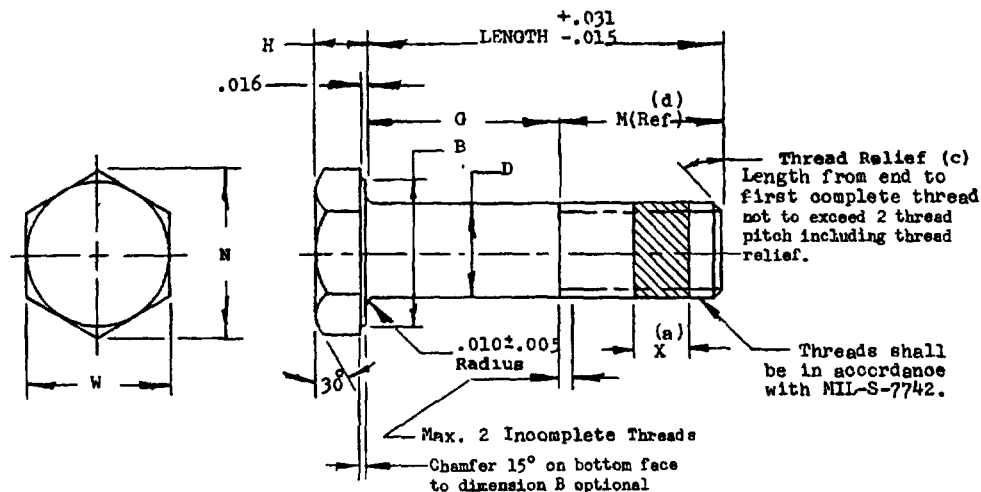


FED. SUP CLASS
5306

DIA DASH NO	(b) THREAD UNF 3A	D DIA		B DIA	(f) H		M Ref	N	W		DBL SHEAR STRENGTH POUNDS	(e) ULT TENSILE STRENGTH POUNDS
		MAX	MIN		MAX	MIN			MIN	MAX	MIN	MIN
3	#10-32	189	186	.335	141	109	.469	416	.377	.365	4,250	2,420
4	1/4-28	249	246	.398	172	140	.506	488	.440	.428	7,360	4,420
5	5/16-24	312	309	.460	204	172	.531	558	.502	.490	11,500	7,100
6	3/8-24	374	371	.523	235	203	.641	630	.565	.553	16,560	10,790
7	7/16-20	437	433	.585	266	234	.656	701	.627	.615	22,500	14,600
8	1/2-20	499	495	.710	.297	.265	.781	843	.752	.740	29,400	19,810
9	9/16-18	562	.558	.835	.328	.296	.906	986	.877	.865	37,400	25,060
10	5/8-18	624	.620	.898	.360	.328	.953	1,058	.940	.928	46,000	31,600
12	3/4-16	749	.744	1.023	.422	.390	.969	1,200	1,066	1.053	66,300	46,100
14	7/8-14	874	.869	1.210	.485	.453	1.250	1,413	1,253	1.240	90,100	62,800
16	1-12	999	.993	1.398	.547	.5	1.375	1,628	1,441	1.428	117,800	82,100
18	1-1/8-12	1,124	1,118	1.585	.610	.578	1.500	1,841	1,628	1.615	147,500	105,750
20	1-1/4-12	1,249	1,243	1.772	.672	.640	1.687	2,054	1,815	1.802	182,100	133,000

- (a) Location of effective locking area X shall be in accordance with MS15981
 (b) Threads shall be formed by any single rolling process and in accordance with Specification MIL-S-7742
 (c) Chamfer 45° ±5° (See MIL-STD-8 for clarification of angular tolerance) Chamfer to extend to root of thread.
 (d) Reference dimensions are for design purposes only and are not an inspection of manufacturing requirement.
 (e) Tensile values based on 125 KSI ultimate tensile strength Stress area = $3.1416 \left(\frac{E}{2} - \frac{3H}{16} \right)^2$. See Handbook H-28 (1957) Part 1

(f) The diameter of the washer face shall not exceed the actual width across flats

MATERIAL Alloy Steel - See Procurement Specification

HARDNESS Rockwell C26-C32

PLATING Cadmium Plated in accordance with Specification QQ-P-416, Type II, Class 3

SURFACE ROUGHNESS The surface of the shank, fillet and bearing area shall not exceed 125 micro-inches See MIL-STD-10.

LOCKING ELEMENT In accordance with Specification MIL-F-18240. Locking element area must pass thru a ring gage equal to maximum major thread diameter + .003" freely or with finger pressure

DESIGN AND USAGE LIMITATIONS See MS15981

DIMENSIONS In inches

EXAMPLE OF PART NUMBER MS21094 -4008 = 1/4"-28 bolt, .500" grip length

FOR DESIGN FEATURE PURPOSES THIS STANDARD TAKES PRECEDENCE OVER DOCUMENTS REFERENCED HEREIN
 REFERENCED DOCUMENTS SHALL BE OF THE ISSUE IN EFFECT ON DATE OF INVITATION FOR BID

P.A. Navy - WP Other Cust USAF - 11	TITLE BOLT, SELF-LOCKING, 250° F, STEEL, 75 KSI Psi, 125 KSI FtU, HEX HEAD	MILITARY STANDARD	
		MS21094(ASG)	
PROCUREMENT SPECIFICATION MIL-B-6812 & MIL-F-18240	SUPERSEDES	SHEET	1 OF 2

Review activities:
 Navy - WP
 USAF - 11
 his military standard is approved by the Department of the Air Force and the Bureau of Naval Weapons and is mandatory for use by these activities. All other military activities are required to employ this standard where suitable.

REVISED
 APPROVED 2 Nov 65

FED SUP CLASS 5306														
LENGTH DASH NO. (a)	ORIP G ±.010	LENGTH +.031 -.015												
		10-32	1/4-28	5/16-24	3/8-24	7/16-20	1/2-20	9/16-18	5/8-18	3/4-16	7/8-14	1-12	1-1/8-12	1-1/4-12
003	.187	.593												
004	.250	.656	.719											
006	.375	.781	.844	.906	1.016									
008	.500	.906	.969	1.031	1.141	1.156	1.281							
010	.625	1.031	1.094	1.156	1.266	1.281	1.406	1.531	1.578					
012	.750	1.156	1.219	1.281	1.391	1.406	1.531	1.656	1.703	1.719				
014	.875	1.281	1.344	1.406	1.516	1.531	1.656	1.781	1.828	1.844	2.125			
016	1.000	1.406	1.469	1.531	1.641	1.656	1.781	1.906	1.953	1.969	2.250	2.375		
018	1.125	1.531	1.594	1.656	1.766	1.781	1.906	2.031	2.078	2.094	2.375	2.500	2.625	
020	1.250	1.656	1.719	1.781	1.891	1.906	2.031	2.156	2.203	2.219	2.500	2.625	2.750	2.937
022	1.375	1.781	1.844	1.906	2.016	2.031	2.156	2.281	2.328	2.344	2.625	2.750	2.875	3.062
024	1.500	1.906	1.969	2.031	2.141	2.156	2.281	2.406	2.453	2.469	2.750	2.875	3.000	3.187
026	1.625	2.031	2.094	2.156	2.266	2.281	2.406	2.531	2.578	2.594	2.875	3.000	3.125	3.312
028	1.750	2.156	2.219	2.281	2.391	2.406	2.531	2.656	2.703	2.719	3.000	3.125	3.250	3.437
030	1.875	2.281	2.344	2.406	2.516	2.531	2.656	2.781	2.828	2.844	3.125	3.250	3.375	3.562
032	2.000	2.406	2.469	2.531	2.641	2.656	2.781	2.906	2.953	2.969	3.250	3.375	3.500	3.687
034	2.125	2.531	2.594	2.656	2.766	2.781	2.906	3.031	3.078	3.094	3.375	3.500	3.625	3.812
036	2.250	2.656	2.719	2.781	2.891	2.906	3.031	3.156	3.203	3.219	3.500	3.625	3.750	3.937
038	2.375	2.781	2.844	2.906	3.016	3.031	3.156	3.281	3.328	3.344	3.625	3.750	3.875	4.062
040	2.500	2.906	2.969	3.031	3.141	3.156	3.281	3.406	3.453	3.469	3.750	3.875	4.000	4.187
042	2.625	3.031	3.094	3.156	3.266	3.281	3.406	3.531	3.578	3.594	3.875	4.000	4.125	4.312
044	2.750	3.156	3.219	3.281	3.391	3.406	3.531	3.656	3.703	3.719	4.000	4.125	4.250	4.437
046	2.875	3.281	3.344	3.406	3.516	3.531	3.656	3.781	3.828	3.844	4.125	4.250	4.375	4.562
048	3.000	3.406	3.469	3.531	3.641	3.656	3.781	3.906	3.953	3.969	4.250	4.375	4.500	4.687
050	3.125	3.531	3.594	3.656	3.766	3.781	3.906	4.031	4.078	4.094	4.375	4.500	4.625	4.812
052	3.250	3.656	3.719	3.781	3.891	3.906	4.031	4.156	4.203	4.219	4.500	4.625	4.750	4.937
054	3.375	3.781	3.844	3.906	4.016	4.031	4.156	4.281	4.328	4.344	4.625	4.750	4.875	5.062
056	3.500	3.906	3.969	4.031	4.141	4.156	4.281	4.406	4.453	4.469	4.750	4.875	5.000	5.187
058	3.625	4.031	4.094	4.156	4.266	4.281	4.406	4.531	4.578	4.594	4.875	5.000	5.125	5.312
060	3.750		4.219	4.281	4.391	4.406	4.531	4.656	4.703	4.719	5.000	5.125	5.250	5.437
062	3.875		4.344	4.406	4.516	4.531	4.656	4.781	4.828	4.844	5.125	5.250	5.375	5.562
064	4.000		4.469	4.531	4.641	4.656	4.781	4.906	4.953	4.969	5.250	5.375	5.500	5.687
066	4.125		4.594	4.656	4.766	4.781	4.906	5.031	5.078	5.094	5.375	5.500	5.625	5.812
068	4.250		4.719	4.781	4.891	4.906	5.031	5.156	5.203	5.219	5.500	5.625	5.750	5.937
070	4.375		4.844	4.906	5.016	5.031	5.156	5.281	5.328	5.344	5.625	5.750	5.875	6.062
072	4.500		4.969	5.031	5.141	5.156	5.281	5.406	5.453	5.469	5.750	5.875	6.000	6.187
074	4.625			5.156	5.266	5.281	5.406	5.531	5.578	5.594	5.875	6.000	6.125	6.312
076	4.750			5.281	5.391	5.406	5.531	5.656	5.703	5.719	6.000	6.125	6.250	6.437
078	4.875			5.406	5.516	5.531	5.656	5.781	5.828	5.844	6.125	6.250	6.375	6.562
080	5.000			5.531	5.641	5.656	5.781	5.906	5.953	5.969	6.250	6.375	6.500	6.687
082	5.125			5.656	5.766	5.781	5.906	6.031	6.078	6.094	6.375	6.500	6.625	6.812
084	5.250			5.781	5.891	5.906	6.031	6.156	6.203	6.219	6.500	6.625	6.750	6.937
086	5.375			5.906	6.016	6.031	6.156	6.281	6.328	6.344	6.625	6.750	6.875	7.062
088	5.500			6.031	6.141	6.156	6.281	6.406	6.453	6.469	6.750	6.875	7.000	7.187
090	5.625					6.281	6.406	6.531	6.578	6.594	6.875	7.000	7.125	7.312
092	5.750					6.406	6.531	6.656	6.703	6.719	7.000	7.125	7.250	7.437
094	5.875					6.531	6.656	6.781	6.828	6.844	7.125	7.250	7.375	7.562
096	6.000					6.656	6.781	6.906	6.953	6.969	7.250	7.375	7.500	7.687
098	6.125					6.781	6.906	7.031	7.078	7.094	7.375	7.500	7.625	7.812
100	6.250					6.906	7.031	7.156	7.203	7.219	7.500	7.625	7.750	7.937
102	6.375						7.031	7.156	7.281	7.328	7.625	7.750	7.875	8.062
104	6.500							7.406	7.453	7.469	7.750	7.875	8.000	8.187
106	6.625							7.531	7.578	7.594	7.875	8.000	8.125	8.312
108	6.750							7.656	7.703	7.719	8.000	8.125	8.250	8.437
110	6.875							7.781	7.828	7.844	8.125	8.250	8.375	8.562
112	7.000							7.906	7.953	7.969	8.250	8.375	8.500	8.687
114	7.125							8.031	8.078	8.094	8.375	8.500	8.625	8.812
116	7.250												8.750	8.937
118	7.375												8.875	9.062
120	7.500												9.000	9.187
122	7.625												9.125	9.312
124	7.750												9.250	9.437
126	7.875												9.375	9.562
128	8.000												9.500	9.687

REVISED

- (a) Unassigned dash numbers shall not be used except those dash numbers included by the following coding note
Dash numbers indicate preferred grip lengths in 125 increments for lengths longer than 250 inches. Intermediate grip lengths between those lengths listed may be specified in .062 increments by intermediate dash numbers. Length and grip of a bolt with an odd number for the dash number will be .062 greater than shown for the bolt with the preceding even dash number.

P.A. Navy - JWP Other Cust USAF -11	TITLE BOLT, SELF-LOCKING, 250° F., STEEL, 75 KSI Ftu, 125 KSI Ftu, HEX HEAD	MILITARY STANDARD MS21094(ASG)
PROCUREMENT SPECIFICATION MIL-B-6812&MIL-F-18240	SUPERSEDES	SHEET 2 OF

REVISED
APPROVED 2 Nov 65