MIL–R–1167A
1 JULY 1955
SUPERSEDING
MIL–R–1167
22 July 1949

MILITARY SPECIFICATION

RIFLE, AUTOMATIC, BROWNING, CALIBER .30, M1918A2

This specification has been approved by the Department of Defense for use of the Departments of the Army, the Navy, and the Air Force.

1. SCOPE

1.1 This specification covers one type of gas-operated, magazine fed automatic rifle.

2. APPLICABLE DOCUMENTS

2.1 The following specifications, standards, and drawings, of the issue in effect on date of invitation for bids, form a part of this specification:

SPECIFICATIONS

MILITARY

MIL–W–13855—Weapons, Small Arms, General Specification for.

STANDARDS

MILITARY

MIL–STD–105—Sampling Procedures and Tables for Inspection by Attributes.

DRAWINGS

ORDNANCE CORPS

51–102–1A —List of Drawings and Specifications — Rifle, Automatic, Browning, Cal. .30, M1918A2.

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

3. REQUIREMENTS

3.1 Design and construction.

3.1.1 *General.* — Components and assemblies shall conform to the materials, dimensions, tolerance limits, heat treatment, final protective finishes, and degree of surface roughness specified on the applicable drawings, and shall be in accordance with Specification MIL–W–13855.

3.1.2 *Marking.* — Unless otherwise specified, each rifle, and each component thereof for which markings are prescribed, shall be clearly marked in the positions and type sizes specified on the applicable drawings, and in accordance with Specification MIL–W–13855.

3.1.3 *Barrel.* — The chamber and bore shall be smooth and free from scratches, pits, rings, and other defects. The lands shall be sharp and well defined. Burrs and sharp edges shall be removed from the edge of the chamber.

3.1.4 *Barrel and receiver assembly.* — The barrel shall be drawn up tightly, and the draw lines shall qualify.

3.1.5 *Bipod assembly.* — The bipod assembly when open shall not sway sideways on the bipod bearing, and shall be capable of being rotated. The bipod legs, in either shortened or extended length, shall have no appreciable looseness and shall be held securely in position by the thumbscrews.

3.1.6 *Bolt assembly.* — The bolt shall move freely on the bolt guides in the receiver without tendency to bind or stick. The bolt lock shall provide positive locking with no appreciable play, and shall prevent rearward movement of the bolt until unlocking has been accomplished.

3.1.7 *Change lever.* — The change lever shall move freely from one position to another, operate as intended, and remain securely in place. With the change lever set at "S", the rifle shall not fire when the trigger is pulled.

3.1.8 *Extractor spring.* — The extractor spring shall assemble freely into the extractor and bolt without binding at any point.

3.1.9 *Firing pin.* — The firing pin point shall be smooth and well rounded, and shall not be hand stoned.

3.1.10 *Forearm.* — The forearm shall be smooth and well sanded. Small checks, cracks, and knotholes not appearing in sections likely to cause weakness shall be filled with plastic wood, shellac, or other such material after approval of the inspector. Light streaks in forearms shall be treated to blend with the remainder of the component to produce a uniform color. Forearms shall be immersed for an adequate length of time in an approved oil as specified on the applicable drawing. Substitution of material other than that indicated on the drawings may be made only upon approval by the procuring agency.

3.1.11 *Magazine.* — The magazine shall fit easily into the receiver and shall be held securely by the magazine catch. Empty magazines shall drop out of the receiver when the magazine catch is operated.

3.1.12 *Magazine catch.* — The magazine catch shall securely hold the loaded magazine in position.

3.1.13 *Receiver assembly.* — All components of the receiver assembly essential to field stripping shall assemble and operate by hand, but without looseness.

3.1.14 *Sights.*

3.1.14.1 *Front sight.* — The top of the front sight blade shall be at right angles to the sides, and shall be smooth and clearly defined.

3.1.14.2 *Rear sight assembly.* — The rear sight assembly shall assemble properly into the dovetailed recess in the receiver. The leaf assembly and its components shall operate without appreciable looseness or play at any point.

3.1.15 *Slide assembly.*—The slide assembly shall move freely throughout its range of travel without tendency to bind or stick, and the sear engaging notch shall be smooth and knife or wire edge removed.

3.1.16 *Trigger guard assembly.* — The trigger guard assembly shall fit freely, but not loosely, in the receiver. There shall be no appreciable sideplay.

3.1.17 *Cyclic rate.* — The rate of fire with the change lever set as shown below shall conform to the following requirements:

	Range
Lever set on low rate (F).....	300–450 R.P.M.
Lever set on high rate (A).....	500–650 R.P.M.

3.1.18 *Firing pin protrusion.* — The firing pin protrusion shall be as specified on the applicable drawings.

3.2 Trigger pull. — The trigger pull shall be smooth, free from objectionable creep, and shall be within the range specified on the applicable drawing. There shall be no alteration of any component beyond the prescribed tolerances in order to meet the trigger pull requirements.

Note.—"Objectionable creep" is interpreted to mean any perceptible rough movement in the trigger pull between the time the slack is taken up and the sear is released, with pressure applied to the trigger at a uniform rate of increase over a period of not less than 3 seconds.

3.3 Interchangeability. — All components and assemblies on lists supplied by the procuring agency, which substantially contain those parts maintained for replacements, shall be interchangeable. (See 6.1).

3.4 Impact resistance. — Plastic stocks and assembled rifles shall be capable of withstanding the drop and impact tests specified on the applicable drawings.

3.5 Breeching space. — Before proof firing, the breeching space shall be as shown on the applicable drawing. The breeching space shall not increase more than 0.001 inch as a result of proof firing. However, should this dimension be exceeded, a second proof round shall show no further increase. In no instance shall the breeching space, chamber, and bore dimensions after proof firing exceed the limits specified on the drawings.

3.6 Functioning. — Each rifle and magazine shall function smoothly and properly under firing conditions.

3.7 Targeting and accuracy. — Rifles shall meet the targeting and accuracy requirements specified on the targeting diagram shown on the applicable drawing.

3.8 Endurance. — Rifles and magazines shall have dependable endurance lives of the specified number of rounds (see 4.3.8.1) without substitution of any components, and without malfunctions or nonacceptable conditions, in excess of the limits shown in Table I.

3.9 Workmanship. — Finished rifles shall be free from defects that may affect appearance, serviceability, operation, and functioning.

TABLE I. — *Malfunctions, nonacceptable conditions, and unserviceable components*

Malfunctions and non-acceptable conditions[1] (attributable to rifle)	Number permitted in the endurance test	
	First 5,000 rounds	Second 5,000 rounds
Change lever fails to function	0	0
Charred forearm	No penalty	No penalty
Enlarged firing pin hole	0	0
Failure to close (due to any rifle component).	0	0
Failure to eject	1	2
Failure to extract	0	0
Failue to feed (bullet striking face of barrel).	0	0
Failure to feed (insufficient recoil)	0	0
Failure to sear to release bolt during slow rate of fire.	3	3
Failure of trigger to release (any cause).	0	0
Faulty trigger pull	0	No penalty
Head space (increase from start of endurance test).	0.002	0.003
Hangfire (noticeable)	0	0
Loose stock	0	0
Loose barrel and receiver	0	0
Misfire	0	1
Pierced primers	0	1
Partial ignition	0	0
Ruptured cartridge case	0	1
Uncontrolled fire	0	0
Worn cylinder causing gas leak	0	0
Other malfunctions — total	1	3
Unserviceable components		
Barrel (eroded)	0	No penalty
Bolt broken	0	0
Bolt, burred	1	1
Bolt, abnormal wear on bearing surfaces.	1	2
Ejector binds on bolt	0	0
Ejector, broken, burred or bent	0	0
Extractor broken	0	0
Extractor burred	1	1
Firing pin, broken	0	1
Improper fit, gas cylinder tube and braket.	0	0

TABLE I. — *Malfunctions, nonacceptable conditions, and unserviceable components—Continued*

Unserviceable components (Continued)	Number permitted in the endurance test	
	First 5,000 rounds	Second 5,000 rounds
Loose fit, ejector and bolt	0	1
Loose or worn bolt supports	0	0
Piston binds	0	0
Sear broken	0	0
Sear contacts, defective	0	0
Firing pin, defective	0	No penalty
Set back in bolt	0	0
Weak extractor spring	0	1
Weak recoil spring	0	0
Worn locking surfaces, bolt lock, and receiver.	0	0
All other unserviceable components	0	4
Magazines		
Bent lips, burrs, or sharp edges causing excessive scraping of metal from cartridge case.	0	0
Failure to feed (bent lips)	0	0
Failure to feed (dented, burred or sharp edges).	0	0
Follower or follower spring fails to function.	0	0
Worn magazine catch notch	0	0

(Note.—When malfunctions (within the allowance of Table I) are traceable to particular components, it is permissible to replace such components and record them as unserviceable, subject to limitations of Table I. When it is definitely established by the inspector that previously recorded malfunctions are attributable to an unserviceable component, such malfunctions shall not be counted against the rifle being tested, provided that they occurred not more than 200 rounds prior to replacement of the unserviceable component. However such malfunctions shall remain recorded and properly identified.

4. QUALITY ASSURANCE PROVISIONS

4.1 Sampling.

4.1.1 *Lot.* — Unless otherwise specified, a lot shall consist of not more than 500 rifles for the initial lot and 1,000 rifles for each subsequent lot.

4.1.2 *Inspection sample.* — The inspector may subject all or part of any lot or lots of components or assemblies to such inspection as he deems necessary to determine compliance with this specification. Unless otherwise specified, inspection sample sizes shall be in accordance with Standard MIL-STD–105.

4.1.3 *Test samples.* — Unless otherwise specified, the number of test samples shall be as specified for each test.

4.2 Inspection.

4.2.1 *Contractor's inspection.* — The contractor shall maintain an adequate system of processing, inspection, and lot identification. Only such lots which meet the requirements of this specification shall be submitted for final Government inspection.

4.2.2 *Procedure.* — Rifles shall be visually inspected for completeness of manufacture, assembly, finish, and workmanship. The chamber and bore shall be examined for rust, pits, powder fouling, burrs, and other defects. Rifles shall be operated by hand to ascertain that the final adjustments have been made to assure proper operation. Components shall be inspected as necessary to assure compliance with drawing requirements. Before final acceptance of any lot, the inspector shall make whatever final inspection deemed necessary to assure that the rifles have undergone all inspection and tests prescribed therefor, and that the rifles have been thoroughly cleaned and prepared for shipment as required by Section 5.

4.3 Tests.

4.3.1 *General.*

4.3.1.1 *Contractor's responsibility.*—Unless otherwise specified, all tests specified herein shall be performed by the contractor under the supervision of a Government inspector.

4.3.1.2 *Ammunition.* — Unless otherwise specified, ammunition used in all firing tests excepting the proof firing test shall be U. S. Government caliber .30 standard service ball ammunition. Ammunition used in proof firing test shall be Government standard caliber .30 high pressure test ammunition.

4.3.2 *Trigger pull test.* — Each rifle shall be tested for trigger pull using a dead weight attached to a hooked wire. The prescribed weights shall be applied as specified on the applicable drawing. The trigger shall be carefully checked for "objectionable creep."

4.3.3 *Interchangeability test.*

4.3.3.1 *Sample.* — Ten rifles selected by the inspector from each lot shall be tested for interchangeability of like components and assemblies which are likely to require replacement. Test frequency may be reduced by the contracting officer when a record of consistently satisfactory results has been established.

4.3.3.2 *Procedure.* — Components and assemblies readily disassembled as shown in the list to be furnished by the procuring agency shall be disassembled from the weapons. Components and assemblies of each kind shall be placed together and mixed. The rifles shall be assembled without fitting or altering any component in any way except that handfitting will be allowed on not more than 2 of the rifles, provided that, as a result, no component or assembly is rendered unsuitable for assembly in other rifles. The 10 assembled rifles shall operate and function properly.

4.3.3.3 At least two of the above reassembled rifles, from which all components included as "Spare Parts" in the list to be furnished by the procuring agency have been removed, shall be assembled, using components intended for use as spare parts. There shall be no handfitting, and the rifles shall operate and function properly.

4.3.3.4 All of the rifles assembled from interchanged components shall be subjected to function and targeting and accuracy firing tests.

4.3.4 *Drop and impact tests.* — Drop and impact tests shall be conducted in the manner specified on the applicable drawings.

4.3.5 *Proof firing test.* — Each assembled rifle, spare barrel, receiver, and bolt assembly shall be subjected to the firing of one high pressure proof cartridge. Suitable fixtures for proof firing spare components and assemblies shall be provided by the contractor. The person doing the proof firing shall place the prescribed proof marks on each accepted barrel, receiver, and bolt immediately after the test.

4.3.6 *Function firing test.* — Unless otherwise specified, each rifle shall be fired 120 rounds in the function firing test, as specified in Table II, using full magazine type of burst.

TABLE II. — *Function firing*

Rounds	Gas port	Change lever setting	Rate of fire
40	Large	"A"	High
40	Large	"F"	Reduced
20[1]	Medium	"A"	High
20	Medium	"F"	Reduced

[1] Using a full magazine, every third rifle shall fire these 20 rounds in short bursts of 4 to 5 rounds, to check on intermittent firing. The quantity of rifles fired shall be increased at the discretion of the procuring agency in the event of failure of rifles to meet this test.

4.3.7 *Targeting and accuracy test firing.* — Rifles shall be tested for targeting and accuracy in accordance with the applicable drawing.

4.3.8 *Endurance test.*

4.3.8.1 *Sample.* — One rifle selected by the inspector from the initial lot, found satisfactory in other tests, shall be considered as a representative weapon and shall be subjected to an endurance test of 10,000 rounds. One rifle so selected from each subsequent lot shall be subjected to an endurance test of 5,000 rounds. Sufficient magazines shall be selected for the test so that approximately 500 rounds shall be fired, in rotation, from each magazine. At the discretion of the contracting officer, initial lots of rifles on continuation contracts (contracts for additional

quantities, production of which starts immediately upon completion of previous contracts) may be considered as subsequent lots.

4.3.8.2 *Procedure.*—Medium gas port shall be used throughout the endurance test. Half of the test shall be fired using the fast cyclic rate setting and half shall be fired using the slow cyclic rate setting. Bursts shall not exceed 100 rounds (burst of 100 rounds is considered to mean 5 magazine loads of 20 cartridges each, fired consecutively). The rifle shall be cooled by either water or air after each 100 rounds of firing. Care should be exercised to prevent water from entering the gas port or cylinder.

4.3.8.3 The rifle may be cleaned and oiled after each 500 rounds or at the close of the day's firing, but no part shall be altered or replaced except that parts broken or worn to the extent that they are unserviceable shall be replaced. A record of each replacement shall be kept.

4.3.8.4 Upon completion of the endurance test, the rifle shall be inspected and all defective or worn components replaced. Before acceptance, the rifle shall be thoroughly conditioned at the expense of the contractor, and shall be function fired 20 rounds with the change lever set at "A" (high rate), and tested for targeting and accuracy.

4.4 Reinspection and retests.

4.4.1 *Defective ammunition.* — Malfunctions in any test traceable to defective ammunition shall not be counted against the rifle being tested.

4.4.2 *Rejections.* — Rifles rejected individually or by lots because of inspection or any test except the endurance and interchangeability tests may be conditioned and resubmitted for inspection or test in which failure occurred and such other inspection or tests as the inspector may consider necessary.

4.4.3 *Endurance retest.* — If the rifle representing any lot fails to meet the specified requirements in the endurance test, a retest shall be made, unless in the opinion of the inspector the failure or failures indicate serious defects in the rifles, in which case retest shall be made only if authorized by the procuring agency. In case a retest is made, the inspector shall select another rifle for the purpose from the lot under consideration. If a retest is not made or the rifle selected therefor fails in the retest, the lot shall be rejected subject to conditioning and further test.

4.4.5 *Interchangeability retest.* — If the rifles representing any lot fail to meet the specified requirements in the interchangeability test, the lot shall be rejected subject to retest of twice the number of rifles as were in the original sample.

5. PREPARATION FOR DELIVERY

5.1 Unless otherwise specified, preservation, packaging, packing, and marking. — Rifles and spare parts shall be preserved, packaged, packed, and marked in accordance with packaging instructions cited on Drawing 51-102-1A.

6. NOTES

6.1 Ordering data. — Procurement documents should specify:

(a) Title, number, and date of this specification.
(b) List of interchangeable components and assemblies. (See 3.3).
(c) Place of inspection. (See 6.3).
(d) Preparation for delivery, if different. (See 5.1.).

6.2 When ordering ammunition for the targeting and accuracy test, procuring agencies should requisition ammunition of an accuracy suitable for the purpose intended.

6.3 Unless otherwise deemed necessary, place of inspection should be at the plant of the prime contractor.

Custodians:

Army—Ordnance Corps
Navy—Bureau of Ordnance
Air Force

Other Interest:

Navy—Mc

☆ U. S. GOVERNMENT PRINTING OFFICE: 961795—1955—(38)