

DRAWING SUPERSEDES ALL ANTECEDENT STANDARD DRAWINGS FOR THE SAME PRODUCT
 SHALL BECOME EFFECTIVE NO LATER THAN SIX MONTHS FROM THE LAST DATE OF
 APPROVAL SHOWN HEREON.

AEROSPACE INDUSTRIES ASSOCIATION OF AMERICA, INC.
 1250 EYE STREET, N.W.
 WASHINGTON, D.C. 20005



Aerospace
 Industries
 Association

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NATIONAL AEROSPACE STANDARD

FED SUP CLASS
 5310

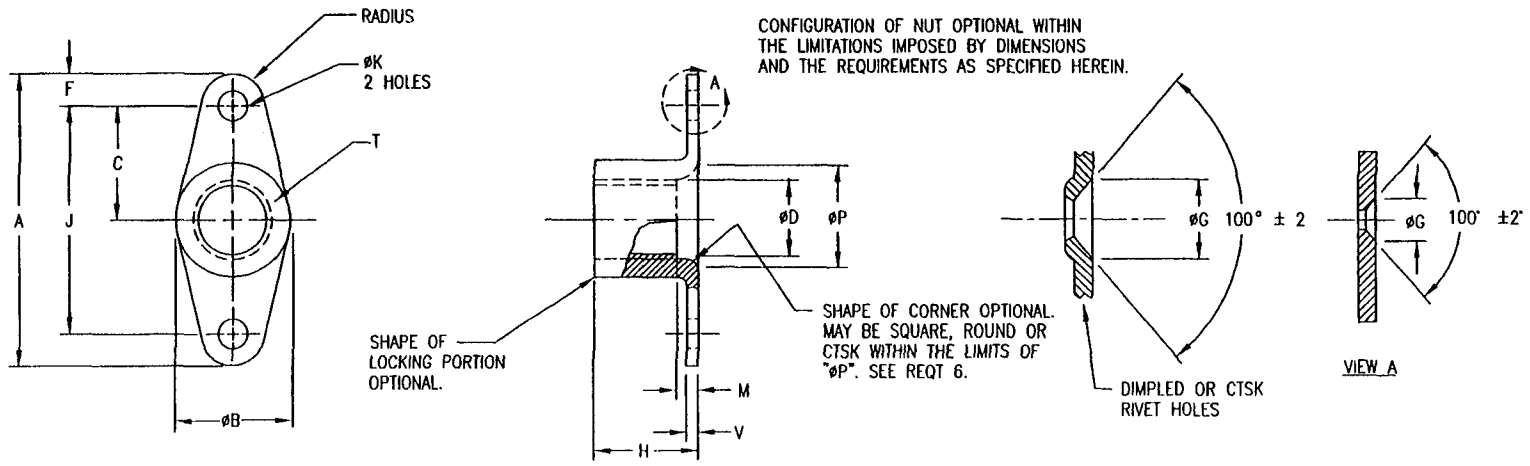


TABLE I. DASH NUMBERS AND DIMENSIONS

DASH NUMBERS				T THREAD SIZES	A MAX	ØB		C ±.005	ØD MIN	F MIN	ØG ±.010	H ^{1/} MAX	J ^{2/} ±.002	ØK ^{3/} +.005 -.000	M MIN	ØP MAX	V MAX	AXIAL STRENGTH LBS MIN	WEIGHT LBS/100
PLAIN RIVET HOLES		COUNTERSUNK OR DIMPLED RIVET HOLES				MAX	MIN												
NON-DRY FILM LUBRICANT	DRY FILM LUBRICANT	NON-DRY FILM LUBRICANT	DRY FILM LUBRICANT																
-04	L04	-04K	L04K	.112-40 UNJC-3B	.948	.260	.195	.344	---	.100	.200	.143	.688	.098	---	.166	.047	750	.14
-06	L06	-06K	L06K	.138-32 UNJC-3B	.948	.265	.239	.344	---	.100	.200	.171	.688	.098	---	.206	.047	1,130	.18
-08	L08	-08K	L08K	.164-32 UNJC-3B	.948	.297	.277	.344	.168	.100	.200	.250	.688	.098	.062	.248	.047	1,720	.28
-3	L3	-3K	L3K	.190-32 UNJF-3B	.948	.328	.308	.344	.194	.100	.200	.250	.688	.098	.062	.274	.047	2,460	.29
-4	L4	-4K	L4K	.250-28 UNJF-3B	1.260	.414	.375	.500	.254	.100	.200	.281	1.000	.098	.062	.344	.055	4,580	.53
-5	L5	-5K	L5K	.3125-24 UNJF-3B	1.292	.505	.485	.500	.317	.125	.230	.328	1.000	.130	.062	.417	.065	7,390	.80
-6	L6	--	--	.375-24 UNJF-3B	1.292	.614	.594	.500	.379	.125	.230	.344	1.000	.130	.062	.505	.075	11,450	1.31
-7	L7	--	--	.4375-20 UNJF-3B	1.477	.726	.695	.562	.442	.156	.230	.390	1.125	.161	.062	.602	.085	15,450	1.84
-8	L8	--	--	.500-20 UNJF-3B	1.602	.859	.796	.625	.521	.156	.230	.609	1.250	.161	.062	.640	.115	21,110	4.80
-9	L9	--	--	.5625-18 UNJF-3B	1.727	.953	.902	.688	.584	.156	.230	.656	1.375	.161	.062	.703	.115	26,810	7.70
-10	L10	--	--	.625-18 UNJF-3B	1.852	1.016	.984	.750	.646	.156	.230	.765	1.500	.161	.062	.756	.115	34,130	8.60

- MINIMUM "H" NOT SPECIFIED, LIMITED ONLY BY STRENGTH REQUIREMENTS OF SPECIFICATION.
- 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.
- DIMPLED RIVET HOLE TOLERANCE FOR "ØK" IS +.015 -.000.

LIST OF CURRENT SHEETS

NO.	REV	NEW
1	2	
2	2	
3		NEW

2

THE INITIAL RELEASE OF THIS DOCUMENT SUPERSEDES MS21047, REVISION F. PART NUMBERS REMAIN MS21047.

CUSTODIAN NATIONAL AEROSPACE STANDARDS COMMITTEE

PROCUREMENT SPECIFICATION NASM25027

TITLE
 NUT, SELF-LOCKING, PLATE, TWO-LUG, LOW HEIGHT, STEEL, 125 KSI FTU, 450° F

CLASSIFICATION PART STANDARD
 SHEET 1 OF 3

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APPROVAL DATE SEPTEMBER 1999

REVISION ① Apr. 2001 ② AUGUST 2002

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1250 EYE STREET, N.W.
WASHINGTON, D.C. 20005

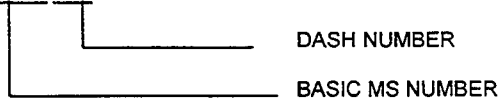
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FORM 4-88

REQUIREMENTS:

1. **MATERIAL:** CARBON STEEL COMPOSITIONS 1035 (UNS G10350), 1040 (UNS G10400), AND 1050 (UNS G10500), IN ACCORDANCE WITH ASTM A827 OR QQ-S-700; 1042 (UNS G10420) IN ACCORDANCE WITH ASTM A29. ALLOY STEEL, GRADES 4130 (UNS G41300), 4340 (UNS G43400) AND 8740 (UNS G87400) IN ACCORDANCE WITH ASTM A29, FE-PL43S CONFORMING TO CHEMISTRY OF EN2543. ②
2. **FINISH:** CADMIUM PLATE IN ACCORDANCE WITH AMS-QQ-P-416 TYPE II, CLASS 2. FOR DRY FILM LUBRICATED NUTS, THE TYPE AND CLASS ARE OPTIONAL IF THE NUTS MEET THE SALT SPRAY REQUIREMENT OF AMS-QQ-P-416, TYPE II. ②
3. **DIMENSIONING AND TOLERANCING:** DIMENSIONING AND TOLERANCING SHALL BE IN ACCORDANCE WITH ANSI Y14.5M.
4. **HARDNESS:** 49HRC, MAX.
5. **THREADS:** THREADS BEFORE LUBRICATION IN ACCORDANCE WITH MIL-S-8879.
6. **SURFACE TEXTURE:** SURFACE TEXTURE, UNLESS OTHERWISE SPECIFIED, SHALL NOT EXCEED 125 MICROINCHES, IN ACCORDANCE WITH ANSI/ASME B46.1.
7. **LUBRICANT:** DRY FILM LUBRICANT APPROVED IN ACCORDANCE WITH NASM25027. NON-DRY FILM LUBRICANTS SHALL BE SOLUBLE IN THE CLEANER SPECIFIED IN MIL-S-8802. ②
8. **EDGES:** BREAK ALL SHARP EDGES AND REMOVE ALL BURRS.
9. **COUNTERBORE/COUNTERSINK:** ON SIZE .164 AND LARGER, COUNTERBORE THREAD "D" DIAMETER X .062 DEEP MINIMUM THREAD RELIEF; ON SIZE .138 AND SMALLER, COUNTERSINK TO "P" DIAMETER WITHIN THE LIMITS OF D, P, AND M.
- 10: **PART NUMBER:** THE PART NUMBER SHALL CONSIST OF THE BASIC MS NUMBER FOLLOWED BY A DASH NUMBER FROM TABLE I.

EXAMPLE: MS21047 L4K



MS21047L4K INDICATES: NUT, SELF-LOCKING, PLATE, TWO LUG, LOW HEIGHT, STEEL, 125 KSI, FTU, 450° F; .250-28 UNJF-3B; DRY FILM LUBRICANT COUNTERSUNK 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 MS33588. ONLY NUTS FOR WHICH THERE ARE QUALIFIED PRODUCTS LISTED ON QPL 25027 SHALL BE USED.
5. MS21047 SUPERSEDES AN362, AN366, NAS680, NAS1023 IN PART.

NASM21047
SHEET 2

APPA DATE: SEPTEMBER 1999 REVISION: ① Apr. 2001 ② AUGUST 2002



INTERCHANGEABILITY RELATIONSHIP

MS21047 NUTS CAN UNIVERSALLY REPLACE AN362, AN366, NAS680 AND NAS1023 NUTS OF LIKE MATERIAL, THREAD SIZE, LUBRICANT (DRY FILM OR NON-DRY FILM LUBRICANT) AND FASTENING METHOD (PLAIN RIVET HOLES; DIMPLED OR COUNTERSUNK RIVET HOLES), BUT THESE AN362, AN366, NAS680, AND NAS1023 NUTS CANNOT UNIVERSALLY REPLACE MS21047 NUTS.

INTERCHANGEABILITY TABLE

CANCELLED PART NUMBER	SUBSTITUTIVE PART NUMBER	CANCELLED PART NUMBER	SUBSTITUTIVE PART NUMBER
NAS1023A04	MS21047L04	NAS1023A5	MS21047L5
NAS1023A04K	MS21047L04K	NAS1023A5K	MS21047L5K
NAS1023AX04	MS21047-04	NAS1023AX5	MS21047-5
NAS1023AX04K	MS21047-04K	NAS1023AX5K	MS21047-5K
NAS1023A06	MS21047L06	NAS1023A6	MS21047L6
NAS1023A06K	MS21047L06K	NAS1023AX6	MS21047-6
NAS1023AX06	MS21047-06	NAS1023A7	MS21047L7
NAS1023AX06K	MS21047-06K	NAS1023AX7	MS21047-7
NAS1023A08	MS21047L08	NAS1023A8	MS21047L8
NAS1023A08K	MS21047L08K	NAS1023AX8	MS21047-8
NAS1023AX08	MS21047-08	NAS1023A9	MS21047L9
NAS1023AX08K	MS21047-08K	NAS1023AX9	MS21047-9
NAS1023A3	MS21047L3	NAS1023A10	MS21047L10
NAS1023A3K	MS21047L3K	NAS1023AX10	MS21047-10
NAS1023AX3	MS21047-3	---	---
NAS1023AX3K	MS21047-3K	---	---
NAS1023A4	MS21047L4	---	---
NAS1023A4K	MS21047L4K	---	---
NAS1023AX4	MS21047-4	---	---
NAS1023AX4K	MS21047-4K	---	---

INTERCHANGEABILITY TABLE

CANCELLED PART NUMBERS			SUBSTITUTIVE PART NUMBERS	CANCELLED PART NUMBERS			SUBSTITUTIVE PART NUMBERS
---	---	---	MS21047-04	---	---	---	MS21047L3
---	---	NAS680X04K	MS21047-04K	---	---	NAS680A3K	MS21047L3K
---	---	NAS680A04	MS21047L04	AN362F428	AN366F428	---	MS21047-4
---	---	NAS680A04K	MS21047L04K	---	AN366F428B	---	MS21047-4
AN362F632	AN366F632	---	MS21047-06	---	---	NAS680X4K	MS21047-4K
---	AN366F632B	---	MS21047-06	AN362F428	AN366F428	NAS680A4	MS21047L4
---	---	NAS680X06K	MS21047-06K	---	AN366F428B	---	MS21047L4
AN362F632	AN366F632	NAS680A06	MS21047L06	---	---	NAS680A4K	MS21047L4K
---	AN366F632B	---	MS21047L06	AN362F524	AN366F524	---	MS21047-5
---	---	NAS680A06K	MS21047L06K	---	AN366F524B	---	MS21047-5
AN362F832	AN366F832	---	MS21047-08	---	---	NAS680X5K	MS21047-5K
---	AN366F832B	---	MS21047-08	AN362F524	AN366F524	NAS680A5	MS21047L5
---	---	NAS680X08K	MS21047-08K	---	AN366F524B	---	MS21047L5
AN362F832	AN366F832	NAS680A08	MS21047L08	---	---	NAS680A5K	MS21047L5K
---	AN366F832B	---	MS21047L08	AN362F624	AN366F624	---	MS21047-6
---	---	NAS680A08K	MS21047L08K	---	AN366F624B	---	MS21047-6
AN362F1032	AN366F1032	---	MS21047-3	AN362F624	AN366F624	NAS680A6	MS21047L6
---	AN366F1032B	---	MS21047-3	---	AN366F624B	---	MS21047L6
---	---	NAS680X3K	MS21047-3K	---	---	NAS680A7	MS21047L7
AN362F1032	AN366F1032	NAS680A3	MS21047L3				

NASM21047
SHEET 3

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