

INCH-POUND

MIL-PRF-32368

26 November 2010

SUPERSEDING

PRF13018855

18 August 2008

(See 6.4)

PERFORMANCE SPECIFICATION

KIT, WEAPONS CLEANING, IMPROVED

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 Kit, Improved Weapons Cleaning, hereafter referred to simply as the Weapon Cleaning Kit. The Weapons Cleaning Kit consists of 23 to 30 items designed for and to support cleaning efficiency and weapon and optic maintainability in garrison, or during field operations for the M4 and M16 series rifles.

1.2 Requirement levels. This specification lists two values for certain performance parameters. 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.

1.3 Component list. The Weapons Cleaning Kit consists of these 23 essential items and 7 optional items:

Cleaning rod sections	Cleaning rod handle section
Two (2) 30" Cleaning cables	8" cleaning cable (O)
Chamber brush	Bore brush
7.62mm bore brush (O)	9mm bore brush (O)
.45 caliber bore brush (O)	Double ended tooth brush

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

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Large area application brush	Cleaning and lubrication bottle
Scraper	Locking lug scraper
Straight pick	Curved ended pick
Lens cleaning solution	Mohair lens cleaning brush
Re-usable micro fiber lens cloth	Multi-purpose tool
Carrying case	Swab patch holder, 5.56mm slotted tip
Cotton swabs	Swab patch holder, 7.62mm slotted tip (O)
Cotton swab patches	Large cal cotton swab patches (O)
Pipe cleaners	Two (2) T-handle and bar
Muzzle cap (O)	Instruction sheet

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.

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

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

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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 TECHNICAL MANUALS

TM 9-1005-319-10 Operator's manual for
 RIFLE, 5.56 MM, M16A2 W/E (1005-01-128-9936) (EIC:4GM)
 RIFLE, 5.56 MM, M16A3 (1005-01-367-5112)
 RIFLE, 5.56 MM, M16A4 (1005-01-383-2872)(EIC:4F9)
 CARBINE, 5.56 MM, M4 W/E (1005-01-231-0973) (EIC:4FJ)
 CARBINE, 5.56 MM, M4A1 (1005-01-382-0953) (EIC:4GC)

(These TMs may be viewed and printed at <https://www.logsa.army.mil/etms/online.cfm>.)

2.3 Non-Government publication. The following documents form a part of this document to the extent 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

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

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 Weapons Cleaning Kit 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 Weapons Cleaning Kit 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 Weapons Cleaning Kit shall be subjected to conformance inspection in accordance with [TABLE I and 4.3].

3.4 Interface and interoperability requirements.

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3.4.1 Compatibility. The Weapons Cleaning Kit shall work with both modular and non-modular M16 and M4 weapon systems (T). It is desired, however, not required, that the Improved Cleaning Kit components shall work with all currently fielded 5.56mm, 9mm, 7.62mm, .45 caliber weapons (O).

3.4.2 Common threading. All components necessary to clean the weapon and/or dislodge a jammed cartridge/projectile that use threaded connections shall use the same common threading. Either #8-32 Unified Fine Thread (UNF) (preferred) or #8-36 UNF may be selected, but when one size is selected, it shall be used for all threaded components. In the event that the common threading is #8-32, an adaptor shall be provided for compatibility with non-kit items (i.e. legacy military #8-36 UNF).

3.4.3 Cleaning kit components.

3.4.3.1 Cleaning rod sections. The cleaning rod sections shall have the following characteristics:

- a. The rod shall break down into not less than three and not more than six sections in order to fit in the carrying case of the Weapon Cleaning Kit (3.4.17).
- b. The rod shall extend at least 29 inches in length when all sections (including the cleaning rod handle section) are assembled.
- c. Each rod section shall have one male and one female threaded end.
- d. Rod sections shall be capable of attaching to standard threading for bore brushes.
- e. Cleaning rod sections conforming to NSN 1005-00-050-6357 have been successfully used in the past.

3.4.3.2 Cleaning rod handle section. The cleaning rod handle section shall have the following characteristics:

- a. It shall have a swiveling handle for ease of storage
- b. The swiveling handle shall be able to lock in place in the straight folded position.
- c. The cleaning rod handle section shall have one female threaded end to allow connection of other components of the Weapon Cleaning Kit.
- d. Rod handle section shall be capable of attaching to bore brush (3.4.3.5).
- e. Cleaning rod handle section conforming to NSN 1005-01-113-0321 has been successfully used in the past.

3.4.3.3 30" Cleaning cable. The cleaning cable shall have the following characteristics:

- a. The cleaning cable shall provide for safe breech to muzzle cleaning.
- b. The cleaning cable shall be able to clean the chamber and bore.
- c. The cleaning cable shall be a minimum of 30" in length.
- d. The cleaning cable shall have two (2) female threaded ends.
- e. There shall be a total of two (2) cleaning cables.

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3.4.3.4 Chamber brush. The chamber brush shall have the following characteristics:

- a. The chamber brush shall be used with the cleaning rod handle section to clean the locking lugs and chamber area.
- b. The chamber brush shall have a male threaded end.
- c. Chamber brush conforming to NSN 1005-00-999-1435 has been successfully used in the past.

3.4.3.5 Bore brush. The bore brush shall have the following characteristics:

- a. The bore brush shall clean the neck and bore of the M4 and M16 (T) and any other standard military 5.56mm weapon (O).
- b. The bore brush shall have a male threaded end.
- c. Bore brush conforming to 1005-00-903-1296 has been successfully used in the past.

3.4.3.6 Double ended tooth brush. The double ended tooth brush shall have the following characteristics:

- a. The double ended tooth brush shall be able to clean the receiver, the bolt and bolt carrier of the weapon.
- b. The double ended tooth brush shall be no less than 6.5" and no more than 7.5" in length.
- c. Double ended tooth brush conforming to NSN 1005-00-494-6602 has been successfully used in the past.

3.4.3.7 Large area application brush. The large area application brush shall have the following characteristics:

- a. The large area application brush shall clean away light sand and debris from weapon.
- b. The large area application brush shall be compatible with standard Army cleaning lubricant such as but not limited to CLP, LSA, LAW.
- c. Large area application brush conforming to NSN 1005-01-445-6798 has been successfully in the past.

3.4.3.8 Cleaning and lubrication bottle. The cleaning and lubrication bottle shall have the following characteristics:

- a. The cleaning and lubrication bottle shall have a cap and be refillable.
- b. The cleaning and lubrication bottle shall have a precision drip applicator and be leak proof.
- c. The volume of the cleaning and lubrication bottle shall be no less than 0.5 ounces and no more than 1.5 ounces.
- d. Cleaning and lubrication bottle conforming to NSN 1005-00-242-5687 has been successfully used in the past.

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3.4.3.9 Scraper. The scraper shall have the following characteristics:

- a. The scraper shall remove carbon from the critical bolt face to reduce weapon misfires.
- b. The scraper shall be able to scrape carbon from the slides, bolts, and bolt carrier without damaging the weapon.
- c. The scraper shall have a male threaded end.
- d. The scraper, with handle if necessary, shall be no less than 7" and no longer than 9" in length.
- e. The scraper shall be durable so that it shall not break during normal cleaning IAW Army TM 9-1005-319-10, WP Sequences No. 0014 Cleaning Instruction.

3.4.3.10 Locking lug scraper. The locking lug scraper (right angle – 90 degree) shall have the following characteristics:

- a. The scraper shall remove carbon from the critical bolt face to reduce weapon misfires.
- b. The scraper shall be able to scrape carbon from the slides, bolts, bolt carrier, locking lugs, and barrel extension without damaging the weapon.
- c. The scraper shall have a male threaded end.
- d. The scraper, with handle if necessary, shall be no less than 7" and no longer than 9" in length.
- e. The scraper shall be durable so that it shall not break during normal cleaning IAW Army TM 9-1005-319-10, WP Sequences No. 0014 Cleaning Instruction.

3.4.3.11 Straight pick. The straight pick shall have the following characteristics:

- a. The straight pick shall be used to remove carbon from hard to reach corners and gas port.
- b. The straight pick shall have a male threaded end.
- c. The straight pick, with handle if necessary, shall be no less than 6" and no longer than 9" in length.

3.4.3.12 Curved ended pick. The 90 degrees curved ended pick shall have the following characteristics:

- a. The curved ended pick shall be used to reach and clean behind the locking lugs to loosen carbon deposits.
- b. The curved ended pick shall have a male threaded end.
- c. The curved ended pick, with handle if necessary, shall be no less than 6" and no longer than 9" in length.

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3.4.3.13 Lens cleaning solution. The lens cleaning solution shall have the following characteristics:

- a. The lens solution shall conform to NSN 6850-01-547-7674 or NSN 6515-01-234-6834.
- b. The lens cleaning solution shall come in a pump spray for efficient lens cleaning application.
- c. The volume of the lens cleaning solution shall be no less than 0.5 ounces and no greater than 1.0 ounces.

3.4.3.14 Mohair lens cleaning brush. Mohair lens cleaning brush shall conform to NSN 1005-01-445-6798. The Mohair lens cleaning brush shall allow scratch free cleaning of optic lenses.

3.4.3.15 Re-usable micro fiber lens cloth.

- a. The re-usable micro fiber lens cloth shall be able to remove finger prints and oils from optics without leaving lint.
- b. The size of the re-usable micro fiber lens cloth shall be no less than 4"x 4".
- c. The micro fibers lens cloth shall be inside a re-sealable protective plastic bag for cleanliness.

3.4.3.16 Multi-purpose tool. The multi-purpose tool shall have the following features:

- a. The multi-tool shall provide needle nose pliers, wire cutters, serrated knife blade, straight knife blade, cross-tip screwdriver size #2, two (2) different sized flat tip screwdrivers size small 3/32 and size medium 7/32, and file.
- b. The multi-tool shall provide the capability to deploy the tool and employ the pliers/wire cutters with one hand.
- c. The color of the multi-tool shall be a non reflective black color.
- d. The overall length shall not exceed seven (7) inches with the needle-nose pliers jaws extended or exceed five and one-quarter (5 1/4) inches with the needle-nose pliers retracted.
- e. The weight of the multi-tool shall be no more than nine (9.0) ounces by itself or eleven (11.0) ounces with its individual carrying case.
- f. The multi-tool shall provide the ability to attach to a lanyard.
- g. Multi-tool shall be able to cut galvanized 0.080" #14 gage wire (ASTM A641).
- h. Multi-tool shall come equipped with a lock system that allows all of the tools to lock in the open (use) position and be released by the locking mechanism for safety.
- i. An individual Modular Lightweight Load-bearing Equipment (MOLLE) System compatible carrying case that can be attached to the Warfighter's belt is desired (O).
- j. Multi-tool shall have a method for adjusting the tool folding tension (O).
- k. Multi-tool conforming to NSN 5110-01-394-6252 has been successfully used in the past.

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3.4.3.17 Carrying case. The carrying case shall have the following characteristics:

- a. All Purpose Lightweight Individual Carry Equipment (ALICE) clips and MOLLE webbing at the back of the carrying case enabling attachment to a Warfighter's belt or vest.
- b. The color of the carrying case shall be non-reflective black.
- c. The size shall be no larger than 6'x10'x4' with all cleaning kit components stored within it.
- d. All cleaning kit components shall be securely stored in a retentive position inside the carrying case.
- e. External compartment(s)/pocket(s) that shall securely store and allows for one-handed rapid access to the multi-purpose tool and cleaning cable with attached slotted tip.

3.4.3.18 Swab patch holder, 5.56mm slotted tip. The swab patch holder, slotted tip, shall have the following characteristics:

- a. The swab patch holder, slotted tip shall be able to attach to a cotton patch to pull down the 5.56mm barrel with the flexible cleaning cable. Proper usage shall result in 360 degree coverage.
- b. The swab patch holder, slotted tip shall have a male threaded end.
- c. Swab patch holder, slotted tip conforming to NSN 1005-00-242-5687 has been successfully used in the past.

3.4.3.19 Cotton swabs. The cotton swabs shall be clean cotton tipped swabs protected in a small plastic bag. There shall be a minimum of six (6) cotton swabs.

3.4.3.20 Cotton swab patches. The cotton patches shall have the following characteristics:

- a. Clean cotton swab patches shall be provided to be used with the slotted tip to create a 360 degree swab to clean 5.56mm barrels.
- b. There shall be a minimum of ten (10) cotton patches inside a protective plastic bag.
- c. Cotton patches conforming to NSN 1005-00-912-4248 or NSN 1005-01-449-9257 have been successfully used in the past.

3.4.3.21 Pipe cleaners. The pipe cleaners shall have the following characteristics:

- a. The pipe cleaners shall be used to clean the gas tube and carrier key.
- b. There shall be a minimum of three (3) pipe cleaners.
- c. The pipe cleaners conform to NSN 9920-00-292-9946 have been successfully used in the past.

3.4.3.22 T-handle and bar. The T-handle and bar shall have the following characteristics:

- a. The T-handle shall be able to fit through the bore of a 5.56mm weapon.
- b. The T-handle shall have a male threaded end.

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- c. The bar shall be designed to be perpendicular to the handle during operational mode.
- d. There shall be a total of two (2) T-handles and bars for each kit.
- e. T-handle and bar conforming to NSN 1005-01-449-9672 and NSN 1005-01-449-8902 has been successfully in the past.

3.4.3.23 Instruction sheet. The Weapon Cleaning Kit shall include an instruction sheet providing a listing of all kit components and details on how to use each component in the Weapon Cleaning Kit. Instructions shall not conflict with cleaning procedures listed in TM 9-1005-319-10.

3.4.3.24 Swab patch holder, 7.62mm slotted tip (O). The swab patch holder, slotted tip, shall have the following characteristics:

- a. The swab patch holder, slotted tip shall be able to attach to a cotton patch to pull down the 7.62mm barrel with the flexible cleaning cable. Proper usage shall result in 360 degree coverage.
- b. The swab patch holder, slotted tip shall have a male threaded end.
- c. Swab patch holder, .30 cal slotted tip conforming to 1005-01-449-9254 has been successfully used in the past.

3.4.3.25 7.62mm bore brush (O). The bore brush shall have the following characteristics:

- a. The bore brush shall clean the neck and bore of any standard military 7.62mm weapon.
- b. The bore brush shall have a male threaded end.
- c. Bore brush conforming to 1005-01-449-8999 has been successfully used in the past.

3.4.3.26 9mm bore brush (O). The bore brush shall have the following characteristics:

- a. The bore brush shall clean the neck and bore of any standard military 9mm weapons.
- b. The bore brush shall have a male threaded end.
- c. Bore brush conforming to 1005-01-449-9159 has been successfully used in the past.

3.4.3.27 .45 caliber bore brush (O). The bore brush shall have the following characteristics:

- a. The bore brush shall clean the neck and bore of any standard military .45 caliber weapon.
- b. The bore brush shall have a male threaded end.
- c. Bore brush conforming to 1005-01-449-9282 has been successfully used in the past.

3.4.3.28 8" Cleaning Cable (O). The cleaning cable shall have the following characteristics:

- a. The cleaning cable shall provide for safe breech to muzzle cleaning.
- b. The cleaning cable shall be able to clean the chamber and bore.
- c. The cleaning cable shall be a minimum of 8" in length.

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- d. The cleaning cable shall have two (2) female threaded ends.

3.4.3.29 Large cal cotton swab patches (O). The cotton patches shall have the following characteristics:

- a. Clean cotton swab patches shall be provided to be used with the slotted tip to create a 360 degree swab to clean 7.62mm or larger sized barrels.
- b. There shall be a minimum of ten (10) cotton patches inside a protective plastic bag.
- c. Cotton patches conforming to NSN 1005-00-445-6728 have been successfully used in the past.

3.4.3.30 Muzzle cap (O). The muzzle cap shall be able to cap & remain on the weapon (M4 and M16). The muzzle cap shall allow the weapon to fire through the muzzle even if it is installed onto the weapon. Muzzle cap conforming to NSN 5340-00-850-7666 has been successful in the past.

3.4.3.31 Performance cleaning characteristics. All cleaning kit components shall demonstrate performance and durability characteristics equivalent or better than the existing components identified with kit (NSN 1005-01-541-7228).

3.5 Environmental requirements.

3.5.1 Operating temperature. The Weapons Cleaning Kit shall function throughout a temperature range from -55 degrees Fahrenheit to +155 degrees Fahrenheit.

3.5.2 Salt spray. The Weapons Cleaning Kit shall be safe to handle and be fully operable after a minimum of forty-eight (48) hours of salt fog exposure.

3.5.3 Chemical compatibility testing. The Weapons Cleaning Kit shall be compatible with Army standard chemicals listed below:

NSN 6850 00 965 2332	Carbon Removing Compound
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

3.6 Support and ownership requirements.

3.6.1 Drop test. The Multi-purpose tool shall withstand a five (5) foot drop test in different orientations without breaking or becoming unserviceable.

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3.6.2 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.

4. VERIFICATION

TABLE I. Requirement/verification cross reference matrix

METHOD OF VERIFICATION		CLASSES OF VERIFICATION							
1 - Analysis		A – Design verification							
2 - Demonstration		B – First article							
3 - Examination		C – Conformance verification							
4 - Test									
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	6-0-1		
3.2	First article inspection	4.2		X	X	X		6-0-1	
3.3	Conformance inspection	4.3		X	X	X			5-0-1
3.4	Interface and interoperability Requirements	4.4		X	X	X	5-0-1	5-0-1	2-0-1
3.4.1	Compatibility	4.4.1				X	5-0-1	5-0-1	2-0-1
3.4.2	Common threading	4.4.2			X		5-0-1	2-0-1	
3.4.3	Cleaning kit components	4.4.3		X	X	X			
3.4.3.1	Cleaning rod sections	4.4.3.1			X		5-0-1	5-0-1	2-0-1
3.4.3.2	Cleaning rod handle section	4.4.3.2			X		5-0-1	5-0-1	2-0-1
3.4.3.3	30" cleaning cable	4.4.3.3		X			5-0-1	5-0-1	2-0-1
3.4.3.4	Chamber brush	4.4.3.4		X			5-0-1	5-0-1	2-0-1
3.4.3.5	Bore brush	4.4.3.5		X			5-0-1	5-0-1	2-0-1
3.4.3.6	Double ended tooth brush	4.4.3.6		X			5-0-1	5-0-1	2-0-1
3.4.3.7	Large area application brush	4.4.3.7		X			5-0-1	5-0-1	2-0-1
3.4.3.8	Cleaning and lubrication bottle	4.4.3.8			X		5-0-1	5-0-1	2-0-1
3.4.3.9	Scraper	4.4.3.9		X			5-0-1	5-0-1	2-0-1
3.4.3.10	Locking lug scraper	4.4.3.10		X			5-0-1	5-0-1	2-0-1
3.4.3.11	Straight pick	4.4.3.11				X	5-0-1	5-0-1	2-0-1
3.4.3.12	Curved ended pick	4.4.3.12		X			5-0-1	5-0-1	2-0-1
3.4.3.13	Lens cleaning solution	4.4.3.13			X		5-0-1	5-0-1	2-0-1
3.4.3.14	Mohair lens cleaning brush	4.4.3.14				X	5-0-1	5-0-1	2-0-1
3.4.3.15	Re-usable micro fiber lens cloths	4.4.3.15			X		5-0-1	5-0-1	2-0-1
3.4.3.16	Multi-purpose tool	4.4.3.16				X	5-0-1	5-0-1	2-0-1
3.4.3.17	Carrying case	4.4.3.17				X	5-0-1	5-0-1	2-0-1
3.4.3.18	Swab patch holder, 5.56mm slotted tip	4.4.3.18		X			5-0-1	5-0-1	2-0-1
3.4.3.19	Cotton swabs	4.4.3.19			X		5-0-1	5-0-1	2-0-1
3.4.3.20	Cotton swab patches	4.4.3.20			X		5-0-1	5-0-1	2-0-1
3.4.3.21	Pipe cleaners	4.4.3.21		X			5-0-1	5-0-1	2-0-1

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TABLE I. Requirement/verification cross reference matrix (Continued)

Section 3 Requirement		Section 4 Method	Verification Methods				Verification Class		
			1	2	3	4	A	B	C
3.4.3.22	T-handle and bar	4.4.3.22		X			5-0-1	5-0-1	2-0-1
3.4.3.23	Instruction sheet	4.4.3.23			X		5-0-1	5-0-1	2-0-1
3.4.3.24	Swab patch holder, 7.62mm slotted tip (O)	4.4.3.24		X			5-0-1	5-0-1	2-0-1
3.4.3.25	7.62mm bore brush (O)	4.4.3.25		X			5-0-1	5-0-1	2-0-1
3.4.3.26	9mm bore brush (O)	4.4.3.26		X			5-0-1	5-0-1	2-0-1
3.4.3.27	.45 caliber bore brush (O)	4.4.3.27		X			5-0-1	5-0-1	2-0-1
3.4.3.28	8" cleaning cable (O)	4.4.3.28		X	X		5-0-1	5-0-1	2-0-1
3.4.3.29	Large cal cotton swab patches	4.4.3.29			X		5-0-1	5-0-1	2-0-1
3.4.3.30	Muzzle cap (O)	4.4.3.30				X	5-0-1	5-0-1	2-0-1
3.4.3.31	Performance cleaning characteristics	4.4.3.31				X	5-0-1	5-0-1	2-0-1
3.5	Environmental requirement	4.5				X	6-0-1	6-0-1	
3.5.1	Operational temperature	4.5.1				X	1-0-1	2-0-1	
3.5.2	Salt spray	4.5.2				X	1-0-1	1-0-1	
3.5.3	Chemical compatibility testing	4.5.3				X	6-0-1	6-0-1	
3.6	Support and ownership requirements	4.6		X	X	X	5-0-1	5-0-1	5-0-1
3.6.1	Drop test	4.6.1				X	2-0-1	2-0-1	2-0-1
3.6.2	Workmanship	4.6.2			X		5-0-1	5-0-1	5-0-1
Notes: Verification (5-0-1) Test 5, Accept with 0 Failures, and Reject with 1 Failure.									

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

4.1.1 Design verification test 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 analysis, 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 Conformance inspection. When specified (see 6.2), conformance 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 and identification requirement as specified in MIL-STD-1916.

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

4.4 Interface and interoperability verifications.

4.4.1 Compatibility. All verification process listed in section 4.4.3 shall be tested with a M16 and M4 weapon to ensure all cleaning tools are functional with both the M16 and M4 (T). All verification process listed in section 4.4.3 shall be tested with currently fielded 5.56mm, 9mm, 7.62, .45 caliber weapons (O).

4.4.2 Common threading. Verify by examination that all components with a UNF thread in the Weapon Cleaning Kit shall be of the same common thread (either #8-32 or #8-36). If the components threading is #8-32, then the adapter shall be verified to ensure it can convert all components to be compatible with #8-36 UNF items.

4.4.3 Cleaning kit components.

4.4.3.1 Cleaning rod sections Physical and functional examination shall be performed to verify all required characteristics of the cleaning rod sections.

4.4.3.2 Cleaning rod handle section. Physical and functional examination shall be performed to verify all required characteristics of the cleaning rod handle section.

4.4.3.3 30" cleaning cable. Verify by demonstration that the cleaning cable, with the attached slotted tip and patch or chamber brush or bore brush, is capable of cleaning the area from the breech to the muzzle as well as the chamber and bore. The length of the cleaning cable shall be measured using SME.

4.4.3.4 Chamber brush. Verify by demonstration that the chamber brush is capable of cleaning the locking lugs and the chamber area.

4.4.3.5 Bore brush. Verify by demonstration that the bore brush is capable of cleaning the neck and bore of any standard military 5.56mm weapon.

4.4.3.6 Double ended tooth brush. Verify by demonstration that the double ended tooth brush is capable of cleaning the receiver, slides and bolt carrier of the weapon. The length of the double ended tooth brush shall be measured using SME.

4.4.3.7 Large area application brush. Verify by demonstration that the large area application brush is capable of cleaning/brushing dust and apply cleaners and lubricants on large surface areas of the weapon system.

4.4.3.8 Cleaning and lubrication bottle. The cleaning and lubrication bottle shall be inspected to ensure it has a cap with a precision drip applicator. The empty refillable bottle shall be filled with water and closed tightly with its cap and tipped upside down to test for leakage.

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4.4.3.9 Scraper. Verify by demonstration that the scraper is capable of removing carbon from the critical bolt and bolt carrier without damaging the weapon. The length of the scraper shall be measured using SME.

4.4.3.10 Locking lug scraper. Verify by demonstration that the locking lug scraper is capable of removing carbon from the bolt, bolt carrier, locking lugs, and barrel extension without damaging the weapon. The length of the scraper shall be measured using SME.

4.4.3.11 Straight pick. The straight pick shall be tested on a previously fired weapon to ensure it is able to remove carbon from hard to reach corners and the gas port.

4.4.3.12 Curved ended pick. Verify by demonstration that the curved ended pick shall be able to reach and clean behind the locking lugs to loosen carbon deposits.

4.4.3.13 Lens cleaning solution. Objective evidence shall be examined for conformance to the NSN number.

4.4.3.14 Mohair lens cleaning brush. The mohair lens cleaning brush shall be tested on any standard military optic lens to ensure it is capable of cleaning without scratching the optic lenses.

4.4.3.15 Re-usable micro fiber lens cloths. The re-usable micro fiber lens cloths shall be tested to ensure it can remove finger prints and oil from optics without leaving lint.

4.4.3.16 Multi-purpose tool. Physical and functional examination shall be performed to verify all required characteristics of the multi-tool.

4.4.3.17 Carrying case. Physical and functional examination shall be performed to verify all required characteristics of the carrying case.

4.4.3.17.1 Item retention test. The carrying case with all its items stored in its appropriate compartments shall be dropped from a height of 5 feet onto concrete. The carrying case shall be examined to verify that all items contained inside the case remained in their retentive position and/or do not fall out after opening the carrying case. The drop test shall be conducted with these orientations:

- a. Carrying case top face up
- b. Carrying case top face down.
- c. Carrying case on long side
- d. Carrying case on short side

4.4.3.18 Swab patch holder, 5.56mm slotted tip. The swab patch holder, slotted tip shall be attached to the end of the cleaning cable and to a cotton patch IAW the directions listed on the Instruction Sheet to provide 360 degree swab coverage in the 5.56mm barrel.

4.4.3.19 Cotton swabs. The cotton swabs shall be visually inspected to ensure that there are six (6) clean, properly sealed cotton tipped swabs in a plastic bag.

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4.4.3.20 Cotton patches. The cotton patch shall be visually inspected to ensure that there are ten (10) clean cotton patches contained in a plastic bag. The cotton patch shall be verified during 4.4.3.18.

4.4.3.21 Pipe cleaners. Verify by demonstration that the pipe cleaners shall be able to clean the gas tube and carrier key.

4.4.3.22 T-handle and bar. Verify by demonstration that the T-handle and bar can fit through the bore of a 5.56mm weapon and the bar can be fitted/adjusted perpendicularly to the handle.

4.4.3.23 Instruction sheet. The Weapons Cleaning Kit shall be examined to ensure an instruction sheet with a listing of all the kit items is included

4.4.3.24 Swab patch holder, 7.62mm slotted tip (O). The swab patch holder, slotted tip shall be attached to the end of the cleaning cable and to a cotton patch IAW the directions listed on the Instruction Sheet to provide 360 degree swab coverage in a 7.62mm barrel.

4.4.3.25 7.62mm bore brush (O). Verify by demonstration that the bore brush is capable of cleaning the neck and bore of any standard military 7.62mm weapon.

4.4.3.26 9mm bore brush (O). Verify by demonstration that the bore brush is capable of cleaning the neck and bore of any standard military 9mm weapon.

4.4.3.27 .45 caliber bore brush (O). Verify by demonstration that the bore brush shall be able to clean the neck and bore of any standard military .45 cal weapon.

4.4.3.28 8" cleaning cable (O). Verify by demonstration that the cleaning cable, with the attached slotted tip and patch or chamber brush or bore brush, shall be able to clean the area from the breech to the muzzle as well as the chamber and bore. The length of the cleaning cable shall be measured using SME.

4.4.3.29 Large cal cotton swab patches (O). The cotton patch shall be visually inspected to ensure that there are ten (10) clean cotton patches contained in a plastic bag. The large cotton patch shall be verified during 4.4.3.24.

4.4.3.30 Muzzle cap (O). The muzzle cap shall demonstrate that it can attach and remain attach to a M16 or M4. User shall run with an M16 or M4 with the muzzle cap to demonstrate the muzzle cap does not fall off the weapon. The muzzle cap shall demonstrate that it can be fired off the weapon after installation with a M16 or M4.

4.4.3.31 Performance cleaning characteristics. All cleaning components shall demonstrate performance and durability characteristics through usage against cleaning components listed in kit NSN 1005-01-541-7228. Used and dirty weapon shall be used during this verification process.

4.5 Environmental verifications.

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4.5.1 Operating temperature.

4.5.1.1 Extreme hot. The Weapons Cleaning Kit shall be conditioned to a stable temperature of one hundred and fifty-five degrees Fahrenheit (155°F) for twelve (12) hours, in accordance with MIL-STD-810. The cleaning components of the weapon kit shall be used after the extreme hot test to clean a M16 and optics as per Army TM 9-1005-319-10, WP Sequence No. 0014 Cleaning Instructions.

4.5.1.2 Extreme cold. Weapons Cleaning Kit shall be conditioned to a stable temperature of minus fifty-five degrees Fahrenheit (-55° F) for twelve (12) hours, in accordance with MIL-STD-810. The cleaning components of the weapon kit shall be used after the extreme cold test to clean a M16 and optics as per Army TM 9-1005-319-10, WP Sequence No. 0014 Cleaning Instructions.

4.5.2 Salt spray. The Weapons Cleaning Kit shall be exposed to a Five Percent (5%) salt solution for forty-eight (48) hours, in accordance with ASTM-B117. After exposure, the Weapon Cleaning Kit and all its components shall be inspected for signs of degradation that adversely impact performance.

4.5.3 Chemical compatibility testing. Six (6) Weapons Cleaning Kits 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 Weapon Cleaning Kit and its components shall be inspected for any signs of degradation that adversely impact performance.

4.6 Support and ownership verifications.

4.6.1 Drop test. The multi-purpose tool shall be dropped from a height of 5 feet onto concrete. The multi-purpose tool shall be examined to verify all tools can unfold, fold, and relock and the pliers can be opened or closed. The drop test shall be conducted with these orientations:

- a. Multi-purpose tool open, on tip of pliers
- b. Multi-purpose tool open and knife blade extended, on tip of thinnest knife blade
- c. Multi-purpose tool open and smallest flat-tip screwdriver extended, on tip of screwdriver
- d. Multi-purpose tool open and smallest cross-tip screwdriver extended, on tip of screwdriver
- e. Multi-purpose tool open and file extended, on end of file

4.6.2 Workmanship. The Weapons Cleaning Kit 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

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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 Weapon Cleaning Kit and associated components described by this specification are intended for use by soldiers on designated military weapons, and will be issued to individual soldiers.

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 conformance inspection.
- e) Packaging requirements (see 5.0).

6.3 Additional information. Material described by this item specification document 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 PRF13018855, Kit, Weapons Cleaning, Improved dated 18 August 2008. 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 1005-2011-004)

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>.