

FED. SUPPLY CLASS

5306

AEROSPACE INDUSTRIES ASSOCIATION OF AMERICA, INC.
1000 WILSON BLVD.
ARLINGTON, VA 22209

THIS DRAWING SUPERSEDES ALL ANTECEDENT STANDARD DRAWINGS FOR THE SAME
PRODUCT AND SHALL BECOME EFFECTIVE NO LATER THAN SIX MONTHS FROM THE LAST
REVISION DATE.

FORM 12-01

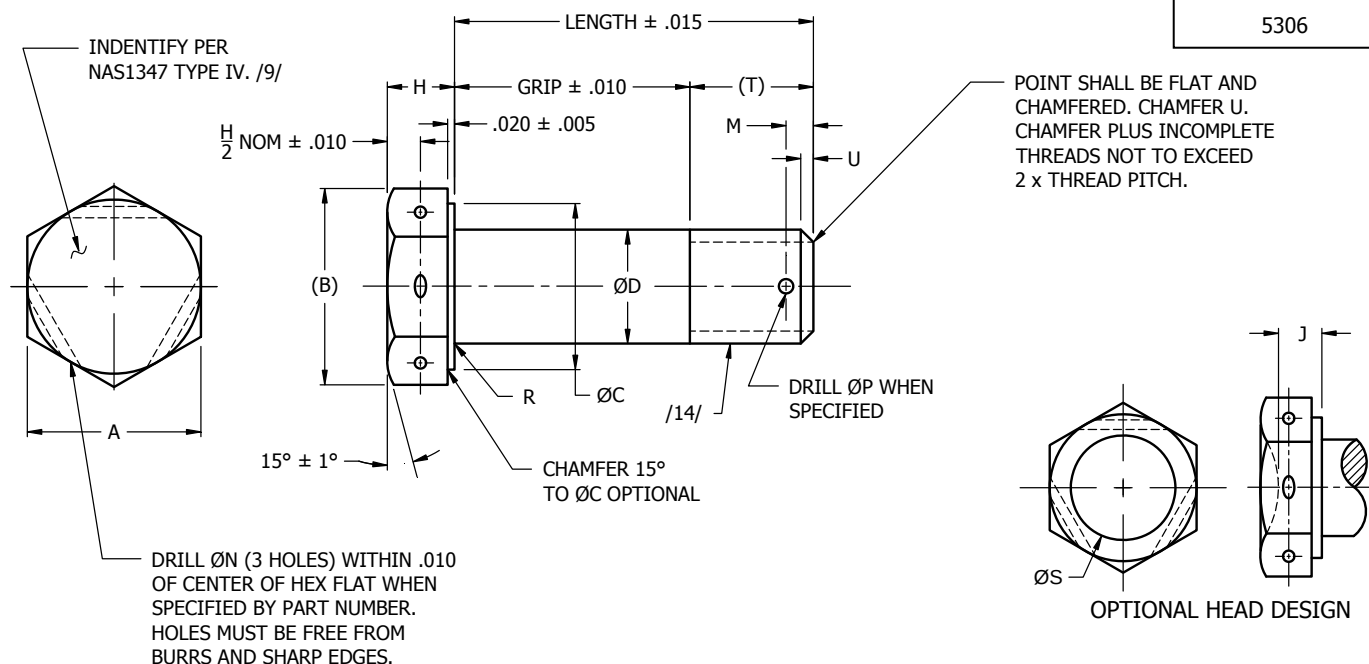


TABLE I – DIMENSIONS

BASIC PART NUMBER	THREAD UNJF-3A	A	(B)	ØC MIN /4/	ØD	H +.015 - .000	J	M ±.010	ØN +.010 - .000	ØP +.010 - .000	R RAD	ØS	(T)	U MAX	INSPECTION DATA		
															X /1/	Y /1/	Z /2/
NAS653	.1900-32	.376 .367	.43	.335	.1895 .1890	.110	.088 .073	.118	.046	.070	.020 .010	.20 .18	.276	.016	.005	.0045	.0040
NAS654	.2500-28	.439 .430	.51	.398	.2495 .2490	.125	.098 .083	.118	.046	.076	.025 .015	.26 .24	.316	.018	.006	.0045	.0030
NAS655	.3125-24	.502 .492	.58	.460	.3120 .3115	.156	.119 .104	.118	.070	.076	.030 .020	.32 .30	.375	.021	.008	.0045	.0030
NAS656	.3750-24	.564 .553	.65	.523	.3745 .3740	.188	.140 .125	.118	.070	.106	.030 .020	.39 .37	.391	.021	.009	.006	.0025
NAS657	.4375-20	.690 .679	.79	.648	.4370 .4365	.219	.161 .146	.125	.070	.106	.030 .020	.45 .43	.453	.025	.010	.006	.0025
NAS658	.5000-20	.752 .741	.87	.710	.4995 .4990	.250	.182 .167	.125	.070	.106	.030 .020	.51 .49	.453	.025	.011	.006	.0020

MATERIAL:

SEE PROCUREMENT SPECIFICATION

FINISH:

NO PROTECTIVE FINISH REQUIRED.

CODE:

DASH NUMBER DESIGNATES GRIP AND LENGTH. SEE TABLE II.
~~NO LETTER BEFORE DASH NUMBER INDICATES 4AL-4MN MATERIAL. /8/~~
ADD "V" BEFORE DASH NUMBER TO INDICATE 6AL-4V MATERIAL.
ADD "D" AFTER DASH NUMBER TO INDICATE DRILLED SHANK. /12/
ADD "H" AFTER DASH NUMBER TO INDICATE DRILLED HEAD.

REVISION DATE: FEBRUARY 29, 2016

ISSUE DATE: JULY 1956

THIRD ANGLE PROJECTION	CUSTODIAN NATIONAL AEROSPACE STANDARDS COMMITTEE	REVISION 11	
		CLASSIFICATION PART STANDARD	
PROCUREMENT SPECIFICATION NAS621-NAS4004	TITLE BOLT, SHEAR, CLOSE TOLERANCE, HEXAGON HEAD, TITANIUM, SHORT THREAD, .1900 TO .5000, 95 KSI Fsu	NAS621 THRU NAS658	
		SHEET 1 OF 3	

EXAMPLE OF PART NUMBER:

NAS654 10 — .2500 DIA BOLT, .625 GRIP, 4AL 4MN MATERIAL
 NAS654V10 = .2500 DIA BOLT, .625 GRIP, 6AL-4V MATERIAL
 NAS654V10D = .2500 DIA BOLT, .625 GRIP, DRILLED SHANK, 6AL-4V MATERIAL

NOTES:

- /1/ CONCENTRICITY: "ØC" AND "ØD" WITHIN "X" VALUES FIM
"ØD" AND THREAD PITCH DIAMETER WITHIN "Y" VALUES FIM.
- /2/ SHANK STRAIGHTNESS: WITHIN "Z" VALUES INCH/INCH FIM.
- (3) REMOVE ALL BURRS AND SHARP EDGES.
- /4/ WASHER FACE DIAMETER: NOT TO EXCEED ACTUAL WIDTH ACROSS FLATS.
- (5) ANGLE: UNDER SIDE OF HEAD TO SHANK: 90° +30°
-00°
- (6) SURFACE ROUGHNESS: HEAD TO SHANK FILLET, THREAD ROOT, THREAD SIDES, THREAD RUN-OUT: 16 MICROINCHES Ra; SHANK AND BEARING SURFACE OF HEAD: 63 MICROINCHES Ra; ALL OTHER SURFACES: 125 MICROINCHES Ra PER ASME B46.1.
- (7) GRIP LENGTH: FROM UNDER SIDE OF HEAD TO END OF FULL CYLINDRICAL PORTION OF SHANK.
- /8/ 4AL 4MN MATERIAL INACTIVE FOR DESIGN AFTER SEPTEMBER 1968, USE 6AL 4V MATERIAL. FOR DESCRIPTION OF STATUS NOTES, SEE NAS380.
- /9/ MARK BASIC PART NUMBER, MATERIAL CODE, DASH NO. AND MANUFACTURERS SYMBOL RAISED OR DEPRESSED .010 MAX, EXCEPT THE DASH NO. MAY BE OMITTED FROM THE NO. 10 SIZE AND "NAS" MAY BE OMITTED FROM THE NO. 10, 1/4, AND 5/16 SIZES. ARRANGEMENT OPTIONAL. PARTS IDENTIFIED PER THE ABOVE MARKING REQUIREMENTS ARE ACCEPTABLE UNTIL 31 DECEMBER 1969.
- (10) DIMENSIONS IN INCHES.
- /11/ DASH NUMBER INDICATES GRIP LENGTH IN .062 INCREMENTS. INTERMEDIATE OR LONGER LENGTH MAY BE SPECIFIED BY USE OF WHOLE DASH NUMBER ONLY.
- /12/ IF REQUIRED, TENSILE TESTING OF BOLTS REQUIRING CROSS-DRILLED THREADS SHALL BE PERFORMED PRIOR TO DRILLING. WHEN BOLTS HAVE BEEN DRILLED, STRENGTH MAY BE VERIFIED BY SHEAR TESTING, IN LIEU OF TENSILE TESTING, IN ACCORDANCE WITH NASM1312. USERS SHOULD BE AWARE THAT FASTENERS WITH CROSS-DRILLED THREADS MAY EXHIBIT A REDUCTION IN TENSILE STRENGTH.
- (13) DIMENSIONING AND TOLERANCING PER ANSI Y14.5M-1982.
- /14/ THREADS IN ACCORDANCE WITH AS8879 AND PROCUREMENT SPECIFICATION; MAX MAJOR DIA SHALL BE .001 BELOW MIN SHANK DIA. ~~THREADS IN ACCORDANCE WITH MIL S 7742 ARE ACCEPTABLE UNTIL 31 DEC 1969.~~
- (15) THIS STANDARD TAKES PRECEDENCE OVER DOCUMENTS REFERENCED HEREIN.
- (16) UNLESS OTHERWISE SPECIFIED, PART INVENTORY MANUFACTURED TO PREVIOUS REVISIONS OF THE APPLICABLE DRAWING OR SPECIFICATION MAY BE PROCURED AND USED UNTIL STOCK IS DEPLETED. PARTS MANUFACTURED TO NAS621 PROCUREMENT SPECIFICATION PRIOR TO JANUARY 1, 2001 MAY BE SUPPLIED TO DEPLETION.
- (11) (17) UNLESS OTHERWISE SPECIFIED HEREIN, REFERENCED DOCUMENTS SHALL BE THE ISSUE IN EFFECT ON DATE OF MANUFACTURE. HOWEVER, EXISTING MATERIAL INVENTORY CERTIFIED TO A PREVIOUS REVISION OF THE APPLICABLE MATERIAL SPECIFICATION(S) IS ACCEPTABLE FOR USE UNTIL DEPLETION.

REVISION

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NAS653-658-11
SHEET 2



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