MIL-I-45932/2B
20 September 1977

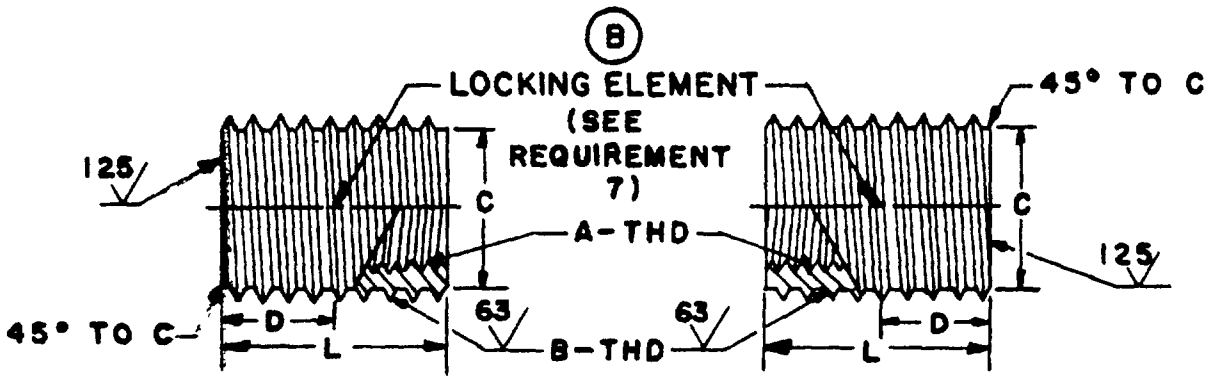
SUPERSEDING
MIL-I-45932/2A
12 November 1973

MILITARY SPECIFICATION SHEET

INSERT, SCREW THREAD, THIN WALL, LOCKED IN

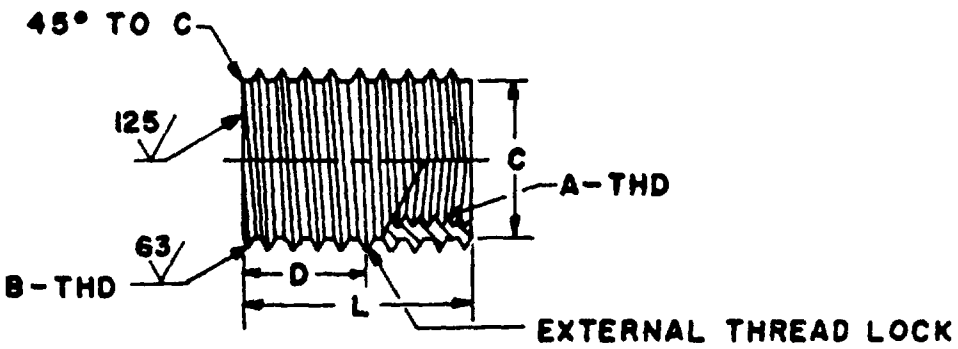
This specification is approved for use by all Departments and Agencies of the Department of Defense.

The complete requirements for procuring the inserts described herein shall consist of this document and the latest issue of specification MIL-I-45932.



TYPE A
NON-METALLIC LOCK
INTERNAL/EXTERNAL

TYPE B
NON-METALLIC LOCK
EXTERNAL ONLY



TYPE C
ALL METAL LOCK
EXTERNAL ONLY

FSC 5340

TABLE I

DASH NUMBER			A INT THD UNJ-3B	B EXTERNAL THREAD ALTERED MINOR DIA		C DIA		D REF	L ±.01
CRES - COMP. 303									
TYPE A	TYPE B	TYPE C	THREAD SIZE	THREAD SIZE	MAX MINOR DIA	MAX	MIN		
~~*101~~			~~.060-80~~	~~.099-48~~	~~.0755~~	~~.071~~	~~.066~~	~~.04~~	~~.10~~
104		004	.086-56	.138-40	.1073	.102	.097	.09	.19
204	304			.164-32	.1380	.133	.128	.09	.19
404				.138-40	.1073	.102	.097	.08	.15
108		008	.112-40	.164-32	.1380	.133	.128	.09	.19
208	308			.190-32	.1620	.157	.152	.09	.19
408				.164-32	.1380	.133	.128	.08	.15
112		012	.138-32	.190-32	.1620	.157	.152	.10	.21
212	312			.216-28	.1890	.185	.179	.10	.21
412				.190-32	.1620	.157	.152	.08	.15
114		014	.164-32	.216-28	.1890	.185	.179	.12	.25
214	314			.250-28	.2170	.212	.207	.12	.25
414				.216-28	.1890	.185	.179	.10	.21
116		016	.190-24	.250-28	.2170	.212	.207	.15	.29
216	316			.3125-24	.2785	.273	.268	.15	.29
416				.250-28	.2170	.212	.207	.10	.21
117		017	.190-32	.250-28	.2170	.212	.207	.15	.29
217	317			.3125-24	.2785	.273	.268	.15	.29
417				.250-28	.2170	.212	.207	.10	.21
118		018	.250-20	.3125-24	.2785	.273	.268	.19	.38
218	318			.375-24	.3405	.335	.330	.19	.38
418				.3125-24	.2785	.273	.268	.12	.25
119		019	.250-28	.3125-24	.2785	.273	.268	.19	.38
219	319			.375-24	.3405	.335	.330	.19	.38
419				.3125-24	.2785	.273	.268	.12	.25
120		020	.3125-18	.375-24	.3405	.335	.330	.24	.47
220	320			.4375-20	.4010	.396	.391	.24	.47
420				.375-24	.3405	.335	.330	.15	.31
121		021	.3125-24	.375-24	.3405	.335	.330	.24	.47
221	321			.4375-20	.4010	.396	.391	.24	.47
421				.375-24	.3405	.335	.330	.15	.31
~~*122~~			~~.375-16~~	~~.4375-20~~	~~.4010~~	~~.396~~	~~.391~~	~~.28~~	~~.56~~
~~*123~~			~~.375-24~~						
222	322		.375-16	.500-20	.4630	.458	.453	.28	.56
223	323		.375-24						
226	326		.500-13	.625-18	.5618	.557	.552	.38	.75
227	327		.500-20						

* Inactive for new design after 12 November 1973 .

REQUIREMENTS:

1. MATERIAL: Corrosion-resisting steel, composition 303 in accordance with Fed. Std. No. 66.
Corrosion-resisting steel, composition A286 in accordance with AMS 5734. (Inactive - see Table II.)
Carbon steel, composition C1117 in accordance with Fed. Std. No. 66. (Inactive - see Table III.)
Nonmetallic locking element shall be nylon 6/6 in accordance with L-P-410, or equivalent. (-60°F to +250°F)

2. PROTECTIVE COATING: Corrosion-resisting steel, comp. 303, shall be passivated in accordance with QQ-P-35, followed by a solid film lubricant coating in accordance with MIL-L-8937.
Corrosion-resisting steel, comp. A286, shall be silver plated in accordance with QQ-S-365, Type II, Grade B.
Carbon steel shall be cadmium plated in accordance with QQ-P-416, Type II, Class 2, followed by a solid film lubricant coating in accordance with MIL-L-8937.

3. THREADS: Threads shall be in accordance with MIL-S-7742, except as noted in Tables I, II, and III and shall accept external MIL-S-8879 threads.

4. DIMENSIONS: All dimensions are in inches and shall apply after plating and before addition of solid film lubricant.

5. TOLERANCES: Angles ±2°.

6. PART NUMBER: The part number consists of M45932/2 and a dash number taken from Table I, II, or III.
Examples: M45932/2-104.

(B) 7. Configuration of locking element (strip, patch, or plug) shall be at the manufacturer's option.

TABLE II
Dash numbers in this Table (Type A only) are INACTIVE FOR NEW DESIGN AFTER 12 November 1973.

DASH NO.	A INT THD CLASS 3B	B EXTERNAL THREAD ALTERED MINOR DIA		C DIA		D REF	L ±.01
CRES COMP. A286	THREAD SIZE	THREAD SIZE	MAX MINOR DIA	MAX	MIN		
CA101	.060-80	.099-48	.0755	.071	.066	.04	.10
CA104	.086-56	.138-40	.1073	.102	.097	.09	.19
CA108	.112-40	.164-32	.1380	.133	.128	.09	.19
CA112	.138-32	.190-32	.1620	.157	.152	.10	.21
CA114	.164-32	.216-28	.1890	.185	.179	.12	.25
CA116	.190-24	.250-28	.2170	.212	.207	.15	.29
CA117	.190-32	.250-28	.2170	.212	.207	.15	.29
CA118	.250-20	.3125-24	.2785	.273	.268	.19	.38
CA119	.250-28	.3125-24	.2785	.273	.268	.19	.38
CA120	.3125-18	.375-24	.3405	.335	.330	.24	.47
CA121	.3125-24	.375-24	.3405	.335	.330	.24	.47
CA122	.375-16	.4375-20	.4010	.396	.391	.28	.56
CA123	.375-24	.4375-20	.4010	.396	.391	.28	.56

TABLE III

Dash numbers in this Table (Type A only) are INACTIVE FOR NEW DESIGN AFTER 12 November 1973.

DASH NO.	A INT THD CLASS 3B	B EXTERNAL THREAD ALTERED MINOR DIA		C DIA		D REF	L ±.01
CARBON STEEL	THREAD SIZE	THREAD SIZE	MAX MINOR DIA	MAX	MIN		
916	.190-24	.375-16	.2983	.293	.288	.22	.43
917	.190-32	.375-16	.2983	.293	.288	.22	.43
918	.250-20	.4375-14	.3499	.344	.339	.25	.50
919	.250-28	.4375-14	.3499	.344	.339	.25	.50
920	.3125-18	.500-13	.4056	.400	.395	.28	.56
921	.3125-24	.500-13	.4056	.400	.395	.28	.56
922	.375-16	.5625-12	.4603	.455	.450	.31	.62
923	.375-24	.5625-12	.4603	.455	.450	.31	.62
924	.4375-14	.625-11	.5135	.508	.503	.35	.69
925	.4375-20	.625-11	.5135	.508	.503	.35	.69
926	.500-13	.750-10	.6273	.622	.617	.38	.75
927	.500-20	.750-10	.6273	.622	.617	.38	.75
928	.5625-12	.875-14	.7874	.782	.777	.44	.87
929	.5625-18	.875-14	.7874	.782	.777	.44	.87
930	.625-11	1.000-12	.8978	.892	.887	.50	1.00
931	.625-18	1.000-12	.8978	.892	.887	.50	1.00
932	.750-10	1.125-12	1.0228	1.017	1.012	.56	1.12
933	.750-16	1.125-12	1.0228	1.017	1.012	.56	1.12
934	.875-9	1.250-12	1.1478	1.142	1.137	.63	1.25
935	.875-14	1.250-12	1.1478	1.142	1.137	.63	1.25
936	1.000-8	1.375-12	1.2728	1.267	1.262	.69	1.38
937	1.000-12	1.375-12	1.2728	1.267	1.262	.69	1.38

HOLE PREPARATION

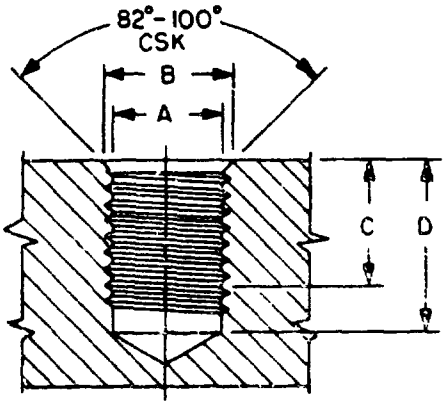


TABLE IV
HOLE PREPARATION - ACTIVE DASH NUMBERS

NOM THREAD SIZE (CLASS 3)	DASH NUMBERS			A DRILL DIA		B CSK DIA		C FULL THREAD DEPTH MIN	D DRILL DEPTH MIN
	TYPE A	TYPE B	TYPE C	MAX	MIN	MAX	MIN		
.138-40UNF	104		004	.117	.112	.188	.168	.220	.280
	404							.180	.240
.164-32UNC	204	304		.144	.139	.214	.194	.220	.300
	108		008					.220	.300
	408							.180	.250
.190-32UNF	208	308		.170	.165	.240	.220	.220	.320
	112		012					.240	.320
	412							.180	.260
.216-28UNF	212	312		.195	.190	.266	.246	.240	.370
	114		014					.280	.370
	414							.240	.330
.250-28UNF	214	314		.225	.220	.300	.280	.280	.410
	116		016					.325	.410
	117		017					.325	.410
	416							.240	.330
	417							.240	.330
.3125-24UNF	216	316		.285	.280	.382	.362	.325	.510
	217	317						.325	.510
	118		018					.415	.510
	119		019					.415	.510
	418							.280	.375
	419							.280	.375

TABLE IV - Continued
HOLE PREPARATION - ACTIVE DASH NUMBERS

NOM THREAD SIZE (CLASS 3)	DASH NUMBERS			A DRILL DIA		B CSK DIA		C FULL THREAD DEPTH MIN	D DRILL DEPTH MIN
	TYPE A	TYPE B	TYPE C	MAX	MIN	MAX	MIN		
.375-24UNF	218 219	318 319		.347	.342	.445	.425	.415	.600
	120 121		020 021					.505	.600
	420 421							.340	.435
.4375-20UNF	220 221	320 321		.408	.403	.507	.487	.505	.710
.500-20UNF	222 223	322 323		.472	.467	.570	.550	.595	.820
.625-18UNF	226 227	326 327		.582	.577	.695	.675	.795	1.035

TABLE V
HOLE PREPARATION - INACTIVE DASH NUMBERS

NOM THREAD SIZE (CLASS 3)	DASH NUMBERS		A DRILL DIA		B CSK DIA		C FULL THREAD DEPTH MIN	D DRILL DEPTH MIN
	TYPE A		MAX	MIN	MAX	MIN		
.099-48UNC	CA101	101	.079	.076	.125	.105	.120	.150
.138-40UNF	CA104		.117	.112	.188	.168	.220	.280
.164-32UNC	CA108		.144	.139	.214	.194	.220	.300
.190-32UNF	CA112		.170	.165	.240	.220	.240	.320
.216-28UNF	CA114		.195	.190	.266	.246	.280	.370
.250-28UNF	CA116	CA117	.225	.220	.300	.280	.325	.410
.3125-24UNF	CA118	CA119	.285	.280	.382	.362	.415	.510
.375-24UNF	CA120	120	.347	.342	.445	.425	.505	.600
.375-24UNF	CA121		.347	.342	.445	.425	.505	.600
.4375-20UNF	CA122	122	.408	.403	.507	.487	.595	.710
.4375-20UNF	CA123	123	.408	.403	.507	.487	.595	.710
.375-16UNC	916	917	.316	.311	.455	.435	.460	.620
.4375-14UNC	918	919	.363	.358	.517	.497	.530	.710
.500-13UNC	920	921	.426	.421	.580	.560	.590	.780
.5625-12UNC	922	923	.488	.483	.642	.622	.650	.870
.625-11UNC	924	925	.535	.530	.705	.685	.720	.950
.750-10UNC	926	927	.645	.640	.830	.810	.780	1.030
.875-14UNF	928	929	.800	.795	.955	.935	.900	1.040
1.000-12UNF	930	931	.910	.905	1.080	1.060	1.030	1.250
1.125-12UNF	932	933	1.035	1.030	1.205	1.185	1.150	1.370
1.250-12UNF	934	935	1.160	1.155	1.340	1.320	1.280	1.500
1.375-12UNF	936	937	1.285	1.280	1.455	1.435	1.410	1.630

NOTES: TABLE IV AND V

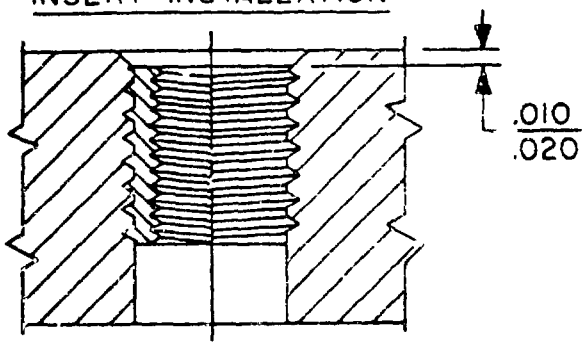
1. Axis of hole shall be normal to entry surface or a spotface shall be provided when required.

2. Surface roughness - Machined surfaces shall be 125 microinches.

3. Remove all burrs and sharp edges.

4. All dimensions are in inches, unless otherwise specified.

INSERT INSTALLATION



1. Install insert to depth shown.

2. Typical drawing callout to be located in vicinity of part identification.

For preparation of hole and installation procedure see MIL-I-45932/2.

Insert View

3. Replacement of inserts can be made with same size parts as those removed and in the same manner as those originally installed. However, when the tapped hole for type A is damaged beyond repair, it can be redrilled and retapped and the larger insert having the same internal thread may be used.

Custodians:
Army - WC
Air Force - 99

Reviewer Activities:
Army - AV
Air Force - 99
DSA - IS

Preparing Activity:
Army - WC

Project No. 5340-1158

User Activities:
Army - AT, EL
Navy - MC, OS

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