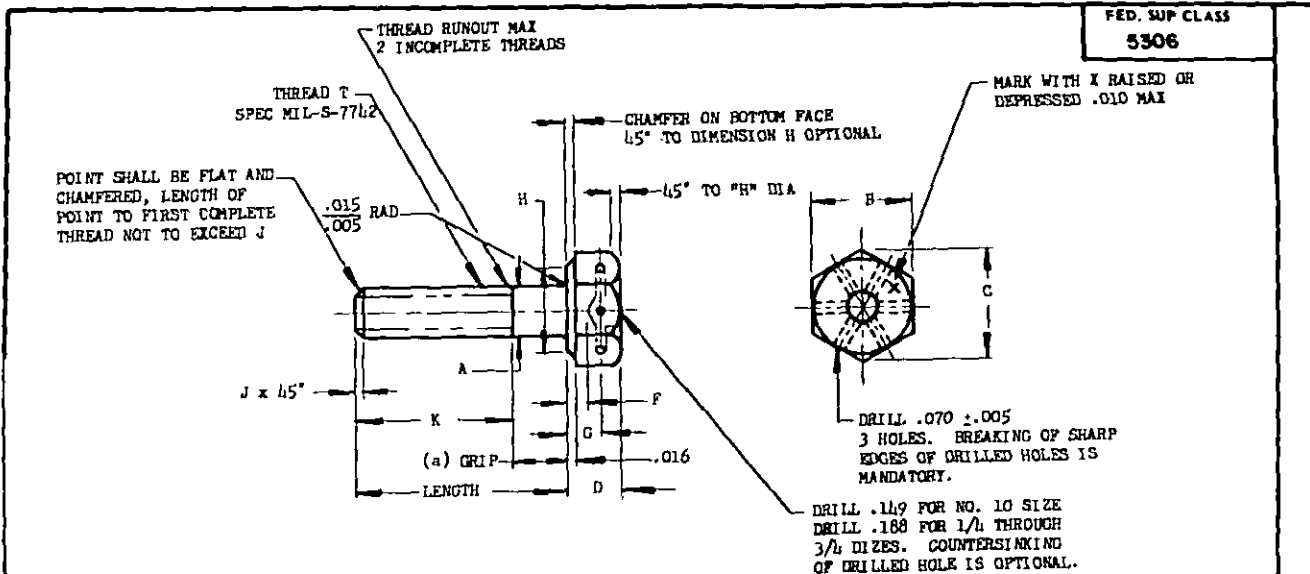


USER ACTIVITIES: ARMY-ME

REVIEWER ACTIVITIES

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



FED. SUP CLASS
5306

SIZE DASH NO.	THREAD T	A DIA		B		(b) C REP	D		F MIN	G ±.000 -.010	H DIA		J		RATED STRENGTH, LBS	
		MAX	MIN	MAX	MIN		MAX	MIN			MAX	MIN	TENSION AT ROOT DIA	SINGLE SHEAR AT FULL DIA		
03-	NO. 10-32 NF-3A	.189	.186	.376	.367	.430	.203	.172	.039	.120	.391	.359	.047	.015	2 210	2 125
04-	1/4-28 UNF-3A	.249	.246	.439	.430	.510	.234	.203	.052	.124	.454	.422	.047	.015	4 080	3 680
05-	5/16-24 UNF-3A	.312	.309	.501	.492	.580	.297	.266	.078	.172	.516	.484	.063	.031	6 500	5 750
06-	3/8-24 UNF-3A	.374	.371	.564	.554	.650	.297	.266	.078	.172	.579	.547	.063	.031	10 100	8 800
07-	7/16-20 UNF-3A	.437	.433	.689	.679	.790	.344	.313	.078	.172	.704	.672	.063	.031	13 600	11 250
08-	1/2-20 UNF-3A	.499	.495	.751	.741	.870	.391	.359	.094	.199	.766	.734	.063	.031	18 500	14 700
09-	9/16-18 UNF-3A	.562	.558	.876	.865	1.010	.438	.406	.109	.203	.891	.859	.078	.046	23 600	18 700
10-	5/8-18 UNF-3A	.624	.620	.939	.928	1.090	.484	.453	.140	.234	.954	.922	.078	.046	30 100	23 000
12-	3/4-16 UNF-3A	.749	.744	1.064	1.053	1.230	.578	.547	.187	.281	1.079	1.047	.078	.046	44 000	33 150

(a) GRIP LENGTH OF BOLTS SHALL BE MEASURED FROM THE UNDERSIDE OF THE HEAD TO THE END OF THE FULL CYLINDRICAL PORTION OF THE SHANK. COMPLETE THREADS SHALL BEGIN WITHIN TWO-THREAD PITCH MAXIMUM. TWO-THREAD PITCH MAXIMUM MAY CONSIST OF INCOMPLETE THREAD OR EXTRUSION ANGLE.

(b) REFERENCE DIMENSIONS ARE FOR DESIGN PURPOSES ONLY AND ARE NOT AN INSPECTION REQUIREMENT.

(c) MINIMUM YIELD STRENGTH = 76.7 PERCENT OF RATED TENSION.

MATERIAL: STEEL, SEE PROCUREMENT SPECIFICATION.

PLATING: CADMIUM PLATE QQ-P-416, TYPE 2, CLASS 3.

DIMENSIONS IN INCHES. UNLESS OTHERWISE SPECIFIED, TOLERANCES: DECIMALS ±.010, ANGLES ±5°.

EXAMPLE OF PART NUMBERS: MS20073-05-07 = 5/16-24 UNF-3A BOLT, .375 GRIP, .922 LONG.

UNASSIGNED DASH NUMBERS SHALL NOT BE USED.

THE ACROSS FLAT DIMENSIONS OF THE HEXAGON HEADS ARE IN AGREEMENT WITH AMERICAN-BRITISH-CANADIAN AIR STD 17/2.

INTERCHANGEABILITY RELATION WITH AN73 THROUGH AN81 PARTS: MS20073 (ASG) PARTS AND AN73 THROUGH AN81 PARTS OF LIKE THREAD AND GRIP LENGTHS ARE UNIVERSALLY FUNCTIONALLY AND DIMENSIONALLY INTERCHANGEABLE.

THIS STANDARD TAKES PRECEDENCE OVER DOCUMENTS REFERENCED HEREIN.

REFERENCED DOCUMENTS SHALL BE OF THE ISSUE IN EFFECT ON DATE OF INVITATIONS FOR BID.

THIS DOCUMENT HAS BEEN PROMULGATED BY THE DEPARTMENT OF DEFENSE AS THE MILITARY STANDARD TO LIMIT THE SELECTION OF THE ITEM, PRODUCT, OR DESIGN COVERED HEREIN IN ENGINEERING, DESIGN, AND PROCUREMENT. THIS STANDARD SHALL BECOME EFFECTIVE NOT LATER THAN 90 DAYS AFTER THE LATEST DATE OF APPROVAL SHOWN.

P. A. AF-82 Other Cust NAVY-AS ARMY-AV AF-99	INTERNATIONAL INTEREST	TITLE	MILITARY STANDARD
	STANAG	BOLT, MACHINE, AIRCRAFT, DRILLED HEAD, FINE THREAD	MS 20073
PROCUREMENT SPECIFICATION MIL-B-6812	SUPERSEDES: AN73 THRU AN81	SHEET 1 OF 3	

APPROVED 16 SEP 58 REVISED (A) 30 JUL 63 (B) 12 APRIL 1984

FED. SUP CLASS.
5306

USER ACTIVITIES: ARMY-ME

REVIEWER ACTIVITIES:

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LENGTH DASH NO.	-03			-04			-05			-06			-07		
	GRIP ±.016	LENGTH +.031 -.016	K REF (MIN)	GRIP ±.016	LENGTH +.031 -.016	K REF (MIN)	GRIP ±.016	LENGTH +.031 -.016	K REF (MIN)	GRIP ±.016	LENGTH +.031 -.016	K REF (MIN)	GRIP ±.016	LENGTH +.031 -.016	K REF (MIN)
02	.062	.304	.250												
03	.062	.469	.375	.062	.469	.375									
04	.062	.594	.500	.062	.594	.500	.062	.609	.515						
05	.125	.656	.499	.125	.656	.499	.125	.672	.515	.062	.734	.640			
06	.250	.781	.499	.250	.781	.499	.250	.797	.515	.125	.797	.640	.062	.797	
07	.375	.906	.499	.375	.906	.499	.375	.922	.515	.250	.922	.640	.188	.922	
10	.500	1.031	.499	.500	1.031	.499	.500	1.047	.515	.375	1.047	.640	.312	1.047	
11	.625	1.156	.499	.625	1.156	.499	.625	1.172	.515	.500	1.172	.640	.438	1.172	
12	.750	1.281	.499	.750	1.281	.499	.750	1.297	.515	.625	1.297	.640	.562	1.297	
13	.875	1.406	.499	.875	1.406	.499	.875	1.422	.515	.750	1.422	.640	.688	1.422	
14	1.000	1.531	.499	1.000	1.531	.499	1.000	1.547	.515	.875	1.547	.640	.812	1.547	
15	1.125	1.656	.499	1.125	1.656	.499	1.125	1.672	.515	1.000	1.672	.640	.938	1.672	
16	1.250	1.781	.499	1.250	1.781	.499	1.250	1.797	.515	1.125	1.797	.640	1.062	1.797	
17	1.375	1.906	.499	1.375	1.906	.499	1.375	1.922	.515	1.250	1.922	.640	1.188	1.922	
20	1.500	2.031	.499	1.500	2.031	.499	1.500	2.047	.515	1.375	2.047	.640	1.312	2.047	
21	1.625	2.156	.499	1.625	2.156	.499	1.625	2.172	.515	1.500	2.172	.640	1.438	2.172	
22	1.750	2.281	.499	1.750	2.281	.499	1.750	2.297	.515	1.625	2.297	.640	1.562	2.297	
23	1.875	2.406	.499	1.875	2.406	.499	1.875	2.422	.515	1.750	2.422	.640	1.688	2.422	
24	2.000	2.531	.499	2.000	2.531	.499	2.000	2.547	.515	1.875	2.547	.640	1.812	2.547	
25	2.125	2.656	.499	2.125	2.656	.499	2.125	2.672	.515	2.000	2.672	.640	1.938	2.672	
26	2.250	2.781	.499	2.250	2.781	.499	2.250	2.797	.515	2.125	2.797	.640	2.062	2.797	
27	2.375	2.906	.499	2.375	2.906	.499	2.375	2.922	.515	2.250	2.922	.640	2.188	2.922	
30	2.500	3.031	.499	2.500	3.031	.499	2.500	3.049	.515	2.375	3.049	.640	2.312	3.049	
31	2.625	3.156	.499	2.625	3.156	.499	2.625	3.172	.515	2.500	3.172	.640	2.438	3.172	
32	2.750	3.281	.499	2.750	3.281	.499	2.750	3.297	.515	2.625	3.297	.640	2.562	3.297	
33	2.875	3.406	.499	2.875	3.406	.499	2.875	3.422	.515	2.750	3.422	.640	2.688	3.422	
34	3.000	3.531	.499	3.000	3.531	.499	3.000	3.547	.515	2.875	3.547	.640	2.812	3.547	
35	3.125	3.656	.499	3.125	3.656	.499	3.125	3.672	.515	3.000	3.672	.640	2.938	3.672	
36	3.250	3.781	.499	3.250	3.781	.499	3.250	3.797	.515	3.125	3.797	.640	3.062	3.797	
37	3.375	3.906	.499	3.375	3.906	.499	3.375	3.922	.515	3.250	3.922	.640	3.188	3.922	
40	3.500	4.031	.499	3.500	4.031	.499	3.500	4.047	.515	3.375	4.047	.640	3.312	4.047	
41	3.625	4.156	.499	3.625	4.156	.499	3.625	4.172	.515	3.500	4.172	.640	3.438	4.172	
42	3.750	4.281	.499	3.750	4.281	.499	3.750	4.297	.515	3.625	4.297	.640	3.562	4.297	
43	3.875	4.406	.499	3.875	4.406	.499	3.875	4.422	.515	3.750	4.422	.640	3.688	4.422	
44	4.000	4.531	.499	4.000	4.531	.499	4.000	4.547	.515	3.875	4.547	.640	3.812	4.547	
45	4.125	4.656	.499	4.125	4.656	.499	4.125	4.672	.515	4.000	4.672	.640	3.938	4.672	
46	4.250	4.781	.499	4.250	4.781	.499	4.250	4.797	.515	4.125	4.797	.640	4.062	4.797	
47	4.375	4.906	.499	4.375	4.906	.499	4.375	4.922	.515	4.250	4.922	.640	4.188	4.922	
50	4.500	5.031	.499	4.500	5.031	.499	4.500	5.047	.515	4.375	5.047	.640	4.312	5.047	
51	4.625	5.156	.499	4.625	5.156	.499	4.625	5.172	.515	4.500	5.172	.640	4.438	5.172	
52	4.750	5.281	.499	4.750	5.281	.499	4.750	5.297	.515	4.625	5.297	.640	4.562	5.297	
53	4.875	5.406	.499	4.875	5.406	.499	4.875	5.422	.515	4.750	5.422	.640	4.688	5.422	
54	5.000	5.531	.499	5.000	5.531	.499	5.000	5.547	.515	4.875	5.547	.640	4.812	5.547	
55	5.125	5.656	.499	5.125	5.656	.499	5.125	5.672	.515	5.000	5.672	.640	4.938	5.672	
56	5.250	5.781	.499	5.250	5.781	.499	5.250	5.797	.515	5.125	5.797	.640	5.062	5.797	
57	5.375	5.906	.499	5.375	5.906	.499	5.375	5.922	.515	5.250	5.922	.640	5.188	5.922	
60	5.500	6.031	.499	5.500	6.031	.499	5.500	6.047	.515	5.375	6.047	.640	5.312	6.047	

REVISED 16 Sep 59

(B)

HEAD DIMENSIONS ARE SUBJECT TO ABCA AND ASSC AIR STD 17/2. WHEN AMENDMENT, REVISION, OR CANCELLATION OF THIS DOCUMENT IS PROPOSED WHICH WILL MODIFY THE INTERNATIONAL AGREEMENT CONCERNED, THE PREPARING ACTIVITY TAKES APPROPRIATE ACTION THROUGH INTERNATIONAL STANDARDIZATION CHANNELS INCLUDING DEPARTMENTAL STANDARDIZATION OFFICES TO CHANGE THE AGREEMENT OR MAKE OTHER APPROPRIATE ACCOMMODATIONS.

THIS DOCUMENT HAS BEEN PROMULGATED BY THE DEPARTMENT OF DEFENSE AS THE MILITARY STANDARD TO LIMIT THE SELECTION OF THE ITEM, PRODUCT, OR DESIGN COVERED HEREIN IN ENGINEERING, DESIGN, AND PROCUREMENT. THIS STANDARD SHALL BECOME EFFECTIVE NOT LATER THAN 90 DAYS AFTER THE LATEST DATE OF APPROVAL SHOWN.

CUSTODIANS AF-82 NAVY-AS ARMY-AV AF-99	STANAG	MILITARY STANDARD		MS20073
		BOLT, MACHINE, AIRCRAFT, DRILLED HEAD, FINE THREAD		
PROCUREMENT SPECIFICATION MIL-B-6812		SUPERSEDES: AN73 THRU AN81		SHEET 2 OF 3

DD FORM 672-1
1 OCT 52

USER ACTIVITIES: ARMY - ME

REVIEWER ACTIVITIES:

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LENGTH DASH NO.	-08			-09			-10			-12		
	GRIP ±.016	LENGTH +.031 -.016	K REF (MIN)	GRIP ±.016	LENGTH +.031 -.016	K REF (MIN)	GRIP ±.016	LENGTH +.031 -.016	K REF (MIN)	GRIP ±.016	LENGTH +.031 -.016	K REF (MIN)
10	.250	1.047	.765									
11	.375	1.172	.765									
12	.500	1.297	.765	.438	1.312	.842						
13	.625	1.422	.765	.562	1.438	.842						
14	.750	1.547	.765	.688	1.562	.842	.562	1.562	.968			
15	.875	1.672	.765	.812	1.688	.944	.688	1.688	.968			
16	1.000	1.797	.765	.938	1.812	.842	.812	1.812	.968	.750	1.812	1.030
17	1.125	1.922	.765	1.062	1.938	.842	.938	1.938	.968	.875	1.938	1.031
20	1.250	2.047	.765	1.188	2.062	.842	1.062	2.062	.968	1.000	2.062	1.030
21	1.375	2.172	.765	1.312	2.188	.842	1.188	2.188	.968	1.125	2.188	1.031
22	1.500	2.297	.765	1.438	2.312	.842	1.312	2.312	.968	1.250	2.312	1.030
23	1.625	2.422	.765	1.562	2.438	.842	1.438	2.438	.968	1.375	2.438	1.031
24	1.750	2.547	.765	1.688	2.562	.842	1.562	2.562	.968	1.500	2.562	1.030
25	1.875	2.672	.765	1.812	2.688	.842	1.688	2.688	.968	1.675	2.688	1.031
26	2.000	2.797	.765	1.938	2.812	.842	1.812	2.812	.968	1.750	2.812	1.030
27	2.125	2.922	.765	2.062	2.938	.842	1.938	2.938	.968	1.875	2.938	1.031
30	2.250	3.047	.765	2.188	3.062	.842	2.062	3.062	.968	2.000	3.062	1.030
31	2.375	3.172	.765	2.312	3.188	.842	2.188	3.188	.968	2.125	3.188	1.031
32	2.500	3.297	.765	2.438	3.312	.842	2.312	3.312	.968	2.250	3.312	1.030
33	2.625	3.422	.765	2.562	3.438	.842	2.438	3.438	.968	2.375	3.438	1.031
34	2.750	3.547	.765	2.688	3.562	.842	2.562	3.562	.968	2.500	3.562	1.030
35	2.875	3.672	.765	2.812	3.688	.842	2.688	3.688	.968	2.625	3.688	1.031
36	3.000	3.797	.765	2.938	3.812	.842	2.812	3.812	.968	2.750	3.812	1.030
37	3.125	3.922	.765	3.062	3.938	.842	2.938	3.938	.968	2.875	3.938	1.031
40	3.250	4.047	.765	3.188	4.062	.842	3.062	4.062	.968	3.000	4.062	1.030
41	3.375	4.172	.765	3.312	4.188	.842	3.188	4.188	.968	3.125	4.188	1.031
42	3.500	4.297	.765	3.438	4.312	.842	3.312	4.312	.968	3.250	4.312	1.030
43	3.625	4.422	.765	3.562	4.438	.842	3.438	4.438	.968	3.375	4.438	1.031
44	3.750	4.547	.765	3.688	4.562	.842	3.562	4.562	.968	3.500	4.562	1.030
45	3.875	4.672	.765	3.812	4.688	.842	3.688	4.688	.968	3.625	4.688	1.031
46	4.000	4.797	.765	3.938	4.812	.842	3.812	4.812	.968	3.750	4.812	1.030
47	4.125	4.922	.765	4.062	4.938	.842	3.938	4.938	.968	3.875	4.938	1.031
50	4.250	5.047	.765	4.188	5.062	.842	4.062	5.062	.968	4.000	5.062	1.030
51	4.375	5.172	.765	4.312	5.188	.842	4.188	5.188	.968	4.125	5.188	1.031
52	4.500	5.297	.765	4.438	5.312	.842	4.312	5.312	.968	4.250	5.312	1.030
53	4.625	5.422	.765	4.562	5.438	.842	4.438	5.438	.968	4.375	5.438	1.031
54	4.750	5.547	.765	4.688	5.562	.842	4.562	5.562	.968	4.500	5.562	1.030
55	4.875	5.672	.765	4.812	5.688	.842	4.688	5.688	.968	4.625	5.688	1.031
56	5.000	5.797	.765	4.938	5.812	.842	4.812	5.812	.968	4.750	5.812	1.030
57	5.125	5.922	.765	5.062	5.938	.842	4.938	5.938	.968	4.875	5.938	1.031
60	5.250	6.047	.765	5.188	6.016	.842	5.062	6.062	.968	5.000	6.062	1.030

APPROVED 15 Sep 58 REVISED (B) FOR CHANGES SEE SHEETS 1, 2, & 3.

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CUSTODIANS AF - 92 NAVY - AS ARMY - AV AF - 99	STANAG	MILITARY STANDARD		MS20073
		BOLT, MACHINE, AIRCRAFT, DRILLED HEAD, FINE THREAD		
PROCUREMENT SPECIFICATION MIL-B-6812		SUPERSEDES: AN73 THRU AN81		SHEET 3 OF 3