

USER SYMBOL

REVIEWER SYMBOLS

"Review/user information is to be placed on the date of this document. For future coordination of changes to this document, draft circulation should be based on the information in the current DOD 135."

This military standard is mandatory for use by all Departments & 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 5310							
<p>Labels in drawing: A, J, T, H, V, ID(a), B(a), 85° MIN., RADIUS, CHAMFER OR SQUARE, MARK MS21085 AND MFG IDENTIFICATION POSITION OPTIONAL, TOOL MARKS AND DISTORTION PERMISSIBLE IN LOCKING AREA, WRENCHING ELEMENT SEE TABULATION, SHAPE OF LOCKING PORTION OPTIONAL, COUNTERSINK, COUNTERBORE OR RADIUS, RELIEF TO THREAD WITHIN THE 85° MIN. ANGLE AND ID LIMITATION, RADIUS OR CHAMFER, OPTIONAL PROFILE.</p>							
<p>NOTES:</p> <ol style="list-style-type: none"> 1. MATERIAL: ALLOY STEEL, AMS 6304, AMS6485 AND AMS6487. 2. HARDNESS: ROCKWELL C48 MAX 3. SURFACE TEXTURE: BEARING SURFACE 125/IN ACCORDANCE WITH ANSI (ASA) B46.1-1962. 4. PLATING: CADMIUM PLATE IN ACCORDANCE WITH QQ-P-416, TYPE II, CLASS 2, DRY FILM LUBRICATED NUTS IN ACCORDANCE WITH QQ-P-416, TYPE AND CLASS OPTIONAL, IF THE NUTS MEET THE SALT SPRAY REQUIREMENTS OF QQ-P-416, TYPE II. 5. LUBRICANT: LUBRICANT APPROVED IN ACCORDANCE WITH PROCUREMENT SPECIFICATION. LUBRICANTS, EXCEPT DRY FILM LUBRICANTS, SHALL BE SOLUBLE IN THE CLEANER SPECIFIED IN THE PROCUREMENT SPECIFICATION. -FOR USAF APPLICATIONS, NUTS TREATED WITH DRY-FILM LUBRICANTS SHALL NOT BE UTILIZED IN INTEGRAL FUEL TANKS- 6. THREADS: MIL-S-8879 BEFORE LUBRICATION. 7. WRENCHING ELEMENT: PER MS33787, DRIVERS PER MIL-W-8982. 8. PERPENDICULARITY: BEARING SURFACE SHALL BE NORMAL WITH PITCH DIAMETER OF THREAD WITHIN X WHEN CHECKED IN ACCORDANCE WITH PROCUREMENT SPECIFICATION. 9. DIMENSIONS IN INCHES: DIMENSIONS APPLY BEFORE LUBRICATION 10. DESIGN USAGE INFORMATION: THESE NUTS ARE DESIGNED TO BE USED WITH MS21296 BOLTS AND MS21299 WASHERS. 							
<p>EXAMPLE OF PART NUMBERS:</p> <p>MS21085-04 = .2500-28 NUT, CADMIUM PLATED, SOLUBLE LUBRICANT. MS21085L04 = .2500-28 NUT, CADMIUM PLATED, DRY FILM LUBRICATED.</p>							
<p>FOR DESIGN FEATURE PURPOSES, THIS STANDARD TAKES PRECEDENCE OVER PROCUREMENT DOCUMENTS REFERENCED HEREIN. REFERENCE DOCUMENTS SHALL BE OF THE ISSUE IN EFFECT ON DATE OF INVITATION FOR BID.</p> <p style="text-align: center;">(A) DENOTES CHANGES</p>							
<p>P.A. NAVY - AS</p> <p>Other Cust USAF - 11 ARMY - AV</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%; padding: 5px;"> <p>TITLE</p> <p>NUT, SELF-LOCKING, STEEL, 260 KSI Ft_u, 450°F., FLANGED, MS33787 WRENCHING ELEMENT</p> </td> <td style="width: 70%; padding: 5px;"> <p style="text-align: center;">MILITARY STANDARD</p> <p style="text-align: center; font-size: 1.5em;">MS21085</p> </td> </tr> <tr> <td style="padding: 5px;"> <p>PROCUREMENT SPECIFICATION MIL-N-8984</p> </td> <td style="padding: 5px;"> <p>SUPERSEDES:</p> </td> </tr> <tr> <td colspan="2" style="padding: 5px;"> <p>SHEET 1 OF 2</p> </td> </tr> </table>	<p>TITLE</p> <p>NUT, SELF-LOCKING, STEEL, 260 KSI Ft_u, 450°F., FLANGED, MS33787 WRENCHING ELEMENT</p>	<p style="text-align: center;">MILITARY STANDARD</p> <p style="text-align: center; font-size: 1.5em;">MS21085</p>	<p>PROCUREMENT SPECIFICATION MIL-N-8984</p>	<p>SUPERSEDES:</p>	<p>SHEET 1 OF 2</p>	
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<p>SHEET 1 OF 2</p>							

DD FORM 672-1 (Coordinated)

PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE.

PROJECT NO. 5310-0997

PLATE NO. 15227

APPROVED 28 JAN 1972 REVISED (A) 15 MARCH 1978

FED. SUP CLASS
5310

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DASH NUMBER		NOMINAL SIZE	"T" THREAD	MS33787 ELEMENT NUMBER	A MAX	B _(a) MIN	ID _(a)	
NON-DRY LUB	DRY LUB						MAX	MIN
03	L03	NO. 10	.1900-32UNJF-3B	8	.377	.337	.220	.190
04	L04	1/4	.2500-28UNJF-3B	10	.481	.441	.280	.250
05	L05	5/16	.3125-24UNJF-3B	12	.588	.548	.342	.312
06	L06	3/8	.3750-24UNJF-3B	16	.701	.661	.405	.375
07	L07	7/16	.4375-20UNJF-3B	18	.821	.771	.473	.438
08	L08	1/2	.5000-20UNJF-3B	20	.933	.883	.535	.500
09	L09	9/16	.5625-18UNJF-3B	24	1.041	.991	.597	.562
10	L10	5/8	.6250-18UNJF-3B	26	1.154	1.104	.660	.625
12	L12	3/4	.7500-16UNJF-3B	30	1.375	1.325	.785	.750
14	L14	7/8	.8750-14UNJF-3B	36	1.592	1.542	.910	.875
16	L16	1	1.0000-12UNJF-3B	40	1.810	1.760	1.035	1.000

DASH NUMBER		H MAX	V MIN	J MIN	X	ULTIMATE AXIAL STRENGTH LB MIN (b)	APPROX WEIGHT LB/100
NON-DRY LUB	DRY LUB						
03	L03	.250	.025	.095	.003	5,640	.30
04	L04	.315	.033	.125	.003	10,100	.59
05	L05	.405	.041	.156	.003	16,000	1.00
06	L06	.490	.049	.188	.003	24,700	1.90
07	L07	.570	.057	.219	.003	33,500	2.70
08	L08	.650	.065	.250	.003	44,600	4.40
09	L09	.730	.073	.281	.004	56,600	6.20
10	L10	.810	.081	.313	.004	70,800	8.70
12	L12	.980	.098	.375	.004	103,000	14.00
14	L14	1.140	.114	.438	.005	140,000	23.00
16	L16	1.300	.130	.500	.006	183,000	33.00

- (a) MINIMUM BEARING AREA BASED ON A BEARING STRESS OF 115 KSI.
 (b) AXIAL STRENGTH DETERMINED FROM FORMULA $W_a = F_t u A$ WHERE A IS THE CROSS SECTIONAL AREA, IN SQUARE INCHES, BASED ON THE MAXIMUM PITCH DIAMETER OF BOLT THREAD, F_t IS 260 KSI AND W_a IS THE AXIAL STRENGTH IN POUNDS.

P.A. NAVY - AS Other Cust USAF - 11 ARMY - AV	TITLE NUT, SELF-LOCKING, STEEL, 280 KSI F_{tu} , 450°F., FLANGED, MS33787 WRENCHING ELEMENT	MILITARY STANDARD MS21085
PROCUREMENT SPECIFICATION MIL-N-8984	SUPERSEDES:	SHEET 2

DD FORM 672-1 (Coordinated)

PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE.

PLATE NO. 15320

APPROVED 28 JAN 1972 REVISED A FOR CHANGES SEE SHEETS 1