

# **TM 9-1005-249-20**

**DEPARTMENT OF THE ARMY TECHNICAL MANUAL**

---

**ORGANIZATIONAL MAINTENANCE MANUAL  
INCLUDING REPAIR PARTS AND  
SPECIAL TOOLS LISTS**

**RIFLE, 5.56-MM, M16A1, W/E  
(1005-073-9421)**

**RIFLE, 5.56-MM, M16  
(1005-856-6885)**

**BIPOD, RIFLE, M3 W/CARRYING CASE  
(1005-890-2609)**

---

**HEADQUARTERS, DEPARTMENT OF THE ARMY  
September 1971**

## WARNING

Dangerous solutions such as P-C-111 are used with this materiel, and if vapors are inhaled for extended periods it could be very harmful. Use in a well ventilated location, also avoid skin contact. If compound comes in contact with the skin wash off thoroughly with running water. The usage of a good lanolin base cream after exposure to compound is helpful. The use of rubber gloves and protective equipment is recommended.

Technical Manual }  
No. 9-1005-249-20 }

HEADQUARTERS  
DEPARTMENT OF THE ARMY  
Washington, D. C. 11 September 1971

ORGANIZATIONAL MAINTENANCE MANUAL  
INCLUDING REPAIR PARTS  
AND  
SPECIAL TOOL LISTS

RIFLE, 5.56-MM, M16  
RIFLE, 5.56-MM, M16A1  
BIPOD, RIFLE, M3

*This manual is current as of 26 August 1971*

	Paragraphs	
Chapter 1. INTRODUCTION		
Section I. General	1-1—1-5	3
II. Description and data	1-6—1-7	3
Chapter 2. ORGANIZATIONAL MAINTENANCE INSTRUCTIONS		
Section I. Service upon receipt of materiel	2-1—2-2	7
II. Repair parts, special tools and equipment	2-3—2-4	9
III. Cleaning and lubrication instructions	2-5—2-6	10
IV. Preventive maintenance checks and services	2-7	15
V. Troubleshooting	2-8	16
VI. Maintenance of Rifles M16, M16A1 and Bipod, Rifle M3	2-9	26
Chapter 3. MAINTENANCE OF MATERIEL USED IN CONJUNCTION WITH MAJOR ITEMS	3-1—3-5	27
Appendix A. REFERENCES	A-1—A-3	31
Appendix B. MAINTENANCE ALLOCATION CHART		
Section I. Introduction	B-1—B-3	33
II. Maintenance allocation chart		
Appendix C. ORGANIZATIONAL MAINTENANCE REPAIR PARTS AND SPECIAL TOOLS LIST		35
Section I. Introduction		
II. Repair parts list		
Repair parts for:		
Major groups and assemblies		B-1
Upper receiver group		B-2
Bolt carrier group		B-3
Lower receiver group		B-4
Rod, cleaning, small arms M11E3		B-5
III. Special Tools list		B-5, B-6, B-7
IV. Federal stock number and reference number index		

\*This manual supersedes that portion that pertains to Organizational Maintenance listed in TM 9-1005-249-12, 2 August 1968, including changes.

<i>Number</i>	<i>Title</i>	<i>Page</i>
1-1	Rifle, 5.56-MM, M16—right rear view . . . . .	4
1-2	Rifle, 5.56-MM, M16A1—right rear view . . . . .	4
1-3	Rifle Bipod, M3 and case . . . . .	5
1-4	Remove/install rifle bipod . . . . .	5
2-1	Clearing rifle . . . . .	8
2-2	Corroded area of upper and lower receiver . . . . .	12
2-3	Cleaning gas tube in receiver . . . . .	12
2-4	Cleaning the bore . . . . .	13
2-5	Cleaning the chamber . . . . .	13
2-6	Cleaning bolt carrier key . . . . .	13
2-7	Drying bolt carrier key . . . . .	13
2-8	Oiling carrier key . . . . .	14
2-9	Cleaning drain hole in butt cap screw . . . . .	14
2-10	Oiling detent and spring . . . . .	15
2-11	Disassembly/assembly of rifle (1 of 8) . . . . .	18
2-11	Disassembly/assembly of rifle (2 of 8) . . . . .	19
2-11	Disassembly/assembly of rifle (3 of 8) . . . . .	20
2-11	Disassembly/assembly of rifle (4 of 8) . . . . .	21
2-11	Disassembly/assembly of rifle (5 of 8) . . . . .	22
2-11	Disassembly/assembly of rifle (6 of 8) . . . . .	23
2-11	Disassembly/assembly of rifle (7 of 8) . . . . .	24
2-11	Disassembly/assembly of rifle (8 of 8) . . . . .	25
3-1	Bayonet-Knife M7 and Bayonet-Knife Scabbard M8A1 . . . . .	27
3-2	Install/remove bayonet-knife . . . . .	27
3-3	Bayonet-Knife M7—partial exploded view . . . . .	28
B-1	Major groups and assemblies . . . . .	41
B-2	Upper receiver group— partial exploded view . . . . .	42
B-3	Bolt carrier group — partial exploded view . . . . .	43
B-4	Lower receiver group—partial exploded view . . . . .	44
B-5	Tools and equipment . . . . .	45
B-6	Tools and equipment . . . . .	46
B-7	Tools and equipment . . . . .	47

# CHAPTER 1

## INTRODUCTION

---

### Section I. GENERAL

#### 1-1. Scope

This manual contains instructions for the organizational maintenance of Rifle 5.56-MM, M16, Rifle, 5.56-MM, M16A1 and Rifle Bipod, M3 as allocated by MAC (Maintenance allocation chart, appendix B).

#### 1-2. Maintenance Forms and Records

Maintenance forms, records, and reports which are to be used by maintenance personnel at all maintenance levels, are listed in and prescribed by TM 38-750.

#### 1-3. Destruction of Material to Prevent Enemy Use

Refer to TM 750-244-7.

#### 1-4. Reporting of Errors

Report of errors, omissions, and recommendations for improving this publication by the individual user is encouraged. Reports should be submitted on DA Form 2028, Recommended Changes to DA Publications and forwarded direct to Commanding General, U.S. Army Weapons Command, ATTN: AMSWE-MAP, Rock Island, Illinois 61201.

#### 1-5. Administrative Storage

Refer to TM 740-90-1.

### Section II. DESCRIPTION AND DATA

#### 1-6. Description

a. *Rifles M16 and M16A1.* The rifles (figs 1-1 and 1-2) are lightweight, air-cooled, gas operated, magazine fed, shoulder or hip fired weapons, designed for automatic or semi-automatic fire by usage of a selector lever. The rifles accommodate the 40-MM Grenade Launcher, M203 and Bayonet-Knife, M7. A brief description of the components is as follows:

(1) The barrel assembly is air-cooled and contains an adjustable front sight, flash suppressor and two hand guards. These hand guards are made of heat resisting material and contain a heat reflecting inner shield.

(2) The stock assembly is made of durable synthetic material of high impact strength. The butt plate is designed with a butt plate cap which opens to receive the basic issue items which are stowed in a compartment of the stock.

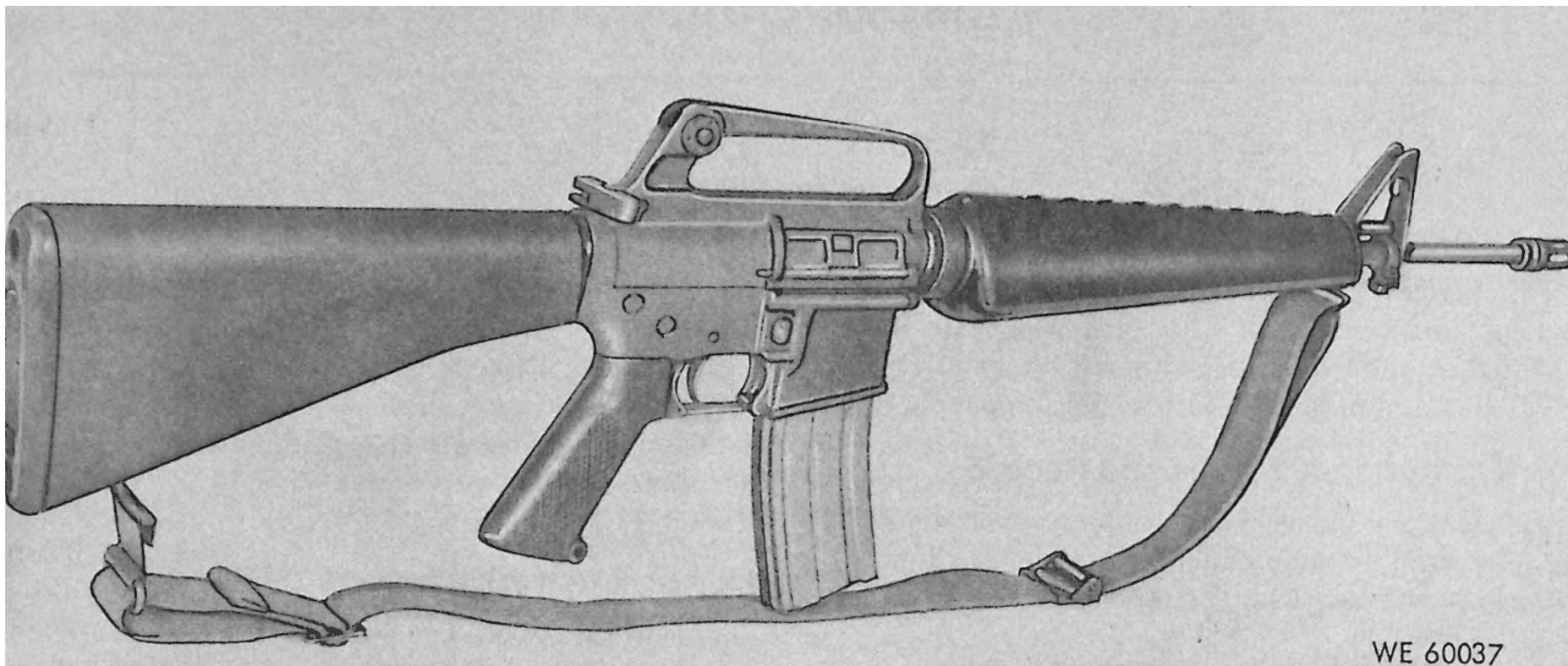
(3) The rifles are easily opened exposing the working parts, making it convenient for cleaning and inspection.

(4) The bolt locking action is one of the mechanical features of the rifle. The bolt assembly and barrel extension contain locking lugs, which engage and lock the bolt group firmly in the barrel extension. The initial force of the explosion of the cartridge is absorbed by the barrel, barrel extension and bolt group.

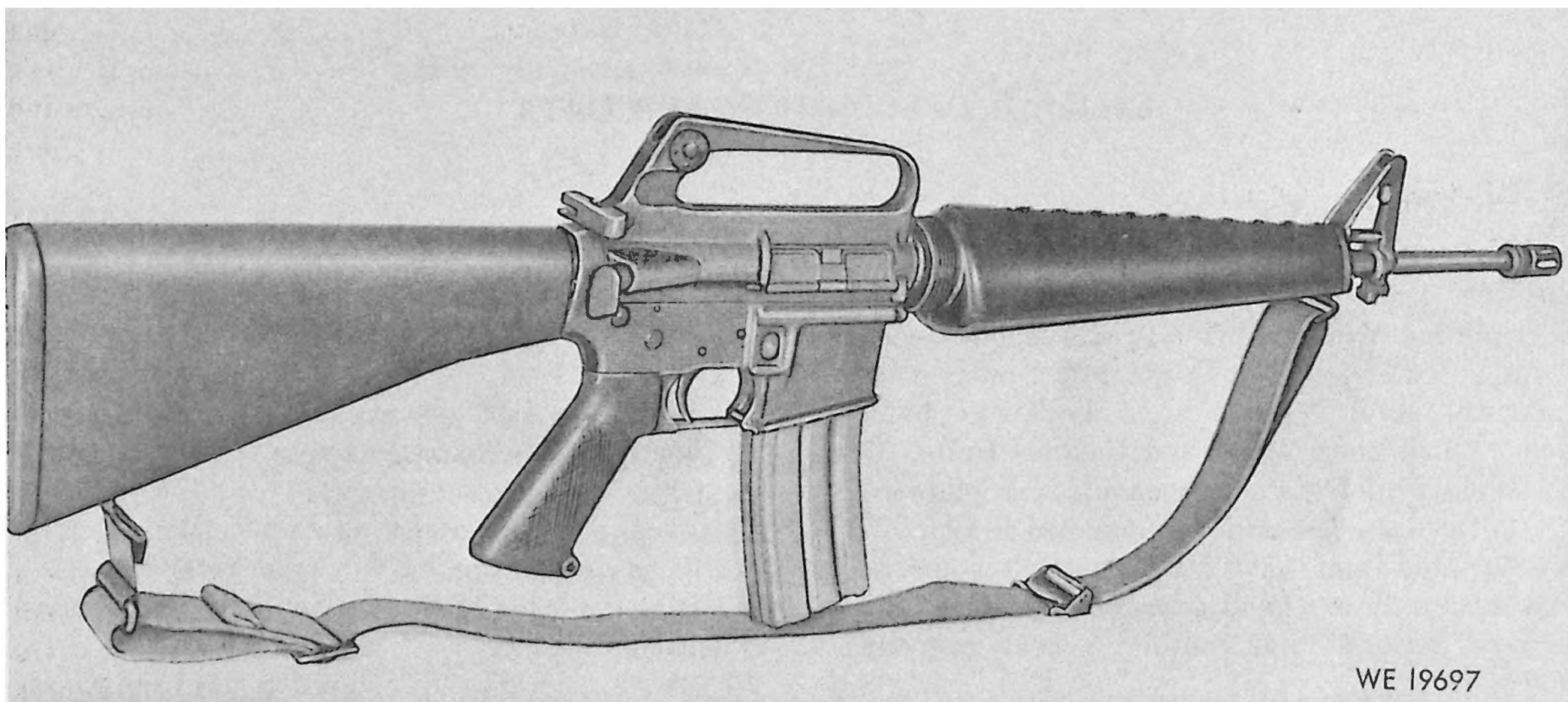
(5) A forward assist assembly (M16A1 only) located on the right rear of the upper receiver, assists in closing the bolt when this is not done by the forces of the action spring.

(6) The winter trigger guard is used for winter operations. A spring loaded retaining pin is depressed to allow ready access to the trigger, when wearing artic mittens.

(7) The ejection port cover prevents dirt or sand from getting into the ejection port. The cover must be closed during periods when firing is not anticipated. It opens automatically by the forward or rearward movement of the bolt carrier.



*Figure 1-1. Rifle, 5.56-MM, M16—right rear view.*



*Figure 1-2. Rifle, 5.56-MM, M16A1—right rear view.*

b. *Rifle Bipod, M3.* The Rifle Bipod M3 (fig 1-3) is a lightweight non-adjusting mount, which clamps on the front portion of the barrel (fig 1-4).

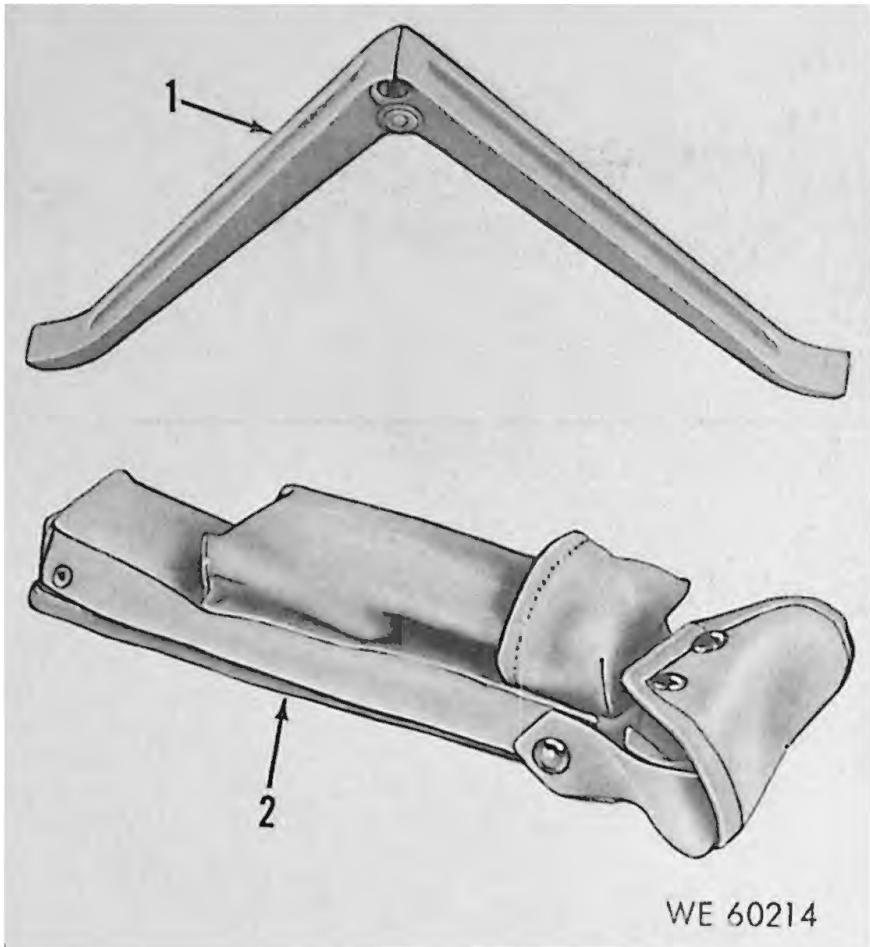


Figure 1-3. Rifle Bipod, M3 and Case.

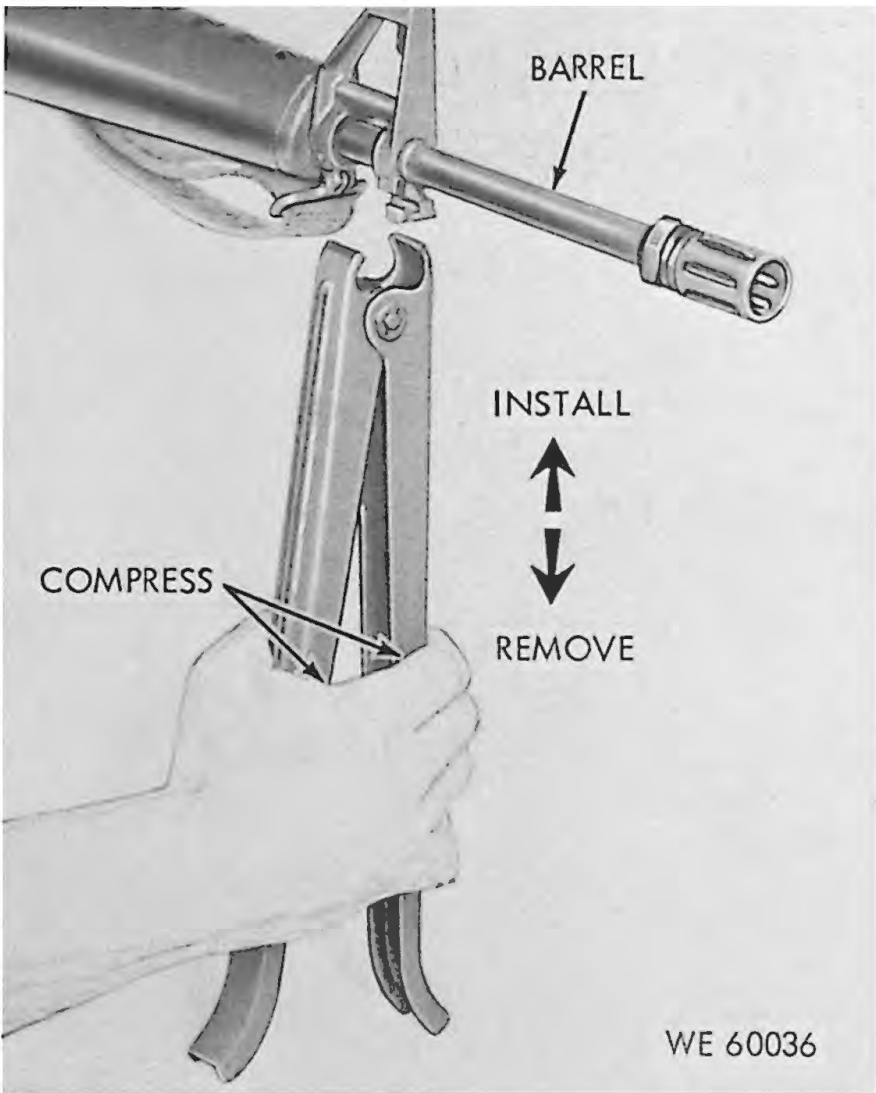


Figure 1-4. Remove/install rifle bipod.

1-7. Tabulated Data

a. *Rifles M16 and M16A1.*

Weight:

Rifle, M16, without magazine and sling	6.35 lb
Rifle, M16A1, without magazine and sling	6.55 lb
Sling, M1	0.4 lb
Empty magazine	0.25 lb
Loaded magazine	1.01 lb
Rifle, M16, w/sling and loaded magazine	7.76 lb
Rifle, M16A1, w/sling and loaded magazine	7.96 lb
Bayonet-Knife, M7	0.6 lb
Scabbard, M8A1	0.3 lb

Length:

Rifle w/flash suppressor	39 in
Rifle w/bayonet-knife	44.25 in
Barrel	20 in
Barrel with flash suppressor	21 in

Mechanical features:

Rifling, R.H. 6 grooves—1 turn in 12 inches.

Method of operation	gas
Type of breech mechanism	rotating bolt
Method of feeding	magazine
Cooling	air

Ammunition:

Caliber	5.56-MM
Type	Ball, blank, dummy and tracer

Firing characteristics:

Muzzle velocity (approximate)	3,250 fps
Muzzle energy	1,300 ft-lb
Chamber-pressure	52,000 psi
Cyclic rate of fire (approximate)	800 rds/m

Maximum rate of fire:

Semiautomatic	45/65 rds/m
Automatic	150/200 rds/m

Sustained rate of fire 12/15 rds/m

Maximum range 2,653 meters

Maximum effective range 460 meters

b. *Rifle Bipod, M3*

Weight:

Bipod	0.6 lb
Bipod case	0.2 lb





## CHAPTER 2

### ORGANIZATIONAL MAINTENANCE INSTRUCTIONS

#### Section I. SERVICE UPON RECEIPT OF MATERIEL

##### 2-1. General

a. When a new or reconditioned rifle or bipod is received, it is the responsibility of the officer in charge to determine whether the materiel has been properly prepared for service and in condition to perform its function.

b. A record will be made of all missing parts, tools and equipment, and any malfunctions will be reported through appropriate channels. Corrective action will be initiated as quickly as possible.

##### 2-2. Services

Refer to table 2-1.

*Table 2-1. Service upon Receipt of Materiel*

Step	Action	Reference
1	Check to determine that all Basic Issue Items have been furnished.	Refer to TM 9-1005-249-10.
2	Clear rifle.	Fig 2-1
3	Remove bolt carrier group from rifle and visually inspect for proper assembly, damaged or missing parts.	Fig 2-11
4	Clean and lubricate. NOTE Wipe excess oil from bore and chamber. Particular attention should be given to cleaning the bolt carrier key.	Table 2-3
5	Reassemble the weapon	Fig 2-11
6	Hand function to assure proper operation NOTE When retracting the bolt, make certain there is free movement between bolt carrier and gas tube.	Para 2-9c
7	Check magazine for positive retention and functioning of bolt catch.	

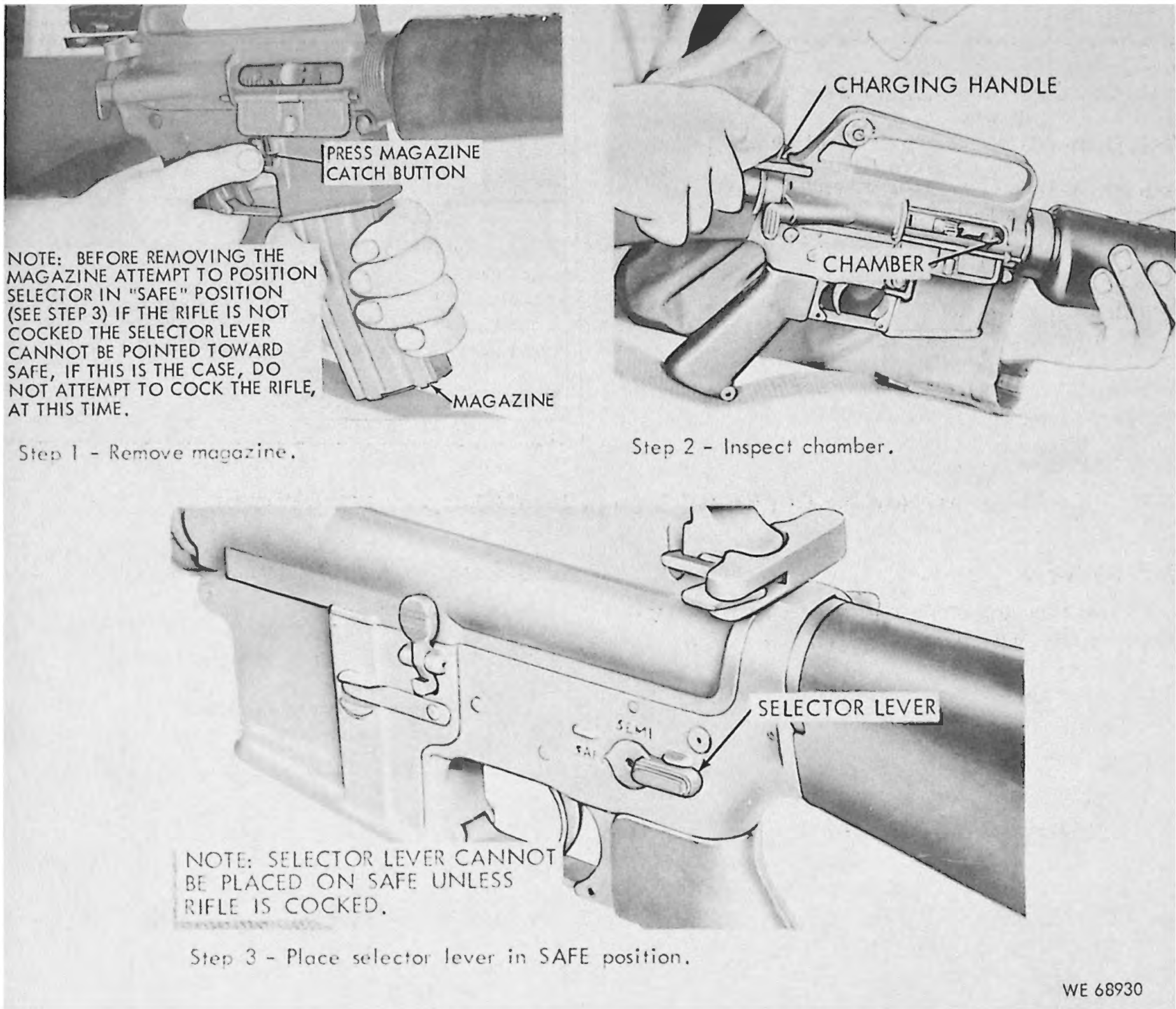


Figure 2-1. Clearing rifle.

Section II. REPAIR PARTS, SPECIAL TOOLS, AND EQUIPMENT

2-3. General

Repair parts, special tools, test and support equipment are listed in appendix C.

2-4. Maintenance Supplies and Materials

Table 2-2 lists lubricating, cleaning, maintenance materials, and their stock numbers that are authorized for maintenance of the rifles and bipod. Pertinent authorized documents are the proper requisitioning authority for these maintenance expendable supplies and materials. The maintenance level column indicates the lowest category of maintenance authorized to utilize the particular item. The maintenance level codes used are:

Code	Explanation
C	Operator/Crew
O	Organizational Maintenance

Table 2-2. Maintenance Supplies and Materials

Federal stock no.	Description	Maintenance level
8020-244-0153	BRUSH ARTISTS:	C
7920-205-2401	BRUSH, CLEANING, TOOL AND PARTS:	C
6850-965-2332	CARBON REMOVING COMPOUND (P-C-111) (5 GAL PAIL)	O
9920-292-9946	CLEANER, TOBACCO PIPE: (DILLS) (36 PER PKG)	C
	CLEANING COMPOUND, RIFLE BORE: (RBC)	
6850-224-6656	2 OZ PLASTIC BOTTLE	C
6850-224-6657	8 OZ CAN	C

Federal stock no.	Description	Maintenance level
6850-224-6663	1 GAL CAN	C
5350-221-0872	CLOTH, ABRASIVE:	O
6850-281-1985	DRY CLEANING SOLVENT: (SD) (1 GAL CAN)	O
	LUBRICANT, SOLID FILM:	
9150-142-9309	12 OZ AEROSOL CAN	O
	LUBRICATING OIL, SEMI-FLUID: (LSA)	
9150-935-6597	2 O PLASTIC BOTTLE	C
9150-889-3522	4 OZ PLASTIC BOTTLE	C
9150-687-4241	1 QT CAN	C
9150-753-4686	1 GAL CAN	C
9150-292-9689	LUBRICATING OIL, WEAPONS: (LAW) (1 QT CAN)	C
7920-205-1711	RAG, WIPING: COTTON (50 LB BALE)	O

### Section III. CLEANING AND LUBRICATION INSTRUCTIONS

#### 2-5. General

This section contains pertinent cleaning and lubricating instructions for organizational maintenance.

#### 2-6. Cleaning and Lubrication

Refer to table 2-3.

Table 2-3. Cleaning and Lubrication Instructions

Item	Action required
Magazine assembly	<ol style="list-style-type: none"> <li>1. Disassemble and wipe dirt from the magazine tube, spring, and follower. Apply a light coat of lubricant to the magazine spring.</li> </ol> <p style="text-align: center;"><b>NOTE</b></p> <p>Because moisture, will collect in the plastic magazine bag, from condensation, the magazine must be removed, unloaded, and dried every 24 hours to prevent corrosion.</p> <ol style="list-style-type: none"> <li>2. After the cartridges and magazine have been dried, apply a light coat of lubricating oil to the magazine spring.</li> </ol>
Upper receiver group	<ol style="list-style-type: none"> <li>1. Clean the upper receiver of powder fouling with rifle bore cleaning compound (RBC). If the upper receiver is corroded as indicated in figure 2-2, clean as follows: <ol style="list-style-type: none"> <li>a. Clean corroded area with crocus cloth.</li> <li>b. Wash thoroughly with dry cleaning solvent.</li> <li>c. Apply solid film lubricant.</li> </ol> <p style="text-align: center;"><b>CAUTION</b></p> <p>If solid film lubricant comes in contact with internal parts of the receiver make certain to wash parts with dry cleaning solvent to remove lubricant.</p> <li>d. Allow to dry 12 to 16 hours before usage. Adequate ventilation is recommended.</li> </li></ol> <p style="text-align: center;"><b>CAUTION</b></p> <p>Do not use a wire brush on aluminum surface.</p> <ol style="list-style-type: none"> <li>2. Clean the outside surface of the protruding gas tube in the receiver with a bore brush attached to a section of the cleaning rod (fig 2-3).</li> <li>3. After cleaning, coat the inner surfaces of the upper receiver with lubricant and apply a light coat to the outer surfaces.</li> </ol> <p style="text-align: center;"><b>CAUTION</b></p> <p>Do not use any type of abrasive material to clean the gas tube.</p>
Barrel	<ol style="list-style-type: none"> <li>1. Attach the wire bore brush to rod, dip in rifle bore cleaning compound (RBC), and brush the bore from chamber to muzzle (fig 2-4). Push the brush through the bore until it extends beyond the muzzle. Do not reverse direction of the brush while in the bore. Continue until the bore is well covered with rifle bore cleaning compound (RBC).</li> </ol> <p style="text-align: center;"><b>NOTE</b></p> <p>Barrels that contain metal fouling or coppering, due to firing excessive rounds of tracer ammunition, will be evacuated to direct support maintenance.</p> <ol style="list-style-type: none"> <li>2. Attach the chamber brush to the cleaning rod, dip in rifle bore cleaning compound (RBC) and insert in chamber (fig 2-5). Use a minimum of five plunger strokes and three rotational (360 °) motions.</li> <li>3. Remove brush from chamber and cleaning rod. Dry the bore and chamber with clean swabs. Do not reverse direction of swabs while in the bore. Continue until swabs come out clean and dry.</li> <li>4. After cleaning, lightly lubricate the bore and chamber with a swab to prevent corrosion and pitting. Lightly lubricate the lugs in the barrel extension.</li> <li>5. Lightly lubricate all the outer surfaces of the barrel and sight (including surfaces under the handguard).</li> <li>6. Apply lubricant generously to the front sight post screw, detent, and spring. Depress detent several times to work the lubricant into the spring.</li> </ol>
Bolt carrier group	<ol style="list-style-type: none"> <li>1. Disassemble the bolt carrier group and wash all components and outer surfaces with a swab saturated in rifle bore cleaning compound (RBC).</li> <li>2. Clean bolt carrier key with a worn bore brush dipped in rifle bore cleaning compound (RBC) (fig 2-6).</li> <li>3. Dry bolt carrier key using pipe cleaners (fig. 2-7).</li> <li>4. Using a bore brush, dipped in rifle bore cleaning compound (RBC), scrub carbon deposits and dirt from the locking lugs of the bolt.</li> </ol> <p style="text-align: center;"><b>CAUTION</b></p> <p>Brush the outer surface of the bolt, paying particular attention to area behind the bolt rings and under lip of the extractor. Do not attempt to remove discoloration caused by heat.</p> <ol style="list-style-type: none"> <li>5. Remove extractor from bolt. Using a bore brush dipped in rifle bore cleaning compound (RBC) scrub extractor to remove carbon. Also clean firing pin recess and firing pin. Do not remove the spring from extractor unless it is damaged (step 19) (fig. 2-11).</li> <li>6. Clean ejector and spring by scrubbing with brush using rifle bore cleaning compound (RBC).</li> <li>7. When dry, and before final assembly, apply a generous coat of lubricant to the outside bolt body, rings. Apply a drop of lubricant in bolt carrier key (fig. 2-8).</li> </ol>

Table 2-3. Cleaning and Lubrication Instructions —Continued

Item	Action required
Bolt carrier group (Continued)	<p style="text-align: center;"><b>CAUTION</b></p> <p>The firing pin and firing pin recess in the bolt should only have a light coat of lubricant.</p> <p>8. During cleaning and lubricating, inspect the bolt for cracks especially in the bolt cam pin hole area.</p>
Lower receiver group	<p>1. Wipe dirt from trigger mechanism with a clean swab or brush.</p> <p style="text-align: center;"><b>CAUTION</b></p> <p>Do not use wire brush on aluminum surface.</p> <p>2. Components which are coated with carbon will be cleaned with rifle bore cleaning compound (RBC) and a bristle brush. Use a scrubbing action to remove all carbon and foreign material. Drain rifle bore cleaning compound from lower receiver cavity and wipe dry. Use opposite end of brush with a piece of rag wrapped around it to get into the hard to get at places.</p> <p>3. If the lower receiver group is corroded (fig 2-2), clean same as indicated for upper receiver group.</p> <p>4. Clean drain hole in butt cap screw (fig. 2-9).</p> <p>5. After the lower receiver has been cleaned and dried, apply a light coat of lubricant to the buffer, action spring and inner surface of lower receiver extension. Also apply a generous coating inside the lower receiver and all components including the takedown and pivot pins.</p> <p>6. Apply a generous amount of semi-fluid lubricating oil (LSA) in detent well (fig. 2-10) to lubricate detent and spring for pivot pin. Also, apply lubricant to the detent and spring for takedown pin, the selector lever, and outer surfaces of lower receiver extension. On rifles which do not have an oil hole, remove pivot pin to lubricate detent and spring.</p> <p style="text-align: center;"><b>NOTE</b></p> <p>Detents and springs must be free of corrosion prior to lubrication.</p> <p>7. If the detents and springs are frozen the following procedures should be accomplished.</p> <ol style="list-style-type: none"> <li>Attempt to depress the detent by inserting a small punch into the slot of the pivot pin, thus forcing the detent into the recess. (Earlier production rifles have a hole in the pivot pin for this purpose.) Only limited movement is required to permit removal of the pivot pin.</li> <li>If the detent cannot be depressed enough to permit removal of the pivot pin, disassemble the rifle. Place the forward portion of the lower receiver in a container of rifle bore cleaning compound (RBC), or carbon removing compound (P-C-111), and allow to soak for a period of 2 to 16 hours. Then attempt to remove the components as described in a above.</li> </ol> <p style="text-align: center;"><b>WARNING</b></p> <p>If vapors from P-C-111 are inhaled for extended period, it could be very harmful. Use a well ventilated location. Also avoid skin contact. 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 or protective equipment is recommended.</p> <ol style="list-style-type: none"> <li>After disassembly, the spring, detent, and detent well should be thoroughly cleaned, then generously lubricated with semi-fluid lubricating oil (LSA) before assembly to the rifle.</li> <li>If the rifle cannot be disassembled by trying the methods described above, turn the weapon into direct support maintenance for repair.</li> </ol>
Inactive weapons	<p>Inactive weapons will be preserved with a generous coat of semi-fluid lubricating oil (LSA). Inspect these weapons on a weekly basis to determine condition of preservation. Weapons having corrosion or rust will be cleaned immediately and preserved in accordance with above instructions. All inactive weapons will be thoroughly cleaned and preserved every 90 days, unless inspection reveals more frequent servicing is necessary.</p>
Bipod, rifle	<ol style="list-style-type: none"> <li>Remove dirt or grease, using rifle bore cleaning compound (RBC).</li> <li>Apply a generous amount of lubricant to all surfaces, making certain the tension spring is well lubricated.</li> </ol>
Bayonet-knife, M7	<ol style="list-style-type: none"> <li>Clean dirt and grease from bayonet-knife. Apply a light coat of lubricant to the blade and generously lubricate the release. The release should work freely and return to lock position.</li> <li>Minor nicks and dents will be removed with file or stone.</li> <li>Remove grips to clean shank of blade assembly and apply a light coat of lubricant.</li> </ol>
Scabbard, M8A1 and sling	<ol style="list-style-type: none"> <li>To prevent mildew, shake out and air the scabbard and sling at frequent intervals. Clean mildewed canvas by scrubbing with a dry brush.</li> <li>Examine mildewed fabric for evidence of rotting or weakening by stretching and pulling the fabric. If fabric shows indication of loss of strength, turn in for replacement.</li> </ol>



Table 2-3. Cleaning and Lubrication Instructions — Continued

Item	Action required
Scabbard, M8A1 and sling (Continued)	3. Make certain all mildew is removed, before water is used to remove dirt. Oil and grease may be removed by scrubbing with issue soap and water. Rinse well with water and dry thoroughly.
	4. Apply a light coat of LSA to the bayonet retaining springs in the M8A1 Scabbard by using the rod holder section of cleaning rod.
	<b>CAUTION</b> Do not use gasoline or any solvent to remove oil or grease from canvas.

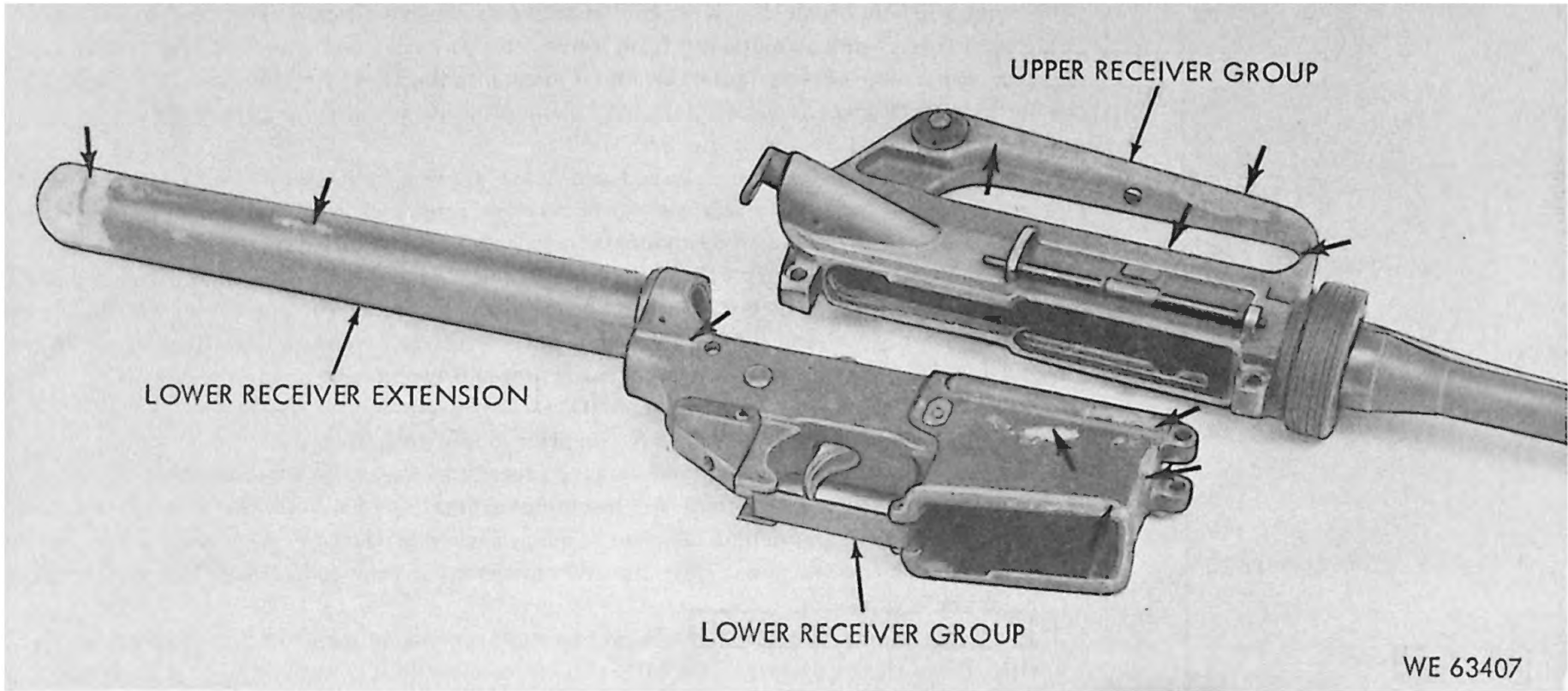


Figure 2-2. Corroded areas of upper and lower receivers.

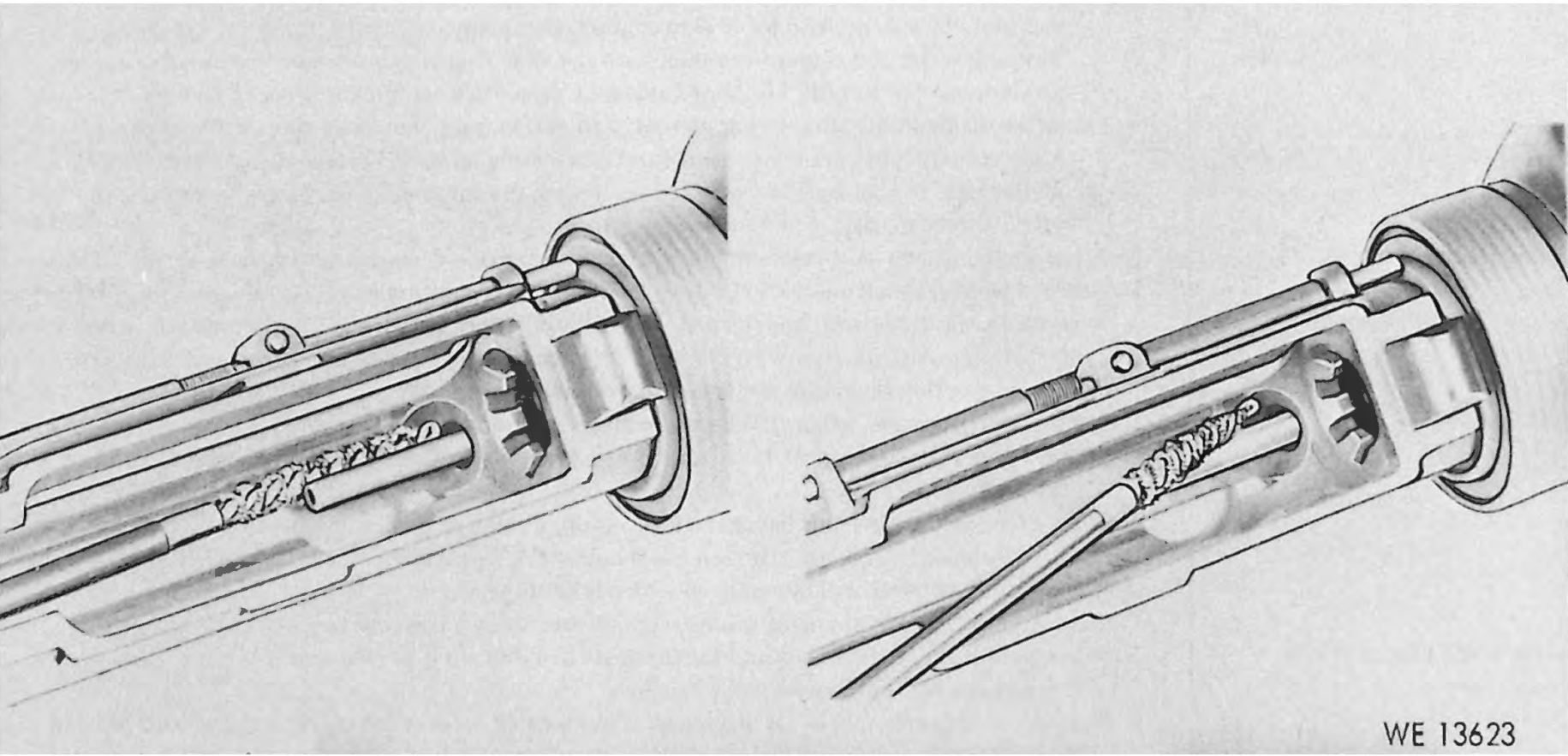


Figure 2-3. Cleaning gas tube in receiver.

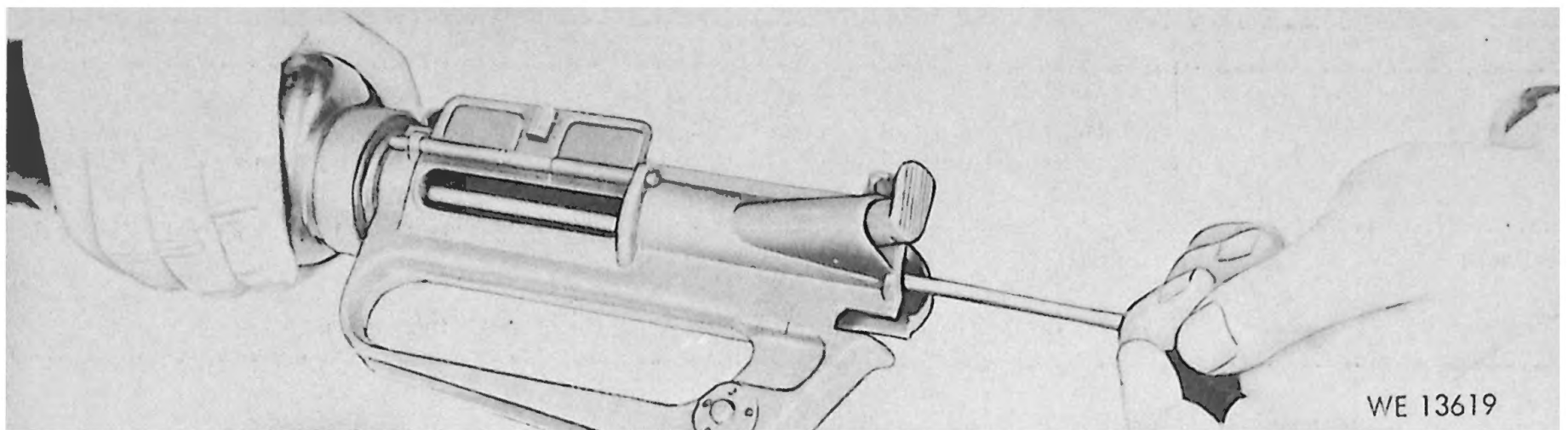


Figure 2-4. Cleaning the bore.

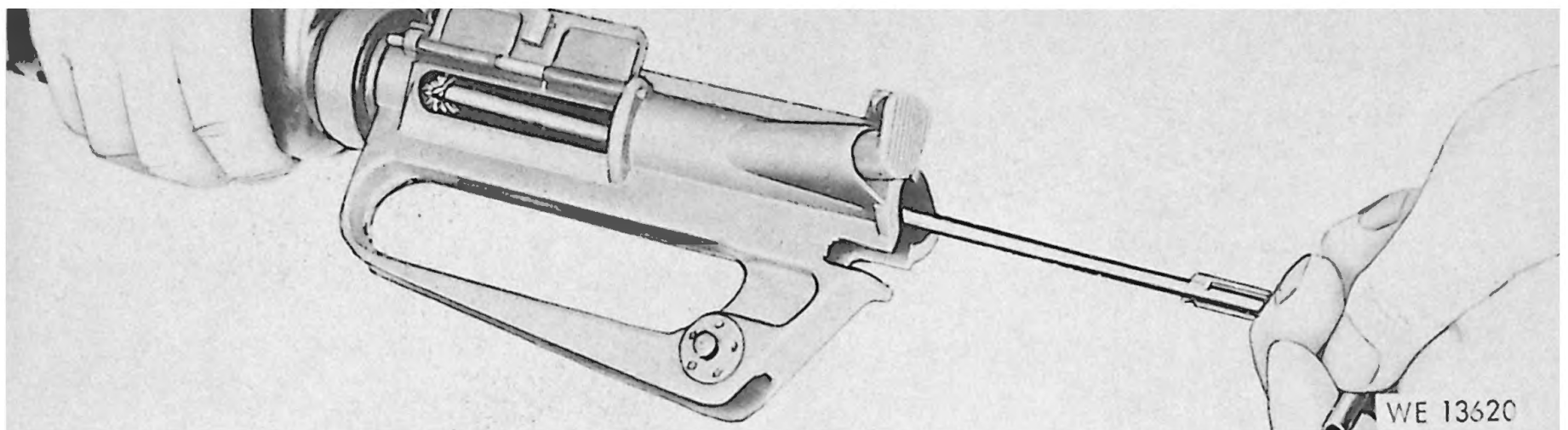


Figure 2-5. Cleaning the chamber.

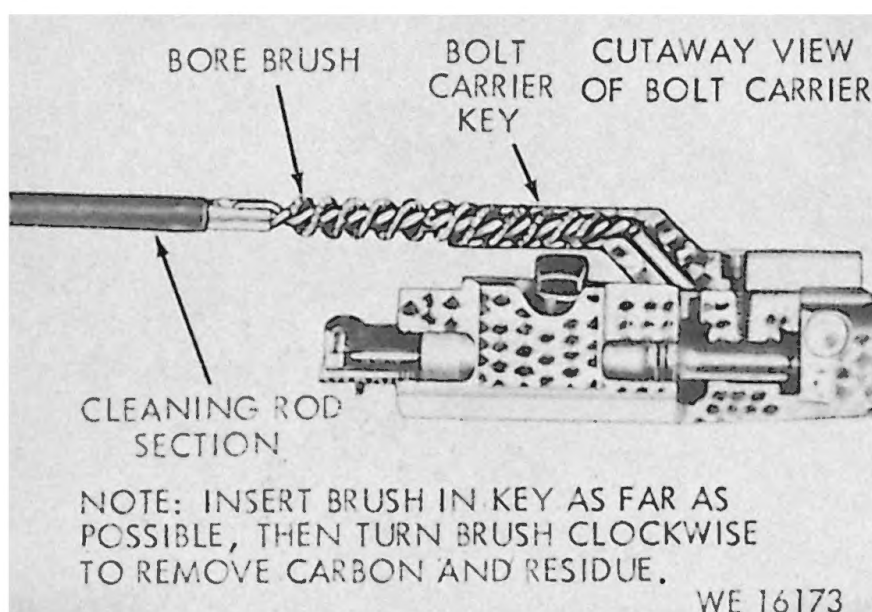


Figure 2-6. Cleaning bolt carrier key.

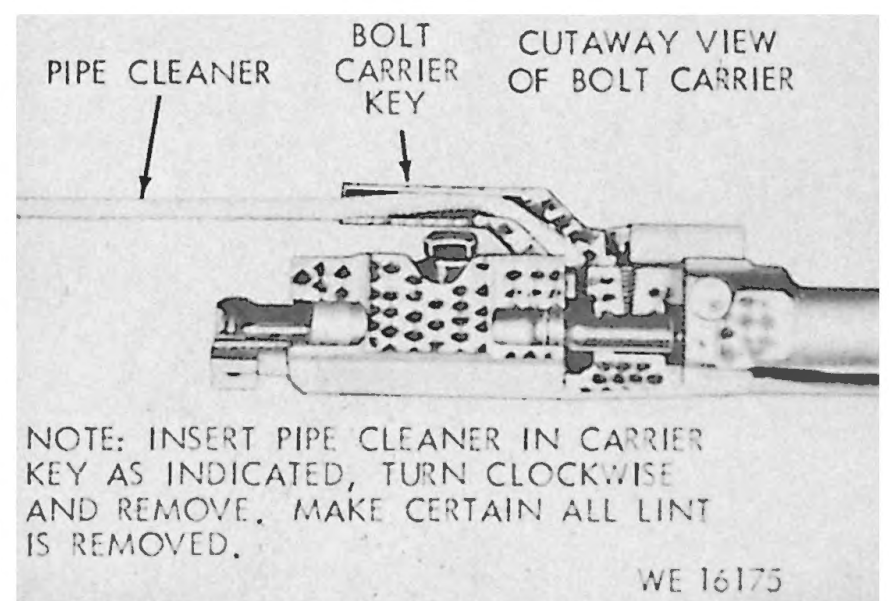
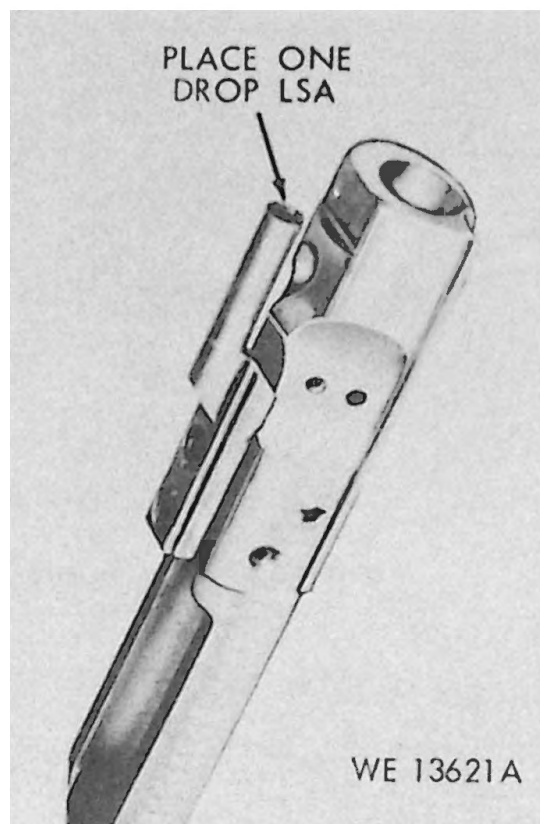
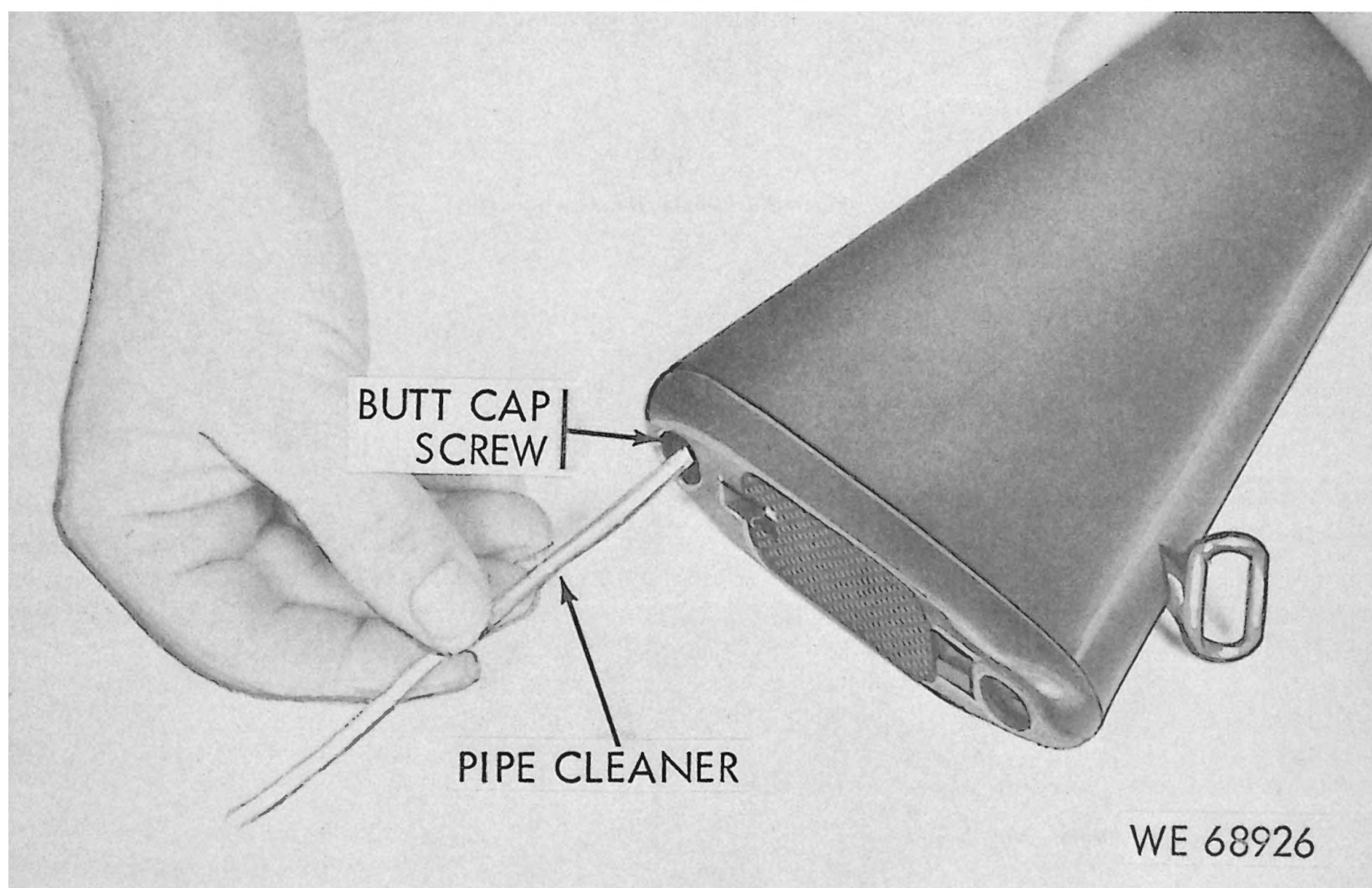


Figure 2-7. Drying bolt carrier key.



*Figure 2-8. Oiling carrier key.*



*Figure 2-9. Cleaning drain hole in butt cap screw.*





Figure 2-10. Oiling detent and spring.

## Section IV. PREVENTIVE MAINTENANCE CHECKS AND SERVICES

### 2-7. General

a. Preventive maintenance listed in table 2-3 is a systematic care inspection and servicing check to keep the rifle in serviceable condition by Organizational unit armorer. Refer to TM 9-1005-249-10 for preventive maintenance checks and services by the operator.

b. In addition to the procedures outlined in table 2-4, remove rust, dirt, grit, gummed oil, and water as these will cause rapid deterioration of the inner

parts and outer surfaces. Make certain to keep all surfaces clean and lubricated. Do not clean or polish outer surfaces of the weapon with a treated cloth or other commercial compounds.

c. Tighten loose parts and replace broken or worn parts as authorized.

d. Every six months check to see if all modifications have been applied. Refer to DA Pam 310-7. No alteration or modification will be made except as authorized by the modification work order.

Table 2-4. Preventive Maintenance Checks and Services

Organizational Maintenance Category		Monthly Schedule (or quarterly)	
Sequence Number	Items to be inspected	Procedure	Reference
1	Upper receiver group	a. Check upper receiver group for powder fouling and corrosion. Clean and/or repair as necessary. b. Hand check barrel, for looseness on upper receiver. If loose, evacuate to direct support maintenance. c. Hand check flash suppressor, for looseness on barrel. If loose, evacuate to direct support maintenance.	Table 2-3
2	Bolt carrier group	a. Clean and lubricate. Make certain to clean bolt carrier key. b. Inspect for dirty ejector and spring. Clean. c. Inspect bolt rings for wear or misalignment.	Table 2-3.
3	Lower receiver group	a. Inspect for frozen detents and springs. b. Clean and lubricate detents and springs, takedown pin, pivot pin and selector lever and outer surface of lower receiver extension. c. Hand check receiver extension for looseness on lower receiver. If loose, evacuate to direct support maintenance.	Table 2-3
4	Bipod	Clean and lubricate. Inspect bipod legs, make certain they move freely from closed to open position. Check spring tension, make certain it is of sufficient strength to hold the bipod to the rifle.	

Section V. TROUBLESHOOTING

2-8. General

a. Troubleshooting shown in table 2-5 contains information for Organizational maintenance and serves as an aid to personnel whose responsibility

it is to restore worn, damaged, or inoperative materiel to a satisfactory condition.

b. Refer to TM 9-1005-249-10 for troubleshooting data pertaining to operator.

Table 2-5. Troubleshooting

Malfunction	Probable cause	Corrective action
1. Failure to fire	a. Broken firing pin b. Firing mechanism, lower receiver improperly assembled or worn, broken, or missing parts.	a. Replace (2, fig B-3). b. Evacuate to direct support maintenance.
2. Failure to extract	Defective extractor pin, extractor, and extractor spring.	Replace (5, 6, and 7, fig B-3).
3. Failure to eject	a. Broken ejector. b. Frozen ejector. c. Weak or broken ejector spring.	a. Replace (9, fig B-3). b. Disassemble and clean. c. Replace (10, fig B-3).
4. Failure to cock	Worn, broken or missing parts of firing mechanism.	Evacuate to direct support maintenance.
5. Failure to lock	s. Bolt cam pin missing. b. Loose or damaged bolt carrier key. c. Improperly assembled extractor spring.	a. Replace bolt cam pin (3, fig B-3). b. Evacuate to direct support maintenance. c. Assemble correctly (step 19, fig 2-11).
6. Short recoil	d. Bent gas tube. a. Missing or broken bolt rings. b. Gas leakage caused by broken or loose gas tube.	d. Evacuate to direct support maintenance. a. Evacuate to direct support maintenance. b. Evacuate to direct support maintenance.
7. Bolt fails to lock to the rear after the last round	a. Broken bolt catch and/or spring. b. Old type buffer installed. c. Magazine follower worn or broken. d. Magazine spring weak or broken. e. Magazine feeder lips bent or broken.	a. Evacuate to direct support maintenance. b. Evacuate to direct support maintenance c. Replace magazine. d. Replace magazine. e. Replace magazine.
8. Failure to cycle with selector lever on <i>AUTO</i>	Worn, broken or missing parts of firing mechanism.	Evacuate to direct support maintenance.
9. Fires with selector lever on <i>SAFE</i>	Worn, broken or missing parts of firing mechanism.	Evacuate to direct support maintenance.
10. Fires with selector lever on <i>SEMI</i> , fires when trigger is released	Worn, broken or missing parts of firing mechanism.	Evacuate to direct support maintenance.

Table 2-6. Organizational Guide for Maintenance of Individual Assemblies and Groups

Assembly or group	Removal/ installation	Disassembly/ assembly	Inspection and repair	Cleaning
Magazine assembly	Fig 2-11	Fig 2-11	<ol style="list-style-type: none"> <li>1. Inspect tube for bulges, dents, or damaged feeder lips.</li> <li>2. Inspect spring for kinks, cracks, or breaks. Replace magazine assembly.</li> <li>3. Inspect follower and base for excessive wear, cracks, or being bent. Replace magazine assembly.</li> </ol>	Table 2-3
Bolt assembly	Fig 2-11	Fig 2-11	<ol style="list-style-type: none"> <li>1. Check for cracks in bolt (especially in area of cam pin hole) condition of locking lugs, pitted or chipped bolt face and elongated firing pin hole. If broken evacuate to direct support maintenance.</li> <li>2. Inspect for broken bolt rings, make certain ring gaps are staggered. If broken or deformed, evacuate to direct support maintenance.</li> <li>3. Inspect for worn extractor pin, extractor, and extractor spring. Replace (5, 6, and 7, fig B-3).</li> <li>4. Inspect for worn pin, ejector, and spring. Replace (8, 9, and 10, fig B-3).</li> </ol>	Table 2-3
Upper receiver group	Fig 2-11	Fig 2-11	<ol style="list-style-type: none"> <li>1. Inspect for cracks, and parts for wear or damage. If spring pin and and swivel are worn or damaged, replace.</li> <li>2. Inspect hand guards for cracks or damage. If cracked or damaged, replace (1 and 2, fig B-2).</li> </ol> <p style="text-align: center;">NOTE</p> <p>Cracked or damaged hand guards will be evacuated to direct support maintenance for repair.</p> <ol style="list-style-type: none"> <li>3. Inspect receiver for condition of finish. If scratched or worn (shiny bright), remove all lubricant from surface. Roughen surface, using crocus cloth, then touch up with solid film lubricant. (Refer to table 2-2).</li> <li>4. Inspect charging handle for damage and latch spring for tension. If charging handle (3, fig B-2) is damaged, replace.</li> </ol>	Table 2-3
Lower receiver group	Fig 2-11	Fig 2-11	<ol style="list-style-type: none"> <li>1. Inspect for worn or damaged machine screw and lock washer (1 and 2, (fig B-4). Inspect for cracked pistol grip. Replace if cracked (3, fig B-4).</li> <li>2. Inspect butt stock assembly and stock assembly. If cracked or damaged replace (6 and 8, fig B-4).</li> </ol> <p style="text-align: center;">NOTE</p> <p>Cracked stocks will be evacuated to direct support maintenance to be repaired.</p> <ol style="list-style-type: none"> <li>3. Inspect take down pin, pivot pin, detents and springs. If worn or damaged replace (fig B-4).</li> <li>4. See 3 above under upper receiver group.</li> <li>4. See 3 above under upper receiver group.</li> <li>5. Inspect lower receiver extension for serviceability.</li> </ol>	
Bipod	Refer to TM 9-1005- 249-10	--	Check spring tension of jaws.	Table 2-3

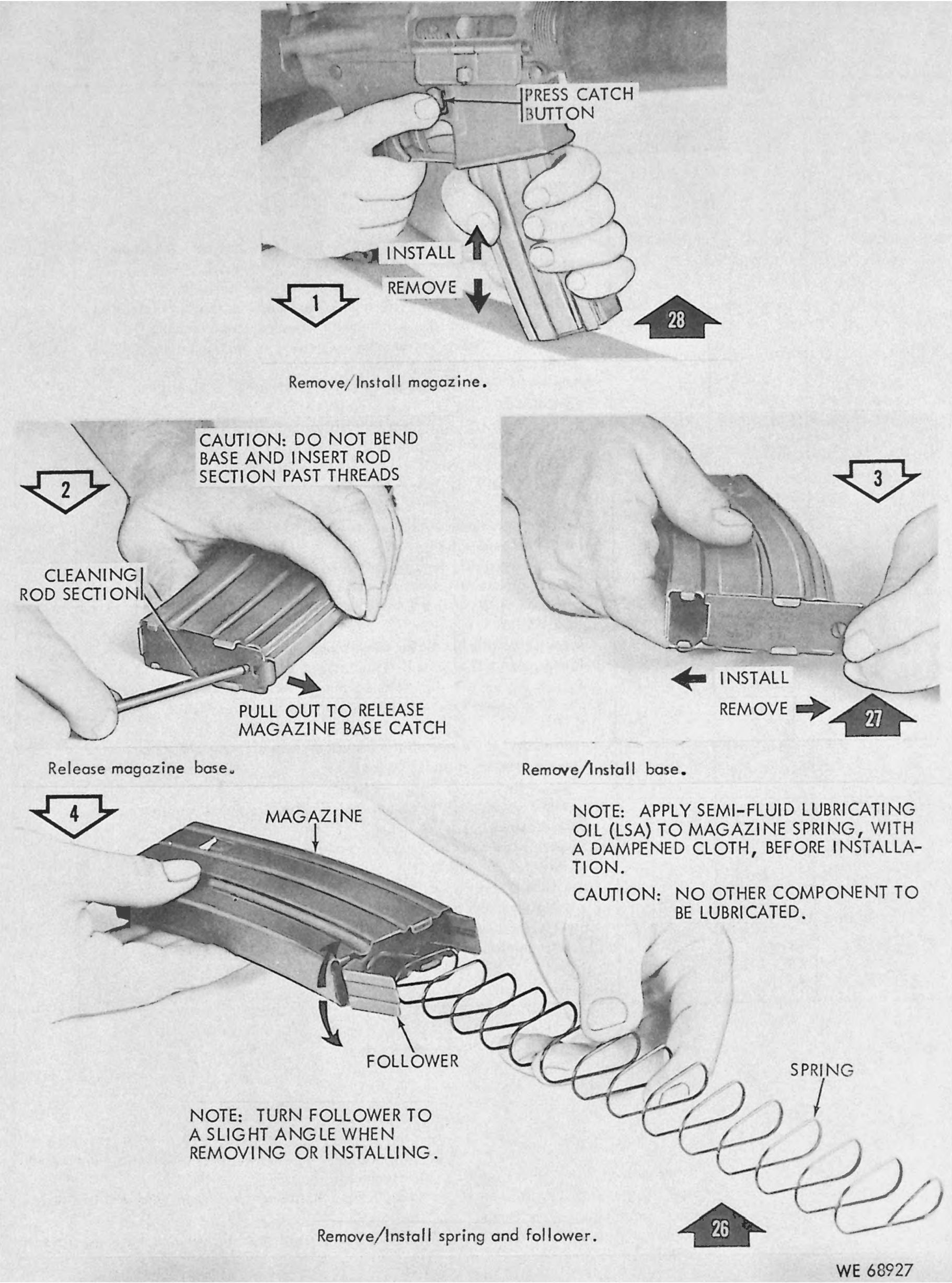


Figure 2-11. Disassembly/assembly of rifle. (1 of 8)



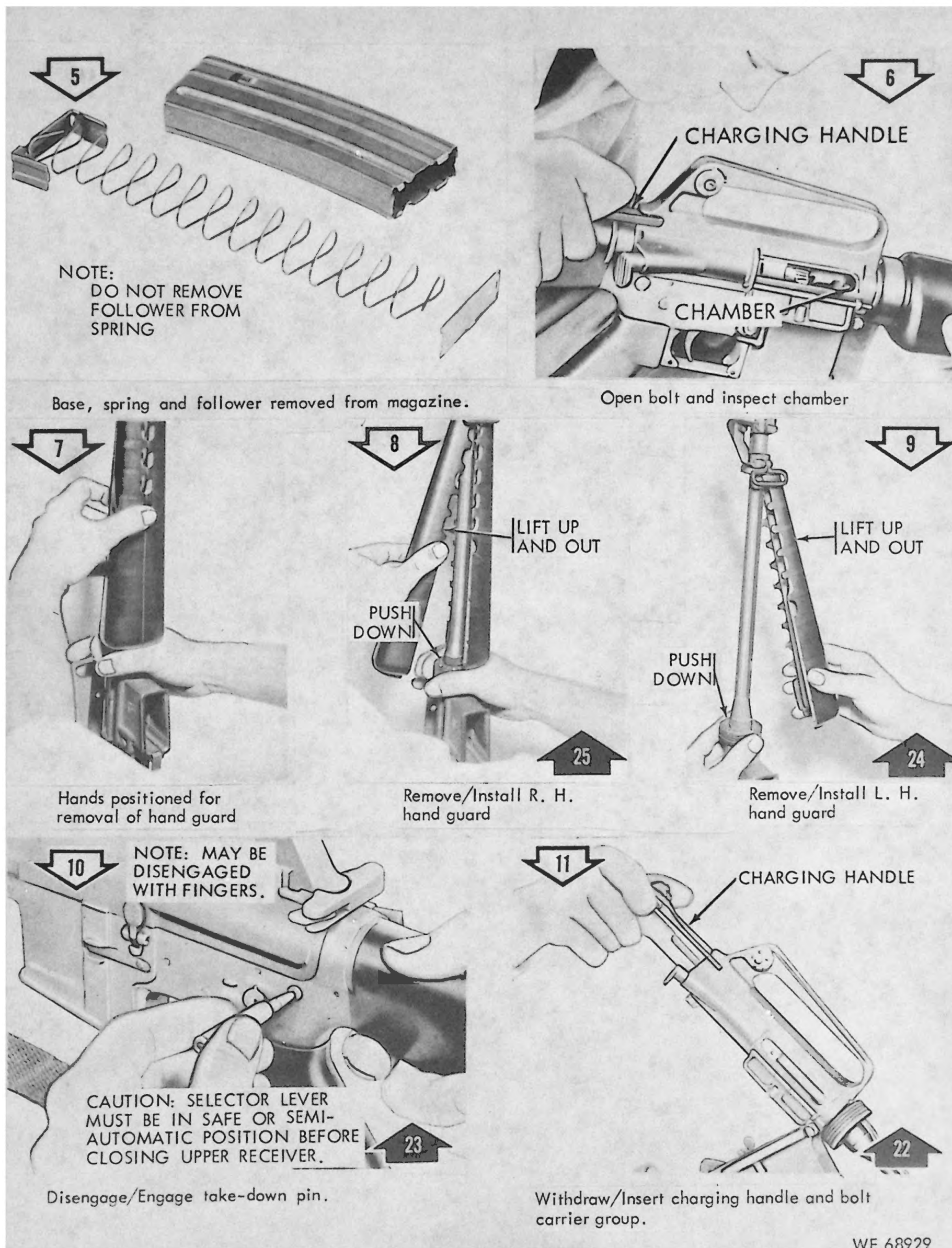


Figure 2-11. Disassembly/assembly of rifle. (2 of 8)

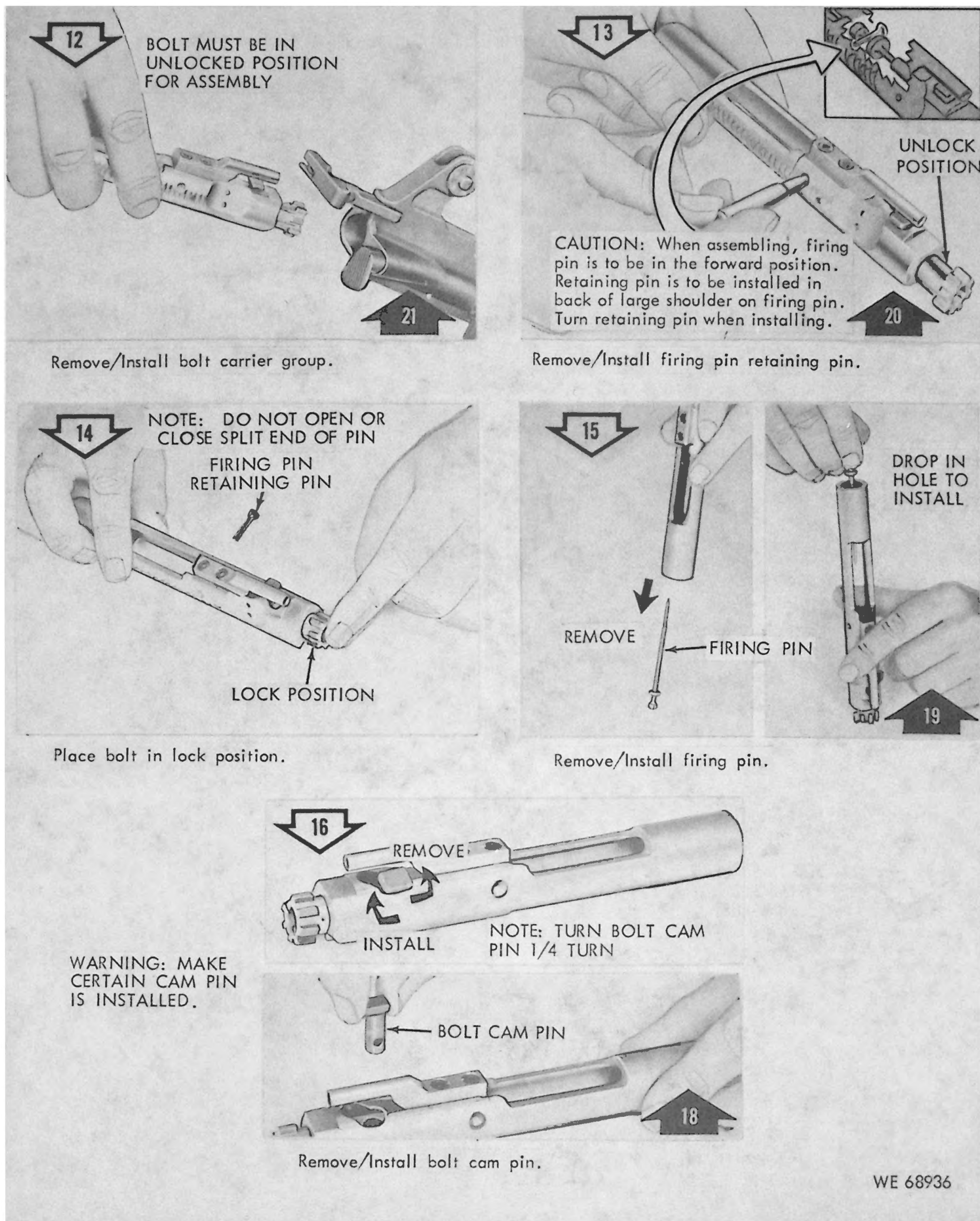


Figure 2-11. Disassembly/assembly of rifle. (3 of 8)



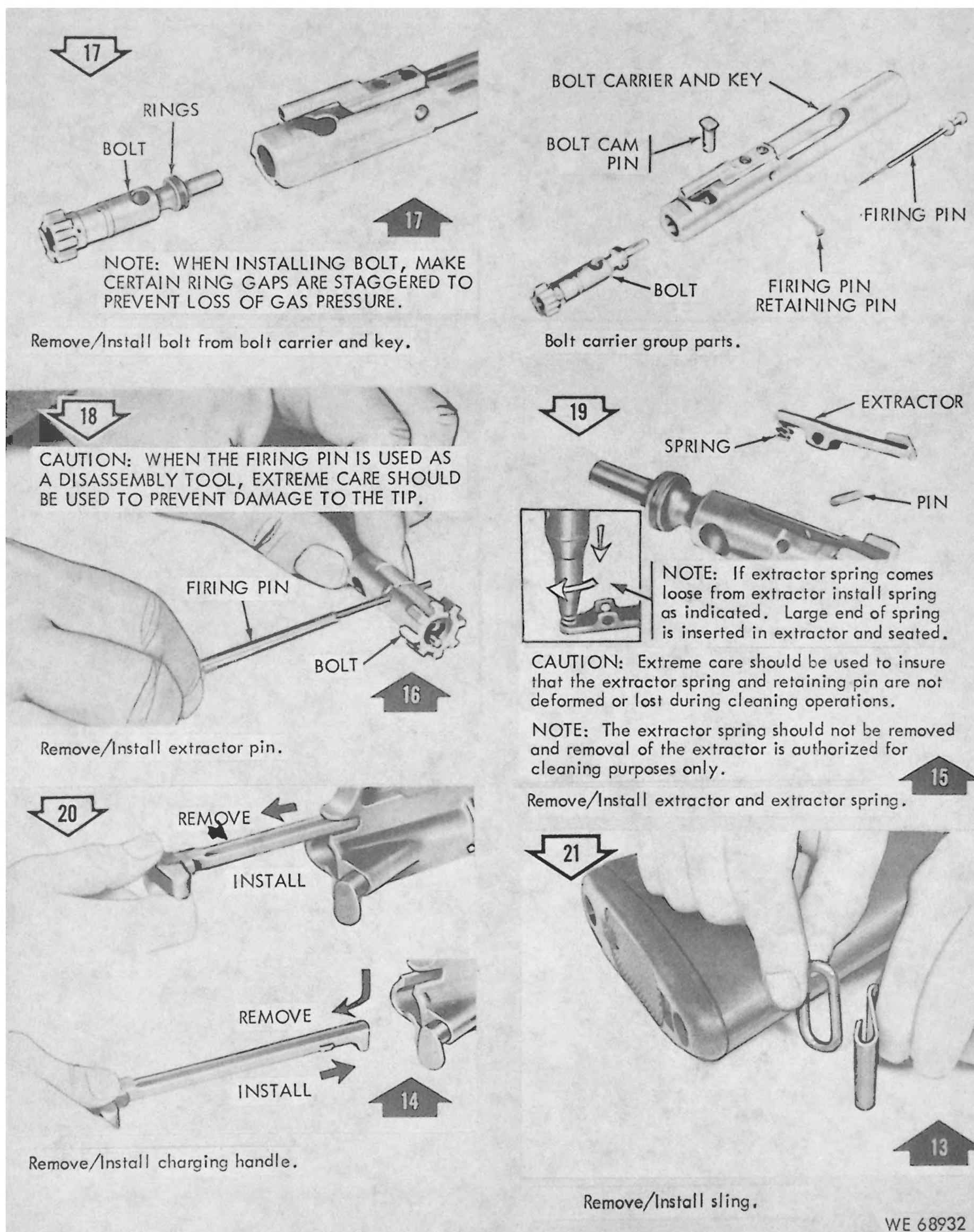


Figure 2-11. Disassembly/assembly of rifle. (4 of 8)

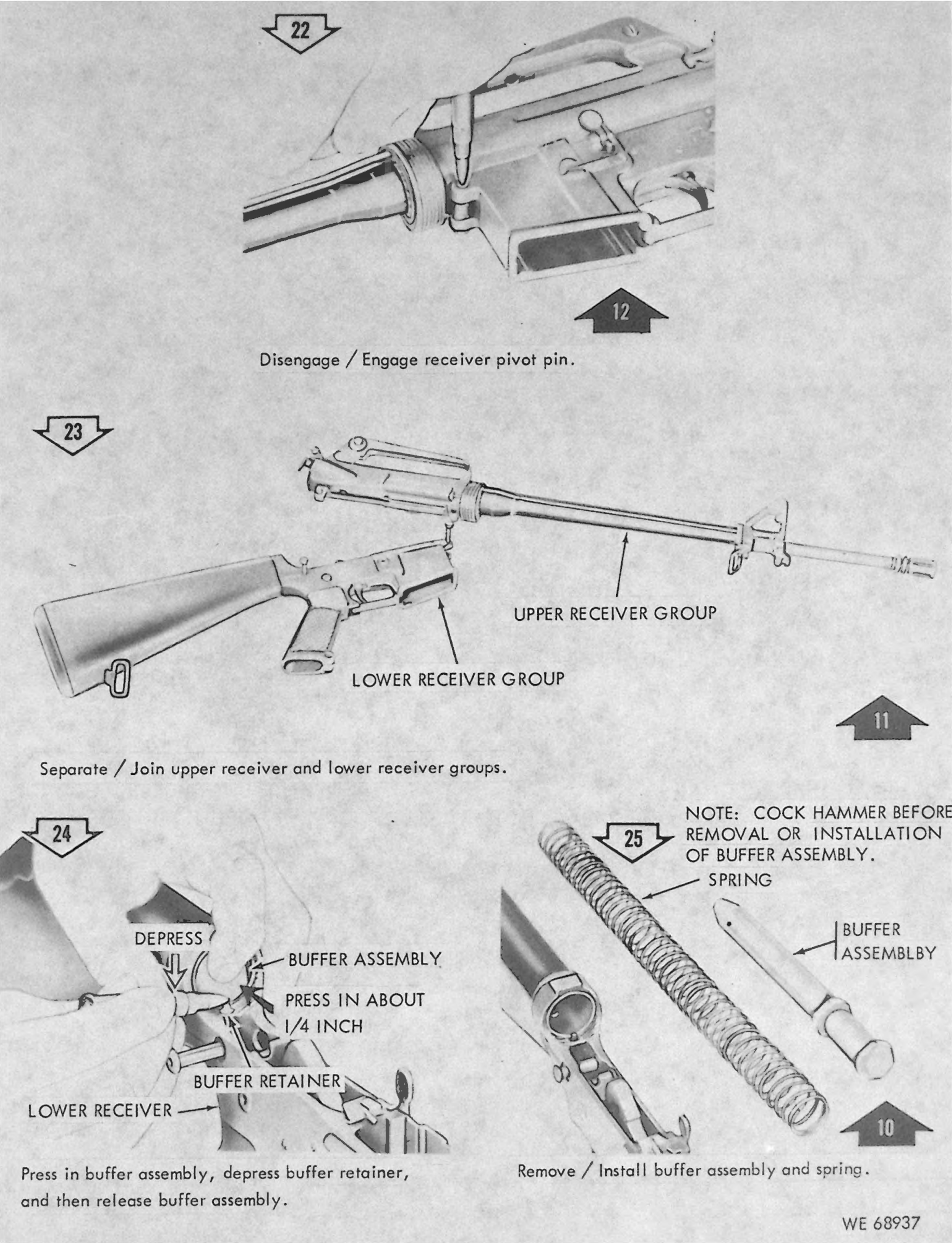


Figure 2-11. Disassembly/assembly of rifle. (5 of 8)



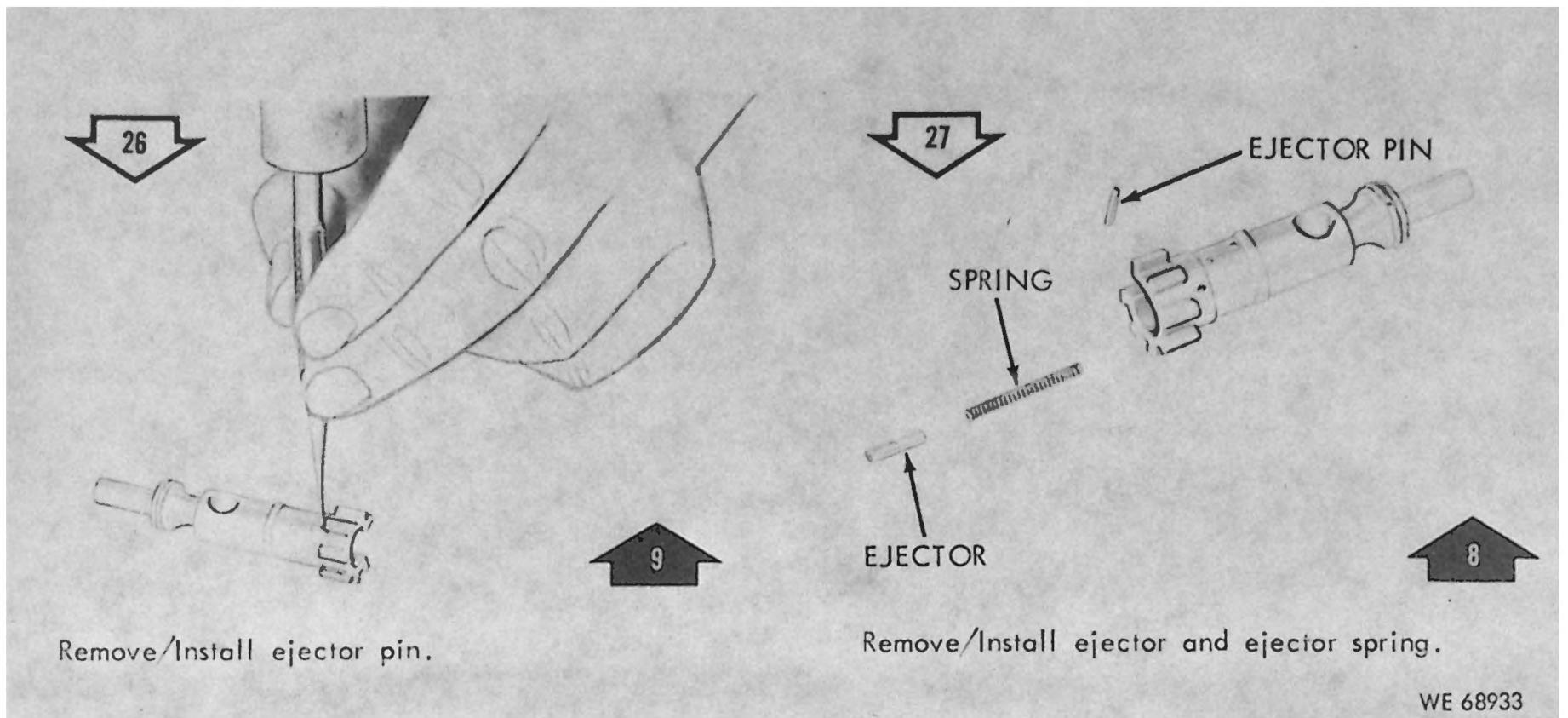


Figure 2-11. Disassembly/assembly of rifle (6 of 8)

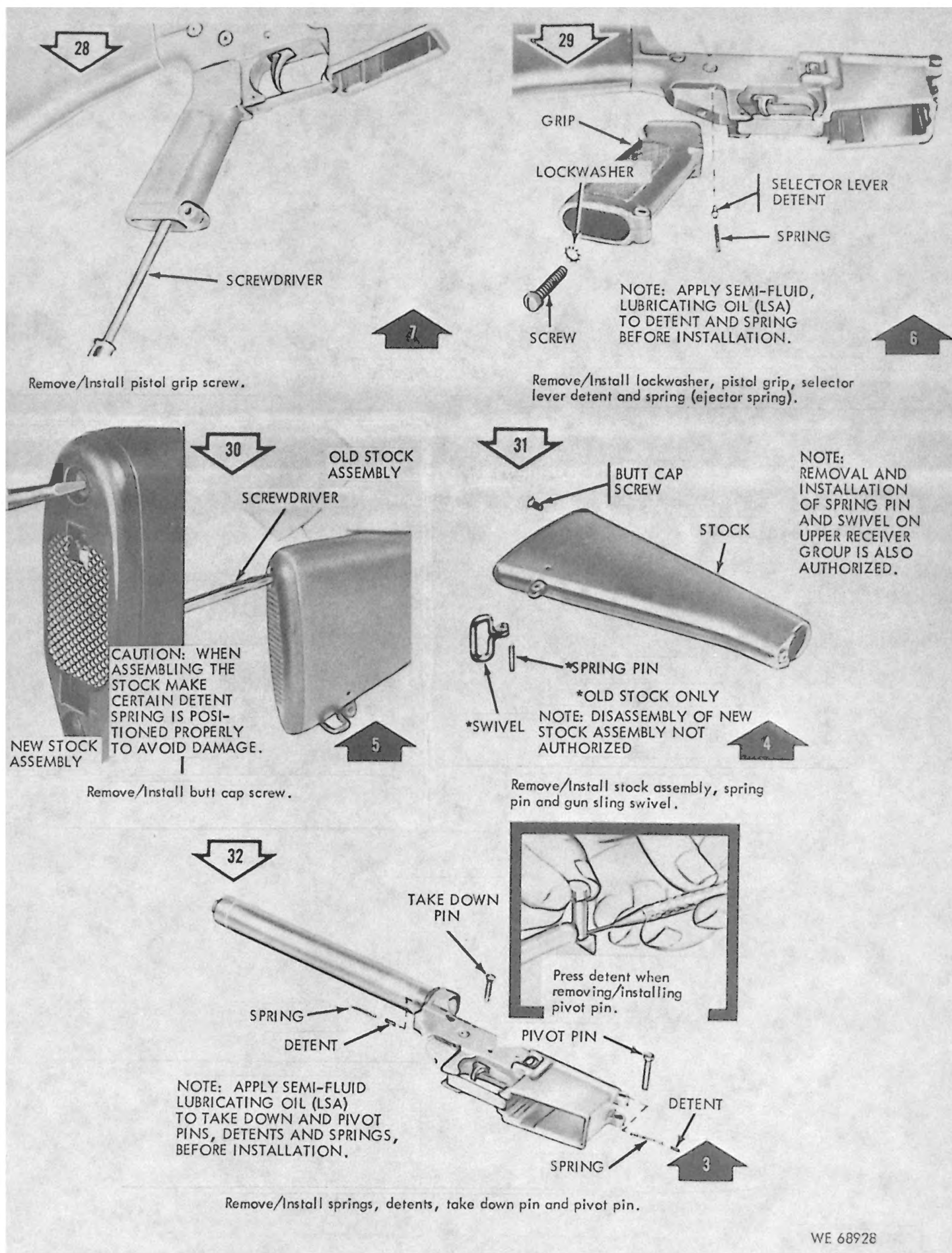
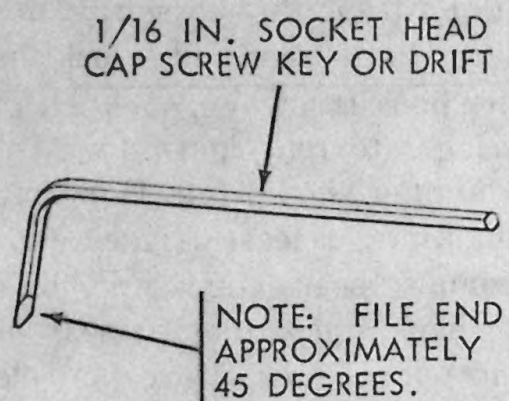
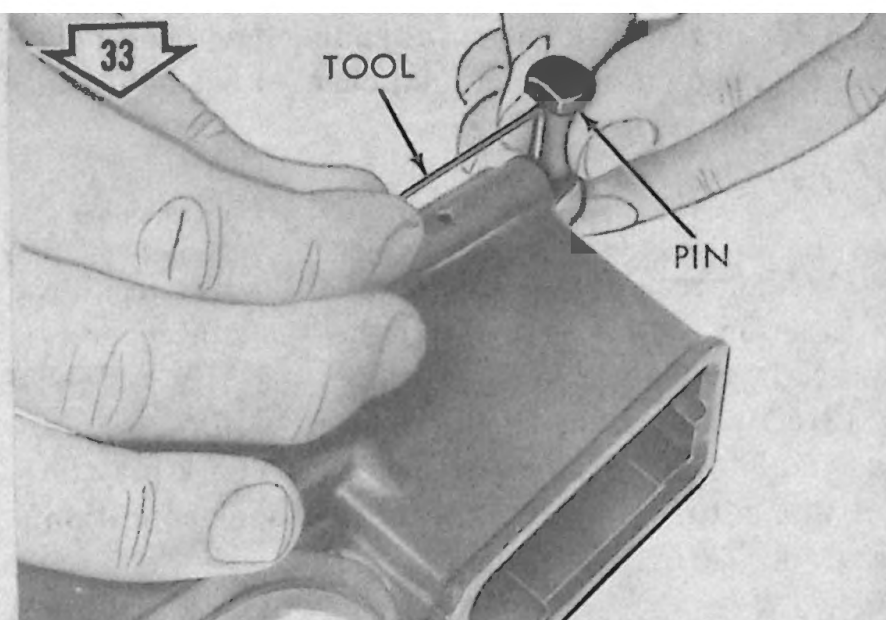


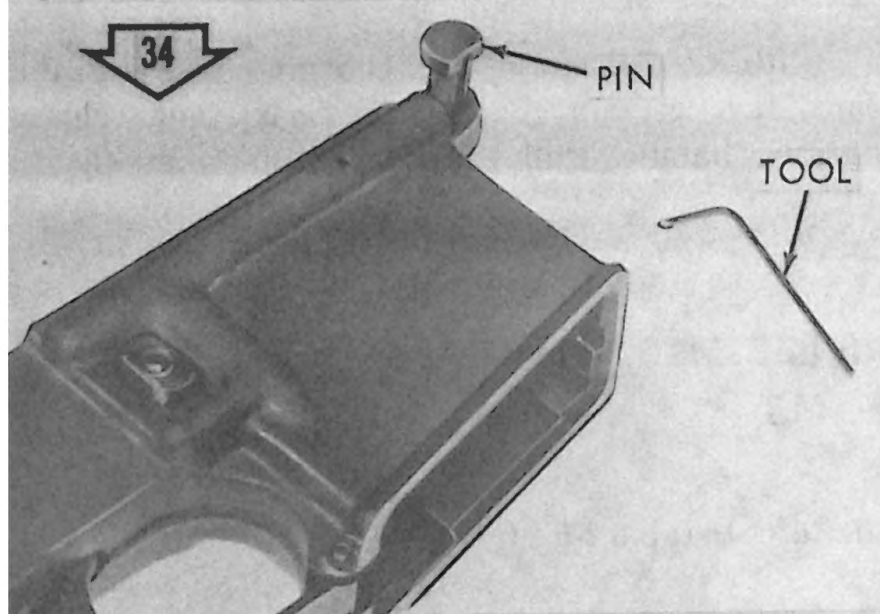
Figure 2-11. Disassembly/assembly of rifle. (7 of 8)



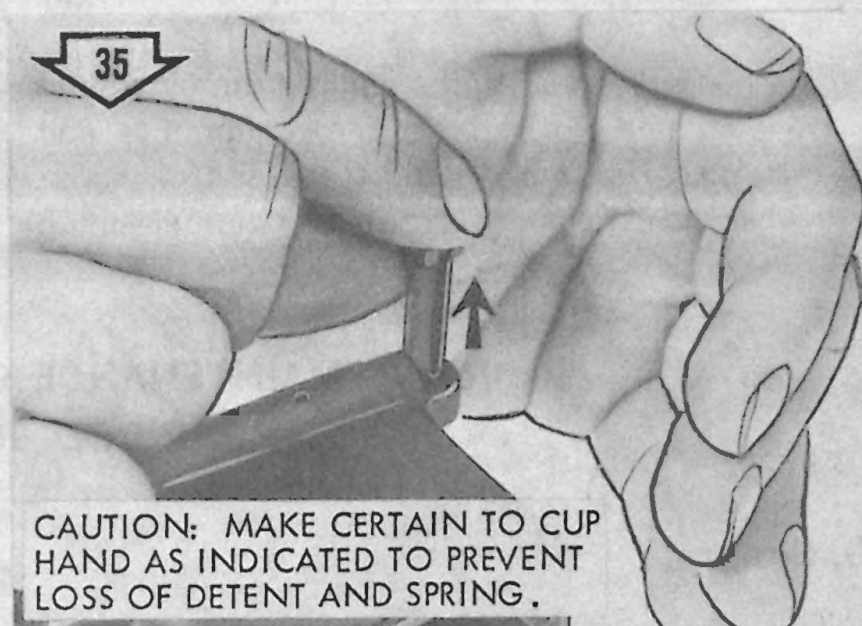
Tool for removal of detent pin.



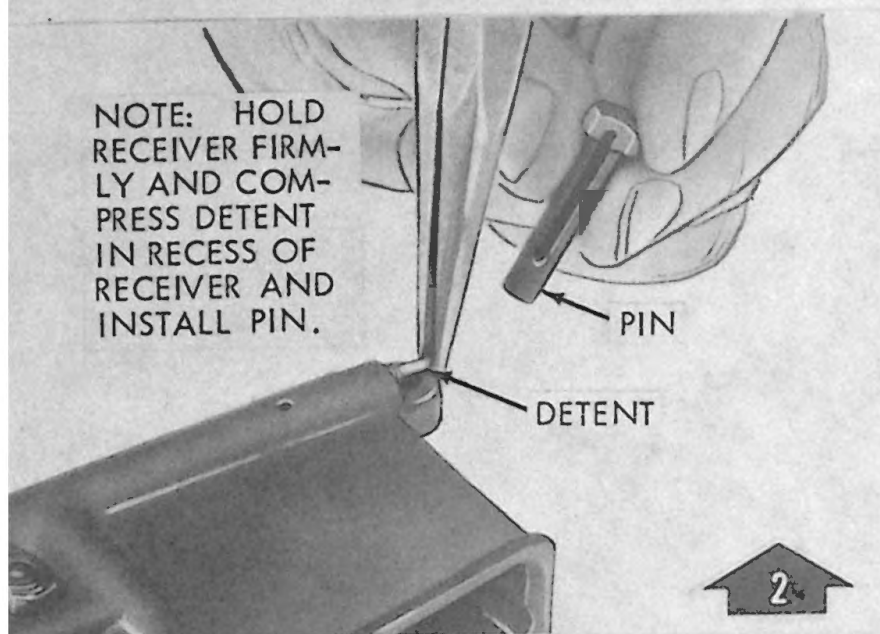
Inserting tool in slot of pin to compress detent.



Rotate pivot pin 1/4 turn and remove tool.



Remove pivot pin.



Install detent and pivot pin.



Install detent spring.

WE 68934

Figure 2-11. Disassembly/assembly of rifle. (8 of 8)



c. After organizational maintenance has been performed on the rifle a functional check must be made as indicated in (1) and (2) below.

**NOTE**

Pull the charging handle to the rear, make certain chamber is clear.

(1) Make a complete functional check by checking the function of the rifle while the selector lever is in the Safe, Semi and Auto position.

(2) The following sequence is used for a rapid and complete check. Any portion of the check may be used along to determine the operational condition of any specific fire selection.

**NOTE**

Disengage takedown pin and open receivers. Hammer shall be in the cock position.

(b) *Safe Position*. Pull trigger, hammer should not fall.

(b) *Semi Position*. Pull trigger, hammer should fall. Hold trigger to the rear, recock hammer and release trigger. Hammer should transfer from hammer hooks and disconnector to the hammer notch

and trigger nose.

(c) *Auto Position*. Pull trigger, hammer should fall. Hold trigger to the rear and recock the hammer. Upper hammer hook is now engaged with automatic sear. Hold trigger to rear, push forward on automatic sear. Hammer should fall. Hold trigger to the rear recock hammer, release trigger and push forward on automatic sear. Hammer should transfer from hammer hook and automatic sear to the hammer notch and trigger nose. Move the selector lever to "safe position", close receiver and engage takedown pin.

**CAUTION**

Failure to move selector lever to "safe" or "semi" position before closing receiver, will damage automatic sear.

(d) *Semi Position*. Pull charging handle to the rear. Make certain chamber is clear, then release charging handle. Pull the trigger, hammer should fall.

## **Section VI. MAINTENANCE OF RIFLES M16, M16A1 AND BIPOD, RIFLE, M3**

### **2-9. General**

a. This section contains the organizational maintenance procedures for the rifle and bipod.

b. Refer to table 2-6.

**NOTE**

The white arrows shown in figure 2-11 indicate disassembly and the black arrows assembly.

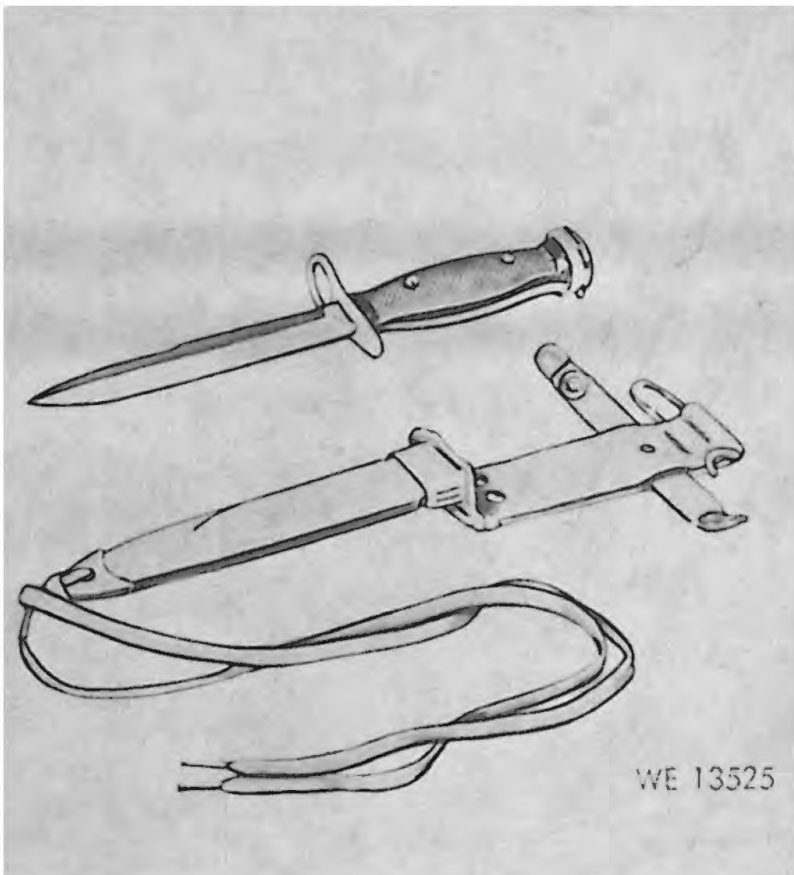
## CHAPTER 3

### MAINTENANCE OF MATERIEL USED IN CONJUNCTION WITH MAJOR ITEM

---

#### 3-1. General

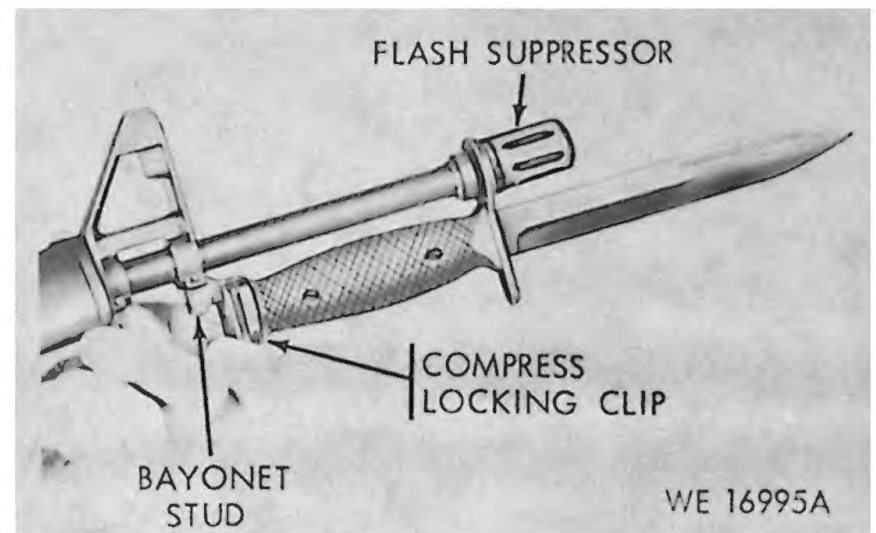
The Bayonet-Knife, M7 and Bayonet-Knife Scabbard, M8A1 (fig 3-1) and Grenade Launcher, 40-MM, M203, are used in conjunction with the major item. (Refer to TM 9-1010-221-14 for data pertaining to Grenade Launcher, M203.)



*Figure 3-1. Bayonet-Knife M7 and Bayonet-Knife Scabbard M8A1.*

#### 3-2. Installation and Removal

Refer to figure 3-2.



*Figure 3-2. Install/remove bayonet-knife.*

#### 3-3. Disassembly and assembly.

a. Refer to figure 3-3.

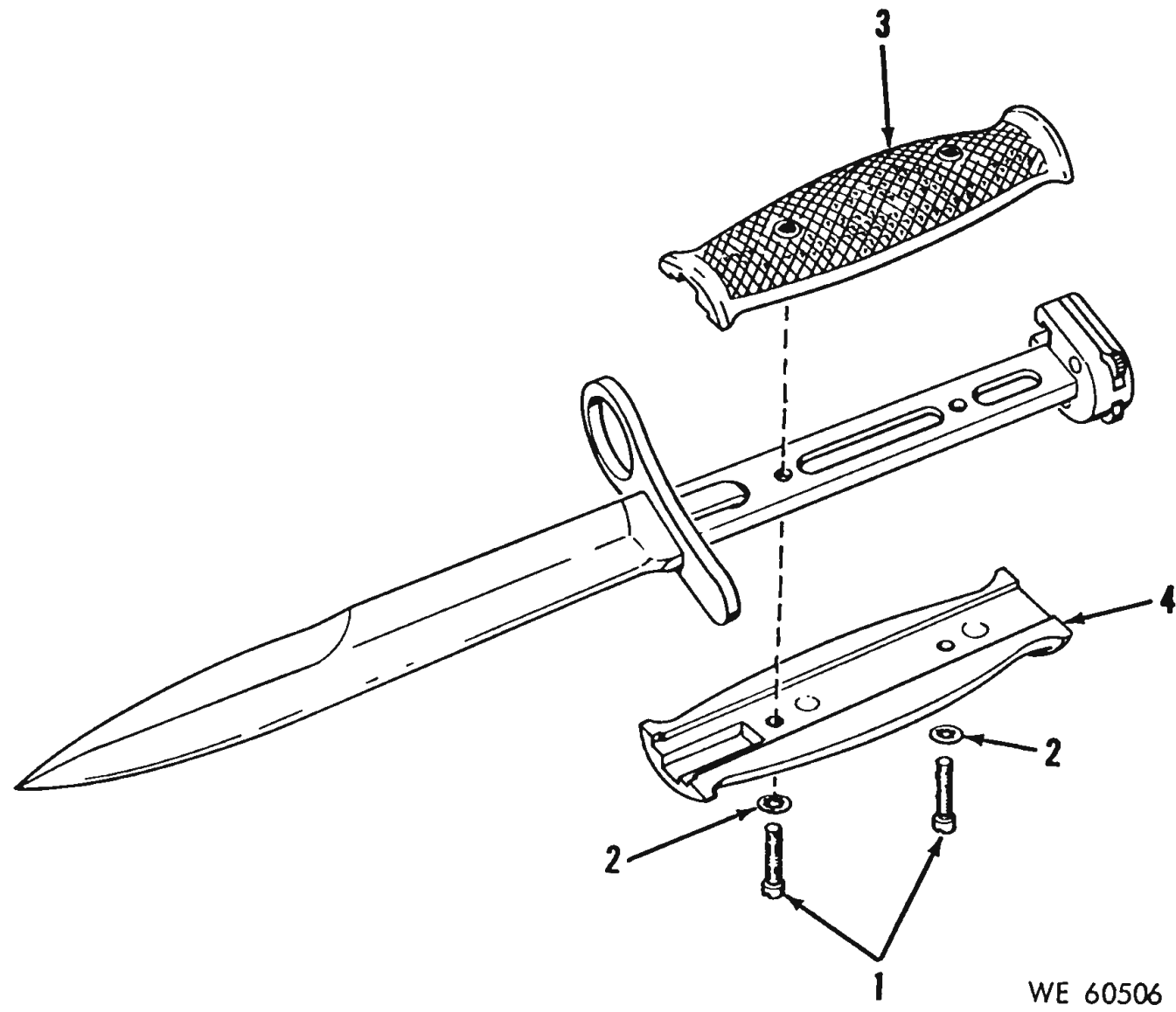


Figure 3-3. Bayonet-Knife M7—partial exploded view.

- b. Remove grip screws (1) and lock washers (2).
- c. Remove left-hand bayonet-knife grip (3) and right-hand bayonet-knife grip (4).

**NOTE**

Further disassembly is not authorized.

**3-4. Cleaning**

Refer to table 2-2.

**3-5. Inspection and Repair**

- a. Inspect grip screws for stripped threads. Re-

place if threads are stripped.

- b. Replace lock washers if missing or damaged.
- c. Inspect left-hand and right-hand bayonet-knife grips for cracks. Evacuate to direct support maintenance if cracked.
- d. If left hand grip threads are stripped, evacuate to direct support maintenance for replacement.
- e. Inspect for broken or damaged lace in M8A1 Scabbard. Replace if broken or damaged.

**NOTE**

Refer to TM 9-1005-237-15P for repair parts for Bayonet-Knife M7 and Scabbard M8A1.





## APPENDIX A REFERENCES

---

### A-1. Publication Indexes

The following indexes should be consulted frequently for the latest changes, revisions of reference given in this appendix and new publications relating to material covered in this manual.

Military Publications:

Index of Administrative Publications .....	DA Pam 310-1
Index of Army Films, Transparencies, GTA Charts, and Recordings .....	DA Pam 108-1
Index of Blank Forms .....	DA Pam 310-2
Index of Doctrinal, Training, and Organizational Publications .....	DA Pam 310-3
Index of Supply Catalogs and Supply Manuals (excluding types 7, 8, and 9) .....	DA Pam 310-6
Index of Technical Manuals, Technical Bulletins, Supply Manuals (types 7, 8, and 9), Supply Bulletins, and Lubrication Orders .....	DA Pam 310-4
U.S. Army Equipment Index of Modification Work Orders .....	DA Pam 310-7

### A-2. Forms

The following form pertains to this materiel.

Recommended Changes to DA Publications .....	DA Form 2028
--	--------------

### A-3. Other Publications

General

Logistics Management: The Army Maintenance Management Systems (TAMMS) .....	TM 38-750
---	-----------

Special Operations:

Basic Cold Weather Manual .....	FM 31-70
Administrative Storage of Equipment .....	TM 740-90-1

Related Publications:

Operator's Organizational, and DS Maintenance Manual Including Repair Parts and Special Tool Lists: Night Vision Sight Individual Served Weapons AN/PVS-2 and AN/PVS-2A .....	TM 11-5855-203-13
Organizational, DS, GS, and Depot Maintenance Manual Including Repair Parts and Special Tool Lists: Starlight Scope, Small, Hand-Held or Individual Weapons Mounted .....	TM 11-1090-268-15
Organizational, DS, GS, and Depot Maintenance Repair Parts, and Special Tools List: Bayonet-Knife M4, M5, M5A1, M6 and M7, With Bayonet-Knife Scabbard M8A1 .....	TM 9-1005-237-15P



## APPENDIX B

### MAINTENANCE ALLOCATION CHART

---

#### B-1. General

The maintenance allocation chart indicates specific maintenance operations performed at proper maintenance levels. Deviations from maintenance operations allocated in the chart is authorized only upon approval of the Commanding Officer.

#### B-2. Maintenance Functions

The maintenance allocation chart designates overall responsibility for the maintenance functions of an end item or assembly. Maintenance functions will be limited to and defined as follows:

- a. *Inspect.* To determine serviceability of an item by comparing its physical, mechanical, and electrical characteristics with established standards.
- b. *Test.* To verify serviceability and to detect electrical or mechanical failure by use of test equipment.
- c. *Service.* To clean, to preserve, to add fuel, lubricants, cooling agents, and air.
- d. *Adjust.* To rectify to the extent necessary to bring into proper operating range.
- e. *Align.* To adjust specified variable elements of an item to bring to optimum performance.
- f. *Calibrate.* To determine the corrections to be made in the readings of instruments or test equipment used in precise measurement. Consists of the comparison of two instruments, one of which is a certified standard of known accuracy, to detect and adjust any discrepancy in the accuracy of the instrument being compared with the certified standard.
- g. *Install.* To set up for use in an operational environment such as an emplacement, site, or vehicle.
- h. *Replace.* To replace unserviceable items with serviceable like items.
- i. *Repair.* Those maintenance operations necessary to restore an item to serviceable condition through correction of material damage or a specific failure. Repair may be accomplished at each category of maintenance.
- j. *Overhaul.* Normally, the highest degree of maintenance performed by the Army in order to minimize time work in process is consistent with quality and economy of operation. It consists of that maintenance necessary to restore an item to completely serviceable condition as prescribed by maintenance standards in technical publications for each item of equipment. Overhaul normally does not return an item to like new, zero mileage, or zero hour condition.
- k. *Rebuild.* The highest degree of materiel maintenance. It consists of restoring equipment as nearly as possible to new condition in accordance with original manufacturing standards. Rebuild is performed only when required by operational considerations or other paramount factors and then only at the depot maintenance category. Rebuild reduces to zero the hours or miles the equipment, or component thereof, has been in use.
- l. *Symbols.* The uppercase letter placed in the appropriate column indicates the lowest level at which that particular maintenance function is to be performed.

#### B-3. Explanation of Format.

Purpose and use of the format are as follows:

- a. *Column (1), Group Number.* Column 1 lists group numbers, the purpose of which is to identify components, assemblies, sub-assemblies and modules with the next higher assembly.
- b. *Column (2), Functional Group.* Column 2 lists the noun names of components, assemblies, subassemblies and modules on which maintenance is authorized.
- c. *Column (3), Maintenance Functions.* Lists the various categories of maintenance to be performed on the weapon.
- d. *Use of Symbols.* See section II, Maintenance Allocation Chart.
- e. *Column (4), Tools and Equipment.* This column shall be used to specify, by code, those tools and test equipment required to perform the designated function.
- f. *Column (5), Remarks.* Self-explanatory.

Section II. MAINTENANCE ALLOCATION CHART  
RIFLES, 5.56-MM, M16 AND M16A1 AND BIPOD, RIFLE, M3

(1)  Group No.	(2)  Functions group	(3) Maintenance functions											(4)  Tools and equipment	(5)  Remarks
		Inspect	Test	Service	Adjust	Align	Calibrate	Install	Replace	Repair	Overhaul	Rebuild		
	RIFLES, 5.56-MM, M16 AND M16A1													
1	Magazine Assembly	C	..	C	..	..	..	C	C	F				
2	Upper Receiver Group	C	..	C	..	..	..	C	..	O				
2a	Hand Guard Assembly	C	..	C	..	..	..	C	O	..				
2b	Barrel and Front Sight Assembly	C	..	C	..	..	..	F	F	O				
2c	Rear Sight	C	..	C	..	..	..	F	F	F				
3	Bolt Carrier Group	C	..	C	..	..	..	C	..	O				
4	Lower Receiver Group	C	..	C	C	..	..	F	..	O				
4a	Stock Assembly	C	..	C	..	..	..	O	O	O				
	BIPOD, RIFLE, M3													
1	Bipod	C	..	C	..	..	..	C	O	..				
2	Case	C	..	C	..	..	..	..	O	..				

LEGEND: C — Operator/Crew  
O — Organizational maintenance  
F — Direct support maintenance  
H — General support maintenance  
D — Depot maintenance

# APPENDIX C

## ORGANIZATIONAL MAINTENANCE REPAIR PARTS AND SPECIAL TOOLS LIST

### Section I. INTRODUCTION

#### C-1. Scope

This appendix lists repair parts and special tools required for the performance of organizational maintenance of Rifles M16 and M16A1 and Bipod, Rifle M3.

#### C-2. General

This repair parts and special tool list is divided into the following sections:

a. *Repair Parts — Section II.* A list of repair parts authorized at the organizational level for the performance of maintenance. It also includes parts which must be removed for replacement of the authorized parts. Parts lists are composed of functional groups in ascending numerical sequence with the parts in each group listed in figure and item number sequence.

b. *Special Tools List — Section III.* A list of special tools, test and support equipment authorized for the performance of maintenance at the organizational level.

c. *Federal Stock Number and Reference Number Index — Section IV.* A list in ascending numerical sequence, of all Federal stock numbers appearing in the listings, followed by a list, in alphabetic sequence, of all reference numbers appearing in the listings. Federal stock number and reference numbers are cross-referenced to each illustration figure and item number appearance.

#### C-3. Explanation of Columns

The following provides an explanation of columns in the tabular listings.

a. *Source, Maintenance, and Recoverability Codes (SMR).*

(1) *Source Code.* Indicates source for the listed item. Source codes are:

Code	Explanation
P	Repair parts, special tools and test equipment supplied from the GSA/DSA or Army supply system and authorized for use at indicated maintenance categories.
P2	Repair parts, special tools and test equipment which are procured and stocked for insurance purposes because the combat or military essentiality of the end item dictates that a minimum quantity be available in the supply system.
P9	Assigned to items which are NSA design controlled: unique repair parts, special tools, test, measuring, and diagnostic equipment, which are stocked and supplied by the Army COMSEC Logistic System and which are not subject to the provisions of AR 380-41.
P10	Assigned to items which are NSA design controlled: special tools, test, measuring, and diagnostic equipment for COMSEC support, which are accountable under the provisions of AR 380-41 and which are stocked and supplied by the Army COMSEC Logistic System.
M	Repair parts, special tools and test equipment which are not procured or stocked as such in the supply system but are to be manufactured at indicated maintenance levels.
A	Assemblies which are not procured or stocked as such, but are made up of two or more units. Such component units carry individual stock numbers and descriptions, are procured and stocked separately and can be assembled to form the required assembly at indicated maintenance categories.
X	Parts and assemblies that are not procured or stocked because the failure rate is normally below that of the application end item or component. The failure of such part or assembly should result in retirement of the end item from the supply system.
X1	Repair parts which are not procured or stocked. The requirement for such items will be filled by the next higher assembly or component.
X2	Repair Parts, special tools, and test equipment which are not stocked and have no foreseen mortality. The indicated maintenance category requiring such repair parts will attempt to obtain the parts through cannibalization or salvage. The item may be requisitioned, with exception data, from the end item manager for immediate use.

Code	Explanation
G	Major assemblies that are procured with PEMA funds for initial issue only as exchange assemblies at DS and GS level. These assemblies will not be stocked above DS and GS level or returned to depot supply level.

NOTE

Cannibalization or salvage may be used as a source of supply for any items source coded above except those coded X1 and aircraft support items as restricted by AR 700-42.

(2) *Maintenance Code*. Indicates the lowest category of maintenance authorized to install the repair part and/or use the special tool or test equipment for each application. Capabilities of higher maintenance categories are considered equal or better. Maintenance codes are:

Code	Explanation
O	Organizational Maintenance

(3) *Recoverability Code*. Indicates whether unserviceable items should be returned for recovery or salvage. Items not coded are nonrecoverable. Recoverability codes are:

Code	Explanation
R	Repair parts (assemblies and components), special tools and test equipment which are considered economically repairable at direct and general support maintenance levels. When the item is no longer economically repairable, it is normally disposed of at the GS level. When supply considerations dictate, some of these repair parts may be listed for automatic return to supply for depot level repair as set forth in AR 710-50. When so listed, they will be replaced by supply on an exchange basis.
S	Repair parts, special tools and test equipment, and assemblies which are economically repairable at DS and GS activities and which normally are furnished by supply on an exchange basis. When items are determined by a GSU to be uneconomically repairable, they will be evacuated to a depot for evaluation and analysis before final disposition.
T	High dollar value recoverable repair parts, special tools and test equipment which are subject to special handling and are issued on an exchange basis. Such items will be repaired or overhauled at depot maintenance activities only. No repair may be accomplished at lower levels.
U	Repair parts, special tools and test equipment specifically selected for salvage by reclamation units because of precious metal content, critical materials, high dollar value, or reusable casings or castings.

b. *Federal Stock Number*. Indicates the Federal stock number assigned to the item and will be used for requisitioning purposes.

c. *Description*. Indicates the Federal item name and a minimum description required to identify the item. The last line indicates the reference number followed by the applicable Federal Supply Code for Manufacturer (FSCM) in parentheses. The FSCM is used as an element in item identification to designate manufacturer or distributor or Government agency, etc., and is identified in SB 708-42. Items that are included in kits and sets are listed below the name of the kit or set with quantity of each item in the kit or set indicated in front of the item name.

d. *Unit of Measure (U/M)*. Indicates the standard or basic quantity by which the listed item is used in performing the actual maintenance function. This measure is expressed by a two-character alphabetical abbreviation, e.g., ea, in, pr, etc., and is the basis used to indicate quantities and allowances in subsequent columns. When the unit of measure differs from the unit of issue, the lowest unit of issue that will satisfy the required units of measure will be requisitioned.

e. *Quantity Incorporated in Unit*. Indicates the quantity of the item used in the breakout shown on the illustration figure, which is prepared for a functional group, subfunctional group, or an assembly. A "V" appearing in this column in lieu of a quantity indicates that no specific quantity is applicable, e.g., shims, spacers, etc.

f. *15-Day Organizational Maintenance Allowances*.

(1) The allowance columns are divided into four subcolumns. Items authorized for use are identified with an asterisk in the allowance column opposite the first appearance of the item. Subsequent appearances have the letters "REF" in the allowance columns.

(2) Subsequent changes to allowance lists will be accomplished in accordance with AR 735-35. In addition, the major commands will be authorized to approve reductions in stockage allowances (range and quantity). If additional items are considered necessary, recommendation should be forwarded to Commanding General, U.S.

Army Weapons Command, ATTN: AMSWE-MAP, Rock Island, Illinois 61201, for exception or revision to the allowance list.

g. *1-Year Allowances Per 100 Equipments/Contingency Planning Purposes.* This column indicates opposite the first appearance of each item the authorization for distribution and contingency planning purposes. The range of items indicates the authorization of all authorized items required to provide for adequate support of 100 equipments for one year. Subsequent appearances of the same item will have the letters "REF" in this column.

- h. *Illustration.* This column is divided as follows:
- (1) *Figure Number.* Indicates the figure number of the illustration on which the item is shown.
  - (2) *Item Number.* Indicates the callout number used to reference the item on the illustration.

C-4. Special Information

Action change codes indicated in the left-hand margin of the listing page denote the following:

N — Indicates an added item.

C — Indicates a change in data.

R — Indicates a change in FSN only.

C-5. How to Locate Repair Parts

- a. When Federal stock number or reference number is unknown:
- (1) *First.* Using the table of contents, determine the functional group within which the repair part belongs. This is necessary since illustrations are prepared for functional groups and listings are divided into the same group.
  - (2) *Second.* Find the illustration covering the functional group to which the repair part belongs.
  - (3) *Third.* Identify the repair part on the illustration and note the illustration figure and item number of the repair part.
  - (4) *Fourth.* Using the Repair Parts Listing, find the functional group to which the repair part belongs and locate the illustration figure and item number noted on the illustration.
- b. When Federal stock number or reference number is known:
- (1) *First.* Using the index of Federal Stock Numbers and Reference Numbers find the pertinent Federal Stock number or reference number. This index is in ascending FSN sequence followed by a list of reference numbers in ascending alphameric sequence, cross-referenced to the illustration figure number and item number.
  - (2) *Second.* Using the Repair Part Listing, find the functional group of the repair part and the illustration figure number and item number referenced in the Index of Federal Stock Numbers and Reference Numbers.

C-6. Abbreviations

Abbreviation	Explanation
cres	corrosion-resistant steel
dia	diameter
dld-f-lkg	drilled for locking
fil-hd	fillister head
id	inside diameter
lg	length
LH	left hand
max	maximum
nom	nominal
od	outside diameter
pass-fin	passivated-finish
phos-ctd	phosphate coated
RH	right hand
S	steel
thk	thick
w/	with (comb form)

## Section II. REPAIR PARTS LIST

TM 9-1005-249-20

(1) Source maint and recov code			(2) Federal stock No.	(3) Description		(4) Unit of meas	(5) Qty inc in unit	(6) 15 day organizational maintenance alw				(7) Illustration	
(a) Source	(b) Maint	(c) Recov		Reference Number & Mfr Code	Usable on Code			(a) 1-5	(b) 6-20	(c) 21-50	(d) 51-100	(a) Fig. No.	(b) Item No.
N	P	C	1005-921-5004	REPAIR PARTS FOR: RIFLES, 5.56-MM, M16 AND M16A1 MAJOR GROUPS AND ASSEMBLIES		EA	1	*	*	*	*	B-1	1
	A	O	.....	MAGAZINE ASSEMBLY: (30 CARTRIDGE CAPACITY) 8448670 (19204)		EA	1	*	*	*	*	B-1	2
	A	O	.....	UPPER RECEIVER GROUP:		EA	1	*	*	*	*	B-1	3
	A	O	.....	BOLT CARRIER GROUP:		EA	1	*	*	*	*	B-1	4
C	P	O	1005-056-2252	LOWER RECEIVER GROUP: UPPER RECEIVER GROUP		EA	1	*	*	*	*	B-2	1
	P	O	1005-056-2251	GUARD, HAND GUN: R. H. BLACK 8448561 (19204)		EA	1	*	*	*	*	B-2	2
	P	O	1005-017-9546	GUARD, HAND GUN: L. H. BLACK 8448557 (19204)		EA	1	*	*	*	*	B-2	3
	P	O	5315-058-6078	HANDLE, CHARGING: BOLT CARRIER 8448517 (19204)		EA	1	*	*	*	*	B-2	4
C	P	O	1005-017-9543	PIN, SPRING: TUBULAR, SLOTTED, S, PHOS-CTD, 1/8 NOM DIA, 7/16 LG MS 16562-126 (96906)		EA	1	*	*	*	*	B-2	5
	P	O	5315-999-1509	SWIVEL, GUN SLING: 84488571 (19204)		EA	1	*	*	*	*	B-3	1
	P	O	1005-017-9547	BOLT CARRIER GROUP PIN, FIRING, PIN RETAINING: 8448504 (19204)		EA	1	*	*	*	*	B-3	2
	P	O	1005-992-7294	PIN, FIRING: 8448503 (19204)		EA	1	*	*	*	*	B-3	3
C	P	O	1005-992-7290	PIN, BOLT CAM: 8448502 (19204)		EA	1	*	*	*	*	B-3	5
	P	O	1005-992-7288	PIN, EXTRACTOR: 8448513 (19204)		EA	1	*	*	*	*	B-3	6
	P	O	1005-992-7289	EXTRACTOR, SMALL ARMS CARTRIDGE: 8448512 (19204)		EA	1	*	*	*	*	B-3	7
	P	O	5315-514-2358	SPRING, EXTRACTOR: 8448514 (19204)		EA	1	*	*	*	*	B-3	8
C	P	O	1005-992-7291	PIN, SPRING: TUBULAR, SLOTTED, S, PHOS-CTD, 1/16 NOM DIA, 7/16 LG MS 16562-99 (96906)		EA	1	*	*	*	*	B-3	9
	P	O	1005-992-7292	EJECTOR, SMALL ARMS CARTRIDGE: 8448515 (19204)		EA	1	*	*	*	*	B-3	10
C	P	O	1005-992-7292	SPRING, EJECTOR AND SELECTOR LEVER DETENT: 8448516 (19204)		EA	1	*	*	*	*	B-3	10



## Section II. REPAIR PARTS LIST — Continued

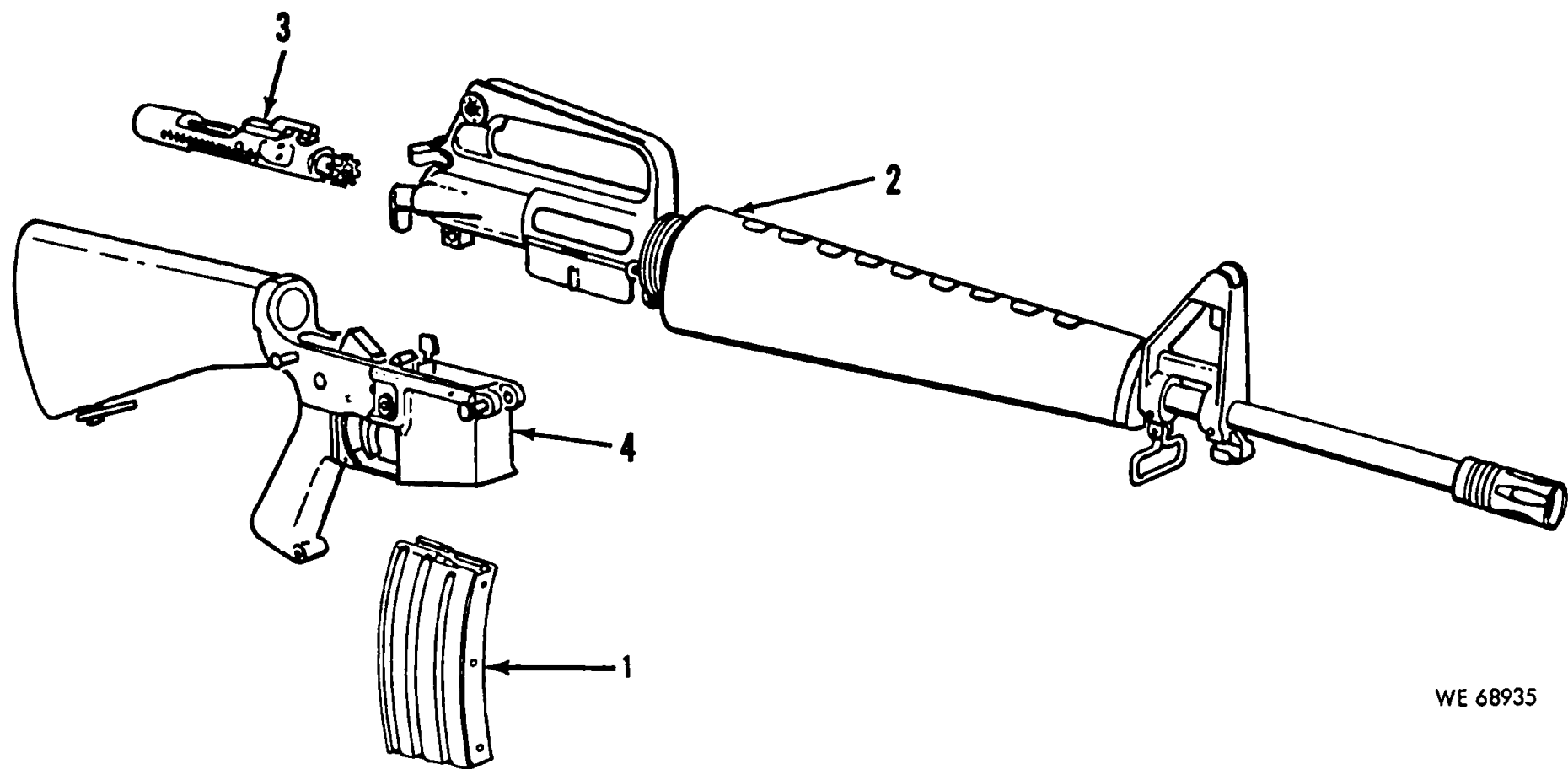
(1) Source maint and recov code			(2) Federal stock No.	(3) Description		(4) Unit of meas	(5) Qty inc in unit	(6) 15 day organizational maintenance alw				(7) Illustration	
(a) Source	(b) Maint	(c) Recov		Reference Number & Mfr Code	Usable on Code			(a) 1-5	(b) 6-20	(c) 21-50	(d) 51-100	(a) Fig. No.	(b) Item No.
	P	O	5305-912-7296	<b>LOWER RECEIVER GROUP</b>		HD	1	*	*	*	*	B-4	1
	P	O	5310-527-3634	SCREW, MACHINE: FIL-HD, DLD-F-LKG WIRE, CRES. PASS-FIN, ¼-28NF-2A, 1-¼ LG MS 35276-284 (96906)		HD	1	*	*	*	*	B-4	2
	P	O	1005-056-2250	WASHER, LOCK: FLAT, EXT-TEETH, S, PASS-FIN, ¼ NOM SIZE, 0.267 MAX ID, 0.510 MAX OD, 0.028 MAX THK MS 35335-61 (96906)		EA	1	*	*	*	*	B-4	3
C	P	O	1005-992-7292	GRIP, PISTOL: BLACK 8448632 (19204)		EA	1	REF	REF	REF	REF	B-4	4
C	P	O	1005-992-6667	SPRING: EJECTOR AND SELECTOR LEVER DETENT: 8448516 (19204)		EA	1	*	*	*	*	B-4	5
C	P	O	1005-992-6657	DETENT, SELECTOR LEVER: 8448631 (19204)		EA	1	*	*	*	*	B-4	6
N	P	O	1005-489-0369	SCREW, BUTT CAP: 8448627 (19204)		EA	1	*	*	*	*	B-4	7
C	P	O	1005-017-9549	BUTTSTOCK ASSEMBLY, STOWAGE: 8448650 (19204)		EA	1	*	*	*	*	B-4	8
	P	O	5315-058-6078	STOCK ASSEMBLY, MOLDED: W/SWIVEL, BLACK (OLD STYLE) 8448622 (19204)		EA	1	REF	REF	REF	REF	B-4	9
C	P	O	1005-017-9543	PIN, SPRING: TUBULAR, SLOTTED, S, PHOS-CTD, 1/8 NOM DIA, 7/16 DIA MS 16562-126 (96906)		EA	1	REF	REF	REF	REF	B-4	10
C	P	O	1005-992-6655	SWIVEL, GUN SLING: 8448571 (19204)		EA	2	*	*	*	*	B-4	11
C	P	O	1005-992-6654	SPRING, DETENT, TAKEDOWN PIN: 8448586 (19204)		EA	2	*	*	*	*	B-4	12
C	P	O	1005-992-6653	DETENT, TAKEDOWN PIN: 8448585 (19204)		EA	1	*	*	*	*	B-4	13
C	P	O	1005-017-9537	PIN, TAKEDOWN: 8448584 (19204)		EA	1	*	*	*	*	B-4	14
	P	O	1005-937-2250	PIN, PIVOT: LOWER RECEIVER 8448621 (19204)		EA	1	*	*	*	*	B-5	6
	P	O	1005-050-6357	ROD, CLEANING SMALL ARMS, M11E3 SWAB HOLDER SECTION, SMALL ARMS CLEANING ROD: 11566327 (19204)		EA	3	*	*	*	*	B-5	7
	P	O		ROD SECTION, CLEANING, SMALL ARMS— 8436775 (19204)		EA	3	*	*	*	*	B-5	7

TM 9-1005-249-20

## Section III. SPECIAL TOOLS LIST

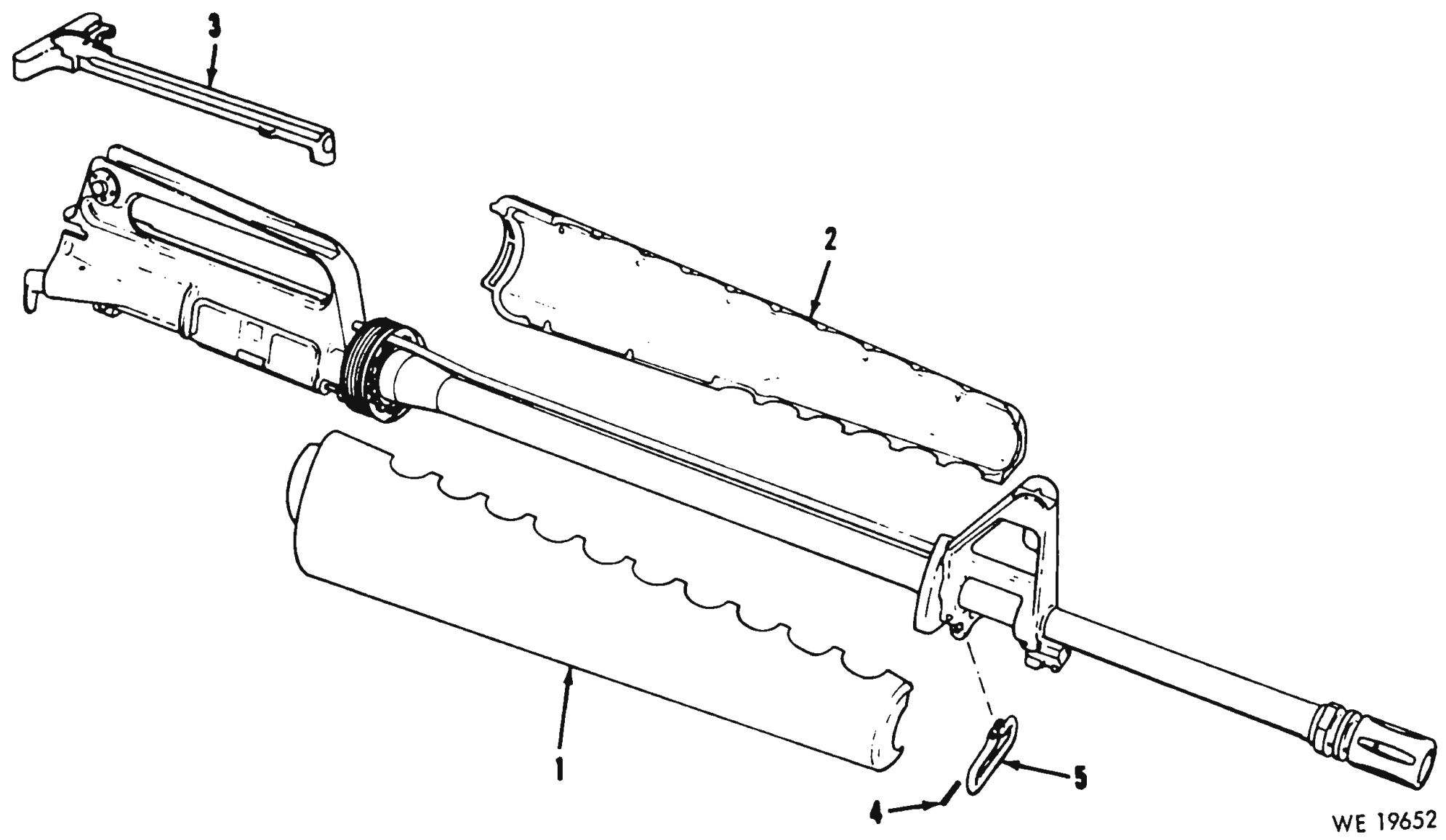
TM 9-1005-249-20

(1) Source maint and recov code			(2) Federal stock No.	(3) Description  Reference Number & Mfr Code Usable on Code	(4) Unit of meas	(5) Qty inc in unit	(6) 15 day organizational maintenance alw				(7) Illustration	
(a) Source	(b) Maint	(c) Recov					(a) 1-5	(b) 6-20	(c) 21-50	(d) 51-100	(a) Fig. No.	(b) Item No.
N	P	C	1005-089-3994	TOOLS AND EQUIPMENT AUTHORIZED FOR UNIT REPLACEMENT ROD, CLEANING, SMALL ARMS: M11E3 8436777 (19204)	EA		*	2	4	8	B-5	5
	P	C	1005-403-5804	CASE, SMALL ARMS ACCESSORIES: 8448751 (19204)	EA		*	*	*	*	B-5	8
	P	C	1005-494-6602	BRUSH, CLEANING, SMALL ARMS: 8448462 (19205)	EA		*	*	*	*	B-5	4
	P	C	1005-654-4058	SLING, SMALL ARMS: M1 WEBBING 6544058 (19204)	EA		*	*	1	2	B-5	9
	P	C	1005-903-1296	BRUSH, CLEANING, SMALL ARMS: BORE 11686340 (19205)	EA		*	2	4	8	B-5	1
	P	C	1005-999-1435	BRUSH, CLEANING, SMALL ARMS: CHAMBER 8432358 (19204)	EA		*	2	4	8	B-5	2
N	P	O	1005-193-8306	TOOLS AND EQUIPMENT BAG, PROTECTIVE, CARTRIDGE MAGAZINE: (500 PER BOX) (FOR 30 ROUND MAGAZINE) 8448464 (19204)	BX		*	1	3	6	B-6	2
N	P	O	1005-242-5687	BOTTLE ASSEMBLY, CYLINDRICAL: (5 OZ CAP) 8448444 (19204)	EA		*	*	1	1	B-5	3
	P	O	1005-912-4248	SWAB, SMALL ARMS CLEANING: (1000 PER PKG) 11686408 (19204)	PG		*	1	2	4	B-6	3
	P	O	5340-880-7666	CAP, PROTECTIVE, DUST AND MOISTURE SEAL: MUZZLE 8445067 (19204) THE FOLLOWING ITEM IS ISSUED ON REQUISITIONED ONLY BY SPECIAL AUTHORIZATION OF THE UNIT COMMANDER	EA		3	11	25	47	B-6	1
	P	O	1005-714-9749	SLING, SMALL ARMS: 7149749 (19204) THE FOLLOWING ITEM IS AUTHORIZED AND ISSUED ONLY BY SPECIAL AUTHORIZATION OF THE UNIT COMMANDER FOR ZERO DEGREE OPERATION	EA		*	*	*	*	B-7	1
	P	O	1005-791-3377	CASE, LUBRICANT: 7790995 (19204)	EA		*	*	*	*	B-7	2



WE 68935

Figure B-1. Major groups and assemblies.



WE 19652

Figure B-2. Upper receiver group.

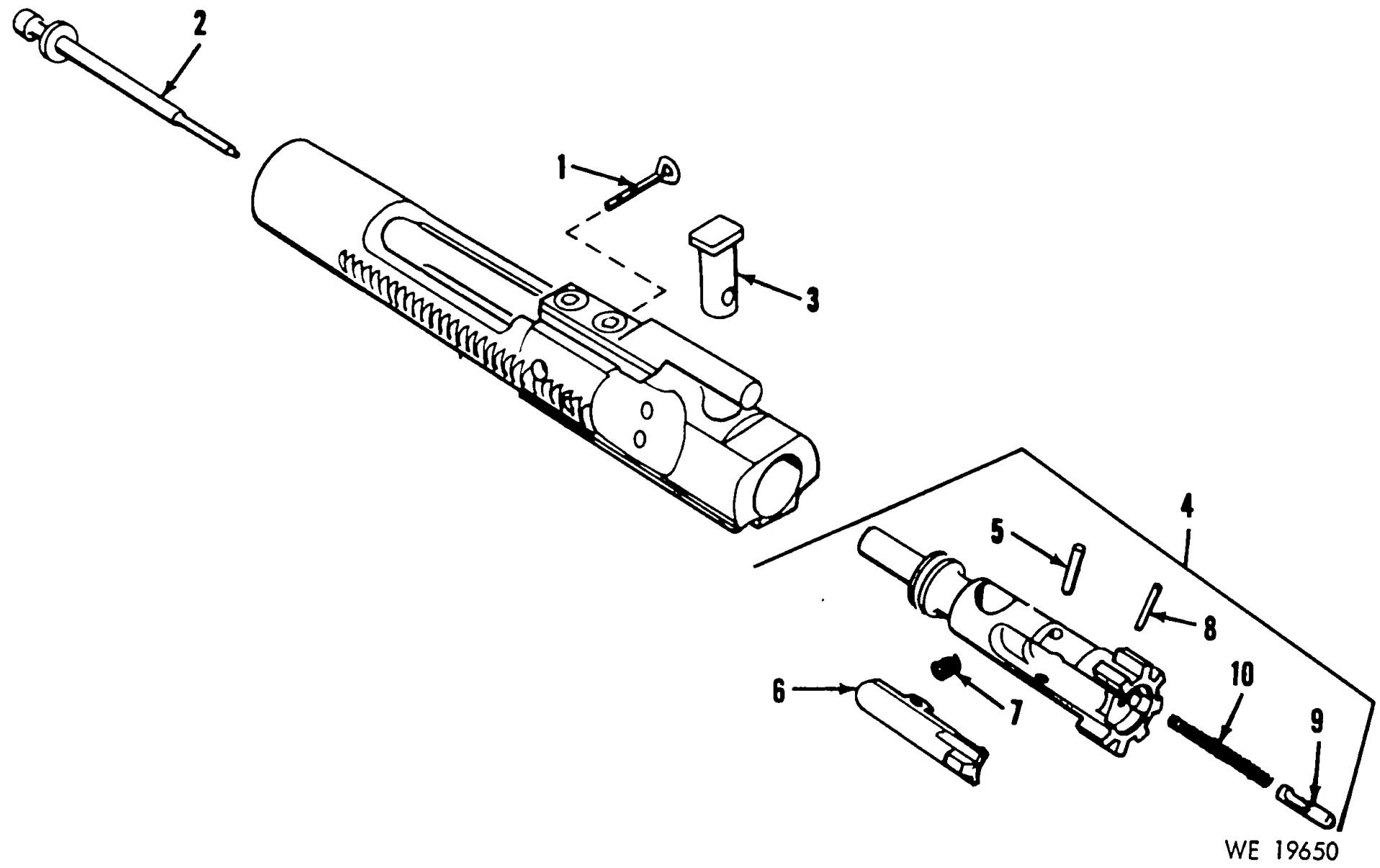
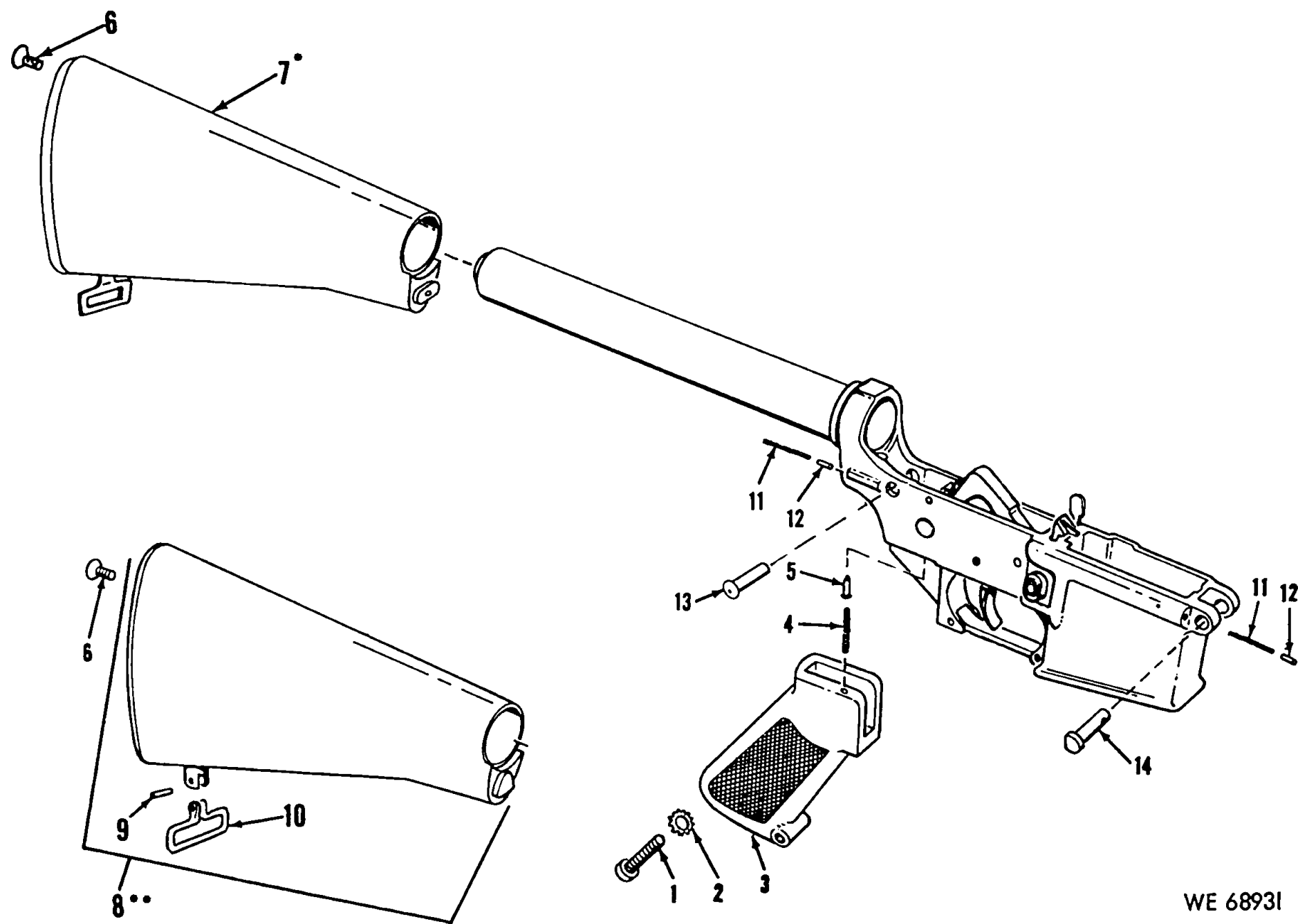


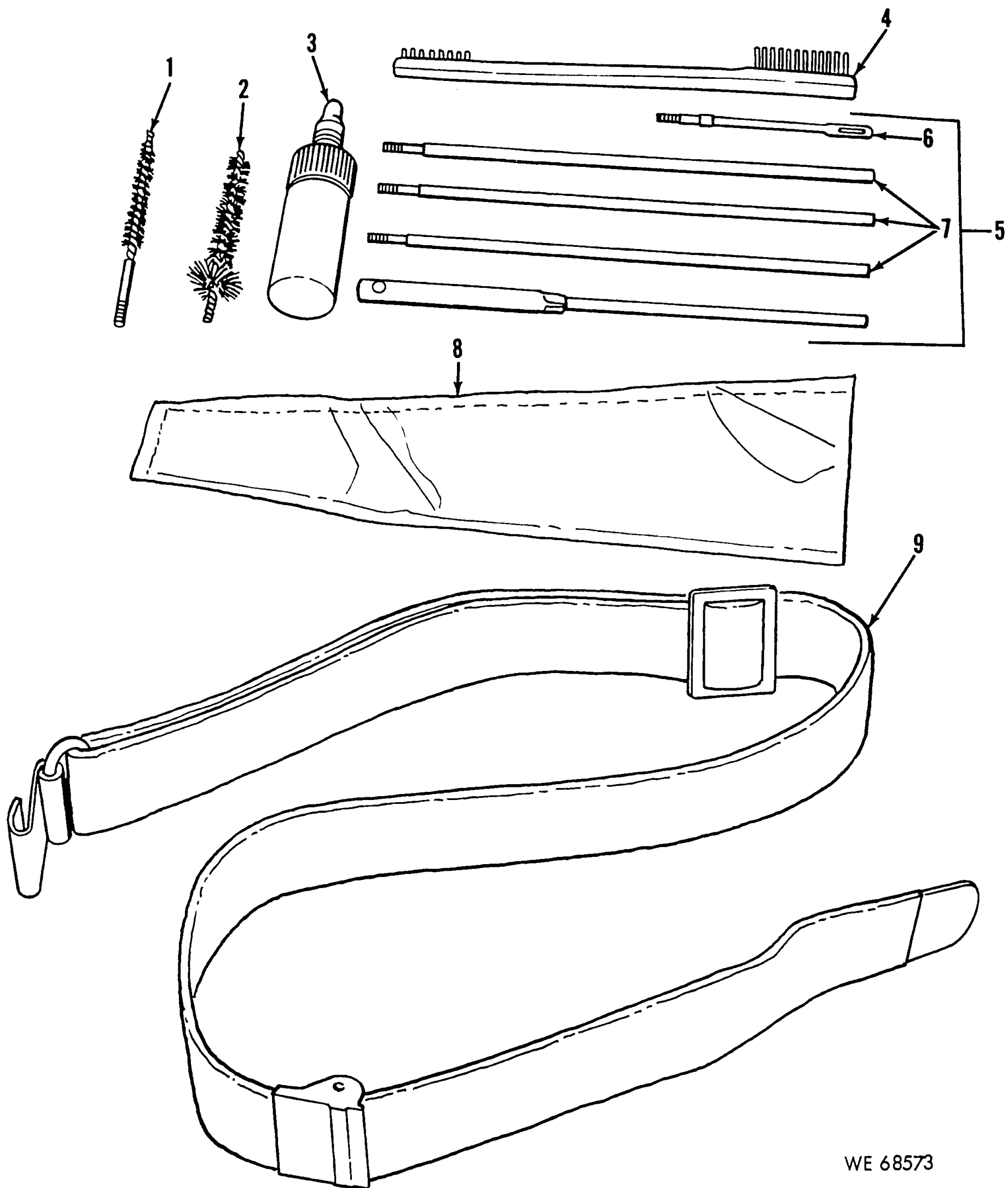
Figure B-3. Bolt carrier group.



WE 6893I

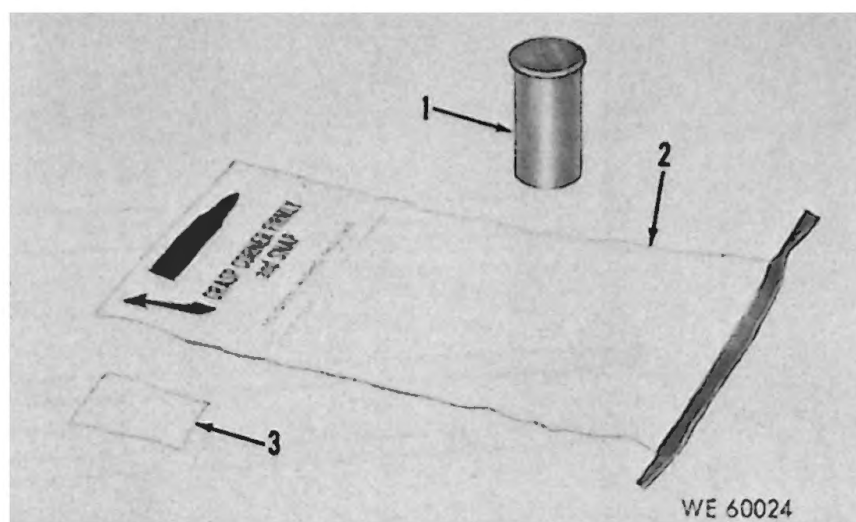
- NEW STOCK ASSEMBLY
- OLD STOCK ASSEMBLY

Figure B-4. Lower receiver group.



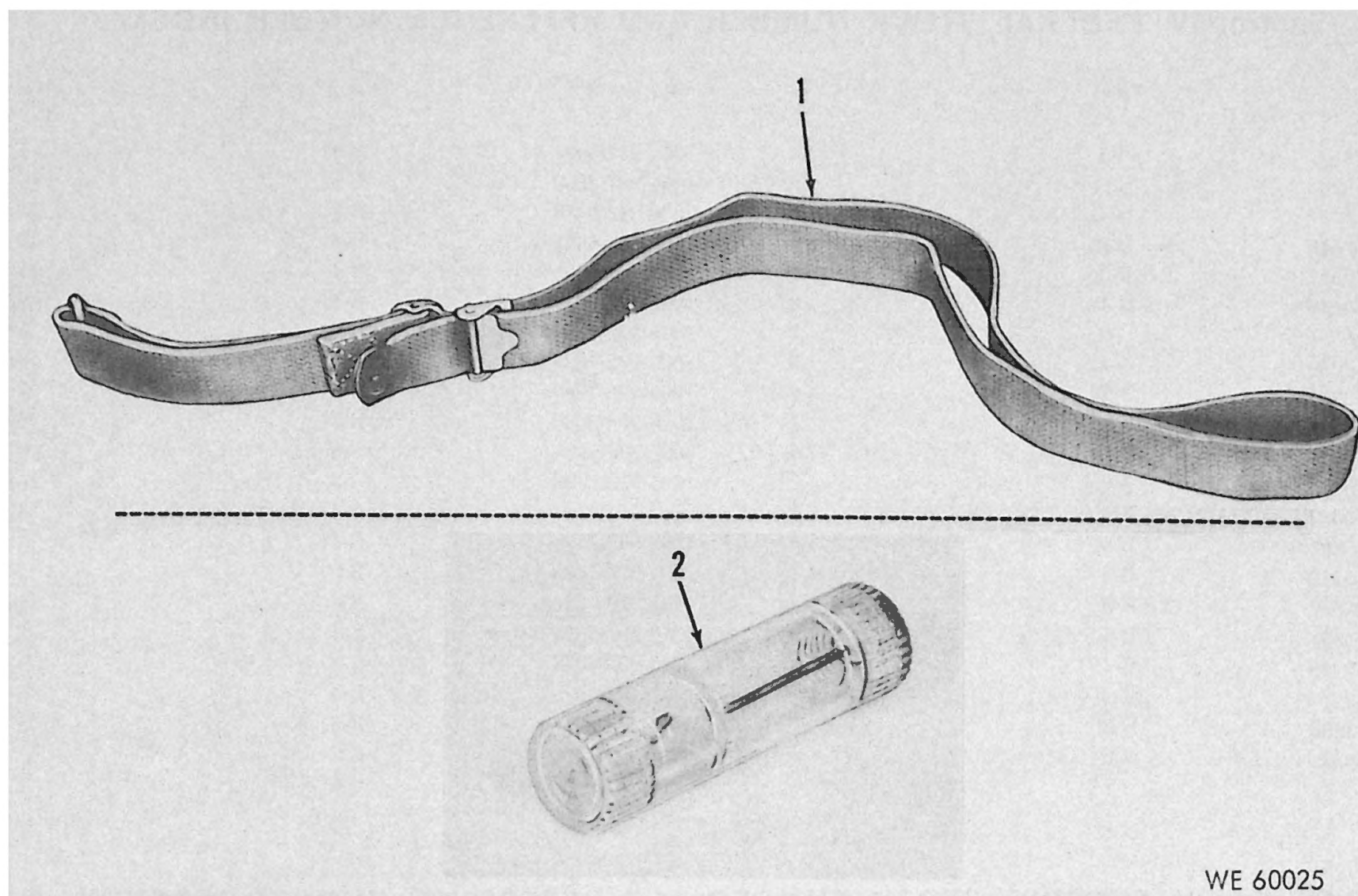
WE 68573

Figure B-5. Tools and equipment.



*Figure B-6. Tools and equipment.*





*Figure B-7. Tools and equipment.*

Section IV. FEDERAL STOCK NUMBER AND REFERENCE NUMBER INDEX

<i>Stock Number</i>	<i>Figure No.</i>	<i>Item No.</i>	<i>Stock Number</i>	<i>Figure No.</i>	<i>Item No.</i>
1005-017-9537	B-4	14	1005-921-5004	B-1	1
1005-017-9543	B2	5	1005-937-2250	B-5	6
	B-4	10	1005-992-6653	B-4	13
1005-017-9546	B-2	3	1005-992-6654	B-4	12
1005-017-9547	B-3	2	1005-992-6655	B-4	11
1005-017-9549	B-4	8	1005-992-6657	B-4	6
1005-050-6357	B-5	7	1005-992-6667	B-4	5
1005-056-2250	B-4	3	1005-992-7288	B-3	6
1005-056-2251	B-2	2	1005-992-7289	B-3	7
1005-056-2252	B-2	1	1005-992-7290	B-3	5
1005-089-3994	B-5	5	1005-992-7291	B-3	9
1005-193-8306	B-6	2	1005-992-7292	B-3	10
1005-242-5687	B-5	3		B-4	4
1005-403-5804	B-5	8	1005-992-7294	B-3	3
1005-489-0369	B-4	7	1005-999-1435	B-5	2
1005-494-6602	B-5	4	5305-912-7296	B-4	1
1005-654-4058	B-5	9	5310-527-3634	B-4	2
1005-714-9749	B-7	1	5315-058-6078	B-2	4
1005-791-3377	B-7	2		B-4	9
1005-903-1296	B-5	1	5315-514-2358	B-3	8
1005-912-4248	B-6	3	5315-999-1509	B-3	1
			5340-880-7666	B-6	1

Section IV. FEDERAL STOCK NUMBER AND REFERENCE NUMBER INDEX  
(Continued)

<i>Reference No.</i>	<i>Mfg Code</i>	<i>Fig No.</i>	<i>Item No.</i>	<i>Reference No.</i>	<i>Mfg Code</i>	<i>Fig No.</i>	<i>Item No.</i>
MS 16562-99	96906	B-3	8	8448615	10204	B-3	10
MS 16562-126	96906	B-2	4			B-4	4
		B-4	9	8448517	19204	B-2	3
MS 35276-284	96906	B-4	1	8448557	19204	B-2	2
MS 35335-61	96906	B-4	2	8448561	19204	B-2	1
6544058	19204	B-5	9	8448571	19204	B-2	5
7149749	19204	B-7	1			B-4	10
77909995	19204	B-7	2	8448584	19204	B-4	13
8432358	19204	B-5	2	8448585	19204	B-4	12
8436775	19204	B-5	7	8448586	19204	B-4	11
8436777	19204	B-5	5	8448621	19204	B-4	14
8445067	19204	B-6	1	8448622	19204	B-4	8
8448444	19204	B-5	3	8448627	19204	B-4	6
8448462	19204	B-5	4	8448631	19204	B-4	5
8448464	19204	B-6	2	8448632	19204	B-4	3
8448502	19204	B-3	3	8448670	19204	B-1	1
8448503	19204	B-3	2	8448650	19204	B-4	7
8448504	19204	B-3	1	8448751	19204	B-5	8
8448512	19104	B-3	6	11686327	19204	B-5	6
8448513	19204	B-3	5	11686340	19205	B-5	1
8448514	19204	B-3	7	11686408	19204	B-6	3
8448515	19204	B-3	9				

By the Order of the Secretary of the Army:

W. C. WESTMORELAND,  
*General, United States Army,*  
*Chief of Staff.*

Official:

VERNE L. BOWERS,  
*Major General, United States Army,*  
*The Adjutant General.*

**Distribution:**

To be distributed in accordance with DA Form 12-40 (qty rqr block no. 136) Organizational Maintenance requirements for Rifle, 5.56-MM, M16 and M16A1.

☆ U.S. GOVERNMENT PRINTING OFFICE: 1971-754020/5047

**TM 9-1095-249-20 - RIFLES, 5.56-MM, M16A1, M16 AND BIPOD, RIFLE M3 — 1971**