

MIL-Q-43015D  
3 November 1981  
SUPERSEDING  
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6 August 1968

## MILITARY SPECIFICATION

### QUICK RELEASE, TYPE B - 2A

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

#### 1. SCOPE

1.1 Scope. This specification covers one type of parachute release.

#### 2. APPLICABLE DOCUMENTS

2.1 Issues of documents. The following documents, of the issue in effect on date of invitation for bids or request for proposal, form a part of this specification to the extent specified herein:

#### SPECIFICATIONS

##### FEDERAL

PPP-B-26	- Bag, Plastic, (General Purpose)
PPP-B-566	- Boxes, Folding, Paperboard
PPP-B-601	- Boxes, Wood, Cleated-Plywood
PPP-B-636	- Boxes, Shipping, Fiberboard
PPP-B-676	- Boxes, Setup

##### MILITARY

MIL-L-10457	- Liners Case and Sheet, Overwrap, Water-Vaperproof or Waterproof, Flexible
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Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: US Army Natick Research and Development Laboratories, Natick, MA 01760 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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## 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 1188 - Commercial Packaging of Supplies and Equipment  
MS -70116 - Link, Connecting, Quick Release

### DRAWINGS

#### AIR FORCE

44B9338 - Button Assembly - Parachute Harness Quick Release Press  
45D18810 - Quick Release, Personnel Parachute Harness, Assembly

(A miniature reproduction of Drawing 45D18810, identified as figure 1, is attached for information only.)

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

### 3. REQUIREMENTS

3.1 First article. When specified (see 6.2), the contractor shall furnish sample units for first article inspection and approval (see 4.3 and 6.3).

3.2 Materials and construction. The materials, construction, and supplementary processes involved in the fabrication of the quick release assembly shall conform to the requirements specified or shown on Drawing 45D18810, subsidiary drawings, and as specified herein (see 6.4).

#### 3.3 Performance.

3.3.1 Link holding ability. The release assembly, with the press button in the locked position, shall accept connecting links and engage them with the locking plungers. The links shall be free to move within the bounds established by the spaces and the body recess walls. The links shall remain connected when subjected to a sharp tug in a radial direction outward from the release when tested as specified in 4.4.3.2.

3.3.2 Unlocking torque. The torque required to rotate the press button from the locked to the unlocked position shall be within the range of 9.5 to 15.5 inch-pounds when tested as specified in 4.4.3.3.

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3.3.3 Release force. The force required to depress the press button from the locked to the released position shall be within the range of 27 to 33 pounds when tested as specified in 4.4.3.3.

3.4 Marking. Each release assembly shall be marked for identification in accordance with MIL-STD-130.

3.5 Workmanship. The workmanship shall conform to the quality established by this specification.

#### 4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection. Unless otherwise specified in the contract, the contractor is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified in the contract, 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.

4.2 Classification of inspection. 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 6.2), it shall be examined for the defects specified in 4.4.3.1. and tested for the characteristics in 4.5.1. The presence of any defect or the failure of 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 specifications, drawings, and standards unless otherwise excluded, amended, modified, or qualified in this specification or applicable purchase document.

4.4.2 In-process inspection. Inspection shall be made of the quick release assembly at appropriate stages of fabrication to determine conformance to the requirements of this specification. The Government reserves the right to exclude from consideration for acceptance any components for which in-process inspection has indicated nonconformance.

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4.4.3 End item inspection.

4.4.3.1 End item examination. The end item shall be examined for the defects listed in table I. The lot size shall be expressed in units of release assemblies. The sample unit shall be one release assembly. The inspection level shall be III and the acceptable quality level (AQL) shall be 1.5 major and 2.5 total (major and minor combined) defects per hundred units.

TABLE I. Visual defects

Examine	Defect	Classification	
		Major	Minor
Finish, protective	Any area of rust or corrosion	X	
	Any breaks, scratches, or tool marks through coating to metal		X
	Dirt, smudge, oil, grease, or foreign matter		X
Design, construction, and workmanship	Any component missing, damaged, or malformed	X	
	Any sharp edges, burrs, or metal slivers	X	
	Any surface roughness exceeding specified limits	X	
	Any part not assembled or joined as specified	X	
	Any operation omitted or not performed as specified	X	
Marking	Missing, illegible, incorrect, incomplete, improperly located, improperly applied, or otherwise not as specified		X

4.4.3.2 Link holding ability testing. The end item shall be tested as specified in 4.5.1 for conformance to the requirement in 3.3.1. The lot size shall be expressed in units of release assemblies. The sample unit shall be one release assembly. The inspection level shall be S-4 and the AQL shall be 1.0 defects per hundred units.

4.4.3.3 Proof testing. Every end item shall be tested for the characteristics specified in table II. Any release assembly failing either or both tests shall be rejected.

TABLE II. Proof tests

Characteristics	Requirement paragraph	Test method
Unlocking torque	3.3.2	4.5.2
Release force	3.3.3	4.5.3

4.4.4 Packaging inspection. An examination shall be made to determine that preservation, packing, and marking comply with the section 5 requirements. The sample unit shall be one shipping container fully packaged except that it need not be closed. Examination for closure defects shall be made on shipping containers fully packaged. Characteristics to be examined and the defects applicable thereto shall be as specified in table III. The inspection level shall be S-2 and the AQL shall be 6.5 defects per hundred units.

TABLE III. Packaging defects

Examine	Defect
Marking (exterior and interior)	Omitted; incorrect; illegible; of improper size, location, sequence, or method of application.
Materials	Any component missing, damaged, defective, or not as specified.
Content	Number of quick releases per intermediate pack or shipping container is more or less than specified.

#### 4.5 Methods of inspection.

4.5.1 Link holding ability test. Place the press button in the locked position. A connecting link conforming to MS 70116 shall serve as a gage for this test. The test procedure shall be as follows:

- a. Insert the connecting link into the body recess and engage the locked plunger. Move the link in all directions within the bounds established by the spaces and the body recess walls.
  - b. Exert a sharp tug on the link in a direction away from the release and along the centerline of the plunger and its diagonal opposite.
  - c. Repeat a. and b. above for the remaining plungers.
- Failure to conform to any of the requirements in 3.3.1 shall be considered a defect.

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4.5.2 Unlocking torque test. The quick release assembly shall be secured to prevent rotation, and a suitable torque registering device, affixed to the press button. The press button shall be rotated from the locked to the unlocked position by application of force through the torque registering device. The torque registered shall be recorded.

4.5.3 Release force test. The quick release assembly shall be secured on a flat surface, and force applied by any suitable means to the press button set in the unlocked position. The point of application shall be at the center of the button and the direction shall be perpendicular to the face of the button. The force required to move the button from the unlocked position to the release position shall be recorded.

## 5. PACKAGING

5.1 Preservation. Preservation shall be level A or Commercial, as specified 6.2).

5.1.1 Level A. Each quick release, with press button in the locked position, shall be placed in a close-fitting 0.0015-inch nominal thickness polyethylene bag conforming to type I or II, style 1 or 2 of PPP-B-26. Prior to or during the closure operation, excess air shall be expelled from the bag. The bagged quick release shall then be unit packed in a box conforming to variety 2, style III, type G, class 1 of PPP-B-566; type I, variety 2, class A, style 4 of PPP-B-676; or style optional, grade W6c of PPP-B-636. Inside dimensions of each paperboard box shall be 3-3/4 inches in length, 3-3/4 inches in width, and 1-3/4 inches in depth. Each box shall be securely closed with pressure-sensitive tape in accordance with the appendix of the applicable box specification.

5.1.2 Commercial. Each release 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 packing. Sixty quick releases, preserved as specified in 5.1, shall be packed in a fiberboard shipping container conforming to style RSC, grade V2s of PPP-B-636; or overseas type, style A or I, grade A or B, type 2 load of PPP-B-601 as specified (see 6.2). Level A unit packs shall be packed flat, four in length, three in width and five in depth within a shipping container. Inside dimensions of each shipping container shall approximate 16-1/2 inches in length, 12-1/2 inches in width and 9-1/2 inches in depth. Approximate dimensions are furnished as a guide only. Each fiberboard 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. Each wood container shall have the contents waterproofed with a sealed case liner conforming to type I or II, grade C of MIL-L-10547 and closed and reinforced in accordance with the appendix of PPP-B-601.

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5.2.2 Level B packing. Sixty quick releases, preserved as specified in 5.1 shall be packed in a fiberboard shipping container conforming to style RSC, type CF variety SW), or SF, class domestic, grade 275 of PPP-B-636. Level A unit packs shall be packed flat, four in length, three in width, and five in depth within a shipping container. Inside dimensions of each shipping container shall approximate 16-1/2 inches in length, 12-1/2 inches in width and 9-1/2 inches in depth. Approximate dimensions are furnished as a guide only. Each shipping container shall be closed in accordance with method II as specified in the appendix of the container specification.

5.2.2.1 Weather-resistant shipping containers. When specified (see 6.2), the shipping container shall be 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 container specification.

5.2.3 Commercial packing. Quick releases, preserved as specified in 5.1 shall be packed in accordance with MIL-STD-1188.

5.3 Marking. In addition to any special marking required by the contract, unit packs and shipping containers shall be marked in accordance with MIL-STD-129 or MIL-STD-1188, as applicable.

## 6. NOTES

6.1 Intended use. The quick release is intended for use in quickly releasing cargo from parachutes.

6.2 Ordering data. Procurement documents should specify the following:

- (a) Title, number, and date of this specification.
- (b) Item Federal Stock Number.
- (c) Quantity required.
- (d) When a first article is required (see 3.1, 4.3 and 6.3).
- (e) Selection of applicable levels of preservation and packing (see 5.1 and 5.2).
- (f) Type of shipping container desired for level A packing (see 5.2.1).
- (g) When weather-resistant grade fiberboard shipping containers are required for level B packing (see 5.2.2.1).

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6.3 First article. When a first article is required, it shall be inspected and approved under the appropriate provisions of DAR 7-104.55. The first article should be a preproduction sample or initial production item. The contracting officer should specify the appropriate type of first article and the number of units to be furnished. The contracting officer should include specific instructions in all procurement instruments regarding arrangements for inspection and approval of the first article.

6.4 Recycled material. It is encouraged that recycled material be used when practical as long as it meets the requirements of the specification.

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

## Custodians:

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## Preparing activity:

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## DOCUMENT IDENTIFIER (Number) AND TITLE

MIL-Q-43015D Quick Release, Type B - 2A

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