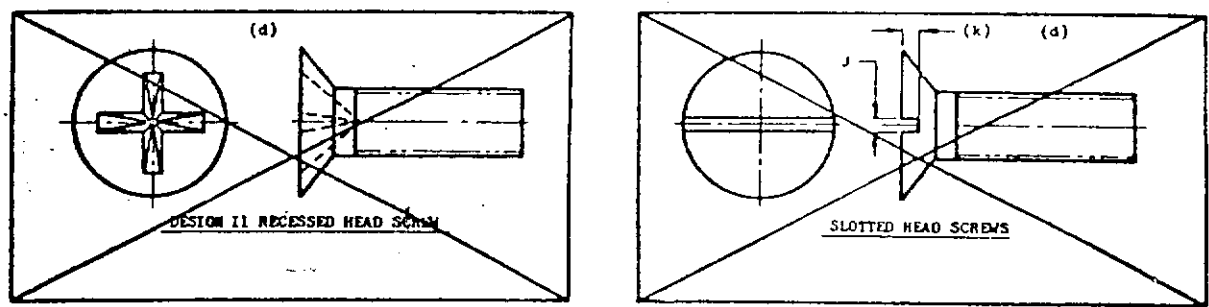


DESIGN I RECESSED HEAD SCREW

SIZE	A DIA	D DIA			F MAX	H						R RAD	
		MAX SHARP	MIN SHARP	ABSOLUTE MIN WITH MAX F		MAX	MIN	MAX	MIN	MAX	MIN	COARSE THREAD MAX	FINE THREAD MAX
NO. 4	.112	.225	.207	.200	.023	.048	.040	.034	.031	.028	.017	.050	.040
NO. 6	.138	.279	.257	.249	.027	.060	.051	.048	.039	.030	.022	.060	.050
NO. 8	.164	.332	.308	.300	.028	.072	.062	.054	.045	.037	.027	.060	.055
NO. 10	.190	.385	.359	.348	.032	.083	.072	.060	.050	.042	.033	.085	.060
1/4	.250	.507	.477	.462	.034	.110	.097	.075	.064	.055	.042	.100	.070
5/16	.313	.635	.600	.581	.040	.138	.123	.084	.072	.069	.053	.110	.085
3/8	.375	.762	.722	.700	.046	.165	.148	.094	.083	.068	.061	.125	.085

- (a) MARK CORROSION-RESISTANT STEEL SCREWS, SIZES NUMBER 5 AND LARGER WITH A DEPRESSED DASH.
- (b) THE DIAMETER OF THE UNTHREADED PORTION OF THE SCREWS SHALL NOT BE LESS THAN THE MINIMUM PITCH DIAMETER NOR MORE THAN THE MAXIMUM MAJOR DIAMETER OF THE THREAD.
- (c) FOR MACHINE SCREWS 2 INCHES LONG AND SHORTER, THE COMPLETE THREADS SHALL EXTEND TO WITHIN TWO THREADS OF THE BEARING SURFACE OF THE HEAD OR CLOSER IF PRACTICABLE. SCREWS OF LONGER LENGTH SHALL HAVE A MINIMUM COMPLETE THREAD LENGTH OF 1-1/4 INCHES.
- (d) DESIGN II RECESSED AND SLOTTED HEAD SCREWS INACTIVE FOR DESIGN AFTER 17 FEBRUARY 1959.



DIMENSIONING AND GAGING OF THIS ABOVE RECESS SHALL BE IN ACCORDANCE WITH THE PROCUREMENT SPECIFICATION.

⑥ CANCELED AFTER 21 APR 1967
FOR NEW DESIGN AND ENGINEERING USE MS24693.

PROCUREMENT SPECIFICATION 77-8-91	AIR FORCE-NAVY AERONAUTICAL STANDARD	AN507 SHEET 1 OF 2
	SCREW, MACHINE, FLAT HEAD, 100 DEGREE	

SUPERSEDES AIR FORCE DRAWINGS 4284930 AND 4285703

APPROVED 3 JUN 51 REVISED 1 21 DEC 44 2 15 JUN 50 3 15 FEB 52 4 23 DEC 52 5 17 FEB 59 6 21 APR 1967

DASH NUMBERS FOR CARBON STEEL SCREWS

L LENGTH	COARSE THREAD							FINE THREAD						
	NO. 4-40 MC-2A	NO. 6-32 MC-2A	NO. 8-32 MC-2A	NO. 10-24 MC-2A	NO. 1/4-20 UMC-2A	NO. 5/16-18 UMC-2A	NO. 3/8-16 UMC-2A	NO. 4-48 NF-2A	NO. 6-40 NF-2A	NO. 8-36 NF-2A	NO. 10-32 NF-2A	NO. 1/4-28 UNF-2A	NO. 5/16-24 UNF-2A	NO. 3/8-24 UNF-2A
1/16	440-3	632-3	832-3					448-3	640-3	836-3	1032-3			
1/4	440-4	632-4	832-4					448-4	640-4	836-4	1032-4			
5/16	440-5	632-5	832-5	1024-5	420-5			448-5	640-5	836-5	1032-5			
3/8	440-6	632-6	832-6	1024-6	420-6			448-6	640-6	836-6	1032-6	428-6		
7/16	440-7	632-7	832-7	1024-7	420-7			448-7	640-7	836-7	1032-7	428-7		
1/2	440-8	632-8	832-8	1024-8	420-8	518-8	616-8	448-8	640-8	836-8	1032-8	428-8	524-8	624-8
5/8	440-10	632-10	832-10	1024-10	420-10	518-10	616-10	448-10	640-10	836-10	1032-10	428-10	524-10	624-10
3/4	440-12	632-12	832-12	1024-12	420-12	518-12	616-12	448-12	640-12	836-12	1032-12	428-12	524-12	624-12
7/8	440-14	632-14	832-14	1024-14	420-14	518-14	616-14	448-14	640-14	836-14	1032-14	428-14	524-14	624-14
1	440-16	632-16	832-16	1024-16	420-16	518-16	616-16	448-16	640-16	836-16	1032-16	428-16	524-16	624-16
1-1/8	440-18	632-18	832-18	1024-18	420-18	518-18	616-18	448-18	640-18	836-18	1032-18	428-18	524-18	624-18
1-1/4	440-20	632-20	832-20	1024-20	420-20	518-20	616-20	448-20	640-20	836-20	1032-20	428-20	524-20	624-20
1-3/8								448-22	640-22	836-22	1032-22	428-22		
1-1/2	440-24	632-24	832-24	1024-24	420-24	518-24	616-24	448-24	640-24	836-24	1032-24	428-24	524-24	624-24
1-5/8								448-26	640-26	836-26	1032-26	428-26		
1-3/4		632-28	832-28	1024-28	420-28	518-28	616-28	448-28	640-28	836-28	1032-28	428-28	524-28	624-28
1-7/8									640-30	836-30	1032-30	428-30		
2		632-32	832-32	1024-32	420-32	518-32	616-32		640-32	836-32	1032-32	428-32	524-32	624-32
2-1/4									640-36	836-36	1032-36	428-36		
2-1/2		632-40	832-40	1024-40	420-40	518-40	616-40		640-40	836-40	1032-40	428-40	524-40	624-40
2-3/4										836-44	1032-44	428-44		
3			832-48	1024-48	420-48	518-48	616-48			836-48	1032-48	428-48	524-48	624-48

(*) NOT PREFERRED FOR AIRFRAME USE

COARSE THREAD
RATED STRENGTH IN POUNDS
(FOR REFERENCE PURPOSES ONLY)

SIZE	MINIMUM ULTIMATE TENSILE BREAKING STRENGTH AT ROOT DIAMETER	MINIMUM SINGLE SHEAR STRENGTH AT ROOT DIA
NO. 4-40 MC-2A	275	165
NO. 6-32 MC-2A	410	246
NO. 8-32 MC-2A	660	396
NO. 10-24 MC-2A	800	480
1/4 -20 UMC-2A	1480	890
5/16-18 UMC-2A	2500	1500
3/8 -16 UMC-2A	3730	2240

FINE THREAD
RATED STRENGTH IN POUNDS
(FOR REFERENCE PURPOSES ONLY)

SIZE	MINIMUM ULTIMATE TENSILE BREAKING STRENGTH AT ROOT DIAMETER	MINIMUM SINGLE SHEAR STRENGTH AT ROOT DIA
NO. 4-48 NF-2A	311	188
NO. 6-40 NF-2A	478	287
NO. 8-36 NF-2A	705	423
NO. 10-32 NF-2A	960	575
1/4 -28 UNF-2A	1790	1075
5/16-24 UNF-2A	2880	1725
3/8 -24 UNF-2A	4450	2660

ULTIMATE TENSILES BASED ON 55,000 PSI.
SHEAR STRENGTHS 60% OF ULTIMATE TENSILES.

MATERIAL: CARBON STEEL, SPECIFICATION QQ-3-671, TYPE FS 1010, 55,000 PSI MINIMUM ULTIMATE ALLOWABLE TENSILE STRESS OR OTHER STEEL MEETING THE SAME PHYSICAL REQUIREMENTS.
CORROSION RESISTANT STEEL, SPECIFICATION QQ-3-761, CLASS IV OR MIL-S-7720, COMPOSITION PH OR Q FOR COLD UPSETTING PROCESS.

BRASS, COMMERCIAL, 55,000 PSI MINIMUM ULTIMATE ALLOWABLE TENSILE STRESS.
ALUMINUM ALLOY, SPECIFICATION QQ-A-354.

FINISH: CARBON STEEL, CADMIUM PLATE, SPECIFICATION QQ-P-416, TYPE I, CLASS 3.
BRASS, BARE, BLACK OXIDE, OR CADMIUM PLATE, SPECIFICATION QQ-P-416, TYPE II, CLASS 3, DEPENDING ON COATING.
CORROSION RESISTANT STEEL, PASSIVATE.
ALUMINUM ALLOY, ANODIZE, SPECIFICATION MIL-A-8625.

HEAT TREATMENT: ALUMINUM ALLOY, 62,000 PSI MINIMUM ULTIMATE ALLOWABLE TENSILE STRESS, SPECIFICATION MIL-H-6068.

- ADD R BETWEEN FIRST AND SECOND DASH NUMBERS FOR RECESSED HEAD SCREWS.
- ADD B BEFORE FIRST DASH NUMBER FOR BRASS SCREWS WITH BLACK OXIDE FINISH.
- ADD PB BEFORE FIRST DASH NUMBER FOR CADMIUM PLATED BRASS SCREWS.
- ADD UB BEFORE FIRST DASH NUMBER FOR PLAIN BRASS SCREWS.
- ADD C BEFORE FIRST DASH NUMBER FOR CORROSION RESISTANT STEEL SCREWS.
- ADD DD BEFORE FIRST DASH NUMBER FOR ALUMINUM ALLOY SCREWS.

LENGTHS IN ADDITION TO THOSE TABULATED ARE AVAILABLE IN 1/4 INCH INCREMENTS BY THE USE OF THE SIGNIFICANT SECOND DASH NUMBER.

- EXAMPLES OF PART NUMBERS:
- AN507-428-8 = 1/4-28 UNF-2A CARBON STEEL SCREW, 1/2 (8/16) INCH LONG, SLOTTED HEAD.
 - AN507BL28-8 = 1/4-28 UNF-2A BRASS SCREW WITH BLACK OXIDE FINISH, 1/2 (8/16) INCH LONG, RECESSED HEAD.
 - AN507BL28-8 = 1/4-28 UNF-2A BRASS SCREW WITH BLACK OXIDE FINISH, 1/2 (8/16) INCH LONG, SLOTTED HEAD.
 - AN507PB428-8 = 1/4-28 UNF-2A CADMIUM PLATED BRASS SCREW, 1/2 (8/16) INCH LONG, SLOTTED HEAD.
 - AN507UB428-8 = 1/4-28 UNF-2A PLAIN BRASS SCREW, 1/2 (8/16) INCH LONG, SLOTTED HEAD.
 - AN507CL28-8 = 1/4-28 UNF-2A CORROSION RESISTANT STEEL SCREW, 1/2 (8/16) INCH LONG, SLOTTED HEAD.
 - AN507DD632-8 = NO. 6-32 MC-2A ALUMINUM ALLOY SCREW, 1/2 (8/16) INCH LONG, SLOTTED HEAD.

SCREWS SHALL BE FREE OF ALL LOOSE OR HANGING BURRS OR SLIVERS WHICH MIGHT BECOME DISLODGED UNDER USAGE.

IN CASE OF CONFLICT, THE REQUIREMENTS SPECIFIED HEREON SHALL TAKE PRECEDENCE OVER THE REQUIREMENTS SPECIFIED IN SPECIFICATION FF-3-92.

3 CANCELED AFTER 21 APR 1967
DIMENSIONS IN INCHES FOR NEW DESIGN AND ENGINEERING USE MS24693.

PROCUREMENT SPECIFICATION

FF-3-92

AIR FORCE-NAVY AERONAUTICAL STANDARD
SCREW, MACHINE, FLAT HEAD, 100 DEGREE

AN507
SHEET 2 OF 2

APPROVED 15 JUN 50 REVISED 1 15 FEB 59 21 APR 1967