

# **TM 9-1005-208-12**

**DEPARTMENT OF THE ARMY TECHNICAL MANUAL**

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**OPERATOR'S AND ORGANIZATIONAL  
MAINTENANCE MANUAL  
INCLUDING REPAIR PARTS AND  
SPECIAL TOOLS LIST**

**RIFLE, CALIBER .30, AUTOMATIC,  
BROWNING, M1918A2, W/E  
(1005-674-1309)**

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**HEADQUARTERS, DEPARTMENT OF THE ARMY  
AUGUST 1969**

**WARNING****DANGEROUS PROCEDURES**

If not ready to fire, be sure the change lever is placed in S (safe) position

**DANGEROUS CONDITIONS**

Cartridges which have been subjected to temperature of 135°F. (uncomfortable to hold) or more, due to direct radiation from the sun or other sources of heat, shall not be fired as dangerous high chamber pressures may result. When such cartridges are returned to lower temperatures, they are safe to fire.

In the event of a misfire the round will remain locked in the chamber for the prescribed time intervals, the gun trained on the target and personnel cleared from the area.

A cook-off will occur after ten seconds of contact with the chamber of a hot barrel.

Do not attempt to fire weapon if water is present in barrel. Fording, heavy rain, or fog can cause water to be present in the barrel.

**DANGEROUS SOLUTIONS**

Avoid skin contact with PC III. The compound should be washed off thoroughly with running water if it comes in contact with the skin. A good lanolin base cream, after exposure to compound, is helpful. The use of gloves and protective equipment is recommended.

TECHNICAL MANUAL  
No. 9-1005-208-12

HEADQUARTERS,  
DEPARTMENT OF THE ARMY  
WASHINGTON, D. C., 1 August 1969

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**RIFLE, CALIBER .30, AUTOMATIC: BROWNING, M1918A2,  
W/E (1005-674-1309)**

*This manual is current as of 30 June 1969*

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\*This manual supersedes TM 9-1005-208-12P, 28 January 1964, in its entirety.

**CHAPTER 1  
INTRODUCTION**

**Section I. GENERAL**

**1-1. Scope**

This manual contains instructions for the operation and organizational maintenance of Caliber .30 Browning Automatic Rifle M1918A2 allocated by the MAC (app B).

**1-2. Forms and Records**

a. *General.* Refer to TM 38-750 (Army Equipment Records Procedure) for forms and records required.

b. *Recommendations for Maintenance Manual Improvements.* Report of errors, omis-

sions and recommendations for improving this manual by the individual user is encouraged. Reports should be submitted on a DA Form 2028 (Recommended Changes to DA Publications) and forwarded direct to: Commanding General, Headquarters, U. S. Army Weapons Command, ATTN: AMSWE-SMM-P, Rock Island, Illinois 61201.

**1-3. Administrative Storage**

Refer to TM 740-90-1 for administrative storage.

**Section II. DESCRIPTION AND DATA**

**1-4. Description**

a. *General.* The Caliber .30 Browning Automatic Rifle M1918A2 (fig. 1-1) is a fully automatic, air-cooled, gas-operated, magazine fed, shoulder-type weapon, designed primarily for use with a bipod. The rifle can be easily disassembled into groups and assemblies. It is composed of the magazine, trigger guard assembly, bolt group, gas cylinder and fore end group, slide and piston group, butt stock, buffer, and actuator group, bipod assembly, rear sight assembly, and barrel and receiver group. The rifle contains a cyclic rate mechanism which is housed in the stock and trigger guard mechanism. This mechanism allows two rates of automatic fire, one at 550 rounds per minute (normal cyclic rate) and one at 350 rounds per minute (slow cyclic rate). A brief description of the components is as follows:

b. *Magazine.* The magazine is located just forward of the trigger guard assembly at the bottom of the receiver. It holds 20 rounds of ammunition.

c. *Trigger Guard Assembly.* The trigger guard assembly is located on the bottom of the receiver.

d. *Bolt Group.* The bolt group is housed within the receiver.

e. *Gas Cylinder and Fore End Group.* The gas cylinder and fore end group is located just below the barrel on the front of the receiver. It consists of the fore end shield, gas cylinder assembly, fore end, front swivel assembly, and gas cylinder gun.

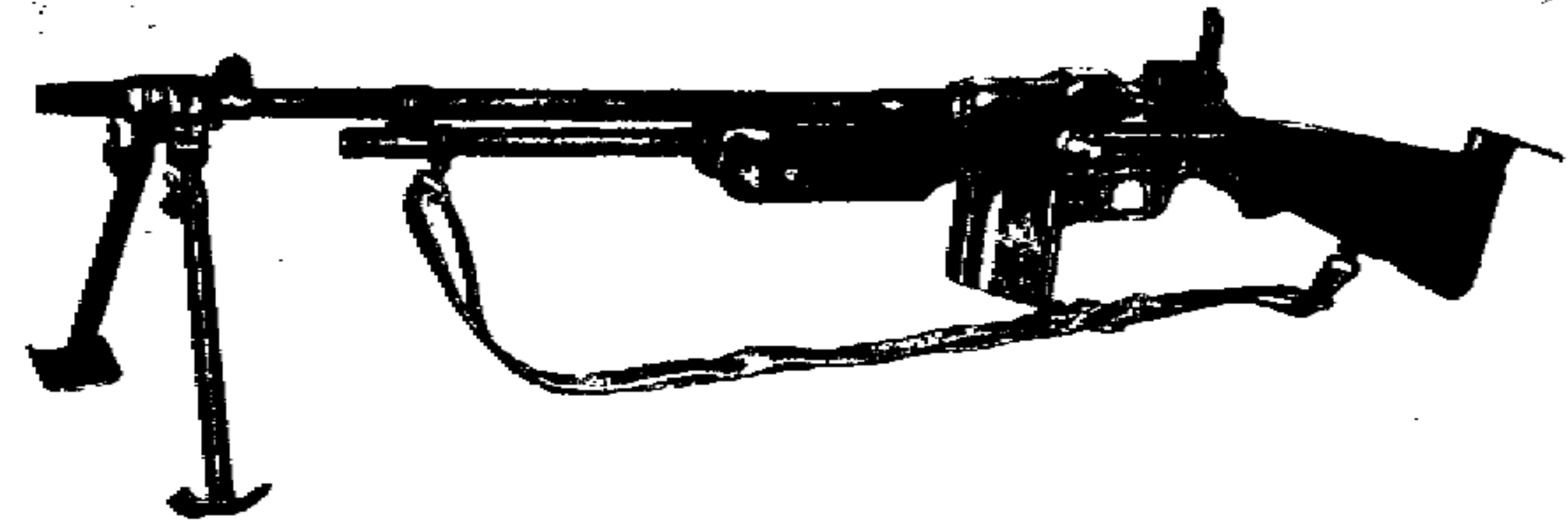
f. *Slide and Piston Group.* The slide and piston group is housed within the gas cylinder and fore end group and receiver.

g. *Butt Stock, Buffer, and Actuator Group.* The butt stock, buffer, and actuator group is housed within the stock of the rifle.

h. *Bipod Assembly.* The bipod assembly is located at the muzzle end of the barrel and is secured to the barrel by the friction washer, a flash hider and bipod bearing.

i. *Rear Sight Assembly.* The rear sight assembly is located on the top of the receiver just forward of the stock.

j. *Barrel and Receiver Group.* The barrel and receiver group serves as a support for all major groups and assemblies of the rifle.



WE 62705

Figure 1-1. Caliber .30 Browning Automatic Rifle M1918A2—left front view.

**1-5. Tabulated Data**

Weight	19.4 lb
Weight of magazine	0.44 lb
Length of rifle	47.8 in
Length of barrel	24.07 in
Rifling:	
Number of grooves	4
Right hand twist (one turn in)	10 in
Method of actuation	gas operated
Feeding	magazine

Capacity	20 rds
Cyclic rate:	
High rate	550 to 650 rds per min
Low rate	350 to 450 rds per min
Cooling	air
Sight radius	31.125 in
Trigger pull:	
Maximum	10 lb
Minimum	6 lb
Ammunition	Ball, armor piercing, tracer, dummy, and blank

## CHAPTER 2 OPERATING INSTRUCTIONS

### Section I. CONTROLS

#### 2-1. General

This section describes, locates, illustrates, and furnishes the operator essential information pertaining to the various controls provided for the proper operation of the materiel.

#### 2-2. Controls

Refer to figure 2-1 for controls and their functions.



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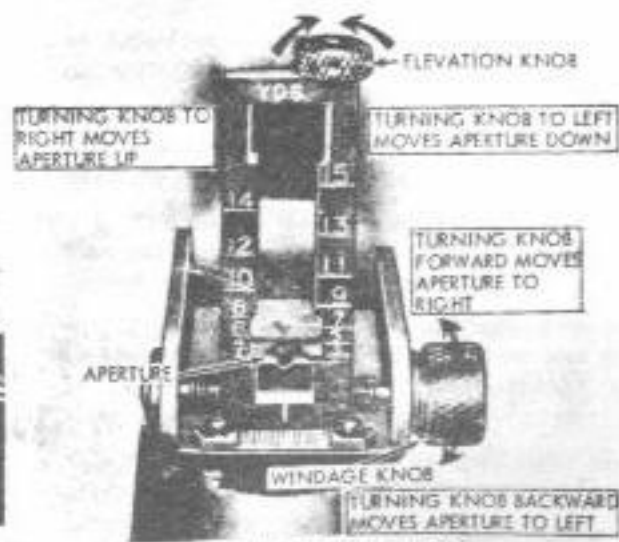


F - SLOW CYCLIC RATE  
A - NORMAL CYCLIC RATE  
S - SAFE

SELECTIVE POSITIONS OF CHANGE LEVER



RETRACT OPERATING HANDLE TO COCK RIFLE



ELEVATION KNOB  
TURNING KNOBS TO RIGHT MOVES APERTURE UP  
TURNING KNOBS TO LEFT MOVES APERTURE DOWN  
TURNING KNOB FORWARD MOVES APERTURE TO RIGHT  
TURNING KNOB BACKWARD MOVES APERTURE TO LEFT  
WINDAGE KNOB

Figure 2-1. Controls.

### Section II. OPERATION UNDER USUAL CONDITIONS

#### 2-3. General

This section contains instructions for the operation of the rifle under moderate temperatures and humidity. Instructions for operation under unusual conditions are covered in section III.

#### 2-4. Preparation for Firing

a. Refer to table 3-4 for cleaning and lubrication instructions.

b. Clear rifle as shown in figure 2-2.

#### 2-5. Loading

a. *Loading the Magazine.* The magazine has a maximum capacity of 20 rounds and may be loaded with any amount up to that capacity. The nose of the bullet must point to the short portion of the magazine. Use of the magazine filler is most helpful for rapid loading of the magazine. Place the filler over the open end of the magazine and funnel the cartridges into its mouth.

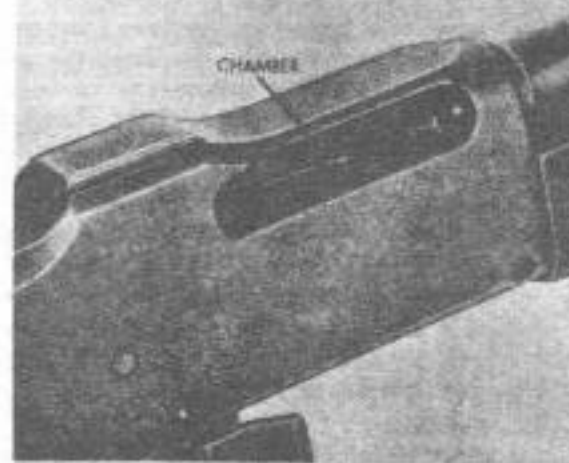
b. *Loading the Rifle.* Before loading the rifle, set the change lever to S (safe position, fig. 2-1). The weapon is cocked before a mag-



REMOVE MAGAZINE



RETRACT OPERATING HANDLE TO COCK RIFLE.



INSPECT CHAMBER.



PLACE CHANGE LEVER ON SAFE POSITION WITH BOLT CLOSED ON EMPTY CHAMBER.

Figure 2-2. Clearing rifle.

azine is loaded. The weapon may be loaded with either hand holding the magazine with its base in the palm. The tips of the cartridges must point toward the muzzle of the weapon. Using the magazine guides, insert the magazine into the magazine feedway. Tap up on the magazine base so that the magazine will be fully seated (the magazine notch engaged by the magazine catch). The rifle is now loaded and can be fired when the change lever is placed in the A (normal cyclic rate) or F (slow cyclic rate) position.

**Warning.** If not ready to fire, be sure the change lever is placed in S (safe) position.

## 2-6. Precautions in Firing Ammunition

a. The general precautions concerning the care, handling, preservation and destruction of ammunition as described in TM 9-1300-206 will be observed. In addition, the precautions below will be closely observed.

b. Ammunition which is badly corroded will not be fired.

c. Cartridge bases are easily dented and should be protected from hard knocks and blows. Dented cartridge cases may jam in the chamber and cause difficulty in extraction.

d. Cartridges which have been seriously damaged or those having loose bullets will not be used.

e. The cartridges will be kept clean and free of foreign matter.

**Warning.** Cartridges which have been subjected to temperature of 135°F. (uncomfortable to hold) or more, due to direct radiation from the sun or other sources of heat, shall not be fired as dangerous high chamber pressures may result. When such cartridges are returned to lower temperatures, they are safe to fire.

## 2-7. Firing

a. *M1918A2 Rifle (Fully Automatic Weapon).* No provision has been made for semi-automatic fire other than by the quick release of the trigger.

b. *Change Lever.* The automatic rifle has capabilities for two distinct cyclic rates of fire (fig. 2-1). This determination is made by the appropriate positioning of the change lever. There are three possible positions for this change lever. Note that repositioning of the change lever does not necessitate the cocking of the weapon.

c. *F Setting.* With the change lever in this position (fig. 2-1), the weapon's firing capability is at the slow cyclic rate (about 350 rounds per minute). When the trigger is depressed or held back on a loaded weapon, the rifle will continue to fire at this rate until the trigger is released or the magazine is emptied.

d. *A Setting.* Normal cyclic rate is experienced when the change lever is positioned at setting A (about 550 rounds per minute) (fig. 2-1).

e. *S Setting.* When the change lever is positioned at S (fig. 2-1), the automatic rifle cannot fire and is safe. Because the trigger is blocked by the change lever from initiating the firing function, it remains immobile when pressure is applied.

f. *Zeroing.* Refer to FM 23-15.

## 2-8. Stoppage and Immediate Action

a. A stoppage is any unintentional interruption in the cycle of operation; it occurs when the rifle stops firing, or fails to fire, through no fault of the rifleman. A stoppage may be a failure to feed, chamber, fire, extract, or eject. The most common cause is a defective magazine.

b. A malfunction is a failure of the weapon to function satisfactorily. A malfunction may or may not become evident by actual stoppage of fire, i.e., a runaway rifle or one which a reduction in the normal rhythm or cadence of automatic fire. Malfunctions may also be caused by mud, sand, ice, etc., entering the mechanism.

c. Immediate action is the prompt action taken by the firer to correct the stoppage. The first phase of immediate action is as follows:

(1) Pull the operating handle all the way to the rear. This should remove any cartridge or cartridge case remaining in the chamber, providing the extractor, extractor spring or the ejector are not broken. The weapon is now cocked.

(2) Push the operating handle all the way forward.

(3) Tap up firmly on the bottom of the magazine. If the magazine is not fully seated, this should seat the magazine, providing the magazine catch, spring, and magazine are serviceable.

(4) Attempt to fire the rifle. If the stoppage is not corrected, immediately perform the second phase of action as follows:

(a) Pull the operating handle to the rear.

(b) Look into the ejection port to see that the chamber is clear.

(c) Inspect to determine cause of malfunction and take appropriate action. (See table 3-3, troubleshooting.)

## 2-9. Misfires and Cook-Offs

a. *General.* Although the following described malfunctions are rarely encountered, all personnel concerned should be sufficiently familiar to recognize them and act accordingly. Knowing the nature of each kind of malfunction, as well as the proper preventive and corrective procedures, will be instrumental in forestalling injury to personnel and damage to materiel. General precautions for removing chambered cartridges associated with these malfunctions are described in b, below.

**Warning.** In the event of a misfire the round will remain locked in the chamber for the prescribed time intervals, the rifle trained on the target and personnel cleared from the area.

(1) *Misfire.* A misfire is a complete failure to fire. It may be due to a faulty firing mechanism or a faulty element in the propelling charge explosive train.

## Section III. OPERATION UNDER UNUSUAL CONDITIONS

### 2-11. General Conditions

a. Refer to table 3-4 for cleaning and lubricating instructions under unusual conditions and table 3-2 for preventive maintenance checks and services to be made when the materiel is subjected to unusual conditions.

b. Report any chronic failure of materiel resulting from subjection to extreme conditions in accordance with TM 38-750.

### 2-12. Operation in Extreme Cold

a. In climates where the temperature is consistently below 0°F., it is necessary to prepare the materiel for cold-weather operation. The rifle should be cleaned and lubricated as indicated in table 3-4 and paragraph 3-6.

b. Operate the various controls through their entire range, at intervals, as required. This aids in keeping them from freezing in place and reduces the effort required to operate them.

c. Materiel not in use and stored outside must be protected with a proper cover.

d. See FM 31-70 for further information on operations in the Arctic.

(2) *Cook Off.* A cook-off is a functioning of any or all of the explosive components of a cartridge chambered in a very hot weapon due to the heat. To prevent injury from a cook-off, observe the time limit prescribed in b below.

b. *Precautions.* After a failure to fire, the following general precautions, as applicable, will be observed:

**Warning.** A cook-off will occur after ten seconds of contact with the chamber in a hot barrel.

(1) Attempt to remove the cartridge before ten seconds has elapsed.

(2) If a cartridge is chambered in a very hot barrel and cannot be fired or removed, there is a possibility of a cook-off. If this occurs, and situation permits, all personnel except the operator must remain clear of the rifle for a minimum of 15 minutes.

(3) The operator will keep the rifle trained in a safe direction.

### 2-10. Unloading

Refer to figure 2-2.

### 2-13. Operation in Extreme Heat

a. *Hot Climates.*

(1) When operating in hot climates, the coating of oil necessary for operation and preservation will dissipate quickly. Inspect the rifle frequently, paying particular attention to all hidden surfaces of the trigger guard assembly and bolt group.

(2) Perspiration contributes to corrosion because it contains acids and salts. After handling rifle, clean, wipe dry and oil using general purpose lubricating oil (PL special).

b. *Hot, Dry Climates.* Clean and oil the bore of the rifle more frequently when operating in hot, dry climates.

### 2-14. Operations in Dusty and Sandy Areas

a. Clean and keep thoroughly dry. Do not lubricate. Even a light coat of oil will attract foreign matter, especially sand and dust, a potential cause of mechanical breakdown. During disassembly and assembly operations, shield parts whenever possible.