

FED. SUPPLY CLASS

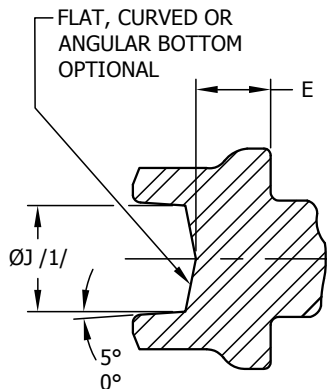
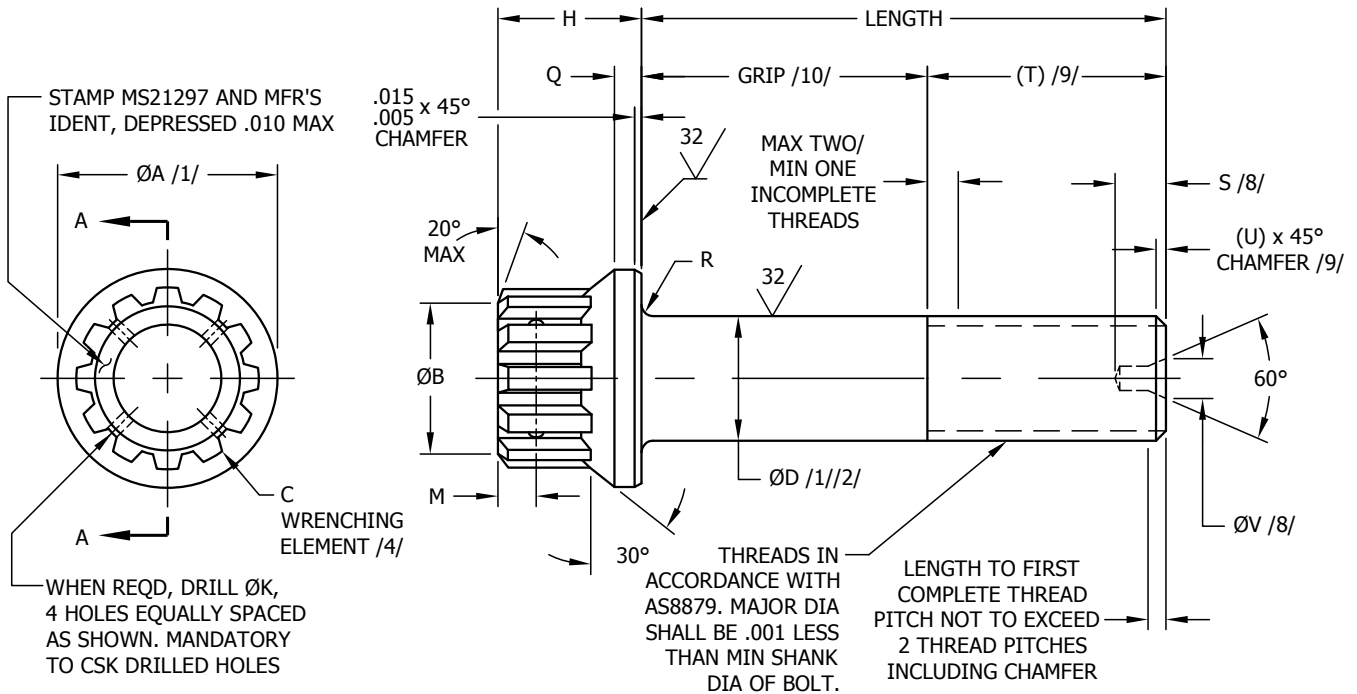
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AEROSPACE INDUSTRIES ASSOCIATION OF AMERICA, INC.
1000 WILSON BLVD.
ARLINGTON, VA 22209

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.

REVISION DATE: JUNE 30, 2014

ISSUE DATE: NOVEMBER 1999



THE INITIAL RELEASE OF THIS DOCUMENT SUPERSEDES MS21297, REV A. PART NUMBERS REMAIN MS21297.

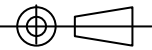
THIRD ANGLE PROJECTION 	CUSTODIAN NATIONAL AEROSPACE STANDARDS COMMITTEE	REVISION 3
PROCUREMENT SPECIFICATION NASM8906	TITLE BOLT, TENSION, STEEL, 220 KSI Ft_u, 450 °F, EXTERNAL WRENCHING, SPLINE DRIVE, FLANGED HEAD	CLASSIFICATION PART STANDARD NASM21297 SHEET 1 OF 5

TABLE I – BOLT DIMENSIONS

DIA. DASH NO.	NOMINAL SIZE	THREAD UNJF-3A	ØA /1/		ØB		C WRENCHING ELEMENT /4/	ØD /1/ /2/		E MIN	H	ØJ +.010 -.030 /1/	ØK ±.005	M	DIA. DASH NO.
			MAX	MIN	MAX	MIN		MAX	MIN						
03	NO.10	.1900-32	.359	.349	.188	.173	8	.1895	.1885	.113	.205	.100	.037	.062	03
04	1/4	.2500-28	.470	.460	.250	.235	10	.2495	.2485	.149	.250	.125			04
05	5/16	.3125-24	.585	.575	.375	.360	12	.3120	.3110	.187	.312	.215			05
06	3/8	.3750-24	.701	.691	.438	.423	14	.3745	.3735	.224	.337	.260			06
07	7/16	.4375-20	.817	.807	.500	.485	16	.4370	.4360	.262	.393	.320	.055	.070	07
08	1/2	.5000-20	.932	.922	.562	.547	20	.4995	.4985	.299	.450	.380			08
09	9/16	.5625-18	1.047	1.037	.625	.610	22	.5615	.5605	.336	.505	.440			09
10	5/8	.6250-18	1.163	1.153	.688	.673	24	.6240	.6230	.374	.562	.500		.094	10
12	3/4	.7500-16	1.394	1.384	.812	.797	28	.7490	.7480	.449	.600	.570			12
14	7/8	.8750-14	1.625	1.615	.938	.923	32	.8740	.8730	.523	.700	.650			14
16	1	1.0000-12	1.856	1.846	1.062	1.047	38	.9990	.9980	.599	.800	.740	.125	.188	16
18	1 1/8	1.1250-12	2.087	2.077	1.250	1.235	42	1.1240	1.1225	.674	.900	.840			18
20	1 1/4	1.2500-12	2.318	2.308	1.375	1.360	48	1.2490	1.2475	.749	1.000	1.070			20
22	1 3/8	1.3750-12	2.549	2.539	1.500	1.485	52	1.3740	1.3725	.824	1.110	1.140			22
24	1 1/2	1.5000-12	2.780	2.770	1.625	1.610	56	1.4990	1.4975	.899	1.200	1.200			24

TABLE I – BOLT DIMENSIONS (CONT'D)

DIA. DASH NO.	Q		R RAD		S MAX /8/	(T) /9/	(U) /9/	V MAX /8/	CENTER DRILL SIZE /8/	BEARING AREA MEAN DIA SQ. IN.	ULTIMATE TENSILE STRENGTH LBF MIN	DOUBLE SHEAR STRENGTH LBF MIN	CONCENTRICITY		DIA. DASH NO.
	MAX	MIN	MAX	MIN									X /1/	Z /2/	
03	.037	.017	.022	.016		.408	.039			.0517	4,770	7,480	.004	.0045	03
04	.046	.026	.028	.022		.495	.045			.0914	8,540	13,000	.005		04
05	.055	.035	.035	.029		.589	.052			.1442	13,500	20,200	.006		05
06	.064	.044	.043	.033		.659	.052			.2106	20,900	29,100	.008		06
07	.073	.053	.049	.039		.763	.063			.2896	28,300	39,700	.009	.0060	07
08	.082	.062	.055	.045		.838	.063			.3786	37,800	51,800	.010		08
09	.091	.071	.061	.051		.935	.069			.4808	47,900	65,600	.011		09
10	.100	.080	.068	.058		1.005	.069			.5945	59,900	81,000	.012		10
12	.118	.098	.080	.070	.200	1.173	.078	.187	2	.7512	86,900	117,000	.015	.0090	12
14	.136	.116	.093	.083	.200	1.348	.089	.187	2	1.1673	119,000	159,000	.018		14
16	.154	.134	.105	.095	.260	1.546	.104	.250	3	1.5465	155,000	207,000	.020		16
18	.172	.152	.118	.108	.260	1.696	.104	.250	3	1.9438	198,000	262,000	.022		18
20	.190	.170	.130	.120	.320	1.836	.104	.312	4	2.4020	247,000	324,000	.025	.0120	20
22	.208	.188	.143	.133	.320	1.976	.104	.312	4	2.9060	301,000	392,000	.028		22
24	.226	.206	.155	.145	.320	2.116	.104	.312	4	3.4638	361,000	466,000	.030		24

MATERIAL: ALLOY STEEL- H-11 (UNS T20811) PER AMS6487

HARDNESS: 46-50 HRC

FINISH: CADMIUM COATED (VACUUM DEPOSITED) PER AMS-C-8837, TYPE II, CLASS 2.

CODE: DIAMETER DASH NO. DESIGNATES DIAMETER PER TABLE I.
GRIP DASH NO. DESIGNATES GRIP LENGTH IN .0625 INCREMENTS PER TABLE II.
ADD LETTER 'H' BEFORE GRIP DASH NO. TO DESIGNATE DRILLED HEAD.
UNASSIGNED DASH NUMBERS SHALL NOT BE USED.

REVISION

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ASME Documents

SHEET 2

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Full document details: AIA NASM21297 2014