INCH-POUND

MIL-K-70606 (AR) 15 September 1988

### MILITARY SPECIFICATION

### KNIFE, BAYONET, MULTIPURPOSE, M9 WITH SCABBARD

This Specification is approved for use within the U.S. Army Armament Munitions and Chemical Command, and is available for use by all Departments and Agencies of the Department of Defense.

1. SCOPE

1.1 Scope. This specification covers the M9 Multipurpose Bayonet System (M.P.B.S.). This system is comprised of a multipurpose knife which functions as a bayonet, field craft knife, combat knife and wire cutter and is carried in a detachable scabbard which may also serve as part of the wire cutter. The termbayonet, hereinafter mentioned in this specification, shall be the multipurpose knife described above.

- 2. APPLICABLE DOCUMENTS
- 2.1 Government documents.

2.1.1 <u>Specifications, standards and handbooks</u>. The following specifications, standards and handbooks form a part of this specification to the extent specified herein. Unless otherwise specified, the issue of these documents shall be those listed in the issue of the Department of Defense Index of Specifications and Standards (DoDISS) and supplement thereto, cited in the solicitation.

### SPECIFICATIONS

FEDERAL

| QQ-A-250\4 | - | Aluminum  | Alloy | 20 | 24, | Plate | and | Sheet |
|------------|---|-----------|-------|----|-----|-------|-----|-------|
| QQ-S-781   |   | Strapping |       |    |     |       |     |       |

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: Commander, U.S. Army Armament, Munitions, and Chemical Command, Attn. AMSMC-QA, Picatinny Arsenal, New Jersey 07806-5000 by using the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

#### MILITARY

| MIL-B-2427  | - Box, Ammunition Packing: Wood, Nailed     |
|-------------|---|
| MIL-W-13855 | - Weapons: Small Arms and Aircraft Armament |
|             | Subsystems, General Specification for       |
| MIL-L-63460 | - Lubricant, Cleaner and Preservative for   |
|             | Weapons and Weapons Systems                 |

#### STANDARDS

#### MILITARY

| MIL-STD-105 | - Sampling Procedures and Tables for      |
|-------------|---|
|             | Inspection by Attributes                  |
| MIL-STD-109 | - Quality Assurance Terms and Definitions |
| MIL-STD-171 | - Finishing of Metal and Wood Surface     |

2.1.2 Other Government documents, drawings, and publications. The following other Government documents, drawings, and publications form a part of this specification to the extent specified herein. Unless otherwise specified, the issues shall be those in effect on the date of solicitation.

#### DRAWINGS

U.S. ARMY ARMAMENT, RESEARCH, DEVELOPMENT AND ENGINEERING CENTER (ARDEC)

| 7274016   | - Gage, Sharpness Testing                   |
|-----------|---|
| 7274019   | - Operating Instructions                    |
| 7274020   | - Twine, Nylon                              |
| 12011860  | - Knife, Bayonet, Multipurpose, M9 with     |
|           | Scabbard                                    |
| P12011860 | - Special packaging Instructions for Knife, |
|           | Bayonet, Multipurpose, M9 with Scabbard     |

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

2.2 other publications. The following document(s) form a part of this specification to the extent specified herein. Unless otherwise specified, the issue of these documents which are DOD adopted shall be those listed in the issue of the DoDISS specified in the solicitation. Unless otherwise specified, the issues of documents not listed in the DoDISS shall be the issue of the nongovernment documents which is current on the date of the solicitation.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

|           |   | Wire Barbed, Zinc Coated (Galvanized) Steel |
|-----------|---|---|
| ASTM-A585 | _ | Aluminum coated steel Barbed Wire           |
| ASTM-E18  |   | Standard Methods of Test for Rockwell       |
|           |   | Hardness and Rockwell Superficial Hardness  |
|           |   | of Materials                                |
| ASTM-B117 | _ | Standard Method of Salt Spray (Fog) Testing |

(Application for copies of ASTM publications should be addressed to the American Society for Testing and Materials, 1916 Race Street, Philadelphia, Pennsylvania <sup>19103.)</sup>

AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME)

ASME/ANSI B 18.3 - Hexagon Socket Button Head Cap Screw

(Application for copies of ASME publications should be addressd to the American Society of Mechanical Engineers, 345 East 47th Street, New York, NY 10017.)

2.3 Order of precedence. In the event of a conflict between the text of this specification and the references cited herein, (except for associated detail specifications, specification sheets or MS standards) the text of this specification shall take precedence. Nothing in this specification, however shall supersede applicable laws and regulations unless specific exemption obtained.

### 3. REQUIREMENTS

3.1 First article. When specified in the contract or purchase order, sample shall be subjected to first article inspection in accordance with the technical provisions herein (see 4.4 and 6.2).

3.2 <u>Materials and construction</u>. The MPBS shall conform to the materials, dimensions, conditions and construction requirements specified herein, and on Drawing 12011860 and drawings applicable thereto, and shall be in accordance with the applicable material and construction provisions of MIL-W-13855.

3.3 Design. The MPBS shall conform to the design specified herein, on Drawing 12011860 and drawings applicable thereto, and shall be in accordance with the applicable design provisions of the MIL-W-13855.

### 3.4 Performance.

3.4.1 Cuttint test. The MPBS shall be capable of cutting the following materials the number of times specified below without sharpening:

MATERIAL

NUMBER OF CUTS

50

- Barbed wire, double strand,
   12 1/2 gage, 0.099 inch diameter.
   (ASTM-A121 and ASTM-A585)
- b. Standard metal band: Flat steel strapping 5/8 inch by 0.020 inch thick, Class 1, Type I or IV of QQ-S-781 as specified in MIL-B-2427.

3.4.2 Corrosion resistance. The MPBS shall be corrosion resistant. Application of one or more of the surface treatments and finishes listed in Table V of MIL-STD-171 is acceptable.

3.4.3 <u>Resiliency</u>. The bayonet shall not fracture and the blade shall not have a permanent deformation of more than 3/16 inch when tested as specified in 4.6.3.

3.4.4 Impact. The bayonet shall withstand a minimum impact of 28 foot-pounds of energy without fracture, permanent deformation-or loosening of any parts:

3.4.5 Twist. The bayonet shall withstand a twist of 25 foot-pounds torque without fracture, permanent deformation, loosening of any parts or detaching from the test fixture.

3.4.6 Withdrawal. The bayonet shall be capable of withstanding a gradually applied longitudinal tensile load of 250 pounds without fracture, permanent deformation, loosening of any parts or detaching from the test fixture.

3.4.7 <u>Sharpness</u>. The bayonet shall be capable of severing a nylon twine in accordance with Dwg. 7274020 in not more than five strokes.

3.4.8 <u>Drop test</u>. The bayonet with and without the scabbard shall withstand a drop test from a height of four feet onto a concrete surface.

3.4.9 Interchangeability. The bayonet and scabbard shall be interchangeable. All spare parts shall be interchangeable.

3.4.10 Latching mechanism functioning. The bayonet shall be capable of being assembled to an M16 series Rifle without manually depressing the latching lever; shall be securely retained after assembly, and shall be readily detached when the latching lever is manually depressed.

3.4.11 <u>Firing</u>. The bayonet while attached to an M16 series Rifle shall withstand the firing of 90 rounds of ammunition at the maximum firing rate in the weapon without becoming loose or damaged.

3.4.12 <u>Serrated edge</u>. The bayonet shall have a serrated edge at the rear portion of the top edge of the blade. It shall be capable of cutting through light metals such as 2024 Aluminum AlloY sheet 0.025 inch thick, 0 temper, per Federal Specification QQ-A-250/4 and one-half inch hemp rope. The serrations shall not protrude above the top edge of the blade.

3.4.13 <u>Temperature extremes</u>. The MPBS shall meet requirements of 3.4.1, 3.4.3, 3.4.4, 3.4.5, 3.4.6, 3.4.8, and 3.4.10 at hot  $(145^\circ \pm 5^\circ F)$ , basic, and cold  $(-50^\circ \pm 5^\circ F)$  temperatures.

3.5 Marking. Each MPBS shall be clearly marked in accordance with the contract, drawings, and MIL-W-13855.

3.6 <u>Workmanship</u>. The requirements for workmanship shall be in accordance with MIL-W-13855.

4. QUALITY ASSURANCE PROVISIONS

4.1 <u>Responsibility for inspection</u>. Unless otherwise specified in the contract or purchase order, the contractor is responsible for the performance-of all inspection requirements as specified herein. Except as otherwise specified in the contract or purchase order, the contractor may utilize his own or any other facilities suitable for the performance of the inspection requirements specified herein, unless disapproved by the Government. The Government reserves the right to perform any of the inspections set forth in the specification where such inspections are deemed necessary to assure supplies and services conform to prescribed requirements.

4.1.1 <u>Responsibility for compliance</u>. All items must meet all requirements of sections 3 and 5. The inspection set forth in this specification shall become a part of the contractor's overall inspection system or quality program. The absence of any inspection requirements in the specification shall not relieve the contractor of the responsibility of assuring that all products or supplies submitted to the Government for acceptance comply with all requirements of the contract. Sampling in quality conformance does not authorize submission of known defective material, either indicated or actual nor does it commit the Government to acceptance of any defective material.

4.1.2 Component and material inspection. The supplier is responsible for insuring that components and materials are manufactured, examined and tested in accordance with referenced specifications, standards and drawings.

4.2 <u>Quality assurance terms and definitions</u>. Quality assurance terms and definitions used herein are in accordance with MIL-STD-109.

4.3 Classification of inspections. The following types of inspections shall be conducted on this item.

a. First Article Inspection (see 4.4)

b. Quality Conformance Inspection (see 4.5)

4.4 First article inspection.

4.4.1 Submission. The contractor shall submit a first article sample as designated by the Contracting officer for evaluation in accordance with provisions of 4.4.2. The first article sample shall consist of the following items in sample quantities as indicated.

| ITEM DESCRIPTION                         | DRAWING  | QUANTITY   |
|--|----------|------------|
| Knife, Bayonet,<br>Multipurpose, M9 with |          |            |
| Scabbard                                 | 12011860 | <b>1</b> 1 |
| SCADDALU                                 |          | 22         |

4.4.2 Inspections to be performed. The first article shall be selected from pistols produced prior to the beginning of quantity production and submitted for testing in accordance with the contract requirements (see 6.2). The first article shall be representative of production processes to be used during quantity production. The first article shall be subjected to all examinations and tests specified in Table I and II and such other inspection as necessary to determine that all the requirements of the contract have been met.

# TABLE I. First article test

CLASSIFICATION OF DEFECTS & TESTS MIL-K-70606 (AR)

| PARAGRAPH TITLE<br>Knife, Bayonet, Multipurpose<br>Scabbard   | e, M9 with   | SHEET             | 1 of 1 .   | DRAWING NUMBER<br>NEXT HIGHER ASSEMBLY  |
|---|--|-------------------|--|---|
| CATEGORY EXAMINATION OR TEST  | NO. OF<br>S <u>AMPLE</u><br>UNITS  | AOL<br>OR<br>100% | REQUIREMENT<br>I ARAGRAPH  | PARAGRAPH REFERENCE<br>/INSPECTION METHOD   |
| CLASSIFICATION OF DEFECTS<br>Cutting test - Hot, cold, ba<br>Corrosion resistance<br>Resiliency - Hot, cold, basic ter<br>Impact - Hot, cold, basic ter<br>Withdrawal - Hot, cold, basic<br>Sharpness<br>Drop test - Hot, cold, basic<br>Latching mechanism functionic<br>cold, basic temp<br>Serrated edge `<br>Interchangeability<br>Firing | ic temp See NOTE<br>mp See NOTE<br>ic temp See NOTE<br>ic temp See NOTE<br>ic temp See NOTE<br>22<br>c temp See NOTE | 100%              | 3.4.1<br>3.4.13<br>3.4.2<br>3.4.3<br>3.4.13<br>3.4.4<br>3.4.13<br>3.4.5<br>3.4.13<br>3.4.6<br>3.4.13<br>3.4.6<br>3.4.13<br>3.4.7<br>3.4.8<br>3.4.10<br>3.4.10<br>3.4.12<br>3.4.9<br>3.4.11 | 4.6.1, 4.6.13<br>4.6.2<br>4.6.3, 4.6.13<br>4.6.4, 4.6.13<br>4.6.5, 4.6.13<br>4.6.6, 4.6.13<br>4.6.7<br>4.6.8, 4.6.13<br>4.6.10, 4.6.13<br>4.6.12<br>4.6.9<br>4.6.11 |

### TABLE II. First article test plan

1) The Classification of Defects, sharpness and latching mechanism tests shall be done first on all 22 M.P.B.S.

2) The impact, twist, withdrawal, and resiliency tests shall be done with the same nine MPBS.

3) The interchangeability test shall be done with 10 M.P.B.S from the remaining 13.

4) The firing, cutting, drop test, and the latching mechanism test at ambient shall be done after the interchangeability using the same MPBS.

5) The corrosion resistance test shall be done with the remaining three MPBS.

4.5 Quality conformance inspection.

4.5.1 <u>Inspection lot</u>. The maximum lot size shall be 1080 or one month's production, whichever is smaller.

4.5.2 <u>Sampling</u>. Sampling for inspection shall be performed in accordance with MIL-STD-105.

4.5.3 Failure data. If test requirements cited herein are not met, acceptance of the MPBS shall be deferred and the contractor . shall accomplish as applicable, the following actions:

a. Conduct a failure analysis study performing a dimensional physical and visual examination of the components which are suspected to be the cause of failure or malfunction.

b. Evaluate and correct the applicable production processes and procedures to prevent recurrence of the same defect(s) in future production.

c. Examine the MPBS, partially assembled MPBS and components (including components and subassemblies at in-process or final assembly) to insure that material containing the same defect is purged from the inventory and not presented to the Government for acceptance.

d. Submit the results of the failure analysis and the corrective actions taken to the Government for review and approval prior to submitting a reconditioned lot or reconditioned MPBS. for retest.

4.5.4 Examination. Examination shall be performed on sample MPBS from each inspection lot for defects listed in 4.5.4.1 through 4.5.4.5. The inspection level shall be Level II per MIL-STD-105 with accept\reject criteria as specified in 4.5.4.1 through 4.5.4.5.

## QUALITY CONFORMANCE INSPECTION

Downloaded from http://www.everyspec.com

CLASSIFICATION OF DEFECTS & TESTS

MIL-K-70606 (AR)

|                                    | DRAWING N<br>12598163<br>NEXT HIGHER     | '1 OF 1                   | SHEET                           |                           | TITLE<br>Blade   | PARAGRAPH                                       |
|------------------------------------|--|---------------------------|---------------------------------|---------------------------|--|---|
| PH REFERENCE<br>/INSPECTION METHOD | PARAGRAPH I                              | REQUIREMENTS<br>PARAGRAPH | AQL<br>180%                     | NO. OF<br>SAMPLE<br>UNITS | EXAMINATION OF TEST  | CATEGORY  |
|                                    |  |                           |                                 |                           | None defined.  | CRITICAL  |
|                                    | Gage                                     |                           | .65                             | See<br>Note 1             | Width, hole (.315)<br>Hardness   | MAJOR<br>1 0 1<br>102                           |
|                                    | Gage<br>Gage<br>Visual<br>Gage<br>Visual |                           | 1.5<br>1.5<br>1.5<br>1.5<br>1.5 |                           | Length, Hole (.565)<br>Location of hole to top of blade (.400)<br>.755 dimension<br>Serrated edge<br>Length, blade<br>Shape, blade | MINOR<br>201<br>202<br>203<br>204<br>205<br>206 |
|                                    |  |                           | eat lot.                        | neat tr                   | Five blades shall be selected from each b  | NOTES: 1/                                       |

## QUALITY CONFORMANCE INSPECTION

## CLASSIFICATION OF DEFECTS & TESTS

|  | CLASSIFICATION OF D   | EFECTS                           | & TESTS                                |                          | MIL-K-70606 (AR)                                   |
|--|---|----------------------------------|--|--------------------------|--|
| PARAGRAPH<br>4.5.4.2   | Body, Scabbard  |                                  | SHEE                                   | T 1 OF 1                 | DRAWING NUMBER<br>12598172<br>NEXT HIGHER ASSEMBLY |
| CATEGORY   | EXAMINATION on TEST   | NO. <i>OF</i><br>SAMPLE<br>UNITS | AOL<br>100%                            | REQUIREMENT<br>PARAGRAPH | PARAGRAPH REFERENCE<br>/INSPECION METHOD           |
| CRITICAL   | None defined.   |                                  |  |                          |  |
| MAJOR<br>1 0 1<br>102<br>103<br>104<br>MINOR<br>2 0 1<br>202<br>203<br>204 | <pre>Diameter, cutting plate mounting holes<br/>(.19), 2 places<br/>True position of cutting plate mounting<br/>holes to datum B<br/>Width, cutting plate cutout (1.595)<br/>True position of width of cutting plate<br/>cutout to datum A<br/>Distance' between screw holes (1.00)<br/>Distance between screw holes and<br/>fastener hole (5.68)<br/>Width of sharpening stone cutout (.91)<br/>Presence of drain hole</pre> |                                  | .65<br>.65<br>.65<br>1.5<br>1.5<br>1.5 |                          | Gage<br>Gage<br>Gage<br>Gage<br>Visual             |
| NOTER  |   |                                  |  |                          |  |

## QUALITY CONFORMANCE INSPECTION

CLASSIFICATION OF DEFECTS & TESTS

MIL-K-70606 (AR)

| PARAGRAPH<br>4.5.4.3  | TITLE<br>Rod , Tang Extending  |                          | SHEET                           | 51 OF 1.                 | DRAWING NUMBUER<br>12598165<br>NEXT HIGHER ASSEMBLY |
|---|--|--------------------------|---------------------------------|--------------------------|---|
| CATEGORY  | EXAMINATION OR TEST  | NO.OF<br>SAMPLE<br>UNITS | AOL<br>OR<br>100%               | REOUIREMENT<br>PARAGRAPH | PARAGRAPH REFERENCE<br>/INSPECTION METHOD           |
| CRITICAL<br>MAJOR<br>1 0 1<br>102<br>103<br>MINOR<br>2 0 1<br>202 | <pre>None defined Pitch diameter, thread, screw cap hole (.250 -20UNC-2B) Minor diameter, thread, screw cap hole (.250-20UNC-2B) True position of screw cap hole thread to datum A Diameter, rod (.38) Runout of .38 diameter to datum A</pre> |                          | .65<br>.65<br>.65<br>1.5<br>1.5 |                          | Gage<br>Gage<br>Gage<br>Gage                        |
| NOTICE:   |  | I                        | 1                               | 1                        |   |

## QUALITY CONFORMANCE INSPECTION

CLASSIFICATION OF DEFECTS & TESTS

MIL-K-70606 (AR)

| -          |  |                           |                   |                          | MILL R /0000 (AR)                        |
|------------|--|---------------------------|-------------------|--------------------------|--|
| PARAGRAPH  | TITLE                                      |                           |                   |                          | DRAWING NUMBER                           |
| 4.5.4.4    | M9 Multipurpose Bayonet System             |                           | SHEE              | T 1 OF 1                 | 12011860                                 |
|            |  |                           | 01122             | 01 -                     | NEXT HIGHER ASSEMBLY                     |
| CATEGORY   | EXAMINATION OR TEST                        | NO. OF<br>SAMPLE<br>UNITS | AOL<br>OR<br>100% | REOILEREMENT             | DARAGRADH REFERENCE                      |
| CHILOONI   |  | UNITS                     | 100%              | REQUIREMENT<br>PARAGRAPH | PARAGRAPH REFERENCE<br>/INSPECTION METHO |
| CRITICAL   | None defined                               |                           |                   |                          |  |
| MAJOR      |  |                           |                   |                          |  |
| 1 0 1      | Weight                                     |                           | .65               |                          | Gag e                                    |
| MINOR      |  |                           |                   |                          |  |
| 201        | Color                                      |                           | 1.5               |                          | Visual-Chart                             |
| 202        | Workmanship                                |                           | 2.5               |                          | Certification<br>Visual                  |
|            |  |                           | 2.5               |                          | Vibuai                                   |
|            |  |                           |                   |                          |  |
|            |  |                           |                   |                          |  |
|            |  |                           |                   |                          |  |
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|            |  |                           |                   |                          |  |
|            |  |                           |                   |                          |  |
| NOTICE: Do | ightion If one nominement is not not       | bo 1-                     | l<br>- aball b    |                          |  |
| Re         | jection - If any requirement is not met, t | ле то                     | SHALL D           | e rejecte                | eu.                                      |
|            |  |                           |                   |                          |  |

AMSMC Form 1570, 1 Feb 85

Replaces DRSMC-QA (D) Form 160, 1 Aug 83, which may not be used.

## QUALITY CONFORMANCE INSPECTION

## CLASSIFICATION OF DEFECTS & TESTS

### MIL-K-70606 (AR)

|           | TITLE   |   |             |  | DRAWING NUMBER   |
|-----------|---|---|-------------|--|--|
| 1.5.4.5   | M9 Multipurpose Bayonet System  |   | SHEET       | 1 OF 1 .   | NEXT HIGHER ASSEMBLY   |
| CATEGORY  | EXAMINATION OR TEST   | No OF<br>SAMPLE<br>UNITS  | AOL<br>100% | REQUIREMENT<br>PARAGRAPH   | PARAGRAPH REFERENCE<br>/INSPECTION METH  |
| IOTICE: 1 | Cutting test (See Note 1)<br>Resiliency (See Note 1)<br>Impact (See Note 1)<br>Twist (See Note 1)<br>Withdrawal (See Note 1)<br>Sharpness (See Note 1)<br>Interchangeability (See Note 1)<br>Latching mechanism<br>Corrosion resistance | <pre>l/day<br/>See<br/>NOTE<br/>10/day<br/>10/day<br/>10/day<br/>10/lot<br/>3/lot</pre> | 1.0%<br>AQL | 3.4.1<br>3.4.3<br>3.4.4<br>3.4.5<br>3.4.6<br>3.4.7<br>3.4.9<br>3.4.10<br>3.4.2 | 4.6.1<br>4.6.3<br>4.6.4<br>4.6.5<br>4.6.6<br>4.6.7<br>4.6.9<br>4.6.10<br>4.6.2 |

4.6 Methods of Inspection.

4.6.1 Cutting test. The MPBS shall cut barbed wire a minimum of 50 times as specified in 3.4.1. The cuts shall be made in one motion without resharpening. The MPBS shall cut a standard metal band as specified in 3.4.1. in one motion.

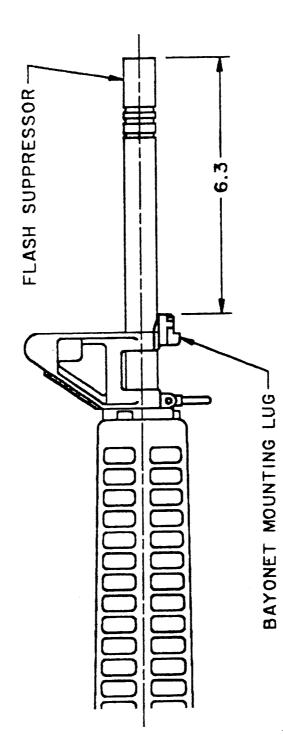
4.6.2 Corrosion resistance. Three (3) MPBS shall be selected from each lot. The bayonet shall be removed from the scabbard and all metal parts shall be coated with oil per MIL-L-63460. The test shall be performed as specified in ASTM-B-117. The time of the test shall be three hours. Test procedures and equipment shall have prior approval of the Government. If any part shows evidence of corrosion, it shall be classed defective and the lot shall be rejected.

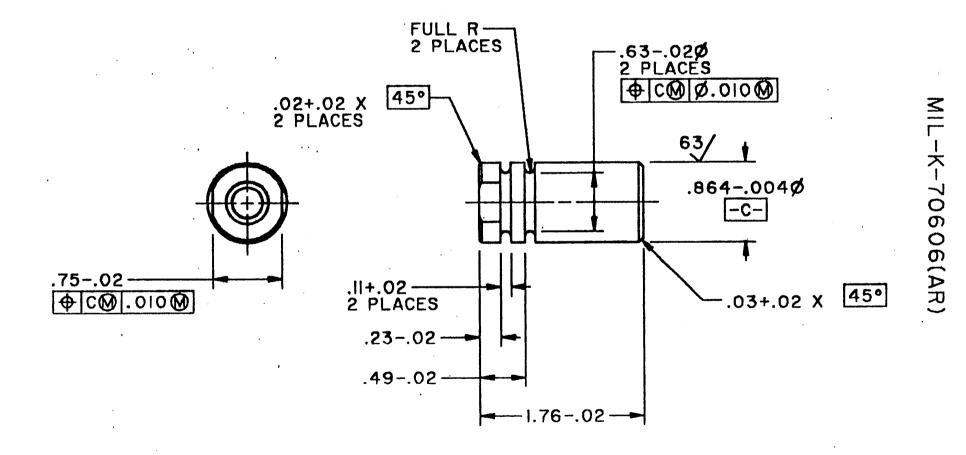
4.6.3 <u>Resiliency test</u>. The MPBS shall be tested using a contractor designed, Government approved test fixture. The blade shall be clamped in the fixture such that one and one-half inches of the pointed end of the blade is rigidly held. The grip end of the bayonet shall be slowly deflected through a minimum arc of 1-1/4 inches to the right and 1-1/4 inches to the left of the vertical center of the blade. On each bend, the bayonet shall be held at the extreme deflection for one second and then, slowly released. Blades having a set of 3/16 inch or less shall be straightened before being returned to the lot.

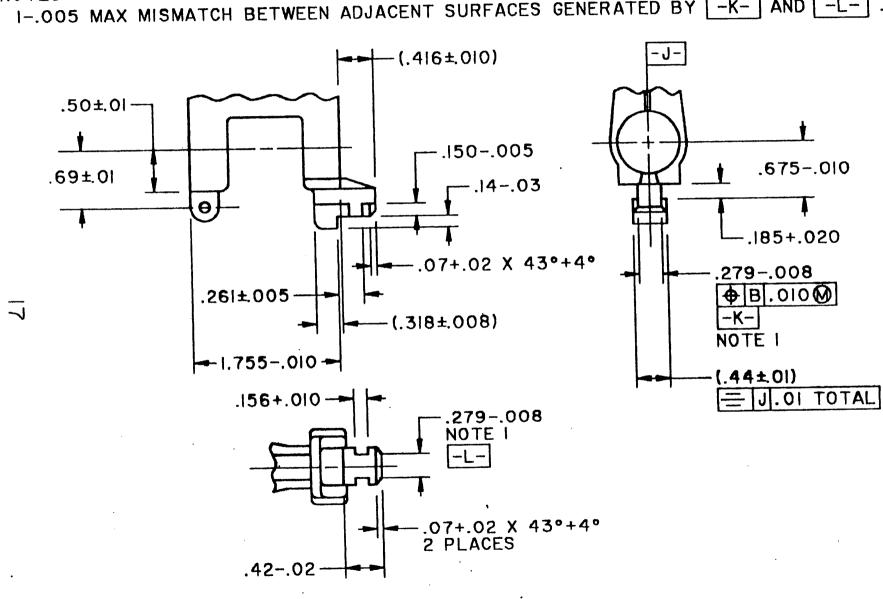
4.6.4 Impact. The bayonet shall be held with the blade point in an upward position in a Government approved fixture of contractor design simulating the applicable rifle (See Figure 1, 2 and 3). A weight, with a block of soft, untreated maple wood attached, shall be dropped on the bayonet knife point from a height of 12 to 18 inches. The surface of the wood block shall be positioned so that the blade penetrates across the woodgrain. The weight and height shall be such that a minimum of 28 foot-pounds of energy is applied on impact.

4.6.5 Twist. The bayonet shall be clamped in a contractor designed, Government approved fixture simulating the applicable weapon (See Figures (1, 2 and 3). The blade shall be twisted at a point  $1.500 \pm 0.125$  inches from the guard. Bending of the blade along the longitudinal axis shall be minimized. The bayonet shall be given one twist of a minimum of 25 foot-pounds torque. The torque shall be applied uniformly in both the clockwise and the counter-clockwise directions.

4.6.6 <u>Withdrawal</u>. The bayonet shall be clamped in a a contractor designed, Government approved fixture simulating the applicable weapon (See Figures 1, 2 and 3). A minimum tensile load of 250 pounds shall be applied gradually in the longitudinal direction.







NOTES: -1-.005 MAX MISMATCH BETWEEN ADJACENT SURFACES GENERATED BY -K-AND -L- .

4.6.7 Sharpness. The bayonet blade shall be tested for sharpness using a sharpness tester in accordance with Dwg. 7274016. Any modification(s) that have to be made to the sharpness tester to accommodate the bayonet shall be approved by the Government. The test shall be set up and operated in accordance with Dwg 7274019.

4.6.8 Drop test. The bayonet shall be attached to a contractor designed, Government approved test fixture in each of the following orientations: p oint down, point up and horizontal. The bayonet shall be released from each of these orientations and allowed to free fall a minimum distance of four feet onto a concrete surface. The test shall be repeated with the scabbard attached to the bayonet.

4.6.9 Interchageability test. The MPBS shall be tested for interchange of parts by disassembly and reassembly of parts using parts from a prearranged system specified below. Interchange of parts shall be accomplished by dividing the parts of each MPBS into 10 groups of nonmating parts as shown below and distributing the groups into 10 different trays until each tray contains a complete MPRS. Groups of parts from MPBS number 1 shall be taken in order and placed in tray 1 through 10; groups of parts from MPBS number 2 shall be taken in order and placed in trays 2 through 10 to 1; groups of parts from MPBS number 3 shall be taken in order and placed in tray 3 through 10 to 2, etc. The MPBS shall be reassembled using only those parts which are in the same tray. The reassembled MPBS shall be subject to tests 4.6.1 and 4.6.10.

### Groups of nonmating parts

| <u>Group I</u><br>Pouch Assembly (12902762)<br>Blade Assembly (12598166) . | <u>Group II</u><br>Latch Plate (12598167)<br>Body Assembly, Scabbard<br>(12598179) with Stone,<br>Sharpening (12598183) |
|--|---|
| <u>Group III</u><br>Handle (12598170)                                      | <u>Group IV</u><br>Bayonet, Release, Left<br>Hand (12598197)  |
| <u>Group V</u>   | <u>Group VI</u>   |
| Screw, Cap (12598171)  | Cutter Assembly (12598182)  |
| <u>Group VII</u>   | <u>Group VIII</u>   |
| Bayonet Release, Right Hand  | Attaching Assembly, Scabbard  |
| (12598196)   | End (12598189)  |

Group IX Attaching Assembly, Load Bearing Equipment End (12598195)

Group X Spring Catch - 7160949 Pin, Spring - Tubular, Slotted MS16562-129 Hexagon Socket Button ASME/ANSI B 18.3 Head Cap Screw - .190-24x.44 .190-32x.69 .190-32x.75 Screw, Machine - MS51959-27B

NOTE : Parts inadvertently damaged during interchange may be replaced without penalty when authorized and verified by the Government representative witnessing the test.

4.6.10 Latching mechanism functioning. The MPBS shall be tested using a contractor designed, Government approved test fixture (See Figures 1, 2 and 3). The MPBS shall be assembled to the test fixture without manually depressing the latching lever. The MPBS shall then be detached by manually depressing the latching lever.

 $4.6.11\ {\rm Firing}.$  The bayonet shall be attached to an M16 series Rifle. The weapon shall be hand held. A total of 90 rounds consisting of three 30 round magazines shall be fired at the maximum rate of fire. Upon completion of the test, the bayonet shall be examined for damage or looseness. This test will be conducted at a Government facility.

4.6.12 Serrated edge. The serrated edge shall be used to make a minimum cut 18 inches long in the material specified in 3.4.12. A sawing motion shall be used. The time shall not exceed one hour. Upon completion, the serrated edge shall be used to cut one-half inch hemp rope.

4.6.13 Temperature extremes. The MPBS shall be conditioned in a Government approved test chamber at the temperature specified in 3.4.13 for a minimum of two hours before testing begins. After the MPBS is removed from the chamber, testing shall begin immediately. After each test the MPBS shall be returned to the test chamber and reconditioned for a period of one hour.

4.6.14 Hardness. Five (5) blades shall be selected from each heat treatment batch (see Note). The test shall be performed as specified in ASTM-E18. The scale used shall be the 15N scale. The reading shall then be converted back to the Rockwell C scale. Each heat treat batch shall remain segregated until completion of all required tests. If any blade fails to comply with the specified heat treatment and hardness requirement, the blade shall be classified defective and the lot shall be rejected.

A heat treatment batch shall be defined as blades NOTE : that have been heat treated at the same time in the same furnace and quench bath for each of all phases of the entire heat treatment process.

5. PACKAGING

5.1 Level A. Packaging shall be in accordance with Special Packaging Instructions PL2011860.

5.2 Level B. Packaged as specified in 5.1.

5.3 Level C. Packaged as specified in 5.1.

6. NOTES

6.1 Intended use. The M9 Multipurpose Bayonet System is intended for use as a bayonet, field craft knife, combat knife and wire cutter.

6.2 ordering data. Acquisition documents should specify the following:

- a. Title, number and date of this specification and all applicable Quality Assurance Provisions (QAPs).
- b. Quantity required and delivery schedules.
- c. Serialization requirements, if applicable.
- d. Quality Conformance Inspection, if other than specified in Section 4 of specification.
- e. Level of packaging (see section 5).
- f. Certificates of conformance for each lot or shipment of product.
- g. The packages opened for-examination shall be repackaged by the contractor at the contractor's expense.
- h. Disposition of MPBS.
- i. Responsibility for test facilities and operation procedures.

6.3 Inspection equipment design. Design responsibility for all inspection equipment is assigned to the contractor. Contractor designs are required for all inspection equipment and may include commercial equipment which the contractor proposes to use. (Commercial equipment is defined as unmodified equipment which is cataloged and available for purchase by the general public). Contractor designs shall include appropriate operating instructions, calibration procedures and maintenance procedures. Commercial equipment shall be fully described by catalog listings or other means which provide sufficient information to permit identification and evaluation by the Government and may include

illustrations and engineering data. Designs shall be prepared for any special fixture(s) required to be used with commercial equipment or with SIE designs if not otherwise covered thereby.

6.4 <u>Drawings</u>. Drawings listed in Section 2 of this specification under the heading US Army Armament Research, Development and Engineering Center (ARDEC) may also include drawings prepared by, and identified as Edgewood Arsenal, Frankford Arsenal, Rock Island Arsenal, Picatinny Arsenal, US Army Armament Research and Development Command (ARRADCOM) or US Army Armament Research and Development Center (ARDC) drawings. Technical data originally prepared by these activities are now under the cognizance of ARDEC.

6.5 <u>Subject term (keyword) listing</u>.

Multipurpose Bayonet System Military Specification M9 Small Arms

6.6 <u>Submission of acceptance inspection equipment designs</u>. Submit equipment designs as required to Commander AMCCOM, AMSMC-QAF-I (D), Picatinny Arsenal, NJ 07806-5000. This address will be specified on the Contract Data Requirements List, DD Form 1423 in the contract. Unless otherwise specified, data item DIR-1714 will apply.

Custodian Army-AR Preparing activity: Army-AR

(project 1005-A727)

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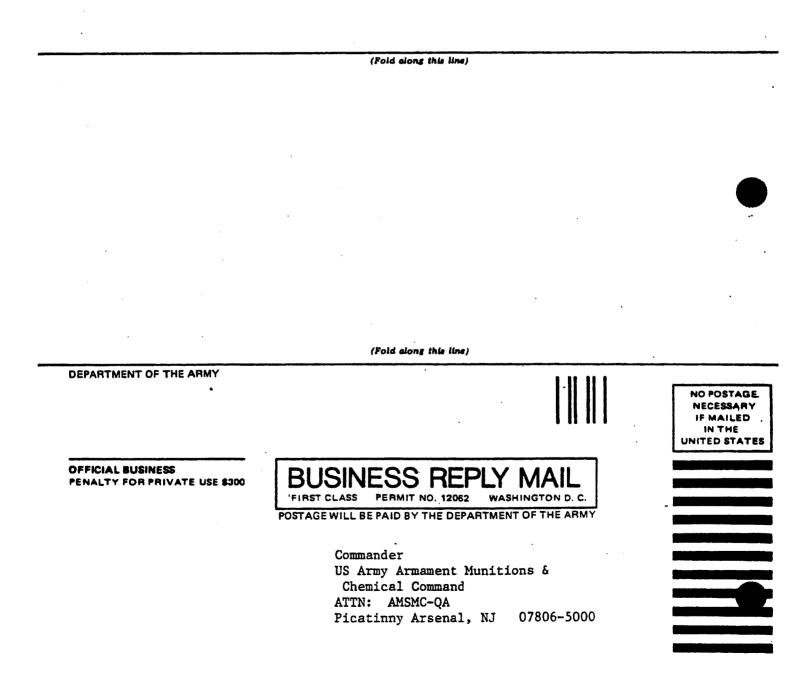
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INSTRUCTIONS: In a continuing effort to make our standardization documents better, the DoD provides this form for use in submitting comments and suggestions for improvements. All users of military standardization documents are invited to prosuggestions. This form may be detached, folded along the lines indicated, taped along the loose edge (DO NOT STAPLE), mailed. In block 5, be as specific as possible about particular problem areas such as wording which required interpretation, was too rigid, restrictive, loose, ambiguous, or was incompatible, and give proposed wording changes which would alleviate the problems. Enter in block 6 any remarks not related to a specific paragraph of the document. If block 7 is filled out, an acknowledgement will be mailed to you within 30 days to let you know that your comments were received and are being considered.

NOTE: This form may not be used to request copies of documents, nor to request waivers, deviations, or clarification of specification requirements on current contracts. Comments submitted on this form do not constitute or imply authorization to waive any portion of the referenced document(s) or to amend contractual requirements.



#### INCH-POUND

MIL-K-70606 (AR) AMENDMENT 2 <u>17 November 1993</u> SUPERSEDING AMENDMENT 1 2 SEPTEMBER 1992

### MILITARY SPECIFICATION

KNIFE, BAYONET, MULTIPURPOSE, M9 WITH SCABBARD

This Amendment forms a part of Military Specification MIL-K-70606(AR), dated 15 September 1988, and is approved for Use by the U.S. Army Armament, Munitions, and Chemical Command, and is available for use by all Departments and Agencies of the Department of Defense.

### PAGE 4

- 3.4.1, item a., line 3, delete "and" and replace with "or".
- 3.4.2 Corrosion resistance, delete entire paragraph and replace with "3.4.2 Not used.".

PAGE 5

- 3.4.11 Firing, delete entire paragraph and replace with "3.4.11 Not used.".
- 3.4.13 Temperature extremes, delete entire paragraph and replace with "3.4.13 Not used.".

#### PAGE 6

4.4.2, line 2, delete: "pistols" and replace with: "units".

PAGE 7

Replace entire Table I with the following Table 1:

AMSC N/A 1 of 4 FSC 1005 <u>DISTRIBUTION STATEMENT A</u>: Approved for public release; distribution is unlimited.

TABLE I. First article test

| CLASSIFICATION OF CHARACTERISTICS AMENDMENT 2 |  |  |   |  |  |
|---|--|--|---|--|--|
| PARAGRAPH                                     | TITLE<br>Knife, Bayonet, Multipurpose, M9 with Scabbard SHEET 1 OF 1   |  |   | DRAWING NUMBER<br>NEXT HIGHER ASSEMBLY   |  |
| CLASSIFICATION                                | EXAMINATION OR TEST  |  | CONFORMANCE REQUIR<br>CRITERIA PARAG          |  | INSPECTION METHOD REFERENCE  |
|   | Cutting test<br>Resiliency<br>Impact<br>Twist<br>Withdrawal<br>Sharpness<br>Drop test<br>Latching mechanism functioning<br>Serrated edge<br>Interchangeability | 9 1<br>9 1<br>9 1<br>9 1<br>22 1<br>9 1<br>22 1<br>3 1 | 00%<br>00%<br>00%<br>00%<br>00%<br>00%<br>00% | 3.4.1<br>3.4.3<br>3.4.4<br>3*4.5<br>3.4.6<br>3.4.7<br>3.4.8<br>3.4.10<br>3.4.12<br>3.4.9 | 4.6.1<br>4.6.3<br>4.6.4<br>4.6.5<br>4.6.6<br>4.6.7<br>4.6.8<br>4.6.10<br>4.6.12<br>4.6.9 |
| NOTES:  |  |  |   |  |  |
|   |  |  |   |  |  |

### MIL-K-70606 (AR) AMENDMENT 2

### PAGE 8

- Table II, item 1), add: "on all 22 MPBS" to the end of the sentence.
- Table II, add new item 3) as follows: "The interchangeability test shall be done with 10 MPBS from the remaining 13." and renumber remaining items.
- Table II, item 4), line 1, delete "firing" and line 2, delete "at ambient".

Table II, delete item 5) in its entirety.

### PAGE 10

Delete minor defect 202 in its entirety and renumber remaining defect numbers.

#### PAGE 12

Delete major characteristic "101 weight .65 Gage".

#### PAGE 13

4.5.4.5, delete "Corrosion resistance 3/lot 3.4.2 4.6.2".

#### PAGE 14

4.6.2 Corrosion resistance, delete entire paragraph and relace with "4.6.2 - Not used.".

#### PAGE 18

- 4.6.9, Group I, delete "pouch assembly (12902762)".
- 4.6.9, Group IV, delete "Bayonet, Release, Left Hand (12598197)" and replace with "Release, Bayonet, Left Hand (11010011)".
- 4.6.9, Group VII, delete "Bayonet, Release, Right Hand (12598196)" and replace with "Release, Bayonet, Right Hand (11010010)".

### MIL-K-70606(AR) AMENDMENT 2

### PAGE 19

- 4.6.9, Group X, change ".190-24x.44" to ".190-24x.38", delete ".190-32x.75", delete "Screw, Machine - MS51959-27B".
- 4.6.11 Firing, delete entire paragraph and replace with "4.6.11 Not used.".
- 4.6.13 Temperature extremes, delete entire paragraph and relace with "4.6.13 Not used.".

The margins of this amendment are marked with an asterisk or vertical lines to indicate where changes (additions, modifications, corrections, deletions) from the previous amendment were made. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations and relationship to the last previous amendment.

Custodian: Army-AR Preparing activity: Army-AR

(Project 1005-A814)

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# NOTICE OF INACTIVATION FOR NEW DESIGN

INCH-POUND

MIL-K-70606(AR) NOTICE 1 29 November 1995

### MILITARY SPECIFICATION

KNIFE, BAYONET MULTIPURPOSE, M9 WITH SCABBARD

This notice should be filed in front of MIL-K-70606 (AR), dated 15 September 1988

MIL-K - 70606 (AR), dated 15 September 1988, with Amendment 2, dated 17 November 1993 is inactive for new design and is no longer used, except for replacement purposes.

Preparing Activity: Army - AR

AMSC N/A

FSC 1005

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