

INCH-POUND

MIL-B-70511B (AR)  
w/AMENDMENT 4  
15 June 2015  
SUPERSEDING  
MIL-B-70511B (AR)  
w/AMENDMENT 3  
22 April 2003

## MILITARY SPECIFICATION

### BOLT, AUTOMATIC WEAPON: (PRACTICE) M2

Inactive for new design after 1 September 1998.

This Specification is approved for use by the US Army Armament 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 establishes the performance, firing and quality assurance retirements for the assembly, testing, inspection and packaging for the Bolt, Automatic Weapon: (Practice) M2.

#### 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 listed in the issue of the Department of Defense Index of Specifications and Standards (DODISS) and supplement thereto, cited in the solicitation (see 6.2)

Comments, suggestions, or questions on this document should be addressed to: Commander, U.S. Army ARDEC, ATTN: RDAR-EIQ-SA, Picatinny, New Jersey 07806-5000 or e-mailed to [ardecstdzn@conus.army.mil](mailto:ardecstdzn@conus.army.mil). Since contact information can change, you may want to verify the currency of this information using the ASSIST Online database at <https://assist.dla.mil>.

AMSC N/A

FSC 1005

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DEPARTMENT OF DEFENSE SPECIFICATIONS

MIL-PRF-372	Cleaning Compound, Solvent (for Bore of Weapons)
MIL-W-13855	Weapons: Small Arms and Aircraft Armaments Subsystems, General Specification for
MIL-W-63150	Weapons and Support Material Standard Quality Assurance Provisions for
MIL-PRF-63460	Lubricant, Cleaner and Preservative for Weapons and Weapons Systems
MIL-C-70725	Cartridge, 5.56MM, M862 Short Range Training Ammunition

DEPARTMENT OF DEFENSE STANDARDS

MIL-STD-1916	-DOD Preferred Methods for Acceptance of Product
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(Copies of these documents are available online at <http://quicksearch.dla.mil/> or from the Standardization Documents Order Desk, 700 Robbins Avenue, Bldg. 4D, Philadelphia, PA 19111-5094.)

2.2.2 Other Government documents, drawings and publications. 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.

ARDEC DRAWINGS (see 6.9)

8440920	- Cylinder, Pressure
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PACKAGING AND MARKING

P11833491	- Bolt, Automatic Weapon: (Practice) M2
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(ARDEC drawings may be requested online at [pica.Drawing.Request@conus.army.mil](mailto:pica.Drawing.Request@conus.army.mil), or from US Army ARDEC, ATTN: RDAR-EIS-PE, Picatinny Arsenal, NJ 07806-500.)

2.3 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 has been obtained.

### 3. REQUIREMENTS

3.1 First article. When specified in contract or purchase order, a sample shall be subjected to first article inspection in accordance with the technical provision herein (See 4.2.1 and 6.1.1).

3.2 Materials and construction. The Bolt, Automatic Weapon (M2 Bolt) shall conform to the materials and construction requirements specified herein, on drawing 11833491 and drawings applicable thereto, and shall be in accordance with the applicable materials and

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construction processes of MIL-W-13855.

3.3 Design. The M2 Bolt shall conform to the design specified herein, on drawing 11833491 and drawings applicable there to, and shall be in accordance with applicable design provisions of MIL-W-13855.the

3.3.1 Bolt carrier assembly. The bolt carrier shall move through its full range of travel without binding in the upper receiver.

3.3.2 Bolt assembly. The bolt assembly shall be retained in the bolt carrier by the locating pin.

3.3.3 Extractor. The extractor shall be retained in the bolt by the extractor pin. The extractor shall move through its full range of travel under spring action without binding in the bolt and shall be capable of engaging and extracting cartridge cases from the barrel chamber when the rifle is function fired or manually operated.

3.3.4 Ejector. The ejector shall be retained in the bolt by the spring pin and shall be held in the forward position by the ejector spring. The ejector shall move through its full range of travel under spring action without binding in the bolt and shall eject cartridge cases completely out of the rifle when the rifle is function fired or manually operated. When fully depressed, the ejector pin shall be flush with or below the cartridge seat in the bolt.

3.3.5 Firing Pin. The firing pin shall be retained in the bolt and bolt carrier assembly by the retaining pin. The firing pin shall move freely through its full range of travel in the bolt carrier assembly. The firing pin protrusion shall be a maximum of .036 inches and a minimum .028 inches. The chromium plating of the firing pin shall be free of nodules, flaking, stripping, anode burns, and evidence of etched base steel, except as specified on the applicable drawing.

3.3.6 Bolt. The Bolt (11833495) shall be free of cracks, seams, and other injurious defects as evidenced by visual and magnetic particle inspection.

3.4 Performance characteristics.

3.4.1 Firing pin indent. When the bolt is closed and the firing mechanism is released, the firing pin indent shall be not less than 0.020 inch. The firing pin indent shall not be off-center more than one half the maximum diameter of the indent. When, in a vertical, muzzle down position, the bolt carrier assembly is released from the full recoil position and the firing mechanism is not actuated, the firing pin indent shall not be more that 0.008 inch.

3.4.2 Functioning. Each M2 Bolt shall operate as specified in 4.3.3.3. In no case shall the number of cited malfunctions be exceeded. A malfunction is defined as any incident resulting in unplanned cessation in firing or inability to commence firing.

3.4.3 Cyclic rate of fire. The cyclic rate of fire for 3 rounds of burst firing using a 30 round magazine shall be within 600 to 950 rounds per minute. The cyclic rate of fire measurement shall be taken on a three round burst, occurring on the 6th or 7th trigger pull. Testing shall be as specified in 4.5.3.

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3.4.4 Endurance. The M2 Bolt shall be capable of withstanding the firing of 10,000 rounds of M862 ammunition with not more than 127 malfunctions attributable to the M2 bolt.

3.4.5 Interchangeability. Unless otherwise specified on the drawing, all parts shall be interchangeable. Testing shall be as specified in 4.3.3.

3.5 Color Code. The M2 Bolt shall be permanently identified as a training item.

3.6 Marking. Each Bolt shall be clearly marked in accordance with contract, drawings, and MIL-W-13855.

3.7 Workmanship. Workmanship shall be in accordance with the workmanship requirements of MIL-W-63150. In addition, the M2 Bolt shall be free from grease, dust, rust, corrosive products, and other foreign matter. The cleaning method used shall not be injurious to any parts nor shall the parts be contaminated by the cleaning agent.

#### 4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection. Unless otherwise specified in the contract or purchase order, the supplier is responsible for the performance of all inspection requirements (examinations and tests) as specified herein. Except as otherwise specified in the contract or purchase order, the supplier may use his own or any other facilities suitable for the performance of the inspection requirements specified herein, unless disapproved by the Government. The Government reserves the right to perform any of the inspections set forth in the specification where such inspections are deemed necessary to ensure supplies and services conform to prescribed requirements.

4.1.1 Responsibility for compliance. All items shall 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 ensuring that all products or supplies submitted to the Government for acceptance comply with all requirements of the contract. Sampling inspection, as part of manufacturing operations, is an acceptable practice to ascertain conformance to requirements, however, this does not authorize submission of known defective material, either indicated or actual, nor does it commit the Government to accept defective material.

4.1.2 General provisions. Unless otherwise specified herein, the provisions of MIL-W-63150 apply and form a part of this specification. Quality assurance terms and definitions used herein are in accordance with MIL-STD-109.

4.2 Classification of inspections. The inspection requirements specified herein are classified as follows:

- a. First article inspection (see 4.2.1).
- b. Quality conformance inspection (see 4.3).

4.2.1 First article inspection. The first article sample shall be subjected to the first article inspections and tests as specified in Table I to determine contract compliance. The first article sample shall be representative of the manufacturing methods and processes to be used for quantity

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production.

TABLE I. First article inspection

**CLASSIFICATION of DEFECTS & TESTS**

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Paragraph	Title  Bolt, Automatic Weapon: (Practice) M2		Sheet 1 of 1		Drawing Number 11833491
					Next Higher Assembly N/A
Category	Examination or Test	No. of Sample Units	AQL or 100%	Requirement Paragraph	Paragraph Reference / Inspection method
	<u><b>INSPECTIONS</b></u>				
	Examination for defects	10	100%	3.3	4.3.2.1
	<u><b>PERFORMANCE TESTS</b></u>				
	Firing Pin Indent	10		3.4.1	4.5.5
	Function	6		3.4.2	4.3.3.3.1/4.5.2
	Cyclic Rate of Fire	10		3.4.3	4.5.3
	Endurance	4		3.4.4	4.5.4
	Interchangeability	10		3.4.5	4.5.6
NOTES:					

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4.2.1.1 Sample. The contractor shall submit a first article sample as designated by the Contracting Officer for evaluation in accordance with provisions of 4.2.1.2. The first article sample shall consist of the assemblies, components and test specimens listed below in the quantities indicated:

Part Description	Drawing	Quantity
Bolt, Automatic Weapon: Practice M2	11833491	10

4.2.1.2 Inspection to be performed. As determined by the Government, the first article assemblies, components and test specimens may be subjected to any or all of the examinations and tests specified in this detail specification and be inspected for compliance with any or all requirements of the applicable drawings.

4.2.1.3 Rejection. If any assembly, component or test specimen fails to comply with any of the applicable requirements, the first article sample shall be rejected. The Government reserves the right to terminate inspection upon failure of any assembly, component or test specimen to comply with any of the requirements.

4.3 Quality conformance inspection.

4.3.1 Inspection lot.

4.3.1.1 M2 Bolt. The number of M2 BOLTS in an inspection lot shall be 1000 or one month's production, whichever is smaller.

4.3.2 Examination. The examinations listed in this specification and component part quality assurance provisions shall be performed on inspection lots as defined in 4.3.1 of this specification.

a. Sampling plans. Sampling plans are incorporated in this specification either by reference to appropriate military standards or by stipulating other specific acceptance criteria. In cases where sampling is specified in accordance with MIL-STD-105, the contractor may request permission from the procuring activity to use an equivalent continuous sampling plan form MIL-STD-1235.

b. Examination for defects. Each M2 Bolt in an inspection lot shall be subjected to the inspections listed in 4.3.2.1 for which a 100% inspection is specified. M2 Bolts which fail to meet the specified requirements shall be rejected and removed from the lot. A random sample of M2 Bolts shall be selected from the inspection lot in accordance with Level II of MIL-STD-105 for the inspections listed in 4.3.2.1 for which an AQL is specified. Acceptance/Rejection of the lot shall be based on the specified AQL.

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**QUALITY CONFORMANCE INSPECTION**

**CLASSIFICATION OF DEFECTS & TESTS**

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Paragraph	Title		Sheet 1 of 3		Drawing Number 11833491
					Next Higher Assembly N/A
4.3.2.1	Bolt, Automatic Weapon: (Practice) M2				
Category	Examination or Test	No. of Sample Units	AQL or 100%	Requirement Paragraph	Paragraph Reference / Inspection method
Critical 1.	Cartridge seating diameter (.356), incorrect		100%	3.3	Gage
Major 101	Firing pin striker point, burrs, cracks or mutilation		.65%	3.3	Visual
102	Firing pin striker point, pits or erosion		.65%	3.3	Visual
103	Extractor, lips, burrs. cracks, or mutilation		.65%	3.3	Visual
104	Improper function of extractor spring assembly action		.65%	3.3	Manual
105	Improper function of ejector spring action		.65%	3.3	Manual
106	Bolt cartridge face, bearing surface, burrs, cracks, or mutilation		.65%	3.3	Visual
107	Magnetic particle inspection mark missing		100%	3.3	Visual
NOTES:					

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**QUALITY CONFORMANCE INSPECTION**

**CLASSIFICATION OF DEFECTS & TESTS**

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Paragraph	Title		Sheet 2 of 3		Drawing Number 11833491
					Next Higher Assembly N/A
4.3.2.1	Bolt, Automatic Weapon: (Practice) M2				
Category	Examination or Test	No. of Sample Units	AQL or 100%	Requirement Paragraph	Paragraph Reference / Inspection method
108	Identification mark missing		.65%	3.5	Visual
109	Firing pin protrusion		.65%	3.3	Gage
110	Protective finish (Dwg. 11833495)		.65%	3.3	Visual
MINOR					
201	Firing pin retaining pin- burrs, cracks or mutilation		1.5%	3.3	Visual
202	Extractor not properly retained by pin		1.5%	3.3	Visual
203	Ejector tip, burrs, cracks or mutilation		1.5%	3.3	Visual
204	Ejector retaining pin-ends not flush with or below bolt surface		1.5%	3.3	Visual
205	Evidence of Poor Workmanship (MIL-W- 63150)		2.5%	3.7	Visual
NOTES:					

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4.3.3 Testing. The quality conformance tests listed in this acceptance test procedure shall be performed on inspection lots as defined in 4.3.1.

4.3.3.1 Quality conformance testing. Quality conformance testing shall be in accordance with 4.3.3.2 and as specified below.

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**QUALITY CONFORMANCE INSPECTION**

**CLASSIFICATION OF DEFECTS & TESTS**

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Paragraph	Title		Sheet 3 of 3		Drawing Number 11833491
4.3.3.2	Bolt, Automatic Weapon: (Practice) M2				Next Higher Assembly N/A
Category	Examination or Test	No. of Sample Units	AQL or 100%	Requirement Paragraph	Paragraph Reference / Inspection method
	<u>Performance Tests</u>				
	Firing Pin Indent	20		3.4.1	4.5.5
	Function	60		3.4.2	4.3.3.3.2/4.5.2
	Cyclic Rate of Fire	20		3.4.3	4.5.3
	Endurance	1		3.4.4	4.5.4
	Interchangeability	10		3.4.5	4.5.6
NOTES:					

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4.3.3.3 Function. The function test shall be conducted as set forth on first article M2 bolts and production lots.

4.3.3.3.1 Function (first article). Thirty rounds shall be fired with each M2 Bolt as specified in 4.5.2.1. If 3 or more malfunctions occur that are attributable to the M2 Bolt, the first article sample shall be rejected. Also, 2 or more malfunctions with any single M2 Bolt shall cause rejection of the first article sample.

4.3.3.3.2 Function (lot acceptance). Each M2 Bolt shall be functioned tested for lot acceptance in accordance with 4.5.2.2. A fully loaded 30-round magazine shall be used in the function firing of each M2 Bolt. A total of 14 or more malfunctions attributed to the M2 Bolt shall cause rejection of the represented lot. Also, 2 or more malfunctions with any single M2 Bolt shall cause rejection of the represented lot.

4.3.3.4 Firing pin indent. A random sample of twenty (20) M2 Bolts from each inspection lot shall be subjected to the firing pin indent test as specified in 4.5.6. Failure of any M2 Bolt to meet the requirements shall cause rejection of the lot.

4.3.3.5 Cyclic rate of fire. A random sample of twenty (20) M2 Bolts from each inspection lot shall be checked for cyclic rate of fire as specified in 4.5.3. If any M2 Bolt fails to meet the requirement, a failure analysis report shall be submitted to the Government for approval.

4.4 Ammunition. The ammunition used for the performance tests shall be Cartridge, 5.56mm, M862 Short Range Training Ammunition and have met all of the requirements of MIL-C-70725.

4.5 Methods of inspection.

4.5.1 Special dimensions. The dimensions listed in requirement 3.3 shall be measured using Government approved equipment.

4.5.2 Function. The M2 Bolt shall be inserted in a Government approved M16A1 and M16A2 Rifle and fired from a Government approved test stand. Firing sequence shall be as specified below. All malfunctions shall be recorded.

4.5.2.1 Function (first article). Six M2 bolts shall be function tested during first article by firing 30 rounds with each bolt. Six magazines, fully loaded with 5.56mm, M862 Short Range Training Ammunition shall be used for this test. Three M2 Bolts shall be tested in the M16A1 Rifle and three in the M16A2 Rifle. For the M16A1 each thirty round firing shall consist of two bursts of approximately three rounds with the remaining rounds fired in one burst. With the M16A2, all firings shall be in three round bursts.

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4.5.2.2 Function (lot acceptance). The M2 Bolt shall be functioned tested for lot acceptance in accordance with the following table:

FUNCTION (LOT ACCEPTANCE)

No. of Bolts	Type of Weapon	Mode of Fire	No. of Rounds/Bolt
15	M16A1	Semi	30
15	M16A1	Auto	30
15	M16A2	Semi	30
15	M16A2	Burst	30

4.5.3 Cyclic rate. Thirty (30) rounds shall be fired in 3 round burst firing from a 30 round magazine with the M16A2 rifle. The cyclic rate of fire measurement shall be taken on a three round burst, occurring on the 6th or 7th trigger pull. All malfunctions shall be recorded.

4.5.4 Endurance. A minimum of two rifles shall be used for this test. At least one half of the test rifles shall be M16A2 rifles and the remainder of the rifles shall be M16A1 rifles. Testing shall be performed from a Government approved test fixture. A total of 10,000 rounds shall be fired on each M2 Bolt. Testing shall be conducted in cycles consisting of firing four 30-round magazines for a total of 120 rounds. Start the endurance test with a M2 bolt in a M16A2 rifle. After each firing cycle, the M2 bolt shall be sequentially rotated through the total number of test rifles, alternating between M16A1 and M16A2 rifles. Firing sequence for both the M16A1 and M16A2 rifles for a test cycle is as follows:

<u>Rifle</u>	<u>1st Magazine</u>	<u>2nd Magazine</u>	<u>3rd Magazine</u>	<u>4th Magazine</u>
M16A1	Semi	Auto	Semi	Auto
M16A2	Semi	Burst	Semi	Burst

After each cycle, the barrel shall be cooled to the point that it is capable of being held by the bare hand. Supplemental cooling is permissible. Lubricant conforming to MII-L-63460 shall be used. After every five cycles, the M2 Bolt shall be lubricated, and cleaned and lubricated after every 10 cycles. At the completion of 4,800 rounds fired and again at the end of the 10,000 round endurance test, each bolt carrier (P/N11833494) and each bolt (P/N 11833495) shall be inspected using magnetic particle inspection. Any cracked or broken bolt carrier or bolt shall result in failure of the endurance test. If there are any other broken, cracked or unserviceable parts, they shall be replaced. Both the M16A1 and M16A2 rifles shall be cleaned and lubricated as stated in paragraph 4.5.4.1. Cyclic rate of fire measurements shall be performed during the first testing cycle, and during the first testing cycle using an M16A2 rifle after the M2 bolt has been lubricated, as stated above. Cyclic rate of fire measurements shall be performed on the second magazine of a cycle using a M16A2 rifle. The cyclic rate of fire shall be measured in accordance with 4.5.3. All malfunctions shall be recorded. If more than the number of malfunctions specified in 3.4.4 occur, that are attributable to an individual M2 bolt, the sample shall have failed the endurance test.

4.5.4.1 Cleaning and Lubrication. Each rifle shall be lubricated as specified below at the beginning of the test and at the end of each 5 cycle increment fired on that rifle. Each rifle shall be cleaned and lubricated at the end of every 10 cycle increment fired on that rifle.

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4.5.4.1.1 Lubrication. Rifles shall have been lubricated using lubricant in accordance with MIL-L-63460 (CLP). Apply a light coat of oil to all surfaces of the bolt carrier group. (Do not apply excessive oil in the bolt firing pin recess.) Apply a moderate coat of oil on all firing mechanism components in lower receiver.

4.5.4.1.2 Cleaning. Rifles shall be cleaned with a cleaning solvent in accordance with MIL-C-372 and the following procedures:

- a) Barrel. Brush bore thoroughly with a brush soaked in cleaning solvent. Brush the bore from the chamber to the muzzle using straight through strokes. Do not reverse muzzle direction of brush until it extends beyond the muzzle. Continue brushing until the bore is covered with solvent. Dry the bore by pushing clean dry swabs through the bore. Continue until the swab comes out clean and dry. Clean dry compressed air may be used for preliminary drying.
- b) Barrel Chamber. Insert the cleaning rod section and chamber brush that has been dipped in cleaning solvent into the chamber and use reciprocating plunge strokes and rotational 360° motions. Dry chamber with cleaning swabs.
- c) Barrel Extension. Using a small bristle brush that has been dipped in cleaning solvent, clean the locking lugs in the barrel extension. Remove excess cleaning solvent.
- d) Bolt carrier group. With the exception of the bolt rings, extractor spring and the ejector, disassemble all parts, wash these parts in cleaning solvent and remove all carbon deposits. Particular attention should be given to the areas under the face of the extractor and behind the three rings on the bolt. Remove excess solvent and dry.
- e) Upper Receiver. Clean with cleaning solvent and remove all powder fouling. Clean the protruding gas tube using bore brush attached to a section of the cleaning rod. Saturate the brush with cleaning solvent. (Do not use any type of abrasive material to clean the gas tube. Remove excess cleaning solvent.)
- f) Lower receiver. Remove all carbon residue from lower receiver group assembly using cleaning solvent. Drain excess solvent from lower receiver cavity and dry.

4.5.4.2 Magazine. Forty 30 round magazines shall be numbered and used in rotation with each rifle during this test. Magazines shall be fully loaded for each use. Each magazine used during this test shall be cleaned at the specified cleaning interval for the rifle with a cleaning solvent in accordance with MIL-C-372 and blown dry with prepared compressed air.

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4.5.5 Firing pin indent. The test shall be performed utilizing Government approved chamber adapters and Government furnished copper compression cylinders for insertion in the barrel chamber.

4.5.5.1 Bolt manually returned. The rifle shall be held in a vertical position (muzzle down) with the muzzle end supported. The bolt shall be retracted to the rearward position and held open. A zero indicator reading shall be made on the height of the copper pressure cylinder before insertion into the chamber adapter. The chamber adapter containing the copper compression cylinder shall then be inserted in the barrel chamber. The bolt shall be manually returned to the battery position, the trigger shall be pulled to release the hammer and indent the copper compressions cylinder. The chamber adapter shall be removed from the barrel chamber and the depth of the indent on the copper compression cylinder computed by measuring the distance from the original zero indicator reading to the bottom of the firing pin impression. The indent impression shall be visually examined to determine if the concentricity requirement has been met.

4.5.5.2 Bolt spring action returned. The rifle shall be held in a vertical position (muzzle down) with the muzzle end supported. The bolt shall again be retracted to the open rearward position and held open. A zero indicator reading shall be made on the height of the copper compression cylinder before insertion into the chamber adapter. The chamber adapter containing the copper compression cylinder shall then be inserted in the barrel chamber. The bolt shall be returned to the battery position under spring action. The trigger shall not be pulled. The chamber adapter shall be removed from the barrel chamber and the depth of the indent in the copper compression cylinder computed by measuring the distance from the original zero indicator reading to the bottom of the firing pin impression.

4.5.5.3 Recording of data. The following data shall be recorded:

- a) M2 Bolt serial number.
- b) Inspection lot number.

Computed measurement of firing pin indent for both firing mechanism released and not released.

4.5.6 Interchangeability test.

4.5.6.1 M2 Bolt Weapons 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 M2 Bolt into 10 groups of non-mating parts as shown below and distributing the groups into 10 different trays until each tray contains a complete M2 Bolt. Groups of parts from M2 Bolt number 1 shall be taken in order and placed in tray 1 through 10; groups of parts from M2 Bolt number 2 shall be taken in order and placed in trays 2 through 10 to 1; groups of parts from M2 Bolt number 3 shall be taken in order and placed in tray 3 through 10 to 2, etc. The M2 Bolt shall be reassembled using only those parts which are in the same tray. The reassembled M2 Bolt shall be tested for functioning, firing pin indent, and cyclic rate of fire as specified in 4.4.2, 4.4.3, and 4.4.4 respectively. Disposition of

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interchangeability M2 Bolts shall be as specified in the contract.

Groups of non-mating parts

Group I Firing Pin Retainer (8448504) Pin, Ejector (11833497)	Group II Pin, Firing (8448503) Spring, Ejector (12598577)
Group III **Screw, Carrier (8445808), (2) Bolt (11833495)	Group IV Plate, top (11833496)
Group V Pin, Locating (11833499)	Group VI Carrier, Bolt (11833494)
Group VII Pin, Extractor (8448513)	Group VIII **Extractor (8448512)
Group IX Extractor (11833498)	Group X Pin, Spring (MS16562-98)

Note: All items preceded by a double asterisk (\*\*) shall be replaced during interchangeability test. Parts inadvertently damaged during interchange may be replaced without penalty when authorized and verified by the Government representative witnessing the test.

## 5. PACKAGING

5.1 Packing. The M2 Bolt shall be packed in accordance with drawing P11833491.

5.2 Marking and labeling. Packing boxes shall be marked and labeled in accordance with drawing, P11833491.

## 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 M2 Bolt replaces the standard M16 series Rifle bolt to enable short range training ammunition to be fired.

6.2 Acquisition requirements. Acquisition documents must specify the following:

- a) Title, number and date of this specification and all applicable Quality Assurance Provisions (QAP's)
- b) Issue of DODISS to be cited in the solicitation, and if required, the specific issue of individual documents referenced (see 2.1.2).

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- c) Requirements for submission of first article sample.
- d) Applicable stock number.
- e) Packaging requirements, if other than specified in Section 5.
- f) Serialization requirements, if applicable.
- g) Certificate of conformance for each lot or shipment of product.
- h) Quality Conformance Inspection, if other than specified in Section 4 of specification.
- i) The packages opened for examination shall be repackaged by the contractor at the contractor's expense.
- j) Disposition of tested M2 Bolt.
- k) Responsibility for test firing facilities and operating procedures.

6.3 Submission of contractor inspection equipment designs for approval. Submit copies of designs as required to: Commander, U.S. Army ARDEC, ATTN: SMCAR-QAF-S, Picatinny Arsenal, NJ 07806-5000. This address will be specified on the Contract Data Requirements List, DD Form 1423 in the contract.

6.4 Drawings. 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 or US Army Armament Research and Development Command (ARRADCOM) drawings. Technical data originally prepared by these activities are now under the cognizance of ARDEC.

6.5 Subject term (key-word) listing.

Endurance testing  
Indent, firing pin  
Interchangeability test  
Rifle  
Small arms  
Training bolt  
5.56mm

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6.6 Amendment notations. The margins of this specification are marked with vertical lines to indicate where changes from the previous issue 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 issue.

Custodian:  
Army-AR

Preparing activity:  
Army-AR

(Project 1005-2015-010)

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.dla.mil>.