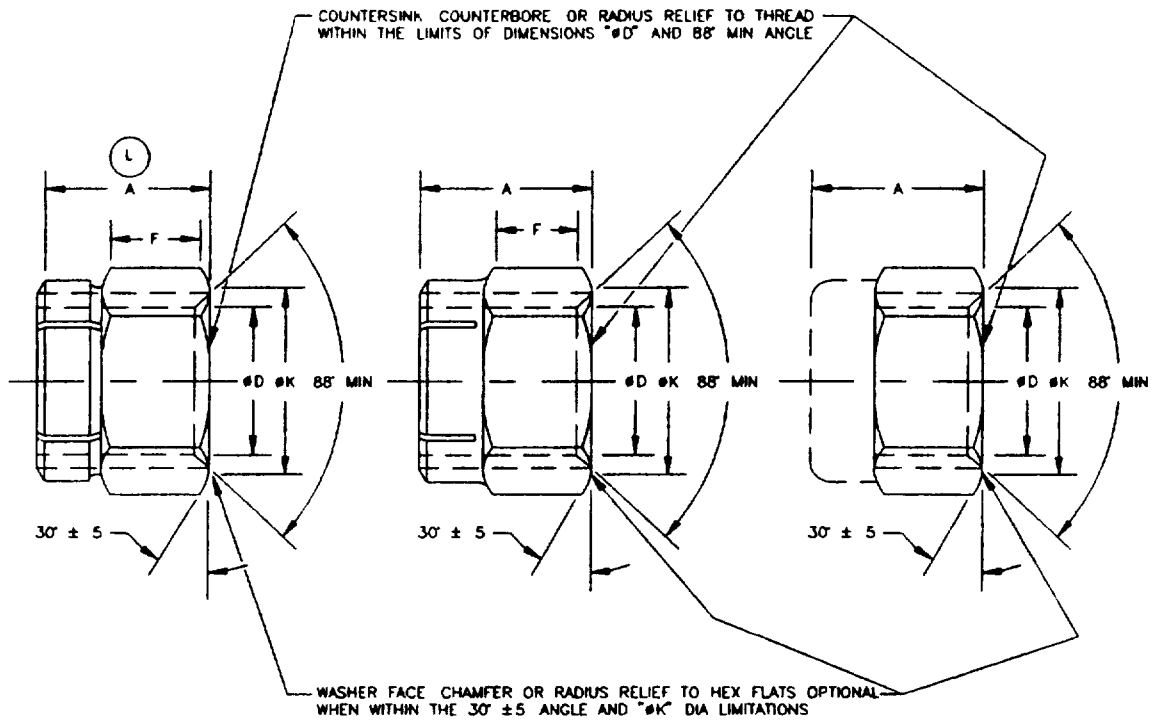


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STYLE A

STYLE B

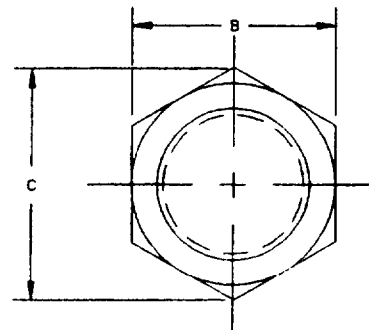
ELLIPTICAL LOCK

EITHER STYLE A OR B TO BE SUPPLIED AT MANUFACTURERS OPTION

SEGMENTED BEAM LOCK

NOTE

CONFIGURATION OF NUT OPTIONAL LIMITATIONS IMPOSED ONLY ON DIMENSIONS AND REQUIREMENTS SPECIFIED HEREIN SEE EXAMPLE OF PART NUMBERS



TYPICAL END VIEW

(L) DENOTES CHANGE(S)

INCH - POUND

PREPARING ACTIVITY DLA-IS
CUSTODIANS ARMY- AR NAVY- AS
AIR FORCE- 99 DLA-
REVIEW AT AV ER GL MI OS SH 11 82
USER
PROJECT NUMBER 5310-2029

MILITARY SPECIFICATION SHEET
TITLE
NUT, SELF-LOCKING
HEXAGON-REGULAR HEIGHT,
450°F 125 KSI Flu

SPECIFICATION SHEET NUMBER
MS21045 5 NOV 94
REV L
SUPERSEDING
MS21045 K 30 AUG 94
AMSC- N/A FSC 5310

DISTRIBUTION STATEMENT

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TABLE I. DIMENSIONS AND TOLERANCES

DASH NUMBERS			(a) THREAD MIL-S-8879	A		(c) B		C	#D	F	(b) BEARING SURFACE SQUARE- NESS	AXIAL STRENGTH LBS MIN	WEIGHT LBS/100 REF	#K	
STEEL		CRES		MAX	MIN	MAX	MIN	MIN	± 0.020	MIN					MIN
NON DRY LUB	DRY LUB														
04	L04	C04	1120-40UNJC-3B	167	133	251	243	268	136	044	004	750	16	223	
06	L06	C06	1380-32UNJC-3B	188	160	313	305	339	161	072	004	1,130	30	285	
08	L08	C08	1640-32UNJC-3B	250	219	345	336	374	188	091	004	1 720	50	316	
3	L3	C3	1900-32UNJF-3B	250	208	376	367	410	210	085	004	2 460	58	347	
4	L4	C4	2500-28UNJF-3B	328	240	439	430	482	273	116	005	4,580	99	410	
5	L5	C5	3125-24UNJF-3B	360	271	502	492	552	336	123	006	7 390	1 40	472	
6	L6	C6	3750-24UNJF-3B	469	318	564	553	622	390	153	006	11,450	2 15	533	
7	L7	C7	4375-20UNJF-3B	469	435	690	679	766	467	178	007	16 450	3 40	669	
8	L8	C8	5000-20UNJF-3B	610	575	752	741	837	531	221	007	21,110	4 70	721	
9	L9	C9	5625-18UNJF-3B	704	623	877	865	978	594	243	008	26,810	7 80	845	
10	L10	C10	6250-18UNJF-3B	766	732	940	928	1 051	656	274	008	34 130	9 50	908	
12	L12	C12	7500-16UNJF-3B	891	855	1 064	1 052	1 191	787	316	009	50 020	13 60	1 032	
14	L14	C14	8750-14UNJF-3B	1 016	965	1 252	1 239	1 403	918	570	010	68,440	21 00	1 219	
16	L16	C16	1 0000-12UNJF-3B	1 141	1 010	1 440	1 427	1 615	1 044	635	011	92 180	31 00	1 407	
18	L18	C18	1 1250-12UNJF-3B	1 266	1 130	1 627	1 614	1 826	1 171	710	012	116 700	46 00	1 594	
20	L20	C20	1 2500-12UNJF-3B	1 454	1 300	1 814	1 801	2 038	1 295	795	013	147 940	65 00	1 781	

- (a) THREADS IN ACCORDANCE WITH MIL-S-8879
- (b) BEARING SURFACE (#K) SHALL BE SQUARE WITH PITCH DIAMETER WHEN MEASURED ON ACCORDANCE WITH MIL-N-25027
- (c) DIMENSIONS ACROSS FLATS MAY INCLUDE DEFORMATION OF SELF-LOCKING DEVICE

PREPARING ACTMITY DLA-IS CUSTODIANS ARMY- AR NAVY- AS AIR FORCE- 99 DLA- REVIEW AT, AV, ER, GL, MI, OS, SH, 11, 82 USER PROJECT NUMBER 5310-2029	MILITARY SPECIFICATION SHEET TITLE NUT, SELF-LOCKING HEXAGON-REGULAR HEIGHT 45°F 125 KSI Ftu	SPECIFICATION SHEET NUMBER MS21045 5 NOV 94 REV L SUPERSEDING MS21045 K 30 AUG 94 AMSC- N/A FSC 5310
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Form Approved
OMB No. 0704-0188

REQUIREMENTS

- 1 **MATERIALS.** ALLOY STEEL GRADE 8740 (UNS G87400) PER AMS 6322
 CARBON STEEL GRADE 1008 (UNS G10080) PER ASTM A29
 CARBON STEEL GRADE 1010 (UNS G10100) PER AMS 5050
 CARBON STEEL GRADE 1015 (UNS G10150) PER AMS 5080
 CARBON STEEL GRADE 1018 (UNS G10180) PER AMS 5069
 CARBON STEEL GRADE 1021 (UNS G10210) PER ASTM A29
 CARBON STEEL GRADE 1022 (UNS G10220) PER AMS 5070
 CARBON STEEL GRADE 1030 (UNS G10300) PER ASTM A29
 CARBON STEEL GRADE 1035 (UNS G10350) PER AMS 5080
 CARBON STEEL GRADE 1046 (UNS G10460) PER ASTM A29
 CARBON STEEL GRADE 1110 (UNS G11100) PER ASTM A29
 CARBON STEEL GRADE 1117 (UNS G11170) PER AMS 5022
 CARBON STEEL GRADE 1118 (UNS G11180) PER ASTM A29
 CARBON STEEL GRADE 1137 (UNS G11370) PER AMS 5024
 CARBON STEEL GRADE 11L37 (UNS G11374) PER AMS 5020
 CARBON STEEL GRADE 1213 (UNS G12130) PER ASTM A29
 CARBON STEEL GRADE 12L14 (UNS G12144) PER ASTM A29
 CARBON STEEL GRADE 15B21H (UNS H15211) PER SAE J1268
 CORROSION RESISTANT STEEL TYPE 303 (UNS S30300) PER AMS 5640
 CORROSION RESISTANT STEEL TYPE (UNS S30430) PER ASTM A493
 CORROSION RESISTANT STEEL XM21 (UNS S30452) PER ASTM A276
 CORROSION RESISTANT STEEL TYPE 304L (UNS S30403) PER AMS 5647
 CORROSION RESISTANT STEEL TYPE A-286 (UNS S66286) PER AMS 5732 OR 5737
 CORROSION RESISTANT STEEL TYPE A-305 (UNS S30500) PER AMS 5686
- 2 **COATING.** STEEL NUTS (WITHOUT DRY FILM LUBRICATION) CADMIUM PLATED IN ACCORDANCE WITH QQ-P-416 TYPE II CLASS 2 DRY FILM LUBRICATED STEEL 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 ALUMINUM COATING, ION VAPOR DEPOSITED PER MIL-C-83488
- 3 **PASSIVATE.** CORROSION RESISTANT STEEL NUTS PER QQ-P-35 BEFORE DRY FILM LUBRICATED
- 4 **LUBRICANT.** DRY FILM LUBRICANT APPROVED IN ACCORDANCE WITH MIL-N-25027 NON DRY LUBRICANT SHALL BE SOLUBLE IN THE CLEANER SPECIFIED IN MIL-S-8802
- 5 **SURFACE ROUGHNESS.** IN ACCORDANCE WITH ANSI/ASME B46.1 UNLESS OTHERWISE SPECIFIED THE SURFACE ROUGHNESS SHALL NOT EXCEED 125 MICROINCHES
- 6 **PERFORMANCE.** SEE PROCUREMENT SPECIFICATION EXCEPT DRY FILM LUBRICATED CRES NUTS LIMITED TO FIVE REUSE CYCLES
- 7 **MAGNETIC PERMEABILITY.** IN ACCORDANCE WITH MIL-N-25027

NOTES.

- 1 DIMENSIONS IN INCHES
- 2 BREAK ALL SHARP EDGES AND REMOVE ALL BURRS AND SLIVERS
- 3 EXAMPLE OF PART NUMBER
 MS21045-4 = 2500-28 STEEL NUT, CADMIUM PLATED SOLUBLE LUBRICANT SEGMENTED BEAM LOCK OR ELLIPTICAL LOCK
 MS21045L4 = 2500-28 STEEL NUT CADMIUM PLATED DRY FILM LUBRICANT SEGMENTED BEAM LOCK OR ELLIPTICAL LOCK
 MS21045C4 = 2500-28 CORROSION RESISTANT STEEL NUT DRY FILM LUBRICANT SEGMENTED BEAM LOCK OR ELLIPTICAL LOCK
 MS21045-4S = 2500-28 STEEL NUT CADMIUM PLATED SOLUBLE LUBRICANT SEGMENTED BEAM LOCK
 MS21045-4E = 2500-28 STEEL NUT CADMIUM PLATED SOLUBLE LUBRICANT ELLIPTICAL LOCK
- 4 AN ADDITIONAL DASH "S" CODE INDICATES SEGMENTED BEAM LOCK "E" CODE INDICATES ELLIPTICAL BEAM LOCK "A" CODE INDICATES ION VAPOR DEPOSITED ALUMINUM COATING
- 5 DESIGN AND USAGE LIMITATIONS THESE NUTS ARE DESIGNED TO DEVELOP THE TENSILE STRENGTH OF BOLTS AND SCREWS WITH AN ULTIMATE STRESS (F_U) OF 125 KSI BASED ON THE CROSS SECTIONAL AREA AT THE BASIC ROOT DIAMETER OF THE THREAD THESE NUTS ARE DESIGNED TO BE USED ON 3A EXTERNAL THREADS PER MIL-S-8879 THESE NUTS SHALL BE USED IN ACCORDANCE WITH THE LIMITATIONS OF MS33588
- 6 INTERCHANGEABILITY RELATIONSHIP (STATUS NOTE) EXCEPT FOR THE AN363 7/16-20 THREAD SIZE NUTS MS21045 NUTS CAN UNIVERSELLY REPLACE THE ALL METAL AN363 AND NAS1021 NUTS OF LIKE MATERIAL PLATING AND AND THREAD SIZE BUT THESE AN363 AND NAS1021 NUTS CANNOT UNIVERSELLY REPLACE THE MS21045 NUTS
- 7 BIDS SHALL BE SOLICITED ONLY FROM THE MANUFACTURERS LISTED ON OPL-25027
- 8 IN THE EVENT OF A CONFLICT BETWEEN THE TEXT OF THIS DOCUMENT AND THE REFERENCES CITED HEREIN THE TEXT OF THIS DOCUMENT SHALL TAKE PRECEDENCE
- 9 UNLESS OTHERWISE SPECIFIED ISSUES OF REFERENCED DOCUMENTS ARE THOSE IN EFFECT AT THE TIME OF SOLICITATION

PREPARING ACTMITY DLA-IS CUSTODIANS ARMY- AR NAVY- AS AIR FORCE- 99 DLA- REVIEW AT, AV ER, GL, MI, OS, SM, 11, 82 USER PROJECT NUMBER 5310-2029	MILITARY SPECIFICATION SHEET TITLE NUT SELF-LOCKING HEXAGON-REGULAR HEIGHT 450F 125 KSI F _U	SPECIFICATION SHEET NUMBER MS21045 5 NOV 94 REV L
		SUPERSEDING MS21045 K 30 AUG 94
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TABLE II INTERCHANGEABILITY TABLE

SEE INTERCHANGEABILITY RELATIONSHIP, STATUS NOTE							
CANCELLED PART NUMBER		SUBSTITUTIVE PART NUMBER		CANCELLED PART NUMBER		SUBSTITUTIVE PART NUMBER	
AN363	NAS1021	MS21045		AN363	NAS1021	MS21045	
-	-	A04	L04	-	-	A7	L7
-532	-	A06	L06	-813	-	-	NONE
C632	B632	-	C06	-820	-	A8	L8
-832	-	A08	L08	C820	B820	-	C8
C832	B832	-	C08	-913	-	-	NONE
-1024	-	-	NONE	-918	-	A9	L9
-1032	-	A3	L3	C918	B918	-	C9
C1032	B1032	-	C3	-1011	-	-	NONE
-420	-	-	NONE	-1018	-	A10	L10
-428	-	A4	L4	C1018	B1018	-	C10
C428	B428	-	C4	-1210	-	-	NONE
-518	-	-	NONE	-1216	-	A12	L12
-524	-	A5	L5	C1216	B1216	-	C12
C524	B524	-	C5	-	-	A14	L14
-616	-	-	NONE	-	-	A16	L16
-624	-	A6	L6	-	-	A17	NONE
C624	B624	-	C6	-	-	A18	L18
-714	-	-	NONE	-	-	A20	L20
-720	-	-	NONE				

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