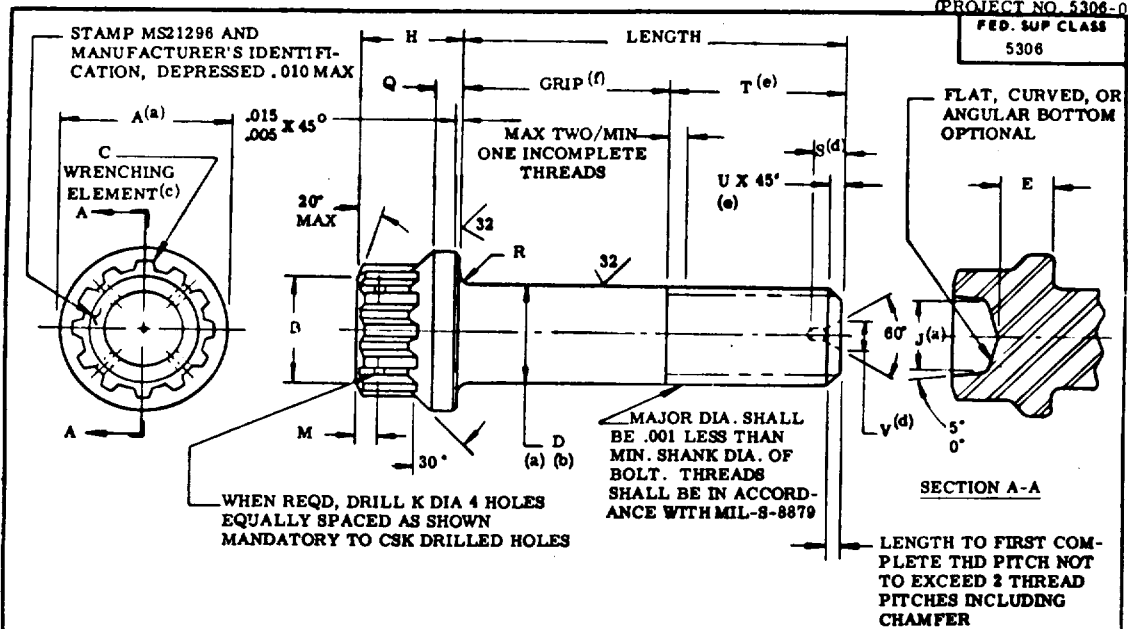


PROJECT NO. 5306-0584

FED. SUP CLASS
5306USER SYMBOLS:
ARMY-MIREVIEWER SYMBOLS:
DSA-15
ARMY-AT

"Review/user information is current as of the date of this document.
For future coordination of changes to this document, draft circulation
should be based on the information in the current DODISS."

This military standard is mandatory for use by all Departments
B. Agencies of the Department of Defense. Selection for all new
engineering and design applications and for repetitive use shall
be made from this document.



NOTES:

1. MATERIAL: ALLOY STEEL PER AMS 6487.
2. HARDNESS: ROCKWELL C51-54
3. SURFACE TEXTURE IN ACCORDANCE WITH ANSI (ASA) B46.1-1962.
4. PLATING: CADMIUM COATED (VACUUM DEPOSITED): MIL-C-8837, TYPE II, CLASS 2.
5. DIMENSIONS IN INCHES. UNLESS OTHERWISE SPECIFIED, TOLERANCES: DECIMALS $\pm .010$, ANGLES $\pm 2^\circ$.
6. DIMENSIONS TO BE MET AFTER PLATING.
7. DESIGN AND USAGE INFORMATION: THESE BOLTS ARE DESIGNED TO BE USED WITH MS21085 NUTS AND MS21299 WASHERS.

FOR DESIGN FEATURE PURPOSES, THIS STANDARD TAKES PRECEDENCE OVER PROCUREMENT DOCUMENTS REFERENCED HEREIN.
REFERENCED DOCUMENTS SHALL BE OF THE ISSUE IN EFFECT ON DATE OF INVITATIONS FOR BID.

REVISOR

P.A. NAVY - AS	TITLE	MILITARY STANDARD
Other Cust USAF-11 ARMY-AV	BOLT, TENSION, STEEL, 260 KSI Ftu, 450°F., EXTERNAL WRENCHING, SPLINE DRIVE, FLANGED HEAD	MS21296
PROCUREMENT SPECIFICATION MIL-B-8907	SUPERSEDES:	SHEET 1 OF 6

DD FORM 672-1 (Coordinated)

PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE.

PLATE NO. 15320

APPROVED 28 JAN 1972 REVISED 6 OCT 1975

USER SYMBOLS:
ARMY-MI

REVIEWER SYMBOLS:
DSA-IS
ARMY-AT

"Review/peer information is current as of the date of this document.
For future coordination of changes to this document, direct circulation
should be based on the information in the current DODISS."

This military standard is mandatory for use by all Departments
in Agencies of the Department of Defense. Selection for all new
engineering and design applications and for repetitive use shall
be made from this document.

FED. SUP CLASS
5306

DASH NO.	NOMINAL SIZE	THREAD UNJF-3A	A-DIA (a)		B-DIA		C ^(c) WRENCHING ELEMENT	D-DIA (a) (b)		DASH NO.
			MAX	MIN	MAX	MIN		MAX	MIN	
03	NO. 10	.1900-32	.359	.349	.188	.173	8	.1895	.1885	03
04	1/4	.2500-28	.470	.460	.250	.235	10	.2495	.2485	04
05	5/16	.3125-24	.585	.575	.375	.360	12	.3120	.3110	05
06	3/8	.3750-24	.701	.691	.438	.423	14	.3745	.3735	06
07	7/16	.4375-20	.817	.807	.500	.485	16	.4370	.4360	07
08	1/2	.5000-20	.932	.922	.562	.547	20	.4995	.4985	08
09	9/16	.5625-18	1.047	1.037	.625	.610	22	.5615	.5605	09
10	5/8	.6250-18	1.163	1.153	.688	.673	24	.6240	.6230	10
12	3/4	.7500-16	1.394	1.384	.812	.797	28	.7490	.7480	12
14	7/8	.8750-14	1.625	1.615	.938	.923	32	.8740	.8730	14
16	1	1.0000-12	1.856	1.846	1.062	1.047	36	.9990	.9980	16

DASH NO.	E	H	J (a) +.010 -.030	K +.005	M	Q		R-(RAD)		S MAX (d)	T MIN REF (e)	DASH NO.
	MIN	+.010	-.030	+.005		MAX	MIN	MAX	MIN			
03	.113	.205	.100	.037	.062	.037	.017	.022	.016		.438	03
04	.149	.250	.125			.046	.026	.028	.022		.520	04
05	.187	.312	.215			.055	.035	.035	.029		.634	05
06	.224	.337	.260			.064	.044	.043	.033		.719	06
07	.262	.393	.320	.065	.070	.073	.053	.049	.039		.833	07
08	.299	.450	.380			.082	.062	.055	.045		.913	08
09	.336	.505	.440			.091	.071	.061	.051		1.015	09
10	.374	.562	.500			.100	.080	.068	.058		1.095	10
12	.449	.800	.570		.125	.118	.098	.080	.070	.200	1.293	12
14	.523	.700	.625			.136	.116	.093	.083		1.468	14
16	.599	.800	.740			.154	.134	.105	.095		1.696	16

APPROVED 28 JAN 1972 REVISED 1 FOR CHGS SEE SHT 1

P.A. NAVY - AS Other Cust USAF-11 ARMY-AV	TITLE BOLT, TENSION, STEEL, 260 KSI F _{tu} 450° F., EXTERNAL WRENCHING, SPLINE DRIVE, FLANGED HEAD	MILITARY STANDARD MS21296
PROCUREMENT SPECIFICATION MIL-B-8907	SUPERSEDES:	SHEET 2 OF 6

DD FORM 672-1 (Coordinated)

PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE.

PLATE NO. 16320

USER SYMBOLS:
ARMY-MI

REVIEWER SYMBOLS:
DSA-IS
ARMY-AT

"Review/user information is current as of the date of this document.
For future coordination of changes to this document, draft circulation
should be based on the information in the current DOD/SS."

This military standard is mandatory for use by all Departments
B. Agencies of the Department of Defense. Selection for all new
engineering and design applications and for repetitive use shall
be made from this document.

FED. SUP CLASS
5306

DASH NO.	U REF (e)	V MAX (d)	CENTER DRILL SIZE (d)	BEARING AREA MEAN DIA. SQ. IN.	ULTIMATE TENSILE STRENGTH LB MIN	DOUBLE SHEAR STRENGTH LB MIN	CONCENTRICITY		DASH NO.
							X (a)	Z (b)	
03	.039			.0517	5,640	8,840	.004		03
04	.045			.0914	10,100	15,300	.005		04
05	.052			.1442	16,000	23,900	.008		05
06				.2106	24,700	34,400	.008	.0045	06
07	.063			.2896	33,500	46,900	.009		07
08				.3786	44,600	61,200	.010		08
09	.069			.4808	56,600	77,500	.011		09
10				.5945	70,800	95,700	.012	.0060	10
12	.078	.187	2	.7512	103,000	138,000	.015		12
14	.089			1.1673	140,000	188,000	.018	.0090	14
16	.104	.250	3	1.5465	183,000	245,000	.020		16

- (a) DIMENSIONS A, D AND J SHALL BE CONCENTRIC TO EACH OTHER WITHIN VALUES SPECIFIED FOR X T.I.R.
 (b) DIMENSIONS D AND THREAD PITCH DIAMETER SHALL BE CONCENTRIC TO EACH OTHER WITHIN VALUES SPECIFIED FOR Z T.I.R.
 (c) WRENCHING ELEMENT PER MS33787, DRIVERS PER MIL-W-8982.
 (d) ON BOLT SIZES .750 INCH AND LARGER, CENTER DRILLING OF SHANK IS OPTIONAL.
 (e) REFERENCE DIMENSIONS ARE FOR DESIGN PURPOSES ONLY AND ARE NOT INSPECTION OR MANUFACTURING REQUIREMENTS.
 (f) GRIP LENGTH OF BOLT SHALL BE MEASURED FROM UNDERSIDE OF HEAD TO THE END OF FULL CYLINDRICAL PORTION OF SHANK.

APPROVED 28 JAN 1972 REVISED A FOR CHGS SEE SHT 1

P.A. NAVY - AS Other Cust. USAF-11 ARMY-AV	TITLE BOLT, TENSION, STEEL, 260 KSI Ftu, 450° F., EXTERNAL WRENCHING, SPLINE DRIVE, FLANGED HEAD	MILITARY STANDARD MS21296
PROCUREMENT SPECIFICATION MIL-B-8907	SUPERSEDES.	SHEET 3 OF 6

DD FORM 1 SEP 57 672-1 (Coordinated)

PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE.

PLATE NO. 15320

This military standard is mandatory for use by all Departments
in Agencies of the Department of Defense. Selection for all new
engineering and design applications and for repeating use shall
be made from this document.

*Review/user information is current as of the date of this document.
For future coordination of changes to this document, draft circulation
should be based on the information in the current DODISS.

REVIEWER SYMBOLS:
DSA-IS
ARMY-AT

USER SYMBOLS:
ARMY-MI

P.A. NAVY - AS Other Cust USAF-11 ARMY-AV		TITLE BOLT, TENSION, STEEL, 260 KSI Ftu, 450° F., EXTERNAL WRENCHING, SPLINE DRIVE, FLANGED HEAD		MILITARY STANDARD MS21296	
PROCUREMENT SPECIFICATION MIL-B-8907		SUPERSEDES:		SHEET 4 OF 6	
GRIP DASH NO.	GRIP .010	DIAMETER DASH NUMBERS			
		03	04	05	06
		07	08	09	10
		11	12	13	14
		15	16	17	18
		19	20	21	22
		23	24	25	26
		27	28	29	30
		31	32	33	34
		35	36	37	38
		39	40	41	42
		43	44	45	46
		47	48	49	50
		51	52	53	54
		55	56	57	58
		59	60	61	62
		63	64	65	66
		67	68	69	70
		71	72	73	74
		75	76	77	78
		79	80	81	82
		83	84	85	86
		87	88	89	90
		91	92	93	94
		95	96	97	98
		99	100	101	102
		103	104	105	106
		107	108	109	110
		111	112	113	114
		115	116	117	118
		119	120	121	122
		123	124	125	126
		127	128	129	130
		131	132	133	134
		135	136	137	138
		139	140	141	142
		143	144	145	146
		147	148	149	150
		151	152	153	154
		155	156	157	158
		159	160	161	162
		163	164	165	166
		167	168	169	170
		171	172	173	174
		175	176	177	178
		179	180	181	182
		183	184	185	186
		187	188	189	190
		191	192	193	194
		195	196	197	198
		199	200	201	202
		203	204	205	206
		207	208	209	210
		211	212	213	214
		215	216	217	218
		219	220	221	222
		223	224	225	226
		227	228	229	230
		231	232	233	234
		235	236	237	238
		239	240	241	242
		243	244	245	246
		247	248	249	250
		251	252	253	254
		255	256	257	258
		259	260	261	262
		263	264	265	266
		267	268	269	270
		271	272	273	274
		275	276	277	278
		279	280	281	282
		283	284	285	286
		287	288	289	290
		291	292	293	294
		295	296	297	298
		299	300	301	302
		303	304	305	306
		307	308	309	310
		311	312	313	314
		315	316	317	318
		319	320	321	322
		323	324	325	326
		327	328	329	330
		331	332	333	334
		335	336	337	338
		339	340	341	342
		343	344	345	346
		347	348	349	350
		351	352	353	354
		355	356	357	358
		359	360	361	362
		363	364	365	366
		367	368	369	370
		371	372	373	374
		375	376	377	378
		379	380	381	382
		383	384	385	386
		387	388	389	390
		391	392	393	394
		395	396	397	398
		399	400	401	402
		403	404	405	406
		407	408	409	410
		411	412	413	414
		415	416	417	418
		419	420	421	422
		423	424	425	426
		427	428	429	430
		431	432	433	434
		435	436	437	438
		439	440	441	442
		443	444	445	446
		447	448	449	450
		451	452	453	454
		455	456	457	458
		459	460	461	462
		463	464	465	466
		467	468	469	470
		471	472	473	474
		475	476	477	478
		479	480	481	482
		483	484	485	486
		487	488	489	490
		491	492	493	494
		495	496	497	498
		499	500	501	502
		503	504	505	506
		507	508	509	510
		511	512	513	514
		515	516	517	518
		519	520	521	522
		523	524	525	526
		527	528	529	530
		531	532	533	534
		535	536	537	538
		539	540	541	542
		543	544	545	546
		547	548	549	550
		551	552	553	554
		555	556	557	558
		559	560	561	562
		563	564	565	566
		567	568	569	570
		571	572	573	574
		575	576	577	578
		579	580	581	582
		583	584	585	586
		587	588	589	590
		591	592	593	594
		595	596	597	598
		599	600	601	602
		603	604	605	606
		607	608	609	610
		611	612	613	614
		615	616	617	618
		619	620	621	622
		623	624	625	626
		627	628	629	630
		631	632	633	634
		635	636	637	638
		639	640	641	642
		643	644	645	646
		647	648	649	650
		651	652	653	654
		655	656	657	658
		659	660	661	662
		663	664	665	666
		667	668	669	670
		671	672	673	674
		675	676	677	678
		679	680	681	682
		683	684	685	686
		687	688	689	690
		691	692	693	694
		695	696	697	698
		699	700	701	702
		703	704	705	706
		707	708	709	710
		711	712	713	714
		715	716	717	718
		719	720	721	722
		723	724	725	726
		727	728	729	730
		731	732	733	734
		735	736	737	738
		739	740	741	742
		743	744	745	746
		747	748	749	750
		751	752	753	754
		755	756	757	758
		759	760	761	762
		763	764	765	766
		767	768	769	770
		771	772	773	774
		775	776	777	778
		779	780	781	782
		783	784	785	786
		787	788	789	790
		791	792	793	794
		795	796	797	798
		799	800	801	802
		803	804	805	806
		807	808	809	810
		811	812	813	814
		815	816	817	818
		819	820	821	822
		823	824	825	826
		827	828	829	830
		831	832	833	834
		835	836	837	838
		839	840	841	842
		843	844	845	846
		847	848	849	850
		851	852	853	854
		855	856	857	858
		859	860	861	862
		863	864	865	866
		867	868	869	870
		871	872	873	874
		875	876	877	878
		879	880	881	882
		883	884	885	886
		887	888	889	890
		891	892	893	894
		895	896	897	898
		899	900	901	902
		903			

USER SYMBOLS:
ARMY-MI

REVIEWER SYMBOLS:
DSA-IS
ARMY-AT

"Review/user information is current as of the date of this document.
For future coordination of changes to this document, draft circulation
should be based on the information in the current 000155."

This military standard is mandatory for use by all Departments
& Agencies of the Department of Defense. Selection for all new
engineering and design applications and for repetitive use shall
be made from this document.

FED. SUP CLASS
5306

DIAMETER DASH NUMBERS														
LENGTH * 0.015														
GRIP DASH NO.	GRIP .010	03	04	05	06	07	08	09	10	12	14	16		
036	2.250	2.703	2.785	2.899	2.984	3.098	3.178	3.280	3.360	3.558	3.753	3.961		
037	2.312	2.766	2.848	2.962	3.046	3.160	3.240	3.342	3.422	3.621	3.816	4.024		
038	2.375	2.828	2.910	3.024	3.109	3.223	3.303	3.405	3.485	3.683	3.878	4.086		
039	2.438	2.890	2.972	3.086	3.172	3.286	3.366	3.468	3.547	3.746	3.941	4.148		
040	2.500	2.953	3.035	3.149	3.234	3.348	3.428	3.530	3.610	3.808	4.003	4.211		
041	2.562	3.016	3.098	3.212	3.296	3.410	3.490	3.592	3.672	3.871	4.066	4.274		
042	2.625	3.078	3.160	3.274	3.359	3.473	3.553	3.655	3.735	3.933	4.128	4.336		
043	2.688	3.140	3.222	3.336	3.422	3.536	3.616	3.718	3.797	3.996	4.191	4.398		
044	2.750	3.203	3.285	3.399	3.484	3.598	3.678	3.780	3.860	4.058	4.253	4.461		
045	2.812	3.266	3.348	3.462	3.546	3.660	3.740	3.842	3.922	4.121	4.316	4.524		
046	2.875	3.328	3.410	3.524	3.609	3.723	3.803	3.905	3.985	4.183	4.378	4.586		
047	2.938	3.390	3.472	3.586	3.672	3.786	3.866	3.968	4.047	4.246	4.441	4.648		
048	3.000	3.453	3.535	3.649	3.734	3.848	3.928	4.030	4.110	4.308	4.503	4.711		
049	3.062	3.516	3.598	3.712	3.796	3.910	3.990	4.092	4.172	4.371	4.566	4.774		
050	3.125	3.578	3.660	3.774	3.859	3.973	4.053	4.155	4.235	4.433	4.628	4.836		
051	3.188	3.640	3.722	3.836	3.922	4.036	4.116	4.218	4.297	4.496	4.691	4.898		
052	3.250	3.703	3.785	3.899	3.984	4.098	4.178	4.280	4.360	4.558	4.753	4.961		
053	3.312	3.766	3.848	3.962	4.046	4.160	4.240	4.342	4.422	4.621	4.816	5.024		
054	3.375	3.828	3.910	4.024	4.109	4.223	4.303	4.405	4.485	4.683	4.878	5.086		
055	3.438	3.890	3.972	4.086	4.172	4.286	4.366	4.468	4.547	4.746	4.941	5.148		
056	3.500	3.953	4.035	4.149	4.234	4.348	4.428	4.530	4.610	4.808	5.003	5.211		
057	3.562	4.016	4.098	4.212	4.296	4.410	4.490	4.592	4.672	4.871	5.066	5.274		
058	3.625	4.078	4.160	4.274	4.359	4.473	4.553	4.655	4.735	4.933	5.128	5.336		
059	3.688	4.140	4.222	4.336	4.422	4.536	4.616	4.718	4.797	4.996	5.191	5.398		
060	3.750	4.203	4.285	4.399	4.484	4.598	4.678	4.780	4.860	5.058	5.253	5.461		
061	3.812	4.266	4.348	4.462	4.546	4.660	4.740	4.842	4.922	5.121	5.316	5.524		
062	3.875	4.328	4.410	4.524	4.609	4.723	4.803	4.905	4.985	5.183	5.378	5.586		
063	3.938	4.390	4.472	4.586	4.672	4.786	4.866	4.968	5.047	5.246	5.441	5.648		
064	4.000	4.453	4.535	4.649	4.734	4.848	4.928	5.030	5.110	5.308	5.503	5.711		
066	4.125		4.660	4.774	4.859	4.973	5.053	5.155	5.235	5.433	5.628	5.836		
068	4.250		4.785	4.899	4.984	5.098	5.178	5.280	5.360	5.558	5.753	5.961		
070	4.375		4.910	5.024	5.109	5.223	5.303	5.405	5.485	5.683	5.878	6.086		
072	4.500		5.035	5.149	5.234	5.348	5.428	5.530	5.610	5.808	6.003	6.211		

P.A. NAVY - AS
Other Cust
USAF-11
ARMY-AV

TITLE

BOLT, TENSION, STEEL, 280 KSI F_{tu}, 450° F.,
EXTERNAL WRENCHING,
SPLINE DRIVE, FLANGED HEAD

MILITARY STANDARD

MS21296

PROCUREMENT SPECIFICATION
MIL-B-8907

SUPERSEDES.

SHEET 5 OF 6

APPROVED 28 JAN 1972 REVISED (A) FOR CRK'S SEE SHT 1

FED. SUP CLASS
5306

APPROVED 28 JAN 1972 REVISED (A) FOR CR S. SEE SHT 1

DD FORM 672-1 (Coordinated)

PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE.

PLATE NO. 15320

P.A. NAVY - AS	TITLE	BOLT, TENSION, STEEL, 260 KSI F _{tu} , 450°F., EXTERNAL WRENCHING, SPLINE DRIVE, FLANGED HEAD	MILITARY STANDARD
Other Cust USAF-11 ARMY-AV			MS21296
PROCUREMENT SPECIFICATION MIL-B-8907	SUPERSEDES.		SHEET 5 OF 6

REVIEWER SYMBOLS:
DSA-IS
ARMY-AT

REVIEWER SYMBOLS:
DSA-IS
ARMY-AT

"Review/user information is current as of the date of this document.
For future coordination of changes to this document, draft circulation
should be based on the information in the current DODISS."

This military standard is mandatory for use by all Departments
B. Agencies of the Department of Defense. Selection for all new
engineering and design applications and for repetitive use shall
be made from this document.

P. A. NAVY - AS		TITLE		MILITARY STANDARD									
Other Cust		BOLT, TENSION, STEEL, 260 KSI FtL 450°F., EXTERNAL WRENCHING, SPLINE DRIVE, FLANGED HEAD		MS21296									
PROCUREMENT SPECIFICATION MIL-B-8907		SUPERSEDES:		SHEET 6 OF 6									
GRIP DASH NO.	GRIP .010	DIAMETER DASH NUMBERS LENGTH ±.015											
		03	04	05	06	07	08	09	10	12	14	16	
074	4.625		5.160	5.274	5.359	5.473	5.553	5.655	5.735	5.933	6.128	6.336	
076	4.750		5.285	5.399	5.484	5.598	5.678	5.780	5.860	6.058	6.253	6.461	
078	4.875		5.410	5.524	5.609	5.723	5.803	5.905	5.985	6.183	6.378	6.586	
080	5.000		5.535	5.649	5.734	5.848	5.928	6.030	6.110	6.308	6.503	6.711	
082	5.125		5.660	5.774	5.859	5.973	6.053	6.155	6.235	6.433	6.628	6.836	
084	5.250		5.785	5.899	5.984	6.098	6.178	6.280	6.360	6.558	6.753	6.961	
086	5.375		5.910	6.024	6.109	6.223	6.303	6.405	6.485	6.683	6.878	7.086	
088	5.500		6.035	6.149	6.234	6.348	6.428	6.530	6.610	6.808	7.003	7.211	
090	5.625		6.160	6.274	6.359	6.473	6.553	6.655	6.735	6.933	7.128	7.336	
092	5.750		6.285	6.399	6.484	6.598	6.678	6.780	6.860	7.058	7.253	7.461	
094	5.875		6.410	6.524	6.609	6.723	6.803	6.905	6.985	7.183	7.378	7.586	
096	6.000		6.535	6.649	6.734	6.848	6.928	7.030	7.110	7.308	7.503	7.711	
098	6.125							7.155	7.235	7.433	7.628	7.836	
100	6.250							7.280	7.360	7.558	7.753	7.961	
102	6.375							7.405	7.485	7.683	7.878	8.086	
104	6.500							7.530	7.610	7.808	8.003	8.211	
106	6.625							7.655	7.735	7.933	8.128	8.336	
108	6.750							7.780	7.860	8.058	8.253	8.461	
110	6.875							7.905	7.985	8.183	8.378	8.586	
112	7.000							8.030	8.110	8.308	8.503	8.711	

DIAMETER DASH NO. AT TOP OF TABLE, PLUS GRIP DASH NO. FIRST COLUMN ON LEFT OF TABLE CONSTITUTES A COMPLETE DASH NO.
IDENTIFYING SPECIFIED LENGTHS OF A GIVEN SIZE OF BOLT.
ADD LETTER 'H' BEFORE DASH NO. TO DESIGNATE DRILLED HEAD. FIRST TWO DASH NUMBERS DESIGNATE DIAMETER IN SIXTEENTHS.
LAST THREE DASH NUMBERS DESIGNATE GRIP LENGTH IN SIXTEENTHS.
UNASSIGNED DASH NOS. SHALL NOT BE USED.
EXAMPLES OF PART NUMBER: MS21296-04008-1/4-28 BOLT, 1.035 LONG, .500 GRIP, UNDRILLED HEAD.
MS21296H04008-1/4-28 BOLT, 1.035 LONG, .500 GRIP, DRILLED HEAD.
MS21296-05012-5/16-24 BOLT, 1.399 LONG, .750 GRIP, UNDRILLED HEAD.
MS21296H05012-5/16-24 BOLT, 1.399 LONG, .750 GRIP, DRILLED HEAD.

FED. SUP CLASS
5306

APPROVED 28 JAN 1972 REVISED A FOR CHGS SEE SHT 1