

MIL-B-2424D(ME)  
6 October 1983  
SUPERSEDING  
MIL-B-2424C(ME)  
5 March 1975

MILITARY SPECIFICATION

BLOCK AND TACKLE: WITH LOAD LOCKING DEVICE

This specification is approved for use by the Mobility Equipment Research and Development Command, Department of the Army, and is available for use by all Departments and Agencies of the Department of Defense.

1. SCOPE

1.1 Scope. This specification covers a simple (single reeved fiber rope) block and tackle commonly used to perform varied lifting and movement of objects.

2. APPLICABLE DOCUMENTS

2.1 Government documents.

2.1.1 Specifications and standards. Unless otherwise specified, the following specifications and standards of the issue listed in that issue of the Department of Defense Index of Specifications and Standards (DoDISS) specified in the solicitation form a part of this specification to the extent specified herein.

Beneficial comment (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: USA Mobility Equipment Research and Development Command, ATTN: DRDME-DS, Fort Belvoir, VA 22060 by using the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

FSC 3940

## MIL-B-2424D(ME)

## SPECIFICATIONS

## FEDERAL

- |           |                                               |
|-----------|-----------------------------------------------|
| GCG-B-490 | - Blocks, Tackle (Manila and Nylon Rope).     |
| PPP-B-601 | - Boxes, Wood, Cleated-Plywood.               |
| PPP-B-636 | - Boxes, Shipping, fiberboard.                |
| PPP-B-640 | - Boxes, Fiberboard, Corrugated, Triple-Wall. |

## MILITARY

- |             |                |
|-------------|----------------|
| MIL-P-17343 | - Rope, Nylon. |
|-------------|----------------|

## STANDARDS

## MILITARY

- |              |                                                                |
|--------------|----------------------------------------------------------------|
| MIL-STD-105  | - Sampling Procedures and Tables for Inspection by Attributes. |
| MIL-STD-129  | - Marking for Shipment and Storage.                            |
| MIL-STD-130  | - Identification Marking of US Military Property.              |
| MIL-STD-889  | - Dissimilar Metals.                                           |
| MIL-STD-1188 | - Commercial Packaging of Supplies and Equipment.              |

(Copies of specifications, standards, and publications required by contractors in connection with specific acquisition functions should be obtained from the contracting activity or as directed by the contracting officer.)

2.2 Other publications. The following documents forms a part of this specification to the extent specified herein. The issue of the document which is indicated as DoD adopted shall be the issue listed in the current DoDISS and the supplement thereto, if applicable.

## CODE OF FEDERAL REGULATIONS (CFR)

- |                        |                                            |
|------------------------|--------------------------------------------|
| Title 29, Chapter XVII |                                            |
| Sub Part H, 1926.251   | - Rigging Equipment for Material Handling. |

(The Code of Federal Regulations (CFR) and the Federal Register (FR) are for sale on a subscription basis by the Superintendent of Documents, US Government Printing Office, Washington, DC 20402. When indicated, reprints of certain regulations may be obtained from the Federal agency responsible for issuance thereof.)

## MIL-B-2424D(ME)

2.3 Order of precedence. In the event of a conflict between the text of this specification and the references cited herein, the text of this specification shall take precedence.

## 3. REQUIREMENTS

3.1 Description. The block and tackle shall be as shown in figure 1 (see 6.3), and as specified herein, and shall consist of two double-sheave blocks reeved with a single rope.

3.2 Material. The material shall be as specified herein. However, when a definite material is not specified, a material shall be used which will enable the block and tackle to meet the performance requirements of this specification. Acceptance or approval of any constituent material shall not be construed as a guaranty of the acceptance of the finished product (see 6.4).

3.2.1 Material deterioration and control. The block and tackle system shall be fabricated from compatible materials, inherently corrosion resistant or treated to provide protection against the various forms of corrosion and deterioration that may be encountered in any of the applicable storage and operating environment to which the item may be exposed.

3.2.1.1 Disimilar metals. Dissimilar metals shall not be used in intimate contact with each other unless protected against galvanic corrosion. Dissimilar metals and methods of protection are defined and detailed in MIL-STD-889.

3.2.1.2 Identification of materials and finishes. The contractor shall identify the specific material, material finish or treatment for use with components and sub-components, and shall make information available, upon request, to the contracting officer or designated representative.

3.3 Blocks. Blocks shall conform to GCG-B-490, type IV, block size as specified (see 6.2). The fixed block shall be provided with a locking mechanism and becket. The movable block shall not be provided with a locking mechanism.

3.4 Nylon rope. Rope shall be nylon conforming to MIL-R-17343. The diameter of the rope shall fit the blocks specified (see 3.3). The length of the rope shall be as specified (see 6.2). The blocks shall be reeved with the rope. One end shall be passed through the becket of the fixed block and securely spliced in accordance with CFR Title 29, Sub Part H 1926.251 and as shown in figure 1. The free end of the rope shall be secured to prevent fraying.

MIL-B-2424D(ME)

3.5 Identification marking. The block and tackle shall be identified in accordance with MIL-STD-130.

3.6 Workmanship. The block and tackle shall be free from defects which could affect serviceability.

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 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 the specification where such inspections are deemed necessary to assure supplies and services conform to prescribed requirements.

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

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

- a. Quality conformance inspection (see 4.3).
- b. Inspection of packaging (see 4.5).

4.3 Quality conformance inspection.

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

4.3.2 Examinations. Samples selected in accordance with 4.3.1 shall be examined as specified in 4.4.1. AQL shall be 2.5 percent defective for major defects and 4.0 percent defective for minor defects.

4.4 Inspection procedure.

4.4.1 Examination. The block and tackle shall be examined as specified herein for the following defects:

## MIL-B-2424 (ME)

Major

101. Material not as specified.
102. Materials are not corrosion resistant or treated to be made corrosion resistant for the applicable storage and operating environment.
103. Dissimilar metals as defined in MIL-STD-889 are not effectively insulated from each other.
104. Contractor does not have documentation available for identification of material, material finishes or treatments.
105. Finish plan not adequate.
106. Blocks not properly reeved with rope.
107. Splicing not as specified.
108. Free end of rope not secured to prevent fraying.

Minor

201. Identification marking missing, incomplete or illegible.
202. Workmanship not as specified.

4.5 Inspection of packaging.4.5.1 Quality conformance inspection of pack.

4.5.1.1 Unit of product. For the purpose of inspection, a completed pack prepared for shipment shall be considered a unit of product.

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

4.5.1.3 Examination. Samples selected in accordance with 4.5.1.2 shall be examined for the following defects. AQL shall be 2.5 percent defective.

109. Containers not as specified for level A or B. Each incorrect container shall constitute one defect.
110. Block and tackle not immobilized to prevent movement within the container for level A.
111. Box closure and sealing not as specified for level A.
112. Preservation and packing not in accordance with the referenced document as specified for commercial.
113. Quantities packed exceed the size of weight limitation of the box for level A or B.
114. Marking illegible, incomplete, incorrect, or missing for level A, B, or commercial.

## MIL-B-2424D(ME)

## 5. PACKAGING

5.1 Preservation. Preservation shall be level A or commercial as specified (see 6.2).

5.1.1 Level A. Each block and tackle assembled and reeved as required shall be placed in a close-fitting box conforming to PPP-B-636, W5c, or W6c, style optional. The contents shall be immobilized to prevent free movement within the box. Box closure and sealing shall be as specified for Method V in accordance with the appendix to the box specification.

5.1.2 Commercial. Each block and tackle, assembled and reeved as required, shall be preserved in accordance with MIL-STD-1188.

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

5.2.1 Level A. The block and tackle preserved as specified in 5.1 shall be packed in close-fitting boxes conforming to PPP-B-601, overseas type, style optional in quantities not to exceed the weight limitations of the box specification. Box closure and strapping shall be in accordance with the appendix to the box specification.

5.2.2 Level B. The block and tackle preserved as specified in 5.1 shall be packed in close-fitting boxes conforming to PPP-B-636, V3c, V11c, V13c, or V15c, or in boxes conforming to PPP-B-640, class 2, style optional, in quantities not to exceed the size and weight limitations of the applicable box specification. Box closure and strapping shall be in accordance with the appendix to the applicable box specification.

5.2.3 Commercial. The block and tackle preserved as specified in 5.1 shall be packed in accordance with MIL-STD-1188.

5.3 Marking.

5.3.1 Military. Marking for military levels of protection (level A or B) shall be in accordance with MIL-STD-129.

5.3.2 Commercial. Marking for commercial packaging shall be in accordance with MIL-STD-1188.

MIL-B-2424D(ME)

6. NOTES

6.1 Intended use. The block and tackle is intended for use in varied rigging, construction and other military operations, which gains for the user a mechanical advantage in the hoisting, pulling or other movement of heavy objects, and which, through use of its safety locking device, is capable of holding things in place.

6.2 Ordering data. Acquisition documents should specify the following:

- a. Title, number, and date of this specification.
- b. Size of block required (see 3.3).
- c. Length of rope required (see 3.4).
- d. Degree of preservation and degree of packing required (see 5.1 and 5.2).

6.3 Information figure. Figure 1 shown a type of block and tackle which has been found acceptable; however, the figure is included for illustration only and is not intended to preclude the furnishing of another block and tackle which conforms to this specification.

6.4 Recycled material. It is encouraged that recycled material be used, when practical, as long as it meets the requirements of this specification (see 3.2).

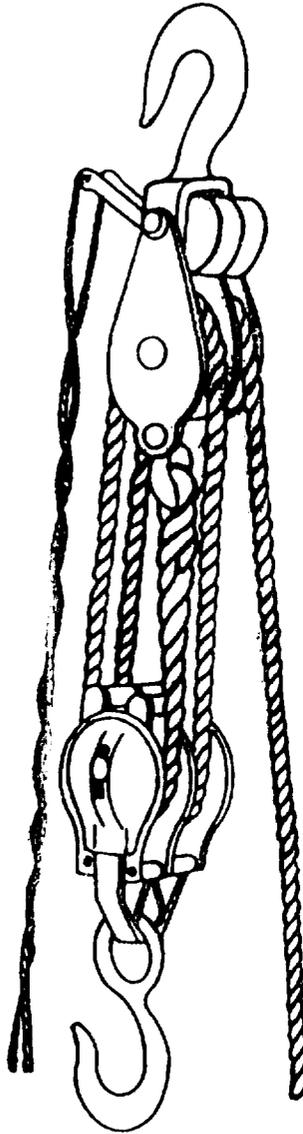
Custodian:  
Army - ME

Preparing activity:  
Army - ME

Review activity:  
DLA - IS

Project 3940-A028

MJL-B-2424D(MB)



**FIGURE I. Block and tackle (with load locking device)**

**X-1600A**

**INSTRUCTIONS:** In a continuing effort to make our standardization documents better, the DoD provides this form for use in submitting comments and suggestions for improvements. All users of military standardization documents are invited to provide suggestions. This form may be detached, folded along the lines indicated, taped along the loose edge (*DO NOT STAPLE*), and mailed. In block 5, be as specific as possible about particular problem areas such as wording which required interpretation, was too rigid, restrictive, loose, ambiguous, or was incompatible, and give proposed wording changes which would alleviate the problems. Enter in block 6 any remarks not related to a specific paragraph of the document. If block 7 is filled out, an acknowledgement will be mailed to you within 30 days to let you know that your comments were received and are being considered.

**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.

(Fold along this line)

(Fold along this line)

DEPARTMENT OF THE ARMY  
USA BRAD Center  
DRDME-DS  
Fort Belvoir, VA 22060

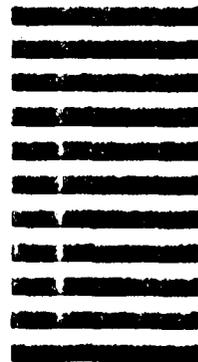


NO POSTAGE  
NECESSARY  
IF MAILED  
IN THE  
UNITED STATES

OFFICIAL BUSINESS  
PENALTY FOR PRIVATE USE \$300

**BUSINESS REPLY MAIL**  
FIRST CLASS PERMIT NO. 12062 WASHINGTON D. C.  
POSTAGE WILL BE PAID BY THE DEPARTMENT OF THE ARMY

Commander  
USA Belvoir Research and Development  
Center  
DRDME-DS  
Fort Belvoir, VA 22060



## STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

(See Instructions - Reverse Side)

1. DOCUMENT NUMBER MIL-B-24 4D(ME)		2. DOCUMENT TITLE Block and Tackle: with Load Locking Device	
3a. NAME OF SUBMITTING ORGANIZATION		4. TYPE OF ORGANIZATION (Mark one)	
3b. ADDRESS (Street, City, State, ZIP Code)		<input type="checkbox"/> VENDOR	
		<input type="checkbox"/> USER	
		<input type="checkbox"/> MANUFACTURER	
		<input type="checkbox"/> OTHER (Specify): _____	
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		8. WORK TELEPHONE NUMBER (Include Area Code) - Optional	
9. MAILING ADDRESS (Street, City, State, ZIP Code) - Optional		10. DATE OF SUBMISSION (YYMMDD)	

TO DETACH THIS FORM, CUT ALONG THIS LINE.

DD FORM 1426  
02 MAR 1976

PREVIOUS EDITION IS OBSOLETE.