SPS TECHNOLOGIES

PROPRIETARY INFORMATION
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DRAWING NUMBER SD. 300. 96627

ISSUE DATE 1/19/04

REVISION

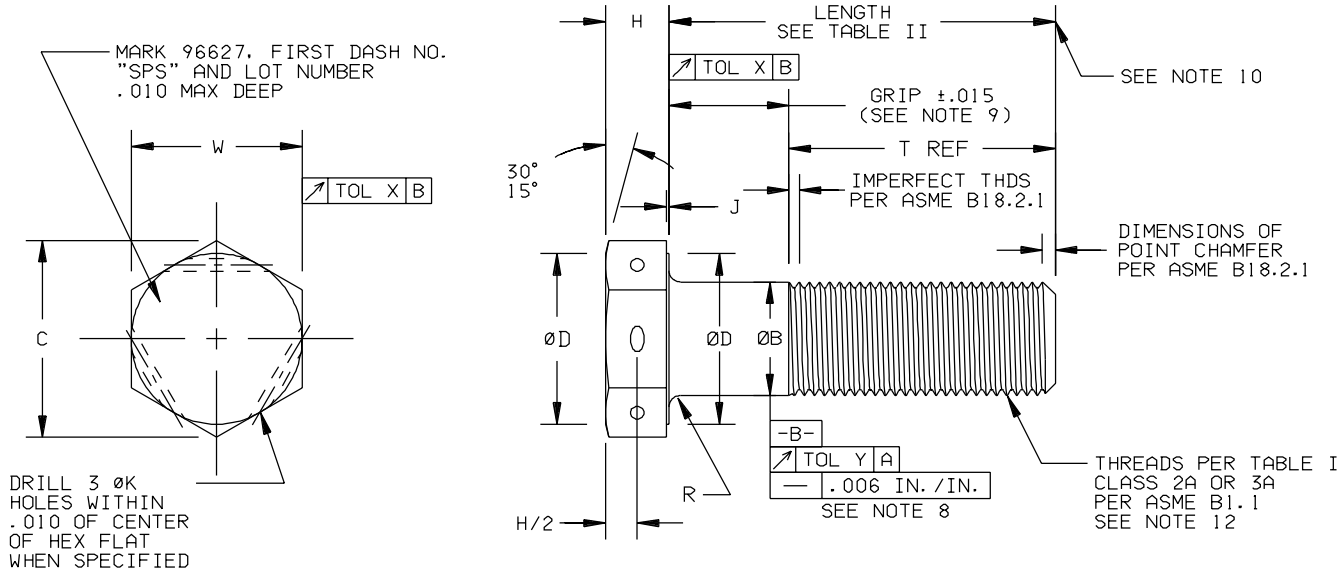

TABLE I

BASIC DIAMETER DASH NUMBER	THREADS UNRC UNRF	ØB	C MIN	ØD MAX	H	J	ØK ±.005	R	T REF LENGTHS 6 IN. & SHORTER	T REF LENGTHS OVER 6 IN.	W	X	Y	AXIAL TENSILE STRENGTH LBS. MIN
4	.2500-20 .2500-28	.2500 .2450	.488	.438	.163 .150	.025 .010	.075	.025 .015	.750	1.000	.438 .428	.010	.0045	5,700 6,600
5	.3125-18 .3125-24	.3125 .3065	.557	.500	.211 .195	.025 .010	.075	.025 .015	.875	1.125	.500 .489	.011	.0045	9,400 10,400
6	.3750-16 .3750-24	.3750 .3690	.628	.562	.243 .226	.025 .010	.075	.025 .015	1.000	1.250	.562 .551	.012	.0060	13,900 15,800
7	.4375-14 .4375-20	.4375 .4305	.698	.625	.291 .272	.025 .010	.075	.025 .015	1.125	1.375	.625 .612	.013	.0060	19,100 21,400
8	.5000-13 .5000-20	.5000 .4930	.840	.750	.323 .302	.025 .010	.075	.025 .015	1.250	1.500	.750 .736	.014	.0060	25,500 28,800
9	.5625-12 .5625-18	.5625 .5545	.910	.812	.371 .348	.025 .010	.075	.045 .020	1.375	1.625	.812 .798	.015	.0060	32,800 36,500
10	.6250-11 .6250-18	.6250 .6170	1.051	.938	.403 .378	.025 .010	.075	.045 .020	1.500	1.750	.938 .922	.017	.0060	40,700 46,100
12	.7500-10 .7500-16	.7500 .7410	1.254	1.125	.483 .455	.025 .010	.075	.045 .020	1.750	2.000	1.125 1.100	.020	.0090	60,100 67,100
14	.8750-9 .8750-14	.8750 .8660	1.465	1.312	.563 .531	.035 .010	.075	.065 .040	2.000	2.250	1.312 1.285	.023	.0090	83,200 91,700
16	1.0000-8 1.0000-12	1.0000 .9900	1.675	1.500	.627 .591	.035 .010	.075	.095 .060	2.250	2.500	1.500 1.469	.026	.0090	109,000 119,000
18	1.1250-8 1.1250-12	1.1250 1.1140	1.859	1.688	.718 .658	.035 .010	.075	.095 .060	2.500	2.750	1.688 1.631	.029	.0120	142,000 154,000
20	1.2500-8 1.2500-12	1.2500 1.2390	2.066	1.875	.813 .749	.035 .010	.075	.095 .060	2.750	3.000	1.875 1.812	.033	.0120	180,000 193,000
22	1.3750-8 1.3750-12	1.3750 1.3630	2.273	2.062	.878 .810	.035 .010	.075	.095 .060	3.000	3.250	2.062 1.994	.036	.0150	222,000 237,000
24	1.5000-8 1.5000-12	1.5000 1.4880	2.480	2.250	.974 .902	.035 .010	.075	.095 .060	3.250	3.500	2.250 2.175	.039	.0150	268,000 285,000
26	1.7500-8 1.7500-12	1.7500 1.7380	2.893	2.625	1.134 1.054	.035 .010	.075	.095 .060	3.750	4.000	2.625 2.538	.046	.0150	375,000 394,000

TABLE II

LENGTH TOLERANCES

NOMINAL LENGTH (INCHES)	NOMINAL SIZE (INCHES) 1/4 TO 3/8	7/16 AND 1/2	9/16 TO 3/4	7/8 AND 1"	1-1/8 TO 1-1/2	OVER 1-1/2
UP TO INCL. 1"	-0.03	-0.03	-0.03			
OVER 1" TO & INCL. 2-1/2"	-0.04	-0.06	-0.08	-0.10	-0.12	-0.18
OVER 2-1/2" TO & INCL. 4"	-0.06	-0.08	-0.10	-0.14	-0.16	-0.20
OVER 4" TO & INCL. 6"	-0.10	-0.10	-0.10	-0.16	-0.18	-0.22
OVER 6"	-0.18	-0.18	-0.18	-0.20	-0.22	-0.24

® MP98T IS A REGISTERED TRADEMARK OF SPS TECHNOLOGIES.

TOLERANCES ±.010 AND ±2° SURFACE ROUGHNESS 125√ UNLESS OTHERWISE NOTED	FSCM NO. 56878 CUSTODIAN: JENKINTOWN, PA.	TITLE BOLT, HEXAGON, NO FLANGE 180 KSI UTS MIN MP98T®	STANDARDS AND SPECIFICATIONS MIL-DTL-1222 EXCEPT AS NOTED
DRAFTED IN ACCORDANCE WITH ASME Y14.5M			PART NUMBER: 96627( )( )( )( )( )( )
DRAWN BY: STEVE FOSTER	DATE: 1/19/04		
APPROVED: S FOSTER	DATE: 3/1/04		
APPROVED: L KLINE			SHEET 1 OF 2

SPS TECHNOLOGIES

DRAWING NUMBER SD.300.96627

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REVISION

1. MATERIAL: MP98T® PER AMS 5919 OR AMS 5920.
2. HEAT TREATMENT: 180 KSI TO 220 KSI ULTIMATE TENSILE STRENGTH. 150 KSI MINIMUM YIELD STRENGTH.
3. FINISH: PASSIVATE PER AMS-QQ-P-35.
4. FLUORESCENT PENETRANT INSPECT PER ASTM E1417. ACCEPTANCE CRITERIA PER SAE J123.
5. MANUFACTURING REQUIREMENTS: HEXAGON HEAD TO BE FORGED.
   HEAD TO SHANK FILLET TO BE COLD WORKED.
   UNLESS OTHERWISE NOTED ON PURCHASE ORDER, FOR ALL SIZES, THREADS SHALL BE ROLLED EXCEPT WHERE THREAD LENGTH EXCEEDS THE DIMENSIONAL LIMITATIONS OF THE THREAD DIE AND/OR MACHINE, ONLY THEN ARE CUT THREADS ALLOWED WITH CUSTOMER APPROVAL PRIOR TO PURCHASE ORDER. ROLLED THREADS SHALL BE FORMED AFTER HEAT TREATMENT.
6. MECHANICAL AND LOT ACCEPTANCE TEST: SAMPLING SIZE SHALL BE PER MIL-DTL-1222.
   ULTIMATE TENSILE TEST PER ASTM F606.
   WEDGE TENSILE TEST PER ASTM F606 EXCEPT THE REQUIREMENT SHALL BE THE TEST RESULTS ARE REPORTED FOR INFORMATION ONLY.
   HARDNESS TEST PER ASTM F606 EXCEPT THE REQUIREMENT SHALL BE THE TEST RESULTS ARE REPORTED FOR INFORMATION ONLY.
7. DIMENSIONS ARE IN INCHES, AND EXCEPT AS NOTED ARE PER ASME B18.2.1.
8. GEOMETRIC TOLERANCING AS NOTED AND STRAIGHTNESS PER ASME B18.2.1 AS APPLICABLE.
9. THE GRIP LENGTH SHALL BE MEASURED FROM THE UNDERSIDE OF THE HEAD TO THE FIRST COMPLETE THREAD.
10. FOR OVERALL LENGTHS SHORTER THAN THOSE VALUES LISTED IN COLUMN T REF, THREADS WILL BE ROLLED TO WITHIN THREE THREAD PITCHES OF BEARING SURFACE YET NOT ALLOWED TO ENTER FILLET RADIUS.
11. UNLESS OTHERWISE SPECIFIED BREAK ALL SHARP EDGES 0.020 X 0.020 MAXIMUM.
12. PART NUMBER: 96627(_)(_)(_)(_)(_)(_)(_)
    - GRIP LENGTH IN SIXTEENTHS
    - THREAD CLASS DESIGNATOR: 2A / 3A
    - THREAD PITCH DESIGNATOR: C = COARSE / F = FINE
    - BASIC DIAMETER IN SIXTEENTHS PER TABULATION
    - LOCKING FEATURE: - = NO LOCK / E = TYPE P (PATCH) PER MIL-DTL-18240 / K = TYPE N (PELLET) PER MIL-DTL-18240 / M = NYTEMP PATCH
    - CROSSDRILLED HEAD: NO LETTER = NO HOLES THRU / H = 3 HOLES THRU
    - BASIC PART NUMBER
    - LENGTH = GRIP + T REF
13. PERFORMANCE REQUIREMENTS OF MIL-DTL-18240 APPLY TO SCREWS WITH NON-METALLIC LOCKING FEATURES, INCLUDING NYTEMP®. FOR 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.

® NYTEMP IS A REGISTERED TRADEMARK OF NYLOK FASTENER CORPORATION.

TOLERANCES ±.010 AND ±2° SURFACE ROUGHNESS 125√ UNLESS OTHERWISE NOTED	DRAFTED IN ACCORDANCE WITH ASME Y14.5M	SPS TECHNOLOGIES	PART NUMBER: 96627( )( )( )( )( )( ) SHEET 2 OF 2