

FED. SUPPLY CLASS

5306

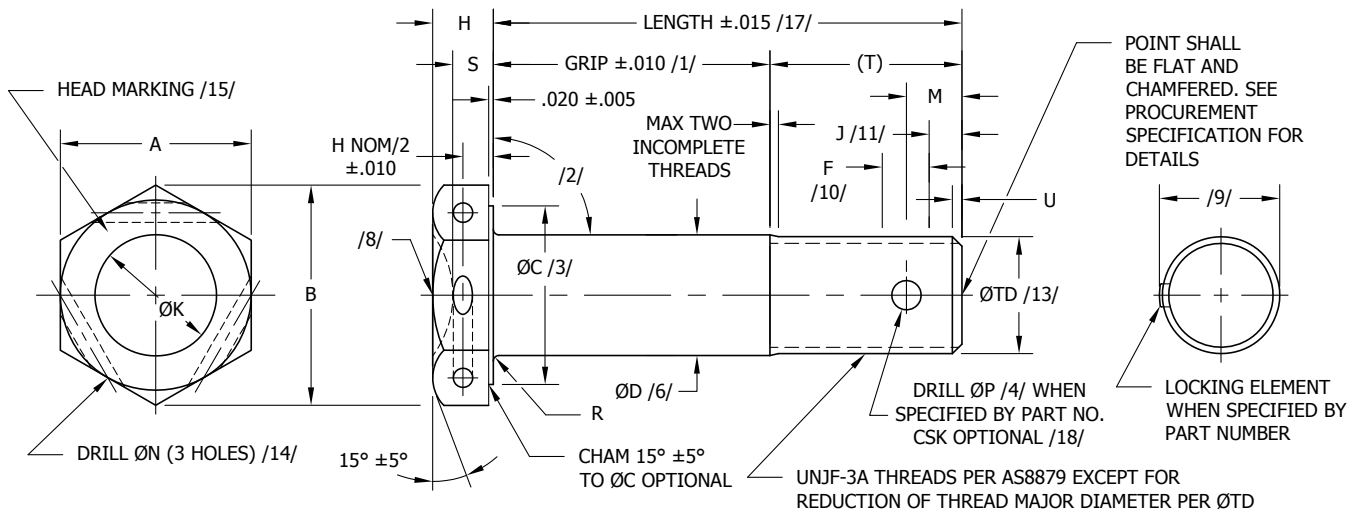


FIGURE 1 – BOLT CONFIGURATION

TABLE I – DIMENSIONS (CONTINUED ON SHEET 2)

BASIC NUMBER	THREAD UNJF-3A	A		B MIN	ØC MIN /3/	ØD				F /10/	H +.015 -.000	J /11/	ØK ±.01
						UNPLATED		PLATED OR COATED					
		MAX	MIN			MAX	MIN	MAX	MIN				
NAS6703	.1900-32	.376	.367	.410	.335	.1895	.1890	.1895	.1885	.156	.110	.094	.19
NAS6704	.2500-28	.439	.429	.480	.398	.2495	.2490	.2495	.2485	.178	.125	.107	.25
NAS6705	.3125-24	.502	.492	.552	.460	.3120	.3115	.3120	.3110	.208	.156	.125	.31
NAS6706	.3750-24	.564	.554	.623	.523	.3745	.3740	.3745	.3735	.208	.188	.125	.38
NAS6707	.4375-20	.690	.678	.764	.648	.4370	.4365	.4370	.4360	.250	.219	.150	.44
NAS6708	.5000-20	.752	.741	.836	.710	.4995	.4990	.4995	.4985	.250	.250	.150	.50
NAS6709	.5625-18	.877	.865	.978	.835	.5615	.5610	.5615	.5605	.278	.281	.167	.56
NAS6710	.6250-18	.940	.928	1.050	.898	.6240	.6235	.6240	.6230	.278	.312	.167	.62
NAS6712	.7500-16	1.065	1.052	1.191	1.023	.7490	.7485	.7490	.7480	.312	.375	.188	.75
NAS6714	.8750-14	1.252	1.239	1.405	1.210	.8740	.8735	.8740	.8730	.357	.438	.214	.88
NAS6716	1.0000-12	1.440	1.427	1.619	1.398	.9990	.9985	.9990	.9980	.416	.500	.250	1.00
NAS6718	1.1250-12	1.627	1.614	1.832	1.585	1.1240	1.1230	1.1240	1.1225	.416	.562	.250	/8/
NAS6720	1.2500-12	1.814	1.801	2.046	1.772	1.2490	1.2480	1.2490	1.2475	.416	.625	.250	/8/

THIRD ANGLE PROJECTION	
PROCUREMENT SPECIFICATION	
NOTED	

CUSTODIAN NATIONAL AEROSPACE STANDARDS COMMITTEE	
TITLE BOLT, TENSION, HEX HEAD, CLOSE TOLERANCE, A286 CRES, LONG THREAD, REDUCED MAJOR THREAD DIA., SELF-LOCKING AND NONLOCKING, 160 KSI Ft_u	

REVISION 10
CLASSIFICATION PART STANDARD
NAS6703 THRU NAS6720 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 09-01

ISSUE DATE: FEBRUARY 1969 REVISION DATE: SEPTEMBER 30, 2013

TABLE I – DIMENSIONS (CONTINUED)

BASIC NUMBER	M ±.010	ØN +.010 -.000	ØP +.010 -.000 /4/	R RAD		S +.015 -.000	(T) /5/	U MAX	ØTD		INSPECTION DATA		
				MAX	MIN				MAX	MIN	X /6/	Y /6/	Z /7/
NAS6703	.164	.046	.070	.020	.010	.073	.345	.039	.184	.181	.005	.0045	.0040
NAS6704	.178	.046	.076	.020	.010	.083	.425	.045	.244	.241	.006	.0045	.0030
NAS6705	.181	.070	.076	.020	.010	.104	.469	.052	.306	.302	.008	.0045	.0030
NAS6706	.197	.070	.106	.025	.015	.125	.578	.052	.368	.364	.009	.0045	.0025
NAS6707	.201	.070	.106	.025	.015	.146	.694	.062	.431	.426	.010	.006	.0025
NAS6708	.216	.070	.106	.030	.020	.167	.735	.062	.493	.488	.011	.006	.0020
NAS6709	.218	.070	.141	.035	.020	.188	.840	.068	.555	.550	.012	.006	.0020
NAS6710	.249	.070	.141	.040	.025	.208	.902	.068	.618	.612	.015	.006	.0020
NAS6712	.252	.070	.141	.045	.030	.250	1.041	.078	.743	.737	.018	.009	.0020
NAS6714	.257	.070	.141	.050	.035	.292	1.184	.089	.868	.861	.020	.009	.0020
NAS6716	.264	.070	.141	.060	.045	.333	1.309	.104	.993	.986	.022	.009	.0020
NAS6718	.357	.070	.141	.070	.055	.78/	1.458	.104	1.118	1.111	.025	.009	.0020
NAS6720	.389	.070	.141	.075	.060	.78/	1.646	.104	1.243	1.236	.028	.009	.0020

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

HEAT TREAT: DEVELOP BASIC MATERIAL PROPERTIES AS FOLLOWS, WITH CONTROLS PER AMS-H-6875 OR AMS2759: 160 – 190 KSI Ft_u /19/

FINISH: UNPLATED BOLTS – PASSIVATED PER AMS2700, METHOD 1, TYPE 2 OR TYPE 8, CLASS 4, PASSIVATED PER AMS2700 METHOD 1, TYPE 8, CLASS 4 - WITHOUT POST TREATMENT OR PASSIVATED PER AMS2700 METHOD 2- WITHOUT POST TREATMENT.
CADIUM PLATED BOLTS – CADIUM PLATE PER AMS-QQ-P-416, TYPE II, CLASS 2. IDENTIFY WITH GREEN DYE OR PAINT ON THE THREAD END. MAXIMUM COVERAGE MAY INCLUDE THE CHAMFER PLUS ONE INCOMPLETE THREAD.
CHROMIUM PLATED –
CODE C - CHROMIUM PLATE PER AMS-QQ-C-320, CLASS 2 ON SHANK ONLY. ALL OTHER SURFACES CADIUM PLATED. NO CHROMIUM WITHIN .020 OF LINE OF TANGENCY OF HEAD-TO-SHANK FILLET. CHROMIUM IN THREAD RUNOUT PERMITTED.
CHROMIUM PLATED BOLTS NOT AVAILABLE WITH GRIP DASH NUMBERS 1 OR 2.
CODE E - CHROMIUM PLATE PER AMS-QQ-C-320, CLASS 2A. PLATING ON SHANK ONLY. NO PLATING ON: TOP OR SIDES OF HEAD, BEARING SURFACE OF HEAD, HEAD-TO-SHANK FILLET, ADJACENT TO FILLET (WITHIN .020 MINIMUM TO .080 MAXIMUM OF LINE OF TANGENCY BETWEEN SHANK AND RADIUS R), AND THREADS EXCEPT RUNOUT MAY BE PLATED. ALL SURFACES NOT CHROMIUM PLATED SHALL BE CADIUM PLATED PER AMS-QQ-P-416, TYPE II, CLASS 2. BOLTS SHALL BE SHOT PEENED PER AMS2430 AND THE FOLLOWING REQUIREMENTS: CAST STEEL SHOT OF SIZE 170 TO 390, INTENSITY .014A TO .018A, SHOT PEEN PRIOR TO CHROMIUM PLATING, THREAD ROLLING AND COLD WORKING "R" RADIUS, BUT AFTER HEAT TREATING AND GRINDING. MINIMUM AREAS TO BE SHOT PEENED: BEARING SURFACE OF HEAD, HEAD-TO-SHANK FILLET, SHANK, AND THREAD RUNOUT.
CHROMIUM PLATED BOLTS NOT AVAILABLE WITH GRIP DASH NUMBERS 1 OR 2.
CODE G - ALL REQUIREMENTS IDENTICAL TO CODE E EXCEPT DELETE REQUIREMENT FOR CADIUM PLATING OF NON-CHROME PLATED SURFACES AND ADD THE FOLLOWING REQUIREMENT: PASSIVATE ENTIRE BOLT PER AMS2700, METHOD 1, TYPE 2 OR TYPE 8, CLASS 4 AFTER CHROMIUM PLATING.

ALUMINUM COATED – ALUMINUM COAT PER NAS4006.

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SHEET 2



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- CODE: NO FINISH CODE AFTER BASIC NUMBER FOR CADMIUM PLATED BOLTS.
ADD "A" AFTER BASIC NUMBER FOR ALUMINUM COATED BOLT. MAY BE USED WITH "D", "H", "L", OR "P" CODE.
- ⑩ ADD "B" AFTER BASIC NUMBER FOR BOLTS, PASSIVATED IN ACCORDANCE WITH AMS2700 METHOD 2 - WITHOUT POST TREATMENT. MAY BE USED WITH "D", "H", "L", OR "P" CODE.
ADD "C" AFTER BASIC NUMBER FOR CHROMIUM PLATED BOLTS NOT REQUIRING SHOT PEENING. SURFACES NOT CHROME PLATED ARE CADMIUM PLATED. DO NOT USE WITH "A", "E", "U", OR "G" CODES.
ADD "D" AFTER BASIC NUMBER FOR DRILLED SHANK BOLTS. DO NOT USE WITH "L" OR "P" CODE. /18/
ADD "E" AFTER BASIC NUMBER FOR CHROMIUM PLATED BOLTS WITH MANDATORY SHOT PEENING. SURFACES NOT CHROMIUM PLATED ARE CADMIUM PLATED. DO NOT USE WITH "A", "C", "U", OR "G" CODES.
- ⑩ ADD "G" AFTER BASIC NUMBER FOR CHROMIUM PLATED BOLTS WITH MANDATORY SHOT PEENING. SURFACES NOT CHROMIUM PLATED ARE PASSIVATED PER AMS2700, METHOD 1, TYPE 2 OR TYPE 8, CLASS 4 ONLY. DO NOT USE WITH "A", "C", "U", OR "E" CODES.
ADD "H" AFTER BASIC NUMBER FOR BOLT WITH DRILLED HEAD.
ADD "L" AFTER BASIC NUMBER FOR SELF-LOCKING BOLT WITH LOCKING ELEMENT TYPE OPTIONAL; SEE PROCUREMENT SPEC BELOW. DO NOT USE "L" WITH "D" OR "P" CODE.
- ⑩ ADD "M" AFTER BASIC NUMBER FOR BOLTS, PASSIVATED IN ACCORDANCE WITH AMS2700 METHOD 1, TYPE 8, CLASS 4 - WITHOUT POST TREATMENT. MAY BE USED WITH "D", "H", "L", OR "P" CODE.
ADD "P" AFTER BASIC NUMBER FOR SELF-LOCKING BOLT WITH PATCH TYPE LOCKING ELEMENT ONLY; SEE PROCUREMENT SPEC BELOW. DO NOT USE "P" WITH "D" OR "L" CODE.
- ⑩ ADD "U" AFTER BASIC NUMBER FOR BOLTS, PASSIVATED PER AMS2700, METHOD 1, TYPE 2 OR TYPE 8, CLASS 4. MAY BE USED WITH "D", "H", "L", OR "P" CODE.
GRIP DASH NUMBER INDICATES GRIP IN .0625 INCREMENTS (CONVERTED TO THREE DECIMAL PLACES PER ANSI Y14.5-1982). SEE TABLE II FOR TABULATIONS OF GRIP AND LENGTH DIMENSIONS. /17/
CODE LETTER "X" AND "Y" FOLLOWING THE GRIP DASH NUMBER INDICATES REPLACEMENT OVERSIZE REPAIR BOLT. (SEE LAST SHEET)
IF MORE THAN ONE CODE LETTER IS USED IN SEQUENCE, ARRANGE THE LETTERS ALPHABETICALLY.

EXAMPLE OF PART NUMBER: (SEE LAST SHEET FOR OVERSIZE BOLTS.)

- NAS6704-10 = BOLT, .2500-28 THREAD, .625 GRIP, UNDRILLED, NONLOCKING, CADMIUM PLATED.
- NAS6704A10 = BOLT, .2500-28 THREAD, .625 GRIP, UNDRILLED, NONLOCKING, ALUMINUM COATED.
- ⑩ NAS6704B10 = BOLT, .2500-28 THREAD, .625 GRIP, UNDRILLED, NONLOCKING, PASSIVATED PER AMS2700, METHOD 2 - WITHOUT POST TREATMENT.
- NAS6704D10 = BOLT, .2500-28 THREAD, .625 GRIP, DRILLED SHANK, UNDRILLED HEAD, NONLOCKING, CADMIUM PLATED.
- NAS6704H10 = BOLT, .2500-28 THREAD, .625 GRIP, DRILLED HEAD, UNDRILLED SHANK, NONLOCKING, CADMIUM PLATED.
- NAS6704DH10 = BOLT, .2500-28 THREAD, .625 GRIP, DRILLED SHANK, DRILLED HEAD, NONLOCKING, CADMIUM PLATED.
- NAS6704L10 = BOLT, .2500-28 THREAD, .625 GRIP, UNDRILLED, SELF-LOCKING (LOCKING TYPE OPTIONAL; SEE PROCUREMENT SPEC BELOW), CADMIUM PLATED.
- NAS6704P10 = BOLT, .2500-28 THREAD, .625 GRIP, UNDRILLED, SELF-LOCKING (PATCH TYPE; SEE PROCUREMENT SPEC BELOW), CADMIUM PLATED.
- ⑩ NAS6704PU10 = BOLT, .2500-28 THREAD, .625 GRIP, UNDRILLED, SELF-LOCKING (PATCH TYPE; SEE PROCUREMENT SPEC BELOW), PASSIVATED PER AMS2700, METHOD 1, TYPE 2 OR TYPE 8, CLASS 4.
- NAS6704C10 = BOLT, .2500-28 THREAD, .625 GRIP, UNDRILLED, CHROMIUM PLATED WITHOUT MANDATORY SHOT PEENING. SURFACES NOT CHROMIUM PLATED ARE CADMIUM PLATED.

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NAS6704-10 THRU NAS6704-10
SHEET 3



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