

USER SYMBOL

REVIEWER SYMBOLS:

\*Review/user information is current as of the date of this document. Per future coordination of changes to this document draft circulation should be based on the information in the current DODISS.

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.

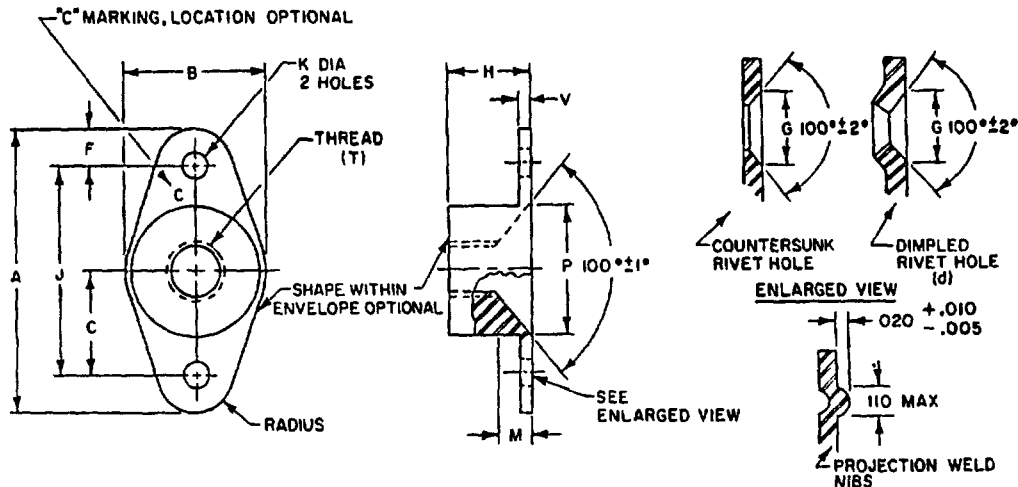
Army - EL, MI, AT, ME

Navy - AS

USAF - 11

DSA - IS

CONFIGURATION OF NUT OPTIONAL WITHIN THE LIMITATIONS IMPOSED BY DIM.'S. AND REQUIREMENTS AS SPECIFIED HEREIN.

FED. SUP CLASS  
5310

(T) THREAD SIZE	A MAX	B MAX MIN	C ± .005	F MIN	G DIA ± .010	(b) H MAX	(c) J ± .002	K DIA + .005 - .000	M REF	P DIA ± .005	V MAT'L MAX	AXIAL STRENGTH LBS MIN	WEIGHT LBS/ 100 MAX
.1640-32 UNJC-3B	.948	422 360	.344	100	200	272	.688	.098	.084	.365	.047	1,720	.39
.1900-32 UNJF-3B	.948	453 406	.344	100	200	281	.688	.098	.083	.411	.047	2,460	.41
.2500-28 UNJF-3B	1 260	619 535	.500	100	200	340	1.000	.098	.121	.540	.055	4,580	.88
.3125-24 UNJF-3B	1 292	766 681	.500	125	230	427	1.000	.130	.156	.686	.065	7,390	1.17

- (a) THREADS BEFORE LUBRICATION PER MIL-S-8879  
 (b) MINIMUM "H" NOT SPECIFIED, LIMITED ONLY BY STRENGTH REQUIREMENTS  
 (c) CENTER OF THE TAPPED HOLE SHALL NOT DEVIATE IN ANY DIRECTION FROM THE CENTER OF THE PLATE NUT AS DETERMINED BY THE RIVET HOLES BY MORE THAN .005  
 (d) DIMPLED HOLE TOLERANCE FOR "K" IS +.015 - .000 AFTER FORMING

**MATERIAL:** CORROSION RESISTANT STEEL, (A286) AMS 5525, AMS 5735, OR AMS 5737  
**PLATING:** 800° F. NUTS ONLY, SILVER PLATE IN ACCORDANCE WITH AMS 2410. PLATE THICKNESS, MEASURED ON ANY EXTERNAL SURFACE OF THE NUT, SHALL NOT BE LESS THAN 0.0002 IN. THREADS SHALL SHOW COMPLETE COVERAGE BUT THICKNESS REQUIREMENTS ON THREAD IS WAIVED NO SILVER PLATE ON WELD NIBS AND OPTIONAL ON OTHER EXTERNAL SURFACES.

**MAGNETIC PERMEABILITY:** SHALL BE LESS THAN 2.0 (AIR = 1.0) FOR A FIELD STRENGTH H = 200 OERSTEDS USING A MAGNETIC PERMEABILITY INDICATOR PER MIL-I-17214, OR EQUIVALENT.

**HARDNESS:** ROCKWELL C49 MAXIMUM  
**LUBRICANT:** 450° F. NUTS ONLY, DRY FILM LUBRICANT IN ACCORDANCE WITH MIL-N-25027 FOR USAF APPLICATIONS.

(D) NUTS TREATED WITH DRY FILM LUBRICANTS SHALL NOT BE USED IN INTERNAL FUEL SYSTEMS.

**DIMENSIONS:** IN INCHES.  
**SURFACE ROUGHNESS:** IN ACCORDANCE WITH ANSI (USAS) B46 1 UNLESS OTHERWISE SPECIFIED, THE SURFACE ROUGHNESS SHALL NOT EXCEED 125 MICRO INCHES.

**PERFORMANCE:** SEE PROCUREMENT SPECIFICATION, EXCEPT 450° F. DRY FILM LUBRICATED NUTS LIMITED TO FIVE REUSE CYCLES.

**DESIGN AND USAGE LIMITATIONS:** THESE NUTS ARE DESIGNED TO DEVELOP THE TENSILE STRENGTH OF BOLTS AND SCREWS WITH AN ULTIMATE TENSILE STRENGTH OF 125 KSI BASED ON A CROSS SECTIONAL AREA AT THE BASIC ROOT DIAMETER OF THE THREAD. THESE NUTS ARE DESIGNED TO BE USED ON 3A EXTERNAL THREADS. THESE NUTS SHALL BE USED IN ACCORDANCE WITH THE LIMITATIONS OF MS33588 ONLY NUTS FOR WHICH THERE ARE QUALIFIED PRODUCTS LISTED ON QPL25027 SHALL BE USED.

**INTERCHANGEABILITY RELATIONSHIP:** MS21050 NUTS CAN UNIVERSALLY REPLACE NAS681 AND AN361 NUTS OF LIKE MATERIAL, THREAD SIZE, PLATING, LUBRICANTS (SILVER PLATE OR DRY FILM LUBRICANT), RIVET SPACING, AND FASTENING METHOD (PLAIN RIVET HOLES, DIMPLED, COUNTERSUNK RIVET HOLES OR PROJECTION WELDING). BUT NAS 681 AND AN 361 NUTS CANNOT UNIVERSALLY REPLACE MS21050 NUTS.

SEE SHEET 2

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.

(D) DENOTES CHANGES

P A	NAVY - AS	TITLE	MILITARY STANDARD
Other Cust	Army - AV USAF - 11	NUT, SELF-LOCKING, PLATE, TWO LUG, 100° CSK LOW HEIGHT, CRES, 125 KSI F1U, 450° & 800° F	MS21050
PROCUREMENT SPECIFICATION MIL-N-25027	SUPERSEDES	NAS 681 AND AN 361	SHEET 1 OF 2

DD FORM 672-1 (Coordinated)

PREVIOUS EDITIONS OF THIS PRINT ARE OBSOLETE.

PROJECT NO. 5310-0970

PLATE 50, 15320

APPROVED 12 June 64  
 REVISED 4 Nov 66  
 21 Dec 71  
 15 MARCH 1978

PROJECT NO 5310-0582

FED SUP CLASS  
5310

## USER SYMBOLS:

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Navy - AS  
USAF - 11  
DSA - IS

THREAD SIZE	DASH NUMBERS					
	800° F			450° F		
	PLAIN HOLES	CTSK OR DIMPLED HOLES	WELDING PROJEC- TION	PLAIN HOLES	CTSK DIMPLED HOLES	WELDING PROJEC- TION
1640-32 UNJC-3B	-08	-08K	-08W	L08	L08K	L08W
.1900-32 UNJF-3B	-3	-3K	-3W	L3	L3K	L3W
.2500-28 UNJF-3B	-4	-4K	-4W	L4	L4K	L4W
.3125-24 UNJF-3B	-5	-5K	-5W	L5	L5K	L5W

## EXAMPLE OF PART NUMBER

MS21050L4K

NUT DASH NUMBER

BASIC PART NO

.2500-28UNJF-3B NUT, SELF LOCKING,  
TWO LUG, CRES, 125 KSI, 450° F,  
DRY FILM LUBRICATED, WITH  
COUNTERSUNK OR DIMPLED RIVET  
HOLES.

INTERCHANGEABLE TABLE		
INACTIVE FOR DESIGN AND - CANCELLED PARTS		SUBSTITUTIVE PARTS
AN 361	NAS 681	
AN361-C832	NAS-C08	MS 21050-08
↑ ---	↑ -C08K	↑ -08K
-WC832	---	-08W
---	-C08M	-L08
---	-C08MK	-L08K
---	---	-L08W
-C1032	-C3	-3
---	-C3K	-3K
-WC1032	---	-3W
---	-C3M	-L3
---	-C3MK	-L3K
---	---	-L3W
-C428	-C4	-4
---	-C4K	-4K
-WC428	---	-4W
---	-C4M	-L4
---	-C4MK	-L4K
---	---	-L4W
-C524	-C5	-5
---	-C5K	-5K
-WC524	---	-5W
---	-C5M	-L5
---	↓ -C5MK	↓ -L5K
AN361 ---	NAS ---	MS 21050-L5W

P A. NAVY - AS Other Cust Army - AV USAF - 11	TITLE NUT, SELF-LOCKING, PLATE, TWO LUG, 100° CSK, LOW HEIGHT, CRES, 25 KSI Ftu, 450° & 800° F	MILITARY STANDARD
		MS21050
PROCUREMENT SPECIFICATION MIL-N-25027	SUPERSEDES NAS 681 AND AN 361	SHEET 2

DD FORM 672-1 (Coordinated)

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PLATE NO 10320

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APPROVED 12 June 64 REVISED (D) FOR CHANGES SEE SHEETS 1 AND 2