INCH-POUND

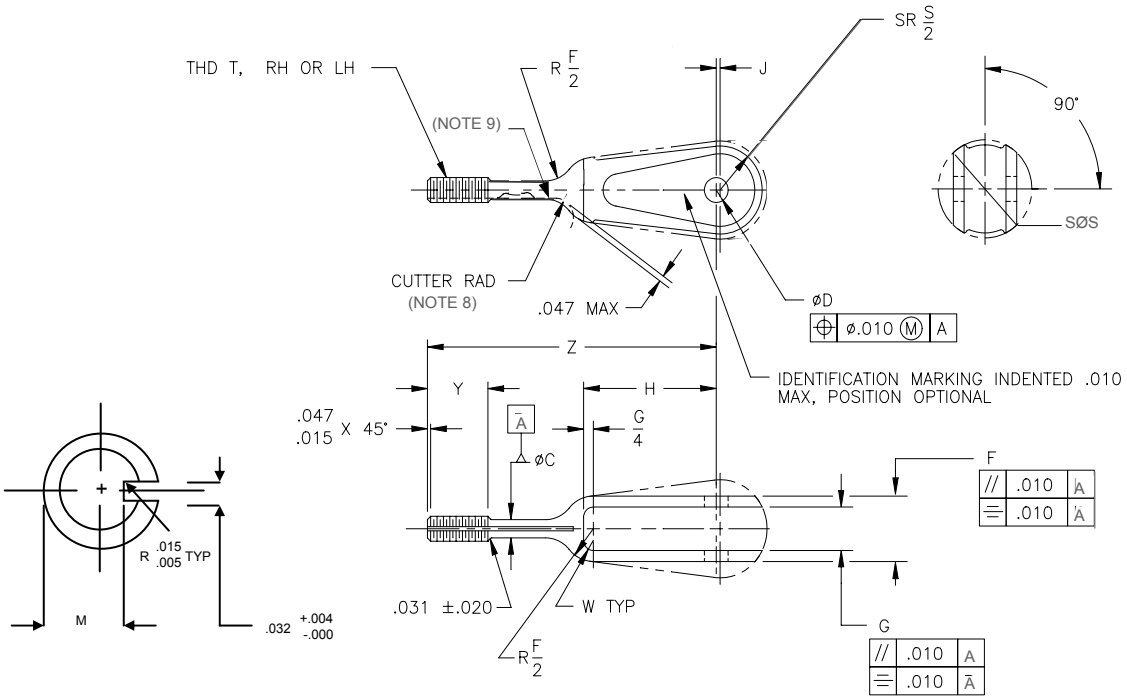
MS21253S
w/AMENDMENT 1
14 January 2010
SUPERSEDING
MS21253S
12 October 2007

DETAIL SPECIFICATION SHEET

CLEVIS END, TURNBUCKLE, CLIP LOCKING (FOR BEARING)

This specification 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-8878, and QPL-8878.



NOTE:
1. G dimension should be inspected below cross-hole.

FIGURE 1. Clevis end, turnbuckle, clip locking, (for bearing).

Table I. Dash numbers and dimensions.

Dash number		Wire rope diameter reference		Minimum breaking strength lbs.	Matches bearing number reference	Thread T UNF-3A	∅C +0.000 -0.006	∅D +0.002 -0.000	F +0.010 -0.005
Direction of thread									
RH	LH	Nominal reference	Minimum						
-3RS	-3LS	3/32	0.093	1,600	MS27640- KP3	0.1900 (#10)-32	0.139	0.190	0.500
-3RL	-3LL								
-4RS	-4LS	1/8	0.125	2,200	MS27640- KP4	0.2500 (1/4)-28	0.195	0.250	0.750
-4RL	-4LL								
-5RS	-5LS	5/32	0.156	3,200		0.3125 (5/16)-24	0.249		
-5RL	-5LL								
-6RS	-6LS	3/16	0.187	4,600	MS27640-KP5			0.313	0.813
-6RL	-6LL								

Table I. Dash numbers and dimensions - Continued.

Dash number		G ±0.005	H	J +0.010 -0.000	M		S∅S +0.125 -0.110	W radius	Y ±0.047 1/	Z ±0.031
Direction of thread										
RH	LH				Maximum	Minimum				
-3RS	-3LS	0.312	1.062	0.031	0.1638	0.1568	0.750	0.156	0.500	2.312
-3RL	-3LL									3.187
-4RS	-4LS	0.500	1.188	0.047	0.2224	0.2152	0.875	0.188	0.625	2.562
-4RL	-4LL									3.437
-5RS	-5LS				0.2830	0.2754			0.750	2.687
-5RL	-5LL									3.562
-6RS	-6LS	0.563	1.313				1.000			2.750
-6RL	-6LL									3.625

1/ Includes last full thread engagement.

REQUIREMENTS:

1. Material: Material shall be in accordance with MIL-DTL-8878.

2. Protective treatment: Protective treatment shall be in accordance with MIL-DTL-8878.

3. Heat treatment: Heat Treatment 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. Tolerances: Unless otherwise specified, tolerances: decimals ±0.010, angles ±0.5°.

7. Outside diameter (O.D.): O.D. of the "J" dimension may be a flat area.

NOTES:

(This section contains information of a general or explanatory nature that may be helpful, but is not mandatory.)

1. The part or identifying number (PIN) consists of the letters MS, the specification sheet number, and a dash number taken from table I. A "C" in lieu of dash indicates 17-4PH; a dash indicates carbon or alloy steel. The first letter following the dash number or letter C indicates direction of thread (left or right hand) and the second letter indicates length (short or long).

EXAMPLE: MS 21253 - 3RL

- 3RL — Dash number (see table I)
- - — Use "C" for 17-4PH or a dash for carbon or alloy steel
- 21253 — Specification sheet number
- MS — MS prefix

MS21253C3LS Indicates - Clevis end, 17-4PH, 0.1900 (#10)-32 left hand thread, short.
MS21253-3RL Indicates - Clevis end, steel, 0.1900 (#10)-32 right hand thread, long.

2. Remove burrs and sharp edges. (See MIL-DTL-8878.)

3. Dimensions are in inches.

4. Interpret drawing in accordance with ASME Y14.5M.

5. In the event of a conflict between the text of this document and the references cited herein, the text of this document takes precedence.

6. Unless otherwise specified, issues of referenced documents are those in effect at the time of solicitation.

7. For clip locking of turnbuckles, see MS33736 and MIL-DTL-8878.

8. Cutter radius mark, which is used as a clip slot alignment indicator, must be present on this surface.

9. During fabrication of the clip slot groove, operation of the cutter shall be maintained for the length of the terminal shank until engagement of the curved surface occurs (see Note 8). Depending upon the part tolerance conditions, the cutter radius marks may or may not appear on the shank surface and shall not be cause for rejection.

10. The parts covered by dash numbers shown on AN162 are canceled after 10 December 1971. Alloy and carbon MS21253 parts are inactive for new design. Use only 17-4 PH stainless steel parts for new design and replacement for comparable alloy and carbon steel MS21253 parts and AN162 parts. The canceled AN162 parts and alloy and carbon steel MS21253 parts cannot replace comparable 17-4 PH stainless parts and should be used until existing stock is depleted. Substitution shall be in accordance with table II.

TABLE II. Substitution table.

PART NUMBERS		
Canceled part AN162	Inactive part MS21253	17-4 PH Stainless steel parts
Dash number	Dash number	Dash number
3RS	3RS	C3RS
3LS	3LS	C3LS
3RL	3RL	C3RL
3LL	3LL	C3LL
4RS	4RS	C4RS
4LS	4LS	C4LS
4RL	4RL	C4RL
4LL	4LL	C4LL
5RS	5RS	C5RS
5LS	5LS	C5LS
5RL	5RL	C5RL
5LL	5LL	C5LL
6RS	6RS	C6RS
6LS	6LS	C6LS
6RL	6RL	C6RL
6LL	6LL	C6LL

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.

Custodians:
Army - AV
Navy - AS
Air Force - 99
DLA - GS

Preparing Activity:
DLA - GS5

(Project 1640-2009-008)

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST database at https://assist.daps.dla.mil/.