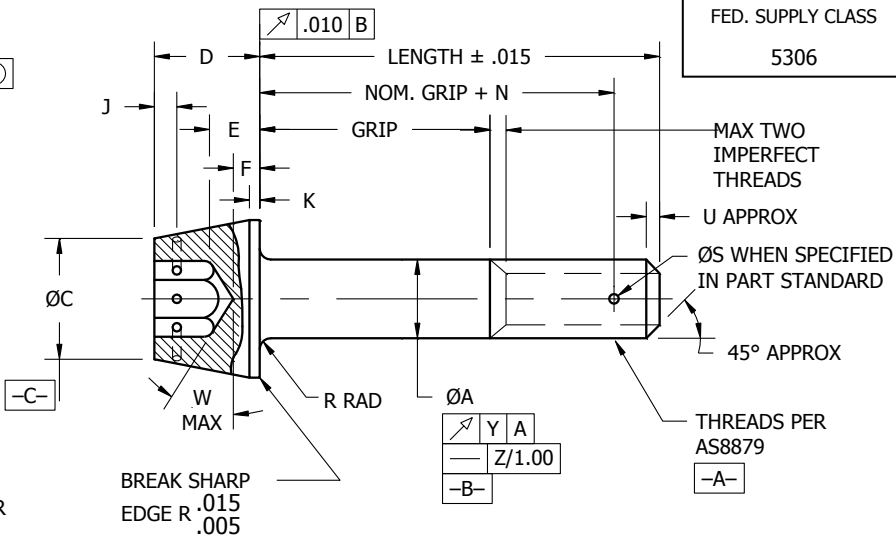
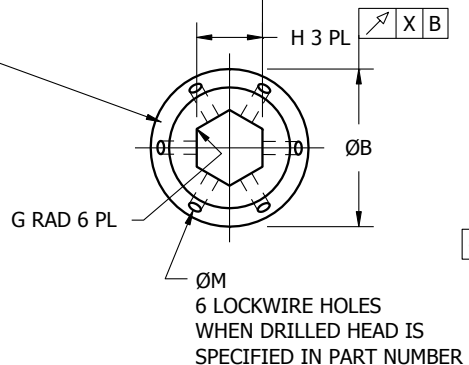


HEAD MARKING PER
NAS1347, TYPE IV,
ON TOP OR TAPERED
SLOPE OF HEAD



FED. SUPPLY CLASS
5306

MAX TWO
IMPERFECT
THREADS
U APPROX
ØS WHEN SPECIFIED
IN PART STANDARD

THREADS PER
AS8879
-A-

TABLE I - DIMENSIONS

BASIC PART NO.	THREAD UNJF-3A	ØA		ØB		ØC	D	E	F MIN	G RAD MAX	H HEX		J
		MAX	MIN	MAX	MIN						MAX	MIN	
NAS144	.2500-28	.2490	.2460	.438	.430	.381	.226	.122	.072	.010	.2210	.2190	.063
NAS145	.3125-24	.3115	.3085	.531	.523	.501	.276	.142	.075	.010	.3150	.3130	.063
NAS146	.3750-24	.3740	.3710	.625	.615	.583	.343	.170	.091	.011	.3785	.3755	.094
NAS147	.4375-20	.4365	.4330	.750	.740	.594	.407	.209	.130	.011	.3785	.3755	.094
NAS148	.5000-20	.4990	.4955	.813	.802	.751	.460	.223	.130	.011	.5035	.5005	.094
NAS149	.5625-18	.5615	.5575	.938	.927	.775	.529	.261	.160	.011	.5035	.5005	.125
NAS150	.6250-18	.6240	.6200	1.000	.988	.850	.595	.288	.175	.019	.5660	.5630	.188
NAS152	.7500-16	.7490	.7445	1.188	1.175	.936	.732	.357	.232	.022	.6279	.6257	.188
NAS154	.8750-14	.8740	.8690	1.438	1.424	1.098	.846	.406	.259	.022	.7547	.7507	.188
NAS156	1.0000-14	.9990	.9935	1.625	1.609	1.405	.952	.434	.259	.022	1.0050	1.0010	.188
NAS158	1.1250-12	1.1240	1.1180	1.875	1.857	1.423	1.091	.512	.320	.022	1.0050	1.0010	.188

BASIC PART NO.	K	ØM +.005 -.000	N	R RAD		ØS +.005 -.000	U	W DEG MAX	RUNOUT & SHANK STRAIGHTNESS TOLERANCE			TENSILE TEST LBF MIN
				MAX	MIN				X	Y	Z	
NAS144	.063	.046	.3438	.041	.026	.076	.03	20	.006	.0045	.0040	5,000
NAS145	.063	.070	.3906	.041	.026	.076	.05	20	.008	.0045	.0030	8,200
NAS146	.063	.070	.4688	.057	.042	.106	.05	20	.009	.0060	.0030	12,700
NAS147	.063	.070	.5156	.057	.042	.106	.05	20	.010	.0060	.0025	17,100
NAS146	.063	.070	.6250	.057	.042	.106	.05	18	.011	.0060	.0025	23,400
NAS149	.094	.070	.6719	.057	.042	.141	.06	20	.012	.0060	.0020	29,800
NAS150	.094	.070	.7500	.073	.058	.141	.06	20	.015	.0060	.0020	38,000
NAS152	.094	.070	.8750	.073	.058	.141	.06	20	.018	.0090	.0020	55,600
NAS154	.094	.070	.9688	.073	.058	.141	.08	20	.020	.0090	.0020	76,200
NAS156	.094	.070	1.1250	.073	.058	.141	.08	18.5	.022	.0090	.0020	102,500
NAS158	.094	.070	1.1875	.073	.058	.141	.09	20	.025	.0090	.0020	128,800

INACTIVE FOR NEW DESIGN AFTER OCTOBER 1, 1986. SEE NASM20004 THRU NASM20024.
FOR DESCRIPTION OF STATUS NOTES SEE NAS380.

⑭ COMPLETELY REVISED

REVISION DATE: NOVEMBER 30, 2012

ISSUE DATE: MAY 1942

THIRD ANGLE PROJECTION	CUSTODIAN NATIONAL AEROSPACE STANDARDS COMMITTEE	REVISION 14
PROCUREMENT SPECIFICATION NOTED	TITLE BOLT, INTERNAL WRENCHING, STEEL, .2500-28 THRU 1.1250-12	CLASSIFICATION PART STANDARD NAS144 THRU NAS158



Documents
SHEET 1 OF 5
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MATERIAL:

ALLOY STEEL IN ACCORDANCE WITH THE PROCUREMENT SPECIFICATION.

HEAT TREATMENT:

160 TO 180 KSI TENSILE STRENGTH IN ACCORDANCE WITH THE PROCUREMENT SPECIFICATION.

FINISH:

CADMIUM PLATING PER AMS-QQ-P-416, TYPE II, CLASS 2.

CODE:

ADD "DH" TO THE PART NUMBER TO DESIGNATE DRILLED HEAD.
ADD "A" TO THE PART NUMBER TO DESIGNATE DRILLED SHANK.
FOR SUFFIX DASH NUMBER TO DESIGNATE GRIP AND LENGTH, SEE TABLE II.

EXAMPLES OF PART NUMBER:

NAS144-25 = .2500-28 BOLT, 1.5625 LONG, UNDRILLED
NAS144DH-25 = .2500-28 BOLT, 1.5625 LONG, DRILLED HEAD
NAS144ADH-25 = .2500-28 BOLT, 1.5625 LONG, DRILLED HEAD AND SHANK

NOTES:

- (1) SURFACE ROUGHNESS: SHANK, HEAD BEARING SURFACE AND THREADS 32 MICROINCHES Ra; FILLET RADIUS 20 MICROINCHES Ra; ALL OTHER SURFACES 125 MICROINCHES Ra PER ASME B46.1.
- (2) MAGNETIC PARTICLE INSPECTION: 100% PER ASTM E1444/E1444M.
- (3) TOLERANCES UNLESS OTHERWISE SPECIFIED: DECIMALS $\pm .010$.
- (4) DIMENSIONS IN INCHES AND APPLY AFTER FINISH UNLESS OTHERWISE SPECIFIED.
- (5) APPLICABLE WASHERS, MS20002 AND NAS1587.
- (6) REMOVE ALL BURRS AND SHARP EDGES.
- (7) DIMENSIONING AND TOLERANCING PER ANSI Y14.5M-1982.
- (8) THIS STANDARD TAKES PRECEDENCE OVER DOCUMENTS REFERENCED HEREIN.
- (9) 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

14

NAS144 THRU NAS158
SHEET 2

(14) COMPLETELY REVISED



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