

THE REQUIREMENTS FOR LOCATING THE PRODUCT(S) DESCRIBED HEREIN SHALL CONSIST OF THIS SPECIFICATION SHEET AND THE ISSUE OF THE FOLLOWING SPECIFICATION LISTED IN THAT ISSUE OF THE DDGCS SPECIFIED IN THE SOLUTION: MIL-8-87114, WL-F-18240

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

														Form Approved OME No. 0704-0185	
DASH NO D/A	THREAD	dD MAX MIN	dA MAX MIN	dB MAX MIN	H MAX MIN	M MAX REF	R MAX MIN	T MAX	Y	d	e	b	2/ ULTIMATE TENSILE LBS/MIN	DOUBLE SHEAR LBS/MIN	DRIVER SIZE
04	.1120-40UNC-3A	.1120 .1095	.219 .205	.195	.080 .070	.250	.010 .015	.090					760	1,480	1
06	.1360-37UNC-3A	.1360 .1355	.270 .256	.242	.097 .087	.312		.111	.005				1,120	2,240	2
08	.1640-32UNC-3A	.1635 .1610	.322 .308	.289	.115 .105	.437		.127		.0045	.016	.0040	1,740	3,170	2
3	.1900-32UNF-3A	.1895 .1870	.373 .357	.331	.133 .122	.406	.020 .010	.145	.006				2,420	4,250	2
4	.2500-28UNF-3A	.2495 .2470	.492 .473	.424	.175 .162	.469		.192	.008			.0030	4,420	7,360	3
5	.3125-24UNF-3A	.3120 .3095	.615 .594	.518	.218 .203	.531		.287	.009				7,100	11,500	4
6	.3750-24UNF-3A	.3745 .3720	.740 .718	.611	.281 .244	.641	.025	.266	.010	.0060	.024	.0025	10,790	16,560	4
7	.4375-20UNF-3A	.4370 .4345	.863 .836	.706	.304 .286	.656						.0020	14,600	22,500	4
8	.5000-20UNF-3A	.4995 .4970	.987 .956	.801	.348 .327	.781	.030 .020						19,810	29,400	4

1/ CHAMFER LENGTH FROM END TO FIRST COMPLETE THREAD NOT TO EXCEED 2 THREAD PITCHES INCLUDING CHAMFER.  
2/ BASED ON 125 KSI ULTIMATE TENSILE STRENGTH AND STRESS AREA =  $3.1416 (t/2 - 3H/16)^2$  SEE FED-STD-H28/1.

(C) DENOTES CHANGE(S)

INCH-POUND

PREPARING ACTIVITY, DLA-OS CUSTODIANS: ARMY-AV NAVY-AS AIR FORCE-99 DLA- REVIEW: USER: PROJECT NUMBER 5304-1618 DISTRIBUTION STATEMENT	MILITARY SPECIFICATION SHEET TITLE BOLT, SELF-LOCKING 75 KSI Tens, 125 KSI FL PAN HEAD, CROSS RECESSED	SPECIFICATION SHEET NUMBER MS21096 9 DEC 94 REV C SUPERSEDING MS21096 0 14 OCT 94 AMSC-H/A FSC-5308
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Approved for public release; distribution is unlimited.

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

[illegible]DD Form 672, MAY 88

PREVIOUS EDITIONS 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 DODSS SPECIFIED IN THE SOLICITATION: MIL-B-87114, MIL-F-18240

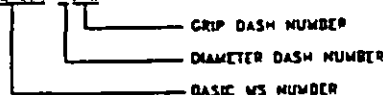
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Form Approved  
OMB No. 0704-0188

**(C) REQUIREMENTS:**

1. **MATERIAL:** ALLOY STEEL 4340 (UNS G43400) IN ACCORDANCE WITH MIL-S-5000 OR 8740 (UNS G87400) IN ACCORDANCE WITH AMS 6322.
2. **THREADS:** THREADS SHALL BE CLASS 3A IN ACCORDANCE WITH FED-STD-H28/2. ACCEPTABILITY OF SCREW THREADS SHALL BE IN ACCORDANCE WITH FED-STD-H28/2D, SYSTEM 22.
3. **DIMENSIONING AND TOLERANCING:** DIMENSIONING AND TOLERANCING SHALL BE IN ACCORDANCE WITH ANSI Y14.5M.
4. **PROTECTIVE COATING:** CADMIUM PLATED IN ACCORDANCE WITH QQ-P-416, TYPE II, CLASS 3.
5. **LOCKING ELEMENT:** IN ACCORDANCE WITH SPECIFICATION MIL-F-18240. THE LOCKING ELEMENT AREA, WITH LOCKING ELEMENT INCORPORATED MUST PASS THRU A RING GAGE EQUAL TO MAXIMUM MAJOR THREAD DIAMETER +.003" FREE OR WITH FINGER PRESSURE.
6. **SURFACE TEXTURE:** SURFACE TEXTURE, UNLESS OTHERWISE SPECIFIED, SHALL BE 125 MICROINCHES EXCEPT UPSET HEAD IN ACCORDANCE WITH ANSI/ASME B46.1.
7. **TOLERANCE:** UNLESS OTHERWISE SPECIFIED, TOLERANCES SHALL BE FOR LINEAR DIMENSIONS  $\pm .010$ , ANGULAR DIMENSIONS  $\pm 5^\circ$ .
8. **HARDNESS:** PARTS SHALL BE WITHIN ROCKWELL HARDNESS RANGE OF C-26 TO C-32.
9. **PART NUMBER:** THE PART NUMBER SHALL CONSIST OF THE BASIC MS NUMBER FROM TABLE.

EXAMPLE: MS21096-4008



MS21096-4008 INDICATES - BOLT, SELF-LOCKING, .250-28 UNF-3A, GRIP .500.

**NOTES:**

1. ALL DIMENSIONS ARE IN INCHES.
2. DESIGN AND USAGE LIMITATIONS: SEE MS15981.
3. REVISION LETTERS ARE NOT USED TO DENOTE CHANGES DUE TO THE EXTENSIVENESS OF THE CHANGES.
4. IN THE EVENT OF A CONFLICT BETWEEN THE TEXT OF THIS DOCUMENT AND THE REFERENCES CITED HEREIN, THE TEXT OF THIS DOCUMENT SHALL TAKE PRECEDENCE.
5. UNLESS OTHERWISE SPECIFIED, ISSUE OF REFERENCED DOCUMENTS ARE THOSE IN EFFECT AT THE TIME OF SOLICITATION.
6. AS AND AMS ARE SAE PUBLICATIONS.
7. GRIP LENGTH IS MEASURED FROM THE UNDERSIDE OF HEAD TO END OF FULL CYLINDRICAL PORTION OF SHANK.
8. UNASSIGNED DASH NUMBERS SHALL NOT BE USED EXCEPT THOSE DASH NUMBERS INCLUDED BY THE FOLLOWING CODING NOTE:  
DASH NUMBERS INDICATE PREFERRED GRIP LENGTHS IN .125 INCREMENTS FOR LENGTHS LONGER THAN .250 INCHES.  
INTERMEDIATE GRIP LENGTHS BETWEEN THESE 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.
9. **PROCUREMENT SPECIFICATION:** MIL-B-87114 EXCEPT AS NOTED TENSILE LOADS AS TABULATED HEREIN. FATIGUE STRENGTH AND COLD WORKING OF HEAD TO SHANK FILLET ARE NOT APPLICABLE. RECESS TORQUE VALUES ARE NOT APPLICABLE FOR SCREWS WITH MS8008 RECESSES.

PREPARING ACTIVITY: DLA-15	<b>MILITARY SPECIFICATION SHEET</b>	SPECIFICATION SHEET NUMBER
CUSTODIANS: ARMY-AV      NAVY-AS AIR FORCE-99      DLA-		MS21096      5 DEC 94 REV C
REVIEWER:	TITLE	SUPERSEDED MS21096 B      14 OCT 94
USER:	BOLT, SELF-LOCKING 75 KSI F <sub>u</sub> , 125 KSI F <sub>y</sub> PAN HEAD, CROSS RECESSED	AMSC-N/A      FSC-5110
PROJECT NUMBER: 3308-1818	DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.	Page 3 of 3
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