SPS TECHNOLOGIES

PROPRIETARY INFORMATION
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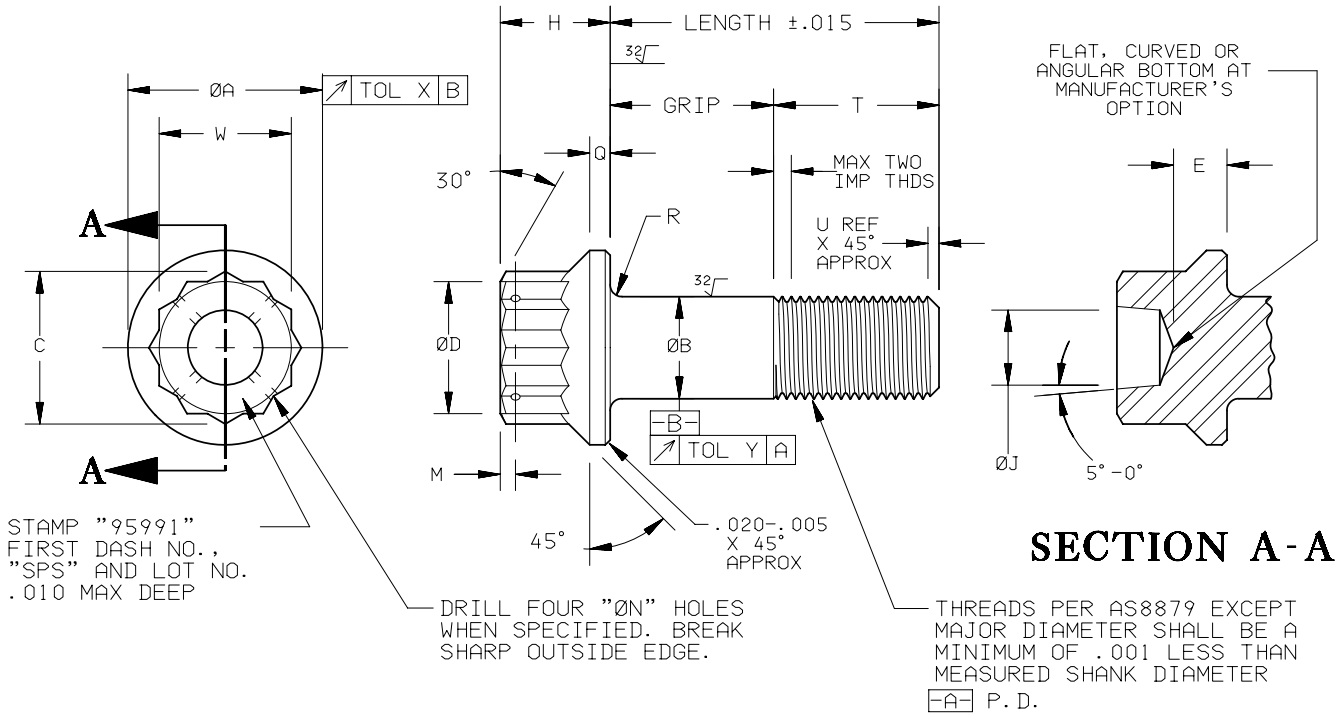
DRAWING NUMBER **SPS-B-95991**

ISSUE DATE 6/04/01

REVISION
1 10/24/02
2 5/28/03
3 11/18/04
4 1/09/07
5 1/18/07
6 2/15/07



FIRST DASH NO	THREAD SIZE UNJF-3A	ØA ±.005	ØB MAX	ØB MIN	C MAX	C MIN	ØD +.000 -.015	E MIN	H ±.010	ØJ +.010 -.030	M ±.010	N ±.005	Q ±.010	R MAX	R MIN	T REF
-3	.1900-32	.364	.1895	.1885	.290	.277	.250	.092	.200	.125	.062	.037	.050	.041	.031	.285
-4	.2500-28	.470	.2495	.2485	.361	.347	.312	.135	.235	.180	.062	.037	.050	.041	.031	.375
-5	.3125-24	.580	.3120	.3110	.434	.418	.375	.162	.290	.215	.070	.055	.050	.041	.031	.469
-6	.3750-24	.644	.3745	.3735	.507	.490	.437	.197	.340	.260	.070	.055	.091	.057	.047	.563
-7	.4375-20	.745	.4370	.4360	.580	.561	.500	.228	.375	.320	.070	.055	.099	.057	.047	.656
-8	.5000-20	.823	.4995	.4985	.651	.637	.562	.254	.430	.380	.094	.070	.123	.057	.047	.750
-9	.5625-18	.933	.5615	.5605	.724	.703	.625	.287	.480	.440	.094	.070	.133	.057	.047	.844
-10	.6250-18	1.045	.6240	.6230	.797	.775	.687	.327	.530	.500	.094	.070	.150	.073	.063	.938
-12	.7500-16	1.225	.7490	.7480	.940	.917	.812	.380	.630	.570	.094	.070	.178	.073	.063	1.125
-14	.8750-14	1.433	.8740	.8730	1.085	1.059	.937	.438	.700	.650	.125	.070	.198	.073	.063	1.313
-16	1.0000-12	1.620	.9990	.9980	1.229	1.200	1.062	.493	.800	.740	.125	.070	.222	.073	.063	1.500

FIRST DASH NO	U MAX	W MAX	W MIN	X	Y
-3	.039	.251	.243	.005	.0045
-4	.045	.313	.304	.005	.0045
-5	.052	.376	.367	.006	.0045
-6	.052	.439	.430	.008	.0045
-7	.062	.502	.492	.009	.0060
-8	.062	.564	.553	.010	.0060
-9	.068	.627	.616	.011	.0060
-10	.069	.690	.679	.012	.0060
-12	.078	.814	.803	.015	.0090
-14	.089	.940	.928	.018	.0090
-16	.104	1.064	1.052	.020	.0090

TM - SPS TITAN IS A TRADEMARK OF SPS TECHNOLOGIES.

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

FSCM NO. 56878
CUSTODIAN: JENKINTOWN, PA.

DRAFTED IN ACCORDANCE WITH ASME Y14.5M

DRAWN BY: STEVE FOSTER — DATE: 6/04/01

APPROVED: R HUKARI
APPROVED: R LEWIS — DATE: 2/16/07

TITLE

SPS TITAN 180 BOLT, DOUBLE HEXAGON, FLANGED
.190 TO 1.000, SPS TITAN ALLOY
180 KSI ULTIMATE TENSILE STRENGTH

STANDARDS AND SPECIFICATIONS
SPS-B-640
APPENDIX 3.6.1

PART NUMBER:

95991( )( )( )( )( )

SHEET 1 OF 2

SPS TECHNOLOGIES

DRAWING NUMBER SPS-B-95991

1. MATERIAL: SPS TITAN™ ALLOY PER CHEMISTRY OF AMS 4958.
2. HEAT TREATMENT: 180,000 PSI MINIMUM TENSILE STRENGTH.
   108,000 PSI MINIMUM SHEAR STRENGTH.
3. FINISH: PLAIN.
   ALUMINUM COAT HI-KOTE 1 PER HS 294.
   ANODIZE PER AMS 2487, COLOR AND QUALITY TEST ONLY, COLOR BLUE; PLUS SOLID FILM LUBRICANT PER AS5272, TYPE I AND HYDRAULIC FLUID RESISTANCE WHEN TESTED PER ASTM 02510 USING SAE AS1241 PHOSPHATE ESTER HYDRAULIC FLUID.
4. FLUORESCENT PENETRANT INSPECT 100% PER ASTM E1417. ACCEPTANCE CRITERIA PER SPS-I-650.
5. DIMENSIONS ARE IN INCHES.
6. PART NUMBER: 95991( )( )( )( )( )

- NO LETTER = PLAIN FINISH
- D = ANODIZE PLUS SOLID FILM LUBE PER AS5272, TYPE I (SEE NOTE 3)
- K = ALUMINUM COAT HI-KOTE 1 PER HS 294.
- DESIGNATES GRIP LENGTH IN SIXTEENTHS.
- - = NO CROSSDRILLED HEADS
- H = CROSSDRILLED HEADS
- DESIGNATES DIAMETER IN SIXTEENTHS PER TABULATION
- - = STANDARD BODY DIAMETER
- X = .0156 OVERSIZE BODY DIAMETER
- Y = .0312 OVERSIZE BODY DIAMETER
- BASIC PART NUMBER

LENGTH = GRIP LENGTH + T REF

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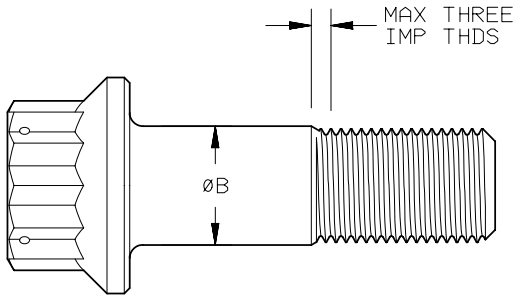
.0156 AND .0312 OVERSIZE BODY



FIRST DASH NUMBER	.0156 OVERSIZE ØB		.0312 OVERSIZE ØB	
	MAX	MIN	MAX	MIN
-3	.2026	.2016	.2182	.2172
-4	.2651	.2641	.2807	.2797
-5	.3276	.3266	.3432	.3422
-6	.3901	.3891	.4057	.4047
-7	.4526	.4516	.4682	.4672
-8	.5151	.5141	.5307	.5297
-9	.5771	.5761	.5927	.5917
-10	.6396	.6386	.6552	.6542
-12	.7646	.7636	.7802	.7792
-14	.8896	.8886	.9052	.9042
-16	1.0146	1.0136	1.0302	1.0292

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

DRAFTED IN ACCORDANCE WITH ASME Y14.5M

SPS TECHNOLOGIES

PART NUMBER: 95991( )( )( )( )( )

ER-020