

INCH-POUND

MS21259J
w/AMENDMENT 2
7 January 2009

SUPERSEDING
MS21259J
w/AMENDMENT 1
12 October 2007

DETAIL SPECIFICATION SHEET**TERMINAL, WIRE ROPE, SWAGING, STUD, LONG THREAD**

This specification sheet is approved for use by all Departments and Agencies of the Department of Defense.

The requirements for acquiring the product described herein shall consist of this specification sheet, MIL-DTL-781, and QPL-781.

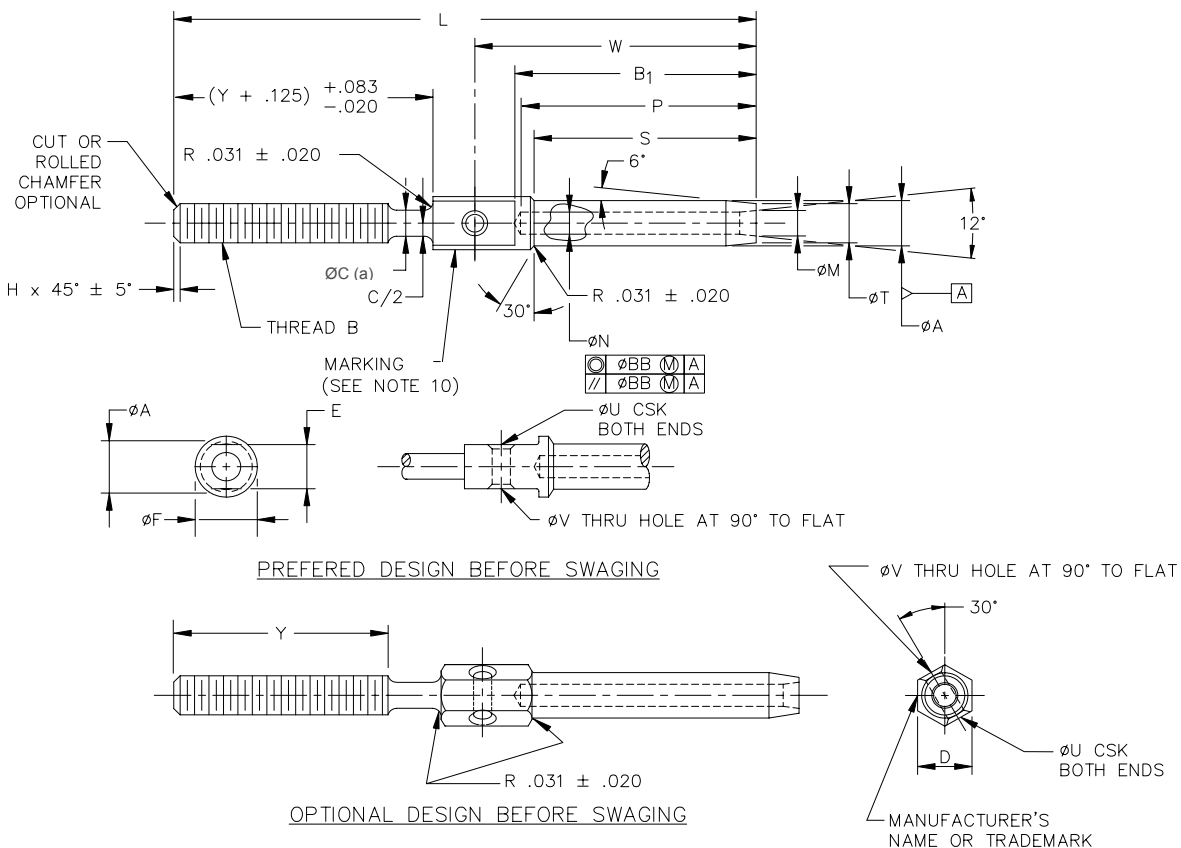
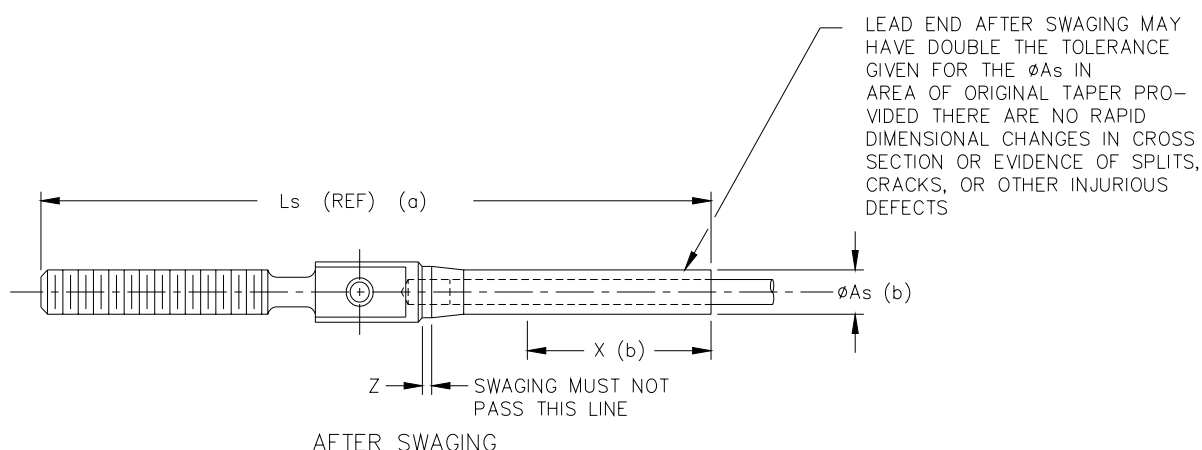


FIGURE 1. Terminal, wire rope, swaging, stud, long thread.

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- NOTES: (a) Reference dimensions are for design purposes only and are not an inspection requirement.
(b) Swaged terminals shall conform to ϕA_s for length X.

FIGURE 2. Terminal, wire rope, swaging, stud, long thread after swaging.

TABLE I. Dash numbers and dimensions.

Dash number		Wire rope diameter		Minimum breaking strength lbs. $\frac{1}{2}$	Thread B UN-3A UNF-3A	ϕA		ϕA_s	
RH thread	LH thread	Nominal	Minimum						
-2RH	-2LH	1/16	0.062	480	0.1380 (#6)-40	0.160	+0.000 -0.005	0.138	+0.000 -0.005
-3RH	-3LH	3/32	0.093	920	0.1900 (#10)-32	0.218		0.190	
-4RH	-4LH	1/8	0.125	2,000	0.2500 (1/4)-28	0.250		0.219	
-5RH	-5LH	5/32	0.156	2,800		0.297		0.250	
-6RH	-6LH	3/16	0.187	4,200	0.3125 (5/16)-24	0.359		0.313	+0.000 -0.007
-7RH	-7LH	7/32	0.218	5,600	0.3750 (3/8)-24	0.427		0.375	
-8RH	-8LH	1/4	0.250	7,000		0.494		0.438	+0.000 -0.008
-9RH	-9LH	9/32	0.281	8,000	0.4375 (7/16)-20	0.563		0.500	
-10RH	-10LH	5/16	0.312	9,800	0.5000 (1/2)-20	0.635		0.563	+0.000 -0.010
-12RH	-12LH	3/8	0.375	14,400	0.5625 (9/16)-18	0.703		0.625	
-14RH	-14LH	7/16	0.437	17,600	0.6250 (5/8)-18	0.781		0.688	+0.000 -0.009
-16RH	-16LH	1/2	0.500	22,800		0.844		0.750	
-18RH	-18LH	9/16	0.562	28,500	0.7500 (3/4)-16	0.984		0.875	+0.000 -0.012
-20RH	-20LH	5/8	0.625	35,000	0.8750 (7/8)-14	1.109		1.000	
-24RH	-24LH	3/4	0.750	49,600	1.0000 (1)-12	1.359	+0.000 -0.010	1.250	+0.000 -0.012
-28RH	-28LH	7/8	0.875	66,500	1.1250 (1 1/8)-12	1.593		1.437	
-32RH	-32LH	1	1.000	85,400	1.2500 (1 1/4)-12	1.812		1.625	

$\frac{1}{2}$ To achieve the minimum breaking strength, for the terminal test only, a galvanized carbon steel wire rope shall be used.

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TABLE I. Dash numbers and dimensions - Continued.

Dash number		B ₁ ±0.063	ØC		D	E
RH thread	LH thread					
-2RH	-2LH	1.042	0.121	+0.017 -0.005	0.188	0.156
-3RH	-3LH	1.261	0.169	+0.021 -0.005	0.250	0.187
-4RH	-4LH	1.511	0.226	+0.024 -0.005	0.313	0.250
-5RH	-5LH	1.761				
-6RH	-6LH	2.011	0.285	+0.028 -0.005	0.375	0.312
-7RH	-7LH	2.261	0.347		0.438	0.375
-8RH	-8LH	2.511			0.500	0.438
-9RH	-9LH	2.761	0.405	+0.033 -0.005	0.625	0.563
-10RH	-10LH	3.011	0.467		0.688	0.625
-12RH	-12LH	3.511	0.529		0.750	0.688
-14RH	-14LH	4.011	0.592		0.812	0.750
-16RH	-16LH	4.698			0.875	0.812
-18RH	-18LH	5.011	0.717		1.000	0.875
-20RH	-20LH	5.511	0.842		1.125	1.000
-24RH	-24LH	6.511	0.967		1.437	1.125
-28RH	-28LH	7.166	1.092		1.625	1.437
-32RH	-32LH	8.229	1.217		1.875	1.625

TABLE I. Dash numbers and dimensions - Continued.

Dash number	ØF	H		L ±0.063	Ls reference	ØM		ØN		P	
		Maximum	Minimum								
-2	0.188	0.031	0.015	2.473	2.65	0.090	+0.010 -0.000	0.078	+0.005 -0.000	1.042	+0.031 -0.000
-3	0.250	0.047		2.879	3.00	0.119		0.109		1.261	
-4	0.313			3.333	3.59	0.154		0.141		1.511	
-5	0.313			3.627	3.97	0.188		0.172		1.761	
-6	0.375			4.002	4.17	0.223		0.203		2.011	
-7	0.438			4.516	4.81	0.257		0.234		2.261	
-8	0.500			4.937	5.24	0.291		0.265		2.511	
-9	0.625			0.063	0.031	5.391		5.75		0.326	
-10	0.688	5.844	6.27			0.360	0.328	3.011			
-12	0.750	6.656	7.06			0.430	0.390	+0.008	3.511		
-14	0.812	7.437	7.91			0.514	0.468	-0.000	4.011		
-16	0.875	0.078	0.046	8.187	8.75	0.584	0.531	+0.009	4.698		
-18	1.000			9.125	9.72	0.653	0.594	-0.000	5.011		
-20	1.125			10.375	11.06	0.722	0.656	+0.010 -0.000	5.511		
-24	1.438	0.094	0.062	12.063	12.64	0.860	+0.015 -0.000	0.781	+0.012 -0.000	6.511	+0.062 -0.000
-28	1.625			13.226	13.99	1.013	0.921	7.166			
-32	1.812			14.969	15.88	1.151	1.046	8.229			

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TABLE I. Dash numbers and dimensions - Continued.

Dash number	S +0.062 -0.000	ØT		ØU reference	ØV ±0.005	W ±0.016	X	Y +0.083 -0.020 2/	Z	ØBB
							Minimum		Minimum	
-2	0.969	0.138	+0.000 -0.005	0.094	0.063	1.174	0.70	1.045	0.03	0.008 (0.016 FIM)
-3	1.188	0.190				1.411	0.80	1.204		
-4	1.438	0.219				1.682	1.05	1.376		
-5	1.688	0.250				1.958	1.29	1.376		
-6	1.938	0.313	+0.000 -0.007	0.125	0.098	2.237	1.31	1.453		
-7	2.188	0.375				2.518	1.55	1.625		
-8	2.438	0.438				2.784	1.70	1.750		
-9	2.688	0.500				3.076	1.89	1.875		
-10	2.938	0.563	+0.000 -0.008	0.156	0.125	3.326	2.06	2.000		
-12	3.438	0.625				3.828	3.12	2.250		
-14	3.938	0.688				4.375	3.57	2.500		
-16	4.625	0.750				5.093	4.31	0.010 (0.020 FIM)		
-18	4.938	0.875	+0.000 -0.009	5.468	4.51	3.000				
-20	5.438	1.000	+0.000 -0.010	6.093	5.04	3.500	0.015 (0.030 FIM)			
-24	6.438	1.250	+0.000 -0.012	7.188	5.80	4.000	0.020 (0.040 FIM)			
-28	7.094	1.437		7.846	6.31	4.500				
-32	8.156	1.625		9.000	7.26	5.000				

2/ Includes last full thread engagement.

REQUIREMENTS:

1. Material: Material shall be in accordance with MIL-DTL-781.
2. Finish: Finish shall be in accordance with MIL-DTL-781.
3. Threads: Threads shall be in accordance with FED-STD-H28/20.
4. Swage: Swage shall be in accordance with MIL-DTL-6117.
5. Tolerances: Unless otherwise specified, tolerances: decimals ± 0.010 , angles $\pm 3^\circ$.

NOTES:

1. The part or identifying number (PIN) consists of the letters MS, the specification sheet number and a dash number taken from [table I](#).

EXAMPLE: MS 21259 - 6RH

└─ Dash number (see [table I](#))

└─ Specification sheet number

└─ MS prefix

MS21259-6RH Indicates - Terminal, 0.3125 (5/16)-24 right hand thread.

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2. Dimensions are in inches.
3. Remove burrs and sharp edges. (See MIL-DTL-781.)
4. Interpret drawing in accordance with ASME Y14.5M.
5. These terminals are not to be used with turnbuckle bodies (barrels).
6. In the event of a conflict between the text of this document and the references cited herein, the text of this document takes precedence.
7. Unless otherwise specified, issues of reference documents are those in effect at the time of solicitation.
8. Interchangeability relationship: MS21259 parts can universally replace the canceled AN666 parts identified by the same dash number; but the canceled AN666 parts cannot replace the superseding MS21259 parts. MS21259 corrosion resistant steel parts can universally replace the canceled carbon and alloy steel parts identified by the same dash number.
9. Carbon and alloy steel parts are inactive for new design.
10. Marking: Complete MS part number, indented. Use two faces if required. For terminal sizes -2 through -5, use basic part number only, example, MS21259.

AMENDMENT ANNOTATIONS: The margins of this specification are marked with vertical lines to indicate where modifications from this amendment were made. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations.

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Air Force - 99

Preparing Activity:
DLA - GS5
(Project 1640-2008-006)

Review Activities:
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