

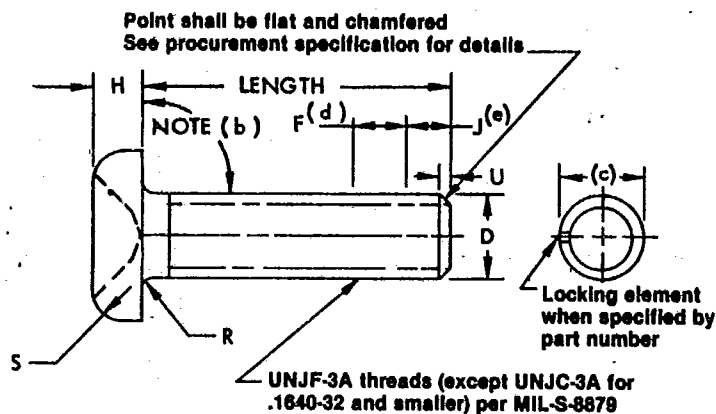
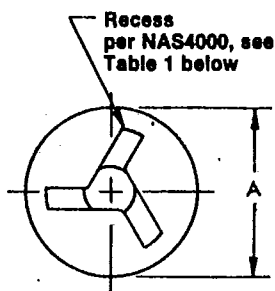
NATIONAL AEROSPACE STANDARD

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

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FED. SUP CLASS

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



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

First Sector - Mark with basic number, 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.(f)

Second Sector - Mark with length, dash number and "L" or "P", when applicable, plus manufacturer's symbol. "L" identifies screw with optional locking element. "P" identifies screw 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.

THREAD LENGTH: Screws less than 2 dias in length - complete threads shall extend to within 2 pitches of bearing surface of head and incomplete threads may extend up to bearing surface. Screws 2 dias thru 2" in length - complete threads shall extend to within 2 pitches of tangency of "R" and incomplete threads may extend up to "R" fillet area. Screws longer than 2" - complete threads shall extend 1.75 min from end of screw and incomplete threads may extend up to "R" fillet area. INCOMPLETE THREADS: See NAS4003.

TABLE I DIMENSIONS

Basic Number	Nom Thread	A Dia (a)		D Dia	F(d)	H		J(e)	R		S		U	Recess Number
		Max	Min	Max		Max	Min		Max	Min	Max	Min	Max	
NAS6900	.1120-40	.219	.205	.112	.125	.069	.059	.075	.010	.005	.041	.031	.031	NAS4000-2
NAS6901	.1380-32	.270	.256	.138	.156	.086	.074	.094	.010	.005	.053	.043	.039	NAS4000-3
NAS6902	.1640-32	.322	.306	.164	.156	.102	.088	.094	.020	.010	.060	.050	.039	NAS4000-4
NAS6903	.1900-32	.373	.357	.190	.156	.118	.103	.094	.020	.010	.064	.054	.039	NAS4000-5
NAS6903J	.1900-32	.373	.357	.190	.156	.118	.103	.094	.020	.010	.064	.054	.039	NAS4000-4J
NAS6904	.2500-28	.492	.473	.250	.178	.150	.133	.107	.020	.010	.086	.076	.045	NAS4000-6
NAS6905	.3125-24	.615	.594	.312	.208	.183	.162	.125	.020	.010	.118	.108	.052	NAS4000-7
NAS6906	.3750-24	.740	.716	.375	.208	.215	.191	.125	.025	.015	.154	.144	.052	NAS4000-8

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

③ INACTIVE FOR NEW DESIGN

AFTER JANUARY 1, 1986

NO SUPERSEDING STANDARD ③

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

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

LIST OF CURRENT SHEETS

NO.	REV.
1	3
2	3

CUSTODIAN NATIONAL AEROSPACE STANDARDS COMMITTEE

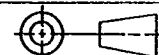
PROCUREMENT SPECIFICATION

NOTED ON SHEET 2

TITLE

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

THIRD ANGLE PROJECTION



CLASSIFICATION STANDARD PART

NAS 6900 THRU 6906
Documents
Document of 2

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

HEAT TREAT: 160 to 180 KSI ultimate tensile.

FINISH: Plated Screws - 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.
Unplated Screws - Passivate to meet requirements of NAS4003.
Coated Screws - 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.

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		+.00, -.06								+.00, -.09

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 "L" 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 "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:

NAS6903-10 = Screw, .1900-32 thread, .62 long, nonlocking, plated.
NAS6903A10 = Screw, .1900-32 thread, .62 long, nonlocking, aluminum coated.
NAS6903L10 = Screw, .1900-32 thread, .62 long, self-locking (optional type; see procurement spec below), plated.
NAS6903LU10 = Screw, .1900-32 thread, .62 long, self-locking (optional type), unplated.
NAS6903P10 = Screw, .1900-32 thread, .62 long, self-locking (patch type; see procurement spec below), plated.
NAS6903JA10 = Screw, .1900-32 thread, .62 long, nonlocking, aluminum coated, 4J recess.

NOTES:

- Concentricity: Outside diameter "A" to thread pitch diameter within .008 T.I.R.
- Bearing surface squareness: within .003 TIR of shank diameter.
- 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).
- "A", aluminum coated and "U", unplated codes need not appear on the head of the screw.
- 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.
- Fastener Suppliers may supply fasteners with recess to revision none until twelve (12) months after last revision date shown hereon. Fasteners with shallow recess may be used until stock is depleted.

SURFACE TEXTURE:

(AA max per ANSI B46.1) head to shank fillet. Thread flanks and thread root 32; bearing 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 NAS6900 thru 6906 screws. Locking element for self-locking screws: per MS15981 and MIL-F-18240. Any type or configuration, including patch type, is optional when "L" code is specified. Patch type (with no metal removed) is required when "P" code is specified. 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.

③ **INACTIVE FOR NEW DESIGN**
AFTER JANUARY 1, 1986
NO SUPERSEDING STANDARD

NAS Documents
NAS 6900 THRU 6906
Document Sharing Hub