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# PRELIMINARY OPERATOR'S AND ORGANIZATIONAL MAINTENANCE MANUAL

5.56MM RIFLE STONER 63 A

CADILLAC GAGE COMPANY  
Small Arms Division  
Warren, Michigan

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CHAPTER 1  
INTRODUCTION

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Section I. GENERAL

1. SCOPE

- a. This manual contains instructions for operator and organizational maintenance of the Stoner rifle and bipod.
- b. Appendix I contains a list of basic issue items, repair parts, and tools and equipment which are required for operational maintenance of the weapon.
- c. Appendix II contains a list of repair parts, special tools and equipment which are required for performing organizational maintenance of the weapon.

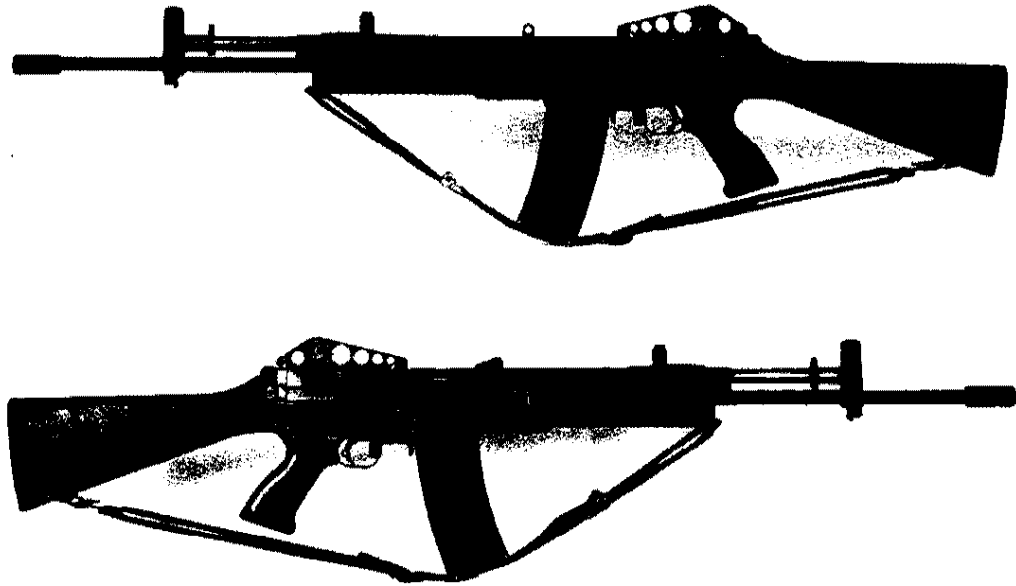


FIGURE 1. STONER RIFLE - LEFT AND RIGHT VIEW

## Section II. DESCRIPTION AND DATA

### 2. DESCRIPTION

a. The Stoner Rifle is a shoulder weapon. Detailed data are listed in paragraph 5. It can be fired either automatically or semiautomatically by moving the selector lever to "SEMI" for semiautomatic or "AUTO" for automatic fire. Figure 1 shows the left and right side of the rifle.

b. The rifle has a dual range sight system for simplicity and reliability. Basic sight settings are fully adjustable in 1 minute of angle increments in windage and elevation. For ease in adjustment under field conditions the sights are readily adjusted by using the point of the 5.56mm cartridge. At each incremental adjustment the sights are positively locked in place to prevent inadvertent misalignment. A bayonet and snap-on bipod are provided for the rifle as shown in figure 2. The flash suppressor serves as a grenade launcher capable of launching rifle grenades presently in the system, as shown in figure 3. A conventional spring-loaded, 30-round magazine feeds the ammunition to the rifle.

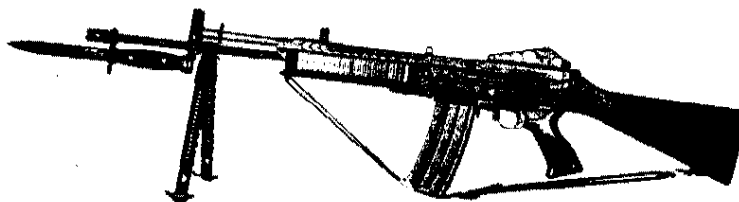


FIGURE 2. STONER RIFLE - WITH BIPOD AND BAYONET

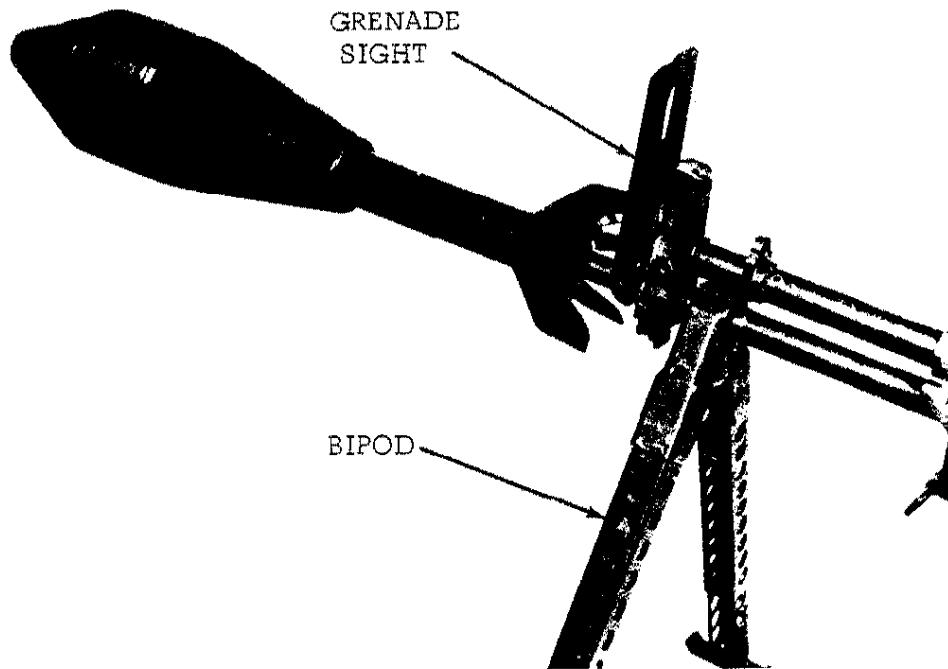


FIGURE 3. RIFLE GRENADE AND BIPOD ON RIFLE

3. NAME AND SERIAL NUMBER

The name and serial number of the rifle are stamped on the top of the receiver in front of the rear sight (figure 6).

4. TABULATED DATA

a. Weights in Pounds.

Rifle (w/o magazine or sling)	7.75 lbs
Empty Magazine	0.50 lbs (Steel) 0.25 lbs (Aluminum)
Full Magazine (30 Rds.)	1.25 lbs (Steel Magazine) 1.00 lbs (Aluminum Magazine)
Sling	0.31 lbs
Cleaning Rod & Attachments	0.25 lbs.
Firing Weight (fully loaded with sling and magazine)	9.56 lbs (w/Steel Magazine) 9.31 lbs (w/Aluminum Magazine)
Bayonet Knife, M7	0.60 lbs
Scabbard, M8A1	0.30 lbs
Grenade Sight	0.06 lbs
Bipod	0.88 lbs
Bipod Case	0.31 lbs

b. Lengths (in inches).

Rifle with Flash Suppressor	40.25 inches
Rifle with Bayonet	45.65 inches
Barrel (Bolt Face to Muzzle)	20.00 inches
Barrel with Extension and Flash Suppressor	21.67 inches

c. Mechanical Features.

Rifling	Right-hand twist (6 grooves), one turn in 12 inches.
Bore Dia. (Max.)	0.220 inches
Groove Dia. (Max)	0.2245 inches
Sight Radius	21.5 in. (from rear of rear sight aperture to midpoint of front sight)
Trigger Pull	
Maximum	8 lbs
Minimum	5 lbs
Method of Operation	Gas
Type of Lock Mechanism	Rotating Bolt
Method of Feeding	Magazine (30 rds)
Cooling	Air

d. Ammunition

Caliber	5.56mm (.223 caliber)
Type	Ball, Tracer

e. Firing Characteristics.

Muzzle Velocity	3250 fps $\pm$ 40 fps
Muzzle Energy	1300 ft lbs (approx)
Chamber Pressure	50,000 $\pm$ 2000 psi
Cyclic Rate of Fire	750 - 900 rds per min
Maximum Rate of Fire	
Semiautomatic	75 - 100 rds per min
Automatic	150 - 200 rds per min
Maximum Sustained Rate of Fire	20 - 30 rds per min
Maximum Effective Rate of Fire	
Semiautomatic	20 - 30 rds per min
Automatic	75 - 100 rds per min
Maximum Range	2,895 yds (2653 meters)
Maximum Effective Range	500 yds (460 meters)

CHAPTER 2  
OPERATING INSTRUCTIONS

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Section I. SERVICE UPON RECEIPT OF MATERIEL

5. GENERAL

a. When a weapon is received, it is the responsibility of the officer in charge to determine whether the materiel has been properly prepared for service by the supplying organization and to be sure it is in condition to perform its function.

b. All repair parts, tools, and equipment will be checked with the listing in Appendix I.

c. A record will be made of all missing parts, tools, and equipment and of any malfunctions. Deficiencies will be corrected as quickly as possible.

6. SERVICES

When preparing weapons for use that are packed with volatile - corrosion inhibitor (VCI), the following procedures shall be followed:

a. Rifle.

(1) Unpacking. Open container and remove weapon and equipment. Remove VCI wrapping from all surfaces. Clean per paragraph (2) below and assemble.

(2) Cleaning. Wipe off excess oil with a clean dry cloth. Run a clean dry patch through the bore of the weapon before firing.

(3) Lubrication. Lubricate as indicated in paragraphs 24 through 26.

(4) Inspection. Perform inspection as indicated in paragraph 33.

b. Bipod. For service pertaining to the bipod refer to paragraph 35.

## Section II. CONTROLS

### 7. GENERAL

This section describes, locates, and illustrates the various controls provided for the operation and organizational maintenance of the rifle and bipod.

### 8. RIFLE CONTROLS

a. Barrel Latch. The barrel latch (figure 4) is located on the bottom of the rifle to the rear of the forearm grip. It consists of three parts, latch, lockpin and spring assembly. The lockpin is attached to the rear of the latch and locks and holds the barrel into position.

b. Bolt Stop. The bolt stop (figure 4) is located inside and at the rear of the magazine well. It holds the bolt and carrier in the open position when required by the operator or when the last round has been fired. To engage the bolt, pull the cocking handle to the rear and push up on the bolt stop. To release, pull back on the cocking handle or strike the butt sharply with the hand.

c. Cocking Handle. The cocking handle (figure 5) is located on the top of the receiver. This control allows for manual cocking of the weapon when required.

d. Safety. The safety is located just forward of the trigger (figure 5). When pushed all the way forward through the slot in the trigger guard, the safety is in the "OFF" or FIRE" position. When pulled all the way to the rear, towards the trigger, it is in the "SAFE" position. This safety can be moved off safe without removing the trigger finger from the trigger guard by pushing forward with the trigger finger.

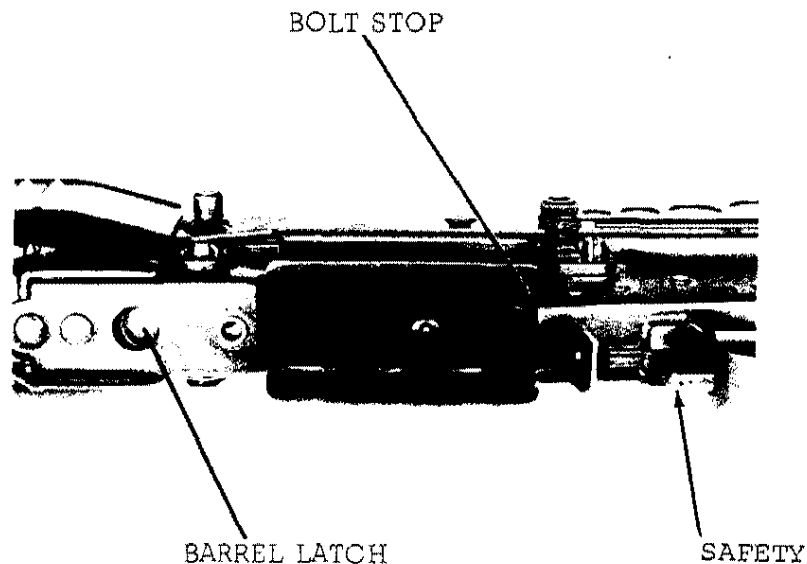


FIGURE 4. BARREL LATCH AND BOLT STOP



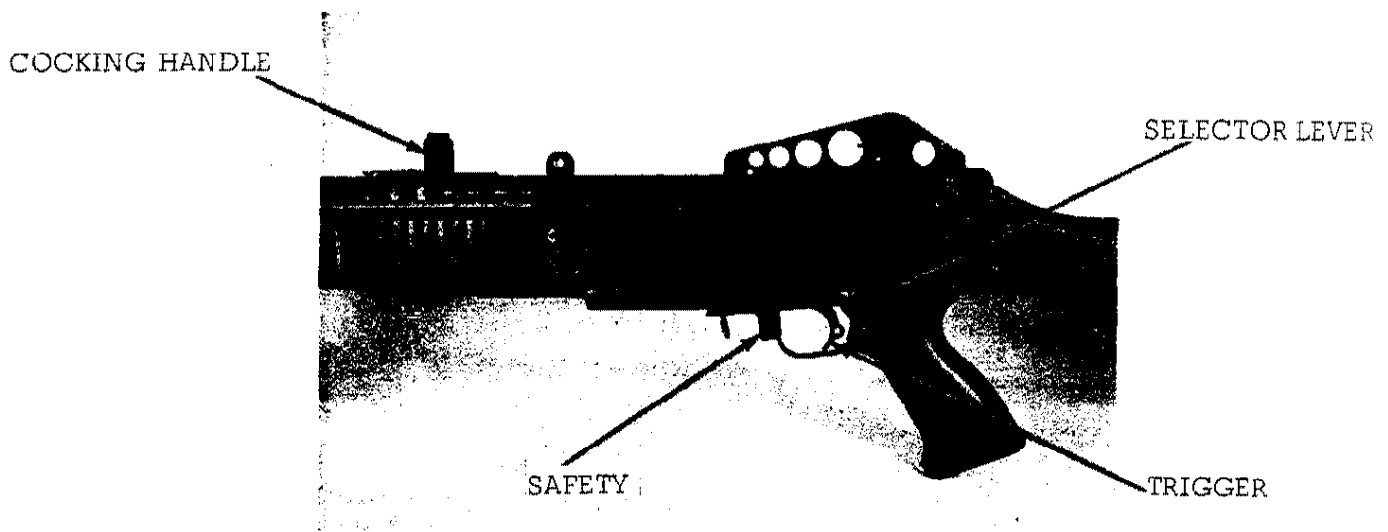


FIGURE 5. COCKING HANDLE, SELECTOR LEVER AND TRIGGER

e. Selector Lever. The selector lever (Figure 5) is located on the left side of the trigger housing group, above and to the rear of the trigger. It is movable to two positions, "SEMI" and "AUTO".

f. Trigger. The trigger (Figure 5) is located below the receiver directly behind the feedway. Its function is to control the firing of the weapon with the selector lever in the SEMI or AUTO positions.

g. Rear Sight.

(1) The rear sight assembly (Figure 6) is located on top and to the rear of the receiver assembly and is held in place by two pins. The rear sight assembly provides short or long-range settings and windage adjustments. There are two apertures on an L-shaped sight. The short range aperture is used for short (0-300 meter) ranges. The long range aperture is used for long (300-500 meter) ranges. The apertures are marked and identified "300" and "500", respectively.

(2) The windage adjustment is located on the right side and to the rear of the rear sight assembly. Adjustments are made by inserting the point of a cartridge into the lower hole containing the plunger of the windage scale drum, and pushing in with the cartridge, rotating the drum in either direction. To move the point of impact of the bullet to the left, rotate the desired amount of increments in the direction of the arrow stamped "L" on the drum. Reverse the direction of rotation to move the impact of the bullet to the right. An index and scale are located at the base of the rear sight for correction reference.

NOTE: Each graduation moves the bullet's point of impact one inch for every hundred meters of range, i.e., one inch at 100 meters, two inches at 200 meters, etc.

h. Front Sight. The elevation adjustment for zeroing the weapon is in the front sight base (figure 7) and adjustments are made by using the tip of a cartridge. To raise or lower the front sight post, depress the detent at the base of the front sight post and turn the post in the desired direction. To move the point of impact up, turn the sight post in the direction of the arrow and the word "UP" stamped on the base.

NOTE: Each graduation moves the bullet's point of impact one inch for every hundred meters of range, i.e., one inch at 100 meters, two inches at 200 meters, etc.

i. Gas Valve. The head of the gas valve (figure 8) (the side with the slot) is located on the right side of the sight base, midway between the barrel and gas cylinder. In order to fire ball ammunition in either the "SEMI" or "AUTO" positions, the slot must be in the vertical position. The slot should be in the horizontal position to launch grenades.

## 9. BIPOD (Figure 9)

a. Spring Lock. The Spring lock is located near the bipod hinge (figure 9). When the legs of the bipod are brought together, the lock springs up automatically and locks the legs in this position. To open the legs, the lock must be depressed and when fully open the lock automatically locks in the open position.

b. Spring Control. The clamping of the bipod is controlled by two springs, one spring mounted inside of the other. The springs are located directly beneath the bipod hinge.

c. Leg Extension Control. Bipod leg extension is controlled by spring catches mounted in the leg extensions. Leg adjustment is accomplished by depressing the catch located on the inner side of each leg and extending the legs to desired height.

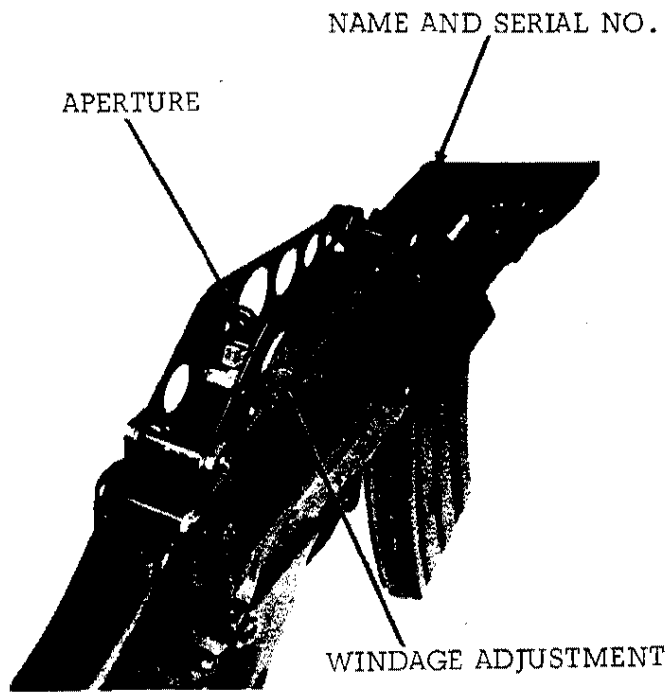


FIGURE 6. REAR SIGHT

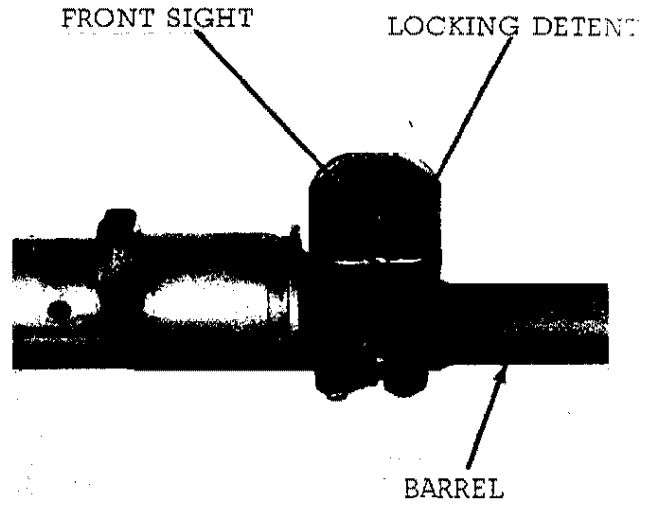


FIGURE 7. FRONT SIGHT

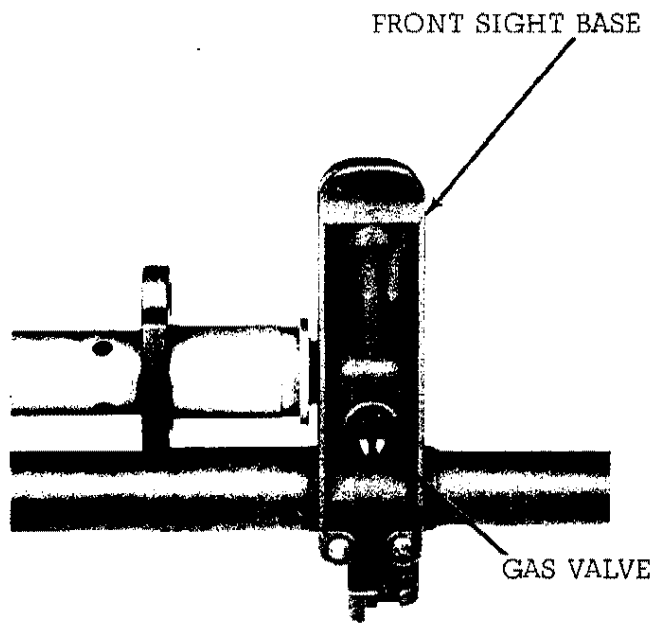


FIGURE 8. GAS VALVE

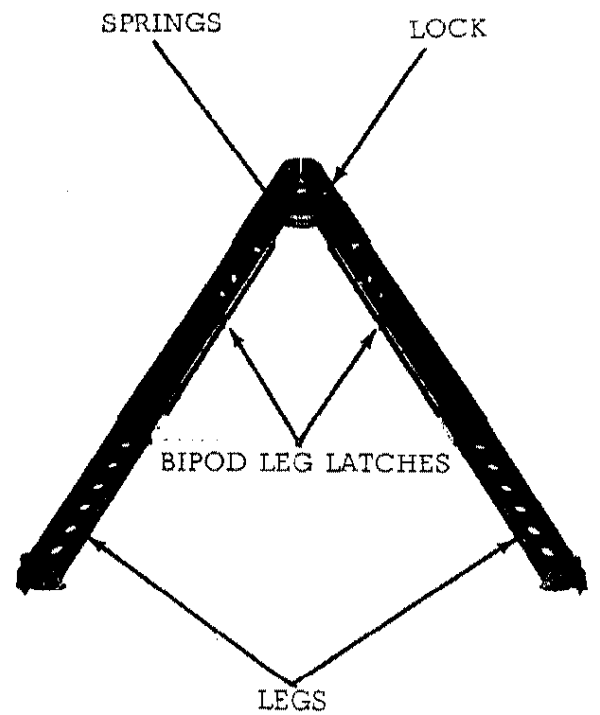


FIGURE 9. BIPOD CONTROLS

### Section III. OPERATION UNDER USUAL CONDITIONS

#### 10. GENERAL

This section contains instructions for the operation of the weapon under conditions of moderate temperatures and humidity.

#### 11. PREPARATION FOR FIRING

a. The rifle may be fired from the standing, kneeling, squatting, sitting, or prone position. When using the bipod, the bipod will be clamped to the front of the barrel (figure 10).

b. Check all ammunition to be sure it is the proper type and grade and that it is properly loaded into the magazine (figure 13).

c. Check weapon to see if it has been thoroughly cleaned and lubricated. Inspect for malfunction or other defects.

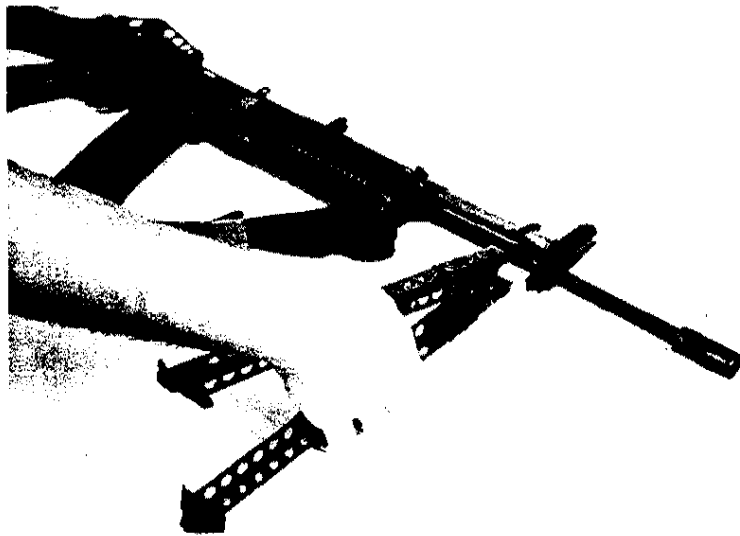


FIGURE 10. INSTALLATION OF BIPOD

#### 12. SERVICE BEFORE FIRING

Perform the before-firing operations. (Refer to Table 2.)

### 13. LOADING

a. Loading the magazine. The magazine has a 30-round capacity and may be loaded with any amount up to that capacity. All types of 5.56mm ammunition may be loaded. Figure 11 shows the magazine with three 10 round clips of 5.56mm ammunition and a loading adapter that slips over the end of the magazine to facilitate loading the magazine. Figure 12 illustrates how to load the magazine. Looking down on the magazine follower, it has a raised portion on the right rear of the follower. Cartridges are loaded into the magazine so that the tips of the bullets are forward of the raised portion on the follower. See figure 13.

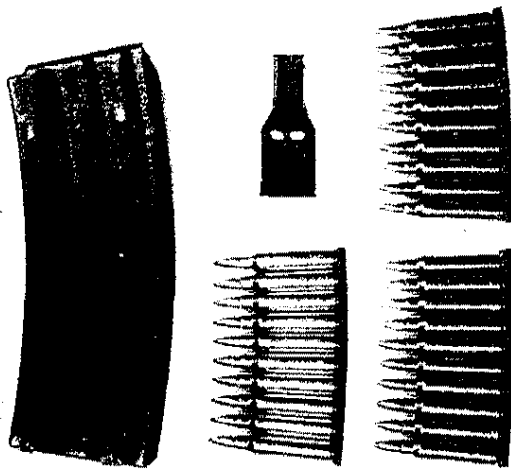


FIGURE 11. 10 ROUND CLIPS AND LOADING ADAPTER

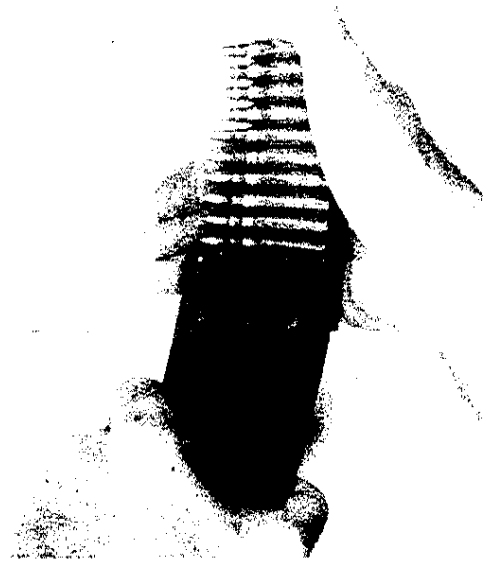


FIGURE 12. LOADING MAGAZINE

b. Loading the Rifle. The magazine may be inserted with the action open or closed. With the bolt closed, insert a loaded magazine into the magazine well until the magazine support and magazine latch (see figure 14) engage the magazine and lock it into place. Pull down on the magazine to insure that it is locked. Pull back and release the cocking handle, allowing the bolt to strip the top round from the magazine, feeding and chambering. Push the cocking handle all the way forward.

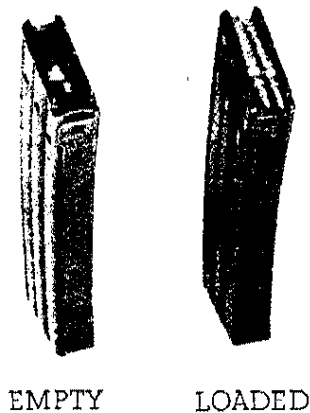


FIGURE 13. 30 ROUND MAGAZINES

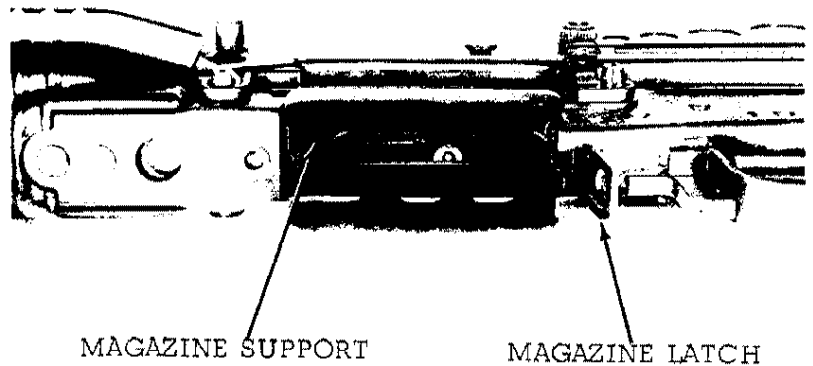


FIGURE 14. MAGAZINE SUPPORT AND LATCH

#### 14. FIRING

The rifle may be fired semiautomatically or automatically by moving the selector to the desired position.

a. "SEMI" (Semiautomatic). With the selector lever in this position, the rifle will fire one round each time the trigger is pulled.

b. "AUTO" (Automatic). With the selector lever in this position, the rifle will continue to fire until the magazine is exhausted or trigger is released.

#### 15. MISFIRE, HANGFIRE, AND COOKOFF

a. Misfire. A misfire is a complete failure to fire. A misfire in itself is not dangerous but, since it cannot be immediately distinguished from a delay in the functioning of the firing mechanism or from a hangfire (b below), it should be considered as a possible delayed firing until such possibility has been eliminated. Such a delay for example, could result from the presence of grit, sand, frost, ice, or improper or excessive oil or grease which might create a partial mechanical restraint which, after some indeterminate delay, is overcome and the firing pin is then driven into the primer in the normal manner. In this connection, no round should be left in a hot weapon any longer than the circumstances require because of the possibility of a cookoff (c below). Refer to paragraph 19 for removal procedures.

b. Hangfire. A hangfire is a delay in the functioning of a propelling charge at the time of firing. The amount of delay is unpredictable but, in most cases, will fall within the range of a split second to several minutes. Thus, a hangfire cannot be distinguished immediately from a misfire and therein lies the principal danger of assuming a failure of the weapon to fire immediately upon actuation of the firing mechanism is a misfire, whereas, in fact, it may prove to be a hangfire.

WARNING: During the prescribed time intervals, the weapon will be kept trained on the target. All personnel will stand clear of the muzzle. Refer to paragraph 16 for removal procedures.

c. Cookoff. A cookoff is a functioning of any or all of the explosive components of a round chambered in a very hot weapon due to the heat of the weapon. If the primer or propelling charger should cookoff, the projectile may be propelled from the weapon with normal velocity even though no attempt was made to fire the primer by actuating the firing mechanism. In such a case, although there may be uncertainty as to whether or when the round will fire, the precautions to be observed are the same as those prescribed for a hangfire (b above). To prevent a cookoff, a round which has been loaded into a very hot weapon should be fired or removed within 5 seconds. Refer to the following paragraphs for removal procedures.

#### 16. PROCEDURES FOR REMOVING A ROUND IN CASE OF FAILURE TO FIRE

a. General. After a failure to fire, due to the possibility of a hangfire or cookoff, the following general precautions, as applicable, will be observed until the round has been removed from the weapon and the cause of failure determined.

- (1) Keep the weapon trained down range. All personnel will stand clear of the muzzle.
- (2) Before retracting the bolt, either to remove the round or recock as the case may be, personnel not required for the operation will be cleared from the vicinity.
- (3) The round, after removal from the weapon, will be kept separate from the other rounds until it has been determined whether the round or the firing mechanism was at fault. If it is determined that the round is at fault, it will continue to be kept separated from the other rounds until disposed of. On the other hand, if examination reveals that the firing mechanism was at fault, the round may be reloaded and fired after correction of the cause for failure to fire.

b. Time Interval. The definite time intervals for waiting after failure of weapon to fire are prescribed as follows: Always keep the round locked in the chamber for 5 seconds from the time a misfire occurs, to insure against an explosion outside of the weapon in the event a hangfire develops. If the barrel is hot and a misfire stops automatic operation of the weapon, wait 5 seconds with the round locked in the chamber to insure against hangfire dangers, then extract immediately to prevent a cookoff. If the round cannot be extracted within 10 seconds, it must remain locked in the chamber for at least 5 minutes due to the possibility of a cookoff.

WARNING: Do not retract the bolt when a hangfire or cookoff is suspected.  
A hangfire will normally occur within 5 seconds from the time the primer is struck and a cookoff after 10 seconds of contact with the chamber in a hot barrel. One hundred-fifty rounds fired in a 2-minute period will make a barrel hot enough to produce a cookoff.

#### 17. DOUBLE FEED

A double feed is malfunction which occurs when the empty case fails to eject and another round is picked up by the bolt. Neither can feed or chamber properly and both become jammed and deformed. Both rounds can be ejected manually using the cocking handle. The cause normally is a short recoil which indicates a dirty gas cylinder or faulty ammunition.

#### 18. SERVICE DURING FIRING

No during-firing service operations are required for this weapon.

#### 19. UNLOADING

To unload a cocked, loaded rifle use the following procedures:

- a. Move the safety lever to (Safe) position. (all the way to the rear)
- b. Remove the magazine from the weapon.
- c. Move cocking handle to the full rearward position and eject the ammunition in the firing chamber.

CAUTION: Do not attempt to clear rifle without manually holding cocking handle in the fully open position.

d. Holding the cocking handle in the fully open position, insert index finger into the magazine well and push bolt stop upward. Gradually release the manual pressure on the cocking handle, allowing the bolt to rest against the bolt stop. Keep manual pressure on the cocking handle.

e. Look through the ejection port and into firing chamber to make sure the chamber is clear of ammunition.

#### 20. SERVICE AFTER FIRING

Perform the after-firing operations. (Refer to table 2.)



## CHAPTER 3

### ORGANIZATIONAL MAINTENANCE INSTRUCTIONS

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#### Section I. REPAIR PARTS, TOOLS, AND EQUIPMENT

##### 21. GENERAL

Repair parts, tools, and equipment are issued to the using organization for operating and maintaining the materiel. Tools and equipment should not be used for purposes other than prescribed and, when not in use, should be properly stowed.

##### 22. REPAIR PARTS

Repair parts are supplied to the using organization for replacement of those parts most likely to become worn, broken, or otherwise unserviceable, when replacement of these parts is authorized to the using organization. Repair parts supplied to the using organization are listed in Appendix I, which is the authority for requisitioning replacements. Repair parts supplied for organizational maintenance are listed in Appendix II.

##### 23. SPECIAL TOOLS AND EQUIPMENT

Special tools are listed in Appendix I.

Section II. LUBRICATION

24. LUBRICATION INSTRUCTIONS

The lubrication instructions (Table 1) prescribes cleaning and lubrication procedures as to locations, intervals and proper materials.

Table 1. LUBRICATION INSTRUCTIONS

Item	Procedure
RIFLE	<p>Immediately after firing, the barrel bore and other surfaces exposed to powder residue or gases will be thoroughly cleaned with brushes saturated with CR. Other surfaces will be cleaned with SD. After cleaning, all surfaces and components will be thoroughly dried with clean cloths or swabs (patches).</p> <p>Clean, after firing and weekly thereafter with SD or TPM; wipe dry and oil with PL special (or LAW for below 0°F. weather conditions).</p>
BIPOD	<p>Clean and oil all moving parts.</p> <p style="text-align: center;">MATERIALS TO BE USED</p> <p>CR - CLEANING COMPOUND, SOLVENT, Rifle bore cleaner</p> <p>SD - DRY-CLEANING SOLVENT or TPM -- THINNER, PAINT, MINERAL SPIRITS</p> <p>PL Special - LUBRICATING OIL, GENERAL PURPOSE, above 0°F.</p> <p>LAW - LUBRICATING OIL, WEAPONS, below 0°F</p>

## 25. GENERAL LUBRICATION INSTRUCTIONS

a. Usual Conditions. Lubrication intervals specified in Table 7, are for normal operation and where moderate temperature and humidity prevail.

b. Reports and Records. Report unsatisfactory performance of materiel or effect of prescribed lubricants and preserving materials.

## 26. SPECIFIC LUBRICATION INSTRUCTIONS

a. General. Lubrication will be performed more frequently than specified in table to compensate for abnormal operation and extreme conditions, such as high or low temperatures, prolonged periods of high-rate operation, or continued exposure to moisture, any one of which may quickly destroy the protective qualities of the lubricant.

b. Changing Grade of Lubricants. Lubricants are prescribed in accordance with temperature ranges: above 0°F., and below 0°F. The time to change the grade of lubricants is determined by maintaining a close check of the operation of the weapon during the approach to changeover periods in accordance with weather forecast data. Ordinarily, it will be necessary to change grade of lubricants only when air temperature is consistently above or below 0°F.

c. Extreme Cold Weather. Apply a light coat of weapons lubricating oil (LAW) to all operating mechanism surfaces. Materiel should be exercised more frequently during the periods of low temperature to insure proper functioning.

d. Extreme Hot Weather. Special lubricants will ordinarily not be required at extremely high temperatures, as lubricants prescribed for temperatures above 0°F. provide adequate protection. However, more frequent servicing than specified in Tables 2 and 3 is necessary because the heat tends to dissipate the lubricants.

e. Humid and Salt-Air Conditions. High humidity, moisture, or salt air contaminate lubricants, necessitating more frequent service than specified in Tables 2 and 3.

f. Before Immersion. Lubricate materiel before amphibious operation as prescribed in Table 3.

g. After Immersion. After immersion, perform the maintenance described in paragraph 27, which covers maintenance operations after immersion and includes special lubrication instructions.

h. Sandy or Dusty Conditions. If firing or prolonged travel has occurred under dusty or sandy conditions, clean and inspect all lubricated surfaces for fouled lubricants. Lubricate as necessary.

Section III. PREVENTIVE-MAINTENANCE SERVICES

27. SPECIFIC PREVENTIVE-MAINTENANCE PROCEDURES FOR THE OPERATOR

Table 2 gives the specific procedures to be performed on the weapon by the operator for each daily service.

Table 2. DAILY PREVENTIVE-MAINTENANCE SERVICES -OPERATOR'S

Interval & Sequence No.				OPERATOR-DAILY SCHEDULE	
Before Firing	During Firing	After Firing	Item to be Inspected	Procedures	Paragraph References
1			Bore	Clean all surface of the bore and wipe oil from bore and chamber.	Par. 33 <u>a</u> (4)
2			Bolt	Retract bolt to assure free movement between bolt carrier and gas cylinder.	Par. 33 <u>a</u> (4)
3			Action Parts	Hand function to assure proper operation.	Par. 34 <u>k</u>
4			Magazine	Check magazine for positive retention.	Par. 13 <u>b</u>
5			Bolt Stop	Check bolt stop for proper functioning.	Par. 8 <u>b</u>
		6	Entire Weapon	Examine bore for evidence of powder fouling or corrosion. Clean bore after firing, then oil as prescribed.	Par. 33 <u>a</u> (5)
		7	Entire Weapon	Wipe outside finished surfaces of weapon, clean, and oil sparingly.	Par. 33 <u>a</u> (5)
		8	Bipod	Check for smoothness of operation through entire range of movement.	Par. 35

28. PREVENTIVE MAINTENANCE BY ORGANIZATIONAL MAINTENANCE PERSONNEL

Refer to Table 3.

Table 3. WEEKLY PREVENTIVE-MAINTENANCE SERVICES  
ORGANIZATIONAL MAINTENANCE PERSONNEL

Sequence No.	Item	Procedure
1	Barrel Assy	Check for unusual wear and damage to bore.
2	Barrel Assy	Check for evidence of metal fouling, corrosion, and use of unauthorized cleaning material and methods.
3	Inertia Pin	Check to determine if the inertia pin has free movement inside the gas piston.
4	Action parts	Check for smoothness of operation. Visually examine moving parts for unusual wear.
5	Action parts	Check for corrosion and damage.
6	Lubrication	See that all items have been lubricated as prescribed in Table 1.
7	Equipment	See that tools and equipment are serviceable, cleaned, and properly stowed.

## Section IV. TROUBLESHOOTING

### 29. SCOPE

This section contains troubleshooting information and tests for locating and correcting some of the troubles which may develop in the weapon. Troubleshooting is the systematic study of trouble signs, testing to determine the defective component, and applying corrective action. Each malfunction is followed by probable causes and suggested procedures to be followed.

### 30. TROUBLESHOOTING GUIDE

Table 4 is intended to be used only as a guide in troubleshooting. This table does not cover all possible malfunctions that may occur; only the more common malfunctions are listed. The tests and corrective actions are governed by the scope of the operator or organizational level of maintenance.

Table 4. TROUBLESHOOTING

Malfunction	Probable Cause	Corrective Action
Bolt fails to lock to the rear after the last round.	<ol style="list-style-type: none"> <li>1. Faulty Magazine.</li> <li>2. Broken bolt stop and/or spring.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace Magazine.</li> <li>2. Refer to higher echelon (direct support) for corrective action.</li> </ol>
Failure to feed.	<ol style="list-style-type: none"> <li>1. Faulty Magazine.</li> <li>2. Dirty or carboned gas port.</li> <li>3. Lubrication inadequate.</li> <li>4. Damaged or weak driving spring.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace Magazine.</li> <li>2. Clean.</li> <li>3. Apply lubricant as required.</li> <li>4. Refer to higher echelon (direct support) for corrective action.</li> </ol>
Failure to cycle when set on "AUTO".	<ol style="list-style-type: none"> <li>1. Frozen ejector.</li> <li>2. Insufficient gas.</li> <li>3. Broken timer assy.</li> <li>4. Faulty selector lever.</li> </ol>	<ol style="list-style-type: none"> <li>1. Disassemble and clean.</li> <li>2. Clean gas cylinder.</li> <li>3. Refer to higher echelon (direct support) for corrective action.</li> <li>4. Refer to higher echelon (direct support) for corrective action.</li> </ol>

Table 4. TROUBLESHOOTING - Continued

Malfunction	Probable Cause	Corrective Action
Failure to fire.	<ol style="list-style-type: none"> <li>1. Improperly installed hammer or trigger spring.</li> <li>2. Faulty ammunition.</li> <li>3. Broken or damaged firing pin.</li> <li>4. Dirty chamber.</li> <li>5. Broken hammer spring.</li> <li>6. Broken timer assembly.</li> <li>7. Misaligned or worn trigger or hammer spring.</li> </ol>	<ol style="list-style-type: none"> <li>1. Disassemble and install properly.</li> <li>2. Remove and replace ammunition.</li> <li>3. Refer to higher echelon (direct support) for corrective action.</li> <li>4. Clear and clean.</li> <li>5. Refer to higher echelon (direct support) for corrective action.</li> <li>6. Refer to higher echelon (direct support) for corrective action.</li> <li>7. Refer to higher echelon (direct support) for corrective action.</li> </ol>
Failure to extract.	<ol style="list-style-type: none"> <li>1. Broken extractor spring.</li> <li>2. Broken extractor.</li> <li>3. Short recoil.</li> </ol>	<ol style="list-style-type: none"> <li>1. Refer to higher echelon (direct support) for corrective action.</li> <li>2. Refer to higher echelon (direct support) for corrective action.</li> <li>3. Clean gas cylinder.</li> </ol>
Failure to chamber.	<ol style="list-style-type: none"> <li>1. Ruptured cartridge case.</li> <li>2. Damaged round.</li> </ol>	<ol style="list-style-type: none"> <li>1. Remove.</li> <li>2. Recharge weapon.</li> </ol>
Failure to eject.	<ol style="list-style-type: none"> <li>1. Short recoil.</li> <li>2. Frozen ejector.</li> <li>3. Damaged ejector.</li> </ol>	<ol style="list-style-type: none"> <li>1. Clean gas cylinder.</li> <li>2. Remove and clean.</li> <li>3. Refer to higher echelon (direct support) for corrective action.</li> </ol>
Fires with safety on safe position.	<ol style="list-style-type: none"> <li>1. Faulty safety.</li> <li>2. Broken trigger.</li> </ol>	<ol style="list-style-type: none"> <li>1. Refer to higher echelon (direct support) for corrective action.</li> <li>2. Refer to higher echelon (direct support) for corrective action.</li> </ol>

Table 4. TROUBLESHOOTING - Continued

Malfunction	Probable Cause	Corrective Action
With selector lever on "SEMI", fires when trigger is released.	1. Faulty hammer or trigger.	1. Refer to higher echelon (direct support) for corrective action.
With selector lever on "SEMI", fires automatically.	1. Faulty disconnect spring. 2. Faulty disconnect. 3. Faulty selector lever.	1. Refer to higher echelon (direct support) for corrective action. 2. As Above. 3. As Above.
Bolt seizes, will not rotate.	1. Carbon dirty or burred bolt group.	1. Hold rifle in vertical position and strike butt sharply on ground while pulling back on cocking handle.
		<u>CAUTION: Strike butt squarely on ground to prevent breakage of stock. Remove bolt group and clean.</u>



## Section V. MAINTENANCE OF RIFLE

### 31. GENERAL

Maintenance includes all measures taken to keep the rifle in top operating condition. This includes normal cleaning, inspection for defective parts, repair, and lubrication. The individual is authorized to disassemble his rifle to the extent called field "stripping". (See Figure 27) The amount of disassembly he is allowed to perform without supervision is adequate for normal maintenance. The frequency of disassembly and assembly should be kept to a minimum, consistent with maintenance and instructional requirements.

The rifle has been designed so that it can be taken apart and put together easily. No force is needed if it is disassembled and assembled correctly. As the rifle is disassembled, the parts should be laid out from left to right. This makes assembly easier because the parts are assembled in the reverse order of disassembly. Disassembly may be accomplished in the field using only a cartridge.

### 32. DISASSEMBLY

a. Removing the Magazine. Grasp the rifle around the forestock with the left hand, keeping the muzzle pointed away from you in a safe direction. Grasp the magazine with the right hand. With the thumb of the right hand, depress the magazine latch toward the magazine. Rotate the magazine forward and remove.

b. Inspection for Safe Condition.

(1) Pull the cocking handle on the top of the receiver to the rear until the action is fully open.

(2) Lock the action open by pushing up on the bolt stop. See Figure 4 and Paragraph 8b.

(3) Return the cocking handle to the forward, locked position.

(4) Move the safety to the safe position. See Figure 5 and Paragraph 8d.

(5) Look in the receiver and chamber to be sure that the weapon is cleared of all ammunition and is safe to disassemble. Feel the inside of the chamber with your little finger to verify that it is empty.

(6) Pull the cocking handle to the rear until the bolt stop is released, then ease the bolt forward, closing the action. When the pressure of the bolt is taken off the bolt stop, the compressed bolt stop spring expands and forces the bolt stop down and out of the path of the bolt.

c. Removing the Driving Spring Assembly and Carrier, Piston and Bolt Assembly.

(1) With the bolt closed and safety on safe, push the take-down pin out toward the right side of the weapon with the point of a cartridge. (Figure 15)

(2) Holding the rifle with the left hand under the receiver, muzzle pointing down, pull out the take-down pin with the right hand until the trigger housing group is allowed to pivot downward. The take-down pin cannot be removed from the trigger housing assembly.

(3) Still holding the weapon in the left hand, grasp the driving spring assembly and remove. (Figure 16).

(4) Place the right hand over the back of the receiver (Figure 17) and rotate the rifle muzzle up slowly. The carrier, piston and bolt assembly will slide out of the receiver assembly.

d. Removal of the Trigger Housing Group from the Receiver Group. Remove the trigger housing group retaining pin (Figure 18) and remove the trigger housing group from the receiver group.

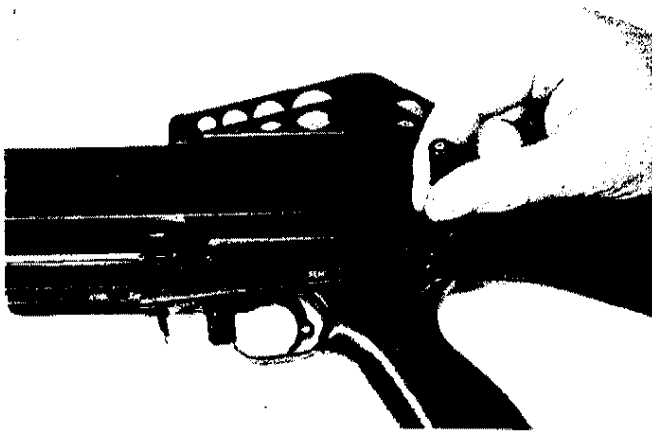


FIGURE 15. PUSHING OUT THE TAKE-DOWN PIN

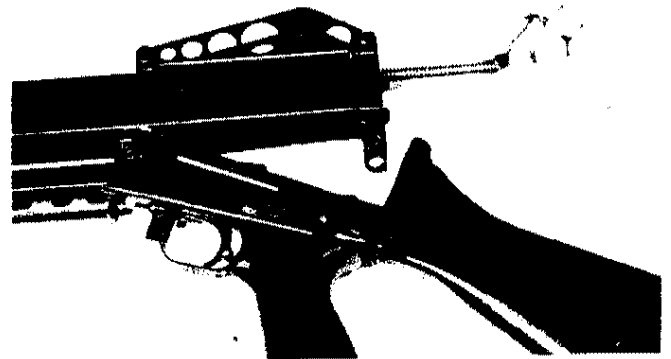


FIGURE 16. REMOVING THE DRIVING SPRING ASSEMBLY

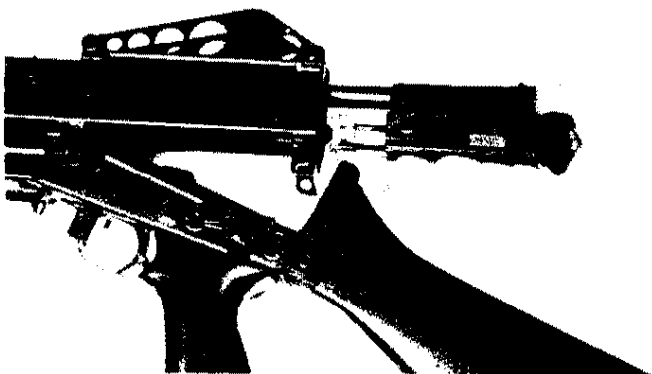


FIGURE 17. REMOVING THE CARRIER, PISTON AND BOLT ASSEMBLY



FIGURE 18. REMOVING THE TRIGGER HOUSING GROUP RETAINING PIN

e. Removal of the Forestock Assembly, Barrel, and Cocking Handle Assemblies, from the Receiver Group.

- (1) Remove the forestock assembly retaining pin. (Figure 19)
- (2) Grasping the forestock assembly, slide it forward and remove it from the receiver assembly.
- (3) Depress the barrel latch, (Figure 20) and remove the barrel assembly.
- (4) Pull back on the cocking handle until the guides on the handle are aligned with the disassembly notches on the receiver (Figure 21) and remove.

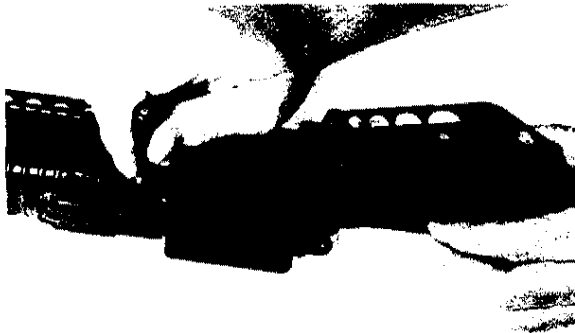


FIGURE 19. REMOVING THE FORESTOCK ASSEMBLY RETAINING PIN



FIGURE 20. DEPRESSING THE BARREL LATCH

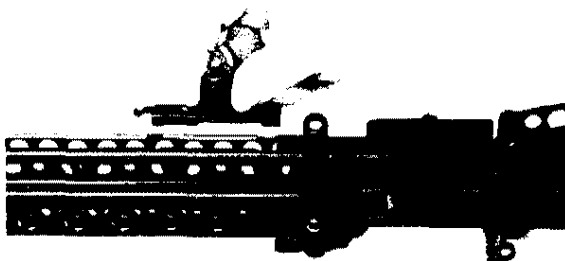


FIGURE 21. COCKING HANDLE GUIDE LUG AND DISASSEMBLY NOTCH



FIGURE 22. REMOVING THE STOCK RETAINING PIN

f. Removal of the Stock from the Trigger Housing Group.

(1) To remove the stock from the trigger housing group, remove the stock retaining pin (Figure 22).

(2) Rotate the bottom of the stock up and remove.

NOTE: The stock retaining pin, forestock assembly retaining pin, and trigger housing group retaining pin are interchangeable.

g. Removal of the Firing Pin, Cam Pin, and Bolt Assembly from the Carrier-Piston and Bolt Assembly.

(1) Push down on the base of the firing pin until it is flush with the back of the carrier cap assembly (Figure 23). Failure to do this will cause damage to the firing pin during disassembly. While holding the firing pin in this position, rotate the carrier cap assembly clockwise with the side of the index finger pressing against the cap roller, until the cap carrier is on line with the bottom of the bolt carrier, (Figure 24) and the word "UP" is on top.

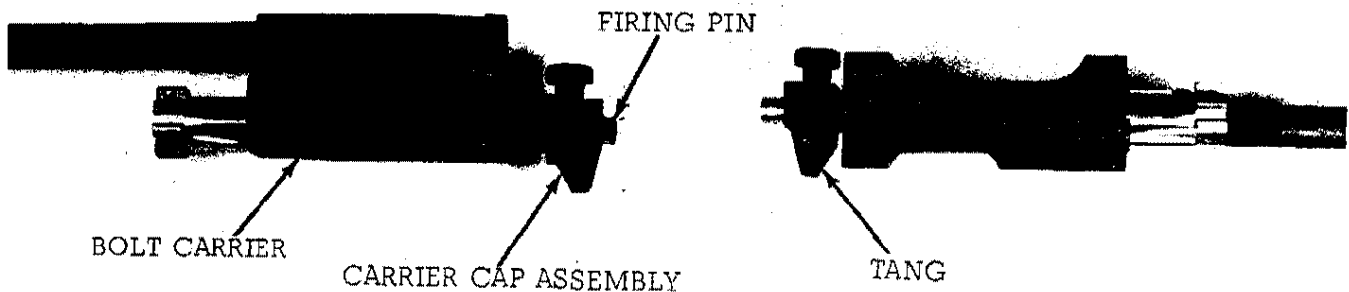


FIGURE 23. FIRING PIN AND CARRIER CAP ASSEMBLY

FIGURE 24. CARRIER CAP ASSEMBLY IN LINE WITH BOTTOM OF BOLT

- (2) Remove the firing pin from the bolt carrier. (Figure 25)
- (3) Remove the cam pin from the bolt. (Figure 25 and 26)
- (4) Remove the bolt from the bolt carrier.

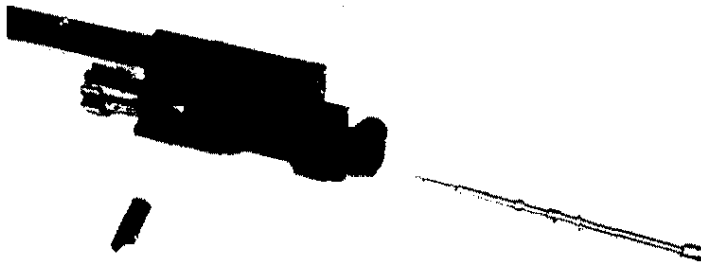


FIGURE 25. FIRING PIN AND CAM PIN REMOVED

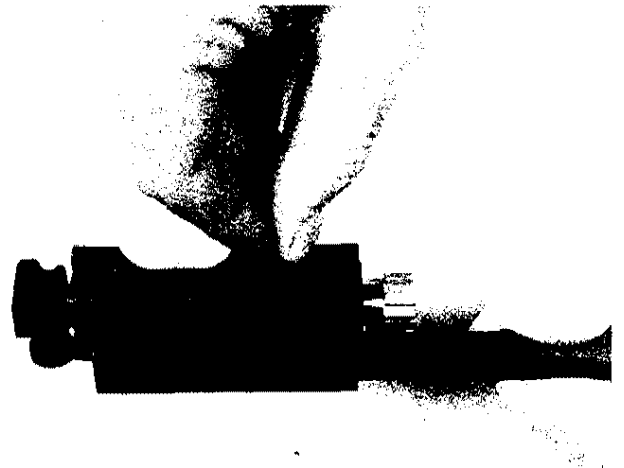


FIGURE 26. REMOVING CAM PIN

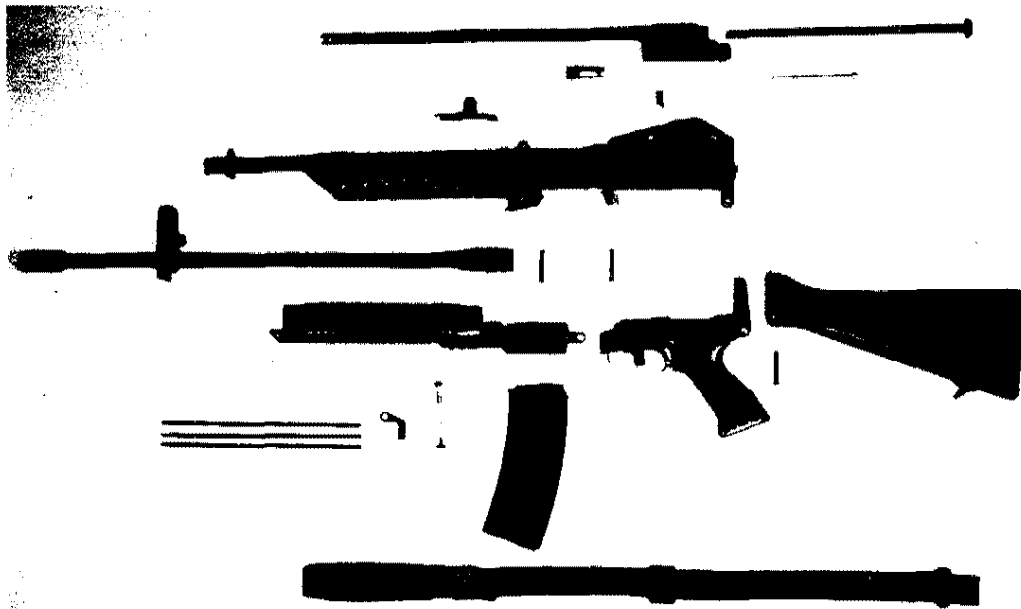


FIGURE 27. RIFLE FIELD STRIPPED

NOTE: The rifle has now been disassembled as far as the operator can go without supervision. Further disassembly must be done under the supervision of organizational maintenance personnel.

h. Disassembly of the Trigger Housing Group.

(1) To disassemble the trigger housing group, cock the hammer, then pull the safety to its safe (rearmost) position within the trigger guard.



FIGURE 28. DISENGAGING LOCK  
PLATE TANG

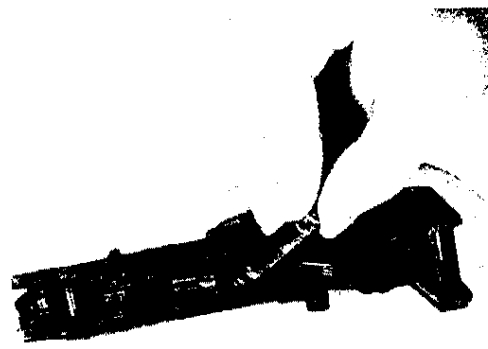


FIGURE 29. PUSHING THE LOCK  
PLATE FORWARD

(2) Hold the trigger housing group in the vertical position. Insert the point of a cartridge into the hole that the lock plate tang is engaged in and push the lock plate forward. (Figure 28 and 29) The lock plate must remain forward during disassembly of the trigger housing group so that the trigger pins can be removed.

(3) With the tip of a cartridge remove the magazine latch pin and remove the magazine latch. (Figure 30) Remove the timer pin and remove the timer. Remove the hammer pin and remove the hammer. Remove the trigger assembly pin. (Figure 31)

NOTE: All four pins are of the same size and are called trigger pins. For clarity of description they will be called hammer pin, timer pin, magazine latch pin, and trigger pin when returning these parts to the trigger housing group.

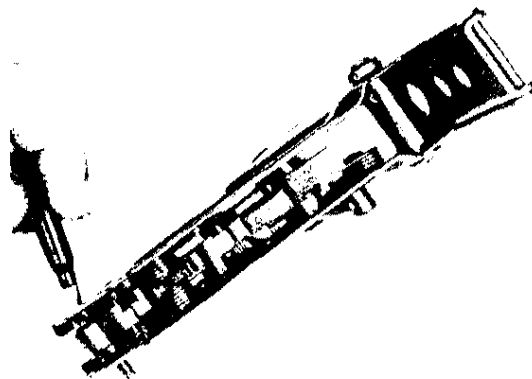


FIGURE 30. REMOVING THE MAGAZINE  
LATCH PIN

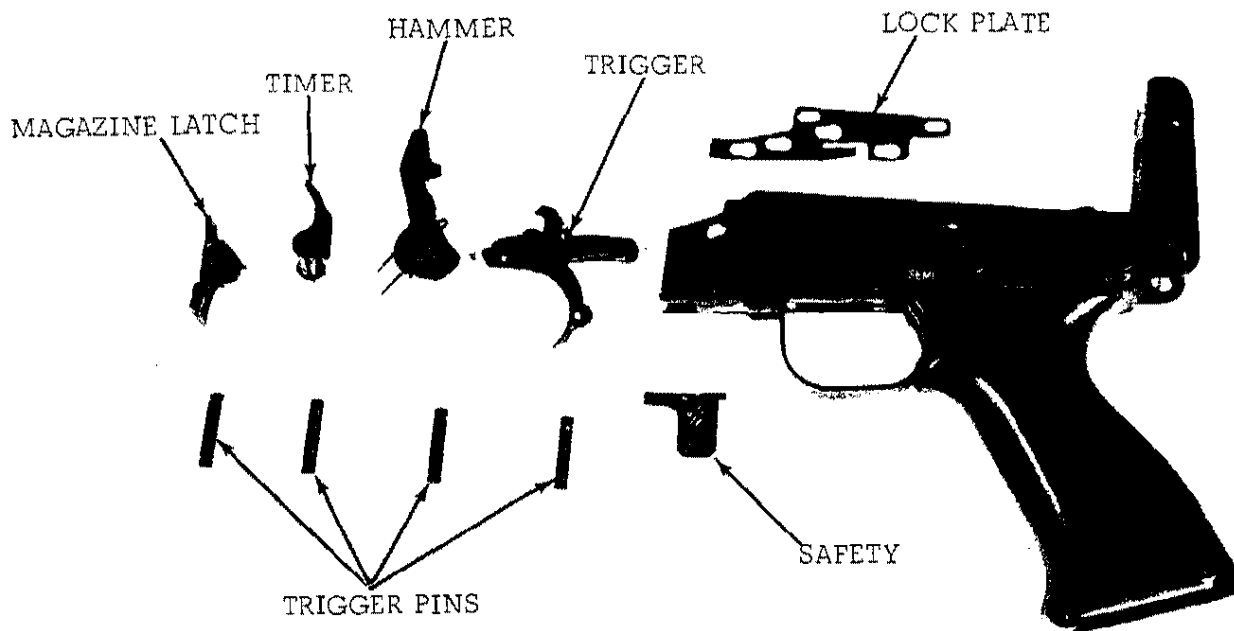


FIGURE 31. TRIGGER HOUSING GROUP - DISASSEMBLED

(5) To remove the trigger assembly, push down on the rear of the sear and push up on the trigger assembly as shown in Figure 32. Remove the trigger assembly.

(6) Remove the safety by sliding it to the rear inside the trigger guard and pulling down. (Figure 33)

(7) Remove the lock plate by grasping the extended front edge and pulling out from guide pins.

#### 1. Disassembly of the Receiver Group.

(1) Remove the bolt stop (Figure 34) by pushing out the bolt stop pin, and remove the bolt stop and bolt stop spring.

(2) Remove the ejector by depressing the ejector detent, sliding the ejector lock plate aside, and pulling out the ejector (Figure 35).

(3) Remove the rear sight assembly by pushing out the rifle sight pin (Figure 35). Unscrew and remove the pivot pin screw from the pivot pin nut.

(4) Remove the rear sight assembly.

NOTE: The rifle is now detailed - stripped as far as permitted under supervision of organizational maintenance personnel. See Figure 37. Further disassembly is restricted to DIRECT SUPPORT PERSONNEL ONLY.

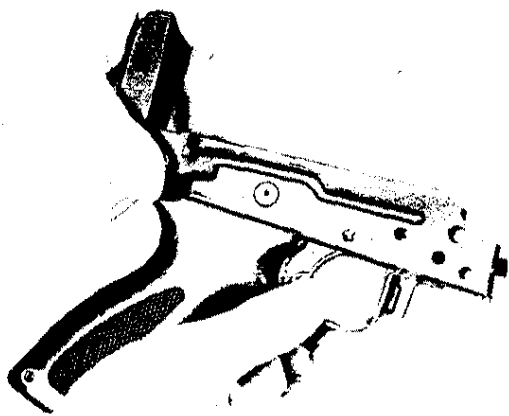


FIGURE 32. REMOVING TRIGGER



FIGURE 33. REMOVING SAFETY

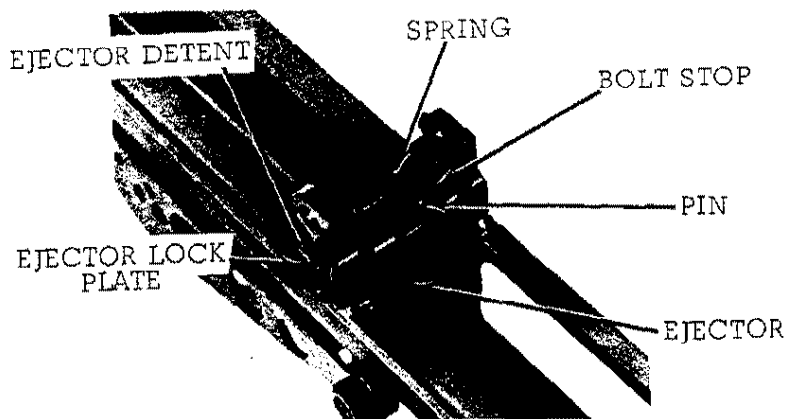


FIGURE 34. REMOVING BOLT STOP, PIN AND SPRING

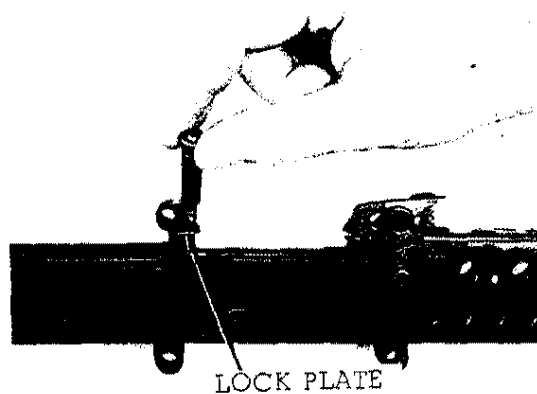


FIGURE 35. DEPRESSING EJECTOR DETENT

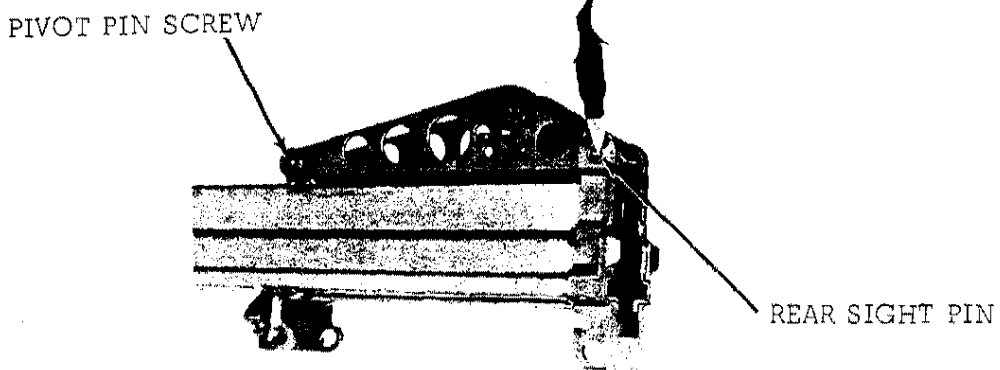


FIGURE 36. REMOVING THE REAR SIGHT ASSEMBLY



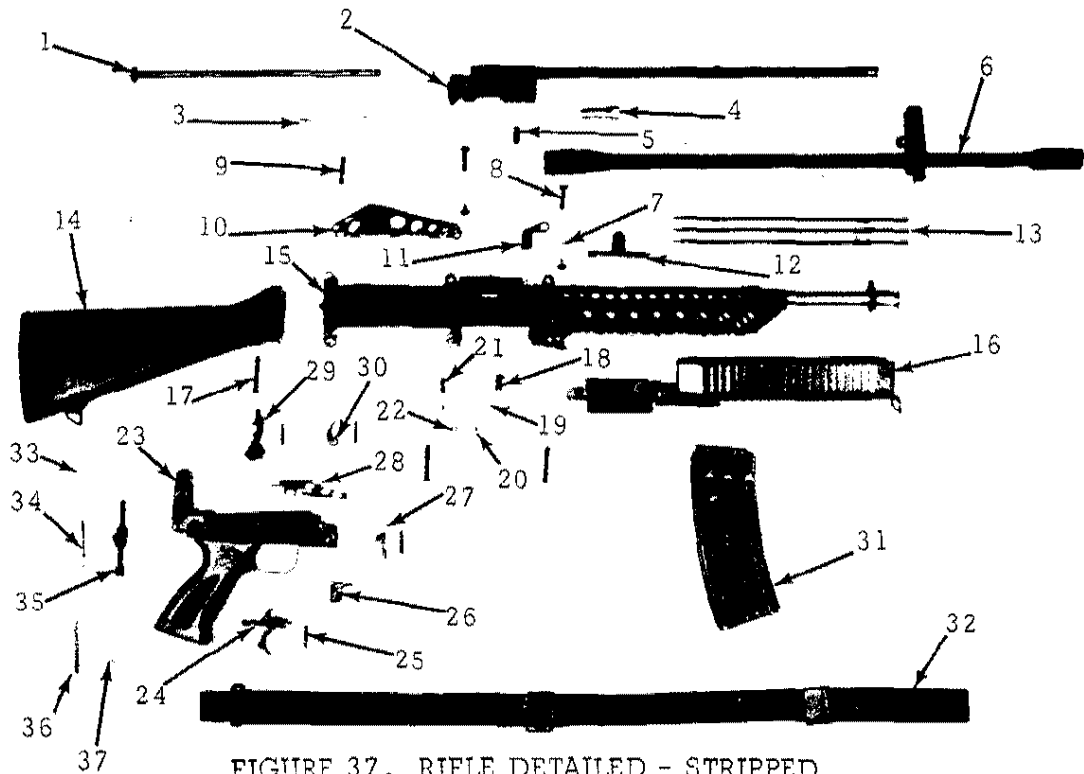


FIGURE 37. RIFLE DETAILED - STRIPPED

- |                          |                      |                    |
|--------------------------|----------------------|--------------------|
| 1. Driving Spring        | 14. Buttstock Assy   | 27. Magazine Latch |
| 2. Carrier & Piston Assy | 15. Receiver Group   | 28. Lock Plate     |
| 3. Firing Pin            | 16. Forestock Assy   | 29. Hammer         |
| 4. Bolt Assy             | 17. Receiver Pin     | 30. Timer          |
| 5. Cam Pin               | 18. Bolt Stop        | 31. Magazine Assy  |
| 6. Barrel Assy           | 19. Bolt Stop Spring | 32. Sling          |
| 7. Pivot Pin Screw       | 20. Bolt Stop Pin    | 33. Patches        |
| 8. Pivot Pin Nut         | 21. Ejector Assy     | 34. Adapter        |
| 9. Rifle Sight Pin       | 22. Ejector Lock     | 35. Comb Tool      |
| 10. Rear Sight Assy      | 23. Trigger Housing  | 36. Bore Brush     |
| 11. Cleaning Rod Bracket | 24. Trigger Assy     | 37. Oiler          |
| 12. Cocking Handle       | 25. Trigger Pins     |                    |
| 13. Cleaning Rod         | 26. Safety           |                    |

### 33. CLEANING, INSPECTION AND REPAIR

#### a. Cleaning and Inspection.

##### (1) Cleaning materials.

(a) Bore cleaner is used for cleaning the bore, chamber, barrel extension, and gas cylinder. It also provides temporary protection from rust.

(b) Hot, soapy water or plain hot water is a substitute for bore cleaner.

(c) Dry-cleaning solvent is used for cleaning rifles which are coated with grease, oil, or corrosion-preventative compounds.

CAUTION: Use warm soapy water to clean plastic parts. Some cleaning solvents and gasoline tend to soften and distort this material.

(2) Lubricants.

(a) Special preservative lubricating oil is used for lubricating the rifle at normal and low temperatures.

(b) Medium preservative lubricating oil is used instead of special preservative oil when the rifle is exposed to high temperatures, high humidity, or salt water.

(c) "Lubriplate" rifle grease should be applied to working surfaces in extremely humid weather or whenever there is a likelihood that the rifle will be subjected to immersion in either fresh or salt water. After immersion in either fresh or salt water, the rifle should be cleaned, dried, and properly lubricated as soon as possible.

(3) Equipment furnished for cleaning the rifle.

(a) Cleaning Rod.

(b) Bore Cleaner

(c) Rifle Oil.

(d) Brushes (See Figure 42)

(e) Cleaning patches. Satisfactory caliber 5.56mm patches can be obtained by cutting .30-caliber patches into quarters.

(4) Before firing.

(a) The bore and chamber should be cleaned and dried. A light coat of oil should be placed on all metal parts except those which come in contact with ammunition.

(b) Lubriplate should be applied to the parts that show friction wear. This is particularly important when the rifle is exposed to rain or salt water. A small amount of Lubriplate is applied to those parts that show wear. Lubriplate is not used in extremely cold temperatures or when the rifle is exposed to extremes of sand and dust.

(c) In cold climates (temperatures below freezing) the rifle must be kept free of moisture and excess oil. Moisture and excess oil on the working parts cause them to operate sluggishly or to fail completely. The rifle must be disassembled and wiped with a clean dry cloth. Dry-cleaning solvent may be used if necessary to remove oil or Lubriplate. Parts that show signs of wear may be wiped with a patch lightly dampened with a special preservative lubricating oil. It is best to keep the rifle as close as possible to outside

temperatures at all time due to the collection of moisture which occurs when cold metal comes in contact with warm air. If the rifle is brought into a warm room, it should be allowed to reach room temperatures so that condensation will appear before the weapon is cleaned.

(d) In hot, dry climates, the rifle must be cleaned daily, or more often, to remove sand and/or dust from the bore and working parts. In sandy areas, the rifle should be kept dry to prevent the collection of sand. The muzzle and receiver should be kept covered during sand and dust storms.

(5) After firing or daily during disassembly.

(a) The rifle must be cleaned after it has been fired because firing produces deposits of primer fouling, powder ashes, carbon, and metal fouling. The ammunition has noncorrosive primer which makes cleaning easier, but no less important. The primer still leaves a deposit that may collect moisture and promote rust if it is not removed. The cleaning described below will remove all deposits except metal fouling which is relatively uncommon and is removed by Ordnance Personnel.

(b) The rifle should be disassembled (Field Stripped, Figure 27) and cleaned in the following manner after it has been fired.

1. Bore. Run patches dampened with bore cleaner or hot soapy water back and forth through the bore several times. Next, attach the bore brush to the cleaning rod and run it back and forth through the bore once or twice. Follow this with more wet patches. Run several dry patches through the bore and inspect each patch as it is removed. The bore is clean when a dry patch comes out clean with no evidence of fouling. Finally, run an oily patch through the bore to leave a light coat of oil inside the barrel.

NOTE: The patch or brush must be pushed all the way through the bore before it is withdrawn.

2. Chamber and barrel extension. Using the appropriate brushes (Figure 42) clean the lugs of the barrel extension and the chamber. After removing the carbon, particles of dirt and/or brass filings, dry the chamber with a clean patch. The lugs of the barrel extension should be oiled lightly.

3. Gas cylinder. Using the appropriate brush (Figure 42) clean the inside of the gas cylinder. Put two patches on the patch holder of the cleaning rod, moisten them with bore cleaner and swab the cylinder bore. Dry the cylinder bore with clean dry patches. Use no abrasives in cleaning the cylinder and do not oil the interior surfaces.

4. Carrier and piston assembly. Shake the assembly to determine if the inertia pin in the piston rod has free movement. If it is not free, remove the roll pin and piston-head and clean. Saturate patches with

bore cleaner and wipe the exterior surface of the piston rod as clean as possible . The piston does not need to have a shiny surface to function properly. Do not use abrasives to clean the piston.

5. Face of the Bolt. Clean the face of the bolt with a patch and bore cleaner. Wipe the bolt face with a dry patch, and oil the bolt lightly.

6. Bolt Carrier. Remove all carbon and foreign materials from the bolt carrier with a patch dampened with bore cleaner. Wipe off the bolt carrier with a dry patch and apply a light coat of oil.

7. Receiver Group assembly and trigger housing group assembly. Inspect both assemblies for dirt and brass filings. Clean both assemblies with the appropriate brush (Figure 42) and oil all surfaces lightly. Place a drop of oil on each of the pins in the trigger housing group assembly for lubrication.

8. Bolt Stop and Ejector. The bolt stop and ejector are spring actuated. It is important that they have free movement. Visually inspect and manually operate both for a proper function. Dirt, brass filing, or lack of lubrication may hinder proper function.

b. Replacement of Parts. All replacement parts (App.II) are interchangeable and require no adjustments when being installed in this rifle.

#### 34. ASSEMBLY

The rifle should be assembled in the reverse order of disassembly.

NOTE: The following assembly operations must be performed under the supervision of organizational maintenance personnel.

##### a. Assembly of the Rear Sight to the Receiver Group (Figure 36).

- (1) Place the rear sight on the receiver with the sight aperture to the rear and the windage drum on the right side.
- (2) Insert the pivot pin nut in the forward mounting bracket from right to left.
- (3) From the left side of the rear sight, screw the pivot pin into the pivot pin nut until fingertight.
- (4) Replace the rear sight pin from left to right.

##### b. Assembly of the Bolt Stop to the Receiver Group (Figure 34).

- (1) Turn the receiver, sight down.
- (2) Put the bolt stop spring in the groove of the bolt stop.
- (3) Put the bolt stop in the receiver.
- (4) Depress the bolt stop until the hole in the bolt stop is aligned with the hole in the ejector housing and insert the bolt stop pin from the rear of the ejector housing until it engages and locks the bolt stop.

c. Installation of the Ejector Assembly (Figure 35).

- (1) Insert the ejector into the ejector hole.
- (2) Slide the ejector lock plate into position.

d. Assembly of the Cocking Handle, Barrel, and Forestock Assembly with the Receiver Group.

- (1) Replace the cocking handle (Figure 21).
- (2) To replace the barrel assembly, depress the barrel latch FIRST and insert the barrel into the receiver group (Figure 20). Lock the barrel into place by releasing the barrel latch.
- (3) Replace the forestock assembly by aligning the hooks on the lower receiver and slide the forestock assembly to the rear. Insert the forestock assembly pin (Figure 19).

e. Assembly of the Trigger Housing Group.

- (1) Place the lock plate in the left side of the trigger housing group (Figure 31) insuring that the lock plate is held in position by the two lock plate guide pins. The lock plate must remain forward during assembly of the trigger housing group.
- (2) Place the safety into its slot within the trigger guard and leave on its "Safe" setting. (Figure 33)
- (3) Depressing the rear of the sear, insert the trigger assembly from the top of the trigger housing. (Figure 32)
- (4) Replace the trigger pin.
- (5) Replace the hammer assembly (Figure 38) and insert the hammer pin.
- (6) Cock the hammer, replace the timer assembly in the trigger housing group (Figure 39) and insert the timer pin.
- (7) Replace the magazine latch assembly (Figure 40) and insert the magazine latch pin.
- (8) Align the trigger pins, and push the extending edge of the lock plate to the rear. The lock plate tang should be seated in the lock plate tang hole (Figure 28).

NOTE: The following assembly operations may be performed by the operator without supervision of organizational maintenance personnel.

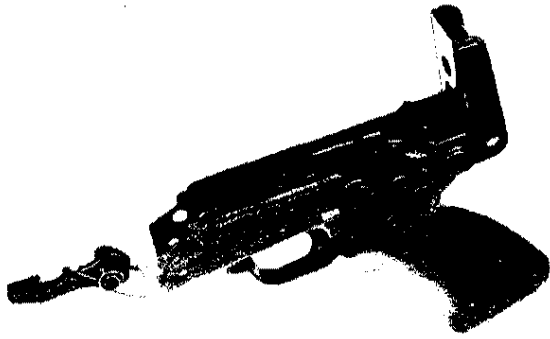


FIGURE 38. REPLACING THE HAMMER ASSEMBLY

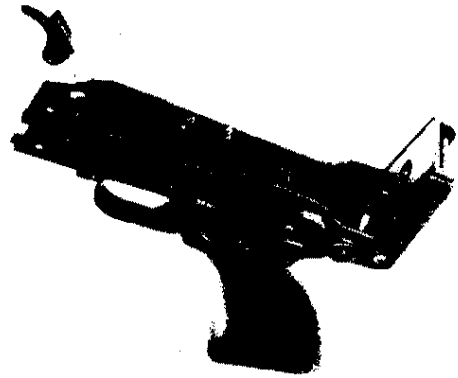


FIGURE 39. REPLACING THE TIMER ASSEMBLY



FIGURE 40. REPLACING THE MAGAZINE LATCH ASSEMBLY

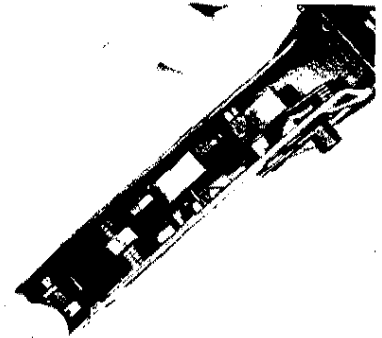


FIGURE 41. DISENGAGING THE TIMER

f. Assembly of the Stock and Trigger Housing Group.

Replace the stock by locking it in the rear of the trigger housing group and inserting the stock retaining pin (Figure 22).

g. Replace the Trigger Housing Group on the Receiver Group.

(1) With the hammer cocked, and the safety in the "Safe" position, move the timer forward, disengaging it from the hammer (Figure 41).

(2) Place the trigger group on the receiver group, (Figure 18) and replace the trigger housing group retaining pin.

h. Assembly of the Bolt Assembly, Cam Pin and Firing Pin with the Carrier-Piston Assembly.

(1) Replace the bolt in the bolt carrier with the ejector groove in the bolt facing toward the cam track in the bolt carrier. (Figures 23 and 24)

(2) Insert the cam pin thru the cam track and into the cam pin hole in the bolt. (Figure 26) The flat side of the cam pin guide lug must be in line with the lower side of the bolt carrier, as shown in Figure 23.

(3) Replace the firing pin in the bolt carrier. Check to see that the "UP" on the carrier cap assembly is in the correct position (Figure 24). Push until it is flush with the rear of the carrier cap assembly. Holding the firing pin in this position, rotate the carrier cap assembly 1/4 turn counterclockwise, so the tang on the carrier cap assembly is in the downward position as shown in Figure 23.

i. Replacing the Carrier-Piston, Bolt and Driving Spring Assemblies.

(1) Holding the rifle in the left hand, muzzle pointing down, insert the carrier-piston and bolt assembly. The bolt must be in the forward position with the cam pin aligned with the bolt carrier rail. (Figure 17)

(2) Replace the driving spring assembly (Figure 16).

i. Locking the Trigger Group and Stock to the Receiver Group. Before rotating the trigger housing group and stock upward, check to be sure that the take-down pin has been pulled to the right as far as it will go. Then rotate the trigger housing group and stock upward and lock them to the receiver group with the take-down pin (Figure 15).

k. Functioning Test. A functioning check will be performed after assembly of the rifle. A complete function check of the weapon consists of checking the operation of the selector lever in the "Semi" (Semiautomatic) and "Auto" (Automatic) positions. The following sequence is used.

(1) Safe Position. Clear the rifle, leaving it cocked with the bolt closed. Place the safety on the "Safe" position and the selector lever on "Semi". Pull the trigger. The hammer should not fall.

(2) "Semi" position. With the hammer still cocked from the safety check, move the safety to the "Off" position and pull the trigger. You should hear the hammer strike the firing pin. While holding the trigger to the rear, recock the rifle. Release the trigger slowly. An audible metallic click should be heard indicating that the disconnect operates properly. The hammer should not fall. Again pull the trigger. The hammer should fall.

(3) "Auto" position. Recock the rifle. Turn the selector lever to the "Auto" position. Pull the trigger. The hammer should fall. While still holding the trigger to the rear, recock the rifle, the hammer should have been released automatically. Release the trigger and pull it again. The hammer should not fall because it should have been released automatically.

## SECTION VI. MAINTENANCE OF BIPOD

### 35. MAINTENANCE

The only maintenance required to be performed is cleaning and inspection of the adjustable legs and hinge springs.



## APPENDIX I

### BASIC ISSUE ITEMS LIST

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#### Section I. PREFACE

##### 1. GENERAL

This appendix is a list of the basic issue items that are required for stockage by first-echelon maintenance. It includes the first-echelon maintenance tools and repair parts accompanying the equipment, all of which constitute the major end item for issue to users.

##### 2. EXPLANATION OF COLUMNS

a. Source, Maintenance, and Recoverability Code. This column lists a code that indicates the selection status and source of supply of the repair part, the lowest echelon capable of installing or manufacturing the repair part, and the recoverability and expendability aspects of the repair part. An example of this code is P,O,R. The "P" indicates that the item is a mission stockage list repair part that is procured and stocked on a national program basis, the "O" indicates that the repair part is authorized to first echelon, and the "R" indicates that the repair part is an expendable, recoverable item. When repair parts supply responsibility has been assigned to a technical service other than Ordnance, the basic number of the supplying technical service is listed in the first position of the source code, for example, "11" for a Signal Corps item. Refer to paragraph 4 for an explanation of all codes appearing in this manual.

b. Federal Stock Number. This column lists the Federal stock number which has been assigned by the Cataloging Division, Armed Forces Supply Center.

c. Description. This column lists the Federal item name (shown in capital letters) and any additional description required for supply operations. The abbreviation "w/e" (with equipment) when used as a portion of the nomenclature indicates that the major item or major combination includes all armament, equipment, accessories, and repair parts issued with the item. The technical service or manufacturer's part number is also included for reference.

d. Unit of Issue. This column lists the minimum quantity that will be supplied. All items are considered as each except where the unit of issue is shown as ft., in., such as for bulk materials; the requisition should indicate the exact amount that is required, for example, 6 ft.

e. Quantity Authorized. This column lists the quantity of the listed item authorized for stockage by first echelon.

f. Illustration. This column indicates the figure number of the illustration that depicts the item. When more than one item appears on an illustration, the item number is also indicated.

### 3. ABBREVIATIONS

assy . . . . . assembly(ies)  
 cal. . . . . caliber  
 ctg . . . . . cartridge  
 ctn . . . . . carton  
 equip. . . . . equipment  
 wdn . . . . . wooden  
 w/e . . . . . with equipment

### 4. EXPLANATION OF CODES

#### a. Source.

Code  
 P

Explanation

Applied to repair parts which are high-mortality parts procured by technical service, stocked in and supplied from the technical service depot system, and authorized for use at indicated maintenance echelons.

#### b. Maintenance Level.

Code  
 O

Explanation

Assigned to all repair parts authorized to first (1st) echelon.

#### c. Recoverability.

Code  
 NR

Explanation

Indicates a repair part or assembly that is nonexpendable and recoverable and is economically repairable.

R

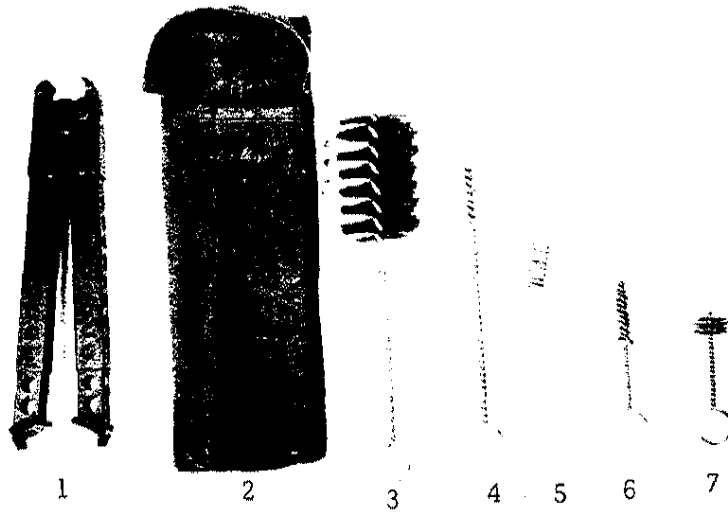
Indicates a repair part or assembly that is expendable and recoverable and is economically repairable and, when available, is furnished by supply on an exchange basis.

#### d. Illustration.

Code  
 NI

Explanation

Indicates a standard military issue item and therefore not illustrated in this handbook.



- 1. Bipod
- 2. Carrying Case
- 3. Receiver Brush
- 4. Gas Cylinder Brush
- 5. Utility Brush
- 6. Chamber Brush
- 7. Locking Lug Brush

Figure 42. BIPOD, CLEANING BRUSHES, AND CARRYING CASE.

APPENDIX I, Section II, BASIC ISSUE ITEMS LIST

Table 5. BASIC ISSUE ITEMS

Source, Maint and Recoverability Code				Federal Stock No.	DESCRIPTION	Unit of Issue	Quantity Auth	Illust
(a) Technical Service No.	(b) Source	(c) Maintenance Level	(d) Recoverability					Fig. No.
					<p align="center"><u>MAJOR ITEMS</u></p> <p>The following items are requisitioned for initial issue only.</p> <p>RIFLE, 5.56MM Stoner, w/e-----</p> <p>MOUNT, bipod-----</p> <p align="center"><u>COMPONENTS OF MAJOR ITEMS</u></p> <p>The items listed below are issued as components of the major items for initial issue. Replacement items will be requisitioned separately under their individual stock numbers.</p> <p>RIFLE, 5.56MM, Stoner</p> <p align="center"><u>REPAIR PARTS FOR:</u></p> <p>RIFLE, 5.56MM, Stoner (See Appendix II)</p> <p align="center"><u>TOOLS AND EQUIPMENT FOR:</u></p> <p>RIFLE, 5.56MM, Stoner</p> <p>BAYONET: Knife----- 1 1 NI</p> <p>BRUSH, Cleaning: receiver----- 1 1 42-3</p> <p>BRUSH, Cleaning: chamber----- 1 1 42-6</p> <p>BRUSH, Cleaning: locking lug----- 1 1 42-7</p> <p>BRUSH, Cleaning: gas cylinder----- 1 1 42-4</p> <p>BRUSH, Cleaning: utility----- 1 1 42-5</p> <p>BRUSH, Cleaning: rifle bore----- 1 1 37-36</p> <p>CASE, CARRYING: bipod----- 1 1 42-2</p> <p>MAGAZINE ASSY: Steel (cartridge cap .30)-- 1 1 13</p> <p>ROD, CLEANING, 5.56MM----- 1 1 37-13</p> <p>SCABBARD: bayonet, knife----- 1 1 NI</p> <p>SLING, GUN: webbing----- 1 1 37-32</p> <p align="center"><u>MISCELLANEOUS MATERIEL</u></p> <p>The items listed under subheadings below are not issued with the major items but are requisitioned and issued in accordance with tables of organization and equipment, tables of allowances, or as otherwise authorized.</p>	1 9		

APPENDIX I, Section II, BASIC ISSUE ITEMS LIST  
 Table 5. BASIC ISSUE ITEMS Cont.

Source, Maint and Recoverability Code				Federal Stock No.	DESCRIPTION	Unit of Issue	Quantity Auth	Illust
(a) Technical Service No.	(b) Source	(c) Maintenance Level	(d) Recoverability					Fig. No.
					<p style="text-align: center;"><u>AMMUNITION</u></p> <p>Ammunition for use with this weapon is listed in SM-9-5-1305.</p> <p style="text-align: center;">ARTICLES FOR <u>INSTRUCTIONAL PURPOSES</u></p> <p>The following item WILL BE TAKEN into the field upon permanent change of station and into the theater of operation.</p> <p>CARTRIDGE, 5.56 MM DUMMY:</p> <p>The following item WILL NOT BE TAKEN into the field upon permanent change of station or into the theater of operations. Unit will turn in all equipment to the commanding officer of the station from which it departs. The receiving officer will make a report to the Army commander, without delay, showing number, type, and condition of item received.</p> <p>GRAPHIC TRAINING AID:</p> <p>Above item, when available, will be listed in DA Pam 310-5.</p>			NI
						bx.		NI
						1		

APPENDIX II.

ORGANIZATIONAL, MAINTENANCE REPAIR PARTS AND SPECIAL  
TOOL LIST

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Section I. PREFACE

1. GENERAL

This appendix lists all items required or authorized for organizational maintenance.

2. EXPLANATION OF COLUMNS

a. Figure and Index Number. This column lists the figure and index number in this manual which illustrates the item.

b. Description. This column lists the repair part or tool with its basic nomenclature.

c. Quantity per Unit. This column lists the quantity of the item used on each weapon.

d. Quantity Authorized. This column lists the quantity of each item recommended for stockage at the organizational level per weapon. Where a large quantity of weapons (50 or more) is assigned to an organizational unit, standard allowance percentages should be used.

Section II. REPAIR PARTS AND SPECIAL TOOL LIST

Table 6. ORGANIZATIONAL MAINTENANCE REPAIR PARTS AND SPECIAL TOOLS

ILLUSTRATION		DESCRIPTION	QTY. PER UNIT	QTY. AUTH.
FIG. NO.	ITEM NO.			
<u>REPAIR PARTS FOR RIFLE: STONER</u>				
37	6	Barrel Assembly.....	1	
37	4	Bolt Assembly.....	1	
37	18	Bolt Stop.....	1	1
37	20	Bolt Stop Pin.....	1	2
37	19	Bolt Stop Spring.....	1	2
37	14	Buttstock Assembly.....	1	
37	17	Buttstock Assembly Pin (Receiver Pin).....	1	2
37	5	Cam Pin.....	1	1
37	2	Carrier and Piston Assembly.....	1	
37	12	Cocking Handle.....	1	
37	1	Driving Spring.....	1	
37	3	F ring Pin.....	1	1
37	16	Forestock Assembly.....	1	
37	17	Forestock Assembly Pin (Receiver Pin).....	1	2
37	31	Magazine Assembly.....	1	
37	27	Magazine Latch.....	1	
37	8	Pivot Pin Nut.....	1	
37	7	Pivot Pin Screw.....	1	
37	10	Rear Sight Assembly.....	1	
37	9	Rifle Sight Pin.....	1	
37	30	Timer.....	1	
37	24	Trigger Assembly.....	1	
37	25	Trigger Pin.....	4	6
37	26	Safety.....	1	
37	23	Trigger Housing.....	1	
37	17	Trigger Housing Pin (Receiver Pin).....	1	
37	21	Ejector Assembly.....	1	
37	22	Ejector Lock Plate.....	1	
<u>SPECIAL PURPOSE TOOLS</u>				
37	35	Combination Tool.....		*
*1 or more per Organizational Unit, as required.				