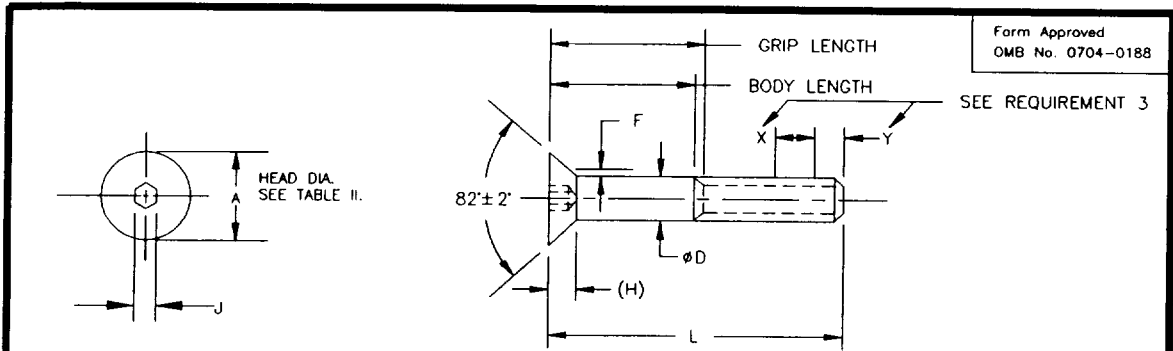


THE REQUIREMENTS FOR ACQUIRING THE PRODUCT(S) DESCRIBED HEREIN SHALL CONSIST OF THIS SPECIFICATION SHEET AND THE ISSUE OF THE FOLLOWING SPECIFICATION LISTED IN THAT ISSUE OF THE DODDSS SPECIFIED IN THE SOLICITATION: FF-S-86

THIS SPECIFICATION IS APPROVED FOR USE BY ALL DEPARTMENTS AND AGENCIES OF THE DEPARTMENT OF DEFENSE.



Form Approved  
OMB No. 0704-0188

SEE REQUIREMENT 3

TABLE I

THREAD SIZE		.1120-40UNC-3A	.1380-32UNC-3A	.1640-32UNC-3A	.1900-24UNC-3A	.2500-20UNC-3A	.3125-18UNC-3A						
#D BODY	MAX	.1120	.1380	.1640	.1900	.2500	.3125						
	MIN	.1075	.1329	.1585	.1840	.2435	.3053						
H HEAD HEIGHT	REF	.083	.097	.112	.127	.161	.198						
J SOCKET SIZE	NOM	.062	.078	.094	.125	.156	.188						
F FILLET EXTENSION ABOVE D, MAX		.012	.015	.015	.015	.015	.015						
TENSILE STRENGTH, LBS-MIN		900	1,350	2,085	2,510	4,750	7,800						
L LENGTH	TOLERANCE SIZE .112 THRU .3125	DASH NO.	DASH NO.	DASH NO.	DASH NO.	GRIP LENGTH MAX	BODY LENGTH MIN	DASH NO.	GRIP LENGTH MAX	BODY LENGTH MIN	DASH NO.	GRIP LENGTH MAX	GRIP LENGTH MIN
.250		1	7	13	19			27			37		
.375		2	8	14	20			28			38		
.500	+ .000	3	9	15	21			29			39		
.625	- .030	4	10	16	22			30			40		
.750		5	11	17	23			31			41		
1.000					24			32			42		
1.250					25	.62	.42	33			43		
1.500								34	.75	.50	44		
1.750	+ .000							35	.75	.50	45	.88	.60
2.000	- .040										46	.88	.60
2.250											47	1.38	1.10
2.500													

TABLE I (CONTINUED)

THREAD SIZE		.3750-18UNC-3A			.4375-14UNC-3A			.5000-13UNC-3A			.6250-11UNC-3A		.7500-10UNC-3A	
#D BODY	MAX	.3750			.4375			.5000			.6250		.7500	
	MIN	.3678			.4294			.4919			.6163		.7406	
H HEAD HEIGHT	REF	.234			.234			.251			.324		.396	
J SOCKET SIZE	NOM	.219			.250			.312			.375		.500	
F FILLET EXTENSION ABOVE D, MAX		.015			.015			.015			.015		.015	
TENSILE STRENGTH, LBS-MIN		11,600			15,900			21,200			33,800		50,000	
L LENGTH	TOLERANCE SIZE .375 THRU .750	DASH NO.	GRIP LENGTH MAX	BODY LENGTH MIN	DASH NO.	GRIP LENGTH MAX	BODY LENGTH MIN	DASH NO.	GRIP LENGTH MAX	BODY LENGTH MIN	DASH NO.	GRIP LENGTH MAX	BODY LENGTH MIN	
.500	+ .000	49			62			73						
.625	- .030	50			63			74						
.750	- .030	51			64			75						
1.000		52			65			76						
1.250	+ .000	53			66			77			84		93	
1.500	- .040	54			67			78			85		94	
1.750	+ .000	55			68			79			86		95	
2.000	- .040	56			69			80	1.00	.62	87		96	
2.250		57	1.00	.69	70	1.12	.77	81	1.00	.62	88		97	
2.500		58	1.00	.69	71	1.12	.77	82	1.00	.62	89		98	
2.750	+ .000	59	1.50	1.19							90		99	
3.000	- .060	60	1.50	1.19							91		100	

1/ SEE NOTE 5.

ENTIRE STANDARD REVISED

INCH-POUND

PREPARING ACTIVITY: DLA-IS  
CUSTODIANS: ARMY-AR NAVY-SH  
AIR FORCE-99

MILITARY SPECIFICATION SHEET  
TITLE  
SCREW, CAP, SOCKET HEAD, FLAT  
COUNTERSUNK, 82°, ALLOY STEEL, UNC-3A

SPECIFICATION SHEET NUMBER  
**MS24667** 30 APR 94  
REV D  
SUPERSEDING  
MS24667 C 28 OCT 76 (SEE NOTE 6)  
AMSC- N/A FSC 5305

DISTRIBUTION STATEMENT

A. Approved for public release; distribution is unlimited.

Page 1 of 3

Form Approved  
OMB No. 0704-0188

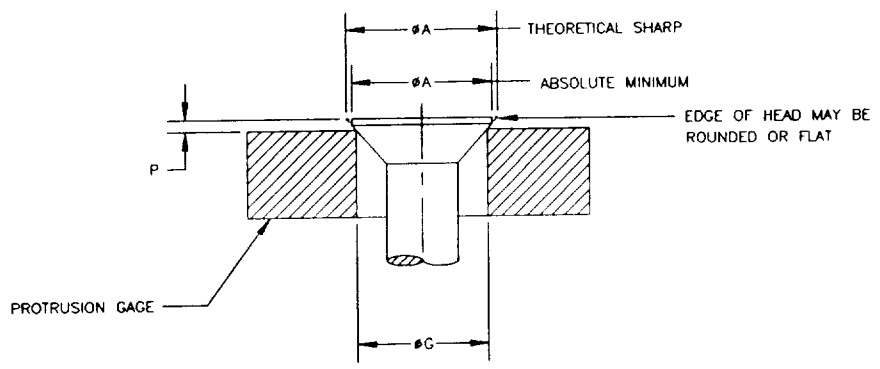


TABLE II 2/

NOMINAL SIZE	$\phi A$		$\phi G$	P	
	HEAD DIAMETER			PROTRUSION GAGE DIAMETER + .000 - .001	HEAD PROTRUSION
	THEORETICAL SHARP	MAX.	ABSOLUTE MIN.		MAX.
.1120	.255	.218	.172	.049	.025
.1380	.307	.263	.220	.052	.023
.1640	.359	.311	.267	.055	.024
.1900	.411	.359	.313	.058	.025
.2500	.531	.480	.424	.064	.031
.3125	.656	.600	.539	.070	.033
.3750	.781	.720	.653	.076	.037
.4375	.844	.781	.690	.092	.050
.5000	.938	.872	.739	.119	.073
.6250	1.188	1.112	.962	.135	.083
.7500	1.438	1.355	1.186	.150	.093

2/ SEE REQUIREMENT 7.

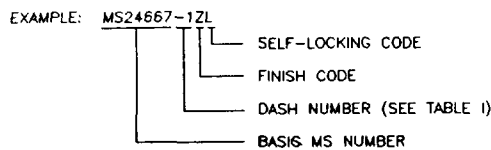
THE REQUIREMENTS FOR ACQUIRING THE PRODUCT(S) DESCRIBED HEREIN SHALL CONSIST OF THIS SPECIFICATION SHEET AND THE ISSUE OF THE FOLLOWING SPECIFICATION LISTED IN THAT ISSUE OF THE DODISS SPECIFIED IN THE SOLICITATION: FF-5-86

THIS SPECIFICATION IS APPROVED FOR USE BY ALL DEPARTMENTS AND AGENCIES OF THE DEPARTMENT OF DEFENSE

PREPARING ACTIVITY: DLA-IS CUSTODIANS: ARMY-AR NAVY-SH AIR FORCE-99 REVIEW: USER: PROJECT NUMBER: 5305-1952	MILITARY SPECIFICATION SHEET TITLE SCREW, CAP, SOCKET HEAD, FLAT COUNTERSUNK, 82', ALLOY STEEL, UNC-3A	SPECIFICATION SHEET NUMBER <b>MS24667</b>	30 APR 94 REV D
		SUPERSEDING MS24667 C	28 OCT 76 (SEE NOTE 6)
		AMSC- N/A	FSC 5305
DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.		Page <u>2</u> of <u>3</u>	

**REQUIREMENTS:**

1. **MATERIAL:** ALLOY STEEL, IN ACCORDANCE WITH PROCUREMENT SPECIFICATION.
2. **PROTECTIVE COATING:** ZINC COATING IN ACCORDANCE WITH ASTM B 633, TYPE II, CLASS FE/ZN 5. CADMIUM PLATING IN ACCORDANCE WITH QQ-P-416, TYPE II, CLASS 3 (SEE REQUIREMENT 8 AND NOTE 5).
3. **SELF-LOCKING ELEMENT:** THE SELF-LOCKING ELEMENT SHALL BE A PATCH TYPE OR LONGITUDINAL STRIP IN ACCORDANCE WITH MIL-F-18240. FOR "X" AND "Y" DIMENSIONS AND DESIGN AND USAGE LIMITATIONS, SEE MS15981 (SEE REQUIREMENT 8).
4. **HARDNESS:** IN ACCORDANCE WITH PROCUREMENT SPECIFICATION.
5. **THREADS:** THREADS SHALL BE IN ACCORDANCE WITH FED-STD-H28/2. ACCEPTABILITY OF SCREW THREADS SHALL BE IN ACCORDANCE WITH FED-STD-H28/20, SYSTEM 22.
6. **MINIMUM THREAD LENGTH:** SCREWS ABOVE HEAVY LINE SHALL HAVE COMPLETE (FULL FORM) THREADS EXTENDING WITHIN TWO THREADS OF THE INTERSECTION OF THE CONICAL PORTION OF THE HEAD WITH THE BASIC SCREW DIAMETER AS MEASURED WITH A THREAD RING GAGE.
7. **HEAD FLUSHNESS:** SCREWS SHALL MEET THE HEAD PROTRUSION LIMITS CITED IN TABLE II, DIMENSION P. FLUSHNESS IS DETERMINED BY PLACING A FLAT HEAD SCREW INTO A GAGING RING OF THE SIZE DETERMINED IN TABLE II AND MEASURING THE HEIGHT THAT THE HEAD EXTENDS ABOVE THE FACE OF THE GAGING RING.
8. **CODE:**  
Z - ZINC COATED  
NO CODE - CADMIUM PLATE (SEE NOTE 5)  
L - SELF-LOCKING
9. **PART NUMBER:** THE PART NUMBER SHALL CONSIST OF THE BASIC MS NUMBER FOLLOWED BY A DASH NUMBER TAKEN FROM TABLE I, FOLLOWED BY A FINISH CODE, FOLLOWED BY A SELF-LOCKING CODE LETTER, IF APPLICABLE.



MS24667-1ZL INDICATES - SCREW, CAP, SOCKET HEAD, FLAT COUNTERSUNK, 82, ALLOY STEEL, .1120-40 UNC-3A, .250 LENGTH, ZINC COATED, SELF-LOCKING.

MS24667-1Z INDICATES - SCREW, CAP, SOCKET HEAD, FLAT COUNTERSUNK, 82, ALLOY STEEL, .1120-40 UNC-3A, .250 LENGTH, ZINC COATED.

MS24667-1L INDICATES - SCREW, CAP, SOCKET HEAD, FLAT COUNTERSUNK, 82, ALLOY STEEL, .1120-40 UNC-3A, .250 LENGTH, CADMIUM PLATED, SELF-LOCKING.

MS24667-1 INDICATES - SCREW, CAP, SOCKET HEAD, FLAT COUNTERSUNK, 82, ALLOY STEEL, .1120-40 UNC 3A, .250 LENGTH, CADMIUM PLATED.

10. **IDENTIFICATION:** SCREWS WITH NOMINAL SIZES .1900 AND LARGER SHALL BE PERMANENTLY MARKED WITH A SYMBOL IDENTIFYING ITS MANUFACTURER OR PRIVATE LABEL DISTRIBUTOR. MARKINGS SHALL BE PLACED ON THE TOP OF HEAD, INDENTED. METHOD AND SIZE OF MARKINGS SHALL CONFORM TO THE REQUIREMENTS FOR PERMANENT MARKINGS SPECIFIED IN SAE AS478.

**NOTES:**

1. ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SPECIFIED.
2. INTERPERT DIMENSIONS IN ACCORDANCE WITH ANSI Y14.5M.
3. IN THE EVENT OF A CONFLICT BETWEEN THE TEXT OF THIS DOCUMENT AND THE REFERENCED CITED HEREIN, THE TEXT OF THIS DOCUMENT SHALL TAKE PRECEDENCE.
4. UNLESS OTHERWISE SPECIFIED, ISSUES OF REFERENCED DOCUMENTS ARE THOSE IN EFFECT AT THE TIME OF SOLICITATION.
5. CADMIUM PLATED PARTS COVERED BY THIS STANDARD ARE INACTIVE FOR NEW DESIGN AFTER 31 DEC 94. DASH NUMBERS 62 THRU 71 ARE INACTIVE FOR NEW DESIGN AFTER 28 JULY 75.
6. MS24667 SUPERSEDES MS24669.

PREPARING ACTMITY: DLA-IS CUSTODIANS: ARMY-AR NAVY- SH AIR FORCE-99	MILITARY SPECIFICATION SHEET TITLE SCREW, CAP, SOCKET HEAD, FLAT COUNTERSUNK, 82, ALLOY STEEL, UNC-3A	SPECIFICATION SHEET NUMBER MS24667 30 APR 94 REV D
REVIEW: USER: PROJECT NUMBER: 5305-1952		SUPERSEDING MS24667 C 28 OCT 76 (SEE NOTE 6)
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		Page 3 of 3