

MILITARY SPECIFICATION SHEET

SCREW, MACHINE-PAN HEAD, CROSS-RECESSED,
CARBON STEEL, CADMIUM PLATED, UNF-2A
(IN./MM)

This amendment forms a part of MS35207F dated 22 October 1970 and is approved for use by all Departments and Agencies of the Department of Defense.

PAGE 1

Table I, P Head Radius: Delete "MIN" and substitute "Reference".

PAGE 2

NOTE 3: Delete and substitute "Threads shall be in accordance with FED-STD-H28/2. Acceptability of screw threads shall be in accordance with FED-STD-H28/20, System 21.

Custodians:

Army - AR
Navy - AS
Air Force - 99

Preparing activity:
Army - AR

(Project 5305-1934)

Review activities:

Army - AT, AV, ME, MI
DLA - IS
NSA - NS

User activities:

Army - GL
Navy - MC, SH, YD

1 of 1

AMSC N/A

FSC 5305

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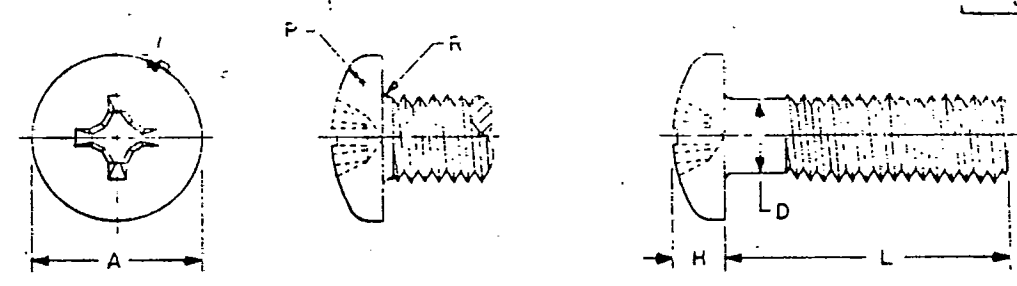


TABLE I

NOMINAL SIZE		#2	#4	#6	#8	#10	1/4	5/16	3/8
THREADS PER INCH (UNF-2A)		4	4.5	4.0	3.6	3.2	2.5	2.4	2.4
D BODY DIAMETER	MAX	.0800	.1120	.1350	.1640	.1900	.2500	.3125	.3750
	MIN	.0717	.0925	.1141	.1399	.1566	.2127	.2712	.3257
A HEAD DIAMETER	MAX	.167	.219	.270	.322	.373	.492	.615	.740
	MIN	.155	.205	.256	.306	.357	.473	.594	.716
H HEAD HEIGHT	MAX	.062	.060	.097	.115	.133	.175	.218	.261
	MIN	.053	.070	.057	.105	.122	.162	.203	.244
P HEAD RADIUS	MIN	.010	.010	.015	.015	.020	.035	.040	.040
R FILLET RADIUS	MAX	.013	.017	.021	.025	.029	.036	.047	.056
* TENSILE STRENGTH, LBS-MIN		235	395	605	660	1,200	2,160	3,460	5,260
L LENGTH	TOLERANCE	DASH NO.	DASH NO.	DASH NO.	DASH NO.	DASH NO.	DASH NO.	DASH NO.	DASH NO.
.125		201	211	224	239	256	276		
.150		202	212	225	240				
.250		203	213	226	241				
.312		204	214	227	242				
.375	+0 -.031	205	215	228	243	261	277	292	
.435		206	216	229	244	262	278	293	
.500		207	217	230	245	263	279	294	
.625		208	218	231	246	264	280	295	
.750		209	219	232	247	265	281	296	309
.875		210	220	233	248	266	282	297	310
1.000			221	234	249	267	283	298	311
1.250		+0 -.062		222	235	250	268	284	299
1.500			223	236	251	269	285	300	313
1.750				237	252	270	286	301	314
2.000				238	253	271	287	302	315
2.250	+0 -.094				254	272	288	303	316
2.500					255	273	289	304	317
2.750					256	274	290	305	318
3.000					257	275	291	306	319

For notes see sheet 2.

(F) For changes see sheets 1 and 4.

REVIEWER: AT, AV, S, ME, MI, MU, NSA
USER: GL, MC, SH, YD

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.

P.A. WC Other Cust AS 82	TITLE SCREW, MACHINE-PAN HEAD, CROSS-RECESSED, CARBON STEEL, CADMIUM PLATED, UNF-2A (IN./MM)	MILITARY STANDARD MS 35207
PROCUREMENT SPECIFICATION FE-S-92	SUPERSEDES: See note 11	SHEET 1 OF 4

APPROVED 25 JUN 1953 REVISED (A) 5 APR 1962 (B) 18 JUN 1962 (C) 22 OCT 1964 (D) 10 DEC 1964 (E) 21 MAY 1969 (F) 22 OCT 1970

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- NOTES:
- MATERIAL:** Carbon steel in accordance with Fed. Std. No. 66.
 - PROTECTIVE COATING:** Cadmium plated in accordance with QQ-P-416, type II, class 3.
 - THREADS:** The threads shall be in accordance with Screw-Thread Standards for Federal Services, Handbook H28.
 - THREAD LENGTH:** Screws 2.000 inches long and shorter shall have complete threads extending to within two threads of the bearing surface of the head, or closer if practicable. Longer screws shall have a minimum thread length of 1.750 inches.
 - RECESS:** The recess shall be in accordance with MS9006.
 - DIMENSIONS:** All dimensions are in inches.
 - PART NUMBER:** The MS part number consists of the MS number, plus the dash number.
Example: MS35207-201.
 - TENSILE STRENGTH:** Based on 60,000 PSI minimum ultimate tensile strength. Load pounds are calculated by the stress areas indicated in Screw-Thread Standards for Federal Services, Handbook H28.
 - Referenced documents shall be of the issue in effect on date of invitations for bid.
 - For design feature purposes, this standard takes precedence over procurement documents referenced herein.
 - SUPERSEDES:** MS35205, MS35209, MS35211, MS35222, MS35224, MS35226, MS35228; and in part MS24584(USAF), MS35357, MS35359 thru MS35362, MS35364 thru MS35366, AN520 and AN526.

REVIEWER: AT, AV, JS, ME, MI, MU, NSA
USER: GL, MC, SH, YD

TABLE II - INTERCHANGEABILITY

Screws covered by the following cancelled dash numbers are cancelled after 5 April 1962. The cancelled screws cannot always replace the new screws and should be used until existing stocks are depleted. Use only the new screws for design and replacement. Replacement shall be in accordance with this table.

PART NUMBERS											
CANCELLED		NEW	CANCELLED		NEW	CANCELLED		NEW	CANCELLED		NEW
MS35205	MS35222		MS35205	MS35222		MS24584	MS35222		MS24584	MS35222	
MS35207	MS35224	MS35207	MS35207	MS35224	MS35207	MS35207	MS35224	MS35207	MS35207	MS35224	MS35207
MS35209	MS35226		MS35209	MS35226		MS35209	MS35226		MS35209	MS35226	
MS35211	MS35228		MS35211	MS35228		MS35211	MS35228		MS35211	MS35228	
1	1	201	27	30	230	51	59	259	79	89	289
2	2	202	28	31	231	52	60	260	--	90	290
3	3	203	29	32	232	53	61	261	--	91	291
4	4	204	30	33	233	54	62	262	80	92	292
5	5	205	31	34	234	55	63	263	81	93	293
6	6	206	32	35	235	56	64	264	82	94	294
7	7	207	33	36	236	57	65	265	83	95	295
8	8	208	34	37	237	58	66	266	84	96	296
9	9	209	35	38	238	59	67	267	85	97	297
-	10	210	36	39	239	60	68	268	86	98	298
10	11	211	37	40	240	61	69	269	87	99	299
11	12	212	38	41	241	62	70	270	88	100	300
12	13	213	39	42	242	63	71	271	89	101	301
13	14	214	40	43	243	64	72	272	90	102	302
14	15	215	41	44	244	65	73	273	91	103	303
15	16	216	42	45	245	--	74	274	92	104	304
16	17	217	43	46	246	--	75	275	--	105	305
17	18	218	44	47	247	66	76	276	--	106	306
18	19	219	45	48	248	67	77	277	93	107	307
19	20	220	46	49	249	68	78	278	94	108	308
20	21	221	47	50	250	69	79	279	95	109	309
--	22	222	48	51	251	70	80	280	96	110	310
--	23	223	49	52	252	71	81	281	97	111	311
21	24	224	50	53	253	72	82	282	98	112	312
22	25	225	--	54	254	73	83	283	99	113	313
23	26	226	--	55	255	74	84	284	100	114	314
24	27	227	--	56	256	75	85	285	101	115	315
25	28	228	--	57	257	76	86	286	102	116	316
26	29	229	--	58	258	77	87	287	103	117	317
						78	88	288	104	118	318
									105	119	319

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P.A. WC Other Cont AS 82	TITLE SCREW, MACHINE-PAN HEAD, CROSS-RECESSED, CARBON STEEL, CADMIUM PLATED, UNF-2A (IN./MM)	MILITARY STANDARD MS35207
PROCUREMENT SPECIFICATION FF-S-92	SUPERSEDES: See note 11	SHEET 2 OF

APPROVED 25 JUN 1953 REVISED (A) 5 APR 1962 (B) 18 JUN 1962 (C) 22 OCT 1964 (D) 30 DEC 1964 (E) 21 MAY 1969 (F) FOR CHANGES SEE SHEETS 1 AND 4.

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TABLE III - INTERCHANGEABILITY

The screws covered by dash numbers given in AN520 in part and AN526 in part are canceled/inactivated after the approval date of Revision C indicated on this document. Use the dash numbers given in the preceding sheets. The canceled screws cannot always replace the new screws and should be used until existing stocks are depleted. Use only the new screws for design and replacement. Replacement shall be in accordance with this table.

PART NUMBERS		PART NUMBERS		PART NUMBERS		PART NUMBERS	
CANCELED	NEW	CANCELED	NEW	CANCELED	NEW	CANCELED	NEW
AN520-OR2	*	AN520-SR22	*	AN520-10R26	*	AN526-836R12	MS35207-247
-OR3	*	-SR24	*	-10R28	MS35207-270	-836R14	-248
-OR4	*	-SR26	*	-10R30	*	-836R16	-249
-OR5	*	-SR28	*	-10R32	-271	-836R18	*
-OR6	*	-6R4	MS35207-226	-10R36	-272	-836R20	-250
-OR7	*	-6R5	-227	-10R40	-273	-836R22	*
-OR8	*	-6R6	-228	-10R44	-274	-836R24	-251
-1R2	*	-6R7	-229	-10R48	-275	-836R26	*
-1R3	*	-6R8	-230	-416R6	-277	-836R28	-252
-1R4	*	-6R10	-231	-416R7	-278	-836R30	*
-1R5	*	-6R12	-232	-416R8	-279	-836R32	-253
-1R6	*	-6R14	-233	-416R10	-280	-836R36	-254
-1R7	*	-6R16	-234	-416R12	-281	-836R40	-253
-1R8	*	-6R18	*	-416R14	-282	-836R44	-256
-2R3	MS35207-202	-6R20	-235	-416R16	-283	-836R48	-257
-2R4	-203	-6R22	*	-416R18	*	-1032R4	-259
-2R5	-204	-6R24	-236	-416R20	-284	-1032R5	-260
-2R6	-205	-6R26	*	-416R22	*	-1032R6	-261
-2R7	-206	-6R28	-237	-416R24	-285	-1032R7	-262
-2R8	-207	-6R30	*	-416R26	*	-1032R8	-263
-2R10	-208	-6R32	-238	-416R28	-286	-1032R9	*
-2R12	-209	-6R36	*	-416R30	*	-1032R10	-264
-3R3	*	-6R40	*	-416R32	-287	-1032R12	-265
-3R4	*	-8R4	-241	-416R36	-288	-1032R14	-266
-3R5	*	-8R5	-242	-416R40	-289	-1032R16	-267
-3R6	*	-8R6	-243	-416R44	-290	-1032R18	*
-3R7	*	-8R7	-244	-416R48	-291	-1032R20	-268
-3R8	*	-8R8	-245			-1032R22	*
-3R10	*	-8R10	-246	AN526-640R4	MS35207-226	-1032R24	-269
-3R12	*	-8R12	-247	-640R5	-227	-1032R26	*
-4R3	-212	-8R14	-248	-640R6	-228	-1032R28	-270
-4R4	-213	-8R16	-249	-640R7	-229	-1032R30	*
-4R5	-214	-8R18	*	-640R8	-230	-1032R32	-271
-4R6	-215	-8R20	-250	-640R9	*	-1032R36	-272
-4R7	-216	-8R22	*	-640R10	-231	-1032R40	-273
-4R8	-217	-8R24	-251	-640R12	-232	-1032R44	-274
-4R10	-218	-8R26	*	-640R14	-233	-1032R48	-275
-4R12	-219	-8R28	-252	-640R16	-234	-428R6	-278
-4R14	-220	-8R30	*	-640R18	*	-428R7	-277
-4R16	-221	-8R32	-253	-640R20	-235	-428R8	-279
-4R18	*	-8R36	-254	-640R22	*	-428R9	*
-4R20	-222	-8R40	-255	-640R24	-236	-428R10	-280
-4R22	*	-8R44	-256	-640R26	*	-428R12	-281
-4R24	-223	-8R48	-257	-640R28	-237	-428R14	-282
-4R26	*	-10R4	-259	-640R30	*	-428R16	-283
-4R28	*	-10R5	-260	-640R32	-238	-428R18	*
-5R4	*	-10R6	-261	-640R36	*	-428R20	-284
-5R5	*	-10R7	-262	-640R40	*	-428R22	*
-5R6	*	-10R8	-263	-640R44	*	-428R24	-285
-5R7	*	-10R10	-264	-640R48	*	-428R26	*
-5R8	*	-10R12	-265	-836R4	-241	-428R28	-286
-5R10	*	-10R14	-266	-836R5	-242	-428R30	*
-5R12	*	-10R16	-267	-836R6	-243	-428R32	-287
-5R14	*	-10R18	*	-836R7	-244	-428R36	-288
-5R16	*	-10R20	-268	-836R8	-245	-428R40	-289
-5R18	*	-10R22	*	-836R9	*	-428R44	-290
-5R20	*	-10R24	-269	-836R10	-246	-428R48	-291

* No Replacement.

REVIEWER: AT, AV, IS, ME, MI, MU, NSA
USER: G, MC, SH, YD

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APPROVED 25 JUN 1953 REVISED (A) 5 APR 1962 (B) 18 JUN 1962 (C) 22 OCT 1964 (D) 10 DEC 1964 (E) 21 MAY 1969 (F) FOR CHANGE: SEE SH. 1, 2, 3, 4, 5

P.A. WC Other Com AS 82	TITLE SCREW, MACHINE-PAN HEAD, CROSS-RECESSED, CARBON STEEL, CADMIUM PLATED, UNF-2A (IN./MM)	MILITARY STANDARD MS 35207
PROCUREMENT SPECIFICATION FF-S-92	SUPERSEDES: SEE NOTE II	SHEET 3

FED. SUP CLASS
5305

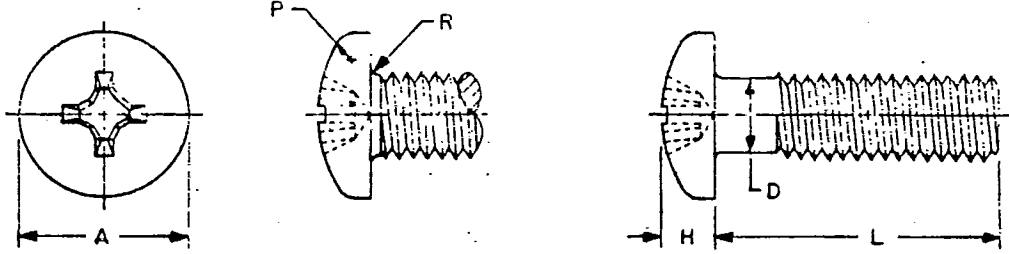


TABLE IV
METRIC TRANSLATION OF TABLE I

NOMINAL SIZE	INCH MM	#2	#4	#6	#8	#10	1/4	5/16	3/8
THREADS PER 25.4 MM (UNF-2A)		64	46	40	36	32	26	24	24
D BODY DIAMETER	MAX MIN	2.164 1.621	2.845 2.350	3.505 2.896	4.166 3.553	4.826 4.026	6.350 5.403	7.936 6.666	9.525 8.349
A HEAD DIAMETER	MAX MIN	4.242 3.937	5.563 5.207	6.856 6.502	8.179 7.772	9.474 9.066	12.497 12.014	15.621 15.066	16.796 16.166
H HEAD HEIGHT	MAX MIN	1.575 1.346	2.032 1.776	2.464 2.210	2.921 2.667	3.376 3.099	4.445 4.115	5.537 5.156	6.629 6.196
P HEAD RADIUS	MIN	.254	.254	.381	.361	.506	.889	1.016	1.016
R FILLET RADIUS	MAX	.330	.432	.533	.635	.737	.965	1.194	1.422
* TENSILE STRENGTH, KGS-MIN		107	180	275	400	545	990	1,580	2,390
L LENGTH	TOLERANCE	DASH NO.	DASH NO.	DASH NO.	DASH NO.	DASH NO.	DASH NO.	DASH NO.	DASH NO.
3.175 4.775 6.350 7.925		201 202 203 204	211 212 213 214	224 225 226 227	239 240 241 242	258 259 260	276		
9.525 11.125 12.700 15.875	+0 -.787	205 206 207 208	215 216 217 218	226 229 230 231	243 244 245 246	261 262 263 264	277 278 279 280	292 293 294 295	307 306
19.050 22.225 25.400		209 210	219 221	232 233 234	247 248 249	265 266 267	281 282 283	296 297 298	309 310 311
31.750 36.100 44.450 50.800	+0 -1.575		222 223	235 236 237 238	250 251 252 253	266 269 270 271	284 285 286 287	299 300 301 302	312 313 314 315
57.150 63.500 69.850 76.200	+0 -2.386				254 255 256 257	272 273 274 275	288 289 290 291	303 304 305 306	316 317 318 319

NOTE: All dimensions are in millimeters (MM), unless otherwise specified.

REVIEWER: AT, AV, IS, ME, MI, MU, NSA
USER: GL, MC, SH, YD

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(F) ENTIRE SHEET REVISED

P.A. WC Other Cust AS 62	TITLE SCREW, MACHINE - PAN HEAD, CROSS-RECESSED, CARBON STEEL, CADMIUM PLATED, UNF-2A (IN./MM)	MILITARY STANDARD MS35207
PROCUREMENT SPECIFICATION FF-S-92	SUPERSEDES. See note 11	SHEET 4 OF

DD FORM 672-1 (Coordinated)

PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE.

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