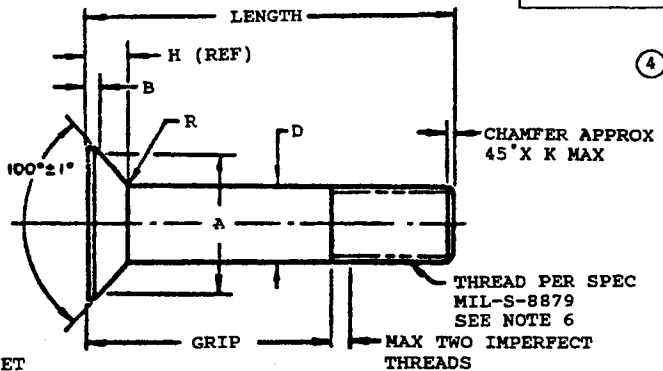
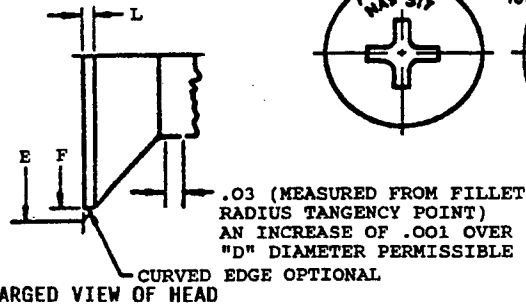




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FED. SUP CLASS
5305

INDENTED HEAD MARKING .010 MAX DEPTH
"NAS517" (NO. 8 SIZE MAY BE MARKED
NAS) POSITION OPTIONAL



FIRST DASH NO.	THREAD CLASS 3A	A GAGE CIRCLE DIA +.0000 -.0004	B HEAD PRO-TRUSION	D SHANK DIA	E DIA AT SHARP CORNER (REF) (NOTE 3)	F ABSOLUTE MIN DIA	H HEAD HEIGHT (REF) NOTE 3	K CHAMFER	L (MAX) LAND WIDTH	R FILLET RAD
- 2 *	.164-32UNJC	.2671	.0276 .0238	.1640 .1610	.334 .323	.287	.068	.031	.015	.020 .010
- 3	.190-32UNJF	.3147	.0299 .0259	.1890 .1860	.387 .375	.337	.080	.031	.016	.020 .010
- 4	.250-28UNJF	.4245	.0353 .0307	.2490 .2460	.510 .496	.452	.106	.031	.018	.020 .010
- 5	.3125-24UNJF	.5389	.0409 .0357	.3115 .3085	.638 .622	.572	.133	.047	.021	.025 .010
- 6	.375-24UNJF	.6532	.0466 .0407	.3740 .3710	.766 .748	.692	.159	.047	.023	.030 .015
- 7	.4375-20UNJF	.7676	.0522 .0457	.4365 .4325	.894 .874	.812	.186	.047	.026	.035 .015
- 8	.500-20UNJF	.8820	.0578 .0507	.4990 .4950	1.022 1.000	.932	.213	.047	.028	.040 .020

*.164-32 SIZE NOT PREFERRED FOR NEW DESIGN

MATERIAL: ALLOY STEEL, 4037 (UNS G40370) PER AMS6300 (RESTRICTED TO SIZES THROUGH .4375 DIAMETER), 4130 (UNS G41300) PER MIL-S-6758, 4340 (UNS G434000) PER MIL-S-5000, 8630 (UNS G86300) PER MIL-S-6050, 8735 (UNS G87350) PER MIL-S-6098 OR 8740 (UNS G87400) PER MIL-S-6049.

HEAT TREAT: 160,000 TO 180,000 PSI UTS, SPEC MIL-H-6875
FINISH: CADMIUM PLATE, SPEC QQ-P-416 TYPE II, CLASS 2
CODE: PARTS WITH CLASS 3 PLATING MAY BE FURNISHED FROM SUPPLIER'S STOCK UNTIL 30 NOVEMBER 1975.
FIRST DASH NUMBER INDICATES DIAMETER OF BOLT AS SHOWN IN ABOVE TABULATION.
SECOND DASH NUMBER INDICATES GRIP AND LENGTH OF BOLT AS SHOWN IN TABULATION ON SHEET 2.

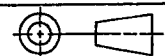
- NOTES:
1. RECESS SHALL BE IN ACCORDANCE WITH MS9006
 2. REFER TO NAS518 AND NAS519 FOR FLUSHNESS GAGING DETAILS
 3. DIMENSIONS E AND H ARE INTENDED FOR ENGINEERING REFERENCE ONLY AND ARE NOT TO BE USED FOR INSPECTION PURPOSES.
 4. ECCENTRICITY BETWEEN CONICAL SURFACE OF HEAD AND SHANK .003 MAX TOTAL INDICATOR READING MEASURED AT GAGE CIRCLE, AND CHUCKED AS CLOSE TO THE HEAD AS PRACTICAL.
 5. MAX ECCENTRICITY BETWEEN RECESS AND SHANK: .008 THRU -4 SIZE, (TOTAL INDICATOR READING .016)
.012 ABOVE -4 SIZE, (TOTAL INDICATOR READING .024)
 6. SCREW SUPPLIER'S MAY SUPPLY SCREWS WITH MIL-S-7742 THREADS UNTIL 30 NOVEMBER 1975.
 7. ALLOY STEELS 4037, 8630 AND 8735 ARE INACTIVE FOR NEW DESIGN AFTER DEC. 1990. PARTS MANUFACTURED FROM THESE ALLOY STEELS MAY BE FURNISHED FROM SUPPLIERS STOCK UNTIL DEC. 1992. EXISTING STOCK MAY BE USED TO DEPLETION.

PROCUREMENT SPECIFICATION: MIL-S-7839 EXCEPT SHEAR STRENGTH OF TABLE II AND PARAGRAPH 3.5.2 REPLACED BY NAS498 TABLE II AND PARAGRAPH E-2b.

LIST OF CURRENT SHEETS			
NO.	REV.	NO.	REV.
1	4	2	4

CUSTODIAN NATIONAL AEROSPACE STANDARDS COMMITTEE

THIRD
ANGLE
PROJECTION



PROCUREMENT
SPECIFICATION

NOTED

TITLE

SCREW-100° CLOSE TOLERANCE FLAT HEAD
160,000 PSI

CLASSIFICATION
STANDARD PART

NAS 517

SHEET 1 OF 2

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SECOND DASH NUMBER	GRIP +/- .015	LENGTH FOR SIZES INDICATED +.030 -.015						
		*.164-32	.190-32	.250-28	.3125-24	.375-24	.4375-20	.500-20
-00		.343	.343					
-0		.406	.406	.469	.531			
-1		.469	.469	.531	.594	.688	.781	
-2	.125	.531	.531	.594	.656	.750	.844	.875
-3	.188	.594	.594	.656	.719	.812	.906	.938
-4	.250	.656	.656	.719	.781	.875	.969	1.000
-5	.312	.719	.719	.781	.844	.938	1.031	1.062
-6	.375	.781	.781	.844	.906	1.000	1.093	1.125
-7	.438	.844	.844	.906	.969	1.062	1.156	1.188
-8	.500	.906	.906	.969	1.031	1.125	1.219	1.250
-9	.562	.969	.969	1.031	1.093	1.188	1.281	1.312
-10	.625	1.031	1.031	1.093	1.156	1.250	1.343	1.375
-11	.688	1.093	1.093	1.156	1.219	1.312	1.406	1.438
-12	.750	1.156	1.156	1.219	1.281	1.375	1.468	1.500
-13	.812	1.219	1.219	1.281	1.343	1.438	1.531	1.562
-14	.875	1.281	1.281	1.343	1.406	1.500	1.594	1.625
-15	.938	1.343	1.343	1.406	1.468	1.562	1.656	1.688
-16	1.000	1.406	1.406	1.468	1.531	1.625	1.719	1.750
-17	1.062	1.468	1.468	1.531	1.594	1.688	1.781	1.812
-18	1.125	1.531	1.531	1.594	1.656	1.750	1.844	1.875
-19	1.188	1.594	1.594	1.656	1.719	1.812	1.906	1.938
-20	1.250	1.656	1.656	1.719	1.781	1.875	1.969	2.000
-21	1.312	1.719	1.719	1.781	1.844	1.938	2.031	2.062
-22	1.375	1.781	1.781	1.844	1.906	2.000	2.093	2.125
-23	1.438	1.844	1.844	1.906	1.969	2.062	2.156	2.188
-24	1.500	1.906	1.906	1.969	2.031	2.125	2.219	2.250
-25	1.562	1.969	1.969	2.031	2.093	2.188	2.281	2.312
-26	1.625	2.031	2.031	2.093	2.156	2.250	2.343	2.375
-27	1.688	2.093	2.093	2.156	2.219	2.312	2.406	2.438
-28	1.750	2.156	2.156	2.219	2.281	2.375	2.468	2.500
-29	1.812	2.219	2.219	2.281	2.343	2.438	2.531	2.562
-30	1.875	2.281	2.281	2.343	2.406	2.500	2.594	2.625
-31	1.938	2.343	2.343	2.406	2.468	2.562	2.656	2.688
-32	2.000	2.406	2.406	2.468	2.531	2.625	2.719	2.750

* .164-32 SIZE NOT PREFERRED FOR NEW DESIGN

(4)

GRIP LENGTHS LONGER THAN THOSE SHOWN IN ABOVE TABLE MAY BE SPECIFIED IN INCREMENTS OF .0625 BY APPLICATION OF THE SIGNIFICANT SECOND DASH NUMBER. BOLT LENGTHS GREATER THAN EIGHT TIMES SHANK DIAMETER SHOULD BE AVOIDED WHERE POSSIBLE AS OPEN DIES MAY BE REQUIRED IN MANUFACTURE.

SHORT SCREWS LISTED ABOVE THE HEAVY LINE SHALL BE THREADED TO .030-.060 OF HEAD TO SHANK INTERSECTION.

NAS 517

SHEET 2

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APPROVAL DATE March 1953 REVISION (1) 15 Dec. 1961 (2) 30 Nov. 1966 (3) 30 Nov. 1973 (4) 25 April 1991 REAFFIRMED AUGUST 21, 2001