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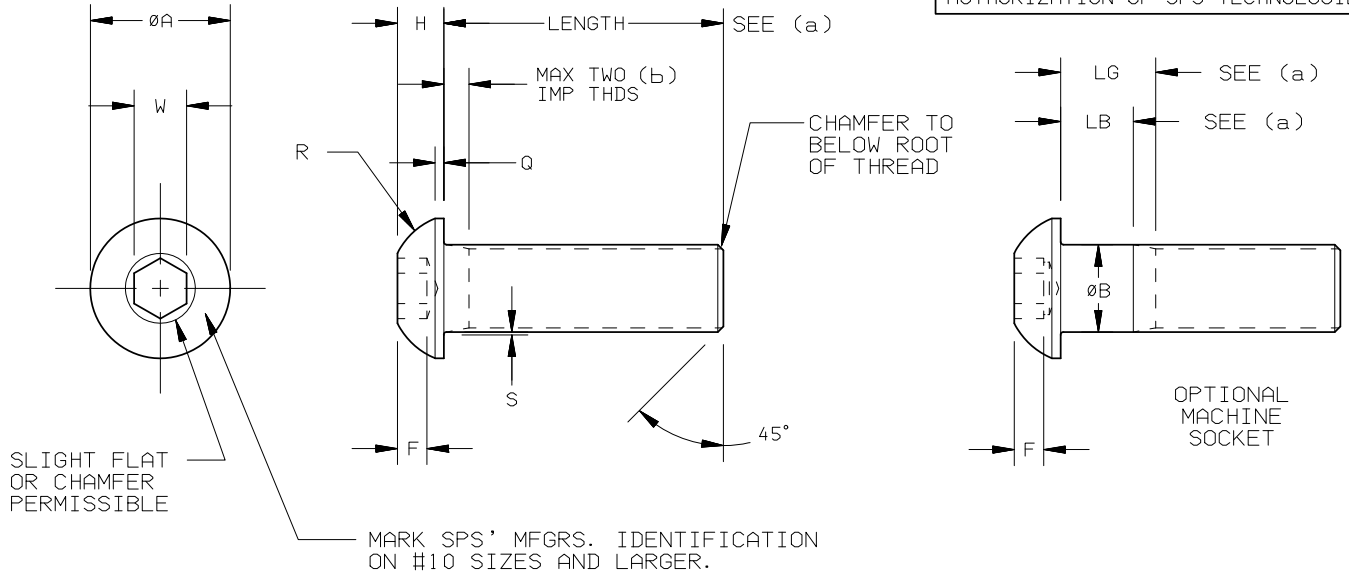


TABLE I

DASH NO	SIZE	THREAD DESIGNATION		ØA		ØB		F	H		L (a)	Q REF	R REF	S			
		UNRF	CLASS	UNRC	CLASS	MAX	MIN		MAX	MIN				MAX	MIN	MAX	MIN
92	#2	.086-64	3A	.086-56	3A	.164	.154	.086	.0822	.028	.046	.038	.500	.010	.099	.010	.005
93	#3	.099-56	3A	.099-48	3A	.188	.176	.099	.0949	.035	.052	.044	.500	.010	.110	.010	.005
94	#4	.112-48	3A	.112-40	3A	.213	.201	.112	.1075	.035	.059	.051	.500	.015	.135	.010	.005
95	#5	.125-44	3A	.125-40	3A	.238	.226	.125	.1202	.044	.066	.058	.500	.015	.141	.010	.005
96	#6	.138-40	3A	.138-32	3A	.262	.250	.138	.1329	.044	.073	.063	.625	.015	.158	.010	.005
98	#8	.164-36	3A	.164-32	3A	.312	.298	.164	.1585	.052	.087	.077	.750	.015	.185	.015	.010
3	#10	.190-32	3A	.190-24	3A	.361	.347	.190	.1840	.070	.101	.091	1.000	.020	.213	.015	.010
4	1/4"	.250-28	3A	.250-20	3A	.437	.419	.250	.2435	.087	.132	.122	1.000	.031	.249	.020	.015
5	5/16"	.312-24	3A	.312-18	3A	.547	.527	.3125	.3053	.105	.166	.152	1.000	.031	.309	.020	.015
6	3/8"	.375-24	3A	.375-16	3A	.656	.636	.375	.3678	.122	.199	.185	1.250	.031	.368	.020	.015
8	1/2"	.500-20	3A	.500-13	3A	.875	.851	.500	.4919	.175	.265	.245	2.000	.046	.481	.030	.020
10	5/8"	.625-18	3A	.625-11	3A	1.000	.970	.625	.6163	.210	.331	.311	2.000	.062	.523	.030	.020

(a) FOR SCREWS OF NOMINAL LENGTHS EQUAL TO OR SHORTER THAN STANDARD MAXIMUM LENGTH "L" LISTED IN TABLE I, THE COMPLETE (FULL-FORM) THREADS, MEASURED WITH A THREAD RING GAGE HAVING THE THREAD CHAMFER AND/OR COUNTERBORE REMOVED, SHALL EXTEND TO WITHIN TWO PITCHES (THREADS) OF THE BEARING SURFACE OF THE HEAD. FOR LONGER SCREWS, THE LENGTH OF THE COMPLETE THREAD SHALL, AT THE OPTION OF THE MANUFACTURER, BE BETWEEN THE MINIMUM LIMIT OF TWICE THE BASIC SCREW DIAMETER PLUS 0.50 INCH AND THE MAXIMUM LIMIT WITHIN TWO PITCHES (THREADS) OF THE HEAD. THE UNTHREADED PORTION OF THE SCREWS SHALL BE AT NOMINAL DIAMETER.

(b) IMPERFECT THREADS NOT TO ENTER INTO FILLET AREA.

TABLE II

LENGTH TOLERANCE TABLE		
UP TO 1" INCL.	OVER 1" TO 2" INCL.	OVER 2"
-.03	-.04	-.06

TABLE III

SIZE	TENSILE STRENGTH IN POUNDS (c)		RECOMMENDED SEATING TORQUE IN INCH POUNDS PLAIN (d)		DOUBLE SHEAR STRENGTH OF BODY LBS. (REF ONLY)	W NOM	X (e)
	UNRC	UNRF	UNRC	UNRF			
#2	592	630	4.5	4.5	1.100	.050	.005
#3	779	837	7.0	7.0	1.460	.0625	.005
#4	966	1,058	8.0	8.0	1.870	.0625	.005
#5	1,274	1,328	12.0	13.0	2.330	.0781	.005
#6	1,454	1,624	15.0	17.0	2.840	.0781	.005
#8	2,240	2,358	30.0	31.0	4.010	.0937	.006
#10	2,800	3,200	40.0	45.0	5.390	.1250	.007
1/4"	5,088	5,824	100.0	110.0	9,330	.1562	.009
5/16"	8,384	9,280	200.0	220.0	14,570	.1875	.011
3/8"	12,400	14,048	350.0	400.0	20,980	.2187	.013
1/2"	22,704	25,584	850.0	1,000.0	37,300	.3125	.018
5/8"	36,160	40,960	1,700.0	1,900.0	58,300	.3750	.021

THE RECOMMENDED SEATING TORQUES LISTED SERVE AS GUIDELINES ONLY, EVEN WHEN USING THE RECOMMENDED SEATING TORQUES, THE INDUCED LOADS OBTAINED MAY VARY AS MUCH AS ±25% DEPENDING UPON THE UNCONTROLLED VARIABLES SUCH AS MATING MATERIAL, PLATING, LUBRICATION, SURFACE FINISH, HARDNESS, BOLT/JOINT COMPLIANCE, METHOD OF TIGHTENING, ETC.

HOWEVER, THE BEST WAY TO DETERMINE THE CORRECT TORQUE IS TO RUN TESTS ON THE PARTICULAR JOINT BY TIGHTENING SAMPLE BOLTS UNTIL THEY JUST BEGIN TO YIELD. THE OPTIMUM TORQUE IS 80% OF THIS VALUE.

(c) THE TENSILE STRENGTH IS BASED ON 160 KSI AND THE TENSILE STRESS AREA PER ASME B1.1.

(d) TORQUE VALUES LISTED ARE FOR PLAIN SCREWS. FOR CADMIUM PLATED SCREWS, MULTIPLY RECOMMENDED SEATING TORQUE BY .75; FOR ZINC PLATED SCREWS MULTIPLY BY 1.40

(e) RUNOUT - SOCKET TO BODY WITHIN "X" T.I.R.

TOLERANCES ±.010 AND ±2°	FSCM NO. 56878
SURFACE ROUGHNESS 125√	CUSTODIAN: JENKINTOWN, PA.
UNLESS OTHERWISE NOTED	
DRAFTED IN ACCORDANCE WITH ANSI Y14.5M-1982	
DRAWN BY: KATHY SCHWARTZ	DATE: 2/21/06
APPROVED: S FOSTER	DATE: 6/24/08
APPROVED: L KLINE	

TITLE

SCREW, BUTTON HEAD
 HEXAGON RECESS
 A286 MATERIAL, 160 KSI U. T. S.

STANDARDS AND SPECIFICATIONS
 ASTM F879
 EXCEPT AS NOTED

PART NUMBER:

96768()-()-()-()-()



TABLE IV

FOR LENGTHS SHORTER THAN LISTED, (LENGTHS ABOVE HEAVY LINE) SCREWS WILL BE THREADED TO WITHIN 3 THREAD PITCHES OF THE HEAD.

BODY AND GRIP LENGTHS FOR BUTTON HEAD SOCKET SCREWS														
SIZE	#2		#3		#4		#5		#6		#8		#10	
	L _G	L _B	L _G	L _B	L _G	L _B	L _G	L _B	L _G	L _B	L _G	L _B	L _G	L _B
NOM. LENGTH														
3/4														
7/8	0.250	0.160	0.250	0.150										
1	0.250	0.160	0.250	0.150										
1-1/4	0.620	0.540	0.620	0.520	0.500	0.380	0.500	0.380	0.500	0.340	0.380	0.220		
1-1/2	0.880	0.790	0.880	0.770	0.500	0.380	0.500	0.380	0.500	0.340	0.380	0.220	0.620	0.420
1-3/4	1.120	1.040	1.120	1.020	1.000	0.880	1.000	0.880	1.000	0.840	0.880	0.720	0.620	0.420
2			1.380	1.270	1.000	0.880	1.000	0.880	1.000	0.840	0.880	0.720	1.120	0.920
2-1/4					1.500	1.380	1.500	1.380	1.500	1.340	1.380	1.220	1.120	0.920
2-1/2									1.500	1.340	1.380	1.220	1.620	1.420
2-3/4									2.000	1.840			1.620	1.420
3											1.880	1.720	1.620	1.420
3-1/4											1.880	1.720	2.120	1.920
3-1/2											2.380	2.222	2.120	1.920
3-3/4													2.620	2.420
4													2.620	2.420

SIZE	1/4		5/16		3/8		7/16		1/2		5/8	
	L _G	L _B	L _G	L _B	L _G	L _B	L _G	L _B	L _G	L _B	L _G	L _B
NOM. LENGTH												
1-3/4	0.750	0.500										
2	0.750	0.500	0.880	0.600								
2-1/4	1.250	1.000	0.880	0.600	1.000	0.690						
2-1/2	1.250	1.000	1.380	1.100	1.000	0.690	1.120	0.770	1.000	0.620		
2-3/4	1.750	1.500	1.380	1.100	1.500	1.190	1.120	0.770	1.000	0.620		
3	1.750	1.500	1.880	1.600	1.500	1.190	1.620	1.270	1.000	0.620		
3-1/4	2.250	2.000	1.880	1.600	2.000	1.690	1.620	1.270	1.750	1.360	1.500	1.040
3-1/2	2.250	2.000	2.380	2.100	2.000	1.690	2.120	1.770	1.750	1.360	1.500	1.040
3-3/4	2.750	2.500	2.380	2.100	2.500	2.190	2.120	1.770	1.750	1.360	1.500	1.040
4	2.750	2.500	2.880	2.600	2.500	2.190	2.620	2.270	2.500	2.120	2.250	1.800
4-1/4	3.250	3.000	2.880	2.600	3.000	2.690	2.620	2.270	2.500	2.120	2.250	1.800
4-1/2	3.250	3.000	3.380	3.100	3.000	2.690	3.120	2.770	2.500	2.120	2.250	1.800
4-3/4	3.750	3.500	3.380	3.100	3.500	3.190	3.120	2.770	3.250	2.860	3.000	2.540
5	3.750	3.500	3.880	3.600	3.500	3.190	3.620	3.270	3.250	2.860	3.000	2.540
5-1/4	4.250	4.000	3.880	3.600	4.000	3.690	3.620	3.270	3.250	2.860	3.000	2.540
5-1/2			4.380	4.100	4.000	3.690	4.120	3.770	4.000	3.620	3.750	3.300
5-3/4			4.380	4.100	4.500	4.190	4.120	3.770	4.000	3.620	3.750	3.300
6			4.880	4.600	4.500	4.190	4.620	4.270	4.000	3.620	3.750	3.300
6-1/4			4.880	4.600	5.000	4.690	4.620	4.270	4.750	4.360	4.500	4.040
6-1/2			4.880	4.600	5.000	4.690	5.120	4.770	4.750	4.360	4.500	4.040
6-3/4			5.380	5.100	5.000	4.690	5.120	4.770	4.750	4.360	4.500	4.040
7					5.500	5.190	5.520	5.270	5.500	5.120	5.250	4.800
7-1/4					6.000	5.690	5.620	5.270	5.500	5.120	5.250	4.800
7-1/2					6.000	5.690	6.120	5.770	5.500	5.120	5.250	4.800
7-3/4					6.500	6.190	6.120	5.770	6.250	5.860	6.000	5.540
8							6.620	6.270	6.250	5.860	6.000	5.540
8-1/2							7.120	6.770	7.000	6.620	6.750	6.300
9							7.620	7.270	7.000	6.620	6.750	6.300
9-1/2							8.120	7.770	8.000	7.620	7.750	7.300
10									8.000	7.620	7.750	7.300
11										9.250	8.800	
12										10.250	9.800	

- MATERIAL: A286 CRES PER AMS 5726.
- HEAT TREATMENT: 180 KSI MINIMUM ULTIMATE TENSILE STRENGTH.
- FINISH: SEE NOTE 5.
- DIMENSIONS, GEOMETRIC TOLERANCE PER ASME B18.3 - INCLUDING MANUFACTURING NOTES NOT LISTED ON THIS DRAWING.
- PART NUMBERING: 96768 () - () () - () ()

FINISH = B-CHEMICAL BLACK OXIDE PER MIL-DTL-13924.
 C-CADMIUM PLATE PER AMS-QQ-P-416, TYPE I, CLASS 3.
 D-CADMIUM PLATE PER AMS-QQ-P-416, TYPE II, CLASS 3.
 H-CADMIUM PLATE PER AMS-QQ-P-416, TYPE I, CLASS 2.
 J-CADMIUM PLATE PER AMS-QQ-P-416, TYPE II, CLASS 2.
 (YELLOW CHROMATE)
 M-CADMIUM PLATE PER AMS-QQ-P-416, TYPE II, CLASS 2.
 (OLIVE DRAB)
 S-SILVER PLATE PER AMS 2410.
 U-ZINC PLATE PER ASTM B633 TYPE III SCI.
 Z-ZINC PLATE PER ASTM B633 TYPE II SCI.
 NO LETTER-PASSIVATE PER ASTM A967 OR EQUIVALENT.

= LENGTH IN SIXTEENTHS

THREAD = C-COARSE
 F-FINE

DASH NUMBER (BASIC DIAMETER)

LOCKING FEATURE = NO LETTER-NO LOCKING FEATURE
 E-TYPE P (PATCH) PER MIL-DTL-18240
 K-TYPE N (PELLET) PER MIL-DTL-18240
 M-NYTEMP PATCH
 TF-TRU-FLEX

BASIC PART NUMBER

- PERFORMANCE REQUIREMENTS OF MIL-DTL-18240 APPLY TO SCREWS WITH NON-METALLIC LOCKING FEATURES, INCLUDING NYTEMP.®
- THREAD SIZES NOT LISTED IN TABLE VA OR VB OF MIL-DTL-18240, ONLY A POSITIVE INDICATION OF TORQUE IS REQUIRED FOR 5 UNSEATED INSTALLATIONS AND REMOVALS.

(R) NYTEMP IS A REGISTERED TRADEMARK OF NYLOK FASTENER CORPORATION

TOLERANCES ±.010 AND ±2'
 SURFACE ROUGHNESS 125√
 UNLESS OTHERWISE NOTED

DRAFTED
 IN ACCORDANCE
 WITH ANSI Y14.5M
 1982



PART NUMBER:

96768()-() () -() ()