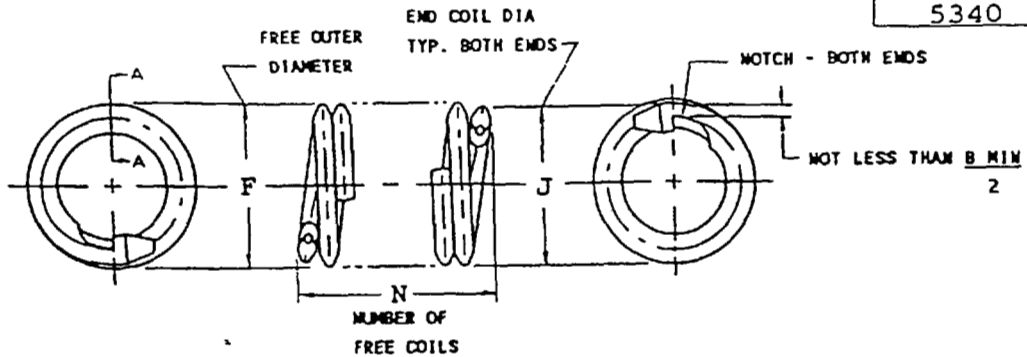
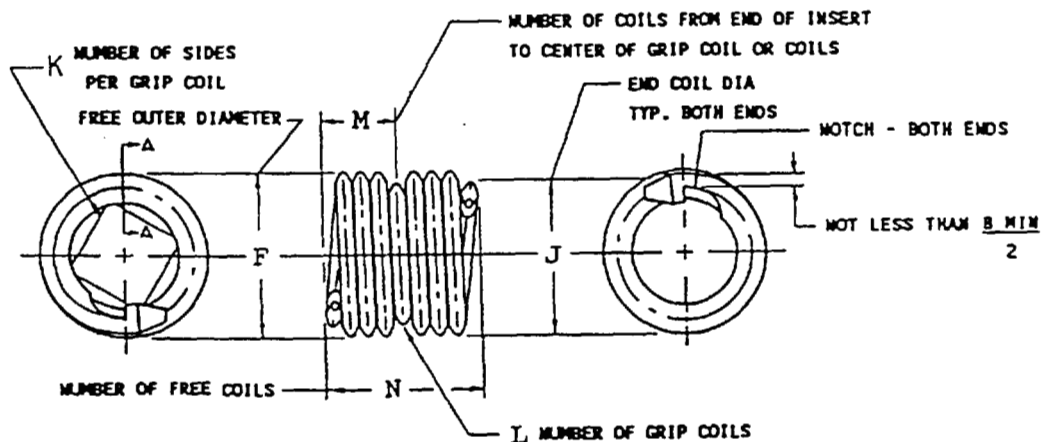
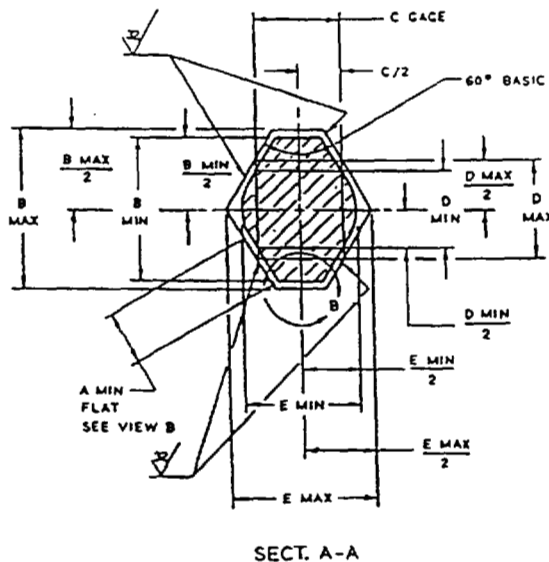




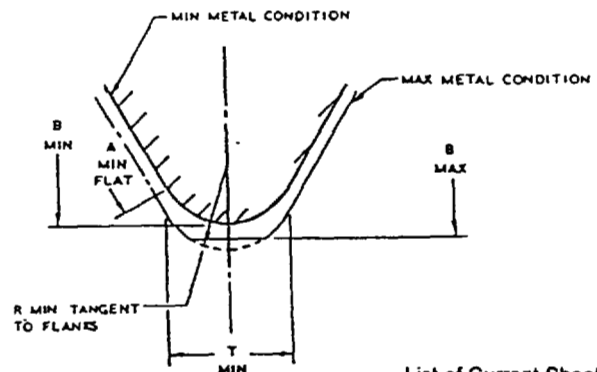
INSERT, TANGLESS, FREE RUNNING



INSERT, TANGLESS, SELF-LOCKING



SECT. A-A



ENLARGED VIEW B

List of Current Sheets

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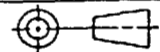
CUSTODIAN NATIONAL AEROSPACE STANDARDS COMMITTEE

PROCUREMENT SPECIFICATION ②

MIL-I-8846

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

THIRD ANGLE PROJECTION



CLASSIFICATION
STANDARD PART

NAS1130

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TABLE 1 - DIMENSIONS

1 DIAMETER NOMINAL LENGTH						1.5 DIAMETER NOMINAL LENGTH				
NOMINAL THREAD SIZE	THREAD SIZE AND LENGTH DASH NO	LENGTH (REF) (1.)	WEIGHT LB/100	M ±1 COIL	N ±.25 COIL (2)(10.)	THREAD SIZE AND LENGTH DASH NO	LENGTH (REF) (1.)	WEIGHT LB/100	M ±1 COIL	N ±.25 COIL (2.) (10)
.086-56	-02-10	.086	.0051	1.500	3.000	-02-15	.129	.0084	2.625	5.250
.112-40	-04-10	.112	.0121	1.375	2.750	-04-15	.168	.0196	2.375	4.750
.138-32	-06-10	.138	.0243	1.375	2.750	-06-15	.207	.0384	2.375	4.750
.164-32	-08-10	.164	.0355	1.750	3.500	-08-15	.246	.0556	3.000	6.000
.190-24	-3C-10	.190	.0573	1.4375	2.875	-3C-15	.285	.0899	2.500	5.000
.190-32	-3-10	.190	.0474	2.0625	4.125	-3-15	.285	.0784	3.4375	6.875
.250-20	-4-10	.250	.145	1.6875	3.375	-4-15	.375	.196	2.875	5.750
.250-28	-4F-10	.250	.109	2.500	5.000	-4F-15	.375	.155	4.125	8.250

2 DIAMETER NOMINAL LENGTH						2.5 DIAMETER NOMINAL LENGTH				
NOMINAL THREAD SIZE	THREAD SIZE AND LENGTH DASH NO	LENGTH (REF) (1.)	WEIGHT LB/100	M ±1 COIL	N ±.25 COIL (2)(10.)	THREAD SIZE AND LENGTH DASH NO	LENGTH (REF) (1.)	WEIGHT T LB/100	M ±1 COIL	N ±.25 COIL (2.) (10)
.086-56	-02-20	.172	.0117	3.6875	7.375	-02-25	.215	.015	5.9375	9.625
.112-40	-04-20	.224	.0272	3.375	6.750	-04-25	.280	.0348	5.500	8.875
.138-32	-06-20	.276	.0525	3.4375	6.875	-06-25	.345	.0666	5.4375	8.875
.164-32	-08-20	.328	.0776	4.1875	8.375	-08-25	.410	.1008	6.5625	10.750
.190-24	-3C-20	.380	.1330	3.5625	7.125	-3C-25	.475	.172	5.6875	9.250
.190-32	-3-20	.380	.112	4.750	9.500	-3-25	.475	.140	7.500	12.000
.250-20	-4-20	.500	.308	4.000	8.000	-4-25	.625	.385	6.375	10.375
.250-28	-4F-20	.500	.212	5.6875	11.375	-4F-25	.625	.276	8.8125	14.500

2 DIAMETER NOMINAL LENGTH					
NOMINAL THREAD SIZE	THREAD SIZE AND LENGTH DASH NO	LENGTH (REF) (1.)	WEIGHT LB/100	M ±1 COIL	N ±.25 COIL (2)(10.)
.086-56	-02-30	.258	.0183	8.1875	11.875
.112-40	-04-30	.336	.0423	7.500	10.875
.138-32	-06-30	.414	.0807	7.4375	10.750
.164-32	-08-30	.492	.125	9.0625	13.250
.190-24	-3C-30	.570	.219	7.8125	11.375
.190-32	-3-30	.570	.170	10.125	14.875
.250-20	-4-30	.750	.490	8.750	12.750
.250-28	-4F-30	.750	.338	11.9375	17.625

TABLE 2 - DIMENSIONS

NOMINAL THREAD SIZE	A	B		C	D		E		F		J	K	L	R	T
	MIN	MIN	MAX	GAGE	MIN	MAX	MIN	MAX	MIN	MAX	MIN			MIN	MIN
.086-56	.0027	.0163	.0193	.00893	.0112	.0116	.0126	.0156	.110	.119	.107	4	1	.0032	.0056
.112-40	.0068	.0241	.0271	.0125	.01584	.01624	.0189	.0219	.144	.159	.141	4	1	.0045	.0078
.138-32	.0076	.0295	.0338	.01563	.01985	.02030	.0233	.0273	.178	.193	.174	4	1	.0056	.0098
.164-32	.0076	.0295	.0338	.01563	.01985	.02030	.0233	.0273	.205	.220	.200	4	1	.0056	.0098
.190-24	.0120	.0410	.0449	.02083	.02656	.02706	.0305	.0365	.244	.259	.237	4	1	.0075	.0130
.190-32	.0076	.0295	.0338	.01563	.01985	.02030	.0233	.0273	.236	.256	.226	5	1	.0056	.0098
.250-20	.0164	.050	.0540	.02500	.03198	.03248	.0378	.0438	.310	.330	.307	5	1	.0090	.0156
.250-28	.0085	.0347	.0387	.01786	.02270	.02320	.0253	.0313	.306	.326	.291	5	1	.0064	.0112

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SHEET 2 OF 3

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MATERIAL: TYPE 304 (UNS S30400) CORROSION RESISTANT STEEL PER AS7245. ②

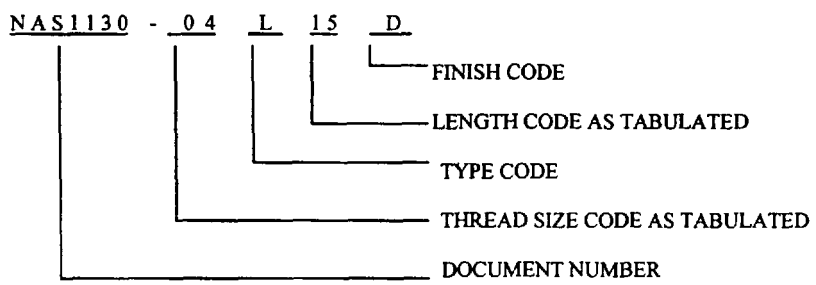
FINISH: - NONE.

- DRY FILM LUBRICANT IN ACCORDANCE WITH MIL-L-46010, TYPE I.
- CADMIUM PLATED IN ACCORDANCE WITH QQ-P-416, TYPE II, THICKNESS SHALL BE A MAXIMUM OF .0001. AS A MINIMUM ALL SURFACES SHALL SHOW VISUAL EVIDENCE OF CADMIUM PLATING.

CODE: - FIRST DASH NUMBER DESIGNATES INSERT THREAD SIZE AS TABULATED.

- 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.

EXAMPLE OF PART NUMBERS:



- NAS 1130-04-15 = A TANGLESS, FREE RUNNING, CORROSION RESISTANT STEEL INSERT, THREAD SIZE .112-40, 1.5 DIAMETER NOMINAL LENGTH.
- NAS I 130-06L20 = A TANGLESS, SELF-LOCKING, CORROSION RESISTANT STEEL INSERT, THREAD SIZE .138-32, 2.0 DIAMETER NOMINAL LENGTH.
- NAS I 130-3L25D = A TANGLESS, SELF-LOCKING, CORROSION RESISTANT STEEL INSERT WITH DRY FILM LUBRICANT, THREAD SIZE .190-32, 2.5 DIAMETER NOMINAL LENGTH.
- NAS I 130-3CL10P = A TANGLESS, SELF-LOCKING, CORROSION RESISTANT STEEL INSERT WITH CADMIUM PLATE, THREAD SIZE .190-24, 1.0 DIAMETER 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 ARE COUNTED FROM NOTCH TO NOTCH.
- (3.) THE INSERT, WHEN ASSEMBLED IN A TAPPED HOLE AS SPECIFIED IN MS33537, 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 MIL-S-8879. THE EXCEPTIONS TO MS33537 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 MS33537 A TANGLESS INSERT IS THE EQUIVALENT TO THE TANGED INSERT WITH THE TANG REMOVED AFTER INSTALLATION.
- (4.) SURFACE ROUGHNESS IS 32 MICROINCHES ARITHMETIC AVERAGE MAXIMUM PER ANSI / ASME B46. 1.
- (5.) DIMENSIONS ARE IN INCHES AND APPLY BEFORE PLATING. TOLERANCE UNLESS OTHERWISE SPECIFIED IS $\pm .010$ FOR DECIMALS AND ± 5 DEGREES FOR ANGLES.
- (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 .190-24 AND .250-20 ARE NOT MIL-S-7742 AND MIL-S-8879 PREFERRED SIZES.
- (8.) THIS STANDARD TAKES PRECEDENCE OVER DOCUMENTS REFERENCED HEREIN.
- (9.) REFERENCED DOCUMENTS SHALL BE THE ISSUE IN EFFECT ON THE DATE OF INVITATIONS FOR BID.
- (10.) THE ASSEMBLED LENGTH OF THE INSERT IS SPECIFIED ON MS33537.

AEROSPACE INDUSTRIES ASSOCIATION OF AMERICA, INC.
1250 EYE STREET, N.W.
WASHINGTON, D.C. 20005

THIS DRAWING SUPERCEDES ALL ANTECEDENT STANDARD DRAWINGS FOR THE SAME PRODUCT AND SHALL BECOME EFFECTIVE NO LATER THAN SIX MONTHS FROM THE LAST DATE OF APPROVAL SHOWN HEREIN.

APPROVAL DATE: June 1992 REVISION: ① 29 November 1995 ② 25 October 2000

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