

USE SYMBOLS:

NAVY - AS
USAF - 11
ARMY - AV

*Review/year information is current as of the date of this document.
For future consideration of changes to this document, draft circulation
should be based on the information in the current 000101.

This military standard is mandatory for use by all Departments
in accordance with the Department of Defense. Exceptions for all new
engineering and design applications and for continuing use shall
be made from this document.

REVISION SYMBOLS:
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DASH NO DIA	THREAD S	D DIA		A DIA			F MAX	H MIN	M REF	R RAD		(r) TENSILE STRENGTH LBS MIN	DOUBLE SHEAR STRENGTH LBS MIN	DRIVER SIZE
		MAX	MIN	MAX SHARP	MIN SHARP	ABSOLUTE MIN WITH MAX F				MAX	MIN			
04	.112-40UNC-3A	.1120	.0925	.225	.207	.200	.010	.041	.250			480	930	1
06	.138-32UNC-3A	.1380	.1141	.279	.257	.249	.014	.053	.312			720	1,420	1
08	.164-32UNC-3A	.1640	.1610	.332	.319	.283	.015	.068	.437	.015	.003	1,120	2,030	2
3	.190-32UNF-3A	.1890	.1860	.385	.371	.327	.016	.080	.469			1,600	2,730	2
4	.250-20UNF-3A	.2490	.2460	.507	.491	.447	.018	.106	.506			2,910	4,700	3
5	.3125-24UNF-3A	.3115	.3085	.635	.617	.569	.020	.133	.531			4,640	7,370	4
6	.375-24UNF-3A	.3740	.3710	.762	.742	.686	.023	.159	.641			7,020	10,600	4
7	.4375-20UNF-3A	.4365	.4325	.890	.868	.805	.026	.186	.656	.020	.020	9,490	14,400	
8	.500-20UNF-3A	.4990	.4950	1.017	.992	.919	.030	.213	.781			12,790	18,800	
9	.5625-18UNF-3A	.5615	.5575	1.145	1.118	1.036	.034	.240	.936			16,250	23,900	

(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. All-S-7747 & HBK H28
 (c) Dimensioning and gaging of recess design shall be in accordance with MS9006.
 (d) Reference dimensions are for design purposes only and are not an inspection or manufacturing requirement.
 (e) Chamfer 45° ± 5° Chamfer to extend to root of thread
 (f) Based on 80,000 PSI ultimate tensile strength, and stress area = 3.1416 (R/2 - 3H/16)². See Handbook H-28 (1957) Part I.

MATERIAL: Corrosion Resisting Steel that will provide in the finished bolt the strength and permeability specified.
TREATMENT: Passivated (See Procurement Specification).
SURFACE ROUGHNESS: The surface of the shank, fillet and bearing area shall not exceed 125 micro-inches per ANSI(USAN)B46.1(1962)
LOCKING ELEMENT: In accordance with Specification MIL-F-18240. Locking element area, with locking element incorporated, must pass thru a ring gage equal to maximum major thread diameter +.003" freely or with finger pressure.
MAGNETIC PERMEABILITY: These bolts have a magnetic permeability of 2.0 maximum (air = 1.0) for a field of H = 200 oersteds using magnetic indicator per MIL-I-17211.
DESIGN AND USAGE LIMITATIONS: See MS15981.
DIMENSIONS IN INCHES.
DIMENSIONS & TOLERANCES: In accordance with ANSI(USAN)Y14.5(1966).
EXAMPLE OF PART NUMBER: MS21092-1008 .250-28 Bolt, .500 Grip

GRIP DASH NUMBER

DIA DASH NUMBER

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

(A) REVISED

P.A. Navy - AS

Other Cans:

USAF - 11

ARMY - AV

TITLE

BOLT, SELF-LOCKING, 250° F., CRES,
48 KSI Fsu, 80 KSI Ftu, 100° FLUSH HEAD, CROSS RECESSED

MILITARY STANDARD

MS21092

PROCUREMENT SPECIFICATION

MIL-S-1839 & MIL-F-18240

SUPERSEDES

MS21092(ABC)

SHEET 1 **OF** 2

FED. SUP CLASS

5366

REVISION SYMBOLS:

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This military standard is mandatory for use by all Departments & Agencies of the Department of Defense. Selection for all new engineering and design applications and for reapplication use shall be made from this document.

LENGTH DASH NO. (a)	TRIP O ±.010	112-40	138-32	164-32	190-32	250-28	312-24	375-24	4375-20	500-20	5625-16
002	.125	.375	.437	.562							
003	.187	.437	.500	.625	.750						
004	.250	.500	.562	.687	.812	.937					
005	.312	.562	.625	.750	.875	1.000					
006	.375	.625	.687	.812	.937	1.062					
007	.437	.687	.750	.875	1.000	1.125					
008	.500	.750	.812	.937	1.062	1.187					
009	.562	.812	.875	.937	1.062	1.187					
010	.625	.875	.937	1.000	1.062	1.125					
011	.687	.937	1.000	1.062	1.125	1.187					
012	.750	1.000	1.062	1.125	1.187	1.250					
013	.812	1.062	1.125	1.187	1.250	1.312					
014	.875	1.125	1.187	1.250	1.312	1.375					
015	.937	1.187	1.250	1.312	1.375	1.437					
016	1.000	1.250	1.312	1.375	1.437	1.500					
017	1.062	1.312	1.375	1.437	1.500	1.562					
018	1.125	1.375	1.437	1.500	1.562	1.625					
019	1.187	1.437	1.500	1.562	1.625	1.687					
020	1.250	1.500	1.562	1.625	1.687	1.750					
021	1.312	1.562	1.625	1.687	1.750	1.812					
022	1.375	1.625	1.687	1.750	1.812	1.875					
023	1.437	1.687	1.750	1.812	1.875	1.937					
024	1.500	1.750	1.812	1.875	1.937	2.000					
025	1.562	1.812	1.875	1.937	2.000	2.062					
026	1.625	1.875	1.937	2.000	2.062	2.125					
027	1.687	1.937	2.000	2.062	2.125	2.187					
028	1.750	2.000	2.062	2.125	2.187	2.250					
029	1.812	2.062	2.125	2.187	2.250	2.312					
030	1.875	2.125	2.187	2.250	2.312	2.375					
031	1.937	2.187	2.250	2.312	2.375	2.437					
032	2.000	2.250	2.312	2.375	2.437	2.500					
033	2.062	2.312	2.375	2.437	2.500	2.562					
034	2.125	2.375	2.437	2.500	2.562	2.625					
035	2.187	2.437	2.500	2.562	2.625	2.687					
036	2.250	2.500	2.562	2.625	2.687	2.750					
037	2.312	2.562	2.625	2.687	2.750	2.812					
038	2.375	2.625	2.687	2.750	2.812	2.875					
039	2.437	2.687	2.750	2.812	2.875	2.937					
040	2.500	2.750	2.812	2.875	2.937	3.000					
041	2.562	2.812	2.875	2.937	3.000	3.062					
042	2.625	2.875	2.937	3.000	3.062	3.125					
043	2.687	2.937	3.000	3.062	3.125	3.187					
044	2.750	3.000	3.062	3.125	3.187	3.250					
045	2.812	3.062	3.125	3.187	3.250	3.312					
046	2.875	3.125	3.187	3.250	3.312	3.375					
047	2.937	3.187	3.250	3.312	3.375	3.437					
048	3.000	3.250	3.312	3.375	3.437	3.500					
049	3.062	3.312	3.375	3.437	3.500	3.562					
050	3.125	3.375	3.437	3.500	3.562	3.625					
051	3.187	3.437	3.500	3.562	3.625	3.687					
052	3.250	3.500	3.562	3.625	3.687	3.750					
053	3.312	3.562	3.625	3.687	3.750	3.812					
054	3.375	3.625	3.687	3.750	3.812	3.875					
055	3.437	3.687	3.750	3.812	3.875	3.937					
056	3.500	3.750	3.812	3.875	3.937	4.000					
057	3.562	3.812	3.875	3.937	4.000	4.062					
058	3.625	3.875	3.937	4.000	4.062	4.125					
059	3.687	3.937	4.000	4.062	4.125	4.187					
060	3.750	4.000	4.062	4.125	4.187	4.250					
061	3.812	4.062	4.125	4.187	4.250	4.312					
062	3.875	4.125	4.187	4.250	4.312	4.375					
063	3.937	4.187	4.250	4.312	4.375	4.437					
064	4.000	4.250	4.312	4.375	4.437	4.500					
065	4.062	4.312	4.375	4.437	4.500	4.562					
066	4.125	4.375	4.437	4.500	4.562	4.625					

- (a) Unassigned dash numbers shall not be used except those dash numbers included by the following coding notes:
 Dash numbers indicate preferred grip lengths in .125 increments for lengths longer than .750 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 - AS Other Cast USAF - 11 ARMY - AV	TITLE BOLT, SELF-LOCKING, 250° F., CRETS, 48 KSI Ftu, 80 KSI Ftu, 100° F. FINISH HEAD, CROSS RECESSED	MILITARY STANDARD MS21092
PROCUREMENT SPECIFICATION MIL-STD-883C & MIL-P-18227	SUPERSEDES MS21092(ASG)	SHEET 2

DD FORM 672-1 (Coordinated)

PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE.

APPROVED 2 Nov 65 REVISED 1 FOR CHANGES SEE SHEETS 1 & 2