

FED. SUPPLY CLASS

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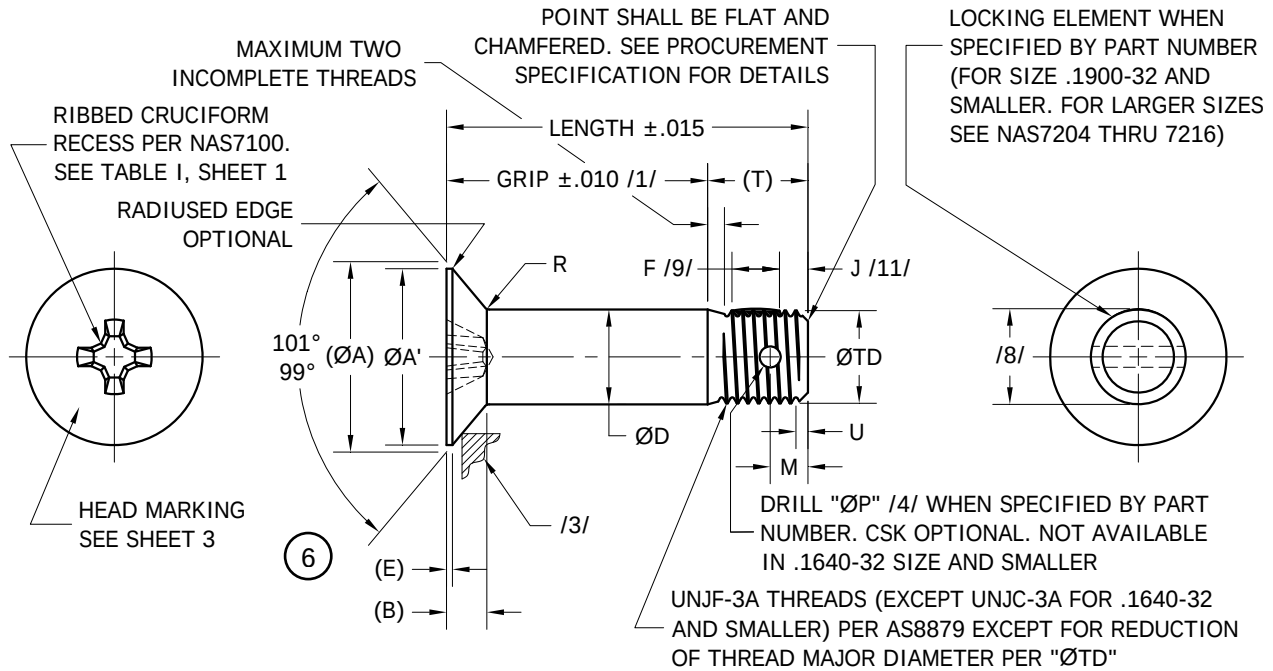


TABLE I – DIMENSIONS (CONTINUED ON SHEET 2)

BASIC PART NUMBER **	NOMINAL THREAD SIZE	(ØA) MAX /2/	ØA' ABSOLUTE MINIMUM	(B) MAX /2/	ØD UNPLATED		ØD PLATED OR COATED		NAS7100 RECESS SIZE
					MAX	MIN	MAX	MIN	
NAS7500	.1120-40	.226	.193	.044	.1115	.1110	.1115	.1105	1
NAS7501	.1380-32	.280	.246	.061	.1375	.1370	.1375	.1365	2
NAS7502	.1640-32	.331	.296	.072	.1635	.1630	.1635	.1625	2
NAS7503	.1900-32	.381	.338	.082	.1895	.1890	.1895	.1885	2
NAS7504	.2500-28	.508	.456	.111	.2495	.2490	.2495	.2485	3
NAS7505	.3125-24	.635	.575	.138	.3120	.3115	.3120	.3110	4
NAS7506	.3750-24	.763	.692	.166	.3745	.3740	.3745	.3735	4
NAS7507	.4375-20	.889	.810	.193	.4370	.4365	.4370	.4360	4
NAS7508	.5000-20	1.016	.928	.221	.4995	.4990	.4995	.4985	4
NAS7509	.5625-18	1.144	1.047	.249	.5615	.5610	.5615	.5605	4
NAS7510	.6250-18	1.276	1.169	.279	.6240	.6235	.6240	.6230	5
NAS7512	.7500-16	1.531	1.406	.334	.7490	.7485	.7490	.7480	5
NAS7514	.8750-14	1.786	1.644	.390	.8740	.8735	.8740	.8730	6
NAS7516	1.0000-12	2.043	1.882	.446	.9990	.9985	.9990	.9980	6

**THE LAST TWO DIGITS OF THE BASIC PART NUMBER DESIGNATE THE SIZE. SEE SHEET 2 AND 3 FOR MATERIAL, FINISH AND FOR "D", "L", "P" CODES, SEE SHEET 5 AND SHEET 6 FOR GRIP DASH NUMBERS.

THIRD ANGLE PROJECTION	
PROCUREMENT SPECIFICATION	NOTED

CUSTODIAN	NATIONAL AEROSPACE STANDARDS COMMITTEE
TITLE	BOLT, SHEAR, 100° FLUSH HEAD, RIBBED CRUCIFORM RECESS, CLOSE TOLERANCE, A286 CRES, SHORT THREAD, SELF-LOCKING AND NONLOCKING, 95 KSI Fsu

REVISION	6
CLASSIFICATION	PART STANDARD
NAS7500 THRU NAS7516 SHEET 1 OF 8	

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

REVISION DATE: FEBRUARY 29, 2016

ISSUE DATE: SEPTEMBER 1977

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TABLE I – DIMENSIONS (CONTINUED)

BASIC PART NUMBER	(E) MAX /2/	F /9/	J /11/	M ±.010	ØP +.010 -.000 /4/	R RADIUS		(T) /5/	ØTD		U MAX	Y /6/	Z /7/
						MAX	MIN		MAX	MIN			
NAS7500	.010	.125	.075	-	-	.012	.005	.238	.1085	.1065	.031	.0045	.0040
NAS7501	.010	.156	.094	-	-	.012	.005	.276	.1340	.1315	.039	.0045	.0040
NAS7502	.012	.156	.094	-	-	.020	.010	.323	.1595	.1570	.039	.0045	.0040
NAS7503	.015	.156	.094	.164	.070	.020	.010	.323	.1840	.1810	.039	.0045	.0040
NAS7504	.018	-	-	.170	.076	.020	.010	.370	.2440	.2410	.045	.0045	.0030
NAS7505	.021	-	-	.182	.076	.025	.010	.438	.3060	.3020	.052	.0045	.0030
NAS7506	.025	-	-	.183	.106	.030	.015	.454	.3680	.3640	.052	.0045	.0025
NAS7507	.028	-	-	.199	.106	.030	.015	.528	.4310	.4260	.062	.0060	.0025
NAS7508	.031	-	-	.198	.106	.030	.015	.528	.4930	.4880	.062	.0060	.0020
NAS7509	.034	-	-	.207	.141	.030	.015	.594	.5550	.5500	.068	.0060	.0020
NAS7510	.038	-	-	.207	.141	.030	.015	.626	.6180	.6120	.068	.0060	.0020
NAS7512	.044	-	-	.222	.141	.030	.015	.666	.7430	.7370	.078	.0060	.0020
NAS7514	.050	-	-	.241	.141	.030	.015	.759	.8680	.8610	.089	.0090	.0020
NAS7516	.057	-	-	.264	.141	.030	.015	.895	.9930	.9860	.104	.0090	.0020

TABLE II – RECESS PERFORMANCE

BASIC PART NUMBER	MINIMUM TORQUE /13/	
	TORQUE INCH POUNDS	NAS7100 RECESS SIZE
NAS7500	-	1
NAS7501	-	2
NAS7502	35	2
NAS7503	50	2
NAS7504	125	3
NAS7505	-	4
NAS7506	-	4
NAS7507	-	4
NAS7508	-	4
NAS7509	-	4
NAS7510	-	5
NAS7512	-	5
NAS7514	-	6
NAS7516	-	6

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NAS7500 THRU
NAS7516

SHEET 2



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MATERIAL: CRES - A286 (UNS S66286) CONFORMING TO THE CHEMISTRY OF AMS5731, AMS5732, AMS5737 OR AMS5853.
LOCKING ELEMENT – NYLON PER MIL-F-18240 MIL-DTL-18240 AND QPL-18240.

HEAT TREAT: DEVELOP BASIC MATERIAL PROPERTIES AS FOLLOWS, WITH CONTROLS PER MIL-H-6875 AMS2759.
CRES: 160-190 KSI FTU, 95 KSI FSU. /14/

FINISH: UNPLATED BOLTS - PASSIVATE TO MEET THE REQUIREMENTS OF AMS2700, METHOD 1, CLASS 4 OR PASSIVATE PER AMS2700, METHOD 2 - NO POST TREATMENT
OR PASSIVATE PER AMS2700, METHOD 1, TYPE 8, CLASS 4 - NO POST TREATMENT.
PLATED BOLTS - CADMIUM PLATE PER QQ-P-416 AMS-QQ-P-416, TYPE II, CLASS 2.
COATED BOLTS - ALUMINUM COATING PER NAS4006.

IDENTIFICATION: CADMIUM PLATED CRES BOLTS SHALL BE IDENTIFIED WITH GREEN DYE OR PAINT ON THE THREAD END. MAXIMUM COVERAGE MAY INCLUDE THE CHAMFER PLUS ONE FULL THREAD.

CODE:

- ⑥ BASIC PART NUMBER = PLATED BOLT WITH UNDRILLED THREADS AND NONLOCKING. ADD "A" AFTER BASIC NUMBER FOR ALUMINUM COATED BOLTS PER NAS4006 - NO CLASS. MAY BE USED WITH "D", "L" OR "P" CODE.
- ⑥ ADD "B" AFTER BASIC NUMBER FOR BOLTS, PASSIVATED PER AMS2700 METHOD 2 - WITHOUT POST TREATMENT. MAY BE USED WITH "D", "L", OR "P" CODE.
- ⑥ ADD "D" AFTER BASIC NUMBER FOR BOLT WITH DRILLED THREADS (FOR SIZES .1900-32 AND LARGER). DO NOT USE WITH "L" OR "P" CODE. /15/
- ⑥ ADD "F" AFTER BASIC NUMBER FOR ALUMINUM COATED BOLTS PER NAS4006 - CLASS NC. MAY BE USED WITH "D", "L" OR "P" CODE.
- ⑥ ADD "L" AFTER BASIC NUMBER FOR SELF-LOCKING BOLT WITH ANY APPROVED OPTIONAL LOCKING ELEMENT (INCLUDING PATCH TYPE, NO METAL REMOVED). DO NOT USE WITH "D" OR "P" CODE.
- ⑥ ADD "M" AFTER BASIC NUMBER FOR BOLTS, PASSIVATED PER AMS2700 METHOD 1, TYPE 8, CLASS 4 - WITHOUT POST TREATMENT. MAY BE USED WITH "D", "L", OR "P" CODE.
- ⑥ ADD "P" AFTER BASIC NUMBER FOR SELF-LOCKING BOLT WITH PATCH TYPE LOCKING ELEMENT ONLY (NO METAL REMOVED). DO NOT USE WITH "D" OR "L" CODE.
- ⑥ ADD "U" AFTER BASIC NUMBER FOR BOLTS, PASSIVATED TO MEET THE REQUIREMENTS OF AMS2700, METHOD 1, CLASS 4. MAY BE USED WITH "D", "L" OR "P" CODE.

WHEN MULTIPLE LETTER CODES ARE USED, SEQUENCE SHALL BE IN ALPHABETICAL ORDER.
DASH NUMBER INDICATES GRIP IN .0625 INCREMENTS CONVERTED TO THREE DECIMAL PLACES PER ANSI Y14.5M-1982.
SEE SHEETS 5 AND 6 FOR TABULATIONS OF GRIP AND LENGTH DIMENSIONS. INTERMEDIATE OR LONGER LENGTHS MAY BE SPECIFIED BY USAGE OF WHOLE DASH NUMBERS ONLY.

HEAD MARKING: HEAD MARKING SHALL BE DEPRESSED (.010 MAX) AND ARRANGED AS FOLLOWS:
MARK WITH BASIC NUMBER ("NAS" OPTIONAL), EXCEPT MARK .1120-40 SIZE WITH "4", .1380-32 SIZE WITH "6", .1640-32 SIZE WITH "8". THESE SIZES ALSO TO BE MARKED "C" FOR A286.

MARK WITH MANUFACTURER'S SYMBOL, GRIP DASH NUMBER AND "D" "L" OR "P" WHEN APPLICABLE AND RECESS NUMBER ENCIRCLED. RECESS NUMBER TO BE APPROXIMATELY 25% LARGER THAN OTHER NUMBERS.

"D" IDENTIFIES BOLT WITH DRILLED THREADS.
"L" IDENTIFIES BOLT WITH OPTIONAL LOCKING ELEMENT.
"P" IDENTIFIES BOLT WITH PATCH TYPE LOCKING ELEMENT ONLY.

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NAS7500 THRU
NAS7516
SHEET 3



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