

D-21-05

FED ELP CLASS
S305

USER ACTIVITIES:
NAVY - MC, OS, SH

REVIEWER ACTIVITIES:
ARMY - AT
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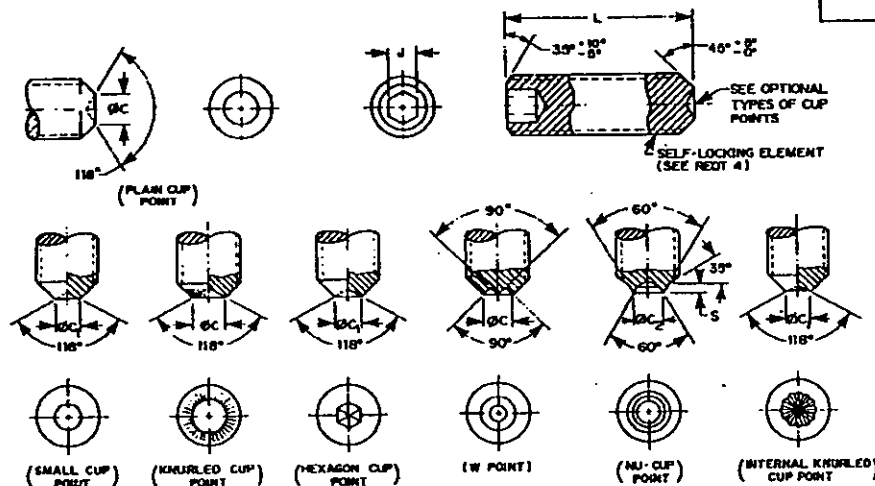


TABLE 1. DASH NUMBERS AND DIMENSIONS

NOMINAL SIZE			.060	.086	.112	.138	.164	.190	
THREADS PER INCH			80 UNF-3A	64 UNF-3A	48 UNF-3A	40 UNF-3A	36 UNF-3A	32 UNF-3A	
J	SOCKET WIDTH ACROSS FLATS	MON	.028	.035	.050	.062	.078	.094	
C	POINT	MAX MIN	.033 .027	.047 .039	.061 .051	.074 .064	.087 .076	.102 .088	
C ₁	POINT	MAX MIN	.032 .027	.043 .038	.056 .051	.069 .062	.082 .074	.095 .086	
C ₂	POINT	MAX MIN	.027 .022	.043 .038	.059 .054	.074 .068	.090 .084	.101 .095	
S	POINT LENGTH	MAX MIN	.007 .004	.010 .007	.013 .008	.017 .012	.021 .016	.024 .019	
L	LENGTH	TOLERANCE	DASH NUMBER						
			PLAIN	PLAIN	PLAIN	PLAIN	PLAIN	PLAIN	SELF- LOCKING
.125 .188 .250 .312 .375		±.010	1	9 1/2	17	27	37		120 1/2
			2	10 1/2	18	28	38	48	121
			3	11 1/2	19	29	39	49	122
					20	30	40	50	123
					21	31	41	51	124
.438 .500 .562 .625							42 1/2	52 1/2	125 1/2
							43	53	126
									127 1/2
							54	128	
.750 1.000 1.250		±.020						55	129
								56	130
								57	

1/ INACTIVE FOR NEW DESIGN AFTER 29 DECEMBER 1972

(E) ENTIRE STANDARD REVISED

P.A.
ARMY - AR
Other Govt
AIR FORCE - 99

INTERNATIONAL
INTEREST

TITLE

SETSCREW, HEXAGON SOCKET, CUP POINT,
ALLOY STEEL, CADMIUM PLATED, UNF-3A,
PLAIN AND SELF-LOCKING

MILITARY STANDARD

MS51964

PROCUREMENT SPECIFICATION
FF-S-200

SUPERSEDES: MSS1018, MSS1020, BCTX4 AND IN PART MS18063,
BCTX1, 1.1, 1.2, 3 AND 5, BCUX3 AND 5.1

PAGE 1 OF 3

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Revision for all new engineering and design applications and for repetitive use shall be made from this document when applicable.

AMSC N/A

DD FORM 672-1 (UNCLASSIFIED)

PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE

5305-1716

APPROVED 29 JAN 1964 REVISED 15 SEPT 88

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TABLE 1. DASH NUMBERS AND DIMENSIONS - CONTINUED

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5305

NOMINAL SIZE		.250	.3125	.375	.4375	.500							
TOLERANCE PER DICH		28 UNF-3A	24 UNF-3A	24 UNF-3A	20 UNF-3A	20 UNF-3A							
J	POCKET WIDTH ACROSS FLATS	NOM .125	.156	.188	.219	.250							
ØC	POINT	MAX MIN	.172 .156	.212 .194	.252 .232	.291 .270							
ØC ₁	POINT	MAX MIN	.125 .114	.156 .144	.187 .174	.218 .204							
						.250 .235							
ØC ₂	POINT	MAX MIN	.156 .150	.190 .185	.241 .236	.286 .281							
						.333 .328							
S	POINT LENGTH	MAX MIN	.027 .022	.038 .033	.041 .036	.047 .042							
						.054 .049							
L	LENGTH	TOLERANCE	DASH NUMBER										
			PLAIN	SELF- LOCKING	PLAIN	SELF- LOCKING	PLAIN	SELF- LOCKING	PLAIN	PLAIN	SELF- LOCKING		
.288 .250 .312 .375		±.010	63	131	76	144	92	156	118 ✓	167	166		
			64	132									
			65	133		79						145	93
			66	134		80						146	94
			67	135		81						147	95
.438 .500 .562 .625		±.020	68	136	82	147	96	157	119 ✓	167	167		
			69	137									
			69	138	83	148	97	158		168	168		
			70	139	84	149	98	159		169	169		
			71	140		150	99	160		170	170		
1.000 1.250 1.500 1.750 2.000		±.031	72	141	85	151	100	161	110 ✓	171	171		
				142	86	152	101	162	111 ✓	172	172		
				143		153		163	112 ✓	173	173		
						154		164		174	174		
						155		165		175	175		
2.500 3.000		±.031							176	176			
										177	177		

1/ INACTIVE FOR NEW DESIGN AFTER 29 DECEMBER 1972

TABLE 1. DASH NUMBERS AND DIMENSIONS - CONTINUED

NOMINAL SIZE		.625	.750	.875	1.000 ✓
TOLERANCE PER DICH		18 UNF-3A	16 UNF-3A	14 UNF-3A	14 UNF-3A
J SOCKET WIDTH ACROSS FLATS	NOM	.312	.375	.500	.562
ØC POINT	MAX MIN	.371 .347	.450 .425	.530 .502	.609 .579
ØC ₁ POINT	MAX MIN	.312 .295	.375 .357	.437 .418	.500 .486
ØC ₂ POINT	MAX MIN	.425 .420	.513 .510	—	—
S POINT LENGTH	MAX MIN	.067 .062	.081 .076	—	—
L LENGTH	TOLERANCE	DASH NUMBER			
		PLAIN	PLAIN	PLAIN	PLAIN
.250	±.010				
.312					
.375					
.438					
.500		253	268		
.625	±.020	254	269		
.750		255	270	281	295 ✓
.875		256	271	284	296 ✓
1.000		257	272	285	297 ✓
1.250		258	273	286	298 ✓
1.500	±.031	259	274	287	299 ✓
1.750		260	275	288	300 ✓
2.000		261	276	289	301 ✓
2.500		262	277	290	302 ✓
3.000		263	278	291	303 ✓

2/ INACTIVE FOR NEW DESIGN AFTER 30 JUNE 1966

P.A. ARMY - AR Other Govt AIR FORCE-99	INTERNATIONAL INTEREST	TITLE SETSCREW, HEXAGON SOCKET, CUP POINT, ALLOY STEEL, CADMIUM PLATED, UNF-3A, PLAIN AND SELF-LOCKING	MILITARY STANDARD MS51964
PROCUREMENT SPECIFICATION FF-9-200	SUPERSEDES MS51018, MS51020, BCTX4 AND IN PART MS18063, BCTX1, 1.1, 1.2, 3 AND 5, BCUX5 AND 5.1	PAGE 2	OF 3

DD FORM 672-1 (UNCLASSIFIED)

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5305-1716

APPROVED 29 JAN 1964
 REVISED
 (E) FOR CHANGES SEE PAGES 1, 2 AND 3

FED. SUP. CLASS
5305

REQUIREMENTS:

1. MATERIAL: ALLOY STEEL IN ACCORDANCE WITH PROCUREMENT SPECIFICATION.
2. PROTECTIVE COATING AND SURFACE TREATMENT: CADMIUM PLATED IN ACCORDANCE WITH PROCUREMENT SPECIFICATION.
3. THREADS: THREADS SHALL BE IN ACCORDANCE WITH FED-STD-H28/2. ACCEPTABILITY OF SCREW THREADS FOR SIZES .150 AND SMALLER SHALL BE IN ACCORDANCE WITH FED-STD-H28/20, SYSTEM 21. ACCEPTABILITY OF SCREW THREADS FOR SIZES .250 AND LARGER SHALL BE IN ACCORDANCE WITH FED-STD-H28/20, SYSTEM 22. SELF-LOCKING SCREWS SHALL BE INSPECTED PRIOR TO INSTALLATION OF LOCKING ELEMENT.
4. SELF-LOCKING ELEMENT:
 - (a). THE SELF-LOCKING ELEMENT SHALL BE IN ACCORDANCE WITH THE PROCUREMENT DOCUMENT.
 - (b). MAXIMUM RING GAGE DIAMETER THAT LOCKING REGION OF SETSCREW MUST PASS THRU FREELY OR WITH FINGER PRESSURE SHALL BE THE NOMINAL SIZE PLUS 0.010.
 - (c). MIL-F-18240 DOES NOT ESTABLISH TORQUE REQUIREMENTS FOR LENGTHS ABOVE THE DASHED LINE. ONLY A POSITIVE INDICATION OF TORQUE IS REQUIRED.
5. TOOLERANCES: ANGLES $\pm 5^\circ$, UNLESS OTHERWISE SPECIFIED.
6. PART NUMBER: THE PART NUMBER SHALL CONSIST OF THE BASIC MS NUMBER FOLLOWED BY A DASH NUMBER TAKEN FROM TABLE I.

EXAMPLE: MS51964-1

DASH NUMBER

BASIC MS NUMBER

MS51964-1 INDICATES - SETSCREW, HEXAGON SOCKET, CUP POINT, ALLOY STEEL, CADMIUM PLATED, .060-80 UNF-3A; LENGTH .125; PLAIN.

NOTES:

1. ALL DIMENSIONS ARE IN INCHES.
2. IN THE EVENT OF A CONFLICT BETWEEN THE TEXT OF THIS STANDARD AND THE REFERENCES CITED HEREIN, THE TEXT OF THIS STANDARD SHALL TAKE PRECEDENCE.
3. REFERENCED GOVERNMENT (OR NON-GOVERNMENT) DOCUMENTS OF THE ISSUE LISTED IN THAT ISSUE OF THE DEPARTMENT OF DEFENSE INDEX OF SPECIFICATIONS AND STANDARDS (DODDIS) SPECIFIED IN THE SOLICITATION FORM A PART OF THIS STANDARD TO THE EXTENT SPECIFIED HEREIN.

INTERCHANGEABILITY RELATIONSHIP

SCREWS COVERED BY THE DASH NUMBERS GIVEN IN MS51018 AND MS51020 ARE CANCELLED AFTER 29 JANUARY 1964 AND SUPERSEDED BY THE SCREWS COVERED ON MS51964 HAVING THE SAME DASH NUMBERS. CANCELLED SCREWS MAY BE USED UNTIL EXISTING STOCKS ARE DEPLETED. USE ONLY MS51964 SCREWS FOR NEW DESIGN.

SCREWS COVERED BY THE DASH NUMBERS GIVEN IN MS18063 IN PART ARE CANCELLED. CANCELLED SCREWS MAY BE USED UNTIL EXISTING STOCKS ARE DEPLETED. USE ONLY THE SUPERSEDING SCREWS FOR NEW DESIGN. REPLACEMENT SHALL BE IN ACCORDANCE WITH TABLE II.

TABLE II. INTERCHANGEABILITY

CANCELLED	SUPERSEDING	CANCELLED	SUPERSEDING	CANCELLED	SUPERSEDING	CANCELLED	SUPERSEDING
MS18063	MS51964	MS18063	MS51964	MS18063	MS51964	MS18063	MS51964
DASH NUMBER		DASH NUMBER		DASH NUMBER		DASH NUMBER	
4	120	32	135	64	150	82	164
8	121	37	136	70	151	85	165
13	122	45	137	74	152	92	166
19	123	50	138	78	153	40	167
25	124	57	139	81	154	53	168
31	125	63	140	84	155	60	169
36	126	69	141	91	156	66	170
44	127	73	142	39	157	72	171
49	128	77	143	52	158	76	172
56	129	15	144	59	159	80	173
68	130	21	145	65	160	83	174
9	131	27	146	71	161	86	175
14	132	38	147	75	162	87	176
20	133	51	148	79	163	88	177
26	134	58	149				

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