

**MIL-STD-17 58**  
**15 February 1979**

# **MILITARY STANDARD**

**INSERTS, SCREW THREAD,  
PREFERRED FOR DESIGN,  
LISTING OF**



**FSC 5340**

MIL-STD-1758  
15 February 1979

DEPARTMENT OF DEFENSE  
Washington, DC 20301

Inserts, Screw Thread, Preferred for Design, Listing Of.

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1. This Military Standard is approved for use by all Departments and Agencies of the Department of Defense.
2. Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: Commander, Aeronautical Systems Division (AFSC), ATTN: ASD/ENESS, Wright-Patterson Air Force Base, Ohio 45433 by using the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

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## FOREWORD

1. The purpose of this bookform standard is to provide a commodity type parts document on SCREW THREAD INSERTS to aid military equipment designers and engineers in the selection of preferred screw thread inserts.

2. This document consists of an index of preferred standardization documents and a listing of preferred parts within these documents that have been selected with respect to configuration, size, length, material, and finish for screw thread inserts.

3. The selection of preferred documents listed in this standard and the selection of part numbers within the preferred documents were made as follows:

### a. Selection of Documents

(1) Documents listed or scheduled for listing in the Department of Defense Index of Specifications and Standards (DODISS).

(2) Documents which are active for design.

(3) Documents specifying part numbers (dash numbers) which designate specific sizes, materials and finishes.

### b. Selection of Part Numbers

(1) By conducting a thorough search and evaluation of existing DoD procurement information.

(2) By evaluation of preferred parts listed in recent weapon system contracts.

(3) By evaluation of preferred parts lists obtained from industry.

4. To increase the scope and versatility of this screw thread insert standard, periodic revisions will be developed. Results from Standardization studies, MILITARY PARTS CONTROL ADVISORY GROUP (MPCAG) evaluations, evaluation of a new family of screw thread inserts and recommendations from interested activities will form the basis for these revisions.

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## 1. SCOPE

1.1 Scope. This standard provides a listing of preferred screw thread inserts encompassing the following characteristics:

- a. Configuration
- b. Size
- c. Materials
- d. Protective Coatings and Finishes

1.2 Purpose. The purpose of this standard is as follows:

a. provide the designer with a listing of preferred screw thread inserts to promote their use in design of weapon systems and equipments.

b. control and minimize the variety of screw thread inserts used in military equipment thereby facilitating logistic support of the equipment during its life cycle.

1.3 Application. To minimize the proliferation of screw thread inserts, only the preferred part numbers listed herein are authorized for use in new design. All other part numbers, even though shown on current Military Specification Sheets, Military Standards (MS), National Aerospace Standards (NAS), Aeronautical Standards (AS), and Air Force/Navy Aeronautical Standards (AN), are not approved for use in new design unless approved by the cognizant Government procuring activity.

1.4 Intended use. Implement this standard by including one of the following options in the contract:

a. Require this standard as a supplement to an end use type standard such as MIL-STD-1471 or MIL-STD-1515. When thus required, only the screw thread inserts listed in both the end use type and this standard are acceptable. Use of other screw thread inserts requires approval of the Government procuring activity.

b. Require this standard as a guide to be used with an end use type standard such as MIL-STD-1471 or MIL-STD-1515. When thus required, the screw thread inserts listed in the end use type standard and this standard are acceptable. The designer must assure himself the screw thread inserts listed in both the end use type standard and this standard are not adequate for his requirement before using screw thread inserts not listed herein. Use of screw thread inserts not listed in the end use type standard requires approval of the Government procuring activity.

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c. Require this standard and indicate exceptions to it. When thus required, only the screw thread inserts listed in this standard and not excluded by the exceptions are acceptable. Use of other screw thread inserts requires approval of the Government procuring activity.

d. Require this standard as a guide. When thus required, the designer must assure himself the screw thread inserts listed in this standard are not adequate for the requirement before using other screw thread inserts.

## 2. REFERENCED DOCUMENTS

2.1 Issues of documents. The following documents of the issue in effect on date of invitation for bids or request for proposal form a part of this standard to the extent specified herein.

### SPECIFICATIONS

#### MILITARY

MIL-I-45932/1 - Insert, Screw Thread - Thin Wall, Locked In.

MIL-I-45932/2 - Insert, Screw Thread, Thin Wall, Locked In.

MIL-I-45934/1 - Insert, Screw Thread - Keyring Locked, Self-Locking and Non Self-Locking, 125 ksi Ft<sub>u</sub>.

MIL-I-45934/2 - Insert, Screw Thread - Keyring Locked, Self-Locking and Non Self-Locking, 180 ksi Ft<sub>u</sub>.

MIL-I-45934/3 - Insert, Screw Thread - Keyring Locked, Self-Locking, and Non Self-Locking, 220 ksi Ft<sub>u</sub>.

### STANDARDS

#### MILITARY

MS21209 - Insert, Screw Thread, Coarse and Fine, Screw Locking, Helical Coil, Cres.

MS35914 - Insert, Screw Thread - Thread Cutting.

MS51830 - Insert, Screw Thread - Locked In, Key Locked, Miniature and Lightweight.

MS51831 - Insert, Screw Thread - Locked In, Key Locked, Heavy Duty.



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## STANDARDS

### MILITARY

- MS51832 - Insert, Screw Thread - Locked In, Key Locked, Extra Heavy Duty.
- MS51836 - Insert, Screw Thread - Thread Forming.
- MS51991 - Insert, Screw Thread - Locked In, Ring Locked, Serrated.
- MS51993 - Insert, Screw Thread - Locked In, Ring Locked, Serrated, High Strength.
- MS122076 thru MS122115 - Insert, Cres Helical Coil Coarse Thread, 1 Dia Nominal Length.
- MS122116 thru MS122155 - Insert, Cres Helical Coil Coarse Thread, 1 1/2 Dia Nominal Length.
- MS122156 thru MS122195 - Insert, Cres Helical Coil Coarse Thread, 2 Dia Nominal Length.
- MS122196 thru MS122235 - Insert, Cres Helical Coil Coarse Thread, 2 1/2 Dia Nominal Length.
- MS122236 thru MS122275 - Insert, Cres Helical Coil Coarse Thread, 3 Dia Nominal Length.
- MS124691 thru MS124730 - Insert, Cres Helical Coil Fine Thread, 1 1/2 Dia Nominal Length.
- MS124731 thru MS124770 - Insert, Cres Helical Coil Fine Thread, 2 Dia Nominal Length.
- MS124771 thru MS124810 - Insert, Cres Helical Coil Fine Thread, 2 1/2 Dia Nominal Length.
- MS124811 thru MS124850 - Insert, Cres Helical Coil Fine Thread, 3 Dia Nominal Length.

(Copies of specifications, standards, drawings and publications required by contractors in connection with specific procurement functions should be obtained from the procuring activity or as directed by the contracting officer.)

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2.2 Other Publications. The following documents form a part of this standard to the extent specified herein. Unless otherwise indicated, the issue in effect on date of invitation for bids or request for proposal shall apply.

AEROSPACE INDUSTRIES ASSOCIATION OF AMERICA, INC. (AIA)

#### NATIONAL AEROSPACE STANDARDS

NAS1832 - Insert, Molded In, Blind Threaded, Self-Locking, Nonsself-Locking, Sandwich Panel.

NAS1833 - Insert, Molded In, Thru Threaded, Self-Locking, Nonsself-Locking, Sandwich Panel.

NAS1835 - Insert, Molded In Blind Threaded, Self-Locking, Nonsself-Locking, Floating, Sandwich Panel.

NAS1836 - Insert, Molded In, Blind Threaded, Self-Locking, Nonsself-Locking, Lightweight, Sandwich Panel.

(Application for copies should be addressed to the Aerospace Industries Association of America, Inc., 1725 De Sales Street, N.W., Washington, DC 20036.)

#### SOCIETY OF AUTOMOTIVE ENGINEERS (SAE)

AS3078 - Insert, Fluid Connection Boss, Internal Straight Thread.

(Application for copies should be addressed to the Society of Automotive Engineers, 400 Commonwealth Drive, Warrendale, PA 15096.)

### 3. DEFINITIONS

3.1 Adopted Industry Standards. Any Industry Specification or Standard which is listed in The Department of Defense Index of Specifications and Standards (DODISS).

3.2 Commodity Type Document. A document which lists preferred parts within a Federal Supply Classification class or Item Name. This document is to be used for selecting preferred parts for a new design when the document is invoked as a contractual requirement in conjunction with a parts control requirement.

3.3 End Use Type Document. A document that lists preferred documents and establishes parts requirements which are contractually binding for the design and construction/manufacture of a weapon system or an established equipment category such as MIL-STD-1515.

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3.4 Military Parts Control Advisory Group (MPCAG). A Department of Defense organization which provides advice to the Military Departments and military contractors on the selection of parts in assigned commodity classes, and collects data on nonstandard parts for developing or updating military specifications and standards.

3.5 Definitions of approved item names used in this standard are as follows:

a. Insert, Screw Thread. A cylindrical item which may have wrenching and/or driving facilities and/or shoulders. It is designed to be inserted in a drilled or a pretapped hole, or molded or pressed into soft material to reduce the size of a tapped hole; to provide threads; to add strength, and/or to prevent stripping. It is one of the following: (1) a one-piece, flanged or unflanged, internally threaded item which may have external threads, and/or serrations around the periphery of the collar, designed to engage a serrated lock ring which is not included with the item; (2) a one-piece precision coiled wire; (3) a two-piece item consisting of an internally threaded cylinder and a mating externally threaded part; or (4) a one-piece internally threaded item whose outside diameter is tapered and/or knurled and/or with fin(s). The internal thread of the item may have a locking feature.

#### 4. GENERAL STATEMENTS

##### 4.1 Selection procedure.

4.1.1 Document selection. The applicable section shall be selected after reviewing the table of contents.

4.1.2 Part number selection (preliminary). A preliminary selection of the applicable part number shall be made after reviewing the nominal parameters (sizes, materials, tensile strength or hardness) listed in the sections.

4.1.3 Part number selection (final). A final selection of the applicable part number shall be made after reviewing the detailed requirements specified in the referenced screw thread insert documents for suitability in the particular military equipment being designed (considering the application and environmental conditions).

#### 5. DETAILED REQUIREMENTS

5.1 The detailed requirements for preferred screw thread inserts are contained in the applicable screw thread inserts document and associated procurement specification. If there is disagreement between the nominal parameters listed in this standard and the parameters

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specified in the applicable screw thread insert document or associated procurement specification, the parameters specified in the applicable screw thread insert document or associated procurement specification shall prevail.

6. NOTES

6.1 Dimensions. Dimensions shown in the sections contained herein are in inches.

Custodians:

Army - AR  
Air Force - 11

Review activities:

Army - AV, EA, ER, MI  
Navy - OS  
Air Force -  
DLA - IS

User activities:

Army - AT, GL  
Navy - EC, SH, YD

Preparing activity:

Air Force - 11

Agent:

DLA - IS

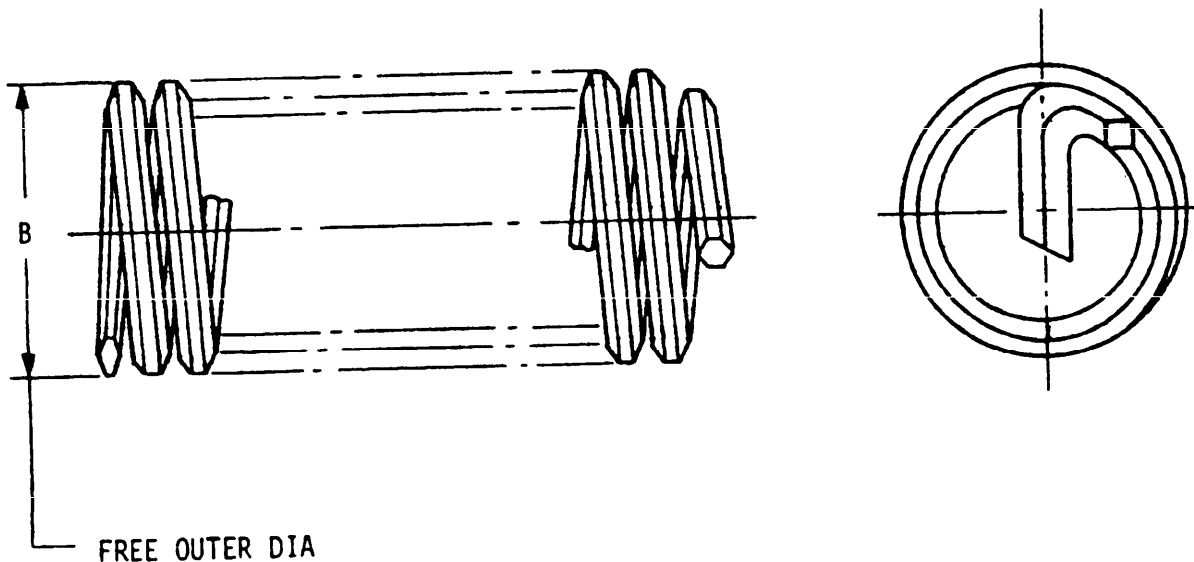
(Project 5340-2016)

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## SECTION 101

INSERT, (SCREW THREAD), COARSE AND FINE, HELICAL COIL, CRES

APPLICABLE DOCUMENTS: MS122076 THRU MS122115, MS122116 THRU MS122155, MS122156 THRU MS122195, MS122196 THRU MS122235, MS122236 THRU MS122275, MS124691 THRU MS124730, MS124731 THRU MS124770, MS124771 THRU MS124810, AND MS124811 THRU MS124850.



MATERIAL	TENSILE STRENGTH (PSI) MIN	PROTECTIVE FINISH
CRES PER AMS7245	150,000	NONE SPECIFIED

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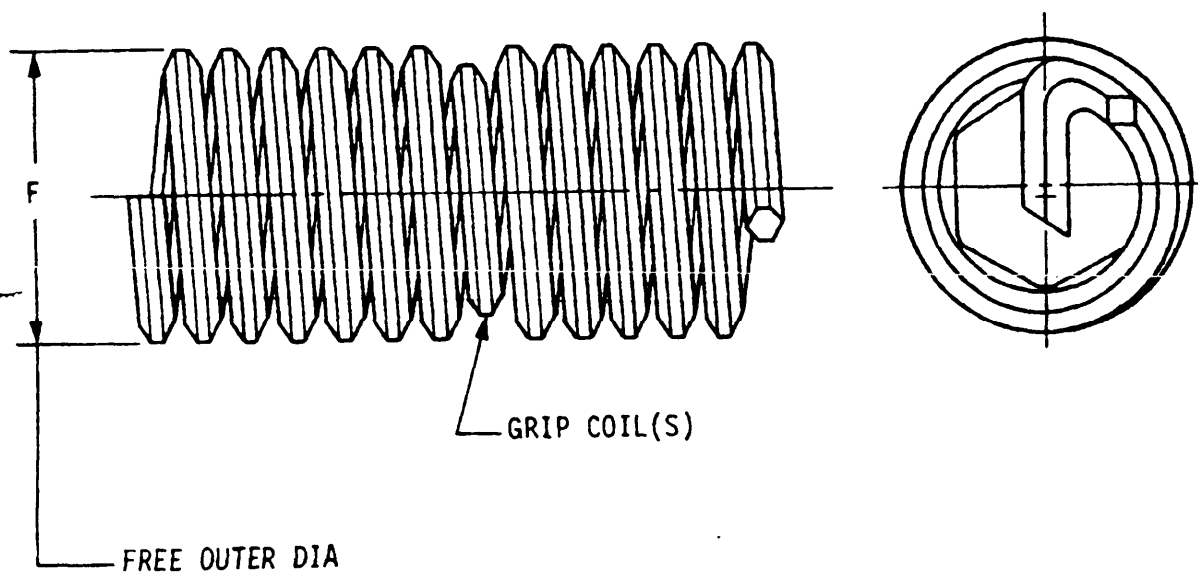
NOMINAL LENGTH			1 DIA	1.5 DIA	2 DIA	2.5 DIA	3 DIA
NOMINAL THREAD SIZE		B (NOM)	PART NUMBERS	PART NUMBERS	PART NUMBERS	PART NUMBERS	PART NUMBERS
COARSE	FINE						
.086-56	---	.115	---	MS122135	MS122175	MS122215	MS122255
.112-40	---	.152	---	MS122116	MS122156	MS122196	MS122236
.138-32	---	.186	---	MS122118	MS122158	MS122198	MS122238
.164-32	---	.213	---	MS122119	MS122159	MS122199	MS122239
.190-24	---	.252	---	MS122120	MS122160	MS122200	MS122240
---	.190-32	.246	---	MS124695	MS124735	MS124775	MS124815
.250-20	---	.320	MS122081	MS122121	MS122161	MS122201	MS122241
---	.250-28	.316	---	MS124696	MS124736	MS124776	MS124816
.3125-18	---	.390	---	MS122122	MS122162	MS122202	MS122242
---	.3125-24	.390	---	MS124697	MS124737	MS124777	MS124817
.375-16	---	.462	---	MS122123	MS122163	MS122203	MS122243
---	.375-24	.458	---	MS124698	MS124738	MS124778	MS124818
.4375-14	---	.539	---	MS122124	MS122164	MS122204	MS122244
---	.4375-20	.537	---	MS124699	MS124739	MS124779	MS124819
.500-13	---	.610	---	MS122125	MS122165	MS122205	MS122245
---	.500-20	.605	---	MS124700	MS124740	MS124780	MS124820
---	.5625-18	.678	---	MS124701	MS124741	MS124781	MS124821
.625-11	---	.755	---	MS122127	MS122167	MS122207	MS122247
---	.625-18	.746	---	MS124702	MS124742	MS124782	MS124822
.750-10	---	.894	MS122088	MS122128	MS122168	MS122208	MS122248
---	.750-16	.889	---	MS124703	MS124743	MS124783	MS124823
---	1.000-12	1.184	---	MS124691	MS124731	MS124771	MS124811
---	1.250-12	1.454	---	MS124707	MS124747	MS124787	MS124827
---	1.500-12	1.728	---	MS124709	MS124749	MS124789	MS124829

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## SECTION 102

INSERT, SCREW THREAD, COARSE AND FINE,  
SCREW LOCKING, HELICAL COIL, CRES

APPLICABLE DOCUMENT: MS21209



MATERIAL	TENSILE STRENGTH (PSI) MIN	PROTECTIVE FINISH
CRES	150,000	DRY FILM LUBRICANT

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TABLE I. MS21209 DASH NUMBERS

NOMINAL LENGTH			1 DIA	1.5 DIA	2 DIA	2.5 DIA	3 DIA
NOMINAL THREAD SIZE		F (NOM)	DASH NUMBERS	DASH NUMBERS	DASH NUMBERS	DASH NUMBERS	DASH NUMBERS
COARSE	FINE						
.086-56	---	.115	---	C0215	C0220	C0225	C0230
.112-40	---	.152	C0410	C0415	C0420	C0425	C0430
.138-32	---	.186	C0610	C0615	C0620	C0625	C0630
.164-32	---	.213	C0810	C0815	C0820	C0825	C0830
.190-24	---	.252	C1-10	C1-15	C1-20	C1-25	C1-30
---	.190-32	.246	F1-10	F1-15	F1-20	F1-25	F1-30
.250-20	---	.320	C4-10	C4-15	C4-20	C4-25	C4-30
---	.250-28	.316	F4-10	F4-15	F4-20	F4-25	F4-30
.3125-18	---	.390	C5-10	C5-15	C5-20	C5-25	C5-30
---	.3125-24	.390	F5-10	F5-15	F5-20	F5-25	F5-30
.375-16	---	.462	C6-10	C6-15	C6-20	C6-25	C6-30
---	.375-24	.458	F6-10	F6-15	F6-20	F6-25	F6-30
.4375-14	---	.539	C7-10	C7-15	C7-20	C7-25	C7-30
---	.4375-20	.537	F7-10	F7-15	F7-20	F7-25	F7-30
.500-13	---	.610	C8-10	C8-15	C8-20	C8-25	C8-30
---	.500-20	.605	F8-10	F8-15	F8-20	F8-25	F8-30
---	.5625-18	.678	F9-10	F9-15	F9-20	F9-25	F9-30
.625-11	---	.755	C1010	C1015	C1020	C1025	C1030
---	.625-18	.746	F1010	F1015	F1020	F1025	F1030
.750-10	---	.894	C1210	C1215	C1220	C1225	C1230
---	.750-16	.889	F1210	F1215	F1220	F1225	F1230
---	1.000-12	1.184	F1610	F1615	F1620	F1625	F1630
---	1.250-12	1.454	F2010	F2015	F2020	F2025	F2030
---	1.500-12	1.728	F2410	F2415	F2420	F2425	F2430

NOTE: ADD "L" AS SUFFIX TO DASH NUMBER FOR DRY FILM LUBRICANT.

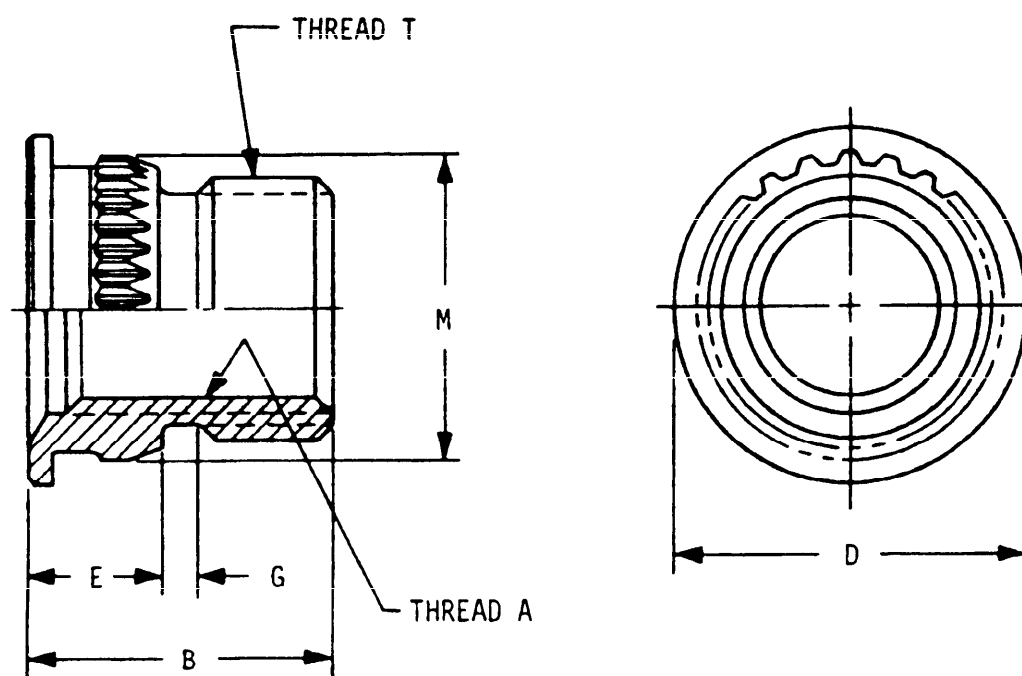


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## SECTION 103

INSERT, (SCREW THREAD) - FLUID CONNECTION BOSS,  
INTERNAL STRAIGHT THREAD

APPLICABLE DOCUMENT: AS3078



MATERIAL	HARDNESS	PROTECTIVE FINISH
CRES	BRINELL 305-382	NONE SPECIFIED

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NOM TUBE O. D. (REF)	A	B (NOM)	D (MAX)	E (NOM)	G (NOM)	M (NOM)	T EXTERNAL THREAD UNJEF-3A	AS 3078 DASH NUMBERS
	INTERNAL THREAD -3B							
.125	.3125-24UNJF	.761	.622	.364	.0845	.5445	.4375-28	-02
.250	.4375-20UNJF	.777	.748	.364	.0845	.6725	.5625-24	-04
.375	.5625-18UNJF	.830	.867	.364	.0845	.8015	.6875-24	-06
.500	.750-16UNJF	.955	1.060	.364	.0845	1.0295	.9375-20	-08
.625	.875-14UNJF	1.051	1.185	.374	.0845	1.1725	1.0625-18	-10
.750	1.0625-12UNJ	1.185	1.435	.389	.0845	1.3625	1.250-18	-12
1.000	1.3125-12UNJ	1.185	1.685	.389	.0845	1.6125	1.500-18	-16
1.250	1.625-12UNJ	1.237	2.020	.389	.1245	2.0125	1.875-16 1/	-20

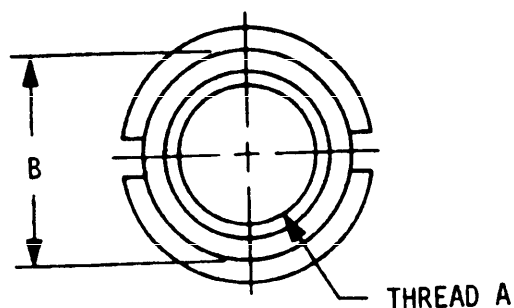
1/ DASH 20 EXTERNAL THREAD IS UNJ-3A.

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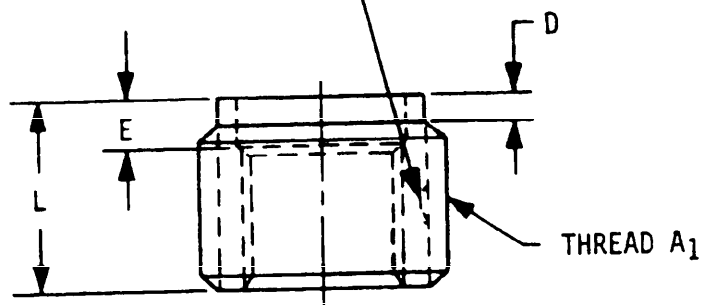
## SECTION 104

INSERT, SCREW THREAD, KEYRING LOCKED,  
SELF-LOCKING AND NON SELF-LOCKING, 125 ksi  $F_{tu}$

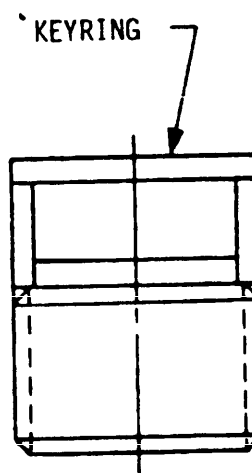
APPLICABLE DOCUMENT: MIL-I-45934/1



AREA DEFORMED AT MID LENGTH  
(APPROX) TO PROVIDE INTERNAL  
THREAD LOCK WHEN SPECIFIED



INSERT



ASSEMBLY

MATERIAL	TENSILE STRENGTH (PSI) MIN	PROTECTIVE FINISH
STEEL, ALLOY	125,000	CADMIUM PLATE
CRES, A286 OR 303	125,000	PASSIVATE OR SILVER PLATE

NOTE: DRY FILM LUBRICANT USED WITH SELF-LOCKING TYPE INSERTS.

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A INTERNAL THREADS UNJF-3B	A <sub>1</sub> EXTERNAL THREADS UNJF-3A	B	D	E	L	M45934/1 DASH NUMBERS 2/
.1380-32 1/	.2160-28	.160	.037	--	.190	-2
.1640-32 1/	.2500-28	.185	.037	.060	.250	-3
.1900-32	.3125-24	.244	.040	.070	.250	-4
.2500-28	.3750-24	.306	.045	.070	.375	-5
.3125-24	.4375-20	.369	.052	.070	.437	-6
.3750-24	.5000-20	.431	.052	.070	.562	-7
.4375-20	.6250-18	.507	.060	.100	.625	-8
.5000-20	.7500-16	.619	.067	.100	.687	-9

1/ THREADS ARE UNJC-3B.

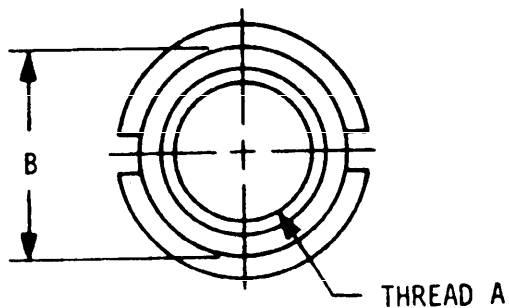
2/ ADD "A" IN LIEU OF "DASH" FOR A286 CORROSION AND HEAT RESISTANT STEEL.  
 ADD "C" IN LIEU OF "DASH" FOR 303 CORROSION-RESISTANT STEEL.  
 ADD "L" AS SUFFIX TO DASH NUMBER FOR SELF-LOCKING INTERNAL THREADS.  
 ADD "P" AS SUFFIX TO DASH NUMBER FOR SILVER PLATING.

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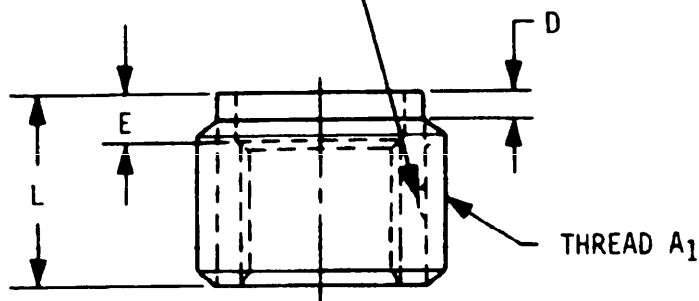
## SECTION 105

INSERT, SCREW THREAD, KEYRING LOCKED, SELF-LOCKING  
AND NON SELF-LOCKING, 180 ksi Ft<sub>u</sub>

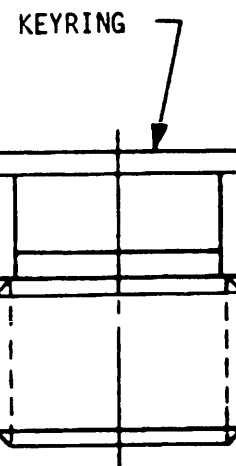
APPLICABLE DOCUMENT: MIL-I-45934/2



AREA DEFORMED AT MID LENGTH  
(APPROX) TO PROVIDE INTERNAL  
THREAD LOCK WHEN SPECIFIED



INSERT



ASSEMBLY

MATERIAL	TENSILE STRENGTH (PSI) MIN	PROTECTIVE FINISH
STEEL, ALLOY	180,000	CADMIUM PLATE
CRES, A286 OR 303	180,000	PASSIVATE OR SILVER PLATE

NOTE: DRY FILM LUBRICANT USED WITH SELF-LOCKING TYPE INSERTS.

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A INTERNAL THREADS UNJF-3B	A <sub>1</sub> EXTERNAL THREADS UNJF-3A	B	D	E	L	M45934/2 DASH NUMBERS <u>2/</u>
.1120-40 <u>1/</u>	.1900-32	.130	.032	--	.190	-1
.1380-32 <u>1/</u>	.2160-28	.160	.037	--	.250	-2
.1640-32 <u>1/</u>	.2500-28	.179	.037	.060	.312	-3
.1900-32	.3125-24	.236	.040	.070	.312	-4
.2500-28	.4375-20	.338	.052	.070	.437	-5
.3125-24	.5000-20	.398	.052	.070	.562	-6
.3750-24	.6250-18	.507	.060	.070	.625	-7
.4375-20	.7500-16	.619	.067	.100	.687	-8
.5000-20	.8750-14	.728	.075	.100	.812	-9
.5625-18	.8750-14	.728	.075	.100	1.000	-10
.6250-18	1.1250-12	.930	.099	.100	1.000	-11
.7500-16	1.2500-12	1.055	.099	.100	1.250	-12
1.0000-12	1.5000-12	1.273	.114	.100	1.875	-16

1/ THREADS ARE UNJC-3B.

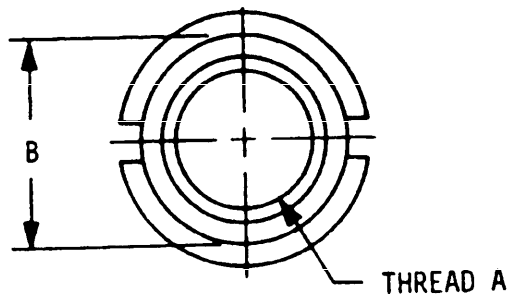
2/ ADD "A" IN LIEU OF "DASH" FOR A286 CORROSION AND HEAT RESISTANT STEEL.  
 ADD "C" IN LIEU OF "DASH" FOR 303 CORROSION-RESISTANT STEEL.  
 ADD "L" AS SUFFIX TO DASH NUMBER FOR SELF-LOCKING INTERNAL THREADS.  
 ADD "P" AS SUFFIX TO DASH NUMBER FOR SILVER PLATING.

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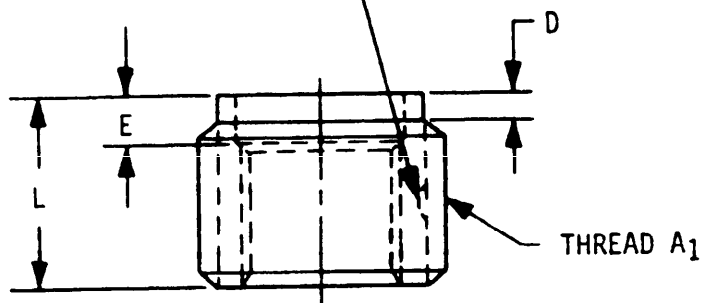
## SECTION 106

INSERT, SCREW THREAD, KEYRING LOCKED,  
SELF-LOCKING, AND NON SELF-LOCKING, 220 ksi Ft<sub>u</sub>

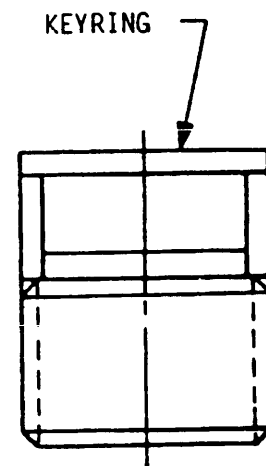
APPLICABLE DOCUMENT: MIL-1-45934/3



AREA DEFORMED AT MID LENGTH  
(APPROX) TO PROVIDE INTERNAL  
THREAD LOCK WHEN SPECIFIED



INSERT



ASSEMBLY

MATERIAL	TENSILE STRENGTH (PSI) MIN	PROTECTIVE FINISH
STEEL, ALLOY	220,000	CADMIUM PLATE
CRES, A286	220,000	PASSIVATE OR SILVER PLATE

NOTE: DRY FILM LUBRICANT USED WITH SELF-LOCKING TYPE INSERTS.

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A INTERNAL THREADS UNJF-3B	A <sub>1</sub> EXTERNAL THREADS UNJF-3A	B	D	E	L	M45934/3 DASH NUMBERS <u>1/</u>
.1900-32	.3125-24	.236	.040	.070	.375	-4
.2500-28	.4375-20	.338	.052	.070	.500	-5
.3125-24	.5625-18	.447	.060	.070	.562	-6
.3750-24	.7500-16	.619	.067	.070	.625	-7
.4375-20	.8750-14	.728	.075	.100	.750	-8
.5000-20	.8750-14	.728	.075	.100	1.000	-9
.5625-18	1.0000-12	.836	.083	.100	1.062	-10
.6250-18	1.1250-12	.930	.099	.100	1.187	-11
.7500-16	1.3750-12	1.148	.114	.100	1.375	-12
1.0000-12	1.5000-12	1.273	.114	.100	2.250	-16

1/ ADD "A" IN LIEU OF "DASH" FOR A286 CORROSION AND HEAT RESISTANT STEEL.  
ADD "L" AS SUFFIX TO DASH NUMBER FOR SELF-LOCKING INTERNAL THREADS.  
ADD "P" AS SUFFIX TO DASH NUMBER FOR SILVER PLATING.

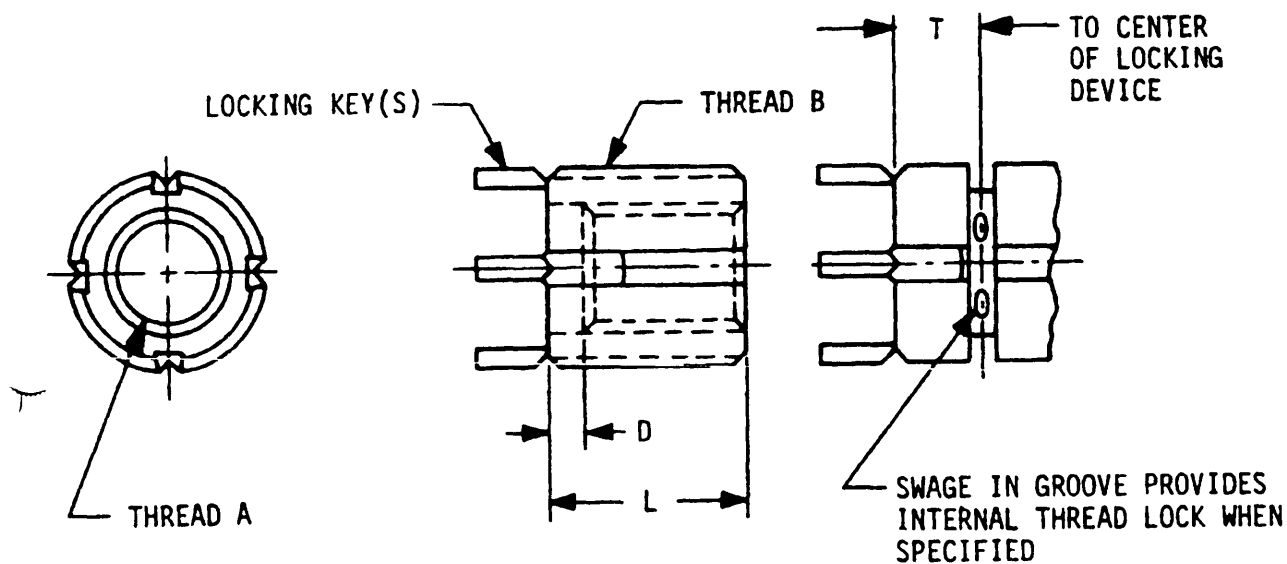


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## SECTION 107

INSERT, SCREW THREAD, LOCKED IN,  
KEY LOCKED, EXTRA HEAVY DUTY

APPLICABLE DOCUMENT: MS51832



MATERIAL	TENSILE STRENGTH (PSI) MIN	PROTECTIVE FINISH
STEEL, ALLOY	160,000	CADMIUM PLATE
CRES, A286 OR 303	140,000	PASSIVATE

NOTE: DRY FILM LUBRICANT USED WITH SELF-LOCKING TYPE INSERTS.

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A INTERNAL THREAD	B EXTERNAL THREAD MOD MINOR DIA	D (NOM)	L (NOM)	T (NOM)	MS51832 DASH NUMBERS 1/
UNJF-3B					
.190-32	.4375-14UNC-2A	.070	.312	.220	-201
.250-28	.500-13UNC-2A	.070	.375	.220	-202
.3125-24	.5625-12UNC-2A	.070	.437	.220	-203
.375-24	.625-11UNC-2A	.070	.500	.250	-204
.4375-20	.6875-11NS-2A	.100	.625	.280	-205
.500-20	.8125-16UN-2A	.100	.688	.280	-206
.5625-18	.875-14UNC-2A	.100	.812	.320	-207
.625-18	1.000-12UNF-2A	.100	.875	.330	-208
.750-16	1.250-12UNF-2A	.100	1.125	--	-209
.750-16	1.250-12UNF-2A	.100	1.250	.490	-209L
1.000-12	1.500-12UNF-2A	.100	1.375	--	-211
1.000-12	1.500-12UNF-2A	.100	1.500	.550	-211L

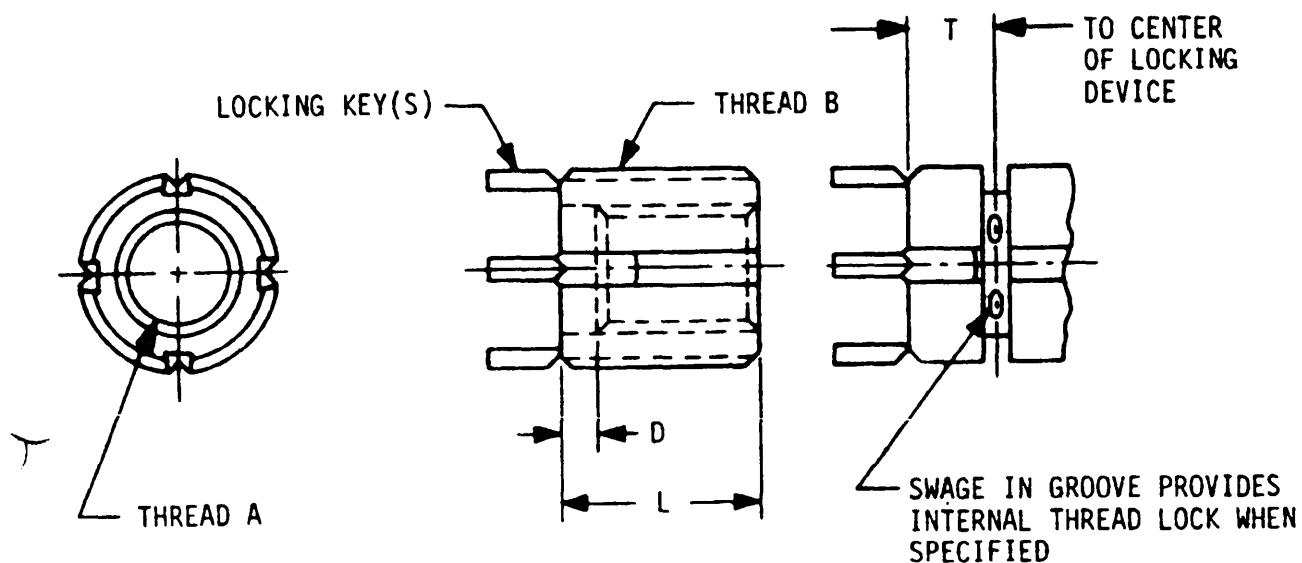
1/ ADD "CA" IN LIEU OF "DASH" FOR CORROSION-RESISTANT STEEL, A-286.  
ADD "A" IN LIEU OF "DASH" FOR ALLOY STEEL, 4140.  
ADD "L" AS SUFFIX TO DASH NUMBER FOR INTERNAL THREAD LOCK  
FOR -201 THROUGH -208 ONLY.  
THE DASH NUMBERS SHOWN IN TABLE INDICATE CRES, 303.

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## SECTION 108

INSERT, SCREW THREAD, LOCKED IN,  
KEY LOCKED, HEAVY DUTY

APPLICABLE DOCUMENT: MS51831



MATERIAL	TENSILE STRENGTH (PSI) MIN	PROTECTIVE FINISH
STEEL, ALLOY	160,000	CADMIUM PLATE
CRES, A286	140,000	PASSIVATE
CRES, 303	NOT SPECIFIED	PASSIVATE

NOTE: DRY FILM LUBRICANT USED WITH SELF-LOCKING TYPE INSERTS.

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A INTERNAL THREAD	B EXTERNAL THREAD MOD MINOR DIA	D (NOM)	L (NOM)	T (NOM)	MS51831 DASH NUMBERS 1/
UNJF-3B					
.190-32	.375-16UNC-2A	.070	.312	.220	-201
.250-28	.4375-14UNC-2A	.070	.375	.220	-202
.3125-24	.500-13UNC-2A	.070	.437	.220	-203
.375-24	.5625-12UNC-2A	.070	.500	.250	-204
.4375-20	.625-11UNC-2A	.100	.625	.280	-205
.500-20	.6875-11NS-2A	.100	.688	.280	-206
.5625-18	.8125-16UN-2A	.100	.812	.320	-207
.625-18	.875-14UNF-2A	.100	.875	.330	-208
.750-16	1.125-12UNF-2A	.100	1.125	--	-209
.750-16	1.125-12UNF-2A	.100	1.250	.490	-209L
1.000-12	1.375-12UNF-2A	.100	1.375	--	-211
1.000-12	1.375-12UNF-2A	.100	1.500	.550	-211L

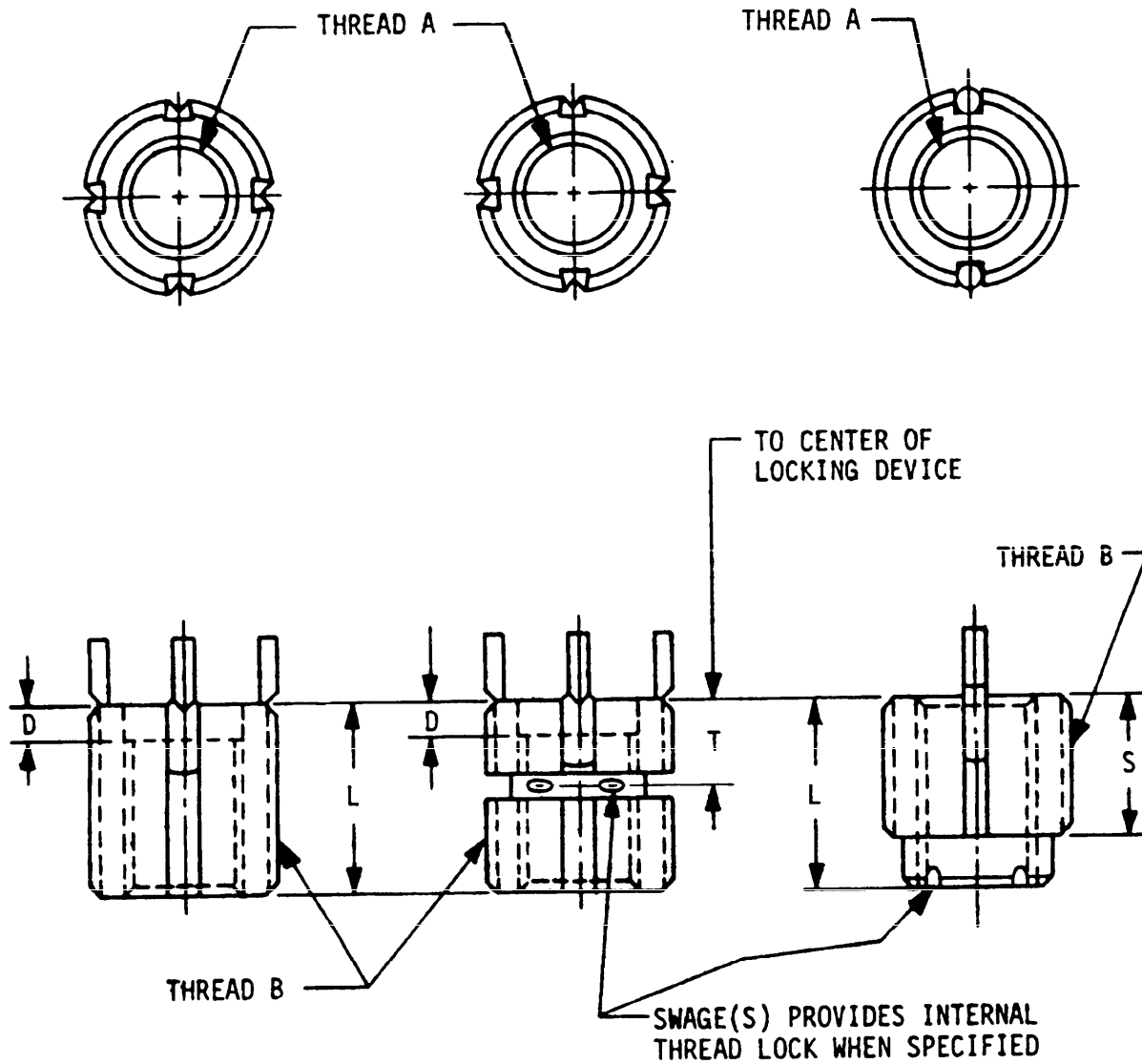
- 1/ ADD "CA" IN LIEU OF "DASH" FOR CORROSION-RESISTANT STEEL, A-286.  
 ADD "A" IN LIEU OF "DASH" FOR ALLOY STEEL, 4140.  
 ADD "L" AS SUFFIX TO DASH NUMBER FOR INTERNAL THREAD LOCK  
 FOR -201 THROUGH -208 ONLY.  
 THE DASH NUMBERS SHOWN IN THE TABLE INDICATE CRES, 303.

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## SECTION 109

INSERT, SCREW THREAD, LOCKED IN,  
KEY LOCKED, MINIATURE AND LIGHTWEIGHT

APPLICABLE DOCUMENT: MS51830



MATERIAL	TENSILE STRENGTH (PSI) MIN	PROTECTIVE FINISH
STEEL, ALLOY	160,000	CADMIUM PLATE
CRES A286	140,000	PASSIVATE
CRES 303	NOT SPECIFIED	PASSIVATE

NOTE: DRY FILM LUBRICANT USED WITH SELF-LOCKING TYPE INSERTS.

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A INTERNAL THREAD		B EXTERNAL THREAD MOD MINOR DIA	D (NOM)	L (NOM)	S (NOM)	T (NOM)	MS51830 DASH NUMBERS 1/
UNJC-3B	UNJF-3B						
.086-56	---	.164-32UNC-2A	--	.120	.090	--	-101
.112-40	---	.190-32UNF-2A	--	.170	.125	--	-102
.138-32	---	.216-28UNF-2A	--	.170	.125	--	-103
.164-32	---	.250-28UNF-2A	--	.220	.175	--	-104
.190-24	---	.3125-18UNC-2A	.070	.312	--	.220	-105
---	.190-32						-201
---	.250-28	.375-16UNC-2A	.070	.375	--	.220	-202
---	.3125-24	.4375-14UNC-2A	.070	.437	--	.220	-203
---	.375-24	.500-13UNC-2A	.070	.500	--	.240	-204
---	.4375-20	.5625-12UNC-2A	.070	.562	--	.270	-205
.500-13	---	.625-11UNC-2A	.070	.625	--	.280	-110
---	.500-20						-206

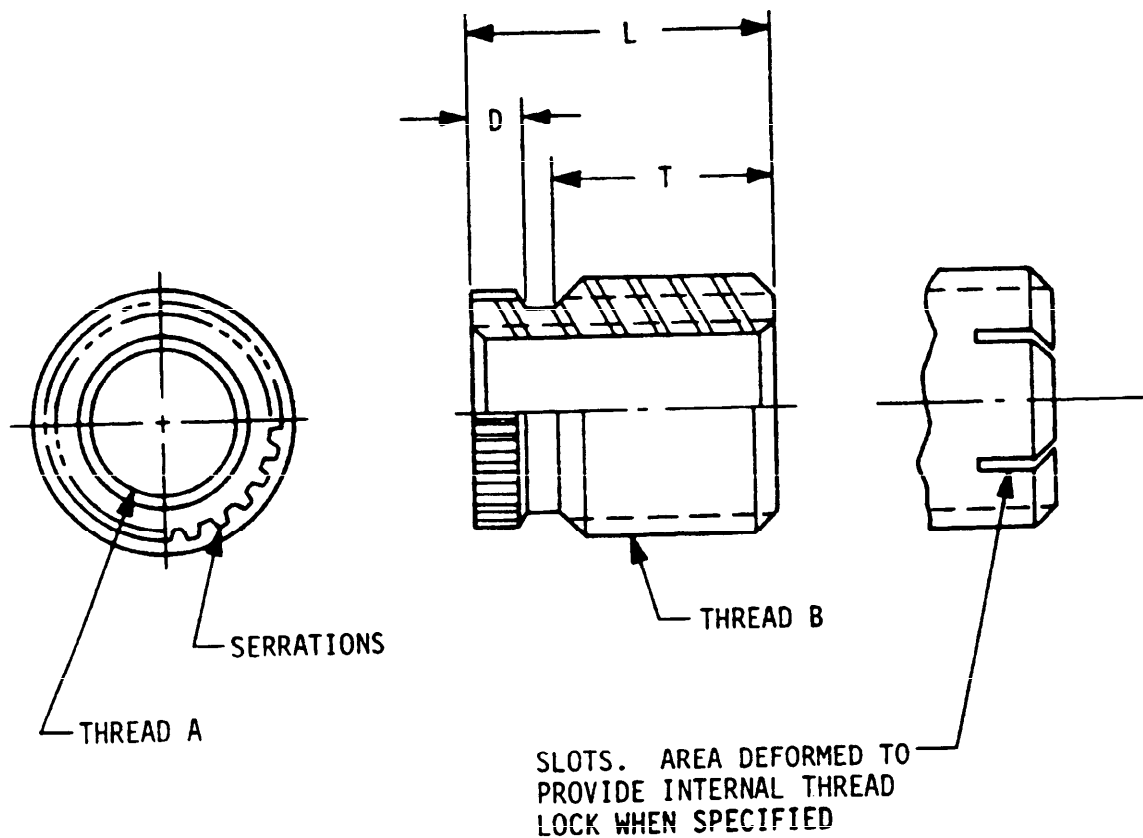
- 1/ ADD "CA" IN LIEU OF DASH FOR CORROSION-RESISTANT STEEL, A-286.  
 ADD "A" IN LIEU OF DASH FOR ALLOY STEEL, 4140.  
 ADD "L" AS SUFFIX TO DASH NUMBER FOR INTERNAL THREAD LOCK.  
 DASH NUMBERS -101 THROUGH -104 ARE AVAILABLE FOR CRES, 303 ONLY.

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## SECTION 110

INSERT, SCREW THREAD, LOCKED IN,  
RING LOCKED, SERRATED

APPLICABLE DOCUMENT: MS51991



MATERIAL	TENSILE STRENGTH (PSI) MIN	PROTECTIVE FINISH
STEEL, CARBON	125,000	CADMIUM PLATE
CRES	125,000	PASSIVATE

NOTE: DRY FILM LUBRICANT USED WITH SELF-LOCKING TYPE INSERTS.

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A INTERNAL THREAD		B EXTERNAL THREAD	D	L	T	MS51991 DASH NUMBERS
UNJC-3B	UNJF-3B	1/				2/
.1120-40	---	.1900-24	.060	.250	.150	-102
.1380-32	---	.2160-24	.080	.310	.190	-103
.1640-32	---	.2500-20	.080	.380	.250	-104
---	.1900-32	.3125-18	.090	.440	.290	-205
.2500-20	---	.3750-16	.110	.500	.330	-106
---	.2500-28					-206
.3125-18	---	.5000-13	.120	.560	.360	-107
---	.3125-24					-207
.3750-16	---	.5625-12	.120	.620	.420	-108
---	.3750-24					-208
---	.4375-20	.6250-11	.140	.690	.460	-209
---	.5000-20	.7500-10	.160	.750	.490	-210
---	.5625-18	.8750-14	.160	.880	.620	-311
---	.6250-18	1.0000-12	.160	1.000	.740	-312.1
---	.7500-16	1.1250-12	.160	1.120	.800	-313
---	1.0000-12	1.3750-12	.190	1.380	1.020	-315

1/ THE EXTERNAL THREAD HAS A SPECIAL PITCH DIAMETER AND MINOR DIAMETER WHICH INSTALLS INTO A NATIONAL CLASS 3 TAPPED HOLE.

2/ ADD "E" IN LIEU OF "DASH" FOR CORROSION-RESISTANT STEEL.  
ADD "L" AS SUFFIX TO DASH NUMBER FOR INTERNAL THREAD LOCK.

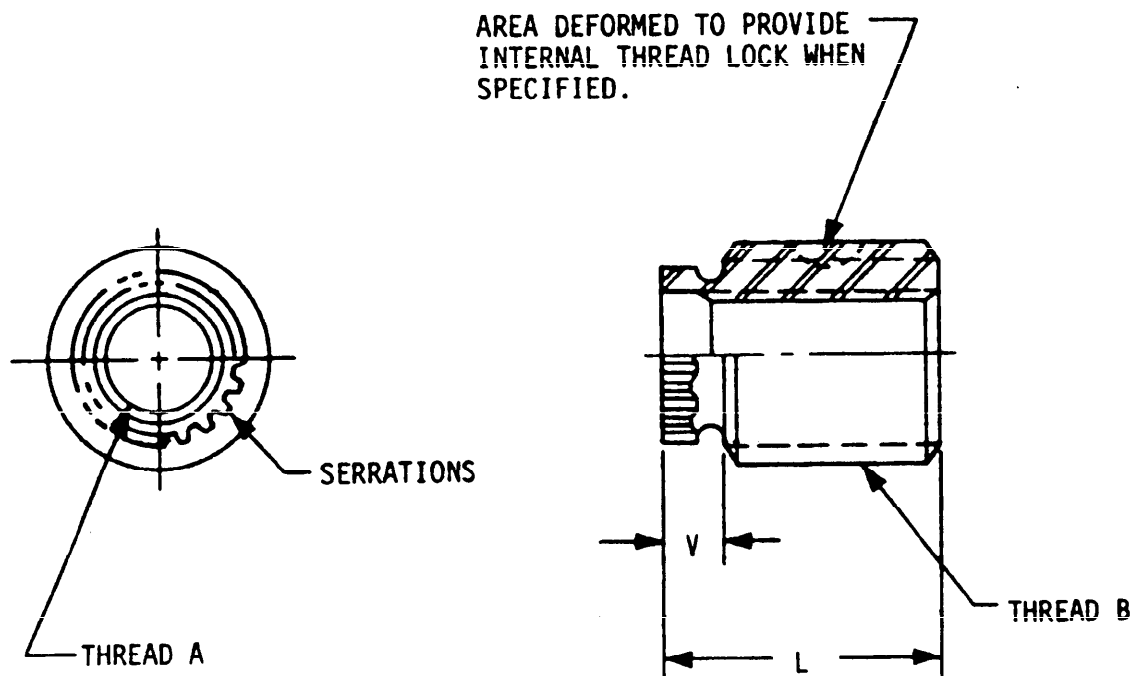


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## SECTION 111

INSERT, SCREW THREAD-LOCKED IN,  
RING LOCKED, SERRATED, HIGH STRENGTH

APPLICABLE DOCUMENT: MS51993



MATERIAL	TENSILE STRENGTH (PSI) MIN	PROTECTIVE FINISH	MS51993 DASH NUMBERS
STEEL, ALLOY	220,000	CADMIUM PLATE	-503 THRU -508 & -803 THRU -808
CRES, A286	220,000	PASSIVATE OR SILVER PLATE	

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A INTERNAL THREAD UNJF-3B	B EXTERNAL THREAD <sup>1/</sup>		L	V	MS51993 DASH NUMBERS <sup>2/</sup>
	FINE	COARSE			
.1900-32	.3750-24	---	.400	.142	-503
	---	.3750-16	.538		-803
.2500-28	.4375-20	---	.542	.176	-504
	---	.4375-14	.731		-804
.3125-24	.5000-20	---	.678	.200	-505
	---	.5000-13	.932		-805
.3750-24	.6250-18	---	.750	.200	-506
	---	.6250-11	1.061		-806
.4375-20	.7500-16	---	.813	.200	-507
	---	.7500-10	1.156		-807
.5000-20	.8750-14	---	.948	.255	-508
	---	.8750-9	1.333		-808

<sup>1/</sup> THE EXTERNAL THREAD HAS A SPECIAL PITCH DIAMETER AND MINOR DIAMETER WHICH INSTALLS INTO A NATIONAL CLASS 3 TAPPED HOLE.

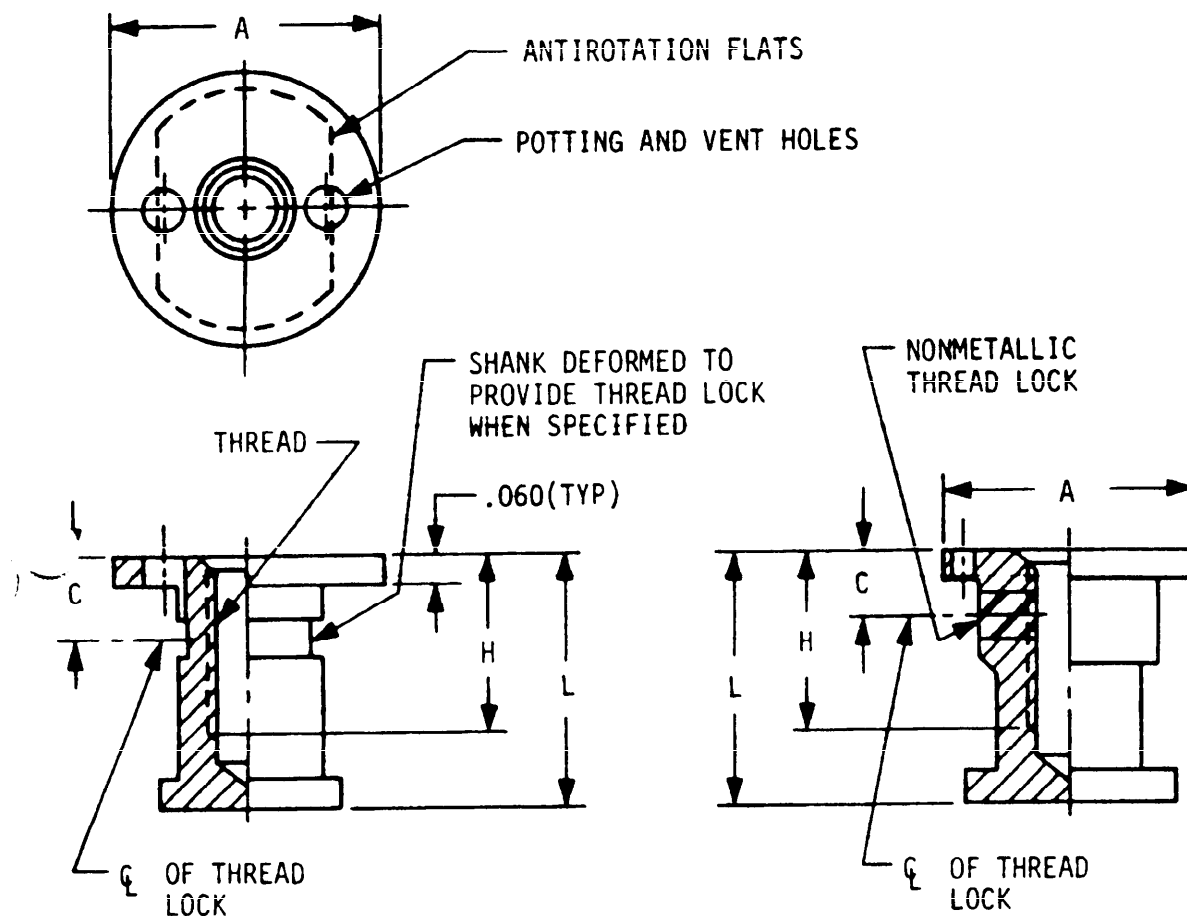
<sup>2/</sup> ADD "M" IN LIEU OF "DASH" FOR STEEL, ALLOY.  
ADD "S" IN LIEU OF "DASH" FOR CORROSION-RESISTANT STEEL, A286.  
ADD "L" AS SUFFIX TO DASH NUMBER FOR INTERNAL THREAD LOCK.

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## SECTION 112

INSERT, (SCREW THREAD) MOLDED IN, BLIND THREADED,  
SELF-LOCKING, NONSELF-LOCKING, SANDWICH PANEL

APPLICABLE DOCUMENT: NAS 1832



ALL STEEL, CRES AND  
NONSELF-LOCKING ALUMINUM STYLE

SELF-LOCKING  
ALUMINUM STYLE

MATERIAL	HARDNESS/TENSILE STRENGTH (PSI) MIN	PROTECTIVE FINISH
STEEL, CARBON	NOT SPECIFIED	CADMIUM PLATE
ALUMINUM ALLOY	62,000	ANODIZE
CRES	BRINELL HARDNESS NO.262 MAX	PASSIVATE

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THREAD SIZE	A	C	H <sup>1/</sup>	L <sup>2/</sup>	NAS1832 DASH NUMBERS
.1380-32UNJC-3B	.560	.12	.250	.37	-06
.1640-32UNJC-3B	.560	.12	.250	.37	-08
.1900-32UNJF-3B	.560	.12	.250	.37	-3
.2500-28UNJF-3B	.685	.14	.312	.50	-4
.3125-24UNJF-3B	.685	.16	.312	.50	-5
.3750-24UNJF-3B	.841	.22	.312	.50	-6

1/ MINIMUM FULL THREADS IN SHORT LENGTHS. MINIMUM FULL THREAD, WHERE LENGTH PERMITS, IS TWO DIAMETERS.

2/ MINIMUM LENGTH SPECIFIED. PREFERRED LENGTHS ARE IN .125 INCH INCREMENTS AND NOT TO EXCEED 2 INCHES.

NOTES:

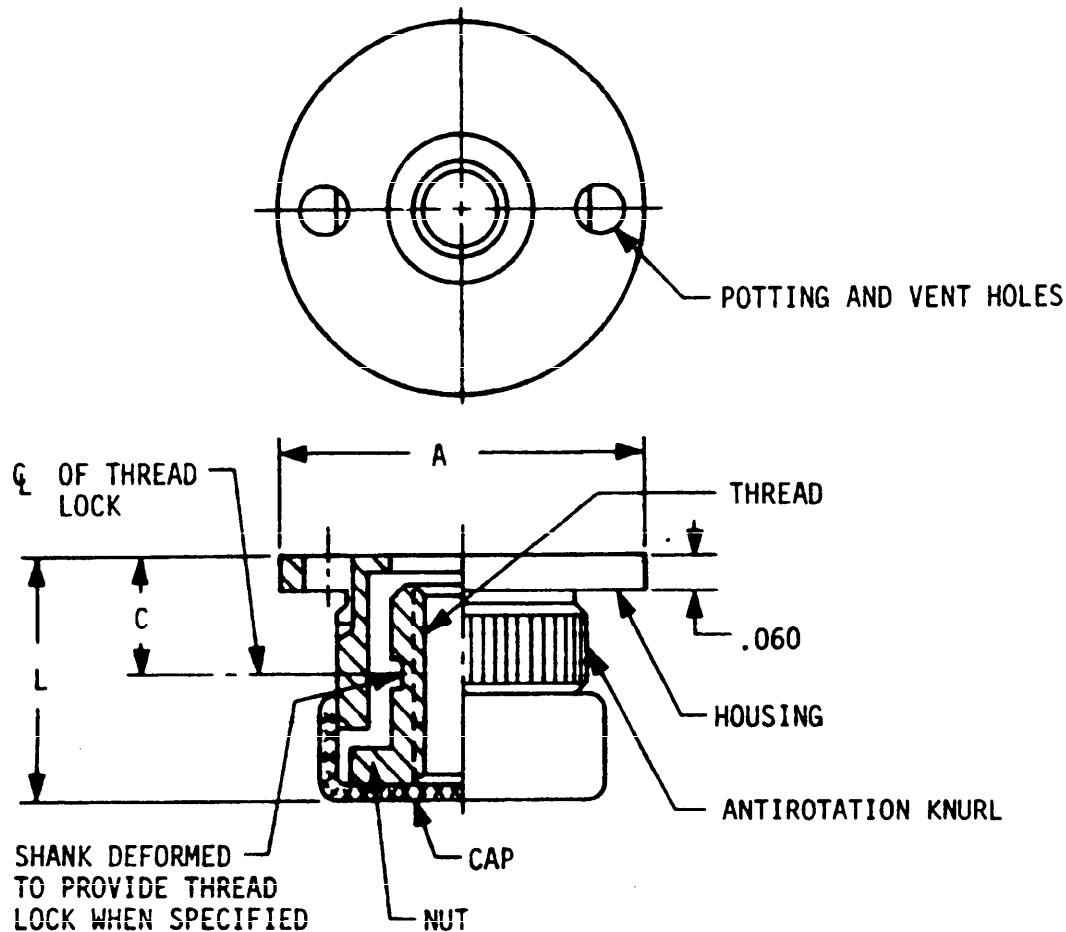
1. NO LETTER AFTER BASIC NUMBER INDICATES CARBON STEEL.
2. SUFFIX "A" TO BASIC NUMBER INDICATES ALUMINUM ALLOY.
3. SUFFIX "C" TO BASIC NUMBER INDICATES CORROSION-RESISTANT STEEL.
4. SUFFIX "N" TO FIRST DASH NUMBER INDICATES NONSELF-LOCKING.
5. SECOND DASH NUMBER INDICATES LENGTH IN .125 INCH INCREMENTS.
6. NO LETTER AFTER SECOND DASH NUMBER FOR CRES INDICATES PASSIVATE ONLY.
7. SUFFIX "M" TO SECOND DASH NUMBER INDICATES SOLID FILM LUBRICANT.

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## SECTION 113

INSERT, (SCREW THREAD) MOLDED IN, BLIND THREADED,  
SELF-LOCKING, NONSELF-LOCKING, FLOATING, SANDWICH PANEL

APPLICABLE DOCUMENT: NAS 1835



MATERIAL	HARDNESS/TENSILE STRENGTH (PSI)			PROTECTIVE FINISH
	NUT	HOUSING	CAP	
STEEL, CARBON	NOT SPECIFIED	85,000 MIN	--	CADMIUM PLATE
ALUMINUM ALLOY	--	62,000 MIN	22,000 MAX	ANODIZE
CRES	BRINELL HARD- NESS NO. 262 MAX	BRINELL HARD- NESS NO. 262 MAX	--	PASSIVATE

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THREAD SIZE	A	C	L	NAS1835 DASH NUMBERS
.1640-32UNJC-3B	.685	.16	.37	-08
.1900-32UNJF-3B	.685	.16	.43	-3
.2500-28UNJF-3B	.748	.18	.56	-4
.3125-24UNJF-3B	.810	.20	.75	-5
.3750-24UNJF-3B	.873	.22	.81	-6

NOTES:

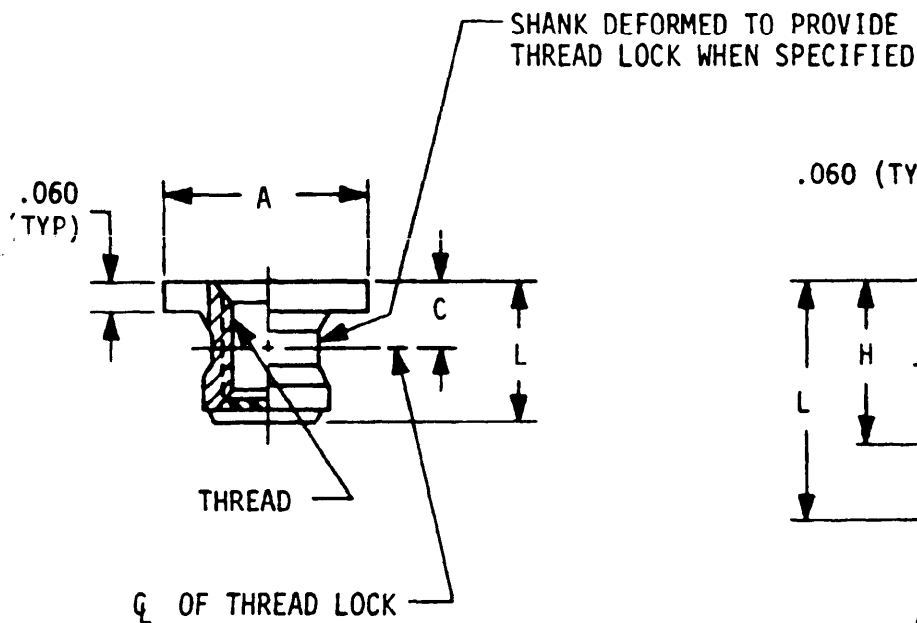
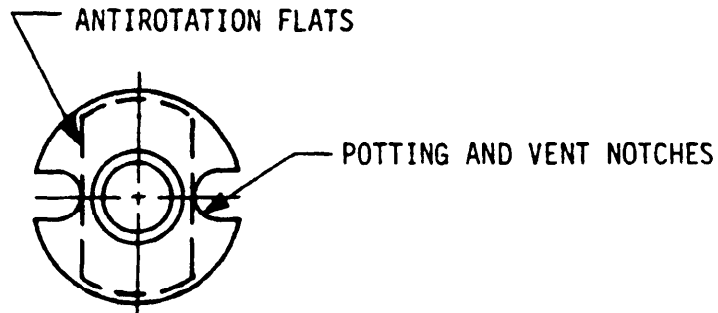
1. NO LETTER AFTER BASIC NUMBER INDICATES CARBON STEEL NUT AND HOUSING.
2. SUFFIX "A" TO BASIC NUMBER INDICATES CARBON STEEL NUT AND AL ALLOY HOUSING.
3. SUFFIX "C" TO BASIC NUMBER INDICATES CRES NUT AND HOUSING.
4. NO LETTER AFTER DASH NUMBER FOR CRES INDICATES PASSIVATE ONLY.
5. SUFFIX "M" TO DASH NUMBER INDICATES SOLID FILM LUBRICANT ON NUT.
6. SUFFIX "N" TO DASH NUMBER INDICATES NONSELF-LOCKING.

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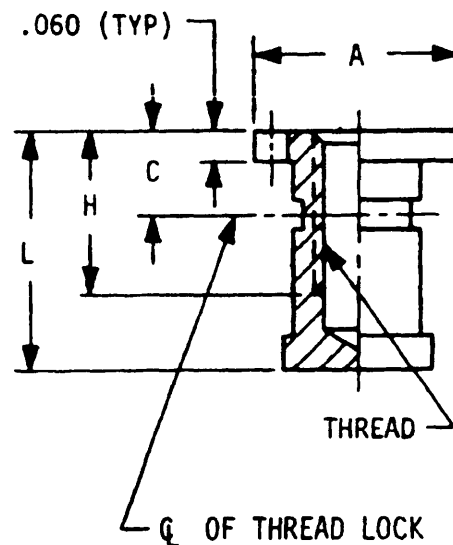
## SECTION 114

INSERT, (SCREW THREAD) MOLDED IN, BLIND THREADED, SELF-LOCKING,  
NONSELF-LOCKING, LIGHTWEIGHT, SANDWICH PANEL

APPLICABLE DOCUMENT: NAS 1836



SHIMMED STYLE  
FOR SHORT LENGTHS



BLIND TAPPED STYLE  
FOR LONG LENGTHS

MATERIAL	HARDNESS/TENSILE STRENGTH (PSI) MIN	PROTECTIVE FINISH
STEEL, CARBON	NOT SPECIFIED	CADMIUM PLATE
ALUMINUM ALLOY	62,000	ANODIZE
CRES	BRINELL HARDNESS NO. 262 MAX	PASSIVATE

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THREAD SIZE	A	C	H <sup>1/</sup>	L <sup>2/</sup>	NAS1836 FIRST DASH NUMBERS
.1380-32UNJC-3B	.451	.12	.187	.218	-06
.1640-32UNJC-3B	.451	.12	.187	.218	-08
.1900-32UNJF-3B	.451	.12	.187	.218	-3
.2500-28UNJF-3B	.498	.14	.250	.281	-4

1/ MINIMUM FULL THREAD IN SHORT LENGTHS. MINIMUM FULL THREAD IS TWO DIAMETERS WHERE LENGTH PERMITS.

2/ MINIMUM LENGTH SPECIFIED. PREFERRED LENGTHS ARE IN .031 INCREMENTS AND NOT TO EXCEED 1 INCH.

NOTES:

1. NO LETTER AFTER BASIC NUMBER INDICATES CARBON STEEL.
2. SUFFIX "A" TO BASIC NUMBER INDICATES AL ALLOY (NONSELF-LOCKING ONLY).
3. SUFFIX "C" TO BASIC NUMBER INDICATES CRES.
4. SUFFIX "N" TO FIRST DASH NUMBER INDICATES NONSELF-LOCKING.
5. SECOND DASH NUMBER INDICATES LENGTH IN .031 INCH INCREMENTS (ALWAYS USE TWO DIGIT DASH NUMBER).
6. NO LETTER AFTER SECOND DASH NUMBER FOR CRES INDICATES PASSIVATE ONLY.
7. SUFFIX "M" TO SECOND DASH NUMBER INDICATES DRY FILM LUBRICANT.

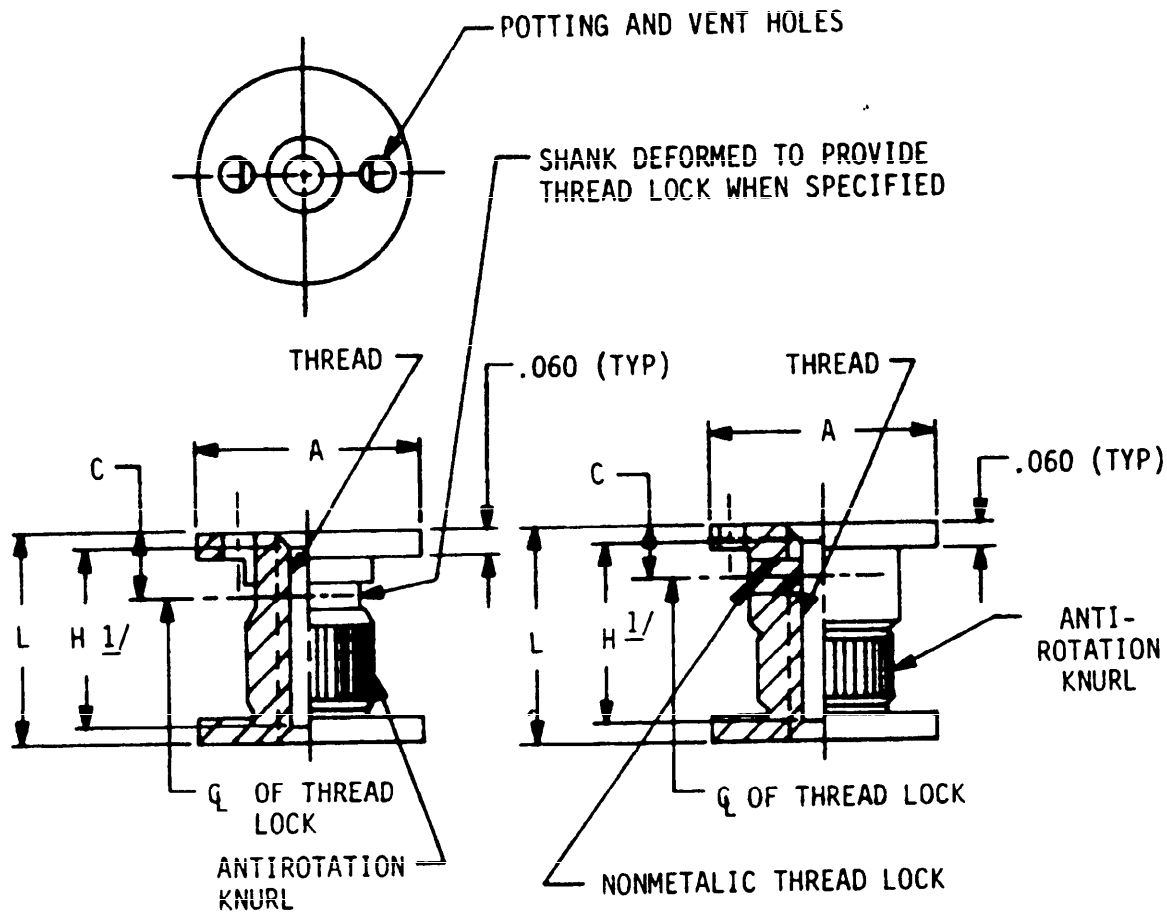


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## SECTION 115

INSERT, (SCREW THREAD) MOLDED IN, THRU THREADED,  
SELF-LOCKING, NONSELF-LOCKING, SANDWICH PANEL

APPLICABLE DOCUMENT: NAS 1833



ALL STEEL AND CRES AND  
NONSELF-LOCKING ALUMINUM STYLE

SELF LOCKING  
ALUMINUM STYLE

MATERIAL	HARDNESS/TENSILE STRENGTH (PSI) MIN	PROTECTIVE FINISH
STEEL, CARBON	NOT SPECIFIED	CADMIUM PLATE
ALUMINUM ALLOY	62,000	ANODIZE
CRES	BRINELL HARDNESS NO. 262 MAX	PASSIVATE

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THREAD SIZE	A	$\frac{2}{L}$	C	NAS1833 FIRST DASH NUMBERS
.1380-32UNJC-3B	.560	.250	.12	-06
.1640-32UNJC-3B	.560	.250	.12	-08
.1900-32UNJF-3B	.560	.250	.12	-3
.2500-28UNJF-3B	.685	.312	.14	-4
.3125-24UNJF-3B	.685	.312	.16	-5
.3750-24UNJF-3B	.841	.375	.22	-6

1/ MINIMUM FULL THREAD "H" IS TWO DIAMETERS WHERE LENGTH PERMITS.

2/ MINIMUM LENGTH SPECIFIED. ALL OTHER PREFERRED LENGTHS ARE IN .125 INCH INCREMENTS AND NOT TO EXCEED 2 INCHES.

NOTES:

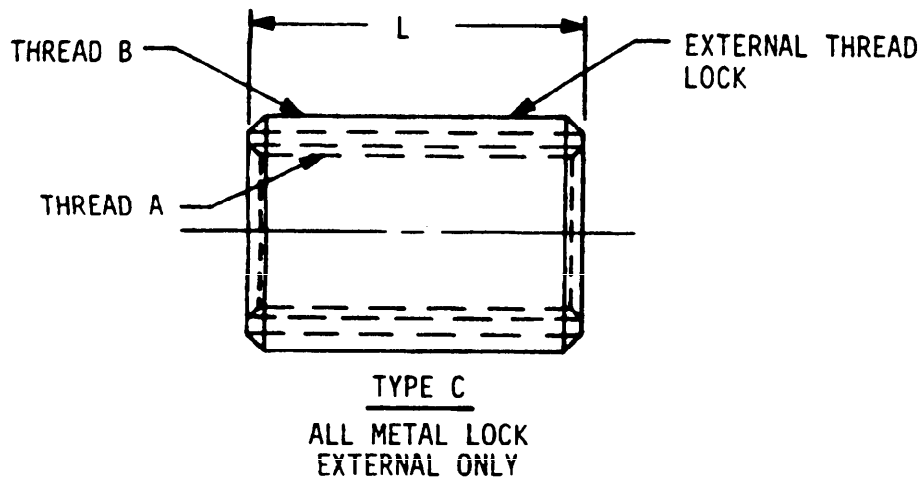
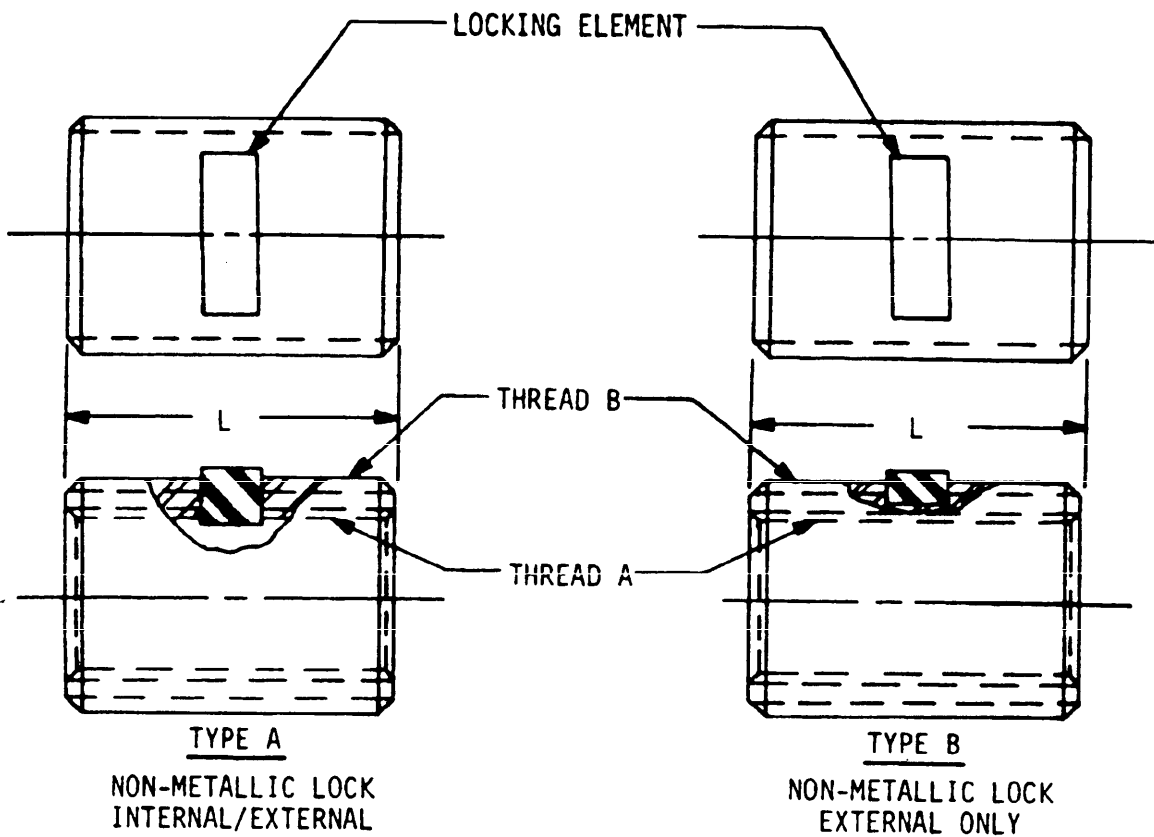
1. NO LETTER AFTER BASIC NUMBER INDICATES CARBON STEEL.
2. SUFFIX "A" TO BASIC NUMBER INDICATES AL ALLOY.
3. SUFFIX "C" TO BASIC NUMBER INDICATES CRES.
4. SUFFIX "N" TO FIRST DASH NUMBER INDICATES NONSELF-LOCKING.
5. SECOND DASH NUMBER INDICATES LENGTH IN THOUSANDTHS.
6. NO LETTER AFTER SECOND DASH NUMBER FOR CRES INDICATES PASSIVATE ONLY.
7. SUFFIX "M" TO SECOND DASH NUMBER INDICATES SOLID FILM LUBRICANT.

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15 February 1979

## SECTION 116

INSERT, SCREW THREAD, THIN WALL, LOCKED IN

APPLICABLE DOCUMENT: MIL-I-45932/2



MATERIAL	TENSILE STRENGTH (PSI) MIN	PROTECTIVE FINISH
CRES	125,000	PASSIVATE

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15 February 1979

A INTERNAL THREAD -3B	B EXTERNAL THREAD 1/	L	M45932/2 DASH NUMBERS		
			TYPE A	TYPE B	TYPE C
.086-56UNJC	.138-40	.19	-104	--	-004
	.164-32	.19	-204	-304	--
	.138-40	.15	-404	--	--
.112-40UNJC	.164-32	.19	-108	--	-008
	.190-32	.19	-208	-308	--
	.164-32	.15	-408	--	--
.138-32UNJC	.190-32	.21	-112	--	-012
	.216-28	.21	-212	-312	--
	.190-32	.15	-412	--	--
.164-32UNJC	.216-28	.25	-114	--	-014
	.250-28	.25	-214	-314	--
	.216-28	.21	-414	--	--
.190-24UNJC	.250-28	.29	-116	--	-016
	.3125-24	.29	-216	-316	--
	.250-28	.21	-416	--	--
.190-32UNJF	.250-28	.29	-117	--	-017
	.3125-24	.29	-217	-317	--
	.250-28	.21	-417	--	--
.250-20UNJC	.3125-24	.38	-118	--	-018
	.375-24	.38	-218	-318	--
	.3125-24	.25	-418	--	--
.250-28UNJF	.3125-24	.38	-119	--	-019
	.375-24	.38	-219	-319	--
	.3125-24	.25	-419	--	--
.3125-18UNJC	.375-24	.47	-120	--	-020
	.4375-20	.47	-220	-320	--
	.375-24	.31	-420	--	--
.3125-24UNJF	.375-24	.47	-121	--	-021
	.4375-20	.47	-221	-321	--
	.375-24	.31	-421	--	--
.375-16UNJC	.500-20	.56	-222	-322	--
.375-24UNJF			-223	-323	--
.500-13UNJC	.625-18	.75	-226	-326	--
.500-20UNJF			-227	-327	--

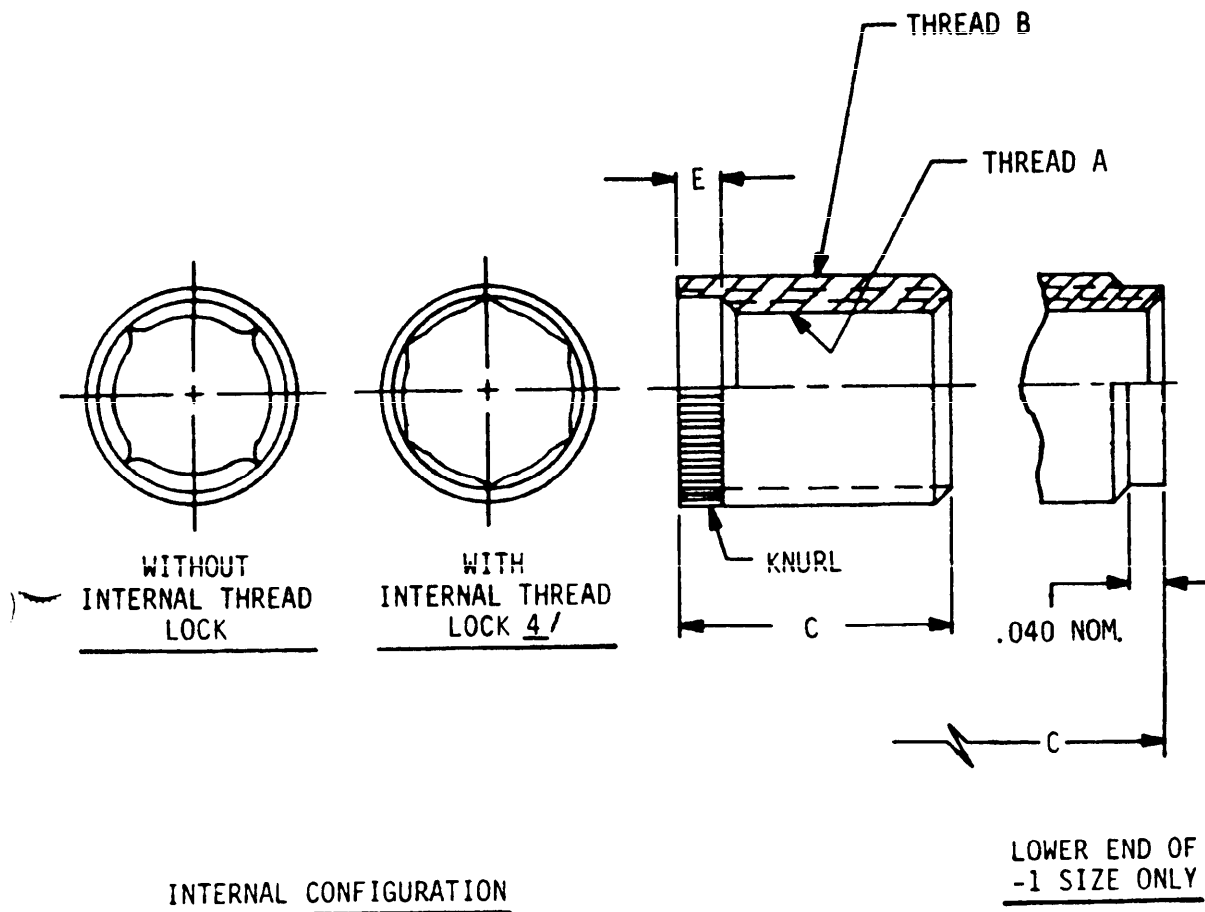
1/ EXTERNAL THREADS HAVE A MODIFIED MINOR DIAMETER.

MIL-STD-1758  
15 February 1979

## SECTION 117

INSERT, SCREW THREAD, THIN WALL, LOCKED IN

APPLICABLE DOCUMENT: MIL-I-45932/1



MATERIAL	TENSILE STRENGTH (PSI) MIN	PROTECTIVE FINISH
STEEL, ALLOY	125,000	CADMIUM PLATE
CRES, A286	125,000	SILVER PLATE

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15 February 1979

A INTERNAL THREAD -3B	B EXTERNAL THREAD	C	E	M45932/1 DASH NUMBERS				
				STEEL 3/ ALLOY	CRES A286 3/			
.086-56UNC	.138-40UNF	.17	.042	-1AL	-1CL			
		.13		-2A	-2C			
.112-40UNC	.164-32UNC	.19	.060	-3AL	-3CL			
				-4A	-4C			
.138-32UNC	.190-32UNF	.21	.065	-5AL	-5CL			
				-6A	-6C			
.164-32UNC	.216-28UNF	.25	.065	-7AL	-7CL			
				-8A	-8C			
.190-32UNF	.250-28UNF	.29	.085	-9AL	-9CL			
				-10A	-10C			
.190-24UNC				-11AL	-11CL			
				-12A	-12C			
.250-28UNF	.3125-24UNF	.38	.085	-13AL	-13CL			
				-14A	-14C			
.250-20UNC				-15AL	-15CL			
				-16A	-16C			
				-17AL	-17CL			
.3125-24UNF	.375-24UNF	.47	.085	-18A	-18C			
				-19AL	-19CL			
.3125-18UNC				-20A	-20C			
				-21AL	-21CL			
.375-24UNF	.4375-20UNF	.56	.115	-22A	-22C			
				-23AL	-23CL			
.375-16UNC				-24A	-24C			
				-25AL	-25CL			
.4375-20UNF	.500-20UNF	.66	.115	-26A	-26C			
				-27AL	-27CL			
.4375-14UNC				-28A	-28C			
				-29AL	-29CL			
.500-20UNF	.5625-24UNEF	.75	.115	-30A	-30C			
				-31AL	-31CL			
.500-13UNC				-32A	-32C			
				--	-33CL			
.5625-18UNF	.6875-12UNF	.84	.145	--	-34C			
				--	-37CL			
.625-18UNF				.750-16UNF	.94	.145	--	-38C
							--	-39CL
.625-11UNC	--	-40C						
	--	-41CL						
.750-16UNF	.875-20UNEF	1.12	.170	--	-42C			
				--	-43CL			
.750-10UNC				--	-44C			
				--				

1/ ALL COARSE INTERNAL THREADS (UNC) HAVE AN INCREASED MINOR DIAMETER.

2/ EXTERNAL THREADS HAVE A MODIFIED MINOR DIAMETER.

3/ "L" SUFFIX SHOWN INDICATES SELF-LOCKING INSERT.

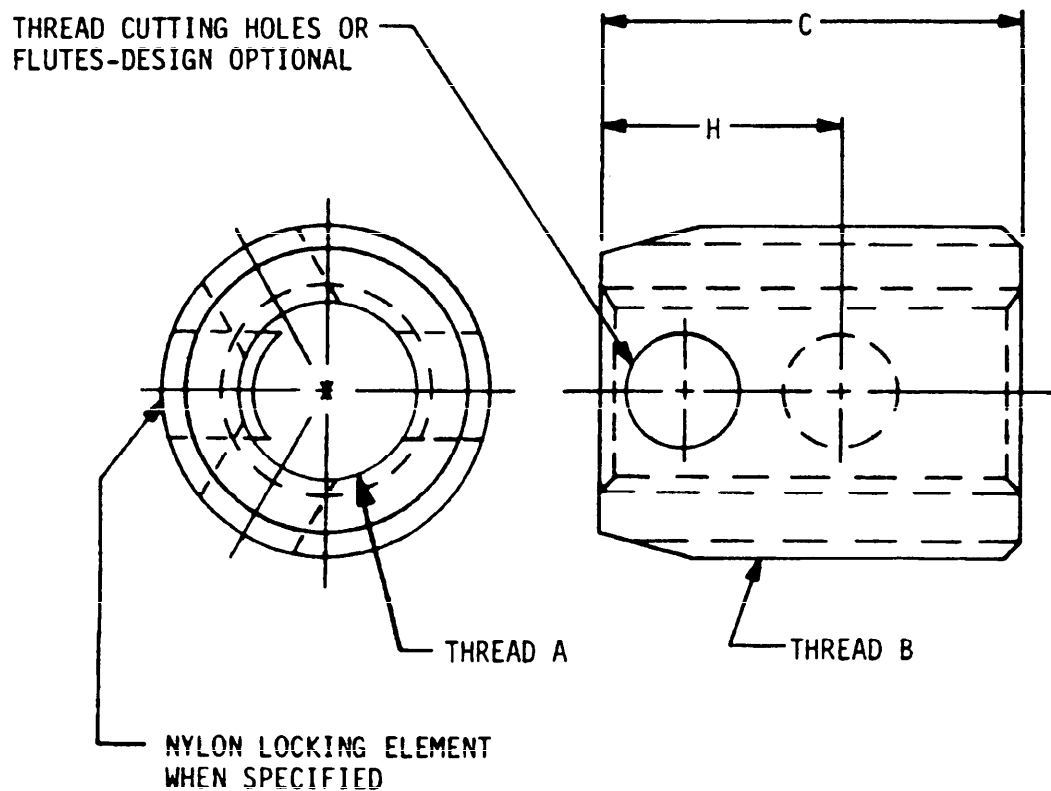
4/ INTERNAL THREAD LOCKING FEATURE - THE CENTERLINE OF THE INTERNAL THREAD LOCKING FEATURE IS APPROXIMATELY MID-LENGTH OF INTERNAL THREAD EXCEPT -1 SIZE IS LOCATED ON A PILOT AT THE BOTTOM OF INSERT.

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15 February 1979

## SECTION 118

INSERT, SCREW THREAD, THREAD CUTTING

APPLICABLE DOCUMENT: MS35914



MATERIAL	HARDNESS/CONDITION	PROTECTIVE FINISH
STEEL, CARBON	ROCKWELL 15N-75 MIN	CADMIUM PLATE
CRES	ANNEALED CONDITION	PASSIVATE

MIL-STD-1758  
15 February 1979

TABLE I. REGULAR WALL.

A INTERNAL THREAD -3B	B EXTERNAL THREAD <sup>1/</sup>	C LENGTH	H <sup>2/</sup>	MS35914 DASH NUMBERS <sup>3/</sup>	
				CARBON STEEL	CRES
.086-56UNC	9/64-48	.188	.109	-125	-141
		.125	--	-202	-252
.112-40UNC	11/64-40	.187	.115	-203	-253
.138-32UNC	7/32-32	.187	--	-206	-256
.164-32UNC	1/4-32	.250	.135	-207	-257
.190-24UNC	19/64-24	.375	.219	-107	-149
.190-32UNF	19/64-24	.375	.219	-108	-150
		.250	--	-212	-262
.250-20UNC	3/8-20	.484	.281	-109	-151
.250-28UNF	3/8-20	.375	.203	-215	-265
.3125-18UNC	15/32-18	.562	.312	-111	-153
.3125-24UNF	15/32-18	.562	.312	-112	-154
		.375	--	-220	-270
.375-16UNC	9/16-16	.687	.375	-113	-155
.375-24UNF	9/16-16	.687	.375	-114	-156
		.562	.281	-223	-273
		.437	--	-224	-274
.500-13UNC	47/64-13	.906	.500	-117	-159
.500-20UNF	47/64-13	.906	.500	-118	-160
		.750	.391	-227	-277
		.562	--	-228	-278
.625-11UNC	29/32-11	1.125	--	-121	-163
.625-18UNF	29/32-11	1.125	--	-122	-164
		.937	--	-231	-281
		.687	--	-232	-282
.750-10UNC	1-5/64-10	1.375	--	-123	-165
.750-16UNF	1-5/64-10	1.375	--	-124	-166
		1.125	--	-235	-285
		.812	--	-236	-286

- 1/ EXTERNAL THREADS ARE SELF-TAPPING AND HAVE A 60° THREAD APPROXIMATING AMERICAN NATIONAL FORM.
- 2/ NYLON LOCKING ELEMENT IS AVAILABLE ONLY FOR INSERTS HAVING A SPECIFIED "H" DIMENSION.
- 3/ ADD "L" AS SUFFIX TO DASH NUMBER FOR INTERNAL THREAD LOCK.

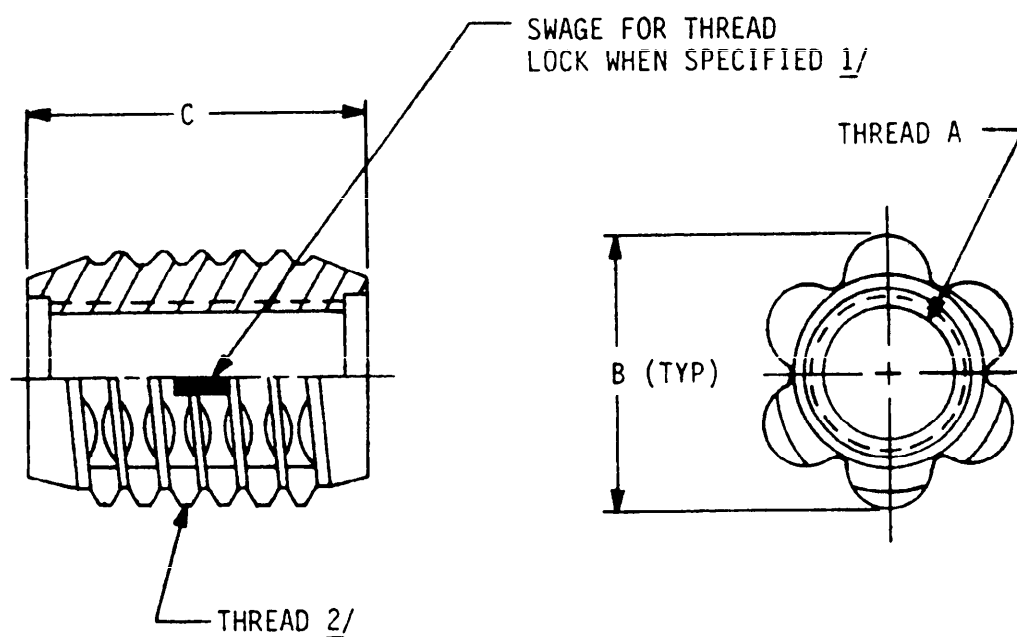


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15 February 1979

## SECTION 119

INSERT, SCREW THREAD, THREAD FORMING

APPLICABLE DOCUMENT: MS51836



MATERIAL	HARDNESS	PROTECTIVE FINISH
STEEL, CARBON	ROCKWELL B94-100	CADMIUM PLATE
CRES	ROCKWELL C23-32	PASSIVATE
BRASS	ROCKWELL B78-83	BLACK OXIDE

1/ LOCKING FEATURE AVAILABLE ONLY IN CRES INSERTS IN MEDIUM AND LONG LENGTHS.

2/ EXTERNAL THREADS HAVE A SPECIAL FORM AND PITCH.

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15 February 1979

TABLE I. SHORT, MEDIUM AND LONG LENGTH INSERTS.

A INTERNAL THREAD	B	C LENGTH	MS51836 DASH NUMBERS <sup>1/</sup>
.086-56UNC-3B	.138	.120	-101
		.160	-201
		.190	-301
.112-40UNC-3B	.172	.160	-103
		.190	-203
		.230	-303
.138-32UNC-3B	.216	.190	-105
		.220	-205
		.280	-305
.164-32UNC-3B	.253	.220	-107
		.250	-207
		.330	-307
.190-24UNC-3B	.280	.250	-109
		.300	-209
		.370	-309
.190-32UNF-3B	.280	.250	-110
		.300	-210
		.370	-310
.250-20UNC-3B	.370	.310	-111
		.370	-211
		.490	-311
.250-28UNF-3B	.370	.310	-112
		.370	-212
		.490	-312
.3125-18UNC-3B	.449	.370	-113
		.470	-213
		.560	-313
.3125-24UNF-3B	.449	.370	-114
		.470	-214
		.560	-314
.375-16UNC-3B	.552	.440	-115
		.560	-215
		.680	-315
.375-24UNF-3B	.552	.440	-116
		.560	-216
		.680	-316

<sup>1/</sup> ADD "B" IN LIEU OF "DASH" FOR BRASS.  
ADD "U" IN LIEU OF "DASH" FOR CARBON STEEL.  
ADD "L" AS SUFFIX TO DASH NUMBER FOR INTERNAL THREAD LOCK FOR  
GRES INSERTS ONLY.

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15 February 1979

TABLE II. THIN WALL. <sup>1/</sup>

A INTERNAL THREAD (-3B)	B EXTERNAL THREAD <sup>2/</sup>	C LENGTH	MS35914 DASH NUMBERS
			CRES
.112-40UNC	5/32-40	.187	-302
.138-32UNC	3/16-32	.281	-304
		.187	-306
.164-32UNC	7/32-32	.250	-308
.190-32UNF	17/64-32	.375	-310
		.250	-312
.250-28UNF	11/32-28	.375	-314
		.312	-315
.3125-24UNF	13/32-24	.562	-316
		.375	-318
.375-24UNF	1/2-20	.687	-319
		.562	-320
		.437	-321
.500-20UNF	5/8-18	.906	-322
		.750	-323
		.562	-324

<sup>1/</sup> THIN WALL INSERTS ARE SUPPLIED IN CORROSION-RESISTING STEEL ONLY.  
NO INTERNAL LOCK IS AVAILABLE.

<sup>2/</sup> EXTERNAL THREADS ARE SELF-TAPPING AND HAVE A 60° THREAD APPROXIMATING  
AMERICAN NATIONAL FORM.



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DOCUMENT IDENTIFIER (Number) AND TITLE

MIL-STD-1758 Inserts, Screw Thread, Preferred for Design, Listing of

NAME OF ORGANIZATION AND ADDRESS OF SUBMITTER

☐ VENDOR      ☐ USER      ☐ MANUFACTURER

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**C. REASON FOR RECOMMENDED CHANGE(S)**

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DD FORM 1426  
1 OCT 76

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