INCH-POUND
MIL-PRF-32364
26 November 2010
SUPERSEDING
PRF13018851
10 October 2007
(See 6.4)

PERFORMANCE SPECIFICATION

HOLDER, MULTI-MAGAZINE

This specification is approved for use by the U.S. Army Armaments Research, Development and Engineering Center (ARDEC) and is available for use by all Departments and Agencies of the Department of Defense.

1. SCOPE

1.1 Scope. This specification prescribes the performance requirements and identifies verification procedures for the Holder, Multi-Magazine, hereafter referred to simply as the Multi-Mag Holder. The Multi-Mag Holder facilitates a rapid magazine change by attaching two magazines together. Unless otherwise specified, MMH denotes the Holder with two (2) fully loaded 30-round magazines attached.

1.2 Requirement levels. This specification identifies two values for selected performance requirements. The threshold (T) is the minimum acceptable level. The objective (O) is the desired level at which performance results in an operationally significant increase in capabilities. When only one requirement is stated, it is the threshold requirement.

2. APPLICABLE DOCUMENTS

2.1 General. The documents listed in this section are specified in sections 3 or 4 of this specification. This section does not include documents cited in other sections of this specification or recommended for additional information or as examples. While every effort has been made to ensure the completeness of this list, document users are cautioned that they must meet all specified requirements of documents cited in sections 3 and 4 of this specification, whether or not they are listed.

Comments, suggestions, or questions on this document should be addressed to: Commander, U.S. Army ARDEC, ATTN: RDAR-QES-E, Picatinny, New Jersey 07806-5000, or emailed to ardecstdzn@conus.army.mil. Since contact information can change, you may want to verify the currency of this address information using the ASSIST online database at https://assist.daps.dla.mil.

AMSC: N/A FSC: 1005

2.2 Government Documents.

2.2.1 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 cited in the solicitations or contract.

DEPARTMENT OF DEFENSE SPECIFICATIONS

MIL-PRF-372	Cleaning Compound, Solvent (For Bore of Small Arms and Automatic Aircraft Weapons)
MIL-PRF-14107	Lubricating Oil, Weapons, Low Temperature
MIL-G-21164	Grease, Molybdenum Disulfide, For Low and High Temperatures, NATO Code Number G-353
MIL-L-46000	Lubricant, Semi-Fluid (Automatic Weapons)
MIL-PRF-63460	Lubricant, Cleaner, and Preservative for Weapons and Weapons Systems

DEPARTMENT OF DEFENSE STANDARDS

MIL-STD-810	Environmental Engineering Considerations and Laboratory Tests
MIL-STD-1916	DoD Preferred Methods for Acceptance of Product

(These documents are available online at https://assist.daps.dla.mil/quicksearch or from the Standardization Document Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094.)

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

ARMY FIELD MANUAL

FM 3-21.75	The Warrior Ethos and Soldier Combat Skills

(Copies of this Field Manual are available from the General Davis J. Reimer Training and Doctrine Digital Library at http://www.army.mil/usapa/doctrine/Active_FM.html).

US ARMY DEVELOPMENT TEST COMMAND

TOP 3-2-045	Automatic Weapons, Machineguns, Hand, and Shoulder Weapons

(Copies of these documents may be ordered from the US Army Developmental Test Command, ATTN: Publications, 314 longs Corner Road, Aberdeen Proving Ground, MD, 21005-5005, or online at http://www.dtc.army.mil/publications/topsindex.aspx).

2.3 Non-Government publication. The following documents form a part of this document to the extend specified herein. Unless otherwise indicated, the issues of these documents are those cited in the solicitation or contract.

ASTM INTERNATIONAL

ASTM-B117 Standard Practice for Operation Salt Spray (Fog) Apparatus

(ASTM standards may be ordered from the ASTM International Engineers, 100 Barr Harbor Drive, PO Box C700, West Conshohocken PA 19428-2959 or online at http://www.astm.org/.)

2.4 Order of precedence. Unless otherwise noted herein or in the contract, 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 is obtained.

3. REQUIREMENTS

3.1 Design verification. When specified (see 6.2), a sample of the Multi-Mag Holder shall be subjected to design verification in accordance with [TABLE I and 4.1].

3.2 First article inspection. When specified (see 6.2), a sample of the Multi-Mag Holder shall be subjected to first article inspection in accordance with [TABLE I and 4.2].

3.3 Conformance inspection. When specified (see 6.2), a sample of the Multi-Mag Holder shall be subjected to conformance inspection in accordance with [TABLE I and 4.3].

3.4 Operating requirements.

3.4.1 Capacity. The Multi-Mag Holder shall be able to mount two standard M16 5.56mm, 30 round fully loaded magazines together.

3.4.2 Retention. The Multi-Mag Holder shall firmly hold both magazines in the upright orientation while attached to a M16 during and after rapid firing and after executing Individual Movement Techniques: low crawl, high crawl, and rush listed in the Movement section, chapter 3 of FM 3-21.75 (T). The Multi-Mag Holder shall have the ability to tighten the magazine retention (O).

3.4.3 Pouch. The Multi-Mag Holder shall be provided with a storage pouch which shall hold the MMH securely. The storage pouch shall be provided with MOLLE and ALICE attachments (see 6.4). ALICE clips shall be included with the pouch. The pouch shall be constructed of a synthetic, water resistant rapid drying soft material. The pouch flap/cover shall be adjustable for a snug fit.

3.4.4 Removal from pouch. The MMH shall have the capability to be quickly removed from the pouch once stored, one-handed without damaging the magazines.

3.5 Interface and interoperability requirements.

3.5.1 Weight. The Multi-Mag Holder weight shall be no greater than four (4) ounces.

3.5.2 Non-interference. The MMH shall not interfere with the use or function of the weapon to include but not limited to blocking the ejection port, interfering with the cartridge feeding and collapsing or extending the buttstock.

3.5.3 Cover. The Multi-Mag Holder shall have a cover for the magazine not in use capable of protecting the ammunition from the weather and it shall be capable of being removed one-handed (O).

3.5.4 Non-interference with additional system. The MMH shall not interfere with the weapon system when an M203 is attached to the weapon (O).

3.6 Environmental requirements.

3.6.1 Operational temperature. The Multi-Mag Holder shall function throughout a temperature range from -55 degrees Fahrenheit to +155 degrees Fahrenheit.

3.6.2 Salt spray. The Multi-Mag Holder shall be safe to handle, be fully operable, and show no evidence of corrosion after a minimum of forty-eight (48) hours of salt fog exposure.

3.6.3 Chemical compatibility testing. The Multi-Mag Holder shall be compatible with Army standard chemicals listed below:

MIL-PRF-372	Cleaning Compound, Solvent (For Bore of Small Arms and Automatic Aircraft Weapons)
MIL-PRF-14107	Lubricating Oil, Weapons, Low Temperature
MIL-G-21164	Grease, Molybdenum Disulfide, For Low and High Temperatures, NATO Code Number G-353
MIL-L-46000	Lubricant, Semi-Fluid (Automatic Weapons)
MIL-PRF-63460	Lubricant, Cleaner, and Preservative for Weapons and Weapons Systems

3.7 Support and ownership requirements.

3.7.1 Attachment. The magazines shall be attached and removed from the Multi-Mag Holder without any tools other than a flat or cross-tip screwdriver.

3.7.2 Color of Multi-Mag Holder. The color of the Multi-Mag Holder shall be a non-reflective dull color

3.7.3 Color of the pouch. The pouch shall be black, tan, grey-green, grey, taupe, or a non-reflective dull color.

3.7.4 Drop test. The MMH shall withstand a 5-foot drop test, while attached to a M16 rifle onto concrete without the Multi-Mag Holder becoming unserviceable.

3.7.5 Endurance. Multi-Mag Holder shall not melt, deform or become unserviceable in performance after firing a total of 420 rounds with an M16 rifle loaded with the MMH.

3.7.6 Workmanship: Finished items and/or parts shall not exhibit poor material and processing such as seams, laps, laminations, cracks, visible steps, sharp edges, nicks, scratches, burrs, deformations, and missing operation which may affect serviceability, functioning, operations, appearance or safety. Fins and other extraneous metal shall be removed from cast or forged parts. Hammering to shape, salvage operations (including repair by welding) or other similar practices shall not be permitted without prior approval of contracting officer.

4. VERIFICATION

TABLE I. Requirement/verification cross reference matrix

METHOD OF VERIFICATION 1 - Analysis 2 - Demonstration 3 - Examination 4 - Test			CLASSES OF VERIFICATION A - Design verification B - First article C – Conformance verification						
Section 3 Requirement		Section 4 Method	Verification Methods				Verification Class		
			1	2	3	4	A	B	C
3.1	Design verification	4.1		X	X	X	4-0-1		
3.2	First article inspection	4.2		X	X	X		4-0-1	
3.3	Conformance inspection	4.3		X	X	X			4-0-1
3.4.	Operating requirements	4.4		X	X	X	2-0-1	2-0-1	2-0-1
3.4.1	Capacity	4.4.1		X	X	X	2-0-1	2-0-1	2-0-1
3.4.2	Retention	4.4.2		X	X	X	2-0-1	2-0-1	2-0-1
3.4.3	Pouch	4.4.3		X	X	X	2-0-1	2-0-1	2-0-1
3.4.4	Removal from pouch	4.4.4		X	X	X	2-0-1	2-0-1	2-0-1
3.5	Interface and interoperability Requirements	4.5		X	X	X	2-0-1	2-0-1	2-0-1
3.5.1	Weight	4.5.1				X	2-0-1	2-0-1	2-0-1
3.5.2	Non-interference	4.5.2				X	2-0-1	2-0-1	2-0-1
3.5.3	Cover	4.5.3				X	2-0-1	2-0-1	2-0-1
3.5.4	Non-interference with additional system	4.5.4				X	2-0-1	2-0-1	2-0-1
3.6	Environmental requirement	4.6				X	4-0-1	4-0-1	
3.6.1	Operational temperature	4.6.1				X	2-0-1	2-0-1	
3.6.2	Salt spray	4.6.2				X	1-0-1	1-0-1	
3.6.3	Chemical compatibility testing	4.6.3				X	3-0-1	3-0-1	
3.7	Support and ownership rqmts	4.7		X	X	X	2-0-1	2-0-1	2-0-1
3.7.1	Attachment	4.7.1		X	X	X	2-0-1	2-0-1	2-0-1
3.7.2	Color of the Multi-Mag Holder	4.7.2		X	X		2-0-1	2-0-1	2-0-1
3.7.3	Color of the pouch	4.7.3		X	X		2-0-1	2-0-1	2-0-1
3.7.4	Drop test	4.6.4				X	2-0-1	2-0-1	2-0-1
3.7.5	Endurance	4.6.5				X	2-0-1	2-0-1	2-0-1
3.7.6	Workmanship	4.6.6			X		2-0-1	2-0-1	2-0-1
Notes: Verification (4-0-1) Test 4, Accept with 0 Failure, and Reject with 1 Failure.									

4.1 Design verification. When specified (see 6.2), design verification shall be performed by demonstration, examination and tests of all performance requirements as specified in TABLE I.

4.1.1 Design verification rejection. If a sample fails to meet any specified performance requirement, the design shall be rejected.

4.2 First article inspection. When specified (see 6.2), first article inspection of sample items shall be executed by demonstration, examination and tests of all performance requirements in accordance with TABLE I.

4.2.1 First article rejection. If any sample fails to comply with the specified performance requirements, the sample shall be rejected.

4.3 Acceptance verification. When specified (see 6.2), acceptance inspection of lot samples shall be accomplished by examinations, demonstrations and tests in accordance with Table I.

4.3.1 Lot formation. Lot formation shall be in accordance with the lot formation requirement as specified in MIL-STD-1916.

4.3.2 Lot Rejection. If any sample fails to comply with the specified performance requirements, the lot shall be rejected.

4.4 Operating verifications.

4.4.1 Capacity. The Multi-Mag Holder shall be demonstrated by attaching two (2) standard 5.56mm, 30 round fully loaded magazines to the Multi-Mag Holder.

4.4.2 Retention. The MMH shall be loaded onto an M16 series rifle. It shall be tested through rapid firing and Individual Movement Techniques. A second MMH shall also be tested through the Individual Movement Techniques while being contained by the Multi-Mag Holder pouch.

4.4.3 Pouch. The pouch shall be verified by demonstration that it can securely contain and hold a MMH. The pouch shall also be inspected to ensure it has MOLLE and ALICE attachments and the ALICE clips are provided.

4.4.4 Removal from pouch. The MMH shall demonstrate that it can be easily placed into and removed from the pouch one-handed. The MMH shall be removed from the pouch twenty (20) times without altering or damaging the Multi-Mag holder, either magazine or the pouch.

4.5 Interface and interoperability verifications.

4.5.1 Weight. The Multi-Mag Holder shall be weighed using SMTE.

4.5.2 Non-interference. The MMH shall be loaded to an M16 series rifle and be used in various fighting positions to ensure it does not interfere with the use or function of the weapon.

4.5.3 Cover. The Multi-Mag Holder cover shall be visually inspected to ensure it can cover and protect the ammunition in the magazine not in use from the weather (O).

4.5.4 Non-interference with additional system. The MMH shall be verified by demonstration that it shall not interfere with the M16 series rifle and M4 when a M203 is attached to the weapon (O).

4.6 Environmental verifications.

4.6.1 Operating temperature.

4.6.1.1 Extreme hot. The extreme hot test for the MMH shall be completed in the following manner:

a. Condition M16 with loaded MMH at one hundred and fifty-five degrees Fahrenheit (155°F), IAW MIL-STD-810 for three (3) hours.
b. All sixty (60) rounds in the MMH shall be fired from the M16 rifle. Firing shall take place no greater than 3 mins from temp chamber removal. . If the time before firing is exceeded, the loaded MMH with the M16 shall be reconditioned at the extreme high temperature for an additional thirty (30) mins before firing.
c. An additional sixty (60) rounds shall be loaded onto the Multi-Mag Holder and the temperature conditioning and firing process shall be repeated until a total of one hundred and eighty (180) rounds have been fired from the MMH loaded M16.
d. The Multi-Mag Holder shall be inspected for signs of degradation or flaws before, during and after each firing session.

4.6.1.2 Extreme cold. The extreme cold test for the MMH shall be completed in the following manner:

a. Condition M16 with loaded MMH at minus fifty-five degrees Fahrenheit (-55° F), IAW MIL-STD-810 for three (3) hours.
b. All sixty (60) rounds in the MMH shall be fired from the M16 rifle. Firing shall take place no greater than 3 mins from temp chamber removal. . If the time before firing is exceeded, the loaded MMH with the M16 shall be reconditioned at the extreme low temperature for an additional thirty (30) mins before firing.
c. An additional sixty (60) rounds shall be loaded onto the Multi-Mag Holder and the temperature conditioning and firing process shall be repeated until a total of one hundred and eighty (180) rounds have been fired from the MMH loaded M16.
d. The Multi-Mag Holder shall be inspected for signs of degradation or flaws before, during and after each firing session.

4.6.2 Salt spray. The Multi-Mag Holder shall be exposed to a Five Percent (5%) salt solution for forty-eight (48) hours, IAW ASTM-B117. After exposure, the Multi-Mag Holder and parts shall be inspected for signs of degradation.

4.6.3 Chemical compatibility testing. Six (6) Multi-Mag Holders shall be used for this test. The Multi-Mag Holder shall be sprayed or brushed with each liquid with a spray bottle or paint brush respectively. After exposure for one hour to each liquid, the Multi-Mag Holders shall be inspected for any signs of degradation.

4.7 Support and ownership verifications.

4.7.1 Attachment. The Multi-Mag Holder shall be demonstrated that it can attach and remove magazines without the use of special tools.

4.7.2 Color of Multi-Mag Holder. The color of the Multi-Mag holder shall be visually inspected to ensure it is a non-reflective dull color.

4.7.3 Color of the pouch. The pouch shall be visually inspected to ensure it is colored black, tan, grey-green, grey, or taupe.

4.7.4 Drop test. The MMH shall be attached to a M16-series rifle and be dropped from a height of 5 feet onto concrete. The drop test shall be conducted with these weapon orientations: straight down, left side, and right side.

4.7.5 Endurance. The MMH shall be attached to a M16 and M4 series rifle and be tested to ensure it does not melt, deform or become unserviceable after firing a total of 420 rounds IAW TOP 3-2-045.

4.7.6 Workmanship. The Multi-Mag Holder shall be visually inspected to ensure the workmanship.

5. PACKAGING

5.1 Packaging. For acquisition purposes, the packaging requirements shall be as specified in the contract or order (see 6.2). When actual packaging of material is to be performed by DoD or in-house contractor personnel, these personnel need to contact the responsible packaging activity to ascertain packaging requirements. Packaging requirements are maintained by the Inventory Control Point's packaging activity within the Military Service of Defense Agency, or within the military service's system commands. Packaging data retrieval is available from the managing Military Department's or Defense Agency's automated packaging files, CD-ROM products, or by contacting the responsible packaging activity.

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 Multi-Mag Holder (MMH) facilitates a rapid magazine change by attaching two magazines together.

6.2 Acquisition requirements. Acquisition documents should specify the following:

a. Title, number, and date of this specification, and of all reference documents cited in Section 2 and applicable documents from Section 6.
b. Requirement for design verification.
c. Requirement for first article inspection.
d. Requirement for acceptance inspection.

e. Packaging requirements (see 5.0).

6.3 Additional information. Material described by this item specification is for a commercial off the shelf (COTS) product. Supplier must have non-developmental production capability.

6.4 Previous identification. This document supersedes an ARDEC Program-Unique Specification PRF13018851, Holder, Multi-Magazine, dated 10 October 2007. A copy of this ARDEC specification may be requested from ardecstdzn@conus.army.mil.

6.5 Subject term (key word) listing.

Close quarter battle
Small arms

Preparing activity:
Army – AR
(Project 1005-2011-002)

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at https://assist.daps.dla.mil.