

INCH-POUND

MIL-P-44376
1 August 1989
SUPERSEDING
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MILITARY SPECIFICATION

**POLE, SKI, ALUMINUM SHAFT, ADJUSTABLE, SNOW AND ICE TRAVERSING
EQUIPMENT (SITE)**

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

1. SCOPE

1.1 Scope. This specification covers a ski pole with adjustable length aluminum shaft, plastic handgrip with nylon wrist strap and basket webbing, polycarbonate basket, polyethylene locknut, and steel tip.

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: U.S. Army Natick Research, Development, and Engineering Center, Natick, MA 01760-5014 by using the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

AMSC N/A

FSC 8465

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SPECIFICATIONS

FEDERAL

PPP-B-636 - Boxes, Shipping, Fiberboard

MILITARY

MIL-L-35078 - Loads, Unit: Preparation of Semiperishable Subsistence Items; Clothing, Personal Equipment and Equipage; General Specification For

STANDARDS

MILITARY

- MIL-STD-105 - Sampling Procedures and Tables for Inspection by Attributes
- MIL-STD-129 - Marking for Shipment and Storage
- MIL-STD-147 - Palletized Unit Loads
- MIL-STD-731 - Quality of Wood Members for Containers and Pallets

(Unless otherwise indicated, copies of federal and military specifications, standards, and handbooks are available from the Naval Publications and Forms Center, (ATTN: NPODS), 5801 Tabor Avenue, Philadelphia, PA 19120-5099.)

2.1.2 Other Government documents, drawings, and publications. The following other Government documents, drawings, and publications form a part of this document to the extent specified herein. Unless otherwise specified, the issues are those cited in the solicitation.

DRAWINGS.

U.S. ARMY NATICK RESEARCH, DEVELOPMENT, AND ENGINEERING CENTER

2-10-107 - Pole, Ski, Aluminum Shaft, Adjustable Assembly

(Copies of drawings are available from the U.S. Army Natick Research, Development, and Engineering Center, Natick, MA 01760-5014.)

2.2 Non-Government 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).

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AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

D 3951 - Standard Practice for Commercial Packaging

(Application for copies should be addressed to the American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103-1187.)

(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 First article. When specified (see 6.2), a sample shall be subjected to first article inspection (see 6.3) in accordance with 4.3.

3.2 Guide samples. Guide samples, when furnished, are solely for guidance and information (see 6.4). Variations from this specification may appear in the samples, in which case this specification shall govern.

3.3 Materials. The materials shall be as specified on Drawing 2-10-107 and all subsidiary drawings and parts lists pertaining thereto. It is encouraged that recycled material be used when practical as long as it meets the requirements of this specification.

3.4 Design and construction. The design and construction of the ski pole shall be as specified herein and as shown on Drawing 2-10-107 and all subsidiary drawings and parts lists pertaining thereto.

3.4.1 Stitches, seams and stitching. All seams and stitchings shall be as specified on the drawings.

3.4.1.1 Automatic stitching. Automatic stitching machines may be used to perform any of the required stitch patterns provided the requirements of the stitch pattern, stitches per inch, and size and type of thread are met; and at least three tying, overlapping, or backstitches are used to secure the ends of the stitching.

3.4.1.2 Lubrication of thread. There shall be no lubrication of the thread prior to or during sewing (see 4.4.1.1).

3.4.1.3 Type 301 stitching. Ends of all stitching shall be backstitched or overstitched as specified on the drawings except where ends are turned under or caught in other seams or stitching. Thread tension shall be maintained so that

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there will be no loose bobbin or top thread or excessively tight stitching resulting in puckering of the materials sewn. The lock shall be imbedded in the materials sewed.

3.4.2 Clinching of eyelets and washers. Eyelets and washers shall be neatly and securely clinched without any crack, split, or burr.

3.5 Ski pole adjustment. The ski pole shall be capable of extension/locking and hand grip replacement when tested as specified in 4.4.5.

3.6 Workmanship. The end items shall conform to the quality of product established by this specification.

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

4.1.1 Responsibility for compliance. All items shall meet all requirements of sections 3 and 5. 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 the requirements, however, this does not authorize submission of known defective material, either indicated or actual, nor does it commit the Government to accept defective material.

4.1.2 Responsibility for dimensional requirements. Unless otherwise specified in the contract or purchase order, the contractor is responsible for ensuring that all specified dimensions have been met. When dimensions cannot be examined on the end item, inspection shall be made at any point, or at all points in the manufacturing process necessary to ensure compliance with all dimensional requirements.

4.1.3 Certificate of compliance. When certificates of compliance are submitted, the Government reserves the right to inspect such items to determine the validity of the certification.

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

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

4.3 First article inspection. When a first article is required (see 3.1 and 6.2), it shall be examined for the defects specified in 4.4.3 and 4.4.4 and tested as specified in 4.4.5. The presence of any defect or failure to pass any test shall be cause for rejection of the first article.

4.4 Quality conformance inspection. Unless otherwise specified, sampling for inspection shall be performed in accordance with MIL-STD-105.

4.4.1 Component and material inspection. In accordance with 4.1, components and materials shall be inspected in accordance with all the requirements of referenced documents unless otherwise excluded, amended, modified, or qualified in this specification or applicable purchase document.

4.4.1.1 Component and material certification. A certificate of compliance may be acceptable as evidence that the prohibition of thread lubrication conforms to the requirement specified in 3.4.1.2.

4.4.2 In-process inspection. Inspection of subassemblies shall be made to ascertain that construction details which cannot be examined in the finished product are in accordance with specified requirements. The Government reserves the right to exclude from consideration for acceptance, any material or service for which in-process inspection has indicated nonconformance.

4.4.3 End item visual examination. The end items shall be examined for the defects listed in table I. The lot size shall be expressed in units of ski poles. The sample unit shall be one ski pole. The inspection level shall be II (see 6.5).

TABLE I. End item visual defects

Examine	Defect	Classification	
		Major	Minor
Construction and workmanship	Any component missing or not as specified	101	
	Screw holding strap to hand grip not securely screwed in place, i.e., is loose		201
	Threaded post insecurely clinched in place, i.e., is loose	102	

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TABLE I. End item visual defects (cont'd)

Examine	Defect	Classification	
		Major	Minor
Construction and workmanship (cont'd)	Component not assembled as shown on applicable drawing		202
	Not clean, i.e., has dirt or grease		203
	Component is malformed, cracked, split, bent out of shape, or broken	103	
	Burr, sharp edge, or rough spot		204
	Not of the specified color		205
Nylon, webbing	Not all the same color		206
	Any cut or tear	104	

4.4.4 End item dimensional examination. The end items shall be examined for conformance to the dimensions specified on the drawings. Only those dimensions that can be evaluated without damaging or disassembling the end items shall be examined. Any dimension not within the specified tolerance shall be classified as a defect. The lot size shall be expressed in units of ski poles. The sample unit shall be one ski pole. The inspection level shall be S-2 (see 6.5).

4.4.5 End item testing. The end items shall be tested as specified in 4.4.5.1 and 4.4.5.2. The lot size shall be expressed in units of ski poles. The sample unit shall be one ski pole. The inspection level shall be S-3 (see 6.5).

4.4.5.1 Locking, unlocking, and extending ski pole test. With the ski pole in the fully compressed and locked position, unlock the ski pole by rotating the top pole half by hand one complete turn in a counter-clockwise direction. At this point, the pole shall be able to be extended by hand from the fully compressed to the fully extended position. Now, with the ski pole in the fully extended position, lock the ski pole by rotating the top half by hand one complete turn in the clockwise direction. A defect shall be scored for each nonconforming condition, i.e., for inability to lock, unlock and extend/compress ski pole.

4.4.5.2 Locking, unlocking and removal of ski pole hand grip test. With the ski pole handgrip in the fully locked position, unlock the handgrip by rotating it by hand one complete revolution in the counter-clockwise direction. At this point the hand grip shall be able to be removed by using a sharp tugging motion on the handgrip. Replace the hand grip on the ski pole and lock handle in place by rotating it one complete turn in the clockwise direction. A defect shall be scored for each nonconforming condition, i.e., for inability to lock, unlock, and extend/compress the ski pole.

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4.4.6 Packaging examination. The fully packaged end items shall be examined for the defects listed below. The lot size shall be expressed in units of shipping containers. The sample unit shall be one shipping container fully packaged. The inspection level shall be S-2 (see 6.5).

<u>Examine</u>	<u>Defect</u>
Marking	Omitted; incorrect; illegible; of improper size, location, sequence, or method of application
Materials	Any component missing, damaged, or not as specified
Workmanship	Inadequate application of components, such as: incomplete sealing or closure of flap, improper taping, loose strapping, or inadequate stapling Bulged or distorted container
Content	Number per container is more or less than required

4.4.7 Palletization examination. The fully packaged and palletized end items shall be examined for the defects listed below. The lot size shall be expressed in units of palletized unit loads. The sample unit shall be one palletized unit load, fully packaged. The inspection level shall be S-1 (see 6.5).

<u>Examine</u>	<u>Defect</u>
Finished dimensions	Length, width, or height exceeds specified maximum requirement
Palletization	Pallet pattern not as specified Interlocking of loads not as specified Load not bonded as specified
Weight	Exceeds maximum load limits
Marking	Omitted; incorrect; illegible; of improper size, location, sequence, or method of application

5. PACKAGING

5.1 Preservation. Preservation shall be level A.

5.1.1 Level A. Each ski pole with the snow basket removed, shall be collapsed to its shortest dimension. Two ski poles shall be nested tip to handgrip and secured at each end with cotton tape or twine. Two snow baskets shall be nested together and secured with cotton tape or twine. Two poles and two snow baskets (one pair) shall be placed in a clear plastic bag. Each bag shall be closed by means of heat sealing.

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5.2 Packing. Packing shall be level A, B, or Commercial, as specified (see 6.2).

5.2.1 Level A packing. Twenty four pairs of ski poles preserved as specified in 5.1, shall be packed in the most compact manner in a snug-fitting fiberboard shipping container conforming to style RSC, grade V2s of PPP-B-636. The container shall be of a size palletizable in accordance with the appendix of MIL-STD-147. Each shipping container shall be closed in accordance with method III, waterproofed in accordance with method V, and reinforced as specified in the appendix of PPP-B-636. Shipping containers shall be arranged in unit loads in accordance with MIL-L-35078 for the type and class of load specified (see 6.2). Strapping shall be limited to nonmetallic strapping, except for type II, class F loads.

5.2.2 Level B packing. Twenty four pairs of ski poles preserved as specified, shall be packed in a snug-fitting fiberboard shipping container as specified in 5.2.1, except that the fiberboard shall be type CF (variety DW) or SF, class domestic, grade 275 of PPP-B-636. Each shipping container shall be closed in accordance with method II, as specified in the appendix of PPP-B-636.

5.2.2.1 Weather-resistant fiberboard containers. When specified (see 6.2), the shipping container shall be a grade V3c, V3s, or V4s fiberboard box fabricated in accordance with PPP-B-636 and closed in accordance with method III, as specified in the appendix of the box specification.

5.2.3 Commercial packing. Ski poles preserved as specified, shall be packed in accordance with ASTM D-3951.

5.3 Palletization. When specified (see 6.2), ski poles packed as specified in 5.2.2 or 5.2.3, shall be palletized on a 4-way entry pallet in accordance with load type Ia of MIL-STD-147. Pallet types shall be type I (4-way entry), type IV, or type V in accordance with MIL-STD-147. Pallets shall be fabricated from wood groups I, II, III, or IV of MIL-STD-731. Each prepared load shall be bonded with primary and secondary straps in accordance with bonding means K and L or film bonding means O or P. Pallet pattern shall be in accordance with the appendix of MIL-STD-147.

5.4 Marking. In addition to any special marking required by the contract or purchase order, unit packs, shipping containers, and palletized unit loads shall be marked in accordance with MIL-STD-129 or ASTM D 3951, as applicable.

5.4.1 Plastic bagged unit packs. Plastic bagged unit packs shall have the required identification information legibly printed or stamped in black directly on the bag across the center face or on a white paper label inserted within the bag so as to permit ready identification.

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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 ski poles are intended for use by military skiers operating over variable snow cover on all types of slope and cross country terrain.

6.2 Acquisition requirements. Acquisition documents must specify the following:

- a. Title, number, and date of this 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 first article is required (see 3.1, 4.3, and 6.3).
- d. Levels of preservation and packing (see 5.1 and 5.2).
- e. Type and class of unit load (see 5.2.1).
- f. When weather-resistant grade fiberboard shipping containers are required for level B packing (see 5.2.2.1).
- g. When palletization is required (see 5.3).
- h. Acceptance criteria required (see 6.5).

6.3 First article. When a first article is required, it shall be inspected and approved under the appropriate provisions of FAR 52.209. The first article should be a preproduction sample. The contracting officer should specify the appropriate type of first article and the number of units to be furnished. The contracting officer should also include specific instructions in acquisition documents regarding arrangements for selection, inspection, and approval of the first article.

6.4 Sample. For access to samples, address the contracting activity issuing the invitation for bids.

6.5 Acceptance criteria. The acceptance criteria below is recommended for use. The acceptance criteria as specified in the contract or purchase order shall be binding. Unless otherwise specified, the following acceptance criteria are in accordance with MIL-STD-105.

6.5.1 End item visual examination. An AQL, expressed in terms of defects per hundred units, of 4.0 for major defects and 6.5 for total (major and minor combined) defects is recommended.

6.5.2 End item dimensional examination. An AQL, expressed in terms of defects per hundred units, of 4.0 is recommended.

6.5.3 End item testing. An AQL, expressed in terms of defects per hundred units, of 0.65 is recommended.

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6.5.4 Packaging examination. An AQL, expressed in terms of defects per hundred units, of 2.5 is recommended.

6.5.5 Palletization examination. An AQL, expressed in terms of defects per hundred units, of 6.5 is recommended.

6.6 Subject term (key word) listing.

Cross country
Downhill

Custodian:

Army - GL
Navy - MC
Air Force - 99

Preparing activity:

Army - GL
(Project 8465-0017)

Review activities:

Army - MD
Air Force - 82
DLA - CT

STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

*(See Instructions - Reverse Side)*1. DOCUMENT NUMBER
MIL-P-443762. DOCUMENT TITLE Pole, Ski, Aluminum Shaft, Adjustable, Snow & Ice
Traversing Equipment (Site)

3. NAME OF SUBMITTING ORGANIZATION

4. TYPE OF ORGANIZATION *(Mark one)* VENDOR USER MANUFACTURER OTHER *(Specify):* _____b. ADDRESS *(Street, City, State, ZIP Code)*

5. PROBLEM AREAS

a. Paragraph Number and Wording:

b. Recommended Wording:

c. Reason/Rationale for Recommendation:

6. REMARKS

7a. NAME OF SUBMITTER *(Last, First, MI) - Optional*b. WORK TELEPHONE NUMBER *(Include Area Code) - Optional*c. MAILING ADDRESS *(Street, City, State, ZIP Code) - Optional*8. DATE OF SUBMISSION *(YYMMDD)*

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NOTE: This form may not be used to request copies of documents, nor to request waivers, deviations, or clarification of specification 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.

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