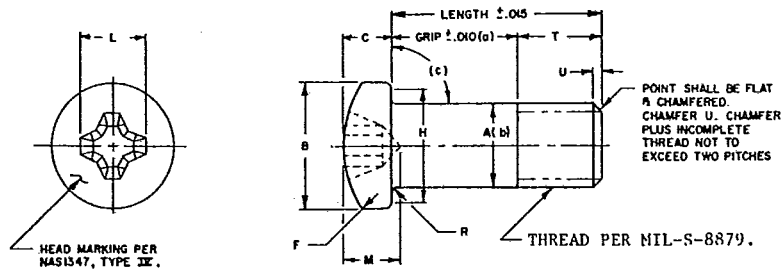


NATIONAL AEROSPACE STANDARD

AEROSPACE INDUSTRIES ASSOCIATION OF AMERICA, INC., 1725 DE SALES STREET, N.W., WASHINGTON, D. C. 20036

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INACTIVE FOR DESIGN AFTER 25 APRIL 1979. USE NAS7700 THRU NAS7706.

FED. SUP CLASS
5305

BASIC PART NUMBER	THREAD	A DIA	B DIA	C HEAD HEIGHT	F RAD REF (d)	H DIA MIN	J MAX (b)	K MAX (b)	PHILLIPS  RECESS (e)			R RAD	T REF (d)	U REF (d)	X (f)	Y (f)	Z (g)
									L DIA +.010 -.000	M MAX	DEPTH OF PENETRATION						
NAS1402	~~8-32 UNC-2A~~ .1640-32 UNJC-3A	.1635 .1610	.322 .306	.115 .105	.24	.289	.166	.05	.169	.127	.094 .071	.020 .010	.338	.016	.005	.0045	.0040
NAS1403	~~10-32 UNF-3A~~ .1900-32 UNJF-3A	.1895 .1870	.373 .357	.133 .122	.28	.331	.192	.06	.186	.145	.110 .089	.020 .010	.338	.016	.005	.0045	.0040
NAS1404	~~1/4-20 UNF-3A~~ .2500-28 UNJF-3A	.2495 .2470	.492 .473	.175 .162	.37	.424	.252	.07	.268	.192	.141 .118	.020 .010	.425	.018	.006	.0045	.0030
NAS1405	~~5/16-24 UNF-3A~~ .3125-24 UNJF-3A	.3120 .3095	.615 .594	.218 .203	.53	.518	.315	.08	.337	.227	.170 .149	.020 .010	.469	.021	.008	.0045	.0030
NAS1406	~~3/8-24 UNF-3A~~ .3750-24 UNJF-3A	.3745 .3720	.740 .716	.261 .244	.65	.611	.378	.09	.380	.266	.210 .190	.025 .015	.578	.021	.009	.0060	.0025

(a) GRIP LENGTH FROM UNDERSIDE OF HEAD TO END OF FULL CYLINDRICAL PORTION OF SHANK.

(b) SHANK TAPER ALLOWABLES "J" DIA FOR "K" DISTANCE UNDER HEAD.

(c) BEARING SURFACE SQUARENESS: WITHIN .003 TIR OF SHANK DIA.

(d) REFERENCE DIMENSIONS ARE FOR DESIGN PURPOSES ONLY AND ARE NOT AN INSPECTION REQUIREMENT.

(e) SEE MS9006 FOR DEPTH OF PENETRATION GAGING FOR PHILLIPS® RECESS.

(f) CONCENTRICITY: "H" AND "A" DIAMETERS WITHIN "X" VALUES TIR, "A" AND THREAD PITCH DIA WITHIN "Y" VALUES TIR. RECESS TO SHANK WITHIN .016 TIR (SIZES 8, 10 AND 1/4), WITHIN .024 TIR (SIZES 5/16 AND 3/8).

(g) SHANK STRAIGHTNESS: WITHIN "Z" VALUES TIR PER INCH OF LENGTH.

CODE BASIC PART NUMBER = SCREW, PAN HEAD, PHILLIPS® RECESS, TYPE II PLATING
ADD "W" TO DASH NUMBER FOR TYPE I PLATING. SEE NOTE 5.EXAMPLE OF PART NUMBER: NAS1404-8 = .2500-28 SCREW, .500 GRIP, PAN HEAD, PHILLIPS® RECESS, TYPE II PLATING.
NAS1404-8W = 1/4-28 SCREW, .500 GRIP, PAN HEAD, PHILLIPS® RECESS, TYPE I PLATING. SEE NOTE 5.

5 MATERIAL: ALLOY STEEL - 4140 PER MIL-S-5626, 4340 PER AMS6414 OR MIL-S-8844 OR 8740 PER MIL-S-6049.

HEAT TREATMENT: 160,000 - 180,000 PSI ULTIMATE TENSILE STRENGTH PER MIL-H-6875.
ROCKWELL HARDNESS: C36-C40.

FINISH: CADMIUM PLATE PER QQ-P-416, TYPE II, CLASS 2 OR TYPE I, CLASS 2. TYPE I PLATING DESIGNATED BY "W" SEE CODE. SEE NOTES 3 AND 5.

SURFACE ROUGHNESS: HEAD TO SHANK FILLET, THREAD SIDES, THREAD ROOT AND RUN-OUT - 32 RHR MAX.
SHANK AND BEARING SURFACE OF HEAD - 63 RHR MAX; OTHER AREAS - 125 RHR MAX.

- NOTES
- 1 FATIGUE STRENGTH, COLD WORKING HEAD TO SHANK FILLET AND RECESS TORQUE VALUES NOT APPLICABLE TO THESE SCREWS.
 - 2 SCREWS SHALL BE FREE FROM BURRS AND SLIVERS.
 - 3 CLASS 3 PLATING ACCEPTABLE UNTIL AUGUST 1981.
 - 4 THREADS TO MIL-S-7742 ACCEPTABLE UNTIL AUGUST 1984. 5
 - 5 TYPE I PLATING (CODE "W") INACTIVE FOR NEW DESIGN.
 - 6 RECESS TORQUE VALUES PER MIL-B-87114 ARE NOT APPLICABLE TO SCREWS WITH MS9006 RECESSES.
 - 7 ALL SCREWS .1900 NOMINAL DIAMETER AND ABOVE SHALL HAVE THE FULL LENGTH OF SHANK AND THREADS PROTECTED FROM ABRASION AND CHAFING DURING HANDLING, TRANSPORTATION AND STORAGE.

DIMENSIONS IN INCHES.

5 PHILLIPS® IS A REGISTERED TRADEMARK OF PHILLIPS SCREW COMPANY.

LIST OF CURRENT SHEETS	
NO.	REV
1	5
2	4

CUSTODIAN NATIONAL AEROSPACE STANDARDS COMMITTEE		THIRD ANGLE PROJECTION
PROCUREMENT SPECIFICATION	TITLE	CLASSIFICATION STANDARD PART
MIL-B-87114 (SEE NOTE 1)	SCREW, MACHINE, AIRCRAFT, PAN HEAD, PHILLIPS® RECESS, 160,000 PSI TENSILE	

NAS 1402 Documents
SHEET 1 OF 2

NATIONAL AEROSPACE STANDARD

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IN FORMULATING AND APPROVING NAS STANDARDS, AIA AND ITS COMMITTEES WILL NOT INVESTIGATE PATENTS WHICH MAY APPLY TO THE SUBJECT MATTER. PROSPECTIVE USERS OF THE STANDARD ARE RESPONSIBLE FOR PROTECTING THEMSELVES AGAINST INFRINGEMENT OF PATENTS.

THIS DRAWING SUPERSEDES ALL ANTECEDENT STANDARD DRAWINGS FOR THE SAME PRODUCT, AND SHALL BECOME EFFECTIVE FOR VENDOR MANUFACTURERS, NOT LATER THAN 6 MONTHS AFTER THE LATEST DATE OF APPROVAL SHOWN.

DASH NUMBER	GRIP $\pm .010$	LENGTH OF SIZES INDICATED				
		NAS1402	NAS1403	NAS1404	NAS1405	NAS1406
1	.062	.400	.400	.487	.531	.640
2	.125	.463	.463	.550	.594	.703
3	.188	.526	.526	.613	.657	.766
4	.250	.588	.588	.675	.719	.828
5	.312	.650	.650	.737	.781	.890
6	.375	.713	.713	.800	.844	.953
7	.438	.776	.776	.863	.907	1.016
8	.500	.838	.838	.925	.969	1.078
9	.562	.900	.900	.987	1.031	1.140
10	.625	.963	.963	1.050	1.094	1.203
11	.688	1.026	1.026	1.113	1.157	1.266
12	.750	1.088	1.088	1.175	1.219	1.328
13	.812	1.150	1.150	1.237	1.281	1.390
14	.875	1.213	1.213	1.300	1.344	1.453
15	.938	1.276	1.276	1.363	1.407	1.516
16	1.000	1.338	1.338	1.425	1.469	1.578
17	1.062	1.400	1.400	1.487	1.531	1.640
18	1.125	1.463	1.463	1.550	1.594	1.703
19	1.188	1.526	1.526	1.613	1.657	1.766
20	1.250	1.588	1.588	1.675	1.719	1.828
21	1.312	1.650	1.650	1.737	1.781	1.890
22	1.375	1.713	1.713	1.800	1.844	1.953
23	1.438	1.776	1.776	1.863	1.907	2.016
24	1.500	1.838	1.838	1.925	1.969	2.078
25	1.562	1.900	1.900	1.987	2.031	2.140
26	1.625	1.963	1.963	2.050	2.094	2.203
27	1.688	2.026	2.026	2.113	2.157	2.266
28	1.750	2.088	2.088	2.175	2.219	2.328
29	1.812	2.150	2.150	2.237	2.281	2.390
30	1.875	2.213	2.213	2.300	2.344	2.453
31	1.938	2.276	2.276	2.363	2.407	2.516
32	2.000	2.338	2.338	2.425	2.469	2.578
34	2.125	2.463	2.463	2.550	2.594	2.703
36	2.250	2.588	2.588	2.675	2.719	2.828
38	2.375	2.713	2.713	2.800	2.844	2.953
40	2.500	2.838	2.838	2.925	2.969	3.078
42	2.625	2.963	2.963	3.050	3.094	3.203
44	2.750	3.088	3.088	3.175	3.219	3.328
46	2.875	3.213	3.213	3.300	3.344	3.453
48	3.000	3.338	3.338	3.425	3.469	3.578
50	3.125	3.463	3.463	3.550	3.594	3.703
52	3.250	3.588	3.588	3.675	3.719	3.828
54	3.375	3.713	3.713	3.800	3.844	3.953
56	3.500	3.838	3.838	3.925	3.969	4.078
58	3.625	3.963	3.963	4.050	4.094	4.203
60	3.750	4.088	4.088	4.175	4.219	4.328
62	3.875	4.213	4.213	4.300	4.344	4.453
64	4.000	4.338	4.338	4.425	4.469	4.578
66	4.125	4.463	4.463	4.550	4.594	4.703
68	4.250	4.588	4.588	4.675	4.719	4.828
70	4.375	4.713	4.713	4.800	4.844	4.953
72	4.500	4.838	4.838	4.925	4.969	5.078
74	4.625	4.963	4.963	5.050	5.094	5.203
76	4.750	5.088	5.088	5.175	5.219	5.328
78	4.875	5.213	5.213	5.300	5.344	5.453
80	5.000	5.338	5.338	5.425	5.469	5.578
82	5.125	5.463	5.463	5.550	5.594	5.703
84	5.250	5.588	5.588	5.675	5.719	5.828
86	5.375	5.713	5.713	5.800	5.844	5.953
88	5.500	5.838	5.838	5.925	5.969	6.078
90	5.625	5.963	5.963	6.050	6.094	6.203
92	5.750	6.088	6.088	6.175	6.219	6.328
94	5.875	6.213	6.213	6.300	6.344	6.453
96	6.000	6.338	6.338	6.425	6.469	6.578

DASH NO. INDICATES GRIP LENGTH IN .062 INCREMENTS. INTERMEDIATE OR LONGER LENGTHS MAY BE SPECIFIED BY USE OF WHOLE DASH NO. ONLY.

INACTIVE FOR DESIGN
AFTER 25 APRIL 1979
USE NAS 7700 thru NAS 7706