

THE REQUIREMENTS FOR ACQUIRING THE PRODUCT(S) DESCRIBED HEREIN SHALL CONSIST OF THIS SPECIFICATION SHEET AND THE ISSUE OF THE FOLLOWING SPECIFICATION LISTED IN THAT ISSUE OF THE DODISS SPECIFIED IN THE SOLICITATION: MIL-N-25027

THIS SPECIFICATION IS APPROVED FOR USE BY ALL DEPARTMENTS AND AGENCIES OF THE DEPARTMENT OF DEFENSE

Form Approved
OMB No. 0704-0188

1. APPLICATION AND DESIGN SELECTION: THESE A.R.E. (ATTACHED RETENTION ELEMENT) NUT ASSEMBLIES SHALL BE SELECTED AND USED IN ACCORDANCE WITH MS33583.
2. MILITARY INSTALLATION AND TOOLS: NONE
3. OVERSIZE NUT: MS14201 OVERSIZE NUTS MAY BE USED AS REPLACEMENT FOR MS14200 NUTS.
4. REPLACEMENT NUT ELEMENT: MS14214
5. GENERAL REQUIREMENTS:
 - 5.1 PERFORMANCE PER MIL-N-25027 :
INSTALLATION HOLES SHALL BE PER TABLE II, PANEL GRIP THICKNESS PER TABLE III
 - (A) 5.2 MATERIAL:
 - 5.2.1 NUT ELEMENT: STEEL AISI 1050 (UNS G10500) PER AMS 5085 OR AISI 4130 (UNS G41300) PER AMS 6351
 - 5.2.2 SLEEVE: CRES AISI 304 (UNS S30400) PER AMS 5639 OR AISI 305 (UNS S30500) PER AMS 5514
 - 5.2.3 CAGE: STEEL AISI 1050 (UNS G10500) PER AMS 5085
 - 5.3 HEAT TREAT
 - 5.3.1 NUT ELEMENT: ROCKWELL C49 MAX.
 - (A) 5.3.2 CAGE: HRC 40-47
 - 5.4 COATING:
 - 5.4.1 SLEEVE AND CAGE SHALL BE CADMIUM PLATED PER QQ-P-416, TYPE II, CLASS 2
 - 5.4.2 NUT ELEMENT SHALL BE CADMIUM PLATED PER QQ-P-416, TYPE AND CLASS OPTIONAL PROVIDED THE ELEMENT MEETS THE SALT SPRAY REQUIREMENTS OF MIL-N-25027.
 - 5.5 LUBRICANT:
 - (A) 5.5.1 NUT ELEMENT ONLY SHALL BE DRY FILM LUBRICATED PER MIL-L-46010, TYPE I.
 - 5.6 SURFACE TEXTURE:
 - (A) 5.6.1 SURFACE TEXTURE IN ACCORDANCE WITH ANSI/ASME B46.1 UNLESS OTHERWISE SPECIFIED, THE SURFACE ROUGHNESS SHALL NOT EXCEED 125 MICRO INCHES.
 - 5.7 NUT FLOAT:
 - 5.7.1 MINIMUM RADIAL FLOAT 0.020 INCH THE NUT ELEMENT SHALL BE CAPABLE OF ENGAGEMENT WITH THE BOLT IN MAXIMUM MISALIGNED POSITION.
 - 5.8 NUT REPLACEABILITY:
 - 5.8.1 NUT ELEMENT SHALL BE REMOVABLE FROM THE CAGE WITH PROPER REMOVAL TOOL, AND A NEW NUT PER MS14214 SHALL BE CAPABLE OF BEING SNAPPED IN PLACE IN THE CAGE.
 - 5.8.2 CAGE REUSABILITY: CAGE SHALL BE CAPABLE OF BEING REUSED A MINIMUM OF 5 TIMES FOR THE REPLACEMENT OF THE NUT ELEMENT IN ACCORDANCE WITH MS14214 AND THEN THE NUT SHALL MEET THE TORQUE OUT AND PUSH OUT VALUES OF MIL-N-25027.
 - 5.9 WORKMANSHIP:
 - 5.9.1 BREAK ALL SHARP EDGES AND REMOVE ALL BURRS AND SLIVERS.
 - 5.9.2 DIMENSIONS ARE IN INCHES.
 - 5.9.3 TOLERANCES: DECIMALS ± .010, ANGLES ± 5' UNLESS OTHERWISE SPECIFIED.
 - 5.10 INSTALLATION:
WHEN INSTALLED INTO PROPERLY PREPARED HOLES, USING PROPER TOOLING, THE SLEEVE SHALL BE CAPABLE OF FLARING SMOOTHLY WITH NO VISUAL EVIDENCE OF CRACKING OR SPLITTING.

(A) DENOTES CHANGE(S)

INCH-POUND

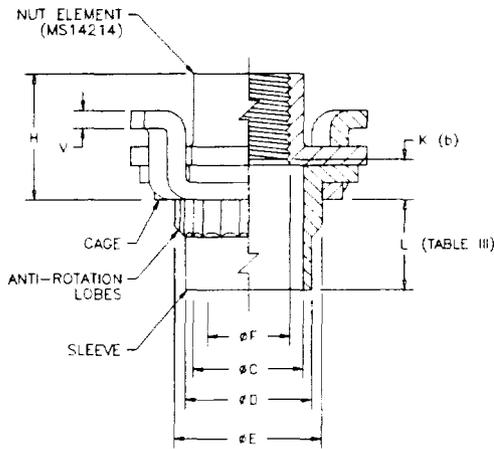
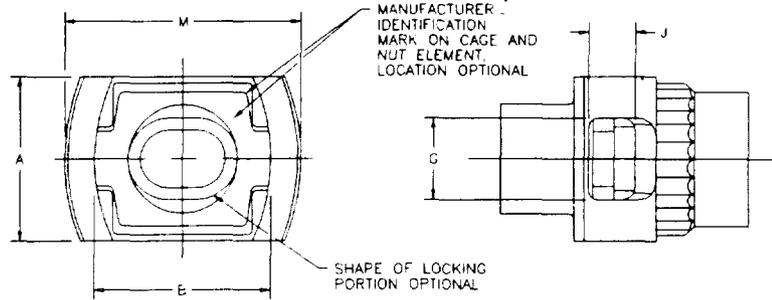
PREPARING ACTIVITY: DLA-IS CUSTODIANS: ARMY- AR NAVY- AS AIR FORCE- 11 DLA-	MILITARY SPECIFICATION SHEET TITLE NUT, FLOATING, SELF LOCKING, ATTACHED RETENTION ELEMENT (A.R.E.), 450°F, STEEL, 125 KSI F _{tu} , REPLACEABLE NUT ELEMENT, 1/84 OVERSIZE REPAIR	SPECIFICATION SHEET NUMBER MS14201 30 SEPT 94 REV A SUPERSEDING MS14201 21 DEC 83 AMSC- N/A FSC 5310
PROJECT NUMBER: 5310-2007 DISTRIBUTION STATEMENT A Approved for public release; distribution is unlimited.		Page <u>1</u> of <u>3</u>

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6. ILLUSTRATION:



7. TABLE J

SIZE DASH NO. (a)	THREAD SIZE MIL-S-8879	A MAX	B ±.010	ϕC MIN	ϕD MAX	ϕE		ϕF MIN	G ±.010	H MAX	J ±.010	K REF (b)	M MAX	V +.010 - .000	AXIAL STRENGTH LBS. MIN.
						MIN	MAX								
04	1120-40 UNJC-3B	.310	.318	.182	.217	.244	.250	.116	.155	.214	.064	.062	.435	.020	750
06	.1380-32 UNJC-3B	.310	.318	.182	.217	.244	.250	.142	.155	.214	.064	.062	.435	.020	1130
08	.1640-32 UNJC-3B	.405	.425	.235	.270	.309	.315	.168	.187	.270	.075	.068	.587	.025	1720
3	.1900-32 UNJF-3B	.405	.425	.235	.270	.309	.315	.194	.187	.270	.075	.068	.587	.025	2460
4	.2500-28 UNJF-3B	.465	.496	.300	.335	.375	.381	.254	.198	.325	.083	.089	.665	.035	4580

(a) ASSEMBLY DASH NO. IS THE SAME AS MS14214 NUT ELEMENT SIZE DASH NO.

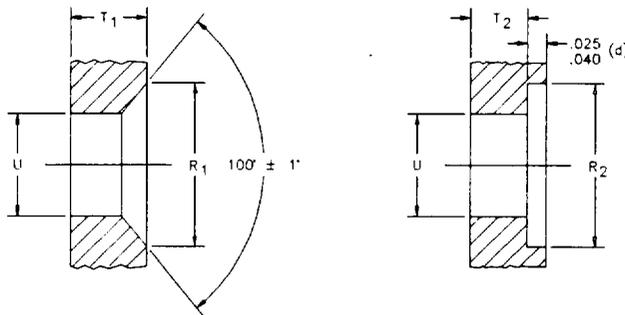
(b) K=(THREAD RELIEF, SLEEVE FLANGE AND CAGE THICKNESS)

PREPARING ACTIVITY: DLA-IS CUSTODIANS: ARMY- AR NAVY- AS AIR FORCE- 11 DLA- REVIEW: MI, AV, SH, 82, 99 USER: PROJECT NUMBER: 5310-2007	MILITARY SPECIFICATION SHEET TITLE NUT, FLOATING, SELF LOCKING, ATTACHED RETENTION ELEMENT (A.R.E.), 450°F. STEEL, 125 KSI F _{tu} , REPLACEABLE NUT ELEMENT, 1/64 OVERSIZE REPAIR	SPECIFICATION SHEET NUMBER MS14201 30 SEPT 94 REV A
		SUPERSEDING MS14201 21 DEC 83 AMSC- N/A FSC 5310
DISTRIBUTION STATEMENT A. Approved for public release, distribution is unlimited.		Page <u>2</u> of <u>3</u>

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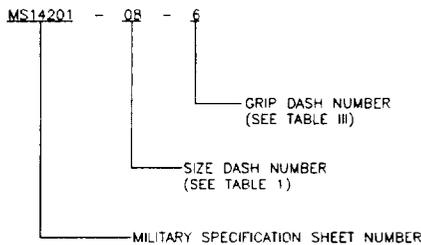
B. TABLE II

SIZE DASH NO.	(c) INSTALLATION HOLE LIMIT		R ₁ ± .005	R ₁ ± .005 (-2 GRIP) ONLY	R ₂ + .020 - .000	WEIGHT LBS/100 (f)
	MAX	MIN				
04	.238	.233	.307	.275	.312	.131
06	.238	.233	.307	.275	.312	.140
08	.300	.295	.370	.343	.375	.365
3 (e)	.300	.295	.370	.343	.375	.370
4 (e)	.367	.362	.437	N/A	.515	.682

9. TABLE III

GRIP DASH NUMBER	T ₁ GRIP THICKNESS (COUNTERSINK)	T ₂ GRIP THICKNESS (COUNTERSINK)	L LENGTH
2 (e)	.055-.073 (e)	N/A	.073
4	.074-.106	.031-.062 (e)	.099
6	.107-.133	.063-.094	.130
8	.134-.165	.095-.125	.161
10	.166-.196	.126-.156	.192
12	.197-.227	.157-.187	.223
14	.228-.258	.188-.218	.254
16	.259-.289	.219-.250	.285
18	.290-.320	.251-.281	.316
20	.321-.351	.282-.312	.347
22	.352-.382	.313-.343	.378
24	.383-.413	.344-.374	.409
26	.414-.444	.375-.405	.440
28	.445-.475	.406-.436	.471
30	.476-.506	.437-.467	.502

10. PART NUMBER EXAMPLE:



- (c) INSTALLATION MAXIMUM AND MINIMUM HOLE LIMITS CAN BE REDUCED BY .009 INCH FOR SIZE DASH NO. 08, 3 AND 4 WHEN INSTALLING IN SOFT MATERIALS, INCLUDING ALUMINUM ALLOYS WITH HARDNESS NOT EXCEEDING BHN 110 OR ROCKWELL B70.
- (d) COUNTERBORE IS OPTIONAL: TO BE USED IN APPLICATIONS REQUIRING SURFACE FLUSHNESS. FOR THE MINIMUM GRIP THICKNESS OF EACH GRIP DASH NO., COUNTERBORE CAN BE INCREASED TO .030 TO INSURE ROLLOVER FLUSHNESS.
- (e) NUT OF SIZE DASH NO. 4 SHALL NOT BE INSTALLED IN GRIP THICKNESS LESS THAN .060 INCH. ON THICKNESSES LESS THAN .060, THE HOLE DIAMETER FOR SIZE -3 SHALL BE .291-.296.
- (f) TO OBTAIN WEIGHTS FOR DIFFERENT GRIP DASH NOS., ADD INCREMENTS OF .010 LB. FOR SIZES 04 AND 06. ADD .020 LB. FOR SIZES 08, 3 AND 4.

11. ADMINISTRATIVE AND CONTRACTUAL PROVISIONS:

- (A) 11.1 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.
- (A) 11.2 UNLESS OTHERWISE SPECIFIED, ISSUES OF REFERENCED DOCUMENTS ARE THOSE IN EFFECT AT THE TIME OF SOLICITATION.
- 11.3 THE A.R.E. NUTS WITHOUT MANUFACTURER'S IDENTIFICATION MAY BE FURNISHED FROM MANUFACTURER'S STOCK UNTIL DECEMBER 31, 1985.
- 11.4 THE A.R.E. NUT ASSEMBLIES IDENTIFIED HEREIN ARE PROPRIETARY PRODUCTS OF DEUTSCH FASTNER CORPORATION AND ARE COVERED BY THE FOLLOWING PATENTS: U.S. 3,695,324 (EXPIRING OCTOBER 3, 1989); 3,765,078 (EXPIRING OCTOBER 6, 1990); FRANCE 72,11463 (EXPIRING APRIL 13, 1990); GERMANY 22 17 490 (EXPIRING MARCH 31, 1992). THE GOVERNMENT DOES NOT HAVE A ROYALTY FREE LICENSE.

PREPARING ACTIVITY: DLA-IS	MILITARY SPECIFICATION SHEET	SPECIFICATION SHEET NUMBER
CUSTODIANS: ARMY- AR NAVY- AS	TITLE	MS14201 30 SEPT 94 REV A
AIR FORCE- 11 DLA-	NUT, FLOATING, SELF LOCKING, ATTACHED RETENTION ELEMENT (A.R.E.), 450F, STEEL, 125 KSI Ftu, REPLACEABLE NUT ELEMENT, 1/64 OVERSIZE REPAIR	SUPERSEDING MS14201 21 DEC 83
REVIEW: MI, AV, SH, 82, 99		AMSC- N/A FSC 5310
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