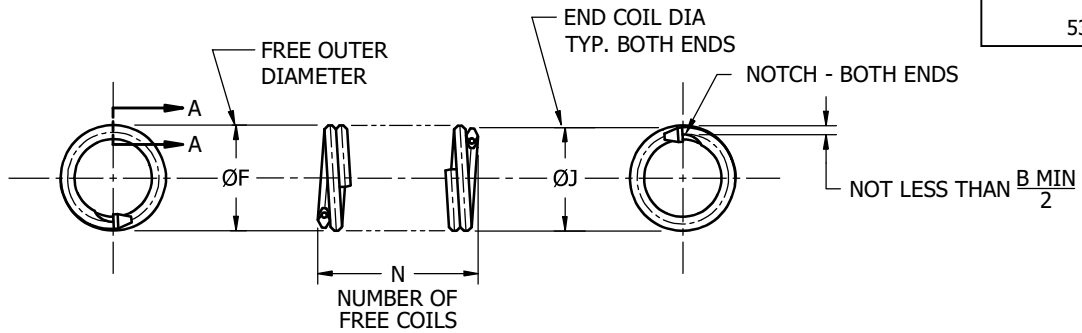
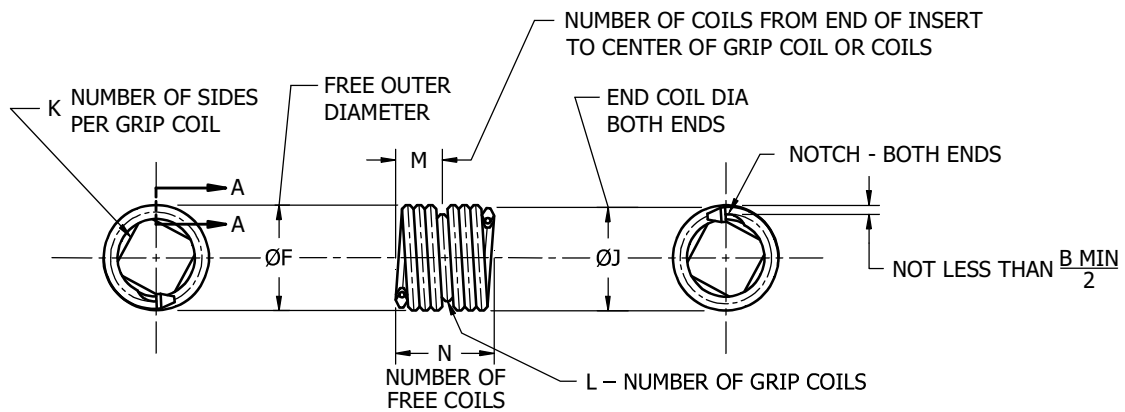


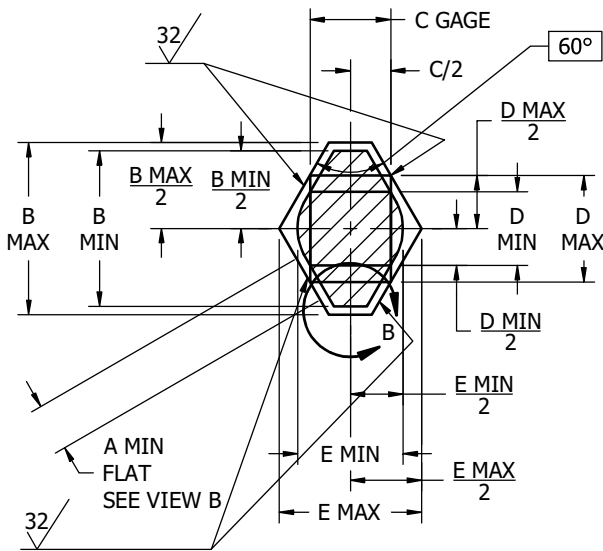
FED. SUPPLY CLASS  
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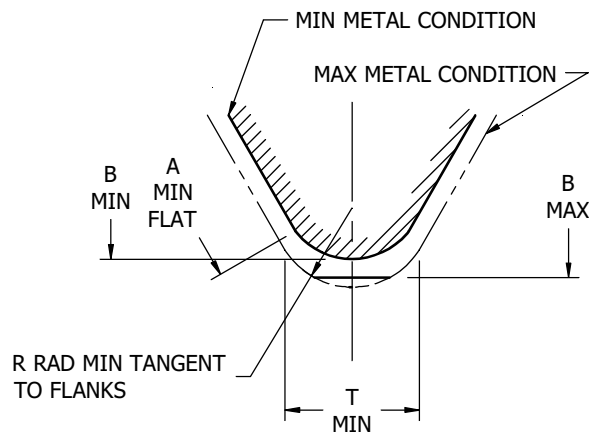
INSERT, TANGLESS, FREE RUNNING



INSERT, TANGLESS, SELF-LOCKING

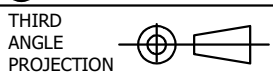


SECTION A-A



ENLARGED VIEW B

④ COMPLETELY REVISED



PROCUREMENT SPECIFICATION  
**NASM8846**

CUSTODIAN  
NATIONAL AEROSPACE STANDARDS COMMITTEE

TITLE  
**INSERT, SCREW THREAD, HELICAL COIL, FREE RUNNING AND SELF-LOCKING, TANGLESS** ④

REVISION  
**4**

CLASSIFICATION  
PART STANDARD  
**NAS1130**  
SHEET 1 OF 4

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

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FORM 05-01

REVISION DATE: AUGUST 26, 2011

ISSUE DATE: OCTOBER 2006

TABLE I – DIMENSIONS

NOMINAL THREAD SIZE	A MIN	B		C GAGE	D		E		ØF		ØJ MIN	K	L	R RAD MIN	T MIN
		MIN	MAX		MIN	MAX	MIN	MAX	MIN	MAX					
.0860-56	.0027	.0163	.0193	.00893	.0112	.0116	.0126	.0156	.110	.119	.107	4	1	.0032	.0056
.1120-40	.0068	.0241	.0271	.0125	.01584	.01624	.0189	.0219	.144	.159	.141	4	1	.0045	.0078
.1380-32	.0076	.0295	.0338	.01563	.01985	.02030	.0233	.0273	.178	.193	.174	4	1	.0056	.0098
.1640-32	.0076	.0295	.0338	.01563	.01985	.02030	.0233	.0273	.205	.220	.200	4	1	.0056	.0098
.1900-24	.0120	.0410	.0449	.02083	.02656	.02706	.0305	.0365	.244	.259	.237	4	1	.0075	.0130
.1900-32	.0076	.0295	.0338	.01563	.01985	.02030	.0233	.0273	.236	.256	.226	5	1	.0056	.0098
.2500-20	.0164	.0500	.0540	.02500	.03198	.03248	.0378	.0438	.310	.330	.307	5	1	.0090	.0156
.2500-28	.0085	.0347	.0387	.01786	.02270	.02320	.0253	.0313	.306	.326	.291	5	1	.0064	.0112
.3125-18	.0176	.0560	.0600	.02778	.03558	.03608	.0416	.0486	.380	.400	.377	5	1	.0100	.0174
.3125-24	.0120	.0410	.0449	.02083	.02656	.02706	.0305	.0365	.380	.400	.362	6	2	.0075	.0130
.3750-16	.0215	.0636	.0677	.03125	.04009	.04059	.0477	.0547	.452	.472	.448	6	1	.0113	.0195
.3750-24	.0120	.0410	.0449	.02083	.02656	.02706	.0305	.0365	.448	.468	.424	6	2	.0075	.0130

MATERIAL:

CRES – TYPE 304 (UNS S30400) PER AS7245.

FINISH:

CADMIUM PLATED IN ACCORDANCE WITH AMS-QQ-P-416, TYPE II, THICKNESS SHALL BE A MAXIMUM OF .0001.  
AS A MINIMUM, ALL SURFACES SHALL SHOW VISUAL EVIDENCE OF CADMIUM PLATING.

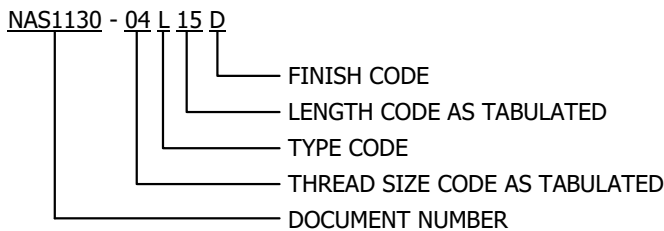
LUBRICATION:

DRY FILM LUBRICANT IN ACCORDANCE WITH AS5272, TYPE I.

CODE:

FIRST DASH NUMBER DESIGNATES INSERT THREAD SIZE AS TABULATED ("C" INDICATES COARSE THREAD AND "F" INDICATES FINE THREAD PER TABLE I).  
NO LETTER AFTER THE FIRST DASH NUMBER DESIGNATES FREE RUNNING.  
ADD "L" AFTER THE FIRST DASH NUMBER TO DESIGNATE SELF-LOCKING.  
SECOND DASH NUMBER DESIGNATES LENGTH AS TABULATED.  
NO LETTER AFTER THE SECOND DASH NUMBER DESIGNATES NO FINISH.  
ADD "D" AFTER THE SECOND DASH NUMBER TO DESIGNATE DRY FILM LUBRICANT.  
ADD "P" AFTER THE SECOND DASH NUMBER TO DESIGNATE CADMIUM PLATE.

EXAMPLES OF PART NUMBERS:



REVISION <b>4</b>
<b>NAS1130</b> SHEET 2

④ COMPLETELY REVISED

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EXAMPLES OF PART NUMBERS (CONT):

- NAS1130-04-15 = A TANGLESS, FREE RUNNING, CRES INSERT, THREAD SIZE .1120-40, 1.5xDIA NOMINAL LENGTH.
- NAS1130-06L20 = A TANGLESS, SELF-LOCKING, CRES INSERT, THREAD SIZE .1380-32, 2.0xDIA NOMINAL LENGTH.
- NAS1130-3L25D = A TANGLESS, SELF-LOCKING, CRES INSERT WITH DRY FILM LUBRICANT, THREAD SIZE .1900-32, 2.5xDIA NOMINAL LENGTH.
- NAS1130-3CL10P = A TANGLESS, SELF-LOCKING, CRES INSERT WITH CADMIUM PLATE, THREAD SIZE .1900-24, 1.0xDIA NOMINAL LENGTH.

NOTES:

- /1/ NOMINAL LENGTH EQUALS MINIMUM THROUGH HOLE LENGTH WITHOUT COUNTERSINK AND WITH INSERT LOCATED 1/4 TO 1/2 THREAD PITCH BELOW TOP SURFACE.
- /2/ THE NUMBER OF FREE COILS OF THE INSERT IS COUNTED FROM NOTCH TO NOTCH.
- (3) THE INSERT, WHEN ASSEMBLED IN A TAPPED HOLE AS SPECIFIED IN NASM33537, SHALL PRODUCE A FINISHED THREAD MEETING THE REQUIREMENTS OF FED-STD-H28/2 AND SHALL ACCEPT EXTERNAL THREADED PARTS WHICH CONFORM TO MIL-S-7742 OR AS8879. THE EXCEPTIONS TO NASM33537 INCLUDE: INSTALLATION IS PERFORMED WITH THE NOTCH AT EITHER END OF THE INSERT INSTEAD OF A TANG, AND CONSEQUENTLY, A TANG DOES NOT HAVE TO BE REMOVED AFTER INSTALLATION. ON NASM33537 A TANGLESS INSERT IS THE EQUIVALENT TO THE TANGED INSERT WITH THE TANG REMOVED AFTER INSTALLATION.
- (4) SURFACE ROUGHNESS: 32 MICROINCHES RA PER ASME B46.1. SURFACE TEXTURE SYMBOLS SHALL BE IN ACCORDANCE WITH ASME Y14.36M.
- (5) DIMENSIONS IN INCHES AND APPLY AFTER FINISH AND PRIOR TO THE APPLICATION OF LUBRICATION UNLESS OTHERWISE SPECIFIED.
- (6) INSERT COLOR IDENTIFICATION:  
 NO FINISH, FREE RUNNING: ..... NONE  
 NO FINISH, LOCKING: ..... RED (DYE)  
 DRY FILM LUBRICATED, FREE RUNNING: ... DARK GRAY  
 DRY FILM LUBRICATED, LOCKING: ..... DARK GRAY  
 CADMIUM PLATED, FREE RUNNING: ..... IRIDESCENT BRONZE OR YELLOW (CHROMATE)  
 CADMIUM PLATED, LOCKING: ..... OLIVE DRAB (CHROMATE)
- (7) SIZES .1900-24, .2500-20, .3125-18 AND .3750-16 ARE NOT MIL-S-7742 AND AS8879 PREFERRED SIZES.
- (8) THIS STANDARD TAKES PRECEDENCE OVER DOCUMENTS REFERENCED HEREIN.
- (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/ THE ASSEMBLED LENGTH OF THE INSERT IS SPECIFIED ON NASM33537.
- (11) TOLERANCES UNLESS OTHERWISE SPECIFIED: DECIMALS ± .010, ANGLES ± 5°.
- (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.

④ COMPLETELY REVISED

REVISION <b>4</b>
<b>NAS1130</b> SHEET 3

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TABLE II – LENGTHS

NOMINAL THREAD SIZE	1.0xDIA NOMINAL LENGTH					1.5xDIA NOMINAL LENGTH				
	THREAD SIZE AND LENGTH DASH NO.	LENGTH (REF) /1/	WEIGHT LB/100	M COIL ±1	N COIL ±.25 /2/ /10/	THREAD SIZE AND LENGTH DASH NO.	LENGTH (REF) /1/	WEIGHT LB/100	M COIL ±1	N COIL ±.25 /2/ /10/
.0860-56	02-10	.086	.0051	1.500	3.000	02-15	.129	.0084	2.625	5.250
.1120-40	04-10	.112	.0121	1.375	2.750	04-15	.168	.0196	2.375	4.750
.1380-32	06-10	.138	.0243	1.375	2.750	06-15	.207	.0384	2.375	4.750
.1640-32	08-10	.164	.0355	1.750	3.500	08-15	.246	.0556	3.000	6.000
.1900-24	3C-10	.190	.0573	1.4375	2.875	3C-15	.285	.0899	2.500	5.000
.1900-32	3-10	.190	.0474	2.0625	4.125	3-15	.285	.0784	3.4375	6.875
.2500-20	4-10	.250	.145	1.6875	3.375	4-15	.375	.196	2.875	5.750
.2500-28	4F-10	.250	.109	2.500	5.000	4F-15	.375	.155	4.125	8.250
.3125-18	5C-10	.3125	.232	2.000	4.000	5C-15	.469	.369	3.3125	6.625
.3125-24	5F-10	.3125	.180	2.750	5.500	5F-15	.469	.284	4.4375	8.875
.3750-16	6C-10	.375	.391	2.1875	4.375	6C-15	.562	.625	3.625	7.250
.3750-24	6F-10	.375	.259	3.4375	6.875	6F-15	.562	.420	5.500	11.000
NOMINAL THREAD SIZE	2.0xDIA NOMINAL LENGTH					2.5xDIA NOMINAL LENGTH				
	THREAD SIZE AND LENGTH DASH NO.	LENGTH (REF) /1/	WEIGHT LB/100	M ±1 COIL	N COIL ±.25 /2/ /10/	THREAD SIZE AND LENGTH DASH NO.	LENGTH (REF) /1/	WEIGHT LB/100	M COIL ±1	N COIL ±.25 /2/ /10/
.0860-56	02-20	.172	.0117	3.6875	7.375	02-25	.215	.015	4.8125	9.625
.1120-40	04-20	.224	.0272	3.375	6.750	04-25	.280	.0348	4.4375	8.875
.1380-32	06-20	.276	.0525	3.4375	6.875	06-25	.345	.0666	4.4375	8.875
.1640-32	08-20	.328	.0776	4.1875	8.375	08-25	.410	.1008	5.375	10.750
.1900-24	3C-20	.380	.133	3.5625	7.125	3C-25	.475	.172	4.625	9.250
.1900-32	3-20	.380	.112	4.750	9.500	3-25	.475	.140	6.000	12.000
.2500-20	4-20	.500	.308	4.000	8.000	4-25	.625	.385	5.1875	10.375
.2500-28	4F-20	.500	.212	5.6875	11.375	4F-25	.625	.276	7.250	14.500
.3125-18	5C-20	.625	.510	4.625	9.250	5C-25	.781	.658	5.9375	11.875
.3125-24	5F-20	.625	.397	6.125	12.250	5F-25	.781	.490	7.8125	15.625
.3750-16	6C-20	.750	.862	5.000	10.000	6C-25	.938	1.064	6.4375	12.875
.3750-24	6F-20	.750	.553	7.500	15.000	6F-25	.938	.709	9.5625	19.125
NOMINAL THREAD SIZE	3.0xDIA NOMINAL LENGTH									
	THREAD SIZE AND LENGTH DASH NO.	LENGTH (REF) /1/	WEIGHT LB/100	M COIL ±1	N COIL ±.25 /2/ /10/					
.0860-56	02-30	.258	.0183	5.9375	11.875					
.1120-40	04-30	.336	.0423	5.4375	10.875					
.1380-32	06-30	.414	.0807	5.375	10.750					
.1640-32	08-30	.492	.125	6.625	13.250					
.1900-24	3C-30	.570	.219	5.6875	11.375					
.1900-32	3-30	.570	.170	7.4375	14.875					
.2500-20	4-30	.750	.490	6.375	12.750					
.2500-28	4F-30	.750	.338	8.8125	17.625					
.3125-18	5C-30	.938	.806	7.3125	14.625					
.3125-24	5F-30	.938	.602	9.500	19.000					
.3750-16	6C-30	1.125	1.316	7.875	15.750					
.3750-24	6F-30	1.125	.862	11.5625	23.125					

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REVISION <b>4</b>
<b>NAS1130</b> SHEET 4