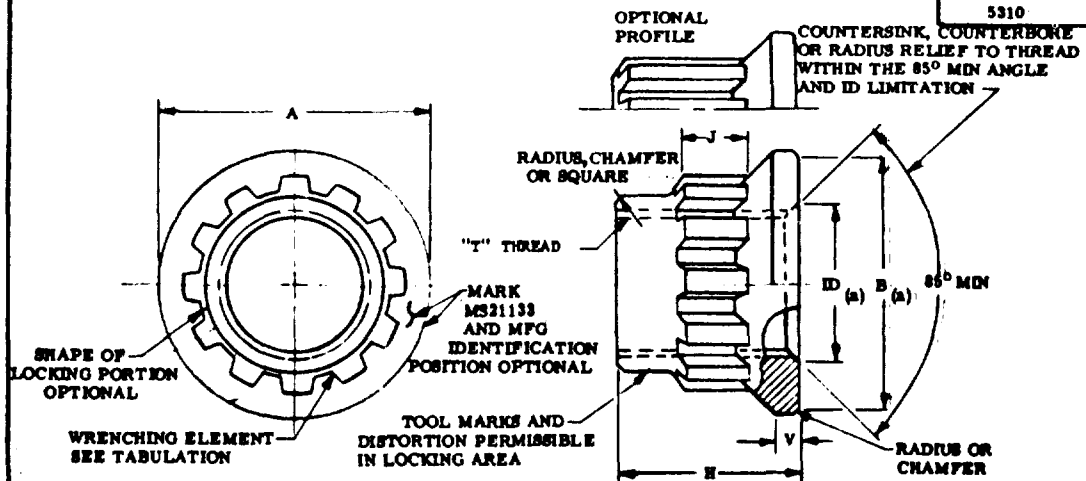


(PROJECT NO. 5310-0624)

FED. SUP CLASS
5310

USER SYMBOLS:

REVIEWER SYMBOLS:



NOMI- NAL SIZE	DASH NUMBER		THREAD	MS33787 ELEMENT NUMBER	A DIA MAX	B DIA MIN (a)	ID (a)		H MAX	V MIN	J MIN	X	ULTIMATE AXIAL STRENGTH LB MIN ^(b)	APPROX WEIGHT LB/100
	NON- DRY LUB	DRY LUB					MAX	MIN						
NO. 10	03	L03	.1900-32UNJF-3B	8	.346	.306	.220	.190	.190	.021	.084	.003	3,910	.21
7/16	04	L04	.2500-28UNJF-3B	10	.439	.399	.280	.250	.250	.028	.110	.003	6,980	.41
5/16	05	L05	.3125-24UNJF-3B	12	.534	.494	.342	.312	.312	.034	.138	.004	11,100	.72
3/8	06	L06	.3750-24UNJF-3B	14	.634	.594	.405	.375	.375	.041	.165	.004	17,100	1.10
7/16	07	L07	.4375-20UNJF-3B	16	.733	.693	.473	.438	.438	.048	.193	.005	23,200	1.60
1/2	08	L08	.5000-20UNJF-3B	20	.833	.793	.535	.500	.500	.055	.220	.005	30,900	2.80
9/16	09	L09	.5625-18UNJF-3B	22	.929	.889	.597	.562	.562	.062	.248	.005	39,200	3.80
5/8	10	L10	.6250-18UNJF-3B	24	1.030	.990	.660	.625	.625	.069	.275	.006	49,000	5.10
3/4	12	L12	.7500-16UNJF-3B	30	1.224	1.184	.785	.750	.750	.083	.330	.007	71,100	9.20
7/8	14	L14	.8750-14UNJF-3B	34	1.419	1.379	.910	.875	.875	.098	.385	.008	97,100	14.00
1	16	L16	1.0000-12UNJF-3B	38	1.620	1.570	1.035	1.000	1.000	.110	.440	.009	126,000	26.00
1 1/8	18	L18	1.1250-12UNJF-3B	44	1.822	1.772	1.160	1.125	1.125	.124	.495	.010	162,000	39.00
1 1/4	20	L20	1.2500-12UNJF-3B	48	2.022	1.972	1.285	1.250	1.250	.138	.550	.011	202,000	40.00
1 3/8	22	L22	1.3750-12UNJF-3B	52	2.221	2.171	1.410	1.375	1.375	.151	.605	.012	247,000	52.00
1 1/2	24	L24	1.5000-12UNJF-3B	56	2.423	2.373	1.535	1.500	1.500	.165	.660	.013	296,000	67.00

(a) MINIMUM BEARING AREA BASED ON A BEARING STRESS OF 115 KSI.

(b) AXIAL STRENGTH DETERMINED FROM FORMULA $W_a = F_{tu}A$ WHERE A IS THE CROSS SECTIONAL AREA, IN SQUARE INCHES, BASED ON THE MAXIMUM PITCH DIAMETER OF BOLT THREAD, F_{tu} IS 180 KSI AND W_a IS THE AXIAL STRENGTH IN POUNDS.

MATERIAL: ALLOY STEEL, AMS-6304, AMS-6485, AND AMS-6487.

HARDNESS: ROCKWELL C48 MAX.

SURFACE TEXTURE: BEARING SURFACE 125/IN ACCORDANCE WITH ANSI (ASA) B46.1-1962.

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 WILL MEET THE SALT SPRAY REQUIREMENTS OF QQ-P-416, TYPE II.

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.

THREADS: MIL-S-8879 BEFORE LUBRICATION.

WRENCHING ELEMENT: PER MS33787, DRIVERS PER MIL-W-8982.

PERPENDICULARITY: BEARING SURFACE SHALL BE NORMAL WITH PITCH DIAMETER OF THREAD WITHIN X WHEN CHECKED IN ACCORDANCE WITH PROCUREMENT SPECIFICATION.

DIMENSIONS IN INCHES: DIMENSIONS APPLY BEFORE LUBRICATION.

DESIGN AND USAGE INFORMATION: THESE NUTS ARE DESIGNED TO BE USED WITH MS21134 BOLTS AND MS21206 WASHERS.

EXAMPLE OF PART NUMBERS:

MS21133-04 .2500-28 NUT, CADMIUM PLATED, SOLUBLE LUBRICANT.

MS21133-1.04 .2500-28 NUT, CADMIUM PLATED, DRY FILM LUBRICATED.

FOR DESIGN FEATURE PURPOSES, THE STANDARD TAKES PRECEDENCE OVER PROCUREMENT DOCUMENTS REFERENCED HEREIN. REFERENCE DOCUMENTS SHALL BE OF THE ISSUE IN EFFECT ON DATE OF INVITATION FOR BID.

NAVY - AS	TITLE	MILITARY STANDARD
Other Code	NUT, SELF-LOCKING, STEEL, 180 KSI F_{tu} , 480°F, FLANGED, MS33787 WRENCHING ELEMENT	MS21133
USAF-11		
ARMY-AV		
PROCUREMENT SPECIFICATION	SUPERSEDES	SHEET 1 OF 1
MIL-N-8085		

DD FORM 672-1 (Coordinated)

PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE.

U.S. GOVERNMENT PRINTING OFFICE: 1973-714-542/3635

"Technical information is current as of the date of this document. For future coordination of changes to this document, draft circulation should be based on the information in the current document."

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 and for reengineering use shall be made from this document.

APPROVED 24 JAN 1972 REVISED

STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL		OMB Approval No. 22-R255
INSTRUCTIONS: The purpose of this form is to solicit beneficial comments which will help achieve procurement of suitable products at reasonable cost and minimum delay, or will otherwise enhance use of the document. DoD contractors, government activities, or manufacturers/vendors who are prospective suppliers of the product are invited to submit comments to the government. Fold on lines on reverse side, staple in corner, and send to preparing activity. Comments submitted on this form do not constitute or imply authorization to waive any portion of the referenced document(s) or to amend contractual requirements. Attach any pertinent data which may be of use in improving this document. If there are additional papers, attach to form and place both in an envelope addressed to preparing activity.		
DOCUMENT IDENTIFIER AND TITLE MS21133 NUT, SELF-LOCKING, STEEL, 180 KSI Ftu, 450°F, FLANGED, MS33787 WRENCHING ELEMENT		
NAME OF ORGANIZATION AND ADDRESS 	CONTRACT NUMBER 	
	MATERIAL PROCURED UNDER A <input type="checkbox"/> DIRECT GOVERNMENT CONTRACT <input type="checkbox"/> SUBCONTRACT	
1. HAS ANY PART OF THE DOCUMENT CREATED PROBLEMS OR REQUIRED INTERPRETATION IN PROCUREMENT USE? A. GIVE PARAGRAPH NUMBER AND WORDING. B. RECOMMENDATIONS FOR CORRECTING THE DEFICIENCIES 		
2. COMMENTS ON ANY DOCUMENT REQUIREMENT CONSIDERED TOO RIGID 		
3. IS THE DOCUMENT RESTRICTIVE? <input type="checkbox"/> YES <input type="checkbox"/> NO (If "Yes", in what way?)		
4. REMARKS 		
SUBMITTED BY (Printed or typed name and address - Optional)		TELEPHONE NO.
		DATE