

INCH-POUND

MIL-PRF-32363

26 November 2010

SUPERSEDING

PRF13018850

11 October 2007

(See 6.5)

PERFORMANCE SPECIFICATION

SLING, TACTICAL

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 Sling, Tactical, hereafter referred to simply as the Tactical Sling or TS. The Tactical Sling allows the Warfighter's weapon to remain in a ready position while conducting non-weapon firing-related tasks.

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 of the Tactical Sling 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

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.

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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-1472	Human Engineering
MIL-STD-1916	DoD Preferred Methods for Acceptance of Product

(Copies of 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 3-22.9	Rifle Marksmanship, M16/ M4 Series Weapons
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(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.htm).

US ARMY DEVELOPMENT TEST COMMAND

TOP 3-2-045	Automatic Weapons, Machineguns, Hand, and Shoulder Weapons
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(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 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 Tactical Sling 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 Tactical Sling 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 Tactical Sling shall be subjected to conformance inspection in accordance with [TABLE I and 4.3].

3.4 Operating requirements.

3.4.1 High ready position upon release. The Tactical Sling shall keep the weapon in the high ready position (see section 6.4.1) orientation when the weapon is released.

3.4.2 Low ready position upon release. The Tactical Sling shall keep the weapon in the low ready position (see section 6.4.2) orientation when the weapon is released.

3.4.3 Adjustment ability. The Tactical Sling shall enable the Warfighter to assume all fighting positions below as defined in FM 3-22.9 (chapter 4 and 7):

- a. Individual Foxhole Supported Firing Position
- b. Basic Prone Unsupported Firing Position
- c. Alternative Prone Firing Position
- d. Kneeling Supported Firing Position
- e. Kneeling Unsupported Firing Position
- f. Standing Firing Position
- g. Modified Supported Firing Position

3.5 Interface and interoperability requirements.

3.5.1 Webbing. The width of the Tactical Sling belt positioned on the shoulder of the Warfighter shall be no less than 1.0 inches and no more than 2.0 inches. The Tactical Sling belt shall be made of a soft web-like synthetic material.

3.5.2 Ambidextrous. The Tactical Sling shall allow for ambidextrous function with the M16 and M4 series rifle.

3.5.3 Quick release. The Tactical Sling shall have one-handed quick release type fastener to separate the weapon from the Warfighter. The fastener when released must allow the weapon to fully separate from the Warfighter without any further action. Loosening the sling to allow the user to remove the weapon is not considered as “fully separating” the weapon from the user.

3.5.4 Non-interference. The Tactical Sling shall not interfere with the use or function of the weapon to include but not limited to blocking the ejection port, interfering with the cartridges feeding, weapon charging and collapsing or extending the buttstock.

3.5.5 Compatibility. The Tactical Sling shall be operable and maintainable by the 5th percentile female through 95th percentile male soldiers, as specified in MIL-STD-1472, while dressed in environmentally protective clothing (MOPP IV and arctic gear without mittens).

3.5.6 Tactical sling attachment. The Tactical Sling shall be capable of attaching to the M16, M16A2, M16A4 Modular Weapon System (MWS), M4, and M4 MWS without the use of tools (T). The Tactical Sling shall be capable of attaching to the previously identified weapons when they are configured with the M203 Grenade Launcher (GL) without the use of any tools (O).

3.5.7 Silent. The Tactical Sling shall not be heard at a distance of 10m (T), 5m(O) when it is opened and will remain quiet in operation when both closed and extended.

3.6 Environmental requirements.

3.6.1 Operational temperature. The Tactical Sling shall function throughout a temperature range from not less than -55 degrees Fahrenheit to not greater than +155 degrees Fahrenheit.

3.6.2 Salt spray. The Tactical Sling 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 Tactical Sling 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

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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 Tactical Sling shall attach to the front swivel and buttstock attachment points (T), to multiple points on the weapon (O).

3.7.2 Color. The Tactical Sling shall be a dull non-reflective color.

3.7.3 Endurance. The Tactical Sling shall not melt, deform or become unserviceable in performance after firing a total of 1260 rounds with a M16 rifle.

3.7.4 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.

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						
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	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	High ready position upon release	4.4.1		X	X	X	2-0-1	2-0-1	2-0-1
3.4.2	Low ready position upon release	4.4.2		X	X	X	2-0-1	2-0-1	2-0-1
3.4.3	Adjustment ability	4.4.3		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	Webbing	4.5.1					2-0-1	2-0-1	2-0-1
3.5.2	Ambidextrous	4.5.2		X	X	X	2-0-1	2-0-1	2-0-1
3.5.3	Quick release	4.5.3				X	2-0-1	2-0-1	2-0-1
3.5.4	Non-interference	4.5.4				X	2-0-1	2-0-1	2-0-1
3.5.5	Compatibility	4.5.5				X	2-0-1	2-0-1	2-0-1
3.5.6	Tactical sling attachment	4.5.6		X	X	X	2-0-1	2-0-1	2-0-1
3.5.7	Silent	4.5.7				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 requirements	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	4.7.2		X	X		2-0-1	2-0-1	2-0-1
3.7.3	Endurance	4.7.3				X	2-0-1	2-0-1	2-0-1
3.7.4	Workmanship	4.7.4			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 Conformance verification. 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 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 High ready position upon release. Verified by demonstration that the Tactical Sling shall maintain the weapon orientation in the high ready position upon release. The Tactical Sling shall be mounted to the M16 and M4 along with the ancillary equipment during this verification process.

4.4.2 Low ready position upon release. Verified by demonstration that the Tactical Sling shall maintain the weapon orientation in the low ready position upon release. The Tactical Sling shall be mounted to the M16 and M4 along with the ancillary equipment during this verification process.

4.4.3 Adjustment ability. The Tactical Sling shall demonstrate that it will allow the Warfighter to adjust for multiple fighting and carrying positions as referenced in chapter 4 and 7 of the FM 3-22.9. The Tactical Sling shall be mounted to the M16 and M4 along with the ancillary equipment during this verification process.

4.5 Interface and interoperability verifications.

4.5.1 Webbing. The width of the Tactical Sling belt shall be measured using SMTE and shall be visually inspected to ensure it is made of a soft web-like synthetic material.

4.5.2 Ambidextrous. The Tactical Sling shall be observed to ensure it is ambidextrous. The Tactical Sling shall be mounted to the M16 and M4 along with the ancillary equipment during this verification process.

4.5.3 Quick release. The Tactical Sling shall be demonstrated to ensure it has a one-handed quick release type fastener to separate the weapon from the fighter as described in requirement.

The Tactical Sling shall be mounted to the M16 and M4 along with the ancillary equipment during this verification process.

4.5.4 Non-interference. The Tactical Sling shall be attached to a M16 and M4 series rifle and the tester shall assume various fighting positions to ensure that the Tactical Sling does not interfere with the use or function of the weapon.

4.5.5 Compatibility. The Tactical Sling shall be verified for compatibility by conducting verification 4.4.1, 4.4.2 and 4.4.3 while the operator is dressed in MOPP IV or arctic gear.

4.5.6 Weapon systems attachment. The Tactical Sling shall demonstrate it can be attached to the M4 and M16 series rifle without the use of any tools.

4.5.7 Silent. The Tactical Sling shall demonstrate it can be silent from a distant of 10m(T) and 5m(O) through user testing:

- a. Three (3) testers shall be positioned 10 meters facing away from the Tactical Sling attached to a M16 series rifle.
- b. Operator shall carefully (while attempting to make as little noise as possible) assume and rotate through these firing positions (FM 3-22.9): Standing Firing Position, Kneeling Unsupported Firing Position, and Alternative Prone Firing Position. Testers shall raise their hand if they hear the Tactical Sling during the procedure.
- c. Operator shall repeat the rotation of the firing positions for a total of five (5) times.
- d. Tactical Sling shall pass the silent test if all three (3) testers do not raise their hand once during each transition to the next firing position.
- e. Repeat Silent test with testers 5 meters away from the Tactical Sling (O).

4.6 Environmental verifications.

4.6.1 Operational temperature.

4.6.1.1 Extreme hot. Tactical Sling shall be attached to a M16 series rifle and shall be conditioned to a temperature of one hundred and fifty-five degrees Fahrenheit (155°F), IAW MIL-STD-810 for three (3) hours. 210 rounds shall be fired from the M16 series rifle. Firing shall take place no greater than 6mins from temp chamber removal. If the time before firing is exceeded, the Tactical Sling with the M16 shall be reconditioned at the extreme high temperature for an additional thirty (30) mins before firing. The Tactical Sling shall be inspected for signs of degradation or flaws during and after firing.

4.6.1.2 Extreme cold. The Tactical Sling shall be attached to a M16 series rifle and shall be conditioned to a temperature of minus fifty-five degrees Fahrenheit (-55° F), IAW MIL-STD-810 for three (3) hours. 210 rounds shall be fired from the M16 series rifle. Firing shall take place no greater than 6mins from temp chamber removal. If the time before firing is exceeded, the Tactical Sling with the M16 shall be reconditioned at the extreme low temperature for an additional thirty (30) mins before firing. The Tactical Sling shall be inspected for signs of degradation or flaws during and after firing.

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4.6.1.3 Salt spray. The Tactical Sling shall be exposed to a Five Percent (5%) salt solution for forty-eight (48) hours, IAW ASTM-B117. After exposure, the Tactical Sling shall be inspected for signs of degradation.

4.6.1.4 Chemical compatibility testing. Six (6) Tactical Slings shall be used for this test. The Tactical Sling 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 Tactical Slings shall be inspected for any signs of degradation.

4.7 Support and ownership verifications.

4.7.1 Attachment. The Tactical Sling shall be tested to ensure it can attach to the front swivel and buttstock attachment points.

4.7.2 Color. The Tactical Sling shall be visually inspected to ensure it is a dull non-reflective color.

4.7.3 Endurance. The Tactical Sling shall be mounted to a M16-series rifle and be tested to ensure it does not melt, deform or become unserviceable after firing a total of 1260 rounds.

4.7.4 Workmanship. The Tactical Sling 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 Tactical Sling allows the Warfighter's weapon to remain in a ready position while conducting non-weapon firing-related tasks.

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 documents identified in Section 6 for information.

- 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 is for a commercial off the shelf (COTS) product. Supplier must have non-developmental production capability.

6.4 Definitions of ready position.

6.4.1 High ready position. The butt of the weapon is held under the armpit, with the barrel pointed slightly up so that the top of the front sight post is just below the line of sight but still within the gunner's peripheral vision. The non-firing hand grasps the hand guards toward the front sling swivel, the trigger finger is outside of the trigger well, and the thumb of the firing hand is on the selector lever. To engage a target from the high ready, the gunner pushes the weapon forward as if to bayonet the target and brings the butt stock firmly against the shoulder as it slides up the body. This technique is best suited for the lineup outside of a building, room, or bunker entrance.

6.4.2 Low ready position. The butt of the weapon is placed firmly in the pocket of the shoulder with the barrel pointed down at a 45-degree angle. The non-firing hand grasps the hand guards toward the front sling swivel, the trigger finger is outside of the trigger well, and the thumb of the firing hand is on the selector lever. To engage a target from the low ready, the gunner brings the weapon up until the proper sight picture is achieved. This technique is best suited for movement inside of building.

6.5 Previous identification. This document supersedes an ARDEC Program-Unique Specification PRF13018850, Sling, Tactical, dated 11 October 2007. A copy of this ARDEC specification may be requested from ardecstdzn@conus.army.mil.

6.6 Subject term (key word) listing.

Close quarter battle
Small arms

Preparing activity:
Army – AR
(Project 1005-2011-003)

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>.