

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

REVIEWED BY: AL, IN, M, MC, SH, CL, MC, ME, OS, SH, (SHEET)

		FED. SUP CLASS 5305												
		<div style="text-align: center;">(B) TABLE 1 (B) SELF-LOCKING ELEMENT (SEE NOTE 7)</div>												
NOMINAL SIZE		.060	.086	.112	.138	.164	.190	.250	.3125	.375	.500			
THREADS PER INCH (-3A)		80 UNF	64 UNF	48 UNF	40 UNC	40 UNF	32 UNC	36 UNF	32 UNC	32 UNF	28 UNF	24 UNF	24 UNF	20 UNF
SOCKET WIDTH ACROSS FLATS		NOM	.028	.035	.050	.062	.078	.094	.125	.156	.188	.250		
Y CONE POINT ANGLE		118° ± 2° FOR LENGTHS UNDER 90° ± 2° FOR THESE LENGTHS AND OVER												
L LENGTH		DASH NUMBER												
TOL		PLAIN	PLAIN	PLAIN	SELF LOCK	PLAIN	SELF LOCK	PLAIN	SELF LOCK	PLAIN	SELF LOCK	SELF LOCK	SELF LOCK	SELF LOCK
.094		1*	15*	25*	101	35*	110		121*		133*			
.125		2*	16*	26*		36*								
.156			17*	27*		37*	111	47*	122	58*	134	144		
.188			18*	28*	102	38*	112	48*	123	59*	135	145	157	
.250			19*	29*	103	39*	113	49*	124	60*	136	146	158	
.312					104	40*	114	50*	125	61*	137	147	159	169
.375					105	41*	115*	51*	126*	62*	138*	148*	160	170
.438					106*		116	52*	127		139	149	161	171
.500					107		117*		128*		140*	150*	162	172
.562					108*		118		129		141	151	163	173
.625					109						142	152	164	174
.750							119		130		143	153	165	175
.875							120		131		144	154	166	176
1.000									132		145	155	167	177
1.250											146	156	168	178
1.500												156	168	178
1.750													166	176
2.000													167	177
2.500													168	178
3.000														188
														189
														190
* Inactive for new design after 29 DEC 1972 (B)														
INTERCHANGEABILITY Effective 31 December 1960, MS51059 and MS51060 were cancelled and superseded by MS51038 and MS51039 respectively. Screws covered by the dash numbers given in MS51039 are cancelled after 29 January 1964 and superseded by the screws covered on MS51038 having the same dash numbers. (MS51039-8 and -9 have no replacement.) Cancelled screws may be used until existing stocks are depleted. Use only MS51038 screws for new design.														
(B) For changes see sheets 1 and 2.														
P.A. W/		TITLE						MILITARY STANDARD						
Other Cust		(B) SETSCREW - HEXAGON SOCKET, CONE POINT, CORROSION-RESISTING STEEL, PASSIVATED, UNC-3A & UNF-3A, PLAIN AND SELF-LOCKING						MS51038						
PROCUREMENT SPECIFICATION		SUPERSEDES: MS18068, MS51039, MS51059, MS51060 and in part BCTX2.12, BCUX2, BCUX3 and BCUX4.3						SHEET 1 OF 2						

FED SUP CLASS  
5305

## NOTES:

1. **MATERIAL:** Corrosion-Resisting Steel, 300 Series, in accordance with procurement specification.
2. **PROTECTIVE COATING:** Passivated in accordance with QQ-P-35.
3. **THREADS:** The threads shall be in accordance with MIL-S-7742.
4. **MAGNETIC PERMEABILITY:** These setscrews have a magnetic permeability of 2.0 max (air = 1.0) for a field strength of H = 200 oersteds, when using a magnetic indicator per MIL-I-17214.
5. **DIMENSIONS:** All dimensions are in inches, unless otherwise specified.
6. **PART NUMBER:** The MS part number consists of the MS number, plus the dash number.  
Example: MS51038-101.
7. **SELF-LOCKING ELEMENT:**
  - (a) The self-locking element shall be in accordance with MIL-F-18240.
  - (b) For design and usage limitations, see MS15981.
  - (c) Location of effective locking area shall be in accordance with MS15981.
  - (d) 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.
  - (e) MIL-F-18240 doesn't establish torque requirements for lengths above the dashed line. Only a positive indication of torque is required.
8. Referenced documents shall be of the issue in effect on date of invitations for bid.
9. For design feature purposes, this standard takes precedence over procurement documents referenced herein.

## INTERCHANGEABILITY (Cont'd)

Screws covered by the dash numbers given in MS18068 are cancelled. Canceled screws may be used until existing stocks are depleted. Use only the superseding screws for new design. Replacement shall be in accordance with Table 11.

TABLE 11

CANCELLED	SUPERSEDING	CANCELLED	SUPERSEDING	CANCELLED	SUPERSEDING	CANCELLED	SUPERSEDING
MS18068	MS51038	MS18068	MS51038	MS18068	MS51038	MS18068	MS51038
DASH NUMBER		DASH NUMBER		DASH NUMBER		DASH NUMBER	
1	101	18	124	26	147	91	169
5	102	24	125	32	148	39	170
10	103	30	126	37	149	52	171
16	104	35	127	45	150	59	172
22	105	43	128	50	151	65	173
89	106	48	129	57	152	71	174
33	107	55	130	63	153	75	175
41	108	62	131	69	154	79	176
46	109	67	132	73	155	82	177
2	110	4	133	77	156	85	178
6	111	8	134	15	157	92	179
11	112	13	135	21	158	40	180
17	113	19	136	27	159	53	181
23	114	25	137	38	160	60	182
90	115	31	138	51	161	66	183
34	116	36	139	58	162	72	184
42	117	44	140	64	163	76	185
47	118	49	141	70	164	80	186
54	119	56	142	74	165	83	187
61	120	68	143	78	166	86	188
3	121	9	144	81	167	87	189
7	122	14	145	84	168	88	190
12	123	20	146				

P.A. WC Other Cost 82	TITLE SETSCREW-HEXAGON SOCKET, CONE POINT, CORROSION-RESISTING STEEL, PASSIVATED, (B) UNC-3A & UNF-3A, PLAIN AND SELF-LOCKING	MILITARY STANDARD MS 51038
PROCUREMENT SPECIFICATION FF-S-200	SUPERSEDES MS18068, MS51039, MS51059, MS51060 and in part BCTX2.12, BCUX2, BCUX3 and BCUX4.3.	SHEET 2 OF 2

DD FORM 672-1 (Coordinated)

PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE.

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This standard is mandatory 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.

REVIEWER: AV, EL, IS, ML, V  
USER: AT, GL, MC, ME, PS, SH, V

APPROVED 7 MAY 1958 REVISED (A) 29 JAN 1964 (B) FOR CHANGES SEE SHEETS 1 AND 2.