

**INCH-POUND**

MS21255P  
 10 January 2001  
 SUPERSEDING  
 MS212155N  
 30 October 1999

# MILITARY SPECIFICATION SHEET

## EYE END, TURNBUCKLE, CLIP LOCKING (FOR WIRE ROPE)

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 and the issue of the following specification listed in that issue of the Department of Defense Index of Specifications and Standards (DoDISS) specified in the solicitation: MIL-DTL-8878, QPL-8878.

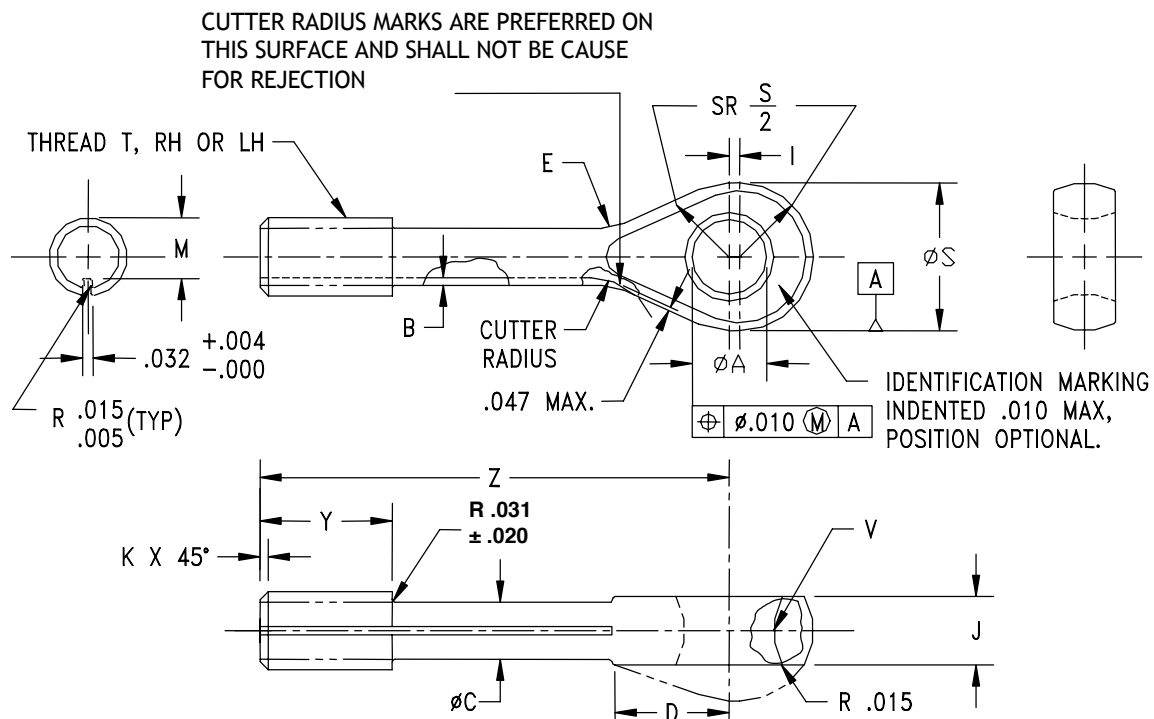


FIGURE 1. Eye end, turnbuckle, clip locking (for wire rope).

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TABLE I. Dash numbers and dimensions.

Dash number		Wire rope diameter		Minimum breaking strength lb	Thread T UNF-3A	ØA +.010 -.000	B	ØC +.006 -.000	D ±.031
Direction of thread							Maximum		
RH	LH	Nominal reference	Minimum						
-2RS	-2LS	1/16	.062	800	.1380 (#-6)-40	.188	.0096	.094	.325
-2RL	-2LL								
-3RS	-3LS	3/32	.093	1,600	.1900 (#10)-32	.219	.0077	.133	.416
-3RL	-3LL								
-5RS	-5LS	5/32 1/	.156	3,200	.2500 (1/4)-28	.281	.0103	.189	.512
-5RL	-5LL								
-6RS	-6LS	3/16	.187	4,600	.3125 (5/16)-24	.313	.0064	.243	.527
-6RL	-6LL								
-8RL	-8LL	1/4	.250	8,000	.3750 (3/8)-24	.375	.0057	.306	.678
-9RL	-9LL	9/32	.281	12,500	.4375 (7/16)-20	.469	.0056	.362	.831
-10RL	-10LL	5/16	.312	17,500	.5000 (1/2)-20	.563	.0058	.425	.900

1/ For .125 (1/8) inch diameter wire rope use -5 parts, minimum breaking strength 2,200 lb (ref).

TABLE I. Dash numbers and dimensions - Continued.

Dash number		E	I	J	K	M		ØS	V	Y	Z
Direction of thread		±.031 radius	+.010 -.000	±.005	+.000 -.015			+.025 -.010	±.016 radius	±.047	+.031 -.015
RH	LH					Maximum	Minimum				
-2RS	-2LS	.125	.031	.125	.031	.1139	.1094	.375	.094	.375	1.500
-2RL	-2LL										
-3RS	-3LS	.156		.188		.1638	.1568	.500	.172	.500	1.625
-3RL	-3LL										2.500
-5RS	-5LS	.219	.047	.219	.047	.2224	.2152	.625	.203	.625	1.750
-5RL	-5LL										2.625
-6RS	-6LS	.250		.281		.2830	.2754	.688	.250	.750	1.875
-6RL	-6LL										2.750
-8RL	-8LL	.281	.063	.328	.063	.3454	.3378	.875	.375	.875	2.875
-9RL	-9LL	.359	.078	.375		.4052	.3972	1.063	.453	1.000	3.375
-10RL	-10LL	.406		.469		.063	.4678	.4597	1.188		.500

## REQUIREMENTS:

1. Material: 17-4PH stainless steel shall be in accordance with SAE AMS 5643 or ASTM A 564. Steel, carbon or alloy shall be in accordance with MIL-DTL-8878.
2. Protective treatment: Protective treatment shall be in accordance with MIL-DTL-8878.
3. Heat treatment: Steel, carbon or alloy shall be heat treated to 125 to 145 KSI in accordance with SAE AMS-H-6875. 17-4PH shall be in accordance with MIL-DTL-8878.
4. Finish: Finish shall be in accordance with MIL-DTL-8878.
5. Threads: Threads shall be in accordance with FED-STD-H28/20.
6. Outside diameter (O.D.): O.D. of the "I" dimension may be a flat area.
7. Tolerances: Unless otherwise specified, tolerances: decimals ± .010, angles ± .5°.

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9. Part or identifying number (PIN): The PIN shall consist of the basic MS number, followed by a dash number; C in lieu of dash indicates 17-4PH (dash indicates carbon or alloy steel); first letter following dash number or letter C indicates direction of thread (left or right hand); second letter following dash number indicates length (short or long).

Example of PIN:

MS21255C2LS - Eye, turnbuckle, 17-4PH, .1380 (#6)-40, left hand thread, short.

MS21255-2RL - Eye, turnbuckle, steel, .1380 (#6)-40, right hand thread, long.

## NOTES:

1. Dimensions are in inches.
2. Remove all burrs and sharp edges. (See procurement specification for definition.)
3. Interpret drawing in accordance with ASME Y14.5M.
4. In the event of a conflict between the text of this document and the references cited herein the text of this document takes precedence.
5. Unless otherwise specified, issues of referenced documents are those in effect at the time of solicitation.
6. For .125 (1/8) inch diameter wire rope use -5 parts, minimum breaking strength 2,200 lb (ref).
7. Steel, carbon and alloy eye end turnbuckles are inactive for new design. 17-4PH stainless steel eye end turnbuckles shall be used for new design and can be used to replace comparable steel parts.
8. For clip locking of turnbuckles, see MS33736.
9. The parts covered by dash numbers shown on AN170 are canceled after 25 November 1963. Use the dash numbers given in table I. The canceled parts cannot replace the new parts and should be used until existing stock is depleted. Use only the MS21255 parts for new design and substitution. Substitution shall be in accordance with table II.
10. Dash 4 and -7 are inactive for new design, and are to be used only for replacement of the old canceled AN170 superseded parts.

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TABLE II. Substitution table.

PART NUMBERS	
Canceled part AN170	New part MS21255
Dash number	Dash number
5	None
8	2
16	3
22	5
32	5
46	6
61	8
80	8
125	9
175	10

CHANGES FROM PREVIOUS ISSUE: Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extent of the changes.

## Custodians:

Army - AV

Navy - AS

Air Force - 99

## Preparing activity:

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## Reviewer:

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