INCH-POUND

MS51835B
13 May 2014
SUPERSEDING
MS51835A
25 November 1970

DETAILED SPECIFICATION SHEET

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

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

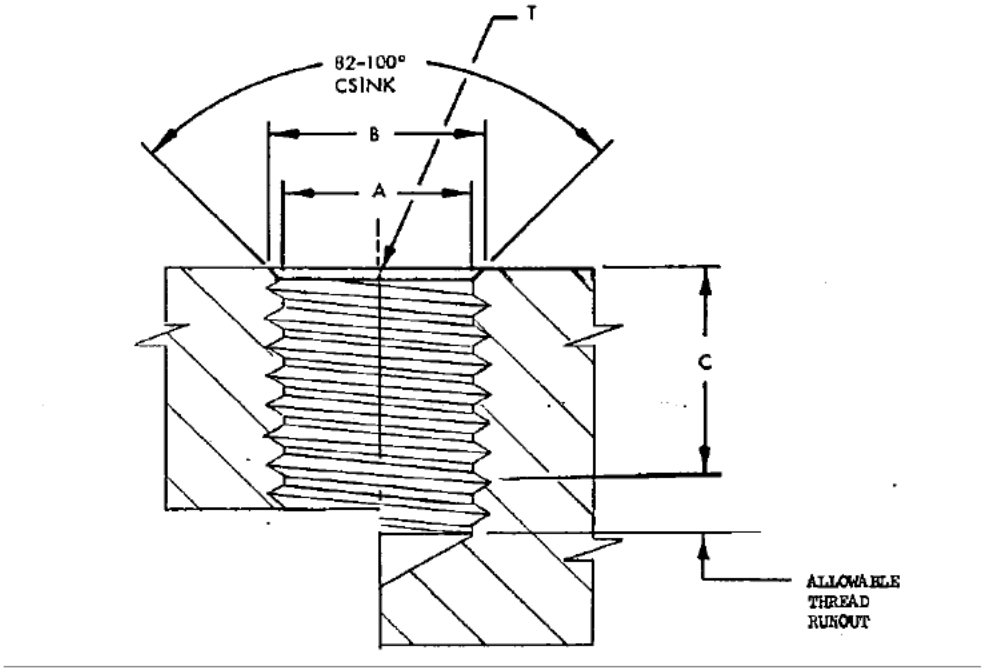

FIGURE 1. Configuration for Tables I, II and III.

TABLE I. Installation hole dimensions for MS51830 and NASM51833.

Nominal External Thread Size for Insert and Stud	MS51830 Insert MS51830 Dash Number (Ref)	NASM51833 Stud MS51833 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 MS51831 and NASM51834.

Nominal External Thread Size for Insert and Stud	MS51831 Insert MS51831 Dash Number (Ref)	NASM51834 Stud MS51834 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	.6875-11NS	.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 -210	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

TABLE III. Installation hole dimensions for MS51832.

Nominal External Thread Size for Insert	MS51832 Insert MS51832 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

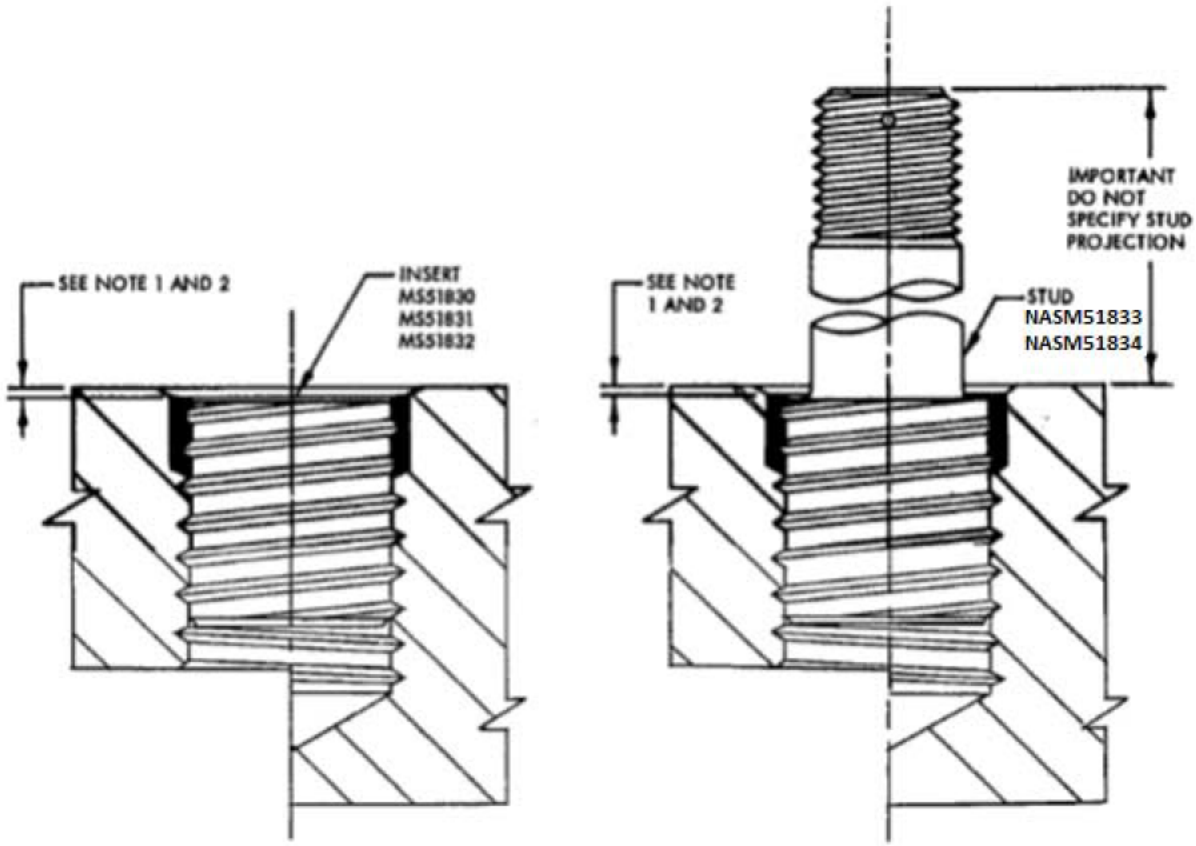

FIGURE 2. Assembly of Inserts and Studs.

REQUIREMENTS:

Hole preparation in accordance with Tables I, II and III per applicable 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 Insert	For Stud
INSTALL INSERT IN ACCORDANCE WITH MS51835	INSTALL STUD IN ACCORDANCE WITH MS51835
INSERT VIEW	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.

NOTES:

1. Axis of hole to be normal to entry surface or provide spot face 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 ASME B46.1.
4. Nominal use, for installation of key - locked inserts and studs conforming to MS51830, MS51831, MS51832, NASM51833, and NASM51834, as applicable.
5. Installation procedure and installation of key - locked inserts and studs, see Figure II.
6. Remove all burrs and sharp edges.
7. Dimensions in inches. Unless otherwise specified, tolerances, linear dimensions ± .005.
8. Illustrations are for identification and are not intended to restrict designs and shapes of inserts and studs which otherwise conform to requirements.
9. This is a design standard and shall not be used as a part number.
10. Changes from previous issue. Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extent of the changes.

Custodians:
Army - AR
Navy - AS
Air Force - 99

Review activities:
Army – AT, AV, CR, MI,
Navy - MC

Preparing Activity:
DLA - IS

(Project 53GP-2014-001)

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