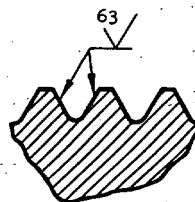
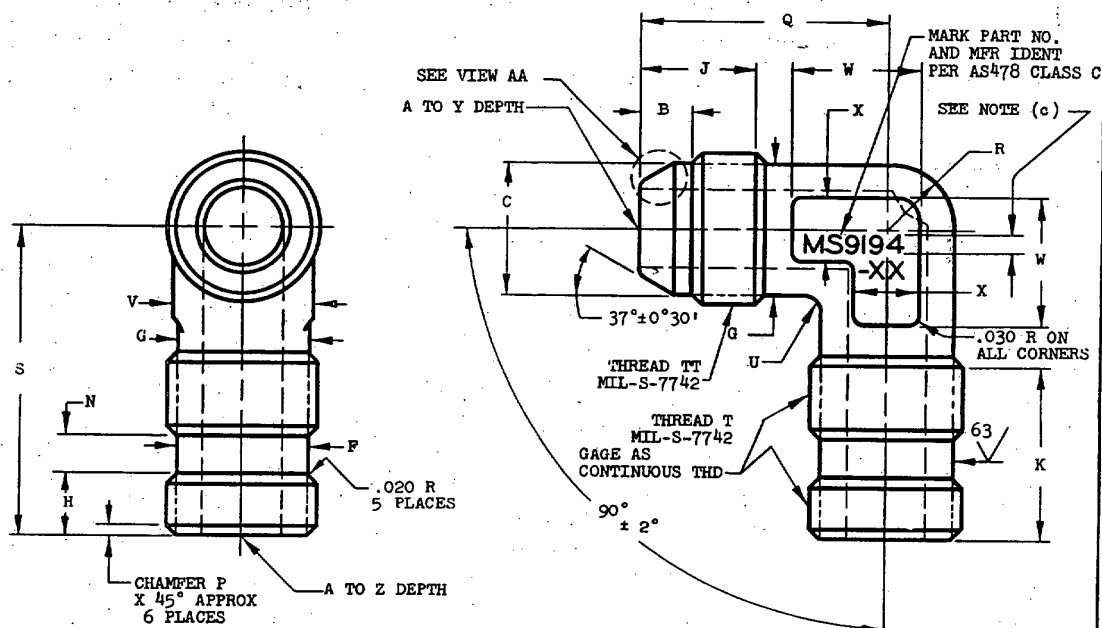
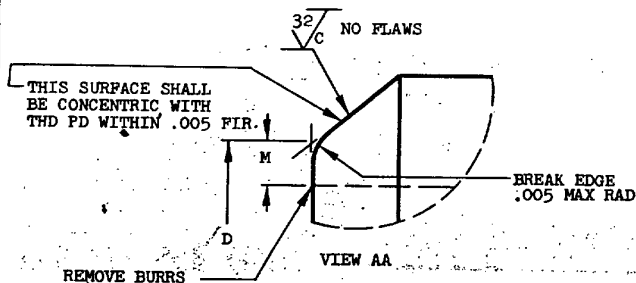


**MS9194(ASG)**FED. SUP CLASS  
4730SECTION THRU  
THD PROFILE

- (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) MIN WALL THICKNESS BETWEEN FORGED SURFACE AND HOLE A.  
 THIS STANDARD WAS DEVELOPED COOPERATIVELY WITH THE ENGINE AND PROPELLER UTILITY PARTS COMMITTEE OF THE SAE.

CUSTODIAN  
 USAF - 69  
 Navy - AS  
 PROCUREMENT SPECIFICATION  
 NONE

**MILITARY STANDARD**

ELBOW, TUBE - AMS 5646, BOSS, 90°

**MS9194(ASG)**

SHEET 1 OF 2

Review activities:  
 Navy - AS  
 USAF - 69, 11

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.

MS FORM 233  
 1 NOV 60

81 28178

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

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  
USAP - 69, 11

**MS9194(ASG)**

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

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  $\pm .015$ .

DO NOT USE UNASSIGNED PART NUMBERS.  
AS & ANG ARE SAE PUBLICATIONS.

PART NO.	E	NOM TUBE OD	THREAD T	SIZE	THREAD TT		MINOR DIA MAX	A DIA	B DIA +.015 -.000	C DIA +.000 -.010	D DIA +.003	F DIA +.002 -.003 (a)(b)	G DIA
					MAJOR DIA	PD							
MS9194-02	.040	.125	.3125-24UNF-3A	.3125-24NS	.3023-	.2797-	.2584	.058-	.144	.245	.132	.250	.240
MS9194-03	.040	.188	.375-24UNF-3A	.375-24NS	.3648-	.3420-	.3209	.121-	.144	.307	.195	.312	.300
MS9194-04	.040	.250	.4375-20UNF-3A	.4375-20NS	.4264-	.3989-	.3732	.168-	.160	.359	.242	.364	.350
MS9194-05	.050	.312	.500-20UNF-3A	.500-20NS	.4889-	.4613-	.4357	.230-	.160	.421	.304	.426	.415
MS9194-06	.050	.375	.5625-18UNF-3A	.5625-18NS	.5508-	.5234-	.4913	.293-	.165	.476	.368	.481	.470
MS9194-07	.060	.438	.625-18UNF-3A	.625-18NS	.6133-	.5824-	.5538	.355-	.165	.539	.430	.544	.535
MS9194-08	.080	.500	.750-16UNF-3A	.750-16NS	.7376-	.7026-	.6703	.387-	.229	.654	.462	.660	.650
MS9194-09	.090	.562	.8125-16UNF-3A	.8125-16NS	.8001-	.7653-	.7328	.434-	.229	.716	.509	.722	.710
MS9194-10	.090	.625	.875-14UNF-3A	.875-14NS	.8617-	.8215-	.7844	.480-	.255	.767	.555	.773	.765
MS9194-11	.110	.688	1.000-12UNF-3A	1.000-12NS	.9856-	.9385-	.8948	.542-	.304	.875	.619	.882	.870
MS9194-12	.110	.750	1.0625-12UNF-3A	1.0625-12NS	1.0481-	1.0012-	.9573	.604-	.304	.938	.661	.945	.935
MS9194-13	.110	.812	1.1875-12UNF-3A	1.1875-12NS	1.1731-	1.1261-	1.0823	.729-	.304	1.062	.806	1.070	1.055
MS9194-14	.110	.875	1.3125-12UNF-3A	1.3125-12NS	1.2981-	1.2511-	1.2073	.839-	.312	1.188	.918	1.195	1.185
MS9194-15	.150	1.125	1.500-12UNF-3A	1.500-12NS	1.4856-	1.4381-	1.3948	.938-	.312	1.375	1.027	1.382	1.365
MS9194-16	.150	1.250	1.625-12UNF-3A	1.625-12NS	1.6106-	1.5635-	1.5219	1.073-	.363	1.560	1.153	1.507	1.492
MS9194-17	.170	1.500	1.875-12UNF-3A	1.875-12NS	1.8608-	1.8134-	1.7698	1.307-	.374	1.750	1.387	1.756	1.745
MS9194-18	.170	1.750	2.125-12UNF-3A	2.125-12NS	2.1084-	2.0614-	2.0179	1.542-	.447	2.000	1.652	2.131	2.120
MS9194-19	.240	2.000	2.500-12UNF-3A	2.500-12NS	2.4856-	2.4429-	2.3948	1.776-	.457	2.375	1.886	2.381	2.370

PART NO.	H	J	K	M	N	P	Q	R	S	U	V	W	X	Y	Z	APPROX WEIGHT LBS/EA
MS9194-02	.208	.317	.682	.030	.135	.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	.560	.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	.357	.585	1.018	.030	.203	.050-.080	1.411	.382	1.680	.094	.812	.750	.500	1.473	1.743	.215
MS9194-10	.417	.663	1.122	.030	.234	.050-.080	1.614	.435	1.855	.094	.938	.750	.500	1.677	1.918	.408
MS9194-11	.417	.663	1.122	.030	.234	.050-.080	1.614	.467	1.885	.094	1.000	.750	.500	1.677	1.948	.445
MS9194-12	.417	.710	1.122	.030	.234	.050-.080	1.768	.527	1.945	.125	1.125	.750	.500	1.893	2.070	.538
MS9194-13	.417	.720	1.122	.030	.234	.050-.080	2.027	.592	2.010	.125	1.250	.750	.500	1.903	2.135	.644
MS9194-14	.417	.767	1.122	.030	.234	.050-.080	2.027	.682	2.100	.125	1.438	.900	.600	2.152	2.225	.954
MS9194-15	.417	.767	1.122	.030	.234	.050-.080	2.027	.750	2.165	.125	1.625	.900	.600	2.152	2.290	1.087
MS9194-16	.417	.889	1.122	.030	.234	.050-.080	2.293	.872	2.280	.125	1.812	.900	.600	2.418	2.415	1.436
MS9194-17	.417	1.017	1.320	.044	.234	.050-.080	2.777	1.062	2.625	.188	2.188	.990	.660	2.902	2.750	2.612
MS9194-18	.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

FED. SUP CLASS.  
4730

CUSTODIANS Navy - AS USAP - 69		OTHER INT.		MILITARY STANDARD		MS9194(ASG)	
PROCUREMENT SPECIFICATION NONE		SUPERSEDES:					
ELBOW, TUBE - AMS 5646, BOSS, 90°				SHEET 2 OF			