

INCH - POUND

MIL-H-3280E
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SUPERSEDING
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MILITARY SPECIFICATION

HOISTS, CHAIN, MANUALLY OPERATED, PACKAGING OF

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

1. SCOPE

1.1 Scope. This specification covers the minimum requirements for preservation, packing, and marking of manually operated chain hoists.

2. APPLICABLE DOCUMENTS

2.1 Government documents.

2.1.1 Specifications, standards, and handbooks. The following specifications, standards, and handbooks 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).

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: USA Belvoir Research, Development, and Engineering Center, ATTN: STRBE-TSE, Fort Belvoir, VA 22060-5606 by using the Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

AMSC N/A

AREA PACK

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

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SPECIFICATIONS

FEDERAL

- PPP-B-601 - Boxes, Wood, Cleated-Plywood.
- PPP-B-621 - Boxes, Wood, Nailed and Lock-Corner.
- PPP-B-636 - Boxes, Shipping, Fiberboard.
- PPP-P-40 - Packaging and Packing of Hand Tools.
- PPP-T-60 - Tape: Packaging, Waterproof

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- MIL-C-104 - Crates, Wood; Lumber and Plywood Sheathed, Nailed and Bolted.
- MIL-P-116 - Preservation, Methods of.
- MIL-B-121 - Barrier Material, Greaseproofed, Waterproofed, Flexible.
- MIL-C-3774 - Crates, Wood; Open, 12,000- and 16,000-Pound Capacity.
- MIL-V-13811 - Varnish, Waterproofing, Electrical, Ignition.
- MIL-C-52950 - Crates, Wood, Open and Covered.

STANDARDS

FEDERAL

- FED-STD-101 - Preservation, Packaging and Packing Materials, Test Procedures.

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- MIL-STD-105 - Sampling Procedures and Tables for Inspection by Attributes.
- MIL-STD-129 - Marking for Shipment and Storage.
- MIL-STD-1186 - Cushioning, Anchoring, Bracing, Blocking, and Waterproofing; with Appropriate Test Methods.

(Unless otherwise indicated, copies of federal and military specifications, standards, and handbooks are available from the Standardization Documents Order Desk, Building 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5094.)

2.2 Non-Government publications. The following document(s) form 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).

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AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

- | | |
|--------|--|
| D 3953 | - Strapping, Flat Steel and Seals. |
| D 4675 | - Selection and Use of Flat Strapping Materials. |

(Application for copies should be addressed to the American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103.)

2.3 Order of precedence. In the event of a conflict between the text of this document and the references cited herein, (except for related associated detail specifications, specification sheets or MS standards), 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 First article pack. Unless otherwise specified (see 6.2), a sample shall be subjected to first article pack inspection (see 6.3) in accordance with 4.3.

3.2 Materials. Materials shall be as specified herein and in applicable specifications and standards. Materials not specified shall be selected by the contractor and shall be subject to all provisions of this specification. Materials shall be free of defects affecting serviceability.

3.2.1 Recovered materials. For the purpose of this requirement, recovered materials are those materials which have been collected from solid waste and reprocessed to become a source of raw materials, as distinguished from virgin raw materials. The components, pieces and parts incorporated in the hoists may be newly fabricated from recovered materials to the maximum extent practicable, provided the hoists produced meets all other requirements of this specification. Used, rebuilt or remanufactured components, pieces and parts shall not be incorporated in the hoists.

3.3 Preservation. Preservation shall be level A or C as specified (see 6.2).

3.3.1 Level A.

3.3.1.1 Cleaning, drying, and preservatives. Surfaces to which a contact preservative is to be applied shall be cleaned and dried in accordance with MIL-P-116. Preservatives specified herein shall conform to the applicable specifications listed in and shall be applied in accordance with MIL-P-116.

3.3.1.2 Unprotected metal surfaces. Unpainted and untreated exterior components and parts of the hoist, except machined surfaces, requiring the application of a contact preservative in accordance with MIL-P-116, shall be coated with type P-1 preservative. Machined surfaces shall be coated with type P-11 preservative. The coated surfaces shall be wrapped or covered with barrier-material conforming to MIL-B-121, type I, grade A, class 2 and the wraps or covers shall be secured in place with tape conforming to PPP-T-60,

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type IV. Unpainted information plates, except anodized aluminum plates, shall be coated with varnish conforming to MIL-V-13811.

3.3.1.3 Lubrication. The hoists, including the bearings, shall be lubricated, using the lubricants required for operation of the hoists.

3.3.1.4 Enclosed gears. Gear housings shall be filled to the operating level with the operational lubricant. The gears shall be actuated to assure coating of all interior parts and surfaces with the lubricant.

3.3.1.5 Roller chains. Roller chains shall be coated with enough type P-3 or type P-9 preservative to assure penetration of the preservative to the inner surfaces of the rollers, pins, and bushings. After the excess type P-3 or type P-9 preservative has drained, the entire chain and the unpainted surfaces of sprockets shall be coated with type P-1 preservative.

3.3.1.6 Repair parts. The preservative application criteria and applicable method(s) of preservation of MIL-P-116, shall be used to preserve the repair parts.

3.3.1.7 Tools. Tools shall be preserved in accordance with the level A requirements of PPP-P-40.

3.3.1.8 Technical publications. Technical publications for each hoist shall be preserved together in accordance with MIL-P-116, method IC-1.

3.3.1.9 Consolidation. The preserved repair parts, tools, and publications for each hoist weighing not more than 1,000 pounds shall be consolidated in a close-fitting box conforming to PPP-B-636, class weather-resistant, style optional. Box closure shall be in accordance with the appendix to the box specification, method V. The preserved repair parts, tools, and publications for each hoist weighing over 1,000 pounds shall be consolidated in a close-fitting box conforming to PPP-B-601, overseas type, style optional. Strapping of the box shall not be required.

3.3.2 Level C. Each complete hoist, repair tools and publications shall be preserved in accordance with the contractor's standard practice in a manner to prevent deterioration and damage during shipment from the contractor to the initial destination.

3.4 Packing. Packing shall be level A, level B, or C as specified (see 6.2).

3.4.1 Level A.

3.4.1.1 Hoists weighing not more than 1,000 pounds. Unless otherwise specified (see 6.2), each complete hoist, with consolidated repair parts, tools, and publications preserved as specified in 3.3, shall be packed in a close-fitting box conforming to PPP-B-601, overseas type, style optional or

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PPP-B-621, class 2, style optional. Blocking, bracing, and anchoring of hoists within the boxes shall be in accordance with MIL-STD-1186. Strapping shall conform to ASTM D 3953, type 1 or 2, grade I or II and ASTM D 4675.

3.4.1.1.1 Hoists not weighing over 50 pounds. When specified (see 6.2), hoists, weighing not more than 50 pounds, complete with consolidated repair parts, tools, and publications furnished in a vendors carton, shall be packed in quantities not to exceed 1,000 pounds in containers as specified in 3.4.1.1.

3.4.1.2 Hoists weighing over 1,000 pounds. Each complete hoist, with consolidated repair parts, tools, and publications shall be packed in a crate conforming to MIL-C-104, type I, class 1 or 2, style A. Blocking, bracing, and anchoring of hoists within the crates shall be in accordance with MIL-STD-1186. Strapping shall conform to ASTM D 3953, Type 1a 2, zinc coated, size as applicable and ASTM D 4675.

3.4.2 Level B. Unless otherwise specified (see 6.2), the complete hoists preserved as specified in 3.3, shall be packed as specified in 3.4.1.1 and 3.4.1.2 as specified for level A, except wood boxes shall be domestic type or class, strapping may be zinc coated and crates shall conform to MIL-C-3774, type I or MIL-C-52950, type V, style A, nondemountable. When specified (see 6.2), hoists weighing not more than 50 pounds, complete with consolidated repair parts, tools, and publications furnished in a vendor's carton, shall be packed in quantities not to exceed the weight limitations of the wood boxes specified herein.

3.4.3 Level C. The complete hoists, repair parts and tools and publications, preserved as specified in 3.3, shall be packed to assure carrier acceptance and safe delivery to destination at lowest ratings in compliance with the applicable carrier rules and regulations.

3.5 Marking. In addition to any special marking specified in the contract or purchase order (see 6.2), marking shall be in accordance with MIL-STD-129.

3.6 Workmanship. All operations and processes involved in accomplishing the cleaning, preserving, packaging, packing and marking requirements specified herein shall be in accordance with the highest grade practices associated with this type of work.

4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection. Unless otherwise specified in the contract or purchase order, the contractor is responsible for the performance of all inspection requirements (examinations and tests) as specified herein. Except as otherwise specified in the contract or purchase order, the contractor may use his own or any other facilities suitable for the performance of the inspection requirements specified herein, unless disapproved by the Government. The Government reserves the right to perform

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any of the inspections set forth in the specification where such inspections are deemed necessary to ensure supplies and services conform to prescribed requirements.

4.1.1 Responsibility for compliance. All items must meet all requirements of section 3. The inspection set forth in this specification shall become a part of the contractor's overall inspection system or quality program. The absence of any inspection requirements in the specification shall not relieve the contractor of the responsibility of ensuring that all products or supplies submitted to the Government for acceptance comply with all requirements of the contract. Sampling inspection, as part of manufacturing operations, is an acceptable practice to ascertain conformance to requirements, however, this does not authorize submission of known defective material, either indicated or actual, nor does it commit the Government to acceptance of defective material.

4.1.2 Component and material inspection. The contractor is responsible for insuring that components and materials are manufactured, examined, and tested in accordance with referenced specifications and standards, as applicable.

4.1.3 Material inspection. The contractor is responsible for ensuring that supplies and materials used are manufactured, examined, and tested in accordance with referenced specifications and standards.

4.2 Classification of inspections. The inspection requirements specified herein are classified as follows:

- a. First article pack inspection (see 4.3).
- b. Quality conformance inspection (see 4.4).

4.3 First article pack inspection.

4.3.1 Examination. The first article pack for level A or level B shall be examined as specified in 4.4.4. Presence of one or more defects shall be cause for rejection.

4.3.2 Tests. The first article pack for level A or level B shall be tested as specified in 4.3.2.1 for boxed hoists and 4.3.2.2 for crated hoists. Failure of either test shall be cause for rejection.

4.3.2.1 Boxed hoists. Boxed hoists not exceeding 200 pounds gross weight shall be subjected to the free-fall drop test in accordance with FED-STD-101, test method 5007. Boxed hoists exceeding 200 pounds shall be subjected to the pendulum-impact test in accordance with FED-STD-101, test method 5012.

4.3.2.2 Crated hoists. Crated hoists shall be subjected to the guided-impact test (railroad-car) in Appendix A to MIL-STD-1186. The test car strike a string of five empty cars with draft gear extended and brakes set, at a speed of not less than 10 miles per hour and not more than 11 miles per hour.

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When it is impractical to test in accordance with the railroad-car method, the incline-impact test method 5023 or the pendulum-impact test method 5012 of FED-STD-101 may be substituted.

4.3.3 Failure criteria. Any shifting of contents, visible damage to the contents, or any loose, broken, or displaced anchoring, blocking or bracing within the container, or rendering of the interior containers, wraps, liners, barriers, or cushioning ineffectual in providing protection to the contents shall constitute failure of either test.

4.4 Quality conformance inspection.

4.4.1 Inspection stages. Inspection shall be in two stages as follows:

- a. The first stage shall include inspection of materials, methods, containers, and markings inside the shipping container.
- b. The second stage shall include inspection of materials and markings after closing the container.

4.4.2 Unit of product. For the purpose of inspection, a pack of any one level containing all components prepared for any applicable stage of inspection shall be considered a unit of product.

4.4.3 Sampling. Sampling for examination shall be in accordance with MIL-STD-105.

4.4.4 Examination. Samples selected in accordance with 4.4.3 shall be examined for the following defects. One or more defects shall be cause for rejection.

101. Preservatives not applied as specified for level A or C (see 3.3.1.1).
102. Hoists not lubricated as specified for level A or C (see 3.3.1.3).
103. Gear housings not filled and the gears not operated as specified for level A or C (see 3.3.1.4).
104. Roller chains and sprockets not preserved as specified for level A or C (see 3.3.1.5).
105. Repair parts, tools, or publications not preserved as specified for level A or C (see 3.3.1.6, 3.3.1.7 and 3.3.1.8).
106. Consolidation not as specified for level A, B or C (see 3.3.1.9).
107. Preservation not as specified for level C (see 3.3.2).
108. Blocking, bracing, and anchoring not provided as specified for level A or B (see 3.4.1.1 and 3.4.2).
109. Strapping not as specified for level A or B (see 3.4.1.1 and 3.4.2).
110. Hoists weighing under 50 pounds not packed as specified, when required for level A or B (see 3.4.1.1.1 and 3.4.2).
111. Packing not as specified for level C (see 3.4.3).
112. Marking illegible, incomplete, incorrect, or missing for level A, B or C (see 3.5).

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5. PACKAGING

(This section not applicable to this specifications.)

6. NOTES

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

6.1 Intended use. It is intended that this specification be used for reference in section 5 of equipment specifications, for direct reference in contracts or orders, and in the preparation of packaging data sheets.

6.2 Acquisition requirements. Acquisition documents should specify the following:

- a. Title, number, and date of the specification.
- b. Issue of DODISS to be cited in the solicitation, and if required, the specific issue of individual documents referenced (see 2.1.1 and 2.2).
- c. When a first article pack is not required (see 3.1).
- d. Time frame required for submission of the first article pack, when applicable (see 3.1).
- e. Level of preservation and packing required (see 3.3 and 3.4).
- f. When hoists weighing not more than 50 pounds are required to be packed in quantities (see 3.4.1.1.1 and 3.4.2).
- g. Any special marking (see 3.5).

6.3 First article pack. When a first article inspection is required, the item(s) should be a preproduction model. The first article should consist of one or more units. The contracting officer should include specific instructions in acquisition documents regarding arrangements for examinations, approval of the first article test results and disposition of the first articles. Invitation for bids should provide that the Government reserves the right to waive the requirement for samples for first article inspection to those bidders offering a product which has been previously acquired or tested by the Government, and that bidders offering such products, who wish to rely on such production or test, must furnish evidence with the bid that prior government approval is presently appropriate for the pending contract. Bidders should not submit alternate bids unless specifically requested to do so in the solicitation.

6.4 Environmental. Environmental pollution prevention measures are contained in the packaging material specification referenced herein. Refer to material specification or preparing activity for recommended disposability methods.

6.5 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.

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6.6 Subject term (key word) listing.

Marking and packing
Packing
Preservation

Custodians:

Army - ME
Navy - YD

Preparing activity:

Army - ME

Project 3950-0287

Review activities:

Army- SM
DLA - CS

User activities:

Army - AT

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-H-3280E	2. DOCUMENT DATE (YYMMDD) 901218
3. DOCUMENT TITLE Hoists, Chain, Manually Operated, Packaging of			
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)	e. DATE SUBMITTED (YYMMDD)
8. PREPARING ACTIVITY			
a. NAME		b. TELEPHONE (Include Area Code) (1) Commercial (703) 664-5717 (2) AUTOVON 354-5717	
c. ADDRESS (Include Zip Code) US Army Belvoir RDE Center ATTN: STRBE-TSE		IF YOU DO NOT RECEIVE A REPLY WITHIN 45 DAYS, CONTACT: Defense Quality and Standardization Office 5203 Leesburg Pike, Suite 1403, Falls Church, VA 22041-3466 Telephone (703) 755-3740 AUTOVON 354-3740	