

INCH-POUND

MIL-DTL-6117E  
 15 August 1997  
 SUPERSEDING  
 MIL-T-6117D  
 1 DECEMBER 1994

## DETAIL SPECIFICATION

## TERMINAL, WIRE ROPE ASSEMBLIES, SWAGED TYPE

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

## 1. SCOPE

1.1 Scope. This specification covers swaging terminals to wire rope to make up wire rope assemblies.

## 2. APPLICABLE DOCUMENTS;

2.1 Government documents

2.1.1 Specifications, standards, and handbooks. The following specifications and standards form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those listed in the issue of the Department of Defense Index of Specifications and Standards (DODISS) and supplement thereto, cited in the solicitation (see 6.2).

## SPECIFICATION

## MILITARY

MIL-DTL-781	Terminal: Wire Rope, Swaging
MIL-DTL-5688	Wire Rope Assemblies, Aircraft, Proof Testing and Prestretching of
MIL-C-11796	Corrosion Preventive Compound, Petrolatum, Hot Application
MIL-DTL-83420	Wire Rope, Flexible, for Aircraft Control

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: Defense Industrial Supply Center, 700 Robbins Avenue, (DISC-EED), Philadelphia, PA 19111-5096 by using the Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

AMSC N/A

FSC 4030

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.

MIL-DTL-6117E

STANDARDS

MILITARY

AND10081 Terminal Shank, Swaging, Dimensions for

(Unless otherwise indicated, copies of the federal and military specifications and standards are available from the Defense Printing Service, Standardization Document Order Desk, 700 Robbins Avenue, Bldg 4D, Philadelphia, PA 19111-5094).

2.2 Non-Governmental publications. The following document forms a part of this document to the extent specified herein. Unless otherwise specified, the issues of the documents which are DoD adopted are those listed in the issue of the DODISS cited in the solicitation. Unless otherwise specified, the issues of documents not listed in the DODISS are the issues of the documents cited in the solicitation (see 6.2).

AMERICAN NATIONAL STANDARDS INSTITUTE INC.

ANSI/ASQC Z1.4 Sampling Procedures and Tables for Inspection by Attributes

(Application for copies should be addressed to the American National Standards Institute Inc., 10 East 40th Street, New York, NY 10016).

(Non-Government standards and other publications are normally available from the organizations that prepare or distribute the documents. These documents also may be available in or through libraries or other informational services.)

2.3 Order of precedence. In the event of a conflict between the text of this document and the references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

3. REQUIREMENTS

3.1 Materials. Wire rope shall conform to MIL-DTL-83420. Terminals shall conform to MIL-DTL-781, AND10081, and to the applicable standard, listed in Section 2. Special terminals not dimensionally conforming to Military Standards shall conform to AND10081 and applicable detail drawings.

3.1.1 Reclaim materials. The use of reclaimed materials shall be encouraged to the maximum extent possible.

3.2 Swaging. Wire rope assemblies shall be swaged in accordance with the appropriate standards and AND10081, as applicable. Before swaging, the fitting shall be anchored to the wire rope with the wire rope end inserted to the full depth of the bore. Swaging shall be accomplished by uniformly cold-working the terminal shank until its dimensions conform to appropriate dimensions listed in the applicable standard or, in the case of special terminals, to appropriate dimensions listed in AND10081.

3.3 Breaking strength. The breaking strength of the wire rope assemblies shall not be less than the allowable Minimum Breaking Strength (MBS) for the type and size wire rope to which the terminal is attached.

3.4 Workmanship. Workmanship shall be such that, after swaging, terminals shall not contain splits or cracks. Swaging shall not cause injurious defects in the terminal or wire rope.

3.5 Proof load test. Proof load test per MIL-DTL-5688.

## MIL-DTL-6117E

## 4. VERIFICATION

4.1 Inspection lot. An inspection lot of wire rope assemblies shall consist of the number of assemblies of the same materials and wire rope diameter produced consecutively by the same swaging machine, or series of progressive swaging machines, and submitted for inspection at the same time under one contract or purchase order.

4.2 Sampling. Identical sample assemblies may be used for the examination of product and mechanical tests.

4.2.1 Examination of product. Assemblies to be inspected shall be chosen from the inspection lot by random sampling. ASQC Z1.4 shall be used as a guide for determining sampling requirements.

4.2.2 Mechanical tests. Assemblies to be inspected shall be chosen from the inspection lot by random sampling. One sample from each lot will be selected for mechanical test.

4.2.3 Proof load test. All wire rope assemblies shall be proof load tested in accordance with MIL-DTL-5688.

4.3 Tests.

4.3.1 Examination of products. Samples shall be examined to determine conformance to the applicable drawing and requirements not covered by the following tests.

4.3.2 Mechanical tests.

4.3.2.1 Breaking strength. The wire rope assembly shall be subjected to a load not less than the allowable MBS for the type and size of the wire rope to which the terminals are attached. This information is contained in applicable specifications. The manner in which the load shall be applied to the fitting end of the terminal shall be governed by the design of the fitting. Prior to application of the load, the wire rope shall be marked at the point where it enters the swaging end of the terminal. Breaking of the wire rope before reaching the specified load, any slippage of the wire rope in the fitting, or any signs of failure in the terminal shall constitute failure.

## 5. PACKAGING

5.1 Packaging. For acquisition purposes, the packaging requirements shall be as specified in the contract or order (see 6.2). When actual packaging of materiel is to be performed by DoD personnel, these personnel need to contact the responsible packaging activity to ascertain requisite packaging requirements. Packaging requirements are maintained by the Inventory Control Point's packaging activity within the Military Department or Defense Agency, or within the Military Department's System Command. Packaging data retrieval is available from the managing Military Department or Defense Agency's automated packaging files, CD-ROM products, or by contacting the responsible packaging activity.

## 6. NOTES

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

6.1 Intended use. The swaged wire rope assemblies covered by this specification are intended for general aircraft use.

MIL-DTL-6117E

6.2 Acquisition documents. Acquisition documents should specify the following:

- a. Title, number, and date of this specification.
- b. MS part number of terminals, size and type of wire rope desired and length of the assembly, or the applicable detail drawing number (see 3.1).
- c. Issue of DODISS to be cited in the solicitation, and if required, the specified issue of individual documents referenced (see 2.1.1).

6.3 Subject term (key word) listing.

Permanent  
Testing procedures  
Wire rope assemblies

6.4 Changes from previous issue. Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extensiveness of the changes.

Custodians:  
Air Force - 99  
Navy - AS

Preparing Activity:  
DLA - IS

(Project No. 4030-0286)

Review Activity:  
Army-MI  
Air Force - 82

# STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

## INSTRUCTIONS

1. The preparing activity must complete blocks 1, 2, 3, and 8. In block 1, both the document number and revision letter should be given.
2. The submitter of this form must complete blocks 4, 5, 6, and 7.
3. The preparing activity must provide a reply within 30 days from receipt of the form.

NOTE: This form may not be used to request copies of documents, nor to request waivers, or clarification of requirements on current contracts. Comments submitted on this form do not constitute or imply authorization to waive any portion of the referenced document(s) or to amend contractual requirements.

### I RECOMMEND A CHANGE:

1. DOCUMENT NUMBER  
MIL-DTL-6117E

2. DOCUMENT DATE (YYMMDD)  
970815

### 3. TERMINAL, WIRE ROPE ASSEMBLIES, SWAGED TYPE

### 4. NATURE OF CHANGE *(Identify paragraph number and include proposed rewrite, if possible. Attach extra sheets as needed.)*

### 5. REASON FOR RECOMMENDATION

### 6. SUBMITTER

a. NAME *(Last, First, Middle Initial)*

b. ORGANIZATION

c. ADDRESS *(Include Zip Code)*

d. TELEPHONE *(Include Area Code)*  
(1) Commercial  
(2) AUTOVON  
*(if applicable)*

7. DATE SUBMITTED  
(YYMMDD)

### 8. PREPARING ACTIVITY

a. NAME  
DEFENSE INDUSTRIAL SUPPLY CENTER

b. TELEPHONE *Include Area Code)*  
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ATTN: DISC-EED  
700 ROBBINS AVENUE  
PHILADELPHIA, PA 19111-5096

**IF YOU DO NOT RECEIVE A REPLY WITHIN 45 DAYS, CONTACT:**  
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Telephone (703) 756-2340 AUTOVON 289-2340