

MIL-B-12582C

20 January 1984

SUPERSEDING

MIL-B-12582B

25 September 1970

## MILITARY SPECIFICATION

## BLOCKS, TACKLE, HAUL BACK, FOR WIRE ROPE

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

## 1. SCOPE

1.1 Scope. This specification covers single sheave, wire rope, haul-back blocks.

1.2 Classification. Blocks shall be the following sizes, as specified (see 6.2).

14-inch heavy duty for 7/8- to 1-1/8-inch rope.

10-inch heavy duty for 3/4- to 1-inch rope.

12-inch regular duty for 3/4- to 7/8-inch rope.

8-inch light duty for 1/2- to 5/8-inch rope.

6-inch light duty for 1/2-inch rope.

## 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 comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: USA Belvoir Research and Development Center, ATTN: STRBE-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.

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## SPECIFICATIONS

## FEDERAL

- |          |  |
|----------|--|
| FF-B-171 | - Bearings, Ball, Annular (General Purpose).                             |
| FF-B-185 | - Bearings, Roller, Cylindrical; and<br>Bearings, Roller, Self-Aligning. |
| FF-B-187 | - Bearing, Roller, Tapered.  |

## MILITARY

- |             |   |
|-------------|---|
| MIL-T- 704  | - Treatment and Painting of Materiel.                                       |
| MIL-F-3541  | - Fittings, Lubrication.  |
| MIL-B-3865  | - Blocks, Rope, Tackle: Packaging of.                                       |
| MIL-C-16173 | - Corrosion Preventive Compound, Solvent<br>Cutback, Cold-Application.      |
| MIL-G-20241 | - Gasket Material, Wool Felt, Impregnated,<br>Adhesive, Pressure-Sensitive. |
| DOD-G-24508 | - Grease, High Performance, Multi-<br>Purpose (Metric).                     |
| MIL-S-81733 | - Sealing and Coating Compound, Corrosion<br>Inhibitive.                    |

## STANDARDS

## FEDERAL

- |             |   |
|-------------|---|
| FED-STD-H28 | - Screw-Thread Standards for Federal<br>Services. |
|-------------|---|

## MILITARY

- |             |   |
|-------------|---|
| MIL-STD-105 | - Sampling Procedures and Tables for<br>Inspection by attributes. |
| MIL-STD-130 | - Identification Marking of US Military<br>Property.              |
| MIL-STD-889 | - Dissimilar Metals.  |

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

2.1.2 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.

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## 3. REQUIREMENTS

3.1 Description. Each block shall consist of a shell, shackle, sheave, sheave pin, and bearings.

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

3.3 Materials. Materials shall be as specified herein. Materials not specified shall be selected by the contractor and shall be subject to all provisions of this specification (see 6.5).

3.3.1 Material deterioration and control. The block shall be fabricated from compatible materials, inherently corrosion and deterioration 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.

3.3.1.1 Dissimilar metals. Dissimilar metals, as defined in MIL-STD-889, shall be electrically insulated from one another to minimize or prevent galvanic corrosion. Insulation may be provided by an insulating barrier such as a corrosion inhibiting sealant conforming to MIL-S-81733 or chromate tape conforming to MIL-G-20241. Protection against any galvanic corrosion could also be obtained by exclusion of the electrolyte if feasible.

3.3.1.2 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.

3.3.2 Shell. The shell shall be annealed cast steel free of injurious defects such as gas holes, cavities, pits, nonmetallic inclusions, and other defects which may be detrimental to the material for the purpose intended.

3.3.3 Sheaves. Sheaves shall be of high grade medium carbon cast steel, manganese cast steel, or forged steel. The sheave application shall be mounted on bearings conforming to FF-B-171, FF-B-185, or FF-B-187, type, class, and grade optional. The bearings shall be sealed to retain grease and to keep out foreign matter. Sheaves shall be grooved to fit the contour of the rope under load conditions as specified herein. The sheave groove shall be hardened to a minimum of Rockwell C35.

3.3.4 Shackle. The shackle shall be steel and shall support the proof load of the block as specified in table I without damage or distortion. The shackle shall be attached to the shell by two removable draw pins (see figure 1 and 6.4). The pins shall be chained together.

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TABLE I. Overall requirements.

Size (inches)	Sheave		Weight maximum W/shackle (pounds)	Safe working load (pounds)	Proof load (pounds)	Wire rope diameter (inches)
	Diameter (inches)	Width (inches)				
14	14	2-1/2	125	26,000	39,000	7/8 to 1-1/8
10	10	2-1/2	85	17,000	25,500	3/4 to 1
12	12	2-1/2	75	13,000	19,500	3/4 to 7/8
8	8	1-3/8	35	4,000	6,000	1/2 to 5/8
6	6	1-1/4	25	4,000	6,000	1/2

3.3.5 Sheave pin. The sheave pin shall be carbon or precision-type alloy steel and shall support the proof load of the block as specified in table I without damage or distortion. The sheave pin shall be locked in position to prevent rotation.

3.3.6 Proof load. The blocks shall support the proof load specified in table I without damage or distortion of any component or part.

3.3.7 Fastening devices. Fastening devices subject to removal, tightening, or adjustment, shall not be swaged, peened, staked, or otherwise permanently deformed.

3.3.8 Threads. Threaded parts shall conform to FED-STD-H28.

3.4 Function. Each individual block, when completely assembled, shall function smoothly without binding of any component or part.

3.5 Lubrication. The bearings shall be lubricated at the time of assembly with grease conforming to DOD-G-24508. One or more grease fittings conforming to MIL-F-3541, type I, II, or IV, shall be provided for lubricating the bearings.

3.6 Identification marking. Each block shall be identified in accordance with MIL-STD-130 and the safe working load (pounds) shall be permanently stamped on or cast integrally to the block.

3.7 Treatment and painting. All parts of the block except pins shall be cleaned, treated, and painted in accordance with MIL-T-704, type B. Pins shall be coated with compound conforming to MIL-C-16173, grade 1.

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3.8 Interchangeability. Like components or parts of blocks having the same make and model number shall be interchangeable.

3.9 Workmanship. All parts, components; and assemblies of the block including castings, forgings, bearings, seals, and machined surfaces shall be clean and free from sand, dirt, fins, pits, scale, and other harmful material. External surface shall be free from burrs, sharp edges, and corners. Rounded edges and corners shall be smooth.

#### 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.

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

- a. First article inspection (see 4.3).
- b. Quality conformance inspection (see 4.4).
- c. Inspection of packaging (see 4.6).

#### 4.3 First article inspection.

4.3.1 Examination. The first article block shall be examined as specified in 4.5.1. Presence of one or more defects shall be cause for rejection.

4.3.2 Tests. The first article block shall be tested as specified in 4.5.2.1. Failure of the test shall be cause for rejection.

#### 4.4 Quality conformance inspection.

4.4.1 Lot. For the purpose of inspection, a lot shall consist of all blocks of the same size offered for delivery at one time and place.

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4.4.1.1 Sampling. Sampling for examination and testing shall be in accordance with MIL-STD-105.

4.4.2 Examination.

4.4.2.1 Individual. Each block shall be examined for the critical defect specified in 4.5.1. Presence of a critical defect shall be cause for rejection.

4.4.2.2 Samples. Samples selected in accordance with 4.4.1.1 shall be examined for the defects specified in 4.5.1. AQL shall be 1.5 percent defective for major defects and 6.5 percent defective for minor defects.

4.4.3 Tests.

4.4.3.1 Samples. Samples selected in accordance with 4.4.1.1 shall be tested as specified in 4.5.2.1. AQL shall be 4.0 percent defective.

4.5 Inspection procedure.

4.5.1 Examination. The blocks shall be examined as specified herein for the following defects:

Critical

1. Gas holes, cracks, cavities, pits, and nonmetallic inclusions in castings.

Major

101. Materials not as specified.
102. Materials are not corrosion resistant or treated to be made corrosion resistant for the applicable storage and/or 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. Dimensions and weight not as specified.
106. Shell not as specified.
107. Sheaves not as specified.
108. Bearings not sealed as specified.
109. Sheave groove not capable of accepting wire rope of the specified diameter.
110. Sheave diameter not as specified.
111. Shackle not as specified.
112. Sheave pin not locked in place.
113. Parts and components do not function.
114. Workmanship not as specified.

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Minor

201. Identification or special marking missing, illegible, or incorrect.
202. Presence of blisters, thin spots, lumps, scratches, runs, and sags in painted surfaces.

4.5.2 Test.

4.5.2.1 Proof load. The block shall be attached to the fixed head of a tension testing machine or device by means of wire rope or round steel bar loops passed around the sheave. The shackle of the block shall be attached to the moving head of the machine or the moving load by suitable links or connections. Tension shall be increased to the proof load specified in table I. Nonconformance to table I, or any evidence of damage or distortion, shall constitute failure of this test.

4.6 Inspection of packaging. The packaging of the blocks shall be examined to determine compliance with the referenced document in section 5 of this specification.

## 5. PACKAGING

5.1 Preservation, packing, palletization, and marking. Preservation, packing, palletization, and marking shall be in accordance with the requirements of MIL-B-3865. preservation shall be level A or commercial (see 6.2). Packing shall be level A, level B, or commercial (see 6.2). Palletization and marking shall be level A, level B, or commercial, as applicable.

## 6. NOTES

6.1 Intended use. The haul-back blocks are intended for use principally for lifting military equipment and for cable rigging.

6.2 Ordering data. Acquisition documents should specify the following:

- a. Title, number, and date of this specification.
- b. Size of block required (see 1.2).
- c. When a first article is required for inspection and approval and the number of units required (see 3.2, 4.3 and 6.3).
- d. Degree of preservation and degree of packing required (see 5.1).

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6.3 First article. When a first article inspection is required, the item shall be examined and should be a first produced block. The first article should consist of one or more units. The contracting officer should include specific instructions in acquisition documents regarding arrangements for examinations, tests and approval of the first article.

6.4 Information figure. Figure 1 shows a type of block which has been found acceptable; however, the figure is included for illustration only and is not intended to preclude the furnishing of other designs which conform to the specification.

6.5 Recycled material. It is encouraged that recycled material be used, when practical, as long as it meets the requirements of this specification (see 3.3).

Custodians:  
Army - ME

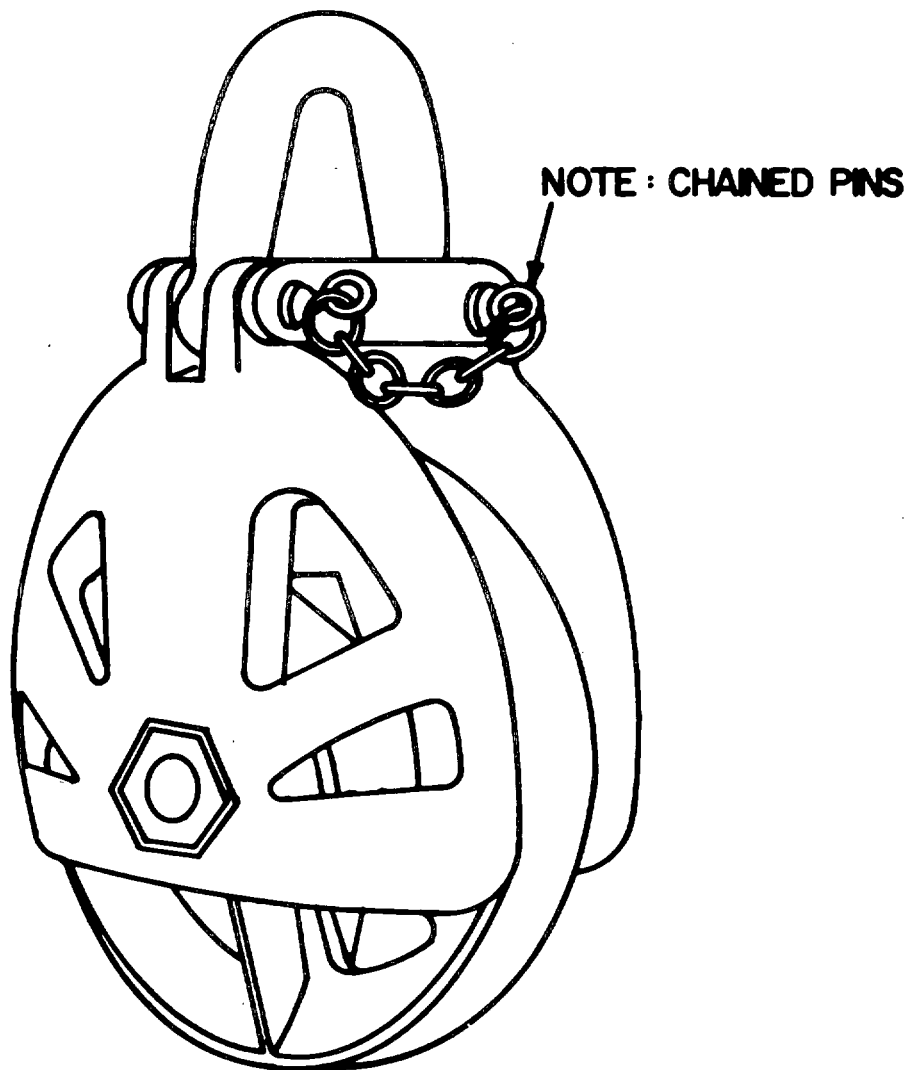
Preparing activity:  
Army - ME

User activity:  
Navy - MC

Project 3940-0163



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**FIGURE 1. Blocks, haul back, for wire rope.**

**X-1974A**

## STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

(See Instructions - Reverse Side)

1. DOCUMENT NUMBER MIL-C-12582C		2. DOCUMENT TITLE Blocks, Tackle, Haul Back, for Wire Rope	
3a. NAME OF SUBMITTING ORGANIZATION		4. TYPE OF ORGANIZATION (Mark one)	
b. 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		b. WORK TELEPHONE NUMBER (Include Area Code) - Optional	
c. MAILING ADDRESS (Street, City, State, ZIP Code) - Optional		8. DATE OF SUBMISSION (YYMMDD)	