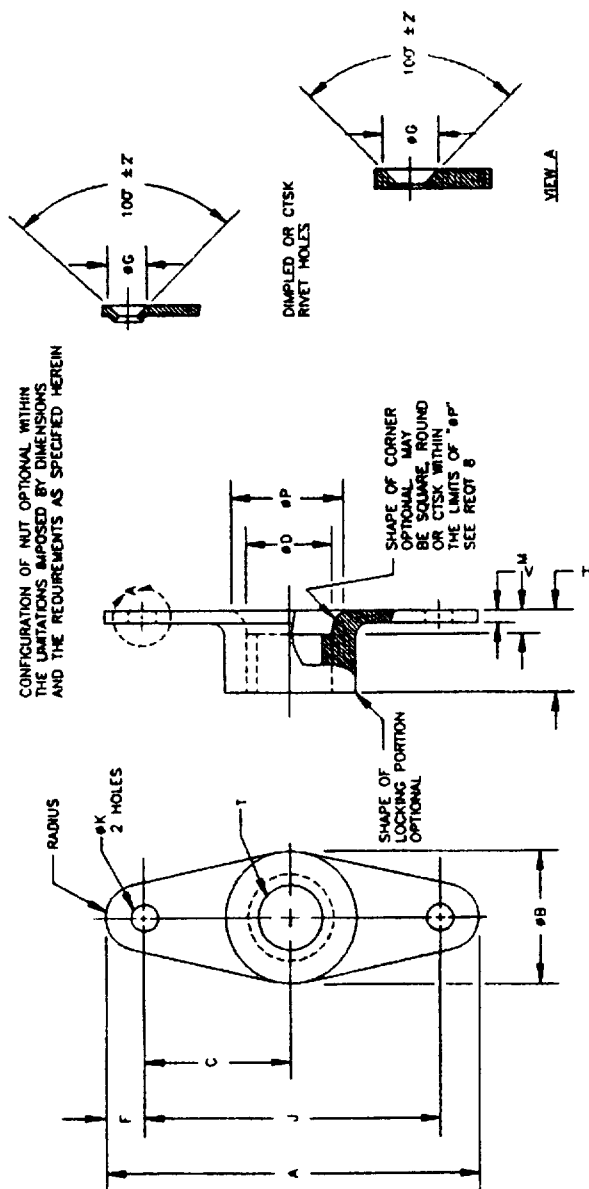




(F) DENOTES CHANGE(S)

INCH-POUND

PREPARING ACTIVITY DLA-IS
CUSTODIANS ARMY- AV NAVY- AS
AIR FORCE- 11 DLA-
REVIEW 82
USER CR, MI
PROJECT NUMBER 5310-1944
DISTRIBUTION STATEMENT

MILITARY SPECIFICATION SHEET
TITLE
NUT, SELF-LOCKING, PLATE, TWO-LUG,
LOW HEIGHT, STEEL, 125 KSI F_{tu}, 450F

SPECIFICATION SHEET NUMBER
MS21047 1 FEB 84
REV F
SUPERSEDING
MS21047 E 30 SEPT 87 (SEE NOTE 5)
AMSC- N/A FSC 5310

A. Approved for public release distribution is unlimited

Page 1 of 1

TABLE 1 DASH NUMBERS AND DIMENSIONS

DASH NUMBERS	PLAIN RIVET HOLES		COUNTERSINK OR DIMPLED RIVET HOLES		A MAX	B		C MIN	F MIN	H MAX	J MAX	K MAX	M MIN	V MAX	ADHESIVE STRENGTH LBS/IN ²	WEIGHT LBS/100
	NON-DRY FILM LUBRICANT	DRY FILM LUBRICANT	NON-DRY FILM LUBRICANT	DRY FILM LUBRICANT		MAX	MIN									
-04	L04	L04	-04K	L04K	948	260	195	344	100	200	143	888	---	188	047	750
-06	L06	L06	-06K	L06K	948	265	239	344	100	200	171	888	---	208	047	1150
-08	L08	L08	-08K	L08K	948	287	277	344	100	200	250	888	---	248	047	1720
-10	L10	L10	-10K	L10K	948	328	308	344	100	200	250	888	---	274	047	2480
-12	L12	L12	-12K	L12K	948	414	375	500	150	200	281	1000	098	344	045	4390
-14	L14	L14	-14K	L14K	948	500	485	500	175	230	328	1000	130	417	045	7390
-16	L16	L16	-16K	L16K	948	584	564	500	175	230	344	1000	161	485	045	11450
-18	L18	L18	-18K	L18K	948	728	685	500	175	230	344	1000	161	564	045	15450
-20	L20	L20	-20K	L20K	948	885	825	500	175	230	344	1000	161	685	045	21110
-22	L22	L22	-22K	L22K	948	1000	925	500	175	230	344	1000	161	800	045	26810
-24	L24	L24	-24K	L24K	948	1147	1065	500	175	230	344	1000	161	925	045	34130
-26	L26	L26	-26K	L26K	948	1300	1215	500	175	230	344	1000	161	1065	045	43900
-28	L28	L28	-28K	L28K	948	1477	1385	500	175	230	344	1000	161	1215	045	56400
-30	L30	L30	-30K	L30K	948	1685	1595	500	175	230	344	1000	161	1375	045	73900
-32	L32	L32	-32K	L32K	948	1925	1835	500	175	230	344	1000	161	1547	045	96810
-34	L34	L34	-34K	L34K	948	2195	2105	500	175	230	344	1000	161	1725	045	12450
-36	L36	L36	-36K	L36K	948	2495	2405	500	175	230	344	1000	161	1915	045	15850
-38	L38	L38	-38K	L38K	948	2825	2735	500	175	230	344	1000	161	2115	045	20810
-40	L40	L40	-40K	L40K	948	3185	3095	500	175	230	344	1000	161	2325	045	27390
-42	L42	L42	-42K	L42K	948	3575	3485	500	175	230	344	1000	161	2547	045	34650
-44	L44	L44	-44K	L44K	948	4000	3910	500	175	230	344	1000	161	2785	045	43650
-46	L46	L46	-46K	L46K	948	4465	4375	500	175	230	344	1000	161	3035	045	54450
-48	L48	L48	-48K	L48K	948	4975	4885	500	175	230	344	1000	161	3295	045	67950
-50	L50	L50	-50K	L50K	948	5535	5445	500	175	230	344	1000	161	3565	045	84150
-52	L52	L52	-52K	L52K	948	6145	6055	500	175	230	344	1000	161	3845	045	10350
-54	L54	L54	-54K	L54K	948	6805	6715	500	175	230	344	1000	161	4135	045	12650
-56	L56	L56	-56K	L56K	948	7515	7425	500	175	230	344	1000	161	4435	045	15450
-58	L58	L58	-58K	L58K	948	8275	8185	500	175	230	344	1000	161	4745	045	18850
-60	L60	L60	-60K	L60K	948	9085	9000	500	175	230	344	1000	161	5065	045	23950
-62	L62	L62	-62K	L62K	948	9945	9860	500	175	230	344	1000	161	5395	045	29850
-64	L64	L64	-64K	L64K	948	10865	10780	500	175	230	344	1000	161	5735	045	36650
-66	L66	L66	-66K	L66K	948	11845	11760	500	175	230	344	1000	161	6085	045	44450
-68	L68	L68	-68K	L68K	948	12885	12800	500	175	230	344	1000	161	6445	045	53450
-70	L70	L70	-70K	L70K	948	13985	13900	500	175	230	344	1000	161	6815	045	63850
-72	L72	L72	-72K	L72K	948	15145	15060	500	175	230	344	1000	161	7195	045	75850
-74	L74	L74	-74K	L74K	948	16365	16280	500	175	230	344	1000	161	7585	045	89550
-76	L76	L76	-76K	L76K	948	17645	17560	500	175	230	344	1000	161	7985	045	10500
-78	L78	L78	-78K	L78K	948	19085	19000	500	175	230	344	1000	161	8395	045	12250
-80	L80	L80	-80K	L80K	948	20685	20600	500	175	230	344	1000	161	8815	045	14250
-82	L82	L82	-82K	L82K	948	22445	22360	500	175	230	344	1000	161	9245	045	16500
-84	L84	L84	-84K	L84K	948	24365	24280	500	175	230	344	1000	161	9685	045	19000
-86	L86	L86	-86K	L86K	948	26445	26360	500	175	230	344	1000	161	10135	045	21750
-88	L88	L88	-88K	L88K	948	28685	28600	500	175	230	344	1000	161	10605	045	24850
-90	L90	L90	-90K	L90K	948	31085	31000	500	175	230	344	1000	161	11095	045	28300
-92	L92	L92	-92K	L92K	948	33645	33560	500	175	230	344	1000	161	11605	045	32100
-94	L94	L94	-94K	L94K	948	36365	36280	500	175	230	344	1000	161	12135	045	36300
-96	L96	L96	-96K	L96K	948	39245	39160	500	175	230	344	1000	161	12685	045	40900
-98	L98	L98	-98K	L98K	948	42285	42200	500	175	230	344	1000	161	13255	045	46000
-100	L100	L100	-100K	L100K	948	45485	45400	500	175	230	344	1000	161	13845	045	51600

1/ MINIMUM 1/4" NOT SPECIFIED, LIMITED ONLY BY STRENGTH REQUIREMENTS OF SPECIFICATION.
2/ CENTER OF THE DIMPLED HOLE SHALL NOT BE MORE THAN 1/8" FROM THE CENTER OF THE
HOLE.
3/ DIMPLED RIVET HOLE TOLERANCE FOR "K" IS +0.015 -0.000

REQUIREMENTS

- (F) 1. MATERIAL. CARBON STEEL, COMPOSITIONS 1035 (UNS G10350) 1040 (UNS G10400) 1050 (UNS G10500) IN ACCORDANCE WITH ASTM A827 OR QQ-S-700 COMPOSITION 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
2. FINISH. CADMIUM PLATE IN ACCORDANCE WITH 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 REQUIREMENTS OF QQ-P-416 TYPE II
3. DIMENSIONING AND TOLERANCING. DIMENSIONING AND TOLERANCING SHALL BE IN ACCORDANCE WITH ANSI Y14.5M
4. HARDNESS. 49 HRC, MAX
5. THREADS. THREADS BEFORE LUBRICATION IN ACCORDANCE WITH MIL-S-8879
6. SURFACE TEXTURE. SURFACE TEXTURE UNLESS OTHERWISE SPECIFIED SHALL NOT EXCEED 125 MICRONCHES, IN ACCORDANCE WITH ANSI/ASME B46.1
7. LUBRICANT. DRY FILM LUBRICANT APPROVED IN ACCORDANCE WITH MIL-N-25027 NON-DRY FILM LUBRICANTS SHALL BE SOLUBLE IN THE CLEANER SPECIFIED IN MIL-S-8802
- (F) 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 1

EXAMPLE MS21047L4K

└── DASH NUMBER
└── BASIC MS NUMBER

MS21047L4K INDICATES NUT SELF-LOCKING, PLATE TWO LUG LOW HEIGHT, STEEL
125 KSI F_{tu} 450°F 250-28UNJF-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 OPL 25027 SHALL BE USED
5. MS21047 SUPERSEDES AN362, AN366 NAS680 NAS1023 IN PART

PREPARING ACTIVITY DLA-15 CUSTODIANS ARMY- AV NAVY- AS AIR FORCE- 11 DLA- REVIEW 82 USER CR, MI PROJECT NUMBER 5310-1944	MILITARY SPECIFICATION SHEET TITLE NUT, SELF-LOCKING, PLATE TWO-LUG, LOW HEIGHT, STEEL, 125 KSI F _{tu} , 450°F	SPECIFICATION SHEET NUMBER MS21047 1 FEB 94 REV F SUPERSEDING MS21047 E 30 SEPT 87 (SEE NOTE 5) AMSC- N/A FSC 5310
DISTRIBUTION STATEMENT A. Approved for public release distribution is unlimited		Page 2 of 3

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	---	AN366F1032B	---	MS21047L3
---	---	NAS680X04K	MS21047-04K	---	---	NAS680A3K	MS21047L3K
---	---	NAS680A04	MS21047L04	AN362F428	AN366F428	---	MS21047-4
---	---	NAS680A04K	MS21047L04K	---	AN366F428B	---	MS21047-4K
AN362F632	AN366F632	---	MS21047-06	---	---	NAS680X4K	MS21047L4
---	AN366F632B	---	MS21047-06K	AN362F428	AN366F428	NAS680A4	MS21047L4K
---	---	NAS680X06K	MS21047L06	---	AN366F428B	---	MS21047-5
AN362F632	AN366F632	NAS680A06	MS21047L06	---	---	NAS680A4K	MS21047-5K
---	AN366F632B	---	MS21047L06K	AN362F524	AN366F524	---	MS21047-6
---	---	NAS680A06K	MS21047L06K	---	AN366F524B	---	MS21047-6K
AN362F632	AN366F632	---	MS21047-08	---	---	NAS680X3K	MS21047L5
---	AN366F632B	---	MS21047-08K	AN362F524	AN366F524	NAS680A5	MS21047L5K
---	---	NAS680X08K	MS21047L08	---	AN366F524B	---	MS21047-6
AN362F632	AN366F632	NAS680A08	MS21047L08	---	---	NAS680A5K	MS21047L5K
---	AN366F632B	---	MS21047L08K	AN362F624	AN366F624	---	MS21047-6
---	---	NAS680A08K	MS21047-3	---	AN366F624B	NAS680A6	MS21047L6
AN362F1032	AN366F1032	---	MS21047-3K	AN362F624	---	---	MS21047L6K
---	AN366F1032B	NAS680X3K	MS21047L3	---	AN366F624B	NAS680A7	MS21047L7
AN362F1032	AN366F1032	NAS680A3		---	---		

PREPARING ACTIVITY DLA-15 CUSTODIANS ARMY- AV NAVY- AS AIR FORCE- 11 DLA-			MILITARY SPECIFICATION SHEET TITLE NUT, SELF-LOCKING, PLATE, TWO-LUG, LOW HEIGHT, STEEL 125 KSI FLU 450F		SPECIFICATION SHEET NUMBER MS21047 1 FEB 94 REV F	
REVIEW 82 USER CR, MI PROJECT NUMBER 5310-1944			SUPERSEDING MS21047 E 30 SEPT 87 (SEE NOTE 5)		AMSC- N/A FSC 5310	
DISTRIBUTION STATEMENT A. Approved for public release distribution is unlimited			Page 3 of 3			