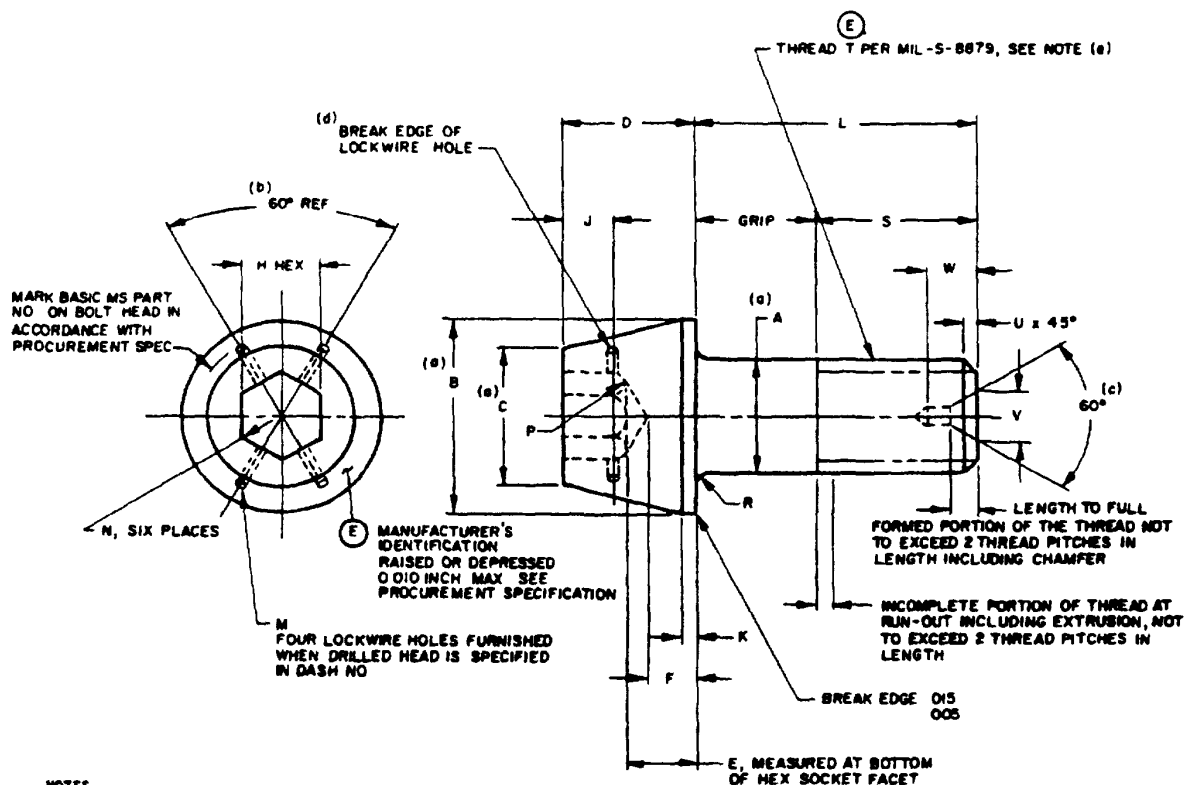


THE REQUIREMENTS FOR ACQUIRING THE PRODUCT(S) DESCRIBED HEREIN SHALL CONSIST OF THIS SPECIFICATION SHEET AND THE ISSUE OF THE FOLLOWING SPECIFICATION LISTED IN THAT ISSUE OF THE DOORS SPECIFIED IN THE SOLICITATION MIL-B-7836



NOTES

- (a) DIMENSIONS A, B AND C SHALL BE CONCENTRIC TO EACH OTHER WITHIN VALUES SPECIFIED FOR X TOTAL INDICATOR READING. DIMENSIONS SHALL BE H AND C SHALL BE CONCENTRIC TO EACH OTHER WITHIN VALUES SPECIFIED FOR Y TOTAL INDICATOR READING. DIMENSION A AND THREAD PITCH DIAMETER SHALL BE CONCENTRIC TO EACH OTHER WITHIN VALUES SPECIFIED FOR Z TOTAL INDICATOR READING.
- (b) REFERENCE DIMENSIONS ARE FOR DESIGN PURPOSES AND TO PROVIDE INFORMATION ONLY. THESE DIMENSIONS ARE NOT INSPECTION OR MANUFACTURING REQUIREMENTS. S MIN REF = (L MIN) - (GRIP MAX).
- (c) ON MS20012 THRU MS20024 CENTER DRILLING OF SHANK IS OPTIONAL FOR BOLT MANUFACTURER.
- (d) COUNTERSINKING OF DRILLED HOLES IS OPTIONAL.
- (e) MS20016 (SEE TABLE 1), 1-14MS-3A IS INACTIVE FOR NEW DESIGN MS20016 THREADS ARE NOTED AS AN EXCEPTION IN MIL-B-7836
- (f) MS20012A IS CANCELLED AFTER 13 JANUARY 1990

REQUIREMENTS

- (1) MATERIAL ALLOY STEEL - UNS G43400, UNS G43406, UNS G41400, UNS G87400, UNS G87350
- (2) FINISH CADMIUM PLATING PER QQ-P-416, TYPE II, CLASS 2 PARTS WITH CLASS 3 PLATING MAY BE FURNISHED FROM SUPPLIER'S STOCK UNTIL 1 JANUARY 1975.
- (3) HARDNESS 34-40 HRC
- (4) DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED, TOLERANCES DECIMALS - 0.10, ANGLES $\pm 1^\circ$
- (5) DIMENSIONS TO BE MET AFTER PLATING INTERCHANGEABILITY RELATIONSHIP BOLTS WITH TYPE II PLATING CAN BE USED TO REPLACE BOLTS WITH TYPE I PLATING IN ALL APPLICATIONS BOLTS WITH TYPE I PLATING CAN BE USED IN PLACE OF BOLTS WITH TYPE II PLATING UNTIL PRESENT STOCKS ARE DEPLETED, BUT BOLTS WITH TYPE I PLATING SHALL NOT BE USED AFTER 1 JANUARY 1964

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

(E) DENOTES CHANGES

PREPARING ACTIVITY NAVY - AS CUSTODIANS ARMY-AR NAVY- AIR FORCE-99 DLA- REVIEW ARMY - ER, ME, MI DLA - IS AF-R? USER ARMY - AV PROJECT NUMBER 5306-123E	MILITARY SPECIFICATION SHEET TITLE BOLTS, INTERNAL WRENCHING, 160 KSI FTU AND 50 KSI FSL	SPECIFICATION SHEET NUMBER 30 MAY 1989 MS20004E THRU 20024E SUPERSEDING MS20004D THRU 20024D 10 AUGUST 1981 AMSC- N/A FSC 5306
DISTRIBUTION STATEMENT A Approved for public release distribution is unlimited		Page 1 of 4

THIS SPECIFICATION IS APPROVED FOR USE BY ALL DEPARTMENTS AND AGENCIES OF THE DEPARTMENT OF DEFENSE

Form approved
OMB No 0704-0188

THE REQUIREMENTS FOR ACQUIRING THE PRODUCT(S) DESCRIBED HEREIN SHALL CONSIST OF THIS SPECIFICATION SHEET AND THE ISSUE OF THE FOLLOWING SPECIFICATION LISTED IN THAT ISSUE OF THE DODISS SPECIFIED IN THE SOLICITATION MIL-B-7838

(E)

TABLE I BOLT DIMENSIONS AND TENSILE STRENGTH

BASIC MS PART NO	(a) THREAD T	(a) A DIA		(a) B DIA		(a) C DIA	D	E	F MIN	(a) H HEX		J	K	M +.005 -.000 DIA	N MAX RAD
		MAX	MIN	MAX	MIN					MAX	MIN				
MS20004	1/4-28 UNJF-3A	.2492	.2477	.438	.428	.342	.250	.112	.068	.1900	.1880	.078		.037	.010
MS20005	5/16-24 UNJF-3A	.3117	.3102	.531	.521	.394	.312	.144	.094	.2210	.2190	.094			
MS20006	3/8-24 UNJF-3A	.3742	.3727	.649	.639	.520	.375	.183	.116	.3150	.3130	.125			.011
MS20007	7/16-20 UNJF-3A	.4367	.4347	.750	.740	.534	.438	.208	.141			.156			
MS20008	1/2-20 UNJF-3A	.4991	.4971	.828	.818	.625	.500	.247	.169	.3785	.3755	.172			
MS20009	9/16-18 UNJF-3A	.5616	.5596	.938	.928	.723	.562	.279	.190	.4410	.4380	.203			.019
MS20010	5/8-18 UNJF-3A	.6240	.6220	1.050	1.040	.826	.625	.317	.216	.5035	.5005	.234			
MS20012	3/4-16 UNJF-3A	.7488	.7468	1.230	1.220	.921	.750	.385	.273	.5660	.5630	.281			
MS20014	7/8-14 UNJF-3A	.8737	.8707	1.438	1.428	1.083	.875	.450	.327	.6295	.6257	.344			
MS20016 *	1 -14 NS -3A											.391			
MS20017	1 -12 UNJF-3A	.9985	.9955	1.625	1.615	1.249	1.000	.527	.381	.7547	.7507	.453			.022
MS20018	1-1/8-12 UNJF-3A	1.124	1.121	1.875	1.865	1.275	1.125	.589	.443						
MS20020	1-1/4-12 UNJF-3A	1.249	1.246	2.125	2.115	1.598	1.250	.667	.475	1.005	1.001	.500	.125		
MS20022	1-3/8-12 UNJF-3A	1.374	1.370	2.313	2.303	1.768	1.375	.746	.531	1.131	1.126	.547			
MS20024	1-1/2-12 UNJF-3A	1.499	1.495	2.500	2.490	1.931	1.500	.823	.586	1.256	1.251	.594	.156		
MS20012A	3/4-16 UNJF-3A	.7488	.7468	1.230	1.220	.921	.750	.385	.273	.5660	.5630	.281	.094		

(E) SEE NOTE (f)

TABLE I (CONTINUED)

BASIC MS PART NO	P RAD		P RAD		(b) S MIN REF	U ±.016	(c) V MAX	(c) W MAX	(b) (c) CENTER DRILL SIZE REF	TENSILE STRENGTH LB MIN	(a) CONCENTRICITY		
	MAX	MIN	MAX	MIN							X	Y	Z
MS20004			.041	.031	.475	.031				6,190	.005	.007	
MS20005					.537					9,820	.006	.008	0045
MS20006					.662					15,200	.008	.010	
MS20007	020	010			.787	.047				20,400	.009	.011	
MS20008			.057	.047						27,400	.010	.012	
MS20009					.850					34,800	.011	.014	.006
MS20010					.912	.062				43,600	.012	.016	
MS20012					1.037		187	200	2	63,200	.015	.018	
MS20014					1.162					86,100	.018	.022	
MS20016 *			.073	.063	1.287	.078				112,000	.020	.025	.009
MS20017					1.475		250	260	3	114,000	.022	.026	
MS20018	030	015			1.600					144,000	.025	.032	
MS20020			.089	.077	1.725	.094	.312	320	4	180,000	.028	.035	
MS20022					1.850					219,000	.030	.039	.012
MS20024					2.030	.062	187	200	2	263,000	.035	.040	.006
MS20012A			.073	.063	1.287	.078				112,000	.020	.025	.009

(E) SEE NOTE (f)

* SEE NOTE (a)

THIS SPECIFICATION IS APPROVED FOR USE
BY ALL DEPARTMENTS AND AGENCIES OF THE
DEPARTMENT OF DEFENSE

PREPARING ACTIVITY NAVY - AS
CUSTODIANS ARMY - AP NAVY -
AIR FORCE - 99 DLA -
REVIEW ARMY - EP, ME, MI DLA - IS AF - HC
USER ARMY - AV
PROJECT NUMBER 5306-1233

MILITARY SPECIFICATION SHEET
TITLE BOLTS, INTERNAL WRENCHING, 160 KSI FTU
AND 96 KSI FSL

SPECIFICATION SHEET NUMBER 30 MAY 1989
MS20004E THRU 20024E
SUPERSEDING
MS20004D THRU 20024D 10 AUGUST 1981
AMSC - N/A FSC 5306

DISTRIBUTION STATEMENT A Approved for public release, distribution is unlimited

Page 2 of 4

DD FORM 672 MAY 1988

PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE

14 2004

TABLE 11. DASH NOS., GRIP LENGTHS AND BOLT LENGTH.

DASH NO		GRIP		LENGTH = 015													
: 010		MS20004	MS20005	MS20006	MS20007	MS20008	MS20009	MS20010	MS20012	MS20014	MS20016	MS20017	MS20018	MS20020	MS20022	MS20024	
		1/4	5/16	3/8	7/16	1/2	9/16	5/8	3/4	7/8	1	1	1-1/8	1-1/4	1-3/8	1-1/2	
4	.250	.750															
6	.375	.875	938	1 062													
8	500	1.000	1 062	1 188	1 312	1 312											
10	.625	1.125	1 188	1.312	1 438	1 438	1.500	1.562	1.625	1.688	1 812						
12	.750	1.250	1.312	1 438	1.562	1 562	1 625	1.688	1 812	1 938	2 062						
14	.875	1.375	1.438	1 562	1 688	1 688	1 750	1 812	1 938	2 062	2 188	2 312	2 438	2 562			
16	1.000	1.500	1.562	1 688	1 812	1 812	1.875	1 938	2 062	2 188	2 312	2 438	2 562	2 688	2 812		
18	1.125	1.625	1.688	1 812	1 938	1 938	2 000	2 062	2 188	2 312	2 438	2 562	2 688	2 812	2 938		
20	1.250	1.750	1 812	1 938	2 062	2 062	2 125	2 188	2 312	2 438	2 562	2 688	2 812	2 938	3 062		
22	.375	1 875	1 938	2 062	2 188	2 188	2 250	2 312	2 438	2 562	2 688	2 812	2 938	3 062	3 188		
24	1.500	2.000	2.062	2 188	2.312	2 312	2 375	2 438	2.562	2.688	2.812	2.938	3.062	3.188	3.312	3.438	
26	1.625	2.125	2.188	2.312	2.438	2 438	2.500	2.562	2.688	2.812	2.938	3.062	3.188	3.312	3.438	3.562	
28	1.750	2.250	2.312	2 438	2.562	2 562	2.625	2.688	2.812	2.938	3.062	3.188	3.312	3.438	3.562	3.688	
30	1.875	2.375	2.438	2 562	2.688	2 688	2.750	2.812	2.938	3.062	3.188	3.312	3.438	3.562	3.688	3.812	
32	2.000	2.500	2.562	2.688	2.812	2 812	2.875	2.938	3.062	3.188	3.312	3.438	3.562	3.688	3.812	3.938	
34	2.125	2.625	2.688	2.812	2.938	2 938	3.000	3.062	3.188	3.312	3.438	3.562	3.688	3.812	3.938	4.062	
36	2.250	2.750	2.812	2.938	3.062	3 062	3.125	3.188	3.312	3.438	3.562	3.688	3.812	3.938	4.062	4.188	
38	2.375	2.875	2.938	3.062	3.188	3 188	3.250	3.312	3.438	3.562	3.688	3.812	3.938	4.062	4.188	4.312	
40	2.500	3.000	3.062	3.188	3.312	3.312	3.375	3.438	3.562	3.688	3.812	3.938	4.062	4.188	4.312	4.438	
42	2.625	3.125	3.188	3.312	3.438	3 438	3.500	3.562	3.688	3.812	3.938	4.062	4.188	4.312	4.438	4.562	
44	2.750	3.250	3.312	3.438	3.562	3 562	3.625	3.688	3.812	3.938	4.062	4.188	4.312	4.438	4.562	4.688	
46	2.875	3.375	3.438	3.562	3.688	3 688	3.750	3.812	3.938	4.062	4.188	4.312	4.438	4.562	4.688	4.812	
48	3.000	3.500	3.562	3.688	3.812	3.812	3.875	3.938	4.062	4.188	4.312	4.438	4.562	4.688	4.812	4.938	
50	3.125	3.625	3.688	3.812	3.938	3 938	4.000	4.062	4.188	4.312	4.438	4.562	4.688	4.812	4.938	5.062	
52	3.250	3.750	3.812	3.938	4.062	4 062	4.125	4.188	4.312	4.438	4.562	4.688	4.812	4.938	5.062	5.188	
54	3.375	3.875	3.938	4.062	4.188	4 188	4.250	4.312	4.438	4.562	4.688	4.812	4.938	5.062	5.188	5.312	
56	3.500	4.000	4.062	4.188	4.312	4 312	4.375	4.438	4.562	4.688	4.812	4.938	5.062	5.188	5.312	5.438	
58	3.625	4.125	4.188	4.312	4.438	4 438	4.500	4.562	4.688	4.812	4.938	5.062	5.188	5.312	5.438	5.562	
60	3.750	4.250	4.312	4.438	4.562	4 562	4.625	4.688	4.812	4.938	5.062	5.188	5.312	5.438	5.562	5.688	
62	3.875	4.375	4.438	4.562	4.688	4 688	4.750	4.812	4.938	5.062	5.188	5.312	5.438	5.562	5.688	5.812	
64	4.000	4.500	4.562	4.688	4.812	4 812	4.875	4.938	5.062	5.188	5.312	5.438	5.562	5.688	5.812	5.938	
66	4.125	4.625	4.688	4.812	4.938	4 938	5.000	5.062	5.188	5.312	5.438	5.562	5.688	5.812	5.938	6.062	
68	4.250	4.750	4.812	4.938	5.062	5 062	5.125	5.188	5.312	5.438	5.562	5.688	5.812	5.938	6.062	6.188	
70	4.375	4.875	4.938	5.062	5.188	5 188	5.250	5.312	5.438	5.562	5.688	5.812	5.938	6.062	6.188	6.312	
72	4.500	5.000	5.062	5.188	5.312	5 312	5.375	5.438	5.562	5.688	5.812	5.938	6.062	6.188	6.312	6.438	
74	4.625	5.125	5.188	5.312	5.438	5 438	5.500	5.562	5.688	5.812	5.938	6.062	6.188	6.312	6.438	6.562	
76	4.750	5.250	5.312	5.438	5.562	5 562	5.625	5.688	5.812	5.938	6.062	6.188	6.312	6.438	6.562	6.688	
78	4.875	5.375	5.438	5.562	5.688	5 688	5.750	5.812	5.938	6.062	6.188	6.312	6.438	6.562	6.688	6.812	
80	5.000	5.500	5.562	5.688	5.812	5 812	5.875	5.938	6.062	6.188	6.312	6.438	6.562	6.688	6.812	6.938	
82	5.125	5.625	5.688	5.812	5.938	5 938	6.000	6.062	6.188	6.312	6.438	6.562	6.688	6.812	6.938	7.062	
84	5.250	5.750	5.812	5.938	6.062	6 062	6.125	6.188	6.312	6.438	6.562	6.688	6.812	6.938	7.062	7.188	
86	5.375	5.875	5.938	6.062	6.188	6 188	6.250	6.312	6.438	6.562	6.688	6.812	6.938	7.062	7.188	7.312	
88	5.500	6.000	6.062	6.188	6.312	6 312	6.375	6.438	6.562	6.688	6.812	6.938	7.062	7.188	7.312	7.438	
90	5.625	6.125	6.188	6.312	6.438	6 438	6.500	6.562	6.688	6.812	6.938	7.062	7.188	7.312	7.438	7.562	
92	5.750	6.250	6.312	6.438	6.562	6 562	6.625	6.688	6.812	6.938	7.062	7.188	7.312	7.438	7.562	7.688	
94	5.875	6.375	6.438	6.562	6.688	6 688	6.750	6.812	6.938	7.062	7.188	7.312	7.438	7.562	7.688	7.812	
96	6.000	6.500	6.562	6.688	6.812	6 812	6.875	6.938	7.062	7.188	7.312	7.438	7.562	7.688	7.812	7.938	
98	6.125						7.000	7.062	7.188	7.312	7.438	7.562	7.688	7.812	7.938	8.062	
100	6.250						7.125	7.188	7.312	7.438	7.562	7.688	7.812	7.938	8.062	8.188	
102	6.375						7.250	7.312	7.438	7.562	7.688	7.812	7.938	8.062	8.188	8.312	
104	6.500						7.375	7.438	7.562	7.688	7.812	7.938	8.062	8.188	8.312	8.438	
106	6.625						7.500	7.562	7.688	7.812	7.938	8.062	8.188	8.312	8.438	8.562	
108	6.750						7.625	7.688	7.812	7.938	8.062	8.188	8.312	8.438	8.562	8.688	
110	6.875						7.750	7.812	7.938	8.062	8.188	8.312	8.438	8.562	8.688	8.812	
112	7.000						7.875	7.938	8.062	8.188	8.312	8.438	8.562	8.688	8.812	8.938	
114	7.125																
116	7.250																
118	7.375																
120	7.500																
122	7.625																
124	7.750																
126	7.875																
128	8.000																

(E) • APPLIES TO MS20012A ONLY.

PREPARING ACTIVITY NAVY - AS

CUSTODIANS ARMY AP

NAVY-

AIR FORCE-99

DLA-

REVIEW ARMY - EP, ME, MI DLA - IS AF-8?

REVIEW AMY - ST
USER APMY - AV

PROJECT NUMBER 5306-123E

MILITARY SPECIFICATION SHEET

TITLE BOLTS, INTERNAL WRENCHING, 160 KSI FTU
AND 90 KSI FSL

SPECIFICATION SHEET NUMBER 30 MAY 1989

MS20004E THRU 20024E

SUPERSEDING

MS20004D THRU 20024D 10 AUGUST 1981

AMSC- N/A

FSC 5306

DISTRIBUTION STATEMENT A Approved for public release distribution is unlimited

Page 1 of 4

DD FORM 672 MAY 1988

PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE

THE REQUIREMENTS FOR ACQUIRING THE PRODUCT(S) DESCRIBED HEREIN SHALL CONSIST OF THIS SPECIFICATION SHEET AND THE ISSUE OF THE FOLLOWING SPECIFICATION LISTED IN THAT ISSUE OF THE DODDS SPECIFIED IN THE SOLICITATION MIL-B-7338

THIS SPECIFICATION IS APPROVED FOR USE
BY ALL DEPARTMENTS AND AGENCIES OF THE
DEPARTMENT OF DEFENSE

1500000 4500000 6000000 7500000 9000000 10500000 12000000 13500000 15000000 16500000 18000000 19500000 21000000 22500000 24000000 25500000 27000000 28500000 30000000 31500000 33000000 34500000 36000000 37500000 39000000 40500000 42000000 43500000 45000000 46500000 48000000 49500000 51000000 52500000 54000000 55500000 57000000 58500000 60000000 61500000 63000000 64500000 66000000 67500000 69000000 70500000 72000000 73500000 75000000 76500000 78000000 79500000 81000000 82500000 84000000 85500000 87000000 88500000 90000000 91500000 93000000 94500000 96000000 97500000 99000000 100500000 102000000 103500000 105000000 106500000 108000000 109500000 111000000 112500000 114000000 115500000 117000000 118500000 120000000 121500000 123000000 124500000 126000000 127500000 129000000 130500000 132000000 133500000 135000000 136500000 138000000 139500000 141000000 142500000 144000000 145500000 147000000 148500000 150000000 151500000 153000000 154500000 156000000 157500000 159000000 160500000 162000000 163500000 165000000 166500000 168000000 169500000 171000000 172500000 174000000 175500000 177000000 178500000 180000000 181500000 183000000 184500000 186000000 187500000 189000000 190500000 192000000 193500000 195000000 196500000 198000000 199500000 201000000 202500000 204000000 205500000 207000000 208500000 210000000 211500000 213000000 214500000 216000000 217500000 219000000 220500000 222000000 223500000 225000000 226500000 228000000 229500000 231000000 232500000 234000000 235500000 237000000 238500000 240000000 241500000 243000000 244500000 246000000 247500000 249000000 250500000 252000000 253500000 255000000 256500000 258000000 259500000 261000000 262500000 264000000 265500000 267000000 268500000 270000000 271500000 273000000 274500000 276000000 277500000 279000000 280500000 282000000 283500000 285000000 286500000 288000000 289500000 291000000 292500000 294000000 295500000 297000000 298500000 300000000 301500000 303000000 304500000 306000000 307500000 309000000 310500000 312000000 313500000 315000000 316500000 318000000 319500000 321000000 322500000 324000000 325500000 327000000 328500000 330000000 331500000 333000000 334500000 336000000 337500000 339000000 340500000 342000000 343500000 345000000 346500000 348000000 349500000 351000000 352500000 354000000 355500000 357000000 358500000 360000000 361500000 363000000 364500000 366000000 367500000 369000000 370500000 372000000 373500000 375000000 376500000 378000000 379500000 381000000 382500000 384000000 385500000 387000000 388500000 390000000 391500000 393000000 394500000 396000000 397500000 399000000 400500000 402000000 403500000 405000000 406500000 408000000 409500000 411000000 412500000 414000000 415500000 417000000 418500000 420000000 421500000 423000000 424500000 426000000 427500000 429000000 430500000 432000000 433500000 435000000 436500000 438000000 439500000 441000000 442500000 444000000 445500000 447000000 448500000 450000000 451500000 453000000 454500000 456000000 457500000 459000000 460500000 462000000 463500000 465000000 466500000 468000000 469500000 471000000 472500000 474000000 475500000 477000000 478500000 480000000 481500000 483000000 484500000 486000000 487500000 489000000 490500000 492000000 493500000 495000000 496500000 498000000 499500000 501000000 502500000 504000000 505500000 507000000 508500000 510000000 511500000 513000000 514500000 516000000 517500000 519000000 520500000 522000000 523500000 525000000 526500000 528000000 529500000 531000000 532500000 534000000 535500000 537000000 538500000 540000000 541500000 543000000 544500000 546000000 547500000 549000000 550500000 552000000 553500000 555000000 556500000 558000000 559500000 561000000 562500000 564000000 565500000 567000000 568500000 570000000 571500000 573000000 574500000 576000000 577500000 579000000 580500000 582000000 583500000 585000000 586500000 588000000 589500000 591000000 592500000 594000000 595500000 597000000 598500000 600000000 601500000 603000000 604500000 606000000 607500000 609000000 610500000 612000000 613500000 615000000 616500000 618000000 619500000 621000000 622500000 624000000 625500000 6270

THE REQUIREMENTS FOR ACQUIRING THE PRODUCT(S) DESCRIBED HEREIN SHALL CONSIST OF THIS SPECIFICATION SHEET AND THE ISSUE OF THE FOLLOWING SPECIFICATION LISTED IN THAT ISSUE OF THE DODIGS SPECIFIED IN THE SOLICITATION MIL-B-7838

THIS SPECIFICATION IS APPROVED FOR USE BY ALL DEPARTMENTS AND AGENCIES OF THE DEPARTMENT OF DEFENSE

Form approved
OMB No 0704-0188

UNASSIGNED DASH NUMBERS SHALL NOT BE USED, EXCEPT THOSE DASH NUMBERS COVERED BY THE FOLLOWING CODING NOTE

DASH NUMBERS INDICATE PREFERRED GRIP LENGTHS IN .125 INCREMENTS. 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 BOLTS WITH THE PRECEDING EVEN DASH NUMBER. ONLY BOLT DIAMETER FOR WHICH THERE ARE QUALIFIED PRODUCTS LISTED ON QPL-7838 SHALL BE USED FOR DESIGN.

FOR EACH BOLT DIAMETER GRIP LENGTHS GREATER OR LESS THAN THOSE DESIGNATED BY ASSIGNED DASH NUMBERS ON TABLE II ARE INACTIVE FOR DESIGN.

ADD "H" BEFORE DASH NUMBER FOR BOLT WITH DRILLED HEAD

EXAMPLES OF PART NUMBERS MS20017-18 = 1-12 BOLT, 2.438 INCH LONG, 1.125 INCH GRIP, UNDRILLED HEAD
MS20017H18 = 1-12 BOLT, 2.438 INCH LONG, 1.125 INCH GRIP, DRILLED HEAD.

PREPARING ACTIVITY NAVY - AS
CUSTODIANS ARMY - AR NAVY -
AIR FORCE - 99 DLA -
REVIEW ARMY - ER, ME, MI DLA - JS AF - 62
USER ARMY - AV
PROJECT NUMBER 5306-1234

MILITARY SPECIFICATION SHEET
TITLE BOLT - INTERNAL WRENCHING, 160 KS; FTU
AND 96 KS; FSL

SPECIFICATION SHEET NUMBER 30 MAY 1989

MS20004E THRU 20024E

SUPERSEDING
MS20004D THRU 20024D 10 AUGUST 1981

AWSC- N/A FSC 5306

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Page 1 of 1

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PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE

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