

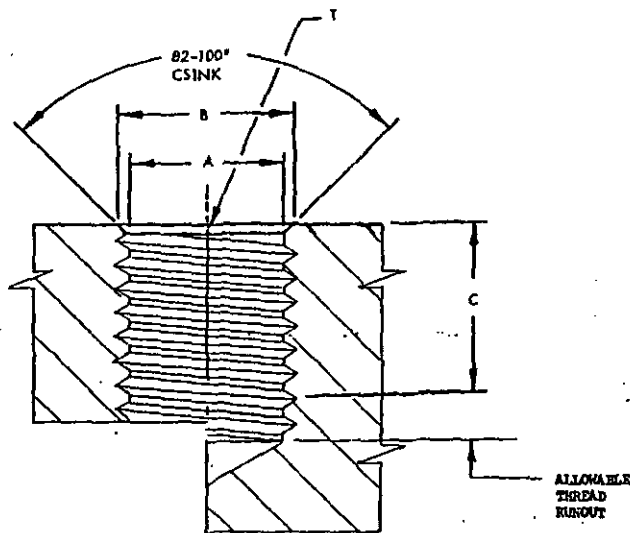
FED. SUP CLASS  
53GPREVIEW: AV, IS, MI, MU, NSA  
USER: AT, EL, CL, MC

FIGURE 1 - CONFIGURATION FOR TABLES I, II AND III

## NOTES

1. AXIS OF HOLE TO BE NORMAL TO ENTRY SURFACE OR PROVIDE SPOTFACE WHEN REQUIRED.
2. UNIFIED NATIONAL CLASS 2B OR 3B THREADS.
3. SURFACE ROUGHNESS: UNLESS OTHERWISE SPECIFIED, MACHINED SURFACES TO BE 125 MICROINCHES IN ACCORDANCE WITH AMS2 246-1.
4. NOMINAL USE: FOR INSTALLATION OF KEY-LOCKED INSERTS AND STUDS CONFORMING TO MS51830, MS51831, MS51832, MS51833, AND MS51834, AS APPLICABLE.
5. INSTALLATION: PROCEDURE AND INSTALLATION OF KEY-LOCKED INSERTS AND STUDS, SEE MS51835, FIGURE II.
6. REMOVE ALL BURRS AND SHARP EDGES.
7. DIMENSIONS IN INCHES. UNLESS OTHERWISE SPECIFIED, TOLERANCES, LINEAR DIMENSIONS  $\pm .005$
8. ILLUSTRATION IS FOR IDENTIFICATION AND IS NOT INTENDED TO RESTRICT DESIGNS AND SHAPES OF INSERTS AND STUDS WHICH OTHERWISE CONFORM TO REQUIREMENTS.

THIS IS A DESIGN STANDARD AND SHALL NOT BE USED AS A PART NUMBER.

④ ENTIRE STANDARD REVISED

P.A.	WC	TITLE	MILITARY STANDARD
Other Cont	AS 82	INSERTS AND STUDS, LOCKED IN - KEY LOCKED, HOLE DIMENSIONS FOR AND ASSEMBLY OF	MS 51835
REQUIREMENT SPECIFICATION NOT APPLICABLE	SUPERSEDES:	SHEET 1 OF 4	

DD FORM 72-1 (Coordinated)

This military standard is mandatory for use by all Departments and Agencies of the Department of Defense. Selection for all new engineering and design applications and for repetitive use shall be made from this document.

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TABLE I -- INSTALLATION HOLE DIMENSIONS FOR MS 51830 AND MS 51833

FED. SUP CLASS  
**53GP**

NOMINAL EXTERNAL THD SIZE FOR INSERT AND STUD	MS 51830 INSERT DASH NUMBER (REF)	MS 51833 STUD DASH NUMBER (REF)	A DIAMETER	B CSINK DIAMETER +.010 -.000	T THREAD UNIFIED NATIONAL CLASS 2B	C MIN FULL THREAD
.164-32	-101	--	.137 .133	.166	.164-32UNC	.140
.190-32	-102	--	.164 .160	.194	.190-32UNF	.160
.216-28	-103	--	.191 .186	.220	.216-28UNF	.160
.250-28	-104	--	.231 .227	.255	.250-28UNF	.210
.3125-18	-105 -201	-101 -201	.276 .271	.323	.3125-18UNC	.370
.375-16	-106 -202	-102 -202	.336 .331	.385	.375-16UNC	.430
.4375-14	-107 -203	-103 -203	.401 .396	.447	.4375-14UNC	.500
.500-13	-108 -204	-104 -204	.457 .452	.510	.500-13UNC	.560
.5625-12	-109 -205	-105 -205	.521 .515	.572	.5625-12UNC	.620
.625-11	-110 -206	-106 -206	.583 .577	.635	.625-11UNC	.680

TABLE II -- INSTALLATION HOLE DIMENSIONS FOR MS 51831 AND MS 51834

NOMINAL EXTERNAL THD SIZE FOR INSERT AND STUD	MS 51831 INSERT DASH NUMBER (REF)	MS 51834 STUD DASH NUMBER (REF)	A DIAMETER	B CSINK DIAMETER +.010 -.000	T THREAD UNIFIED NATIONAL CLASS 2A	C MIN FULL THREAD
.3125-18	--	-101 -201	.276 .271	.323	.3125-18UNC	.370
.375-16	-101 -201	-102 -202	.336 .331	.385	.375-16UNC	.370
.4375-14	-102 -202	-103 -203	.401 .396	.447	.4375-14UNC	.430
.500-13	-103 -203	-104 -204	.457 .452	.510	.500-13UNC	.500
.5625-12	-104 -204	-105 -205	.521 .515	.572	.5625-12UNC	.560
.625-11	-105 -205	-106 -206	.583 .577	.635	.625-11UNC	.680
.6875-11	-106 -206	-107 -207	.646 .640	.700	.6875-11UNS	.750
.8125-16	-107 -207	-108 -208	.771 .765	.822	.8125-16UN	.940
.875-14	-108 -208	-109 -209	.833 .827	.885	.875-14UNF	1.000
1.125-12	-109(L) -209(L)	-110 -201	1.067 1.061	1.145	1.125-12UNF	1.310 (L) 1.440
1.250-12	-110(L) -210(L)	-111 -211	1.192 1.186	1.270	1.250-12UNF	1.440 (L) 1.560
1.375-12	-111(L) -211(L)	-112 -212	1.317 1.311	1.395	1.375-12UNF	1.560 (L) 1.680

P.A. WC  
Other Cust AS  
82

TITLE

INSERTS AND STUDS, LOCKED IN -  
KEY LOCKED, HOLE DIMENSIONS FOR AND ASSEMBLY OF

MILITARY STANDARD

**MS 51835**

PROCUREMENT SPECIFICATION  
NOT APPLICABLE

SUPERSEDES:

SHEET 2 OF 4

DD FORM 672-1 (Coordinated)

PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE.

APPROVED 1 DEC 1967 REVISED (A) FOR CHANGES SEE ESDT 1

REVIEW: AV, IS, MI, MU, NSA  
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TABLE III - INSTALLATION HOLE DIMENSIONS FOR MS 51832

FED. SUP CLASS  
**53GP**

NOMINAL EXTERNAL THREAD SIZE FOR INSERT	MS 51832 INSERT DASH NUMBER (REF)	A DIAMETER	B CSINK DIAMETER +.010 -.000	T THREAD UNIFIED NATIONAL CLASS 2B	C MIN FULL THREAD
.4375-14	-101 -201	.401 .396	.447	.4375-14UNC	.370
.500-13	-102 -202	.457 .452	.510	.500-13UNC	.440
.5625-12	-103 -203	.521 .515	.572	.5625-12UNC	.500
.625-11	-104 -204	.583 .577	.635	.625-11UNC	.560
.6875-11	-105 -205	.646 .640	.700	.6875-11NS	.680
.8125-16	-106 -206	.771 .765	.822	.8125-16UN	.750
.875-14	-107 -207	.833 .827	.885	.875-14UNC	.940
1.000-12	-108 -208	.942 .936	1.020	1.000-12UNF	1.000
1.250-12	-109(L) -209(L)	1.192 1.186	1.270	1.250-12UNF	1.310 (L) 1.440
1.375-12	-110(L) -210(L)	1.317 1.311	1.395	1.375-12UNF	1.440 (L) 1.560
1.500-12	-111(L) -211(L)	1.442 1.437	1.520	1.500-12UNF	1.560 (L) 1.680

APPROVED 1 DEC 1967 REVISED (A) FOR CHANGES SEE SHEET 1

P.A.	WC	TITLE	MILITARY STANDARD
Other Cust	AS	INSERTS AND STUDS, LOCKED IN -	
82		KEY LOCKED, HOLE DIMENSIONS FOR AND ASSEMBLY OF	<b>MS 51835</b>
PROCUREMENT SPECIFICATION NOT APPLICABLE	SUPERSEDES:	SHEET 3 OF 4	

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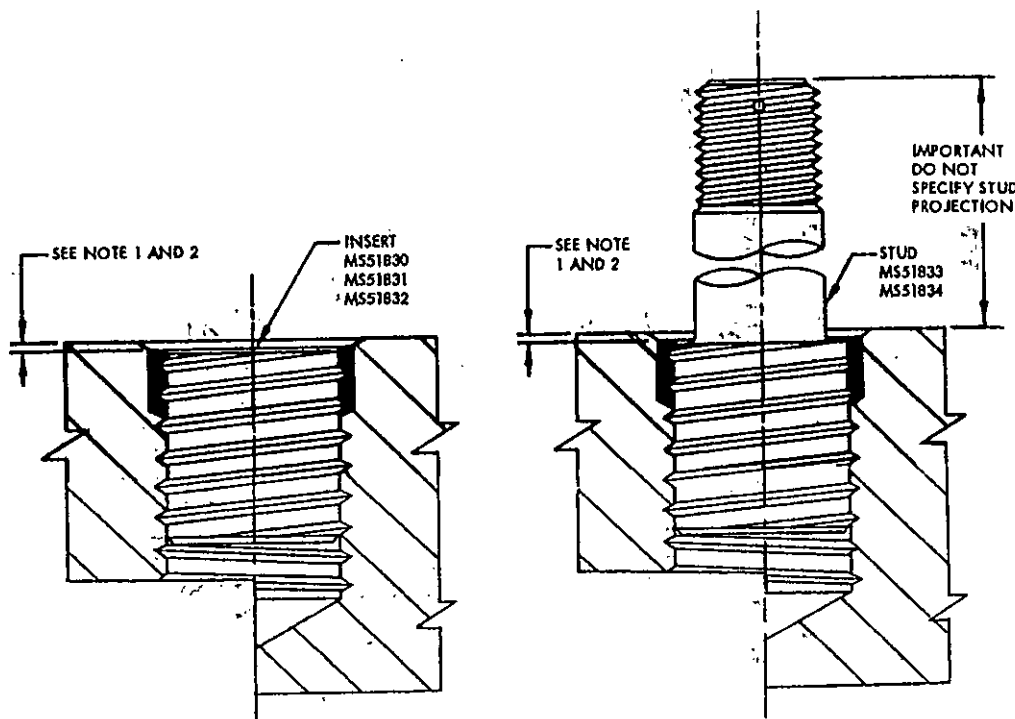
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FIGURE II - ASSEMBLY OF INSERTS AND STUDS

HOLE PREPARATION IN ACCORDANCE WITH TABLES I, II AND III PER APPLICABLE EXTERNAL THREAD SIZE OF PART AND CORRESPONDING DASH NUMBER.

1. INSTALL INSERT OR STUD AS SHOWN. (KEYS LOCATE CORRECT DEPTH.)
2. DRIVE KEYS AS SHOWN.
3. TYPICAL DRAWING CALLOUT-TO BE LOCATED IN VICINITY OF PART IDENTIFICATION.

FOR INSERTINSTALL INSERT IN  
ACCORDANCE  
WITH MS51835

INSERT VIEW

FOR STUDINSTALL STUD IN  
ACCORDANCE  
WITH MS51835

STUD VIEW

4. REPLACEMENT OF INSERTS AND STUDS IS MADE WITH SAME SIZE PARTS AS THOSE REMOVED AND IN SAME MANNER AS ORIGINALLY INSTALLED.
5. IN MATERIALS HARDER THAN 150 BRINNELL, KEY SLOTS, BROACHED PRIOR TO INSERT INSTALLATION, MAY BE REQUIRED.
6. ILLUSTRATION IS FOR IDENTIFICATION AND IS NOT INTENDED TO RESTRICT DESIGNS AND SHAPES OF INSERTS AND STUDS WHICH OTHERWISE CONFORM TO REQUIREMENTS.

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PROCUREMENT SPECIFICATION NOT APPLICABLE	SUPERSEDES:	SHEET 4 OF 4

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