

FED. SUPPLY CLASS

5305

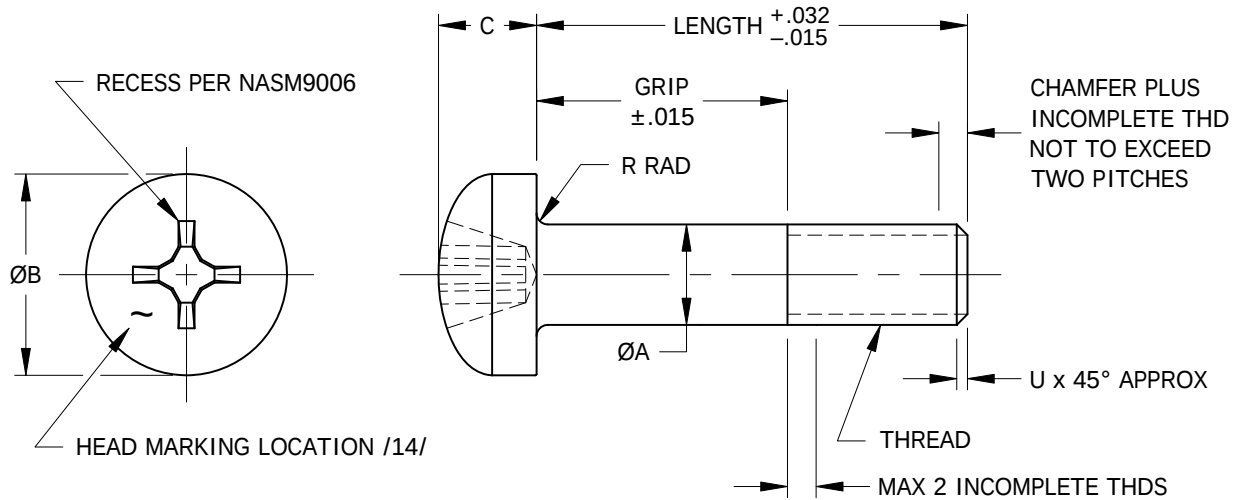


TABLE I – DIMENSIONS

THREAD	ØA		ØB		C		R RAD		U	MAX ECCENTRICITY	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN		HEAD TO SHANK FIM	RECESS TO SHANK FIM
.1640-32 UNC-3A	.1640	.1610	.322	.306	.115	.105	.020	.010	.032	.020	.016
.1900-32 UNF-3A	.1890	.1860	.373	.357	.133	.122				.024	.020
.2500-28 UNF-3A	.2490	.2460	.492	.473	.175	.162				.030	.024
.3125-24 UNF-3A	.3115	.3085	.615	.594	.218	.203				.036	.030
.3750-24 UNF-3A	.3740	.3710	.740	.716	.261	.244	.025	.015	.047	.042	
.4375-20 UNF-3A	.4365	.4325	.868	.838	.304	.286				.048	
.5000-20 UNF-3A	.4990	.4950	.987	.958	.348	.327	.030	.020		.056	

TABLE II – MECHANICAL PROPERTIES

THREAD	ULTIMATE TENSILE LOAD LBF MIN /9/				ULTIMATE DOUBLE SHEAR LOAD LBF MIN /10/			
	ALUM ALLOY	MANGANESE BRONZE	ALLOY STEEL	CRES	ALUM ALLOY	MANGANESE BRONZE	ALLOY STEEL	CRES
.1640-32 UNC-3A	868	1,190	1,750	1,750	1,570	2,150	3,170	3,170
.1900-32 UNF-3A	1,240	1,700	2,500	2,500	2,110	2,890	4,250	4,250
.2500-28 UNF-3A	2,260	3,090	4,550	4,550	3,650	5,010	7,360	7,360
.3125-24 UNF-3A	3,600	4,930	7,250	7,250	5,700	7,820	11,500	11,500
.3750-24 UNF-3A	5,440	7,460	11,000	11,000	8,220	11,300	16,600	16,600
.4375-20 UNF-3A	7,360	10,100	14,800	14,800	11,200	15,300	22,500	22,500
.5000-20 UNF-3A	9,900	13,600	20,000	20,000	14,700	20,000	29,400	29,400

THE INITIAL RELEASE OF THIS DOCUMENT SUPERSEDES MS27039, REVISION F. PART NUMBERS REMAIN MS27039.

THIRD ANGLE PROJECTION	
PROCUREMENT SPECIFICATION	
NASM7839	

CUSTODIAN	NATIONAL AEROSPACE STANDARDS COMMITTEE
TITLE	SCREW, MACHINE, PAN HEAD, CRUCIFORM RECESS

REVISION	5
CLASSIFICATION PART STANDARD	



NASM27039

SHEET 1 OF 5

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MATERIAL:

ALUMINUM ALLOY: 2024 (UNS A92024) IN ACCORDANCE WITH QQ-A-430, TEMPER 2024-O,
OR AMS-QQ-A-225/6, TEMPER T4.

MANGANESE BRONZE (UNS C67000) IN ACCORDANCE WITH ASTM B138/B138M.

ALLOY STEEL: 8630 (UNS G86300) IN ACCORDANCE WITH MIL-S-6050, 26-32 HRC; OR 8740 (UNS G87400)
IN ACCORDANCE WITH MIL-S-6049 AMS6322; OR 4130 (UNS G41300) IN ACCORDANCE WITH AMS-S-6758
OR AMS6346.

HEAT AND CORROSION-RESISTANT STEEL: A286 (UNS S66286) IN ACCORDANCE WITH AMS5731 OR AMS5732.

FINISH:

ALUMINUM ALLOY: ANODIZE, IN ACCORDANCE WITH MIL-A-8625, TYPE I OR II.

MANGANESE BRONZE: CADMIUM PLATE, IN ACCORDANCE WITH AMS-QQ-P-416, TYPE II, CLASS 3.

MANGANESE BRONZE: UNCOATED.

ALLOY STEEL: CADMIUM PLATE, IN ACCORDANCE WITH AMS-QQ-P-416, TYPE II, CLASS 2.

HEAT AND CORROSION-RESISTANT STEEL:

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PASSIVATE IN ACCORDANCE WITH AMS2700, METHOD 1, TYPE 2 OR 8, CLASS 1, TEST METHOD 102 OR

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PASSIVATE IN ACCORDANCE WITH AMS2700, METHOD 1, TYPE 8, CLASS 4, TEST METHOD 102 - NO POST
TREATMENT OR

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PASSIVATE IN ACCORDANCE WITH AMS2700, METHOD 2, TEST METHOD 102 - NO POST TREATMENT

CODE:

ADD "DD" BEFORE DASH NUMBER FOR ANODIZED ALUMINUM ALLOY.

ADD "BP" BEFORE DASH NUMBER FOR CADMIUM PLATED MANGANESE BRONZE.

ADD "B" BEFORE DASH NUMBER FOR UNCOATED MANGANESE BRONZE.

ADD "-" BEFORE DASH NUMBER FOR CADMIUM PLATED ALLOY STEEL.

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ADD "C" BEFORE DASH NUMBER FOR HEAT AND CORROSION-RESISTANT STEEL, PASSIVATED PER AMS2700,
METHOD 1, TYPE 2 OR 8, CLASS 1, TEST METHOD 102.

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ADD "M" BEFORE DASH NUMBER FOR HEAT AND CORROSION-RESISTANT STEEL, PASSIVATED PER AMS2700,
METHOD 1, TYPE 8, CLASS 4, TEST METHOD 102 - NO POST TREATMENT.

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ADD "G" BEFORE DASH NUMBER FOR HEAT AND CORROSION-RESISTANT STEEL, PASSIVATED PER AMS2700,
METHOD 2, TEST METHOD 102 - NO POST TREATMENT.

EXAMPLE OF PART NUMBER:

THE PART NUMBER SHALL CONSIST OF BASIC MS NUMBER FOLLOWED BY THE MATERIAL AND FINISH
CODE FOLLOWED BY THE DASH NUMBER FROM TABLE III.

MS27039DD0809 = SCREW, MACHINE - PAN HEAD, CROSS RECESSED; .1640-32 UNC-3A, .594 LENGTH,
ANODIZED ALUMINUM ALLOY.

MS27039BP0809 = SCREW, MACHINE - PAN HEAD, CROSS RECESSED; .1640-32 UNC-3A, .594 LENGTH,
CADMIUM PLATED MANGANESE BRONZE.

MS27039B0809 = SCREW, MACHINE - PAN HEAD, CROSS RECESSED; .1640-32 UNC-3A, .594 LENGTH,
UNCOATED MANGANESE BRONZE.

MS27039-0809 = SCREW, MACHINE - PAN HEAD, CROSS RECESSED; .1640-32 UNC-3A, .594 LENGTH,
CADMIUM PLATED ALLOY STEEL.

REVISION

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NASM27039

SHEET 2



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