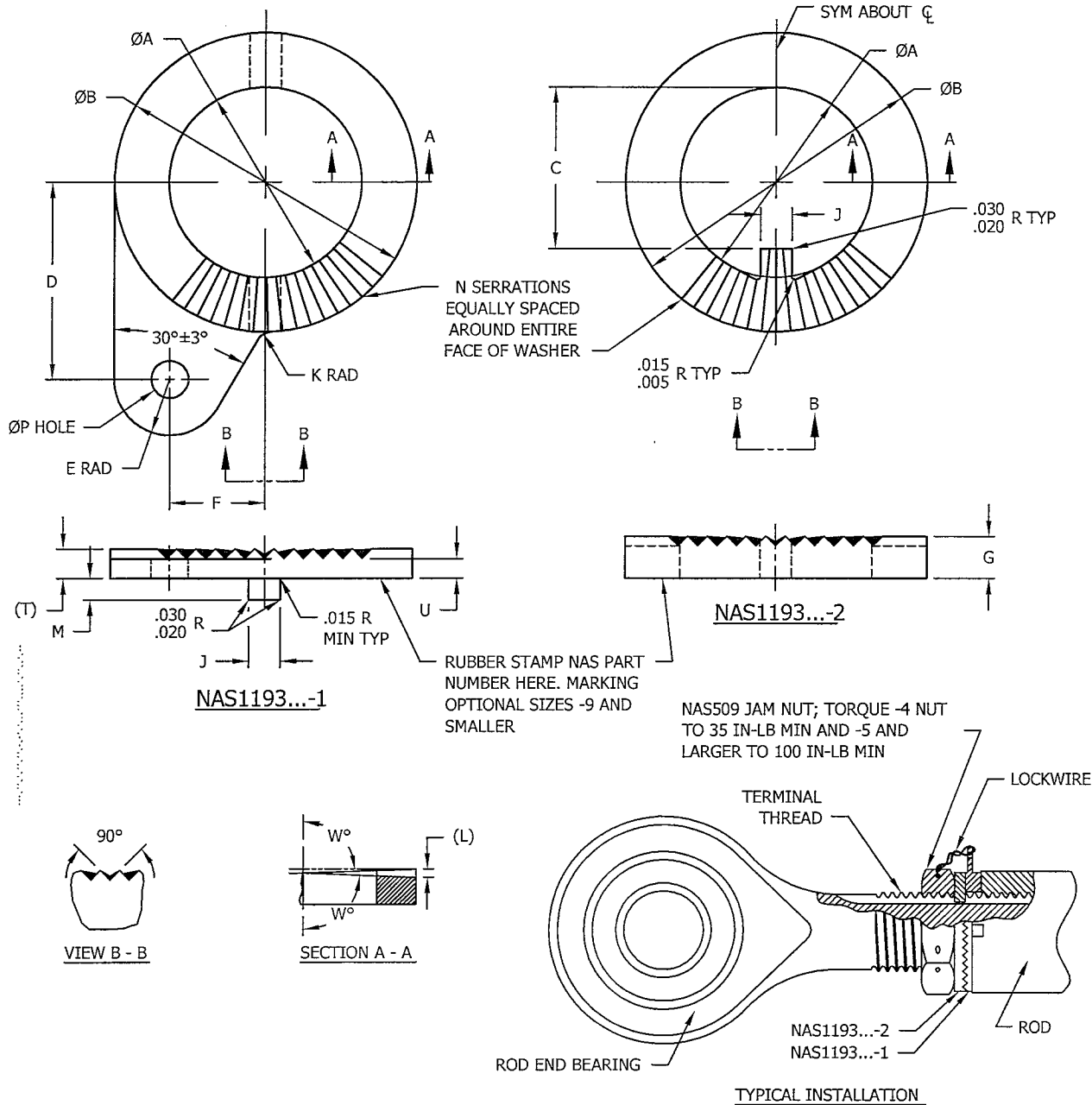


FED. SUPPLY CLASS
5340

AEROSPACE INDUSTRIES ASSOCIATION OF AMERICA, INC.
1000 WILSON BLVD.
ARLINGTON, VA 22209

THIS DRAWING SUPERSEDES ALL ANTECEDENT STANDARD DRAWINGS FOR THE SAME PRODUCT AND SHALL BECOME EFFECTIVE NO LATER THAN SIX MONTHS FROM THE LAST REVISION DATE.



REVISION DATE: JUNE 10, 2010

ISSUE DATE: SEPTEMBER 1958

⑨ COMPLETELY REVISED

THIRD ANGLE PROJECTION		CUSTODIAN NATIONAL AEROSPACE STANDARDS COMMITTEE	REVISION 9
PROCUREMENT SPECIFICATION NONE	TITLE LOCKING DEVICE, POSITIVE INDEX	CLASSIFICATION PART STANDARD NAS1193 SHEET 1 OF 4	

FIRST DASH NO.	TERMINAL THREAD SIZE REF	ØA	ØB +0.02 -0.00	C	D	E RAD	F	G ±.005	J ±.005	K RAD	(L)	M ±.005	N NUMBER OF SERRATIONS	ØP	(T)	U ±.005	W° ±30'
4	.2500-28	.260±.005	.44	.211	+.000 -.005	.330	.093	.127	.070	.052	.026	.019	.036	36	.062	.043	.022 87°30'
5	.3125-24	.323±.005	.50	.270		.330	.093	.157	.070	.052	.026	.018	.036	42	.062	.043	.023 87°51'
6	.3750-24	.385±.005	.56	.321		.335	.093	.187	.070	.082	.041	.021	.036	42	.062	.043	.022 87°51'
7	.4375-20	.448±.005	.63	.380		.360	.093	.222	.080	.082	.041	.020	.049	50	.062	.043	.023 88°12'
8	.5000-20	.510±.005	.75	.446		.440	.093	.282	.080	.082	.041	.024	.049	50	.062	.055	.031 88°12'
9	.5625-18	.575±.008	.88	.488		.510	.093	.347	.090	.114	.057	.025	.057	56	.071	.055	.031 89°50'
10	.6250-18	.638±.008	1.00	.551	+.000 -.010	.580	.106	.394	.090	.114	.057	.028	.057	56	.071	.062	.034 89°50'
12	.7500-16	.763±.008	1.12	.678		.604	.106	.454	.100	.114	.057	.028	.057	64	.071	.062	.034 89°51'
14	.8750-14	.888±.008	1.31	.792		.698	.120	.535	.100	.142	.071	.029	.066	72	.080	.062	.033 89°53'
A16	1.0000-14	1.015±.010	1.50	.915		.715	.135	.615	.100	.142	.071	.033	.074	72	.090	.078	.044 89°53'
16	1.0000-12	1.015±.010	1.50	.915		.715	.135	.615	.100	.142	.071	.028	.074	84	.090	.072	.044 89°54'
18	1.1250-12	1.140±.010	1.62	1.030		.836	.135	.675	.100	.174	.087	.030	.074	84	.090	.078	.048 89°54'
20	1.2500-12	1.265±.010	1.75	1.156	+.000 -.015	.942	.168	.707	.100	.174	.087	.033	.096	84	.112	.081	.048 89°54'
22	1.3750-12	1.390±.010	1.88	1.256		.982	.168	.772	.100	.236	.118	.035	.096	84	.112	.081	.043 89°54'
24	1.5000-12	1.515±.010	2.00	1.381		1.026	.168	.832	.100	.236	.118	.038	.096	84	.112	.081	.043 89°54'
26	1.6250-12	1.640±.010	2.12	1.502		1.080	.175	.888	.100	.236	.118	.040	.109	84	.125	.083	.043 89°54'
28	1.7500-12	1.765±.010	2.25	1.615		1.130	.175	.950	.100	.298	.149	.042	.109	84	.125	.085	.043 89°54'
30	1.8750-12	1.890±.010	2.38	1.740		1.165	.175	1.013	.100	.298	.149	.045	.109	84	.125	.088	.043 89°54'
32	2.0000-12	2.015±.010	2.63	1.865	+.000 -.020	1.255	.175	1.138	.100	.298	.149	.049	.109	84	.125	.092	.043 89°54'
34	2.1250-12	2.140±.010	2.75	1.980		1.293	.175	1.200	.100	.298	.149	.051	.109	84	.125	.094	.043 89°54'
36	2.2500-12	2.265±.010	2.88	2.105		1.328	.175	1.263	.100	.298	.149	.054	.109	84	.125	.097	.043 89°54'

MATERIAL:

/8/ NO CODE: — STEEL INVESTMENT CASTING TYPE 410 PER SPECIFICATION AMS5350 EXCEPT FOR HEAT TREAT. FOR USE UP TO 450°F.

"K" CODE – 17-4PH CORROSION RESISTANT STEEL INVESTMENT CASTING, 180-200 KSI. HEAT TREAT PER AMS5355. FOR USE UP TO 800°F.

"E" CODE – 17-4PH CORROSION RESISTANT STEEL INVESTMENT CASTING, 150-170 KSI. HEAT TREAT PER AMS5343. FOR USE UP TO 800°F.

HEAT TREATMENT:

/8/ NO CODE: TYPE 410 MATERIAL, 180,000-200,000 PSI PER AMS H 6875

"K" CODE – 17-4PH CRES - 180-200 KSI PER AMS5355 EXCEPT HARDNESS NOT TO EXCEED ROCKWELL C44 MAX.

"E" CODE – 17-4PH CRES - 150-170 KSI PER AMS5343 EXCEPT HARDNESS NOT TO EXCEED ROCKWELL C40 MAX.

FINISH:

/8/ TYPE 410 MATERIAL, CADMIUM PLATE PER AMS-QQ-P-416 TYPE II, CLASS 2, PARTS WITH CLASS 3 PLATING MAY BE FURNISHED UNTIL _____.

17-4PH CRES: NO CODE - NONE

"P" CODE - CADMIUM PLATE PER AMS-QQ-P-416 TYPE II, CLASS 2

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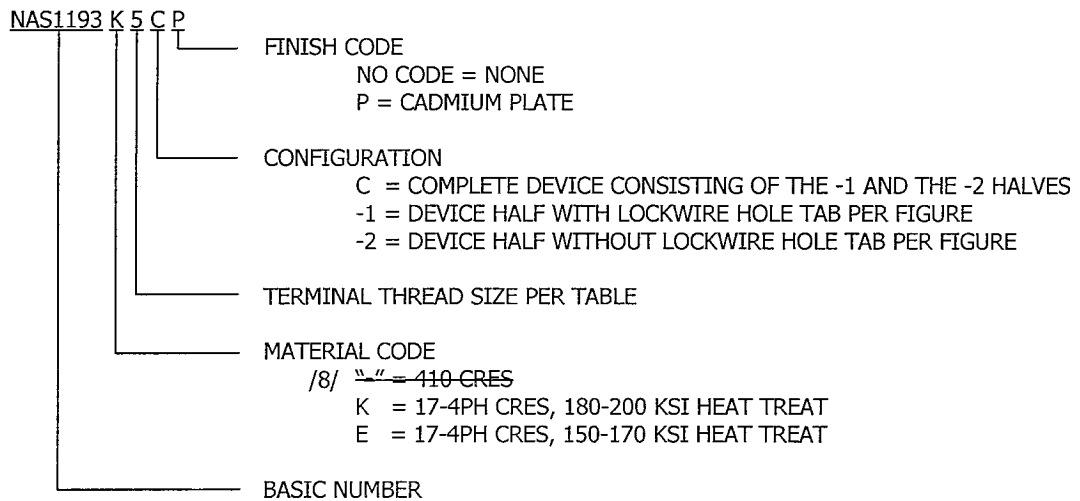
NAS1193

SHEET 2

CODE:

- /8/ NO CODE LETTER (A DASH) FOLLOWING BASIC PART NUMBER DESIGNATES TYPE 410 MATERIAL FOR USE UP TO 450°F.
 "K" FOLLOWING BASIC PART NUMBER DESIGNATES 17-4PH MATERIAL 180-200 KSI HEAT TREAT FOR USE UP TO 800°F.
 "E" FOLLOWING BASIC PART NUMBER DESIGNATES 17-4PH MATERIAL 150-170 KSI HEAT TREAT FOR USE UP TO 800°F.
 FIRST DASH NUMBER DESIGNATES TERMINAL THREAD SIZE AS DESIGNATED IN TABLE.
 "C" FOLLOWING THE FIRST DASH NUMBER DESIGNATES A COMPLETE LOCKING DEVICE CONSISTING OF THE -1 AND -2 HALVES.
 THE SECOND DASH NUMBER DESIGNATES LOCKING DEVICE HALF AS SHOWN IN FIGURE AND AS DIMENSIONED IN TABLE.
 THE SUFFIX LETTER "P" FOLLOWING THE "C" CODE OR SECOND DASH NUMBER DESIGNATES CADMIUM PLATE FINISH FOR USE UP TO 400°F.

EXAMPLE OF PART NUMBER:



/8/ ~~NAS1193-5C = A POSITIVE INDEXING DEVICE ASSEMBLY OF THE TYPE 410 MATERIAL FOR USE ON A .3125-24 THREADED TERMINAL AND CONSISTING OF AN NAS1193-5-1 HALF AND AN NAS1193-5-2 HALF.~~

NAS1193K5C = A POSITIVE INDEXING LOCKING DEVICE ASSEMBLY OF 17-4PH CRES, 180-200 KSI HEAT TREAT, FOR USE ON A .3125-24 THREADED TERMINAL AND CONSISTING OF AN NAS1193K5-1 HALF AND AN NAS1193K5-2 HALF.

NAS1193K5CP = A POSITIVE INDEXING LOCKING DEVICE ASSEMBLY OF CADMIUM PLATED 17-4PH CRES, 180-200 KSI HEAT TREAT, FOR USE ON A .3125-24 THREADED TERMINAL AND CONSISTING OF AN NAS1193K5-1P HALF AND AN NAS1193K5-2P HALF.

NAS1193K5-1 = A POSITIVE INDEXING LOCK WASHER HALF OF THE CONFIGURATION AS SHOWN IN FIGURE, 17-4PH CRES, 180-200 KSI HEAT TREAT, FOR USE WITH A .3125-24 THREADED TERMINAL.

NAS1193K5-2 = A POSITIVE INDEXING LOCK WASHER HALF OF THE CONFIGURATION AS SHOWN IN FIGURE, 17-4PH CRES, 180-200 KSI HEAT TREAT, FOR USE WITH A .3125-24 THREADED TERMINAL.

NAS1193E5C = A POSITIVE INDEXING LOCKING DEVICE ASSEMBLY OF 17-4PH CRES, 150-170 KSI HEAT TREAT, FOR USE ON A .3125-24 THREADED TERMINAL AND CONSISTING OF AN NAS1193E5-1 HALF AND AN NAS1193E5-2 HALF.

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NAS1193

SHEET 3

NOTES:

- (1) THIS LOCKING DEVICE IS INTENDED FOR USE WITH THE NAS509 JAM NUT OF AN EQUIVALENT DASH NUMBER WHERE CLOSE LINEAR TOLERANCES OR CLOSE ADJUSTMENT TO WITHIN .001 INCH OF ROD END LENGTH IS REQUIRED.
- (2) BREAK ALL SHARP EDGES EXCEPT AS NOTED.
- (3) TRIM GATES FLUSH.
- (4) SURFACE FINISH C-12 ALL OVER PER NAS823.
- (5) PENETRANT INSPECT PER MIL-C-6021 AMS2175 FOR CLASS 2 NON-MAGNETIC MATERIAL.
- (6) FOR PISTON ROD AND KEYWAY DETAIL, SEE NAS513.
- (7) DIMENSIONS IN INCHES AND ARE TO BE MET BEFORE CADMIUM PLATING.
- /8/ THE NO CODE (TYPE 410 MATERIAL) PARTS ARE INACTIVE FOR DESIGN AFTER 29 SEPT. 1973 AND ARE SUPERSEDED BY "K" CODE PARTS. FOR DESCRIPTION OF STATUS NOTES, SEE NAS380.
- (9) TOLERANCES UNLESS OTHERWISE SPECIFIED:
CASTING TOLERANCES $\pm .005$ /IN.
ANGULAR TOLERANCES $\pm 30'$.
CORE LOCATION AND DIMENSIONS $\pm 30'$ OR $\pm .01$.
- (10) THIS STANDARD TAKES PRECEDENCE OVER DOCUMENTS REFERENCED HEREIN.
- (11) REFERENCED DOCUMENTS SHALL BE THE ISSUE IN EFFECT ON DATE OF INVITATIONS FOR BID.
- (12) UNLESS OTHERWISE SPECIFIED, PART INVENTORY MANUFACTURED TO PREVIOUS REVISIONS OF THE APPLICABLE DRAWING OR SPECIFICATION MAY BE PROCURED AND USED UNTIL STOCK IS DEPLETED.
- (13) DIMENSIONING AND TOLERANCING PER ANSI Y14.5M-1982.

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NAS1193

SHEET 4