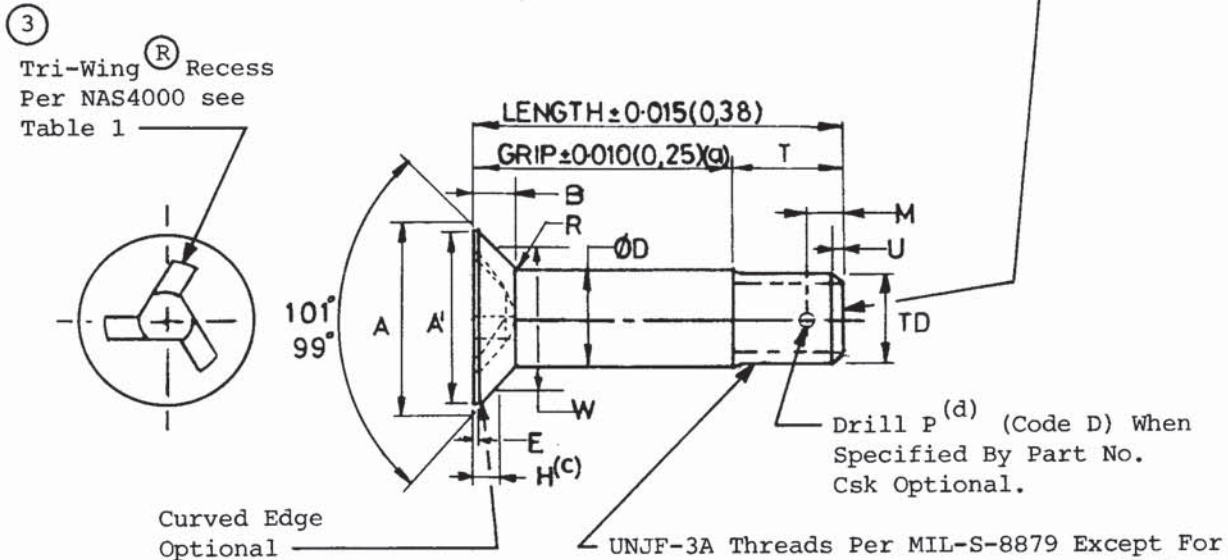


Point Shall Be Flat And Chamfered.  
See Procurement Specification For Details



Head marking shall be depressed .010 max. (0,25) and arranged as follows:-

First Sector - Mark with basic number ("ABS" Optional).

Second Sector - Mark with Manufacturer's symbol (symbol location optional in any sector), grip dash number and "D", when applicable. "D" identifies bolt with drilled shank.

Third Sector - Mark with recess dash number, encircled.  
Recess number should be approximately 25% larger than other numerals in head marking.

TABLE 1 DIMENSIONS. Dimensions are given in inch (mm) unless otherwise stated.

Dia.	Thread	A	A'	B	D Dia.				
Dash	Size	Dia.	Absolute	Max.	Before Coating	After Coating	Recess		
No.	UNJF-3A	Max.	Min.	(b)			Number		
③ 9	.5625-18	1.144	1.047	.249	.5607	.5601	.5615	.5605	NAS4000-
		(29,06)	(26,59)	(6,32)	(14,242)	(14,227)	(14,262)	(14,237)	11
10	.6250-18	1.276	1.169	.279	.6232	.6226	.6240	.6230	NAS4000-
		(32,41)	(29,69)	(7,09)	(15,829)	(15,814)	(15,850)	(15,824)	12
12	.7500-16	1.531	1.406	.334	.7482	.7476	.7490	.7480	NAS4000-
		(38,89)	(35,71)	(8,48)	(19,004)	(18,989)	(19,025)	(18,999)	13

TABLE 1 CONTINUED ON PAGE 02

Page	01	02	03	04	TRI-WING <sup>®</sup> IS A REGISTERED
Iss./Rev.	③	③	①	①	TRADEMARK OF THE PHILLIPS SCREW COMPANY

Form: AIF 8001


<b>Approved</b> <b>AIRBUS-INDUSTRIE</b> 	<b>Title</b> BOLT, 100° HEAD, TRI-WING <sup>®</sup> RECESS, CLOSE TOLERANCE, 6AL-4V TITANIUM ALLOY, LONG THREAD	<b>Classification</b> <b>ABS0113</b>
	Issue: 04/84 Revision: ① 08/84 ② 10/84 ③ 09/85	Page 01 of 04

TABLE 1 DIMENSIONS. (CONTINUED)

:Dia.:	H Gauge	:W Gauge	Dia.:	E	: M	: P(d)	: R Rad.	:
:Dash:	Protrusion(c)	: +.0002	:	:	: ±.010	: +.010	:	:
:No.:	Nom	: ±Tol	: (+0,005)	: Max.	: (±0,25)	: (+0,25)	: Max.	: Min.
9	.0556	.0025	1.0026	.034	.218	.141	.030	.015
	(1,412)	(0,064)	(25,466)	(0,86)	(5,54)	(3,58)	(0,76)	(0,38)
10	.0649	.0027	1.1122	.038	.249	.141	.030	.015
	(1,648)	(0,069)	(28,250)	(0,965)	(6,32)	(3,58)	(0,76)	(0,38)
12	.0738	.0031	1.3438	.044	.252	.141	.030	.015
	(1,874)	(0,079)	(34,133)	(1,118)	(6,40)	(3,58)	(0,76)	(0,38)
:	:	:	:	:	:	:	:	:
:	:	:	:	:	:	:	:	:

TABLE 1 DIMENSIONS. (CONTINUED)

:Dia.:	T	: TD Dia.	: U	:	:	:
:Dash:	±.010	:	:	: Y(f)	: Z(g)	:
:No.:	(±0,25)	: Max.	: Min.	: Max.	:	:
9	.840	.555	.550	.068	.006	.002
	(21,34)	(14,10)	(13,97)	(1,73)	(0,15)	(0,05)
10	.902	.618	.612	.068	.006	.002
	(22,91)	(15,70)	(15,54)	(1,73)	(0,15)	(0,05)
12	1.041	.743	.737	.078	.006	.002
	(26,44)	(18,87)	(18,72)	(1,98)	(0,15)	(0,05)
:	:	:	:	:	:	:
:	:	:	:	:	:	:

PROCUREMENT SPECIFICATION: NAS4004 EXCEPT FOR PROTECTIVE TREATMENT AND LUBRICATION

(c), (d), ETC.: SEE NOTES ON PAGE 03.

Classification

ABS0113

Issue: 04/84      Revision: ① 08/84    ② 10/84    ③ 09/85

Page 02

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Form: AIF 8002



Material: 6AL-4V Titanium Alloy per AMS4928 or AMS4967.

Heat Treat: 160 to 180 KSI (1100 to 1240 N/mm<sup>2</sup>) Ultimate Tensile.  
95 KSI (655 N/mm<sup>2</sup>) Min. Ultimate Shear.

Finish: Bolts to be coated with Aluminium (IVD) to MIL-C-83488 Type II Class 3 to be identified with Blue Dye on thread end of bolt plus chamfer.

"Grip" dimension equals grip dash number times .0625 (1,588). "Length" equals "Grip" plus "T" (See page 02).

Example of Part Number e.g. for a .625 (15,88) dia. bolt with undrilled shank and .625 (15,88) grip the part number is:-

<u>ABS0113</u>	<u>-10</u>	<u>-10</u>	
:	:	:	
Basic Part Number	:	:	Grip Dash No. (in .0625 (1,588) increments)
	:	:	
	:	:	Dia. Dash No. (in .0625 (1,588) increments)

Replace dash "-" after basic part number with "D" for bolt with drilled shank.

e.g. For a .750 (19,05) dia. bolt with a drilled shank and .750 (19,05) grip the part number is:-

<u>ABS0113D</u>	<u>12</u>	<u>-12</u>	
:	:	:	
Basic Part Number	:	:	Grip Dash No. (in .0625 (1,588) increments)
	:	:	
Bolt with drilled shank	:	:	Dia. Dash No. (in .0625 (1,588) increments)

**NOTES:**

- a. 'Grip' of bolt shall be measured from the top of bolt head to the end of the full cylindrical portion of the shank.
- b. Dimensions A, A' and B are included for engineering reference only and are not to be used for Inspection. Values A, A' and B are calculated limits resulting from tolerances on W, H, E and Head Angle.
- c. Dimensions for H gauge protrusion shall be inspected per NAS527.
- d. Cotter pin hole centre line : within .010 (0,25) and normal within 2° of bolt centre line.
- e. Surface texture : on shank, conical surface of head, thread flanks and thread root  $\sqrt{32}$  (0,8 microns); other surfaces  $\sqrt{125}$  (3,2 microns)
- f. Concentricity : Conical surface of head to shank diameter within .003 (0,076) TIR. "D" dia. to thread pitch dia. within "Y" TIR.
- g. Shank straightness : within "Z" TIR per inch (25,4 mm) of length.

Form: AIF 8003

Issue: 04/84

Revision: ① 09/85

Classification

ABS0113

Page 03

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**RESTRICTED USAGE : FOR REPAIR WORK ONLY**

.0156 (0,396) and .0312 (0,792) OVERSIZE SHANK FOR REPLACEMENT OF BOLTS SHOWN ON PAGE 01.

Head Marking: Same as shown on page 01

Plus identification for oversize, as applicable, to be included in second sector.

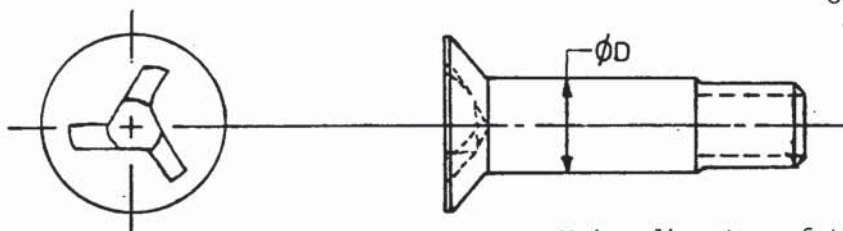
Identify .0156 (0,396) oversize by "X".

Identify .0312 (0,792) oversize by "Y". See pages 01 thru 03 for dimensions not shown.

Head height dimensions (B Max.)

are reduced with oversize shanks.

Reduction is: .0065 (0,165) for .0156 (0,396) Oversize Bolts  
 .0130 (0,330) for .0312 (0,792) Oversize Bolts.



Major diameter of threads may conform to "TD" on page 02 or to MIL-S-8879.

TABLE II OVERSIZE PART NUMBERS AND DIMENSIONS

Basic		Nominal	.0156 (0,396) Oversize Shank:			
Part No.	Thread	Size	Before Coating		After Coating	
			Max.	Min.	Max.	Min.
① .0156 (0,396)						
① : Oversize						
: ABS0113-9-***X	: .5625-18:		.5763	.5757	.5771	.5761
			(14,638)	(14,623)	(14,658)	(14,633)
: ABS0113-10-***X	: .6250-18:		.6388	.6382	.6396	.6389
			(16,226)	(16,210)	(16,246)	(16,228)
: ABS0113-12-***X	: .7500-16:		.7638	.7632	.7646	.7636
			(19,400)	(19,385)	(19,421)	(19,395)
.0312 (0,792)						
① : Oversize						
: ABS0113-9-***Y	: .5625-18:		.5919	.5913	.5927	.5917
			(15,034)	(15,019)	(15,055)	(15,029)
: ABS0113-10-***Y	: .6250-18:		.6544	.6538	.6552	.6542
			(16,622)	(16,607)	(16,642)	(16,617)
: ABS0113-12-***Y	: .7500-16:		.7794	.7788	.7802	.7792
			(19,797)	(19,782)	(19,817)	(19,792)

\* Grip Dash Number in .0625 (1,588) increments.

For material, finish and procurement information, see page 03.

Examples of part number

.0156 (0,396) oversize = ABS0113-10-\*\*\*X

.0312 (0,792) oversize = ABS0113-10-\*\*\*Y

Grip Length \_\_\_\_\_

Classification

**ABS0113**

Page 04

Issue: 04/84      Revision: ① 09/85