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 instruction for all new engineering and design applications and for repetitive use shall be made from this  
 document when applicable)

REVIEWER ACTIVITIES:  
 ARMY - AR  
 NAVY - SH  
 AIR FORCE - 99  
 DLA - IS

USER ACTIVITIES  
 ARMY - CR, MI  
 NAVY - OS

**PA NAVY-AS** INTERNATIONAL INTEREST  
**Other Cost**  
**ARMY-AV**  
**AIR FORCE-II**

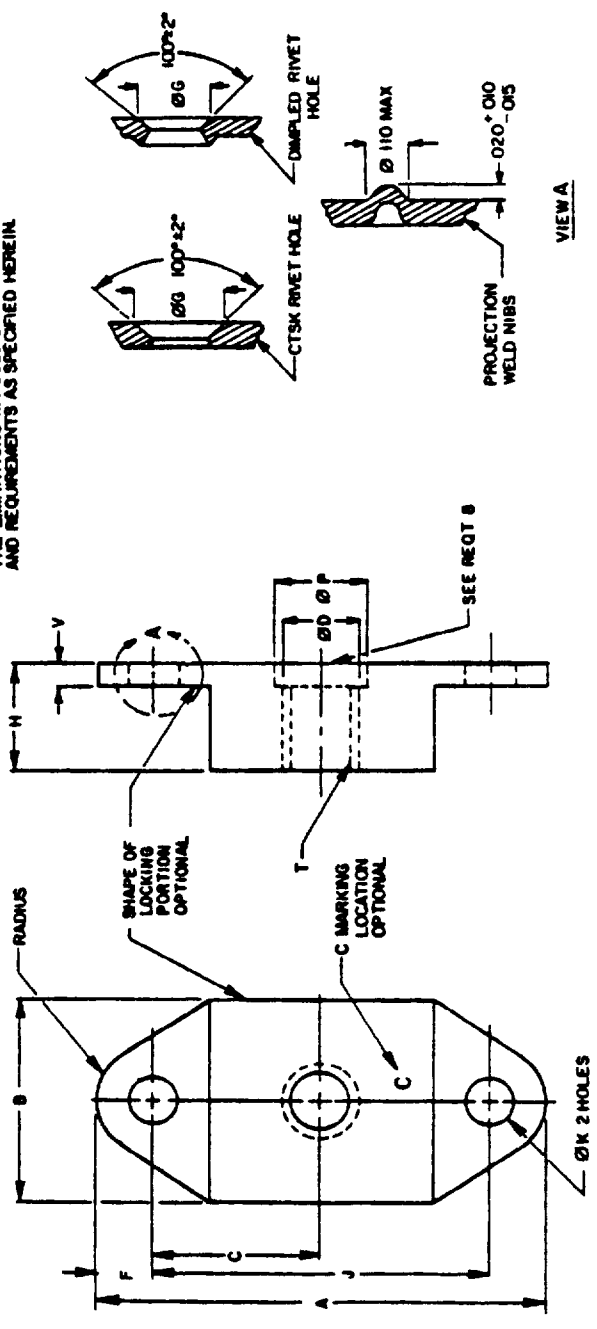
**TITLE**  
**NUT, SELF-LOCKING, PLATE,**  
**TWO LUG, FLOATING, LOW HEIGHT,**  
**CRES, 125 KSI FTU, 450° F & 800° F**

**PROCUREMENT SPECIFICATION**  
**MIL-N-25027**

**SUPERSEDES**  
**NAS 686, NAS 1031 (IN PART)**

**MILITARY STANDARD**  
**MS 21060**

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VIEW A

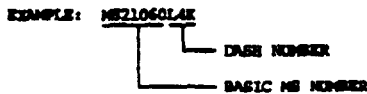
TABLE 1 GRID NUMBER AND DIMENSIONS

GRID NUMBER	GRID NUMBER		T THREAD BLIND	A PILE	B PILE	C PILE	D PILE	E PILE	F PILE	G PILE	H PILE	J PILE	K PILE	L PILE	M PILE	N PILE	O PILE	P PILE	Q PILE	R PILE	S PILE	T PILE	U PILE	V PILE	W PILE	X PILE	Y PILE	Z PILE		
	PLAIN HOLES	DIMPLED HOLES																												
L04	L04	L04	112-40	048	016	290	344	100	200	175	608	098	278	172	032	754	78													
L04	L04	L04	138-32	048	016	290	344	100	200	203	608	098	278	108	032	1,138	79													
L08	L08	L08	144-32	048	016	290	344	100	200	250	608	098	278	224	032	1,726	40													
L12	L12	L12	148-32	048	016	290	344	100	200	258	608	098	278	258	032	2,468	41													
L16	L16	L16	258-28	1,292	516	758	500	254	160	280	281	1,808	138	372	032	4,508	90													
L18	L18	L18	312-24	1,292	609	412	500	317	125	238	328	1,808	138	372	032	4,508	90													
L20	L20	L20	375-24	1,482	688	475	500	379	125	238	344	1,808	138	372	032	4,508	90													
L22	L22	L22	437.5-20	1,482	719	672	543	442	146	238	504	1,125	181	517	032	11,058	135													
L24	L24	L24	500-20	1,482	819	786	625	504	146	238	538	1,250	181	540	032	11,058	135													

MEMBER "M" NOT SPECIFIED, LIMITED ONLY BY STITCHING REQUIREMENTS OF SPECIFICATION  
 DIMPLED RIVET HOLE TOLERANCE FOR Ø "M" IS + 0.15 - 0.00

REQUIREMENTS:

1. **MATERIAL:** CORROSION RESISTANT STEEL, TYPE A286, (UNS S66286) IN ACCORDANCE WITH AMS5525, AMS732 OR AMS737.
2. **FINISH:** ONLY 800°F NUTS: SILVER PLATE ALL THREADED SURFACES OF NUT ELEMENT IN ACCORDANCE WITH AMS 2410. THREADS SHALL SHOW COMPLETE COVERAGE. SILVER PLATING ON ALL OTHER SURFACES OPTIONAL. TARNISHING OR DISCOLORATION OF SILVER NOT CAUSE FOR REJECTION.
3. **LUBRICANT:** ONLY 450°F NUTS: DRY FILM LUBRICANT IN ACCORDANCE WITH MIL-N-25027.
4. **DIMENSIONING AND TOLERANCING:** DIMENSIONING AND TOLERANCING SHALL BE IN ACCORDANCE WITH ANSI Y14.5M.
5. **HARDNESS:** 49HRC, MAX.
6. **THREADS:** THREADS BEFORE LUBRICATION IN ACCORDANCE WITH MIL-S-8879.
7. **SURFACE TEXTURE:** SURFACE TEXTURE, UNLESS OTHERWISE SPECIFIED, SHALL NOT EXCEED 125 MICROINCHES, IN ACCORDANCE WITH ANSI B46.1.
8. **COUNTERSINK/COUNTERBORE:** ON SIZE .164 AND LARGER, THREAD RELIEF SHALL BE .062 MINIMUM; ON SIZE .138 AND SMALLER, COUNTERSINK OR RADDIUS WITHIN "P" DIAMETER.
9. **PERFORMANCE:** SEE PROCUREMENT SPECIFICATION, EXCEPT 450°F DRY FILM LUBRICATED NUTS LIMITED TO FIVE REUSE CYCLES.
10. **FLOAT OF NUT PORTION:** FLOAT OF NUT PORTION OF ASSEMBLY SHALL NOT BE LESS THAN .030 RADIIALLY FROM CENTERED POSITION. NUT ELEMENT SHALL BE CAPABLE OF ENGAGEMENT WITH BOLT IN THE MAXIMUM MISALIGNED POSITION.
11. **PART NUMBER:** THE PART NUMBER SHALL CONSIST OF THE BASIC NS NUMBER FOLLOWED BY A DASH NUMBER FROM TABLE I.



MS21060LAK INDICATES: NUT, SELF-LOCKING, PLATE, TWO LUG, FLOATING, LOW HEIGHT, CRES, 125 KSI FTU, 450°F; DRY FILM LUBRICATION; .250-28 UNF-3B; COUNTERSINK OR DIMPLED HOLES.

NOTES:

1. ALL DIMENSIONS ARE IN INCHES.
2. IN THE EVENT OF A CONFLICT BETWEEN THE TEXT OF THIS STANDARD AND THE REFERENCES CITED HEREIN, THE TEXT OF THIS STANDARD SHALL TAKE PRECEDENCE.
3. REFERENCED GOVERNMENT (OR NON-GOVERNMENT) DOCUMENTS OF THE ISSUE LISTED IN THAT ISSUE OF THE DEPARTMENT OF DEFENSE INDEX OF SPECIFICATIONS AND STANDARDS (DODISS) SPECIFIED IN THE SOLICITATION FORM A PART OF THIS STANDARD TO THE EXTENT SPECIFIED HEREIN.
4. 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 THE CROSS SECTION AREA AT THE BASIC ROOT DIAMETER OF THE THREADS. THESE NUTS ARE DESIGNED TO BE USED ON 3A EXTERNAL THREADS. THESE NUTS SHALL BE USED IN ACCORDANCE WITH THE LIMITATIONS OF MS3388. ONLY NUTS FOR WHICH THERE ARE QUALIFIED PRODUCTS LISTED ON QPL 25027 SHALL BE USED.

USER ACTIVITIES  
ARMY-CR, MI  
NAVY-OS

REVIEWER ACTIVITIES  
ARMY-AR  
NAVY-SH  
AIR FORCE-99  
DLA-IS

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APPROVED 23 JUL 64 REVISED (F) FOR CHANGES SEE PAGES 1, 2 AND 3

PA NAVY-AS	INTERNATIONAL INTEREST	TITLE	MILITARY STANDARD
Other Cat ARMY-AV		NUT, SELF-LOCKING, PLATE, TWO LUG, FLOATING, LOW HEIGHT, CRES, 125 KSI FTU, 450°F & 800°F	MS21060
AIR FORCE-11			PAGE 2 OF 3
PROCUREMENT SPECIFICATION	SUPERSEDES		
MIL-N-25027		NAS 686, NAS 1031 (IN PART)	

INTERCHANGEABILITY RELATIONSHIP

MS21060 NUTS CAN UNIVERSALLY REPLACE NAS6886 AND NAS1031 NUTS OF LIKE MATERIAL, THREAD SIZE, LUBRICANT (DRY FILM OR SILVER PLATE) RIVET SPACING AND FASTENING METHOD (PLAIN RIVET HOLES, DIMPLED OR COUNTERSUNK RIVET HOLES OR PROJECTION WELDING), BUT THESE NAS6886 AND NAS1031 NUTS CANNOT UNIVERSALLY REPLACE MS21060 NUTS.

INTERCHANGEABILITY TABLE

CANCELLED PART NUMBER	SUBSTITUTIVE PART NUMBER	CANCELLED PART NUMBER	SUBSTITUTIVE PART NUMBER	CANCELLED PART NUMBER	SUBSTITUTIVE PART NUMBER	CANCELLED PART NUMBER	SUBSTITUTIVE PART NUMBER
NAS6886C04	MS21060-04	---	MS21060-3W	NAS1031C04	MS21060-04	NAS1031C0W	MS21060-0W
NAS6886C04K	MS21060-04K	NAS6886C3M	MS21060L3	NAS1031C04K	MS21060-04K	NAS1031CS	MS21060-5
---	MS21060-04W	NAS6886C3M	MS21060L3K	NAS1031C04W	MS21060-04W	NAS1031CSK	MS21060-5K
NAS6886C04M	MS21060L04	---	MS21060L3W	NAS1031C06	MS21060-06	NAS1031CSW	MS21060-5W
NAS6886C04MK	MS21060L04K	NAS6886C4	MS21060-4	NAS1031C06K	MS21060-06K	NAS1031CS	MS21060-6
---	MS21060L04W	NAS6886C4K	MS21060-4K	NAS1031C06W	MS21060-06W	NAS1031CSW	MS21060-6W
NAS6886C06	MS21060-06	---	MS21060-4W	NAS1031C08	MS21060-08	NAS1031C7	MS21060-7
NAS6886C06K	MS21060-06K	NAS6886C4M	MS21060L4	NAS1031C08K	MS21060-08K	NAS1031C7W	MS21060-7W
---	MS21060-06W	NAS6886C4MK	MS21060L4K	NAS1031C08W	MS21060-08W	NAS1031CS	MS21060-8
NAS6886C06M	MS21060L06	---	MS21060L4W	NAS1031C08W	MS21060-08W	NAS1031CSW	MS21060-8W
NAS6886C06MK	MS21060L06K	NAS6886C5	MS21060-5	NAS1031C3	MS21060-3	---	---
---	MS21060L06W	NAS6886C5K	MS21060-5K	NAS1031C3K	MS21060-3K	---	---
NAS6886C08	MS21060-08	---	MS21060-5W	NAS1031C3W	MS21060-3W	---	---
NAS6886C08K	MS21060-08K	NAS6886C5M	MS21060L5	NAS1031C4	MS21060-4	---	---
---	MS21060-08W	NAS6886C5MK	MS21060L5K	NAS1031CAK	MS21060-4K	---	---
NAS6886C08M	MS21060L08	---	MS21060L5W	---	---	---	---
NAS6886C08MK	MS21060L08K	NAS6886C6	MS21060-6	---	---	---	---
---	MS21060L08W	---	MS21060-6W	---	---	---	---
NAS6886C3	MS21060-3	NAS6886C6M	MS21060L6	---	---	---	---
NAS6886C3K	MS21060-3K	---	MS21060L6W	---	---	---	---

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AIR FORCE-II			PAGE 3 OF 3
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