

NATIONAL AEROSPACE STANDARD

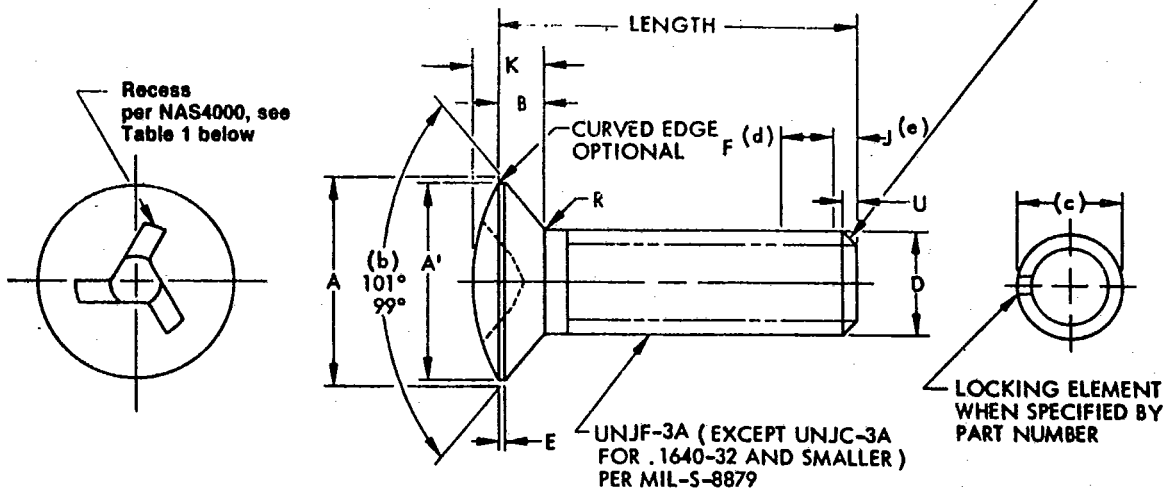
AEROSPACE INDUSTRIES ASSOCIATION OF AMERICA, INC., 1725 DE SALES STREET, N.W., WASHINGTON, D. C. 20036

© COPYRIGHT 1985 AEROSPACE INDUSTRIES ASSOCIATION OF AMERICA, INC. ALL RIGHTS RESERVED

Diameter of unthreaded portion of shank shall not be less than min pitch dia nor more than max major dia of thread.

POINT SHALL BE FLAT AND CHAMFERED SEE PROCUREMENT SPECIFICATION FOR DETAILS

FED. SUP CLASS



Head marking shall be depressed (.010 max) and arranged as follows:

First Sector - Mark with basic number ("NAS" optional) except mark .1120-40 size with "4", .1380-32 size with "8", .1640-32 size with "8", and (optional) .1900-32 size with "10". These sizes also to be marked "C" for A286. Second Sector - Mark with manufacturer's symbol (symbol location optional in any sector), length dash number and "L" when applicable. "L" identifies screws with optional locking element. "P" identifies screws with patch type locking element only. Third Sector - Mark with recess dash number encircled.

Recess number should be approximately 25% larger than other numerals in head marking. "A", aluminum coated and "U", unplated codes need not appear on head of screw.

THREAD LENGTH: Screws 2 inches long or shorter - thread shall extend to within .03 of point of tangency of "R" but shall not enter "R" fillet area.

Screws longer than 2 inches - shall have a minimum complete thread length of 1.75 inches. Maximum thread length shall not enter "R" fillet area.

INCOMPLETE THREAD: See NAS4003.

TABLE 1 DIMENSIONS (CONTINUED ON SHEET 2)

Basic Number	Nom Thread	A Dia Max (e)	A' Absolute Min Dia (e)	B Max (a)	D Dia Max	E Max	F (d)	Recess Number
NAS6500	.1120-40	.226	.193	.044	.112	.010	.125	NAS4000-2
NAS6501	.1380-32	.280	.246	.061	.138	.010	.156	NAS4000-3
NAS6502	.1640-32	.331	.296	.072	.164	.012	.156	NAS4000-4
NAS6503	.1900-32	.381	.338	.082	.190	.015	.156	NAS4000-5
NAS6503J	.1900-32	.381	.338	.082	.190	.015	.156	NAS4000-4J
NAS6504	.2500-28	.506	.456	.111	.250	.018	.178	NAS4000-6
NAS6505	.3125-24	.635	.575	.138	.312	.021	.208	NAS4000-7
NAS6506	.3750-24	.763	.692	.166	.375	.025	.208	NAS4000-8

**The last digit of the basic number designates the size. See Sheet 2 for "L" and "U" codes.

MATERIAL: A286 corrosion resistant steel with composition per AMS5731 or AMS5737. Locking element - plastic per MIL-F-18240 and QPL18240.

HEAT TREAT: 160 KSI minimum ultimate tensile.

FINISH: Unplated Screw - Passivate to meet requirements of NAS4003.

Plated Screw - Cadmium plate per QQ-P-416, Type II, Class 2. Parts plated to Class 3 may be used until stock depleted. Embrittlement test per QQ-P-416 does not apply.

Coated Screw - Aluminum coating per NAS4006.

Cadmium plated A286 CRES screws shall be identified with green dye or paint on thread end.

Maximum coverage may include chamfer plus one incomplete thread.

④ LIST OF CURRENT SHEETS

NO.	REV.
1	4
2	4

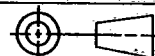
④ INACTIVE FOR NEW DESIGN
AFTER JANUARY 1, 1986
NO SUPERSEDING STANDARD

(a), (b) etc: See notes on Sheet 2.

TRI-WING® IS A REGISTERED TRADEMARK OF THE PHILLIPS SCREW COMPANY.

CUSTODIAN NATIONAL AEROSPACE STANDARDS COMMITTEE

THIRD ANGLE PROJECTION



PROCUREMENT SPECIFICATION

NOTED ON SHEET 2

TITLE

SCREW, 100° OVAL HEAD, TRI-WING® RECESS, A286 CRES, FULL THREAD, SELF-LOCKING AND NONLOCKING

CLASSIFICATION STANDARD PART

AVAS 6500 THRU 6506 Documents SHOTting Hub

NATIONAL AEROSPACE STANDARD

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

© COPYRIGHT 1985 AEROSPACE INDUSTRIES ASSOCIATION OF AMERICA, INC. ALL RIGHTS RESERVED

TABLE I DIMENSIONS (CONTINUED)

Basic Number	J ^(a)	K Max (a)	R Rad		U Max
			Max	Min	
NAS6500	.075	.085	.012	.002	.031
NAS6501	.094	.105	.012	.002	.039
NAS6502	.094	.124	.020	.010	.039
NAS6503	.094	.143	.020	.010	.039
NAS6503J	.094	.143	.020	.010	.039
NAS6504	.107	.189	.020	.010	.045
NAS6505	.125	.237	.025	.010	.052
NAS6506	.125	.282	.030	.015	.052

TABLE II PREFERRED LENGTHS

Dash Numbers	3	4	5	6	7	8	9	10	11	12	13	14
Length	.19	.25	.31	.38	.44	.50	.56	.62	.69	.75	.81	.88
Length Tol	+.00, -.03											

Dash Numbers	15	16	18	20	22	24	26	28	30	32	34 to 96
Length	.94	1.00	1.12	1.25	1.38	1.50	1.62	1.75	1.88	2.00	2.12 to 6.00
Length Tol	+.00, -.03										

Dash number indicates length in .0625 increments (rounded to two decimal places). Use of .25 inch increments is recommended for screws over 3 inches long. Intermediate or longer lengths may be specified by use of whole dash number only.

CODE: Basic part number indicates nonlocking, plated screw. See Table I.
Dash number indicates length. See Table II.
Add "A" after basic number for aluminum coated screws. May be used with "L" or "P" code.
Add "L" after basic number for self-locking screw with optional locking element (including patch type); See procurement spec below. Do not use with "P" code.
Add "P" after basic number for self-locking screw with patch type element only; see procurement spec below. Do not use with "L" code.
Add "U" after basic number for unplated screw. May be used with or without "L" or "P" code.
Add "J" as the fifth digit in basic four-digit part number for the deep number 4 recess.

EXAMPLES OF PART NUMBERS:

NAS6503-10 = Screw, .1900-32 thread, .62 long, nonlocking, plated.
NAS6503A10 = Screw, .1900-32 thread, .62 long, nonlocking, aluminum coated.
NAS6503L10 = Screw, .1900-32 thread, .62 long, self-locking (optional type; see procurement spec below), plated.
NAS6503LU10 = Screw, .1900-32 thread, .62 long, self-locking (optional type), unplated.
NAS6503P10 = Screw, .1900-32 thread, .62 long, self-locking (patch type; see procurement spec below), plated.
NAS6503JA10 = Screw, .1900-32 thread, .62 long, nonlocking, aluminum coated, 4J recess.

NOTES:

- Dimensions A applies to sharp corner intersection of 101°/99° cone and top of head (without the oval crown). Dimensions B and K are included for engineering reference only and are not to be used for inspection.
- Concentricity: Conical surface of head to thread pitch dia within .005 TIR.
- Protrusion of locking element shall be controlled so that it will pass freely, or with finger pressure, through a ring gage with diameter of .010 (+.001, -.000) greater than max major dia of screw thread.
- "F" min (5 thread pitches) = region of minimum engagement with female thread required to meet MIL-F-18240 requirements. Locking element within "F" region must develop required torque when tested per MIL-F-18240.
- For ease in starting, locking element shall not be effective in "J" area (3 thread pitches).
- Magnetic permeability shall be less than 2.0 (Air = 1.0) for a field strength H = 200 oersteds using a magnetic permeability indicator per MIL-I-17214 or equivalent.

SURFACE TEXTURE:

(AA max per ANSI B46.1) head to shank fillet, thread flanks and thread root 32; conical surface of head 63; other surfaces 125.

DIMENSIONS TO BE MET AFTER PLATING OR COATING.

DIMENSIONS IN INCHES.

PROCUREMENT SPECIFICATION:

NAS4003, except as noted. Cold working of head to shank fillet is not required for NAS6500 thru 6506 screws. Locking element for self-locking screws: per MS15981 and MIL-F-18240, any type or configuration including patch type. Locking element must be supplied by a qualified source listed in QPL18240 or approved for listing in QPL18240. Shipping notice should identify supplier of screw and locking element separately.

④ INACTIVE FOR NEW DESIGN
AFTER JANUARY 1, 1986
NO SUPERSEDING STANDARD

NAS 6500 THRU 6506
Documents
Document Sharing Hub