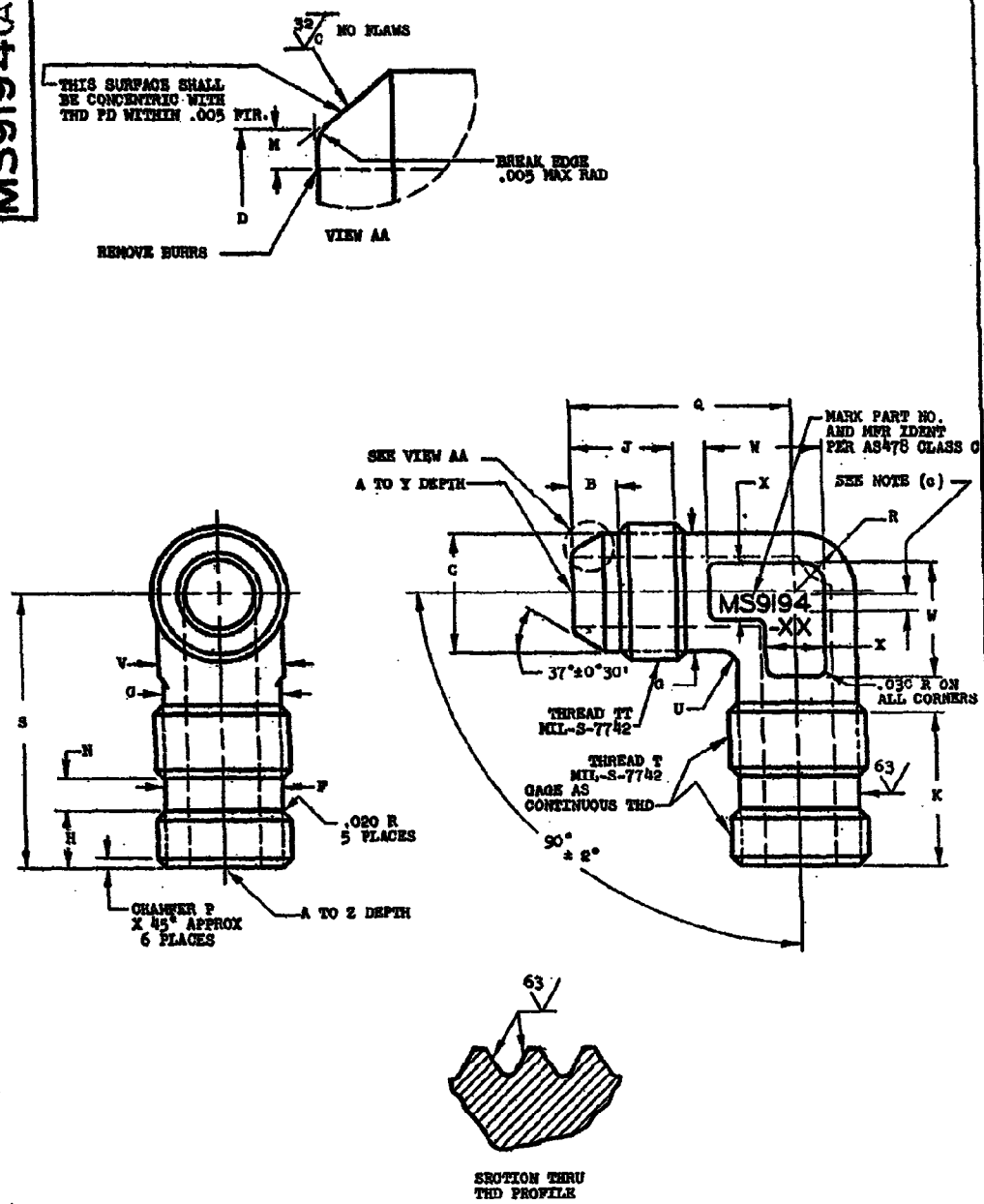
MS9194(ASG)

FED. SUP CLASS 4730



(a) DIAMETER F SHALL BE FREE OF THREAD MARKS.
(b) DIAMETER F SHALL BE CONCENTRIC WITH PD OF THREAD WITHIN .0025 FIR.
(c) .020-.040 FOR -02, THRU -04 SIZE; .040-.060 FOR -05 THRU -16 SIZE; .090-.150 FOR -18 AND LARGER SIZES.
(d) ALL DIAMETERS SHALL BE CONCENTRIC WITHIN .010 FIR. UNLESS OTHERWISE SPECIFIED.
(e) PARTING LINE MISMATCH. .015 MAX.
(f) E MIN WALL THICKNESS BETWEEN FORGED SURFACE AND HOLE A. (R) FOR CHANGES SEE SHEET 2

THIS STANDARD WAS DEVELOPED COOPERATIVELY WITH THE ENGINE AND PROPELLER UTILITY PARTS COMMITTEE OF THE SAE.

This military standard is approved by the Department of the Air Force and the Naval Air Systems Command and is mandatory for use by these activities. All other military activities are required to employ this standard where suitable.

Review activities: Navy - AS USAF - 69, 11

APPROVED 11 Apr 60 REVISED (R) 11 May 62 (B) 27 Jul 67

CUSTODIAN USAF - 69 Navy - AS	MILITARY STANDARD	MS9194(ASG)
PROCUREMENT SPECIFICATION NONE	ELBOW, TUBE - AMS 5646, BOSS, 90°	SHEET 1 OF 2

NO FORM 233
1 APR 59

This military standard is approved by the Department of the Air Force and the Naval Air Systems Command and is mandatory for use by these activities. All other military activities are required to employ this standard where suitable.

Review activities:
Navy - AS
USAF - 69, 11

MS9194 (ASG)

MATERIAL: CORROSION RESISTANT STEEL, AMS 5646 FORGING.
CLEANING: FINISHED PARTS SHALL BE DEGREASED AND IMMERSED FOR NOT LESS THAN 20 MINUTES IN A SOLUTION OF 1 VOLUME OF NITRIC ACID (SP GR 1.42) AND 9 VOLUMES OF WATER AT ROOM TEMPERATURE.
SURFACE ROUGHNESS: AS 291.. UNLESS OTHERWISE SPECIFIED MACHINED SURFACES TO BE 125 MICROINCHES.

PARTS SUBJECT TO FLUORESCENT PENETRANT INSPECTION PER AMS 2645.
BREAK SHARP EDGES .003-.015 UNLESS OTHERWISE SPECIFIED.
DIMENSIONS IN INCHES. UNLESS OTHERWISE SPECIFIED: TOLERANCES; LINEAR DIMENSIONS ±.015.
DIMENSIONS ARE TO SHARP CORNERS UNLESS OTHERWISE SPECIFIED
DO NOT USE UNASSIGNED PART NUMBERS. AS & AMS ARE SAE PUBLICATIONS.

PART NO.	(f) E	MOM TUBE OD	THREAD T	THREAD TT SIZE	THREAD TT MAJOR DIA	THREAD TT PD	THREAD TT MINOR DIA MAX	A DIA	B (B) +.015 -.000	C DIA +.000 -.010	D DIA ±.003	F DIA +.002 -.003 (a)(b)	G DIA
MS9194-02	.040	.125	.3125-24UNF-3A	.3125-24NS	.3023- .3095	.2797- .2824	.2584	.058- .065	.144	.245	.132	.250	.240
MS9194-03	.040	.188	.375 -24UNF-3A	.375-24NS	.3648- .3720	.3420- .3449	.3209	.121- .128	.144	.307	.195	.312	.300
MS9194-04	.040	.250	.4375-20UNF-3A	.4375-20NS	.4264- .4345	.3989- .4020	.3732	.168- .175	.160	.359	.242	.364	.350
MS9194-05	.050	.312	.500 -20UNF-3A	.500-20NS	.4889- .4970	.4613- .4645	.4357	.230- .237	.160	.421	.304	.426	.415
MS9194-06	.050	.375	.5625-18UNF-3A	.5625-18NS	.5508- .5595	.5200- .5234	.4913	.293- .301	.165	.476	.366	.481	.470
MS9194-07	.060	.438	.625 -18UNF-3A	.625-18NS	.6133- .6220	.5824- .5859	.5538	.355- .363	.165	.539	.430	.544	.535
MS9194-08	.080	.500	.750 -16UNF-3A	.750-16NS	.7376- .7470	.7026- .7064	.6703	.387- .395	.229	.654	.462	.660	.650
MS9194-09	.090	.562	.8125-16UN-3A	.8125-16NS	.8001- .8095	.7653- .7689	.7328	.434- .442	.229	.716	.509	.722	.710
MS9194-10	.090	.625	.875 -14UNF-3A	.875-14NS	.8617- .8720	.8215- .8256	.7844	.480- .488	.255	.767	.555	.773	.765
MS9194-11	.110	.688	1.000 -12UNF-3A	1.000-12NS	.9856- .9970	.9385- .9429	.8948	.542- .552	.304	.875	.619	.882	.870
MS9194-12	.110	.750	1.0625-12UN-3A	1.0625-12NS	1.0481-1.0595	1.0012-1.0054	.9573	.604- .614	.304	.938	.681	.945	.935
MS9194-14	.110	.875	1.1875-12UN-3A	1.1875-12NS	1.1731-1.1845	1.1261-1.1304	1.0823	.729- .739	.304	1.062	.806	1.070	1.055
MS9194-16	.110	1.000	1.3125-12UN-3A	1.3125-12NS	1.2981-1.3095	1.2511-1.2554	1.2073	.839- .851	.312	1.188	.918	1.195	1.185
MS9194-18	.150	1.125	1.500 -12UNF-3A	1.500 -12NS	1.4856-1.4970	1.4381-1.4429	1.3948	.948- .960	.312	1.375	1.027	1.382	1.365
MS9194-20	.150	1.250	1.625-12UN-3A	1.625 -12NS	1.6106-1.6220	1.5635-1.5679	1.5198	1.073-1.086	.363	1.500	1.153	1.507	1.495
MS9194-24	.170	1.500	1.875 -12UN-3A	1.875 -12NS	1.8606-1.8720	1.8134-1.8179	1.7698	1.307-1.320	.374	1.750	1.387	1.756	1.745
MS9194-28	.240	1.750	2.250 -12UN-3A	2.250 -12NS	2.2356-2.2470	2.1884-2.1929	2.1448	1.542-1.557	.447	2.125	1.652	2.131	2.120
MS9194-32	.250	2.000	2.500 -12UN-3A	2.500 -12NS	2.4856-2.4970	2.4429-2.4383	2.3948	1.776-1.791	.457	2.375	1.885	2.381	2.370

PART NO.	H ±.010	J ±.010	K ±.010	M MIN	N +.010 -.000	P	Q ±.010	R RADIUS	S ±.010	U RADIUS	V	W	X	Y ±.010	Z ±.010	APPROX WEIGHT LBS/EA
MS9194-02	.208	.317	.682	.030	.125	.020-.050	.707	.120	1.000	.062	.250	.300	.200	.722	1.018	.025
MS9194-03	.208	.346	.682	.030	.131	.020-.050	.764	.150	1.000	.062	.312	.310	.220	.795	1.033	.036
MS9194-04	.250	.398	.748	.030	.140	.030-.060	.826	.175	1.115	.062	.375	.380	.260	.862	1.146	.050
MS9194-05	.250	.398	.748	.030	.140	.030-.060	.889	.207	1.140	.062	.438	.440	.300	.907	1.171	.065
MS9194-06	.278	.398	.813	.030	.156	.040-.070	.998	.235	1.270	.094	.500	.490	.330	1.032	1.301	.083
MS9194-07	.278	.398	.813	.030	.172	.040-.070	.998	.267	1.305	.094	.562	.490	.330	1.032	1.336	.097
MS9194-08	.312	.489	.903	.030	.187	.040-.070	1.195	.325	1.460	.094	.688	.640	.430	1.257	1.523	.186
MS9194-09	.312	.489	.903	.030	.203	.040-.070	1.195	.355	1.490	.094	.750	.660	.440	1.257	1.553	.215
MS9194-10	.357	.585	1.018	.030	.219	.050-.080	1.411	.382	1.680	.094	.812	.750	.500	1.473	1.743	.280
MS9194-11	.417	.663	1.122	.030	.234	.050-.080	1.614	.435	1.855	.094	.938	.750	.500	1.677	1.918	.408
MS9194-12	.417	.663	1.122	.030	.234	.050-.080	1.614	.467	1.885	.094	1.000	.750	.500	1.677	1.948	.445
MS9194-14	.417	.710	1.122	.030	.234	.050-.080	1.768	.527	1.945	.125	1.125	.750	.500	1.893	2.070	.538
MS9194-16	.417	.720	1.122	.030	.234	.050-.080	1.778	.592	2.010	.125	1.250	.750	.500	1.903	2.135	.644
MS9194-18	.417	.767	1.122	.030	.234	.050-.080	2.027	.682	2.100	.125	1.438	.900	.600	2.152	2.225	.954
MS9194-20	.417	.767	1.122	.030	.234	.050-.080	2.027	.750	2.165	.125	1.625	.900	.600	2.152	2.290	1.087
MS9194-24	.417	.889	1.122	.030	.234	.050-.080	2.293	.872	2.290	.125	1.812	.900	.600	2.418	2.415	1.476
MS9194-28	.417	1.017	1.205	.044	.234	.050-.080	2.777	1.062	2.625	.188	2.188	.990	.660	2.902	2.750	2.612
MS9194-32	.417	1.142	1.320	.044	.234	.050-.080	3.027	1.188	2.975	.250	2.438	1.125	.750	3.152	3.100	3.382

APPROVED 11 APR 60 REVISED (A) 11 May 6. (B) FOR CHANGE SEE SHEET 2.

THIS STANDARD WAS DEVELOPED COOPERATIVELY WITH THE ENGINE AND PROPELLER UTILITY PARTS COMMITTEE OF THE SAE

PROCUREMENT SPECIFICATION NONE

CUSTODIAN Navy - AS NSAF - 69

OTHER MIL. A: B: AF -

MILITARY STANDARD

NUT, TUBE - AMS 5646, ROSS, 90°

MS9194 (ASG)

SHEET 2 OF

FSC 5310

REF CHART 4136