

TABLE I - DIMENSIONS

FIRST DASH NO	THREAD SIZE	ØB NOM	C MAX	ØD + .000 - .004	E MAX	F + .005 - .000	INSTALL DRILL SIZE (REF)	INSTALL HOLE SIZE		KEYWAY DIMENSIONS	
								MAX	MIN	P + .003 - .000	H
04	.1120-40 UNC-3B	.263	.051	.155	.198	.054	5/32	.157	.155	.062	.046 - .048
06	.1380-32 UNC-3B	.323	.063	.189	.240	.054	NO. 12	.193	.189	.062	.056 - .058
08	.1640-32 UNC-3B	.355	.063	.221	.271	.054	NO. 2	.226	.221	.062	.056 - .058
3E	.1900-24 UNC-3B	.391	.065	.250	.302	.054	E	.256	.250	.062	.056 - .058
3	.1900-32 UNF-3B	.391	.065	.250	.302	.054	E	.256	.250	.062	.056 - .058
4E	.2500-20 UNC-3B	.529	.089	.332	.382	.054	Q	.338	.332	.062	.056 - .058
4	.2500-28 UNF-3B	.529	.089	.332	.382	.054	Q	.338	.332	.062	.056 - .058
5E	.3125-18 UNC-3B	.656	.104	.413	.505	.120	Z	.423	.413	.128	.097 - .102
5	.3125-24 UNF-3B	.656	.104	.413	.505	.120	Z	.423	.413	.128	.097 - .102
6E	.3750-16 UNC-3B	.770	.124	.490	.597	.120	12,5 MM	.500	.490	.128	.110 - .115
6	.3750-24 UNF-3B	.770	.124	.490	.597	.120	12,5 MM	.500	.490	.128	.110 - .115
8E	.5000-13 UNC-3B	.906	.124	.625	.733	.120	5/8	.635	.625	.128	.110 - .115
/5/ 8	.5000-20 UNF-3B	.906	.124	.625	.733	.120	5/8	.635	.625	.128	.110 - .115
8	.5000-20 UNF-3B	.998	.154	.640	.772	.151	41/64	.650	.640	.159	.135 - .140

MATERIAL:

- AL ALLOY - 5056-H32 (UNS A95056) OR 6053-T4 (UNS A96053) PER ASTM B316/B316M OR QQ-A-430 AS APPLICABLE (EXCEPT TEMPER). GRADE 6061-T6 OR 6061-T4 (UNS A96061) PER AMS-QQ-A-225/8 MAY BE USED WHEN REQUIRED.
- CARBON STEEL - GRADE 1008 (UNS G10080), 1010 (UNS G10100), 1108 (UNS G11080), OR 1110 (UNS G11100) PER ASTM A 576 AS APPLICABLE. 1215 (UNS G12150) PER ASTM A 108 MAY BE USED WHEN REQUIRED.
- CRES ALLOY STEEL - TYPE 430 (UNS S43000) PER ASTM A276 OR ASTM A580/A580M AS APPLICABLE. 4037 (UNS G40370) PER ASTM A752, ASTM A547.
- BRASS - ALLOY 260 (UNS C26000) OR 270 (UNS C27000) IN ACCORDANCE WITH ASTM B 134/B 134M.
- CRES (AUSTENITIC) - TYPE 316 (UNS S31600) PER ASTM A276.

11 COMPLETELY REVISED

THIRD ANGLE PROJECTION	CUSTODIAN NATIONAL AEROSPACE STANDARDS COMMITTEE	REVISION <b>11</b>
PROCUREMENT SPECIFICATION  NOTED	TITLE <b>NUT, BLIND RIVET, COUNTERSUNK HEAD, 11 INTERNAL THREAD, NON-LOCKING (FREE-RUNNING) AND SELF-LOCKING (PREVAILING TORQUE)</b>	CLASSIFICATION PART STANDARD <b>NAS1330</b> SHEET 1 OF 6

TABLE II - STRENGTH VALUES

DASH NO.	ULTIMATE THREAD STRENGTH* LBF MIN					
	AL	CARBON STEEL	430 CRES	ALLOY STEEL	BRASS	316 CRES
04	510	910	1270	1170	910	1270
06	650	1330	1670	1590	1330	1670
08	800	1660	1950	2570	1660	1950
3E & 3	1070	1850	3150	4130	1850	3150
4E & 4	1820	3500	4760	6590	3500	4760
5E & 5	2290	4330	6870	9040	4330	6870
6E & 6	3340	6840	8450	12700	6840	8450
8E & 8	4300	6900	10400		6900	10400
8	5550	12590				

\* TEST PER ASTM F606.

FINISH:

- AL ALLOY - ANODIZE PER MIL-A-8625, TYPE II, CLASS 1
- STEEL - CADMIUM PLATE PER AMS-QQ-P-416, TYPE II, CLASS 2.  
~~PARTS WITH CLASS 3 PLATING MAY BE FURNISHED FROM SUPPLIER'S STOCK UNTIL 15 SEPT. 1977.~~  
- ZINC PLATE PER ASTM B 633, FE/ZN 5, TYPE II. (NON-AIRFRAME APPLICATIONS ONLY)
- CRES - PICKLED AND PASSIVATED PER AMS2700, METHOD 1, CLASS 4
- ALLOY STEEL - CADMIUM PLATE PER AMS-QQ-P-416, TYPE II, CLASS 2
- BRASS - NONE

CODE:

DIAMETER AND GRIP RANGE AS TABULATED.

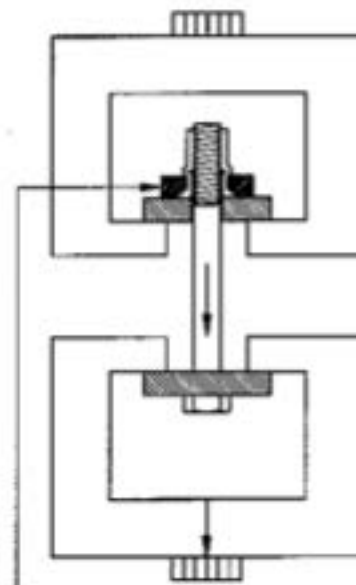
LETTER BETWEEN BASIC NUMBER AND FIRST DASH NUMBER INDICATES MATERIAL AND FINISH:

- "A" FOR ALUMINUM ALLOY
- "S" FOR CADMIUM PLATED CARBON STEEL
- "Z" FOR ZINC PLATED CARBON STEEL
- "H" FOR ALLOY STEEL
- "C" FOR TYPE 430 CRES MATERIAL
- "N" FOR TYPE 316 CRES MATERIAL
- "G" FOR BRASS

LETTER BETWEEN DASH NUMBERS INDICATES TYPE:

- "-" FOR KEYLESS OPEN END
- "K" FOR KEYED OPEN END
- "B" FOR KEYLESS CLOSED END
- "KB" FOR KEYED CLOSED END

ADD "L" TO PART NUMBER TO INDICATE THREAD LOCKING PER NASM25027 ON OPEN END, KEYED, ALLOY STEEL PARTS ONLY, FOR DASH NO 04 THRU 08, AND FINE THREAD SERIES NUTS 1900-32 & LARGER.



INSTALL TEST PART IN MID GRIP TEST PLATE - ANVILS & SCREW TO BE 45HRC MIN.

EXAMPLE OF PART NUMBER:

- NAS1330A3K166 = AL ALLOY, KEYED OPEN END, .1900-32 INTERNAL THREAD, .116 TO .166 GRIP RANGE.
- NAS1330C6EKB296 = 430 CRES, KEYED CLOSED END, .3750-16 INTERNAL THREAD, .211 TO .296 GRIP RANGE.
- NAS1330N4EB211 = 316 CRES, KEYLESS CLOSED END, .2500-20 INTERNAL THREAD, .151 TO .211 GRIP RANGE.
- NAS1330H3K166L = ALLOY STEEL, KEYED OPEN END, .1900-32 INTERNAL THREAD, .116 TO .166 GRIP RANGE, WITH THREAD LOCKING FEATURE.
- NAS1330Z5E-181 = CARBON STEEL, KEYLESS OPEN END, .3125-18 INTERNAL THREAD, .106 TO .181 GRIP RANGE, ZINC PLATED

NOTES:

- (1) DIMENSIONS IN INCHES AND APPLY AFTER FINISH UNLESS OTHERWISE SPECIFIED.
- (2) THREAD LOCKING TYPE MUST BE INSTALLED WITH A MODIFIED STUD (REDUCED PITCH DIAMETER AND O.D. ON FIRST FEW THREADS).
- /3/ IDENTIFY SELF-LOCKING TYPE NUT WITH "L" DEPRESSED .010 MAX (LOCATION OPTIONAL).
- /4/ MANUFACTURER'S IDENTIFICATION REQUIRED ON -4 (.2500) AND LARGER NUTS ONLY. ~~NUT SUPPLIERS MAY SUPPLY NUTS WITHOUT THE MANUFACTURER'S IDENTIFICATION UNTIL 1 JANUARY 1991.~~
- /5/ DASH 8 CONFIGURATIONS ARE DESIGNATED BY THE COMPLETE PART NUMBER. -226, -326, -426 AND -526 ARE Ø .625 PARTS, AND -276, -396, -516 AND -636 ARE Ø .640 PARTS.
- /6/ DIMENSIONS FOR COARSE AND FINE THREAD SERIES PARTS ARE THE SAME. FOR FIRST DASH NUMBER, SEE TABLE I
- (7) THIS STANDARD TAKES PRECEDENCE OVER DOCUMENTS REFERENCED HEREIN.
- (8) UNLESS OTHERWISE SPECIFIED, PART INVENTORY MANUFACTURED TO PREVIOUS REVISIONS OF THE APPLICABLE DRAWING OR SPECIFICATION MAY BE PROCURED AND USED UNTIL STOCK IS DEPLETED.
- (9) UNLESS OTHERWISE SPECIFIED HEREIN, REFERENCED DOCUMENTS SHALL BE THE ISSUE IN EFFECT ON DATE OF MANUFACTURE. HOWEVER, EXISTING MATERIAL INVENTORY CERTIFIED TO A PREVIOUS REVISION OF THE APPLICABLE MATERIAL SPECIFICATION(S) IS ACCEPTABLE FOR USE UNTIL DEPLETION
- (10) DIMENSIONING AND TOLERANCING PER ANSI Y14.5M-1982

PROCUREMENT SPECIFICATION:

NASM25027 FOR THREAD LOCKING TORQUE ONLY



TABLE III - PART NUMBERS AND DIMENSIONS

PART NUMBER	GRIP RANGE	IDENT MARK	OPEN END KEYED & KEYLESS		CLOSED END KEYLESS			CLOSED END KEYED		
			A ±.015	(M)	L ±.015	J NOM	K NOM	L ±.015	J NOM	K NOM
NAS1330-04-81	.050 - .081	BLACK	.370	.235	.525	.390	.235	.525	.390	.235
NAS1330-04-106	.081 - .106	1 RAD	.395	.235	.550	.390	.235	.550	.390	.235
NAS1330-04-131	.106 - .131	2 RAD	.420	.235	.575	.390	.235	.575	.390	.235
NAS1330-04-156	.131 - .156	3 RAD	.450	.235	.600	.390	.235	.600	.390	.235
NAS1330-04-181	.156 - .181	4 RAD	.475	.235	.625	.390	.235	.625	.390	.235
NAS1330-04-206	.181 - .206	5 RAD	.500	.235	.650	.390	.235	.650	.390	.235
NAS1330-06-106	.065 - .106	BLACK	.500	.325	.687	.510	.325	.812	.635	.425
NAS1330-06-161	.106 - .161	2 RAD	.500	.280	.687	.465	.280	.812	.590	.380
NAS1330-06-201	.161 - .201	4 RAD	.562	.295	.687	.420	.260	.812	.545	.335
NAS1330-06-241	.201 - .241	1 CIRC	.625	.315	.812	.505	.295	.812	.505	.295
NAS1330-06-281	.241 - .281	2 CIRC	.625	.270	.812	.465	.265	.812	.465	.265
NAS1330-06-321	.281 - .321	3 CIRC	.687	.290	.844	.455	.265	.844	.455	.265
NAS1330-08-106	.065 - .106	BLACK	.500	.325	.687	.510	.325	.812	.635	.425
NAS1330-08-161	.106 - .161	2 RAD	.500	.280	.687	.465	.280	.812	.590	.380
NAS1330-08-201	.161 - .201	4 RAD	.562	.290	.687	.415	.255	.812	.540	.330
NAS1330-08-241	.201 - .241	1 CIRC	.625	.310	.875	.560	.290	.875	.560	.290
NAS1330-08-281	.241 - .281	2 CIRC	.687	.325	.875	.515	.290	.875	.515	.290
NAS1330-08-321	.281 - .321	3 CIRC	.687	.295	.875	.485	.300	.875	.485	.300
NAS1330-3X-116	.065 - .116	BLACK	.578	.395	.828	.645	.395	.828	.645	.395
NAS1330-3X-166	.116 - .166	1 RAD	.625	.385	.875	.635	.385	.875	.635	.385
NAS1330-3X-216	.166 - .216	2 RAD	.687	.400	.938	.650	.400	.938	.650	.400
NAS1330-3X-266	.216 - .266	3 RAD	.734	.390	.984	.640	.390	.984	.640	.390
NAS1330-3X-316	.266 - .316	4 RAD	.781	.385	1.031	.635	.385	1.031	.635	.385
NAS1330-3X-366	.316 - .366	5 RAD	.844	.400	1.094	.650	.400	1.094	.650	.400
NAS1330-4X-151	.089 - .151	BLACK	.687	.440	1.000	.750	.435	1.000	.750	.435
NAS1330-4X-211	.151 - .211	1 RAD	.750	.440	1.062	.750	.435	1.062	.750	.435
NAS1330-4X-271	.211 - .271	2 RAD	.812	.440	1.125	.750	.435	1.125	.750	.435
NAS1330-4X-331	.271 - .331	3 RAD	.875	.435	1.187	.750	.435	1.187	.750	.435
NAS1330-4X-391	.331 - .391	4 RAD	.937	.435	1.250	.750	.435	1.250	.750	.435
NAS1330-4X-451	.391 - .451	5 RAD	1.000	.435	1.312	.760	.445	1.312	.760	.445
NAS1330-5X-181	.106 - .181	BLACK	.844	.540	1.218	.915	.540	1.218	.915	.540
NAS1330-5X-256	.181 - .256	1 RAD	.937	.560	1.312	.935	.560	1.312	.935	.560
NAS1330-5X-331	.256 - .331	2 RAD	1.000	.550	1.406	.955	.550	1.406	.955	.550
NAS1330-5X-406	.331 - .406	3 RAD	1.093	.565	1.468	.940	.565	1.468	.940	.565
NAS1330-5X-481	.406 - .481	4 RAD	1.156	.555	1.562	.960	.555	1.562	.960	.555
NAS1330-5X-556	.481 - .556	5 RAD	1.250	.575	1.625	.950	.575	1.625	.950	.575
NAS1330-6X-211	.125 - .211	BLACK	.938	.580	1.375	1.020	.655	1.375	1.020	.655
NAS1330-6X-296	.211 - .296	1 RAD	1.031	.590	1.468	1.030	.655	1.468	1.030	.655
NAS1330-6X-381	.296 - .381	2 RAD	1.125	.600	1.562	1.040	.675	1.562	1.040	.675
NAS1330-6X-466	.381 - .466	3 RAD	1.219	.615	1.656	1.050	.690	1.656	1.050	.690
NAS1330-6X-551	.466 - .551	4 RAD	1.312	.625	1.750	1.065	.705	1.750	1.065	.705
NAS1330-6X-636	.551 - .636	5 RAD	1.442	.650	1.859	1.090	.715	1.859	1.090	.715
NAS1330-8X-226	.125 - .226	BLACK	.984	.610	1.406	1.030	.610	1.406	1.030	.610
NAS1330-8X-326	.226 - .326	1 RAD	1.094	.620	1.515	1.040	.620	1.515	1.040	.620
NAS1330-8X-426	.326 - .426	2 RAD	1.218	.640	1.625	1.050	.640	1.625	1.050	.640
NAS1330-8X-526	.426 - .526	3 RAD	1.312	.635	1.750	1.075	.635	1.750	1.075	.635
NAS1330-8-276	<del>.156 - .276</del>	<del>BLACK</del>	<del>1.188</del>	<del>.725</del>	<del>1.781</del>	<del>1.320</del>	<del>.850</del>	<del>1.781</del>	<del>1.320</del>	<del>.850</del>
NAS1330-8-396	<del>.276 - .396</del>	<del>1 RAD</del>	<del>1.312</del>	<del>.730</del>	<del>1.906</del>	<del>1.325</del>	<del>.845</del>	<del>1.906</del>	<del>1.325</del>	<del>.845</del>
NAS1330-8-516	<del>.396 - .516</del>	<del>2 RAD</del>	<del>1.438</del>	<del>.735</del>	<del>2.031</del>	<del>1.330</del>	<del>.880</del>	<del>2.031</del>	<del>1.330</del>	<del>.880</del>
NAS1330-8-636	<del>.516 - .636</del>	<del>3 RAD</del>	<del>1.578</del>	<del>.750</del>	<del>2.172</del>	<del>1.350</del>	<del>.890</del>	<del>2.172</del>	<del>1.350</del>	<del>.890</del>

REVISION

11

**NAS1330**

SHEET 4

11 COMPLETELY REVISED

TABLE IV – MS27130/NAS1330 CROSS REFERENCE INDEX

MS27130 DASH NO	NAS1330 DASH NUMBER				MS27130 DASH NO	NAS1330 DASH NUMBER			
	AL	STEEL	CRES	BRASS		AL	STEEL	CRES	BRASS
81	A04-81	S04-81	C04-81		105	A4-151	S4-151	C4-151	
81K	A04K81	S04K81	C04K81		105K	A4K151	S4K151	C4K151	
82	A04-106	S04-106	C04-106		106	A4-211	S4-211	C4-211	
82K	A04K106	S04K106	C04K106		106K	A4K211	S4K211	C4K211	
83	A04-131	S04-131	C04-131		107	A4-271	S4-271	C4-271	
83K	A04K131	S04K131	C04K131		107K	A4K271	S4K271	C4K271	
84	A04-156	S04-156	C04-156		108	A4-331	S4-331	C4-331	
84K	A04K156	S04K156	C04K156		108K	A4K331	S4K331	C4K331	
85	A04-181	S04-181	C04-181		109	A4-391	S4-391	C4-391	
85K	A04K181	S04K181	C04K181		109K	A4K391	S4K391	C4K391	
86	A04-206	S04-206	C04-206		110	A4-451	S4-451	C4-451	
86K	A04K206	S04K206	C04K206		110K	A4K451	S4K451	C4K451	
87	A06-106	S06-106	C06-106		111	A5-181	S5-181	C5-181	
87K	A06K106	S06K106	C06K106		111K	A5K181	S5K181	C5K181	
88	A06-161	S06-161	C06-161		112	A5-256	S5-256	C5-256	
88K	A06K161	S06K161	C06K161		112K	A5K256	S5K256	C5K256	
89	A06-201	S06-201	C06-201		113	A5-331	S5-331	C5-331	
89K	A06K201	S06K201	C06K201		113K	A5K331	S5K331	C5K331	
90	A06-241	S06-241	C06-241		114	A5-406	S5-406	C5-406	
90K	A06K241	S06K241	C06K241		114K	A5K406	S5K406	C5K406	
91	A06-281	S06-281	C06-281		115	A5-481	S5-481	C5-481	
91K	A06K281	S06K281	C06K281		115K	A5K481	S5K481	C5K481	
92	A06-321	S06-321	C06-321		116	A5-556	S5-556	C5-556	
92K	A06K321	S06K321	C06K321		116K	A5K556	S5K556	C5K556	
93	A08-106	S08-106	C08-106		117	A6-211	S6-211	C6-211	
93K	A08K106	S08K106	C08K106		117K	A6K211	S6K211	C6K211	
94	A08-161	S08-161	C08-161		118	A6-296	S6-296	C6-296	
94K	A08K161	S08K161	C08K161		118K	A6K296	S6K296	C6K296	
95	A08-201	S08-201	C08-201		119	A6-381	S6-381	C6-381	
95K	A08K201	S08K201	C08K201		119K	A6K381	S6K381	C6K381	
96	A08-241	S08-241	C08-241		120	A6-466	S6-466	C6-466	
96K	A08K241	S08K241	C08K241		120K	A6K466	S6K466	C6K466	
97	A08-281	S08-281	C08-281		121	A6-551	S6-551	C6-551	
97K	A08K281	S08K281	C08K281		121K	A6K551	S6K551	C6K551	
98	A08-321	S08-321	C08-321		122	A6-636	S6-636	C6-636	
98K	A08K321	S08K321	C08K321		122K	A6K636	S6K636	C6K636	
99	A3-116	S3-116	C3-116		123	A8-226	S8-226	C8-226	
99K	A3K116	S3K116	C3K116		123K	A8K226	S8K226	C8K226	
100	A3-166	S3-166	C3-166		124	A8-326	S8-326	C8-326	
100K	A3K166	S3K166	C3K166		124K	A8K326	S8K326	C8K326	
101	A3-216	S3-216	C3-216		125	A8-426	S8-426	C8-426	
101K	A3K216	S3K216	C3K216		125K	A8K426	S8K426	C8K426	
102	A3-266	S3-266	C3-266		126	A8-526	S8-526	C8-526	
102K	A3K266	S3K266	C3K266		126K	A8K526	S8K526	C8K526	
103	A3-316	S3-316	C3-316						
103K	A3K316	S3K316	C3K316						
104	A3-366	S3-366	C3-366						
104K	A3K366	S3K366	C3K366						

TABLE IV - MS27130/NAS1330 CROSS REFERENCE INDEX (CONTINUED)

MS27130 DASH NO	NAS1330 DASH NUMBER				MS27130 DASH NO	NAS1330 DASH NUMBER			
	AL	STEEL	CRES	BRASS		AL	STEEL	CRES	BRASS
127	A3E-116	S3E-116	C3E-116		151	A8E-226	S8E-226	C8E-226	
127K	A3EK116	S3EK116	C3EK116		151K	A8EK226	S8EK226	C8EK226	
128	A3E-166	S3E-166	C3E-166		152	A8E-326	S8E-326	C8E-326	
128K	A3EK166	S3EK166	C3EK166		152K	A8EK326	S8EK326	C8EK326	
129	A3E-216	S3E-216	C3E-216		153	A8E-426	S8E-426	C8E-426	
129K	A3EK216	S3EK216	C3EK216		153K	A8EK426	S8EK426	C8EK426	
130	A3E-266	S3E-266	C3E-266		154	A8E-526	S8E-526	C8E-526	
130K	A3EK266	S3EK266	C3EK266		154K	A8EK526	S8EK526	C8EK526	
131	A3E-316	S3E-316	C3E-316						
131K	A3EK316	S3EK316	C3EK316						
132	A3E-366	S3E-366	C3E-366						
132K	A3EK366	S3EK366	C3EK366						
133	A4E-151	S4E-151	C4E-151						
133K	A4EK151	S4EK151	C4EK151						
134	A4E-211	S4E-211	C4E-211						
134K	A4EK211	S4EK211	C4EK211						
135	A4E-271	S4E-271	C4E-271						
135K	A4EK271	S4EK271	C4EK271						
136	A4E-331	S4E-331	C4E-331						
136K	A4EK331	S4EK331	C4EK331						
137	A4E-391	S4E-391	C4E-391						
137K	A4EK391	S4EK391	C4EK391						
138	A4E-451	S4E-451	C4E-451						
138K	A4EK451	S4EK451	C4EK451						
139	A5E-181	S5E-181	C5E-181						
139K	A5EK181	S5EK181	C5EK181						
140	A5E-256	S5E-256	C5E-256						
140K	A5EK256	S5EK256	C5EK256						
141	A5E-331	S5E-331	C5E-331						
141K	A5EK331	S5EK331	C5EK331						
142	A5E-406	S5E-406	C5E-406						
142K	A5EK406	S5EK406	C5EK406						
143	A5E-481	S5E-481	C5E-481						
143K	A5EK481	S5EK481	C5EK481						
144	A5E-556	S5E-556	C5E-556						
144K	A5EK556	S5EK556	C5EK556						
145	A6E-211	S6E-211	C6E-211						
145K	A6EK211	S6EK211	C6EK211						
146	A6E-296	S6E-296	C6E-296						
146K	A6EK296	S6EK296	C6EK296						
147	A6E-381	S6E-381	C6E-381						
147K	A6EK381	S6EK381	C6EK381						
148	A6E-466	S6E-466	C6E-466						
148K	A6EK466	S6EK466	C6EK466						
149	A6E-551	S6E-551	C6E-551						
149K	A6EK551	S6EK551	C6EK551						
150	A6E-636	S6E-636	C6E-636						
150K	A6EK636	S6EK636	C6EK636						