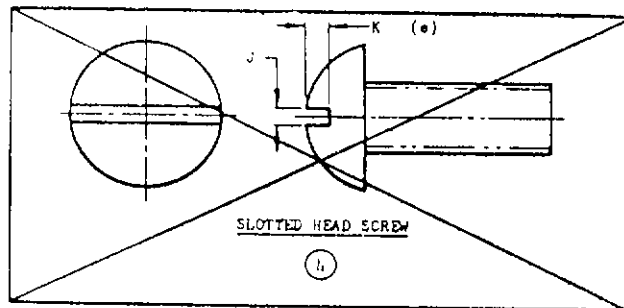
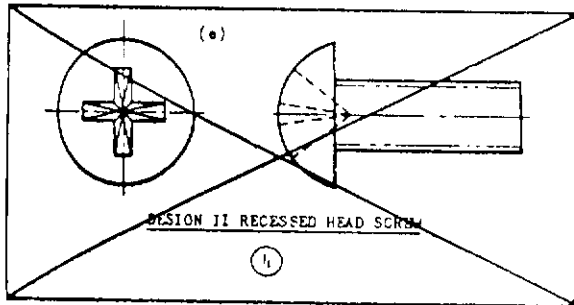


④ DESIGN I RECESSED HEAD SCREW

SIZE	A	D		H	J		K		R
	DIA	MAX	MIN	MAX	MAX	MIN	MAX	MIN	RAD
NO. 2-56 NC-2A	.086	.162	.156	.069	.031	.023	.048	.037	.009
NO. 3-48 NC-2A	.099	.187	.169	.078	.036	.027	.051	.040	.010
NO. 4-40 NC-2A	.112	.211	.193	.086	.033	.031	.058	.044	.013
NO. 5-40 NC-2A	.125	.236	.217	.095	.043	.035	.063	.047	.013
NO. 6-32 NC-2A	.138	.260	.240	.103	.048	.039	.067	.051	.016
NO. 8-32 NC-2A	.164	.309	.289	.120	.064	.045	.077	.058	.016
NO. 10-24 NC-2A	.190	.357	.338	.137	.076	.056	.087	.065	.020
1/4 -20 UNC-2A	.250	.472	.443	.175	.075	.061	.109	.087	.025
5/16 -18 UNC-2A	.313	.590	.557	.216	.091	.071	.132	.097	.028
3/8 -16 UNC-2A	.375	.708	.670	.256	.091	.091	.155	.117	.031

- ④ (a) MARK CORROSION RESISTANT STEEL SCREWS, SIZES NUMBER 5 AND LARGER WITH 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 1-3/4 INCHES.
- ④ (*) DESIGN I RECESSED AND SLOTTED HEAD SCREWS INACTIVE FOR DESIGN AFTER 17 FEBRUARY 1959.



④ DIMENSIONING AND GAGING OF THE ABOVE RECESS DESIGNS SHALL BE IN ACCORDANCE WITH PROCUREMENT SPECIFICATION.

⑤ **CANCELLED AFTER 5 MAY 1965**
 USE MS35206, MS35214, MS35218, MS51957

Interchangeability relationship - The MS parts can replace the cancelled AN515 parts of like material, finish, thread size, and length. The cancelled AN515 parts cannot replace the MS parts and should be used until existing stock is depleted. Use only the superseding MS parts for design and replacement.

PROCUREMENT SPECIFICATION ④ 77-9-92	AIR FORCE-NAVY AERONAUTICAL STANDARD	AN515 SHEET 1 OF 2
	SCREW, MACHINE, ROUND HEAD, COARSE THREAD	

APPROVED 17 May 63 REVISED 1 8 Dec 43 2 15 Jan 50 3 21 Feb 52 4 17 Feb 59 5 5 May 65

DASH NUMBERS FOR CARBON STEEL SCREWS

L LENGTH	NO. 2-56	NO. (d) 3-48	NO. 4-40	NO. (d) 5-40	NO. 6-32	NO. 8-32	(d) NO. 10-24	(d) 1/4-20	(d) 5/16-18	(d) 3/8-16
1/8	2-7	3-7	4-7	5-7	6-7	8-7	10-7			
3/16	2-11	3-11	4-11	5-11	6-11	8-11	10-11			
1/4	2-14	3-14	4-14	5-14	6-14	8-14	10-14			
5/16	2-5	3-5	4-5	5-5	6-5	8-5	10-5	416-5		
3/8	2-6	3-6	4-6	5-6	6-6	8-6	10-6	416-6		
7/16	2-7	3-7	4-7	5-7	6-7	8-7	10-7	416-7		
1/2	2-8	3-8	4-8	5-8	6-8	8-8	10-8	416-8	516-8	616-8
5/8	2-10	3-10	4-10	5-10	6-10	8-10	10-10	416-10	516-10	616-10
3/4	2-12	3-12	4-12	5-12	6-12	8-12	10-12	416-12	516-12	616-12
7/8		3-14	4-14	5-14	6-14	8-14	10-14	416-14	516-14	616-14
1		3-16	4-16	5-16	6-16	8-16	10-16	416-16	516-16	616-16
1-1/8			4-18	5-18	6-18	8-18	10-18	416-18	516-18	616-18
1-1/4			4-20	5-20	6-20	8-20	10-20	416-20	516-20	616-20
1-3/8			4-22	5-22	6-22	8-22	10-22	416-22	516-22	616-22
1-1/2			4-24	5-24	6-24	8-24	10-24	416-24	516-24	616-24
1-5/8			4-26	5-26	6-26	8-26	10-26	416-26	516-26	616-26
1-3/4			4-28	5-28	6-28	8-28	10-28	416-28	516-28	616-28
1-7/8					6-30	8-30	10-30	416-30	516-30	616-30
2					6-32	8-32	10-32	416-32	516-32	616-32
2-1/4					6-36	8-36	10-36	416-36	516-36	616-36
2-1/2					6-40	8-40	10-40	416-40	516-40	616-40
2-3/4					8-44	8-44	10-44	416-44	516-44	616-44
3					8-48	8-48	10-48	416-48	516-48	616-48

(d) NOT PREFERRED FOR AIRFRAME USE.

RATED STRENGTH IN POUNDS
(FOR REFERENCE PURPOSES ONLY)

SIZE	MINIMUM ULTIMATE TENSILE BREAKING STRENGTH AT ROOT DIA	MINIMUM SINGLE SHEAR STRENGTH AT ROOT DIA
NO. 2-56	170	102
NO. 3-48	275	135
NO. 4-40	275	165
NO. 5-40	370	222
NO. 6-32	410	216
NO. 8-32	660	396
NO. 10-24	800	480
1/4 -20	1480	890
5/16-18	2500	1500
3/8 -16	3730	2240

CANCELLED
SEE SHEET NO. 1

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

MATERIAL: CARBON STEEL, SPECIFICATION QQ-S-771, TYPE FS 1044, 55,000 PSI MINIMUM ULTIMATE ALLOWABLE TENSILE STRESS OR OTHER STEEL MEETING THE SAME PHYSICAL REQUIREMENTS.
CORROSION RESISTANT STEEL, SPECIFICATION QQ-S-763, CLASS IV OR MIL-S-7720 COMPOSITION FM OR G FOR COLD UPSETTING PROCESS.
BRASS, COMMERCIAL, 55,000 PSI MINIMUM ULTIMATE ALLOWABLE TENSILE STRESS.
ALUMINUM ALLOY, SPECIFICATION QQ-A-354.

1 FINISH: CARBON STEEL, CADMIUM PLATE, SPECIFICATION QQ-P-416, TYPE 1, CLASS J.
BRASS, BARE, BLACK OXIDE, OR CADMIUM PLATE, SPECIFICATION QQ-P-416, TYPE 11, CLASS J, DEPENDING ON CODING.
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-6088.

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: AN515-4-8 = NO. 4-40 CARBON STEEL SCREW, 1/2(8/16) INCH LONG, SLOTTED HEAD.
AN515B-8 = NO. 4-40 BRASS SCREW WITH BLACK OXIDE FINISH, 1/2(8/16) INCH LONG, RECESSED HEAD.
AN515B-8 = NO. 4-40 BRASS SCREW WITH BLACK OXIDE FINISH, 1/2(8/16) INCH LONG, SLOTTED HEAD.
AN515PB-8 = NO. 4-40 CADMIUM PLATED BRASS SCREW, 1/2(8/16) INCH LONG, SLOTTED HEAD.
AN515UB-8 = NO. 4-40 PLAIN BRASS SCREW, 1/2(8/16) INCH LONG, SLOTTED HEAD.
AN515C-8 = NO. 4-40 CORROSION RESISTANT STEEL SCREW, 1/2(8/16) INCH LONG, SLOTTED HEAD.
AN515DD-8 = NO. 6-32 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.

1 IN CASE OF CONFLICT, THE REQUIREMENTS SPECIFIED HEREON SHALL TAKE PRECEDENCE OVER THE REQUIREMENTS SPECIFIED IN SPECIFICATION 77-9-92.

DIMENSIONS IN INCHES.

PROCUREMENT SPECIFICATION

77-9-92

AIR FORCE-NAVY AERONAUTICAL STANDARD

SCREW, MACHINE, ROUND HEAD,
COARSE THREAD

AN515

SHEET 2 OF 2

APPROVED 21 Feb 52 REVISED 17 Feb 59