



Form approved  
OMB No. 0704-0188

TABLE I

DIA DASH NO.	NOMINAL SIZE	THREAD UNF-3A	A-DIA		B-DIA		C WRENCHING ELEMENT	D-DIA	
			MAX	MIN	MAX	MIN		MAX	MIN
03	NO. 10	.1900-32	.359	.349	.188	.173	8	.1895	.1885
04	1/4	.2500-28	.470	.460	.250	.235	10	.2495	.2485
05	5/16	.3125-24	.585	.575	.375	.360	12	.3120	.3110
06	3/8	.3750-24	.701	.691	.438	.423	14	.3745	.3735
07	7/16	.4375-20	.817	.807	.500	.485	16	.4370	.4360
08	1/2	.5000-20	.932	.922	.562	.547	20	.4995	.4985
09	9/16	.5625-18	1.047	1.037	.625	.610	22	.5615	.5605
10	5/8	.6250-18	1.163	1.153	.688	.673	24	.6240	.6230
12	3/4	.7500-16	1.394	1.384	.812	.797	28	.7490	.7480
14	7/8	.8750-14	1.625	1.615	.938	.923	32	.8740	.8730
16	1.0	1.0000-12	1.856	1.846	1.062	1.047	38	.9990	.9980

TABLE I CONT'D

DIA DASH NO.	E MIN	H +.010 -.030	J-DIA +.010 -.030	K +.005 -.005	N	Q		R-RAD		T MIN REF
						MAX	MIN	MAX	MIN	
03	.113	.205	.100	.037	.062	.037	.017	.022	.016	.408
04	.149	.250	.125			.046	.026	.028	.022	.495
05	.187	.312	.150			.055	.035	.035	.029	.589
06	.224	.337	.200	.065	.070	.064	.044	.043	.033	.659
07	.262	.393	.220			.073	.053	.049	.039	.763
08	.299	.450	.280			.082	.062	.055	.045	.838
09	.336	.505	.340	.094	.094	.091	.071	.061	.051	.935
10	.374	.562	.400			.100	.080	.068	.058	1.005
12	.499	.600	.570			.118	.098	.080	.070	1.173
14	.523	.700	.650	.125	.125	.136	.116	.093	.083	1.348
16	.599	.800	.740			.154	.134	.105	.095	1.546

TABLE I CONT'D

DIA DASH NO.	U REF	BEARING AREA (MEAN DIA) SQ. IN.	TENSILE STRENGTH			DOUBLE SHEAR STRENGTH LB. MIN.	STRESS RUPTURE AT 800°F (LBS)	TOLERANCE	
			ROOM TEMPERATURE		AT 800°F			X	Z
			MAX. (LBS)	MIN. (LBS)	MIN. (LBS)				
03	.039	.0517	5,640	4,770	3,810	7,100	2,670	.004	.004
04	.045	.0914	10,080	8,540	6,830	12,300	4,780	.005	
05	.052	.1442	15,960	13,500	10,800	19,200	7,560	.006	
06	.063	.2106	24,700	20,900	16,720	27,650	11,700	.008	.006
07	.070	.2896	33,480	28,300	22,640	37,600	15,840	.009	
08	.089	.3786	44,640	37,800	30,240	49,100	21,160	.010	
09	.108	.4808	56,570	47,900	38,320	62,150	26,820	.011	
10	.127	.5945	70,820	59,900	47,920	76,700	33,540	.012	
12	.156	.7512	100,800	86,900	69,500	109,857	48,700	.015	.009
14	.185	1.1673	137,000	119,000	95,000	149,640	66,600	.018	
16	.214	1.5465	179,000	155,000	124,000	195,565	86,800	.020	

PREPARING ACTIVITY: NAVY-AS  
CUSTODIANS: ARMY-AY NAVY-  
AIR FORCE-99 DLA-  
REVIEW: DLA-IS, ARMY-AT, USAF-82  
USER: ARMY-MI  
PROJECT NUMBER: 5306-1207

## MILITARY SPECIFICATION SHEET

TITLE BOLT, TENSION, NICKEL ALLOY 718, 220  
KSI Ftu; EXTERNAL WRENCHING, SPLINE  
DRIVE, FLANGED HEAD

SPECIFICATION SHEET NUMBER

MS14181 C 30 JAN 89

SUPERSEDING

MS14181 B 21 SEP 87

AMSC- N/A

FSC 5306

DISTRIBUTION STATEMENT

A. Approved for public release; distribution is unlimited.

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FORM

672 MAY 1988

PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE

142994

Form approved  
OXB No. 0704-0188

TABLE II

GRIP DASH NO.	GRIP ±.010	DIAMETER DASH NUMBERS										
		03	04	05	06	07	08	09	10	12	14	16
		LENGTH ±.015										
004	.250	0.683	0.770	0.864	0.934	1.038	1.113	1.210	1.280	1.448	1.623	1.821
006	.375	0.808	0.895	0.989	1.059	1.163	1.238	1.335	1.405	1.573	1.748	1.946
008	.500	0.933	1.020	1.114	1.184	1.288	1.363	1.460	1.530	1.698	1.873	2.071
010	.625	1.058	1.145	1.239	1.309	1.413	1.488	1.585	1.655	1.823	1.998	2.196
012	.750	1.183	1.270	1.364	1.434	1.538	1.613	1.710	1.780	1.948	2.123	2.321
014	.875	1.308	1.395	1.489	1.559	1.663	1.738	1.835	1.905	2.073	2.248	2.446
016	1.000	1.433	1.520	1.614	1.684	1.778	1.863	1.960	2.030	2.198	2.373	2.571
018	1.125	1.558	1.645	1.739	1.809	1.913	1.988	2.085	2.155	2.323	2.498	2.696
020	1.250	1.683	1.770	1.864	1.934	2.038	2.113	2.210	2.280	2.448	2.623	2.821
022	1.375	1.808	1.895	1.989	2.059	2.163	2.238	2.335	2.405	2.573	2.748	2.946
024	1.500	1.933	2.020	2.114	2.184	2.288	2.363	2.460	2.530	2.698	2.873	3.071
026	1.625	2.058	2.145	2.239	2.309	2.413	2.488	2.585	2.655	2.823	2.998	3.196
028	1.750	2.183	2.270	2.364	2.434	2.538	2.613	2.710	2.780	2.948	3.123	3.321
030	1.875	2.308	2.395	2.489	2.559	2.663	2.738	2.835	2.905	3.073	3.248	3.446
032	2.000	2.433	2.520	2.614	2.684	2.788	2.863	2.960	3.030	3.198	3.373	3.571
034	2.125	2.558	2.645	2.739	2.809	2.913	2.988	3.085	3.155	3.323	3.498	3.696
036	2.250	2.683	2.770	2.864	2.934	3.038	3.113	3.210	3.280	3.448	3.623	3.821
038	2.375	2.808	2.895	2.989	3.059	3.163	3.238	3.335	3.405	3.573	3.748	3.946
040	2.500	2.933	3.020	3.114	3.184	3.288	3.363	3.460	3.530	3.698	3.873	4.071
042	2.625	3.058	3.145	3.239	3.309	3.413	3.488	3.585	3.655	3.823	3.998	4.196
044	2.750	3.183	3.270	3.364	3.434	3.538	3.613	3.710	3.780	3.948	4.123	4.321
046	2.875	3.308	3.395	3.489	3.559	3.663	3.738	3.835	3.905	4.073	4.248	4.446
048	3.000	3.433	3.520	3.614	3.684	3.788	3.863	3.960	4.030	4.198	4.373	4.571
050	3.125	3.558	3.645	3.739	3.809	3.913	3.988	4.085	4.155	4.323	4.498	4.696
052	3.250	3.683	3.770	3.864	3.934	4.038	4.113	4.210	4.280	4.448	4.623	4.821
054	3.375	3.808	3.895	3.989	4.059	4.163	4.238	4.335	4.405	4.573	4.748	4.946
056	3.500	3.933	4.020	4.114	4.184	4.288	4.363	4.460	4.530	4.698	4.873	5.071
058	3.625	4.058	4.125	4.239	4.309	4.413	4.488	4.585	4.655	4.823	4.998	5.196
060	3.750	4.183	4.270	4.364	4.434	4.538	4.613	4.710	4.780	4.948	5.123	5.321
062	3.875	4.308	4.395	4.489	4.559	4.663	4.738	4.835	4.905	5.073	5.248	5.446
064	4.000	4.433	4.520	4.614	4.684	4.788	4.863	4.960	5.030	5.198	5.373	5.571
066	4.125	4.558	4.645	4.739	4.809	4.913	4.988	5.085	5.155	5.323	5.498	5.696
068	4.250	4.683	4.770	4.864	4.934	5.038	5.113	5.210	5.280	5.448	5.623	5.821
070	4.375	4.808	4.895	4.989	5.059	5.163	5.238	5.335	5.405	5.573	5.748	5.946
072	4.500	4.933	5.020	5.114	5.184	5.288	5.363	5.460	5.530	5.698	5.873	6.071
074	4.625	5.058	5.145	5.239	5.309	5.413	5.488	5.585	5.655	5.823	5.998	6.196
076	4.750	5.183	5.270	5.364	5.434	5.538	5.613	5.710	5.780	5.948	6.123	6.321

PREPARING ACTIVITY: NAVY - AS  
 CUSTODIANS: ARMY- AY NAVY-  
 AIR FORCE- 99 DLA-  
 REVIEW: DLA-15, ARMY-AT, USAF-82  
 USER: ARMY-MI  
 PROJECT NUMBER: 5306-1207

## MILITARY SPECIFICATION SHEET

TITLE BOLT, TENSION, NICKEL ALLOY 718, 220  
 KSI Fw, EXTERNAL WRENCHING, SPLINE  
 DRIVE, FLANGED HEAD

SPECIFICATION SHEET NUMBER

MS14181 C 30 JAN 89

SUPERSEDING

HS14181 B 21 SEP 87

AMSC- N/A

FSC 5306

DISTRIBUTION STATEMENT

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FORM

672

MAY 1988

PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE

14-10000

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OMB No. 0704-0188

TABLE II CONT'D

GRIP DASH NO.	GRIP ±.010	DIAMETER DASH NUMBERS										
		03	04	05	06	07	08	09	10	12	14	16
		LENGTH ±.015										
078	4.875	5.308	5.395	5.489	5.559	5.663	5.738	5.835	5.905	6.073	6.248	6.446
080	5.000	5.433	5.520	5.614	5.684	5.788	5.863	5.960	6.030	6.198	6.373	6.571
082	5.125	5.558	5.645	5.739	5.809	5.913	5.988	6.085	6.155	6.323	6.498	6.696
084	5.250	5.683	5.770	5.864	5.934	6.038	6.113	6.210	6.280	6.448	6.623	6.821
085	5.375	5.808	5.895	5.989	6.059	6.163	6.238	6.335	6.405	6.573	6.748	6.946
088	5.500	5.933	6.020	6.114	6.184	6.288	6.363	6.460	6.530	6.698	6.873	7.071
090	5.625	6.058	6.145	6.239	6.309	6.413	6.488	6.585	6.655	6.823	6.998	7.196
092	5.750	6.183	6.270	6.364	6.434	6.538	6.613	6.710	6.780	6.948	7.123	7.321
094	5.875	6.308	6.395	6.489	6.559	6.663	6.738	6.835	6.905	7.073	7.248	7.446
096	6.000	6.433	6.520	6.614	6.684	6.788	6.863	6.960	7.030	7.198	7.373	7.571
098	6.125	6.558	6.645	6.739	6.809	6.913	6.988	7.085	7.155	7.323	7.498	7.696
100	6.250	6.683	6.770	6.864	6.934	7.038	7.113	7.210	7.280	7.448	7.623	7.821
102	6.375	6.808	6.895	6.989	7.059	7.163	7.238	7.335	7.405	7.573	7.748	7.946
104	6.500	6.933	7.020	7.114	7.184	7.288	7.363	7.460	7.530	7.698	7.873	8.071
106	6.625	7.058	7.145	7.239	7.309	7.413	7.488	7.585	7.655	7.823	7.998	8.196
108	6.750	7.183	7.270	7.364	7.434	7.538	7.613	7.710	7.780	7.948	8.123	8.321
110	6.875	7.308	7.395	7.489	7.559	7.663	7.738	7.835	7.905	8.073	8.248	8.446
112	7.000	7.433	7.520	7.614	7.684	7.788	7.863	7.960	8.030	8.198	8.373	8.571

PREPARING ACTIVITY: NAVY-AS  
 CUSTODIANS: ARMY- AV NAVY-  
 AIR FORCE- 99 DLA-  
 REVIEW: DLA-IS, ARMY-AT, USAF-82  
 USER: ARMY-MI  
 PROJECT NUMBER: 5306-1207

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 KSI Ft<sub>u</sub>, EXTERNAL WRENCHING, SPLINE  
 DRIVE, FLANGED HEAD

SPECIFICATION SHEET NUMBER

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