

ARMY TM 9-1005-213-23
MARINE CORPS TM 02498A-23/2
AIR FORCE TO 11W2-213-172
NAVY SW 361-AC-MMM-010

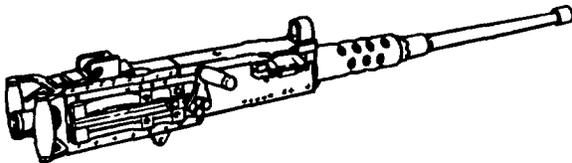
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dated 8 July 1968

TECHNICAL MANUAL

UNIT AND DIRECT SUPPORT MAINTENANCE MANUAL

FOR

MACHINE GUNS, CALIBER .50; BROWNING, M2,
HEAVY BARREL
FLEXIBLE, W/E (1005-00-322-9715) (EIC: 4AG)
M48 TURRET TYPE (1005-00-957-3893) (EIC: 4BB)
SOFT MOUNT (1005-01-343-0747) (NAVY)
FIXED TYPE RIGHT HAND FEED (1005-00-122-9339) (NAVY)
FIXED TYPE LEFT HAND FEED (1005-00-122-9368) (NAVY)



**M2 MACHINE GUN,
FLEX TYPE**



**M2 MACHINE GUN,
M48 TURRET TYPE**

PCN 184 024981 00

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WARNING

All M2 machine guns must be inspected and gaged at least once annually for safety and serviceability. Air Force users refer to inspection requirements in Air Force Regulation (AFR) 50-36 and Air Force Pamphlet (AFP) 50-63, Volume 1.

All Army Reserve and Army National Guard M2 machine guns must be inspected and gaged at least once every 2 years, after the initial inspection/gaging procedures have been accomplished. This 2 year interval may be maintained unless preventive maintenance checks and services (PMCS) or other physical evidence indicates that an individual unit's M2 machine guns require inspection/gaging at a more frequent interval. If it is determined that a yearly inspection is necessary for an individual unit, only that unit will be affected. This will not affect other units in regard to the interval of inspection.

Hearing protection must be worn when firing this weapon.

Safety glasses, hearing protection, and protective clothing will be worn when repairing, firing, or cleaning weapon.

Be sure to clear weapon before disassembling, cleaning, inspecting, transporting, or storing. Clearing consists of unloading the machine gun and visually inspecting weapon and chamber to ensure all rounds have been removed. Do not release the bolt or press the trigger.

Headspace should be checked and adjusted before firing weapon, after assembling weapon, and after replacing barrel.

Improper headspace and timing can cause malfunctions, damage to the gun, and injury to personnel.

When bolt latch release and trigger are both held down, machine gun will fire automatically (Flex only).

Immediate action should be applied to a hot weapon within 10 seconds (cook-off). If a round is not removed within 10 seconds, wait 15 minutes. Keep weapon trained on the target.

Never open the cover on a hot weapon. An open cover cook-off could occur and result in serious injury or death.

When machine gun has been in action, clear machine gun before anyone moves in front of the muzzle.

Do not keep live ammunition near work/maintenance area.

Do not expose ammunition to the direct rays of the sun.

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Do not oil or grease ammunition. Oiled cartridges will produce excessive chamber pressure.

Dry cleaning solvent (SD) is flammable. Do not clean parts near an open flame or in a smoking area. Dry cleaning solvent evaporates quickly and has a drying effect on the skin. When used without protective gloves, solvent may cause irritation to or cracking of the skin.

Never attempt to lift machine gun by the backplate group assembly in the upright position.

Do not close cover when bolt is held rearward as damage may occur when bolt goes forward.

Never remove the backplate assembly from any weapon until the chamber has been cleared.

Do not remove the backplate unless the bolt is in forward position,

To avoid injury to your eyes, use care when installing and removing spring-loaded parts.

Do not attempt to charge machine gun without the backplate assembled to machine gun. Stand to one side when removing backplate.

Carefully remove bolt latch assembly; the spring is under heavy tension and could cause injury if released accidentally.

Heat protective mitten should be used when barrel is hot.

FIRST AID

For information on FIRST AID, see FM 21-11.

TECHNICAL MANUALS
No. 9-1005-213-23
No. 02498A-23/2
TECHNICAL ORDER
No. 11W2-213-172
No. SW 361-AC-MMM-010

* ARMY TM 9-1005-213-23
*MARINE CORPS TM 02498A-23/2
* AIR FORCE TO 11W2-213-172
* NAVY SW 361-AC-MMM-010
DEPARTMENTS OF THE ARMY,
US MARINE CORPS, AIR FORCE,
AND NAVY
Washington D. C., 30 August 1994

Unit and Direct Support Maintenance Manual

for

MACHINE GUNS, CALIBER .50; BROWNING, M2,
HEAVY BARREL
FLEXIBLE, W/E (1005-00-322-9715) (EIC: 4AG)
M48 TURRET TYPE (1005-00-957-3893) (EIC: 4BB)
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FIXED TYPE LEFT HAND FEED (1005-00-122-9368) (NAVY)

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistakes, or if you know of a way to improve the procedures, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Form 2028-2, located in the back of this manual, direct to: Commander, US Army Armament, Munitions and Chemical Command, ATTN: AMSMC-MAS, Rock Island, IL 61299-6000. Marine Corps users submit NAVMC 10722 to: Commander, Marine Corps Logistics Bases, (Code 850), 814 Radford Blvd, Albany, GA 31704-1128. Air Force users submit ATFO Form 22, Technical Order System Publication Improvement Report and Reply, to: WR-ALC/TILT, Robins AFB, GA 31098-5330. Navy users submit Form TMDER NAVSEA 9086/10 to: Commander, Code 20, NAVSURFWARCENDIV, 300 Highway 361, Crane, IN 47522-5001. A reply will be furnished to you.

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* This manual supersedes TM 9-1005-213-25, 8 July 1968, including all changes. This manual supersedes NAVSEAOP4130, July 1972, including all changes.

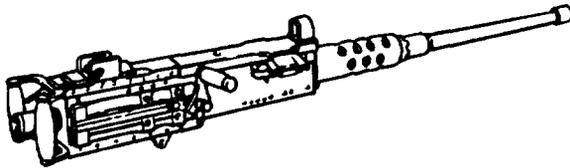
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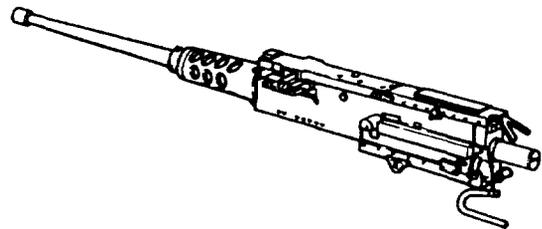
CHAPTER 1

INTRODUCTION

Section I. GENERAL INFORMATION



M2 MACHINE GUN, FLEX



M2 MACHINE GUN, M48

1-1. SCOPE

a. Type of Manual. Unit and Direct Support maintenance manual.

b. Model Number and Equipment Name. Browning Machine Gun, Caliber .50; M2 heavy barrel, flexible type, and M48 turret type, soft mount, and fixed type machine guns. For application and use of gun mounts, refer to TM 9-1005-245-13&P (Army), TM 1005-13&P/1 (Marine Corps), and TO 11W2-8-1-322 (Air Force). Marine corps users refer to TM 08686A-13&P/1 for use of Mk64 mount. Navy users refer to SW 361-AO-MMO-010 for gun mounts.

c. Purpose of Equipment. To provide automatic weapon suppression fire for offensive and defensive purposes. This weapon can be used effectively against personnel, light armored vehicles; low, slow flying aircraft; and small boats. The caliber .50 M2 flexible version is used as a ground gun on the M3 tripod mount or various Naval mounts. The caliber .50 M2, M48 turret type, fixed type, and soft mount are installed on mounts of several different types of combat vehicles and ships.

1-2. MAINTENANCE FORMS, RECORDS, AND REPORTS

Department of Army forms and procedures used for equipment maintenance will be those prescribed by DA PAM 738-750, The Army Maintenance Management System (TAMMS). Navy users refer to the applicable Maintenance Requirement Card under the Planned Maintenance System. Marine Corps forms and procedures for equipment maintenance will be those prescribed by TM 4700-1 5/1. Air Force users refer to TO 11W-1-10 for appropriate forms and records.

1-3. DESTRUCTION OF ARMY MATERIEL TO PREVENT ENEMY USE

Refer to TM 750-244-7.

1-4. PREPARATION FOR STORAGE OR SHIPMENT

Refer to page 3-67.

1-5. OFFICIAL NOMENCLATURE, NAMES, AND DESIGNATIONS

NOMENCLATURE CROSS-REFERENCE LIST

Common Name	Official Nomenclature
Accelerator pin assembly	Spring pin
Backplate latch	Manual control lever (6008949)
Barrel carrier assembly	Manual control handle (5504080)
Bolt latch release	Manual control lever (5504071)
Bolt stud	Headless shoulder pin
Bolt switch	Alternate feed knob
Buffer body lock	Buffer body stock
Cable	Wire rope assembly
Ml O lock selector	Slide lock catch
Plunger	Headless shoulder pin
Retaining pin	Headless straight pin
Safety wire	Nonelectrical wire
Sear slide	Sear

1-6. REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR's)

If your machine gun needs improvement, let us know. Send us an EIR. You, the user, are the only one who can tell us what you don't like about your equipment. Let us know why you don't like the design or performance. Put it on an SF 368 (Product Quality Deficiency Report). Mail it to us at Commander, US Army Armament, Munitions and Chemical Command, ATTN: AMSMC-QAD, Rock Island, IL 61299-6000. Marine Corps personnel are encouraged to submit SF 368 in accordance with MCO 4855.10, Product Quality Deficiency Report, to: Commander, Marine Corps Logistics Bases (Code 856), 814 Radford Blvd, Albany, GA 31704-1128. Air Force users submit Materiel Deficiency Report (MDR) and Quality Deficiency Report (QDR) in accordance with TO 00-35D-54, TM, USAF, Materiel Deficiency Reporting and Investigating System, to WR-ALC/TILT, Robins AFB, GA 31098-5330. Navy users submit SF 368, Quality Deficiency Report, to: Commander, Code 20, NAVSURFWARCENDIV, 300 Highway 361, Crane, IN 47522-5001.

1-7. CORROSION PREVENTION AND CONTROL (CPC)

Corrosion Prevention and Control (CPC) of materiel is a continuing concern. It is important that any corrosion problems with this item be reported so that the problem can be corrected and improvements can be made to prevent the problem in future items.

While corrosion is typically associated with rusting of metals, it can also include deterioration of other materials such as rubber and plastic. Unusual cracking, softening, swelling, or breaking of these materials may be a corrosion problem.

If a corrosion problem is identified, it can be reported using SF 368, Product Quality Deficiency Report. Use of key words such as "corrosion", "rust", "deterioration", or "cracking" will assure that the information is identified as a CPC problem. The form should be submitted to: Commander, US Army Armament, Munitions and Chemical Command, ATTN: AMSMC-QAD/Customer Feedback Center, Rock Island, IL 61299-6000. Marine Corps personnel are encouraged to submit SF 368 in accordance with MCO 4855.10, Product Quality Deficiency Report, to: Commander, Marine Corps Logistics Bases (Code 856), 814 Radford Blvd, Albany, GA 31704-1128. Navy users submit SF 368, Product Quality Deficiency Report, to: Commander, Code 20, NAVSURFWARCENDIV, 300 Highway 361, Crane, IN 47522-5001.

Section II. EQUIPMENT DESCRIPTION AND DATA

1-8. EQUIPMENT CHARACTERISTICS, CAPABILITIES, AND FEATURES

The caliber .50 machine gun, Browning, M2, Heavy Barrel, Flexible:

- a. Is a link-belt fed, recoil-operated, air-cooled, crew-served machine gun. The machine gun is capable of firing single-shot and automatic. Is capable of right-hand or left-hand feed.
- b. Is used as a ground gun mounted on M3 tripod mount, Mk 26 Mod 0-14, Mk 64 mount, or is installed on M66 ring mount of several types of combat vehicles.

The caliber .50 machine gun, Browning, M2, Heavy Barrel, M48 Turret type:

- a. Is a link-belt fed, recoil-operated, air-cooled, crew-served machine gun. The machine gun is capable of firing automatic only. Is capable of right-hand or left-hand feed.
- b. Is mounted on the M1, M1A1, or M1A2 Abrams main battle tank commander's station.

The caliber .50 machine gun, Browning, M2, Heavy Barrel, Soft Mount type (Navy):

- a. Is a link-belt fed, recoil-operated, air-cooled, crew-served machine gun. Is capable of right-hand or left-hand feed.
- b. Is mounted on the Mk 26 Mod 15, 16, or 17 gun mount.

The caliber .50 machine gun, Browning, M2, Heavy Barrel, Fixed type (Navy):

- a. Is a link-belt fed, recoil-operated, air-cooled, crew-served machine gun. Is capable of right-hand or left-hand feed.
- b. Is mounted on the Mk 56 Mod 0 or 4 gun mount.
- c. Is primarily fired by a firing solenoid and requires a 24-28 Vdc power source. Refer to TM 9-1005-213-10 for adjusting timing top plate solenoid (Fixed only).

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1-8. EQUIPMENT CHARACTERISTICS, CAPABILITIES, AND FEATURES (cont)

The M3 tripod mount is a lightweight, portable, folding mount which permits a high degree of accuracy and control of fire. For use of M3 tripod mount, refer to TM 9-1005-245-13&P (Army), TM 1005-13&P/1 (Marine Corps), and TO 11W2-8-1-322 (Air Force).

The Mk64 mount is a universal machine gun mount for ground deployment. Army users refer to TM 9-1010-231-13&P. Marine Corps users refer to TM 08686A-13&P/1. Air Force users refer to TO 11W2-8-32-4 (use TM 08686A-13&P/1).

Navy users refer to SW 361-AO-MMO-010 for applicable gun mounts.

1-9. DIFFERENCES BETWEEN MODELS

a. Refer to Table 1-1 for differences between models.

Table 1-1. Differences Between Models

ASSEMBLY	FLEX	SOFT MOUNT (NAVY)	M48 TURRET TYPE	FIXED TYPE (NAVY)
Machine Gun Barrel (P/N 7266131)	X	X	X	X
Backplate Assembly (P/N 6535477)	X			
Backplate Assembly (P/N 5564311)			X	
Backplate Assembly (P/N 5985102)		X		
Backplate Assembly (P/N 2866381)				X
Breech Bolt Assembly (P/N 6528322)	X	X	X	X
Barrel Extension Assembly (P/N 5504082)	X	X	X	X
Retracting Slide Assembly (P/N 11010439)	X	X		X
Cover Assembly (P/N 6528309)	X	X	X	X
Receiver Assembly (P/N 6535480)	X	X	X	X
M10 Manual Charger (P/N 7267982)			X	X
Rear Sight Assembly (P/N 12003047)	X			
Barrel Carrier Assembly (P/N 5504080)	X			
Top Cover Plate (P/N 6008939)		X	X	
Front Sight Assembly (P/N 6085990)		X		
Electrical Solenoid Assembly (P/N 2846714)				X

b. Maintenance procedures in this manual pertain to all models unless specified in the Applicable Configurations portion of the Initial Setups. Where procedures pertain to all models, the Flex type only is illustrated.

1-10. EQUIPMENT DATA

M2 machine gun:

	US	CUSTOMARY	METRIC
Weight of gun (approx)	84	lb	(38.1 0 kg)
Weight of barrel	26	lb	(1 1.79 kg)
Length of gun	65.13	in.	(165.43 cm)
Length of barrel	45	in.	(1 14.30 cm)
Length of rifling (approx)	41.88	in.	(1 06.38 cm)
Number of lands and grooves	8		
Twist, right-hand	one turn in 15	in.	(38.10 cm)
Feed		link-belt	
Operation		short recoil	
Cooling		air	
Muzzle velocity (approx)	3,050	fps	(929.64 reps)
Maximum range (approx)	7,400	yd	(6,767 m)
Maximum effective range (approx)	2,000	yd	(1 ,829 m)

Rates of Fire:

NOTE

For Abrams series tanks, refer to FM 17-12-1.

SINGLE SHOT - Place gun in single shot mode and engage target with well-aimed shots. The caliber .50 machine gun is extremely accurate and can effectively engage targets out to 2,000 yards (1,829 meters). Change barrel at end of firing day, or if the barrel is damaged.

SLOW FIRE - Slow fire is less than 40 rounds per minute, fired in bursts of six to nine rounds, at 10-15 second intervals. Change barrel at the end of the firing session, or if the barrel is damaged.

RAPID FIRE - Rapid fire is greater than 40 rounds per minute, fired in bursts of six to nine rounds, at 5-10 second intervals. Change barrel at the end of the firing session, or if the barrel is damaged.

CYCLIC FIRE - This rate represents the maximum amount of ammunition that can be expended by a gun without a break in firing. The cyclic rate of this caliber .50 machine gun is 400 to 500 rounds per minute. Change barrel at end of firing session, or if the barrel is damaged.

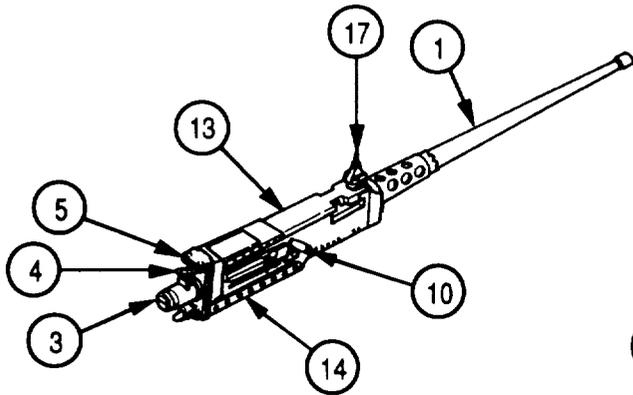
1-11. SAFETY, CARE, AND HANDLING OF AMMUNITION

Refer to TM 9-1300-206 for general ammunition safety, care, and handling.

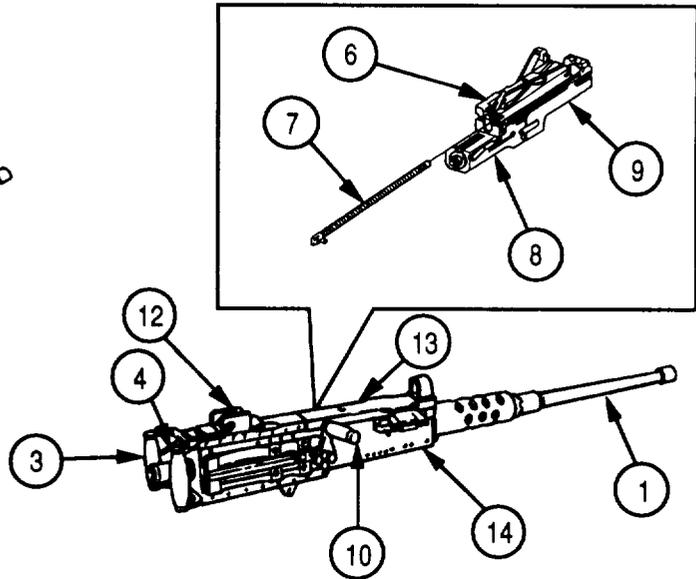
Section III. PRINCIPLES OF OPERATION

1-12. PRINCIPLES OF OPERATION

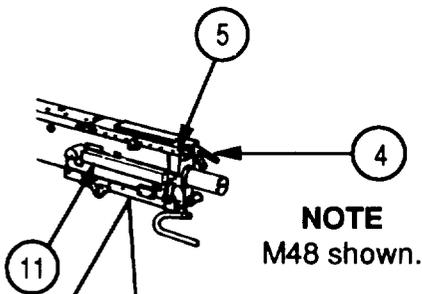
M2 Machine Gun



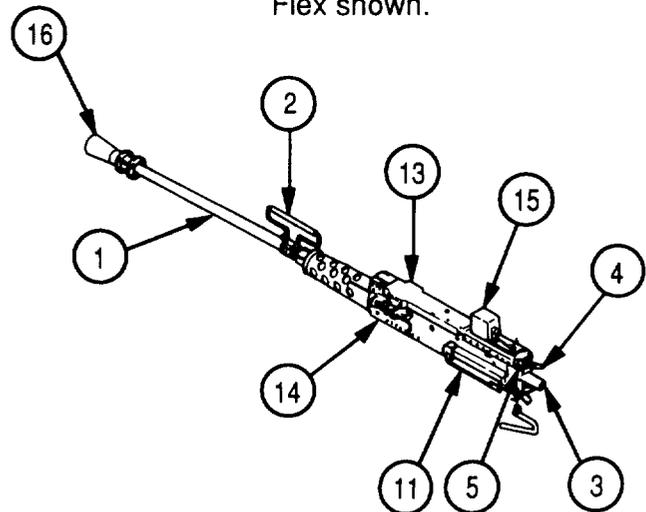
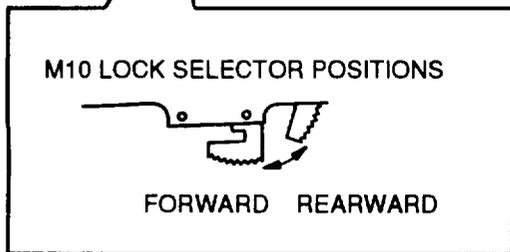
NOTE
Soft mount shown (NAVY).



NOTE
Flex shown.



NOTE
M48 shown.



NOTE
Fixed type shown (NAVY).

a. Barrel assembly (1). Composed of barrel (1) and barrel carrier assembly (2). Barrel carrier assembly permits quick removal or installation of barrel and is secured to locking and retaining grooves of barrel.

b. Backplate assembly (3). Houses the trigger (4) and buffer tube. The trigger safety acts as a positive block for manual operation of the trigger. The backplate assembly is located at the rear portion of the receiver assembly. The safety (5) is located at the top of the backplate assembly (M48 and Fixed type only).

- c. Bolt assembly (6) and driving spring rod assembly (7).** The bolt assembly is located on top of the barrel extension assembly inside the receiver assembly. The driving spring rod assembly, installed into bolt assembly, is secured to the right receiver side plate by a retaining pin. It absorbs recoil shock and provides the energy for the bolt assembly to feed, strip, chamber, and fire the following round in the belted ammunition.
- d. Barrel buffer assembly (8).** Part of the action group of the weapon. Buffers and stops the rearward movement of the barrel assembly and barrel extension assembly by action of helical compression spring. Located to the rear of the barrel extension assembly inside the receiver assembly.
- e. Barrel extension assembly (9).** Recoiling parts of the weapon are locked together during recoil for 0.75 in. (1.91 cm) after firing. During recoil, the barrel extension assembly causes tips of the accelerator to rotate rearward. Located in the forward area inside the receiver assembly.
- f. Retracting slide assembly (10).** Secured to and operated from the right or left side of receiver assembly. Manually charges or recharges the weapon in case of a malfunction or stoppage. Used with bolt stud.
- g. M10 manual charger (11).** Secured to and operated from the right or left side of receiver assembly. Manually charges or recharges the weapon in case of a malfunction or stoppage. Used with bolt stud.
- h. Rear sight assembly (12).** Composed of windage screw, scale dial, and leaf assembly. Windage screw permits deflection changes of 5 roils right or left of center. Located on the top rear area of receiver assembly and used with blade-type front sight (Flex type only).
- i. Cover assembly (13).** Located on top of receiver assembly. Feeds the cartridge belt and positions and holds the cartridges for cambering. The feed mechanism, actuated by the bolt assembly, brings the belted cartridge against the cartridge stops. The feed mechanism must be repositioned when converting the M2 machine gun from left-hand to right-hand feed.
- j. Receiver assembly (14).** Houses the action groups of the weapon and, through a series of cams and levers, controls functioning of the internal groups of receiver assembly. Serves as support for all major groups and assemblies of the M2 machine gun. Serial number is located on the right side of the receiver assembly.
- k. Solenoid assembly (15).** Operates on a 24-28 V dc power source to fire the gun (Fixed type only).
- l. Flash suppressor (16).** Reduces muzzle flash when firing. Installed on the muzzle end of barrel.
- m. Front sight (17).** Fixed post, adjustable for windage (Soft mount only).

CHAPTER 2

UNIT MAINTENANCE INSTRUCTIONS

Section I. LUBRICATION INSTRUCTIONS

2-1. LUBRICATION INSTRUCTIONS

CAUTION

Do not oil or lubricate the backplate.

NOTE

Refer to TM 9-1005-213-10 for lubrication instructions.

Section II. SERVICE UPON RECEIPT

2-2. CHECKING UNPACKED EQUIPMENT

a. Inspect the equipment for damage incurred during shipment. If the equipment has been damaged, report the damage on SF 364, Report of Discrepancy (ROD). Marine Corps personnel use MCO P4610.19. Air Force personnel use Materiel Deficiency Report (MDR).

b. Check the equipment against the packing slip to see if the shipment is complete. Report all discrepancies in accordance with the instructions in DA PAM 738-750.

Army users in accordance with DA PAM 738-750.

Navy users submit SF 368, Quality Deficiency Report (QDR), to: Commander, Code 20, NAVSURFWARCENDIV, 300 Highway 361, Crane, IN 47522-5001.

Air Force users submit Material Deficiency Report (MDR) and Quality Deficiency Report (QDR) to: WR-ALC/TILT, Robins AFB, GA 31098-5330.

Marine Corps users submit SF 368 in accordance with MCO 4855.10, Product Quality Deficiency Report (QDR), to: Commander, Marine Corps Logistics Bases (Code 856), 814 Radford Blvd, Albany, GA 31704-1128.

c. Check to see whether the equipment has been modified. Refer to authorized equipment configuration changes listed in DA PAM 25-30.

2-3. SERVICE UPON RECEIPT OF MATERIEL

WARNING

- DO NOT keep live ammunition near work/maintenance area.
- Be sure to clear weapon before disassembling, cleaning, inspecting, transporting, or storing. Clearing consists of unloading the machine gun and visually inspecting weapon and chamber to ensure all rounds have been removed. Do not release the bolt or press the trigger.

Table 2-1. Service Upon Receipt

Location	Item	Action	Remarks
M2 MACHINE GUN 1. Container 2. Machine Gun	a. Machine Gun	(1) Remove machine gun from container. (2) Inspect the equipment for damage incurred during shipment. (3) Check the equipment against the packing list to see if the shipment is complete.	If the equipment has been damaged, report the damage on SF 364, Report of Discrepancy (ROD). Report all discrepancies in accordance with the instructions of DA PAM 738-750.
	b. Basic Issue Items	Check for missing items.	Refer to Operator's Manual.
	a. Barrel/Spare Barrel Assembly	Remove volatile corrosion inhibitor (VCI) bore tube from barrel and discard.	
	b. All Parts	(1) Field-strip machine gun and inspect for missing parts, damaged parts, and rusted or corroded parts.	Refer to Operator's Manual.

Table 2-1. Service Upon Receipt (cont)

Location	Item	Action	Remarks
		(2) Clean and lubricate. (3) Reassemble. (4) Test/adjust head space. (5) Test/adjust timing. (6) Function by hand using link belted dummy cartridges. (7) Check to see whether the equipment has been modified.	Refer to Operator's Manual. Refer to Operator's Manual. Refer to Operator's Manual. Refer to Operator's Manual. Refer to Operator's Manual. Army users see DA PAM 25-30. Marine Corps personnel use SL-1-2/SL-1-3. Air Force users see AFTO Form 105.

2-4. CHANGING MACHINE GUN FROM LEFT-HAND FEED TO RIGHT-HAND FEED

WARNING

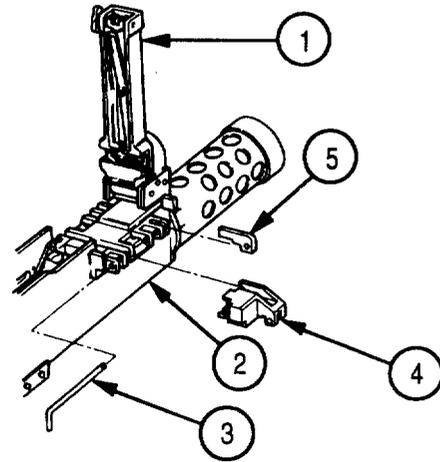
- DO NOT keep live ammunition near work/maintenance area.
- Be sure to clear weapon before disassembling, cleaning, inspecting, transporting, or storing. Clearing consists of unloading the machine gun and visually inspecting weapon and chamber to ensure all rounds have been removed. Do not release the bolt or press the trigger.

NOTE

- Navy and Marine Corps use only.
- Procedures on cover latch lever and retracting slide assembly may vary depending on gun mount used.

2-4. CHANGING MACHINE GUN FROM LEFT-HAND FEED TO RIGHT-HAND FEED (cont)

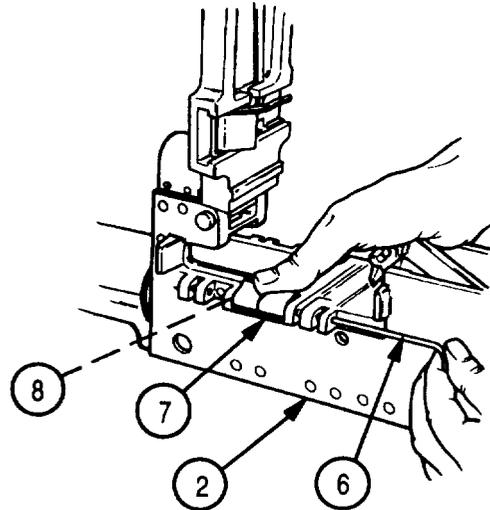
- 1 Raise cover assembly (1) on receiver (2) and remove belt holding pawl pin (3), rear cartridge stop assembly (4), and front cartridge stop (5) from right side of receiver (2). Set rear cartridge stop assembly (4) aside.



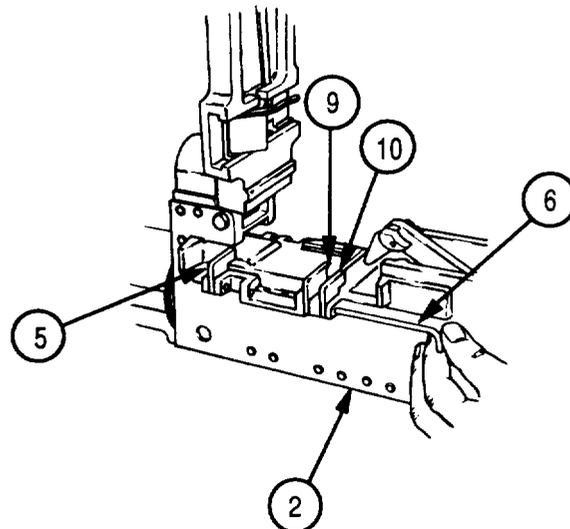
WARNING

To avoid injury to your eyes, use care when removing and installing spring-loaded parts.

- 2 Remove belt holding pawl pin (6), belt holding pawl assembly (7), and belt holding pawl springs (8) from left side of receiver (2) and install belt holding pawl springs (8), belt holding pawl assembly (7), and belt holding pawl pin (6) on right side of receiver (2).



- 3 Install front cartridge stop (5), link stripper (9), and cartridge stop (10) to left side of receiver (2) and secure with belt holding pawl pin (6).



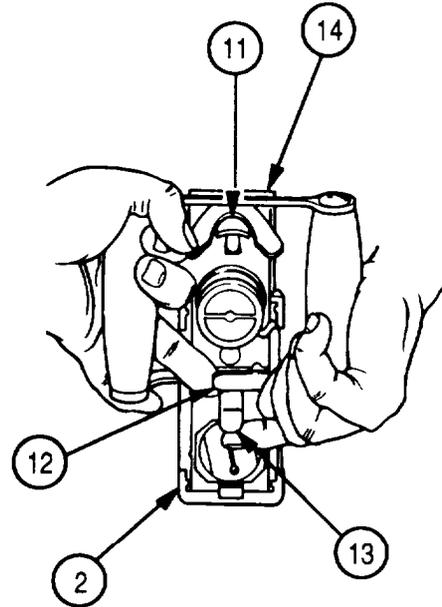
WARNING

Ensure bolt is in the forward position before removing backplate assembly. Stand to the side of the weapon when removing the backplate assembly.

NOTE

Ensure that bolt latch release (11) is in the up position (single-shot mode).

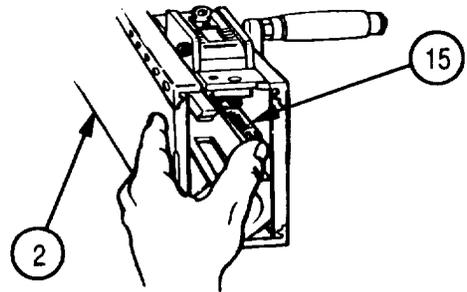
- 4 Pull backplate latch lock (12) straight back, while lifting upon backplate latch (13). Raise backplate assembly (14) straight up and remove from receiver (2).



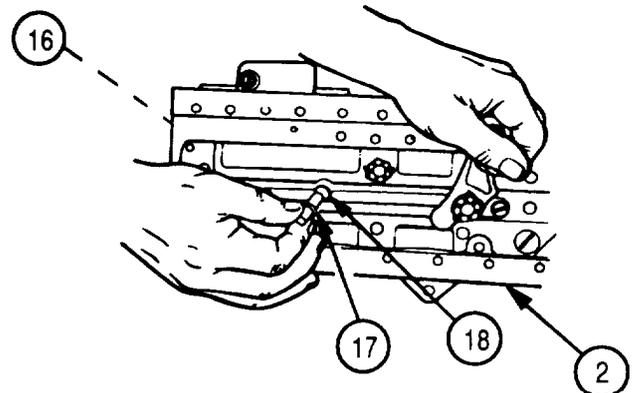
WARNING

To avoid injury to your eyes, use care when removing and installing spring-loaded parts.

- 5 Push rear of driving spring rod assembly (15) forward and to the left until free from side of receiver (2). Remove driving spring rod assembly (15) from receiver (2).



- 6 Retract bolt assembly (16) far enough to align bolt stud (17) with enlarged bolt stud hole (18) in receiver (2). Remove bolt stud (17) from right side of receiver (2).

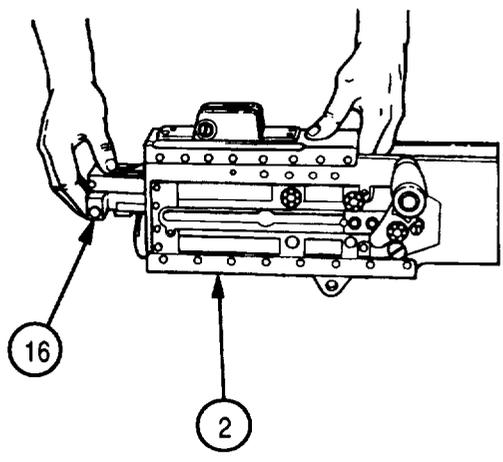


2-4. CHANGING MACHINE GUN FROM LEFT-HAND FEED TO RIGHT-HAND FEED (cont)

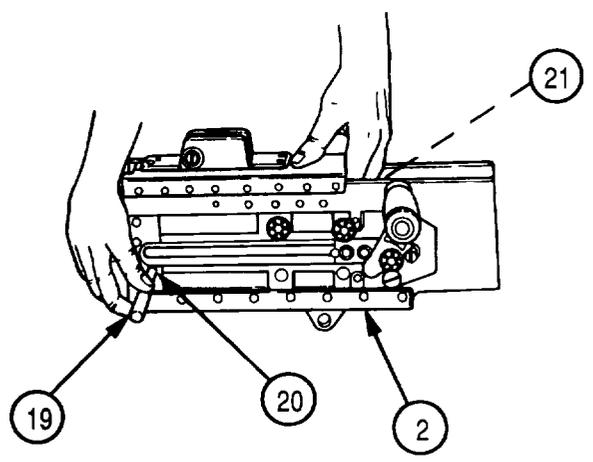
NOTE

Bolt latch must be pushed up to remove bolt assembly (Flex only).

- 7 Remove bolt assembly (16) from receiver (2).



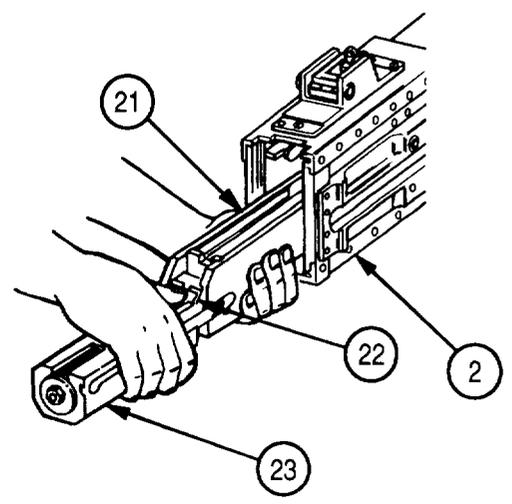
- 8 Install pointed end of punch (19) into hole (20) in receiver (2) and depress buffer body lock while applying rearward pressure on barrel extension assembly (21).



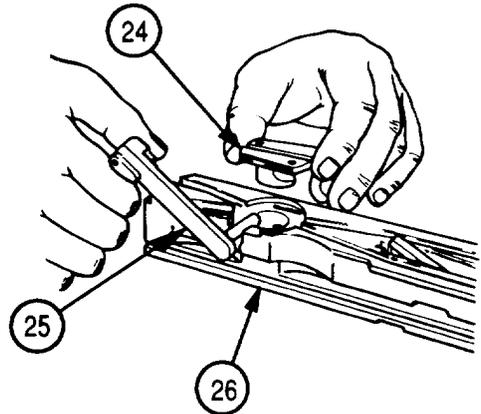
WARNING

Maintain thumb pressure on buffer accelerator while removing barrel buffer assembly and barrel extension assembly from receiver.

- 9 Maintain thumb pressure on buffer accelerator (22). Remove barrel buffer assembly (23) and barrel extension assembly (21) from receiver (2).



- 10 Lift out bolt switch (24). Rotate cartridge extractor (25) upward and remove from left side of bolt subassembly (26). Install bolt switch (24) with narrow end forward for right-hand feed. Install cartridge extractor (25). Set bolt assembly aside.

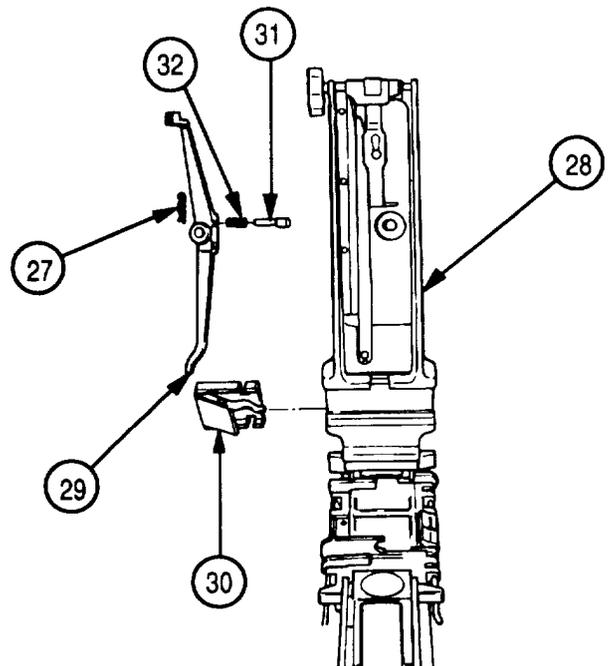


- 11 Remove lock pin (27) from underside of cover subassembly (28).

WARNING

To avoid injury to your eyes, use care when removing and installing spring-loaded parts.

- 12 Push belt feed lever (29) to the right until toe end is in line with the slot in the cover subassembly (28) and the belt feed slide assembly (30). Remove belt feed lever (29), shoulder pin (31), and helical spring (32).

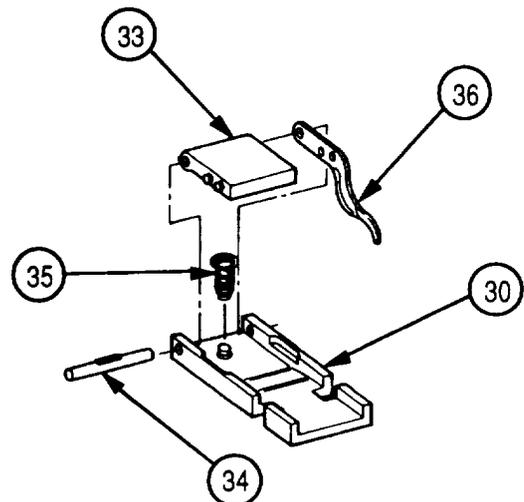


- 13 Remove belt feed slide assembly (30) from cover subassembly (28).

WARNING

To avoid injury to your eyes, use care when removing and installing spring-loaded parts.

- 14 Hold belt feed pawl (33) while removing pin (34) from belt feed slide assembly (30).
- 15 Slowly let belt feed pawl (33) rise to control spring (35). Remove belt feed pawl (33) from belt feed slide assembly (30). Remove spring (35) and belt feed pawl arm (36) from belt feed pawl (33).



2-4. CHANGING MACHINE GUN FROM LEFT-HAND FEED TO RIGHT-HAND FEED

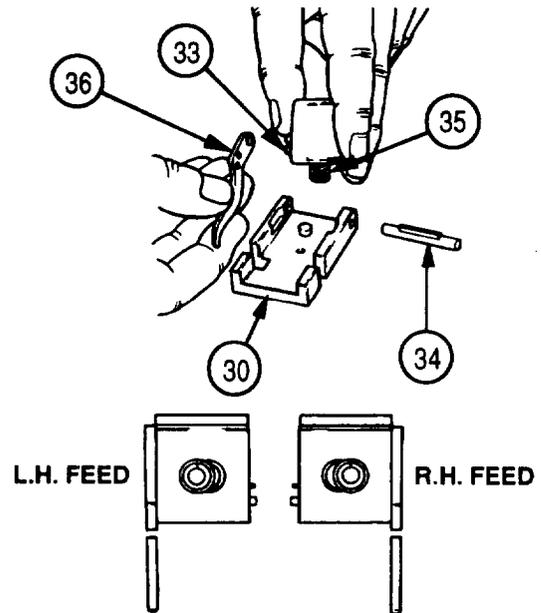
(cont)

WARNING

To avoid injury to your eyes, use care when removing and installing spring-loaded parts.

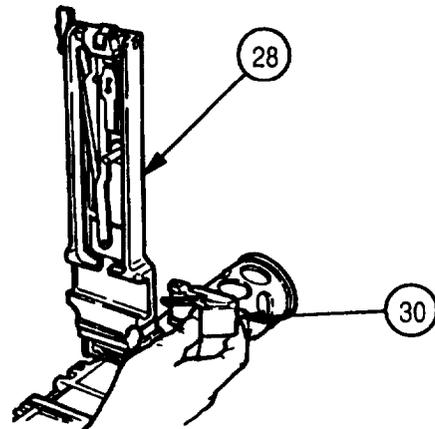
16 Assemble belt feed pawl arm (36) and spring (35) on belt feed pawl (33). Install large end of spring (35) in hole in belt feed pawl (33) with the foot of the spring (35) opposite the belt feed pawl (33) as illustrated.

17 Install belt feed pawl (33) on belt feed slide assembly (30), aligning spring (35) on pin of belt feed slide assembly (30) and secure with pin (34).



Position of spring and belt feed pawl arm showing left-hand feed/ right-hand feed.

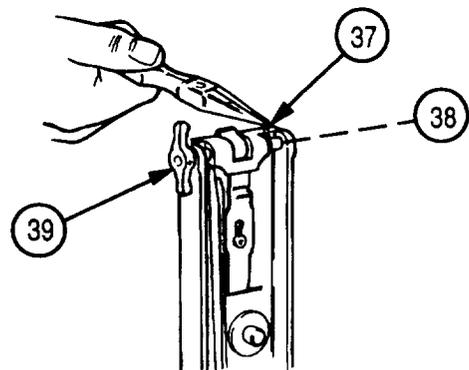
18 Push belt feed slide assembly (30) into cover subassembly (28) as shown.



NOTE

Steps 19 thru 21 are optional for operator convenience.

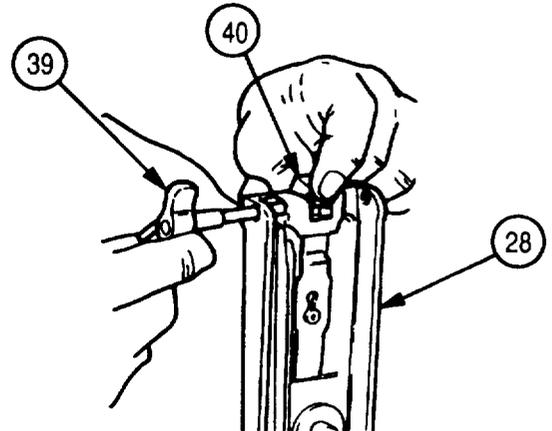
19 Remove cotter pin (37) and flat washer (38) from cover latch lever (39). Discard cotter pin (37).



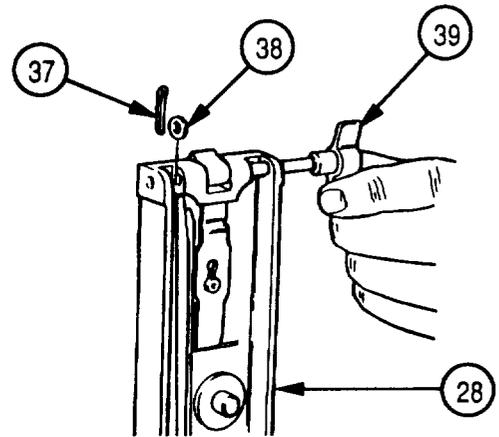
NOTE

Make sure that cover latch (40) stays installed when performing step 20.

- 20 Remove cover latch lever (39) from cover subassembly (28).



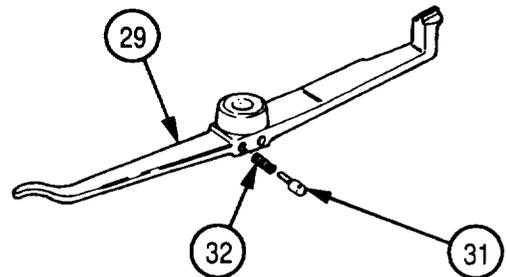
- 21 Install cover latch lever (39) in cover subassembly (28) as illustrated. Install flat washer (38) and new cotter pin (37).



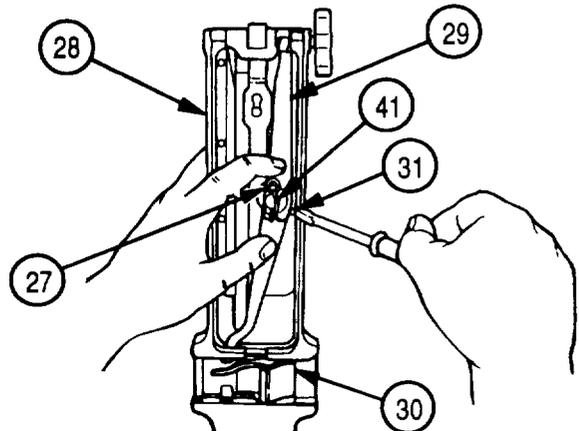
WARNING

To avoid injury to your eyes, use care when removing and installing spring-loaded parts.

- 22 Install helical spring (32) and shoulder pin (31) into bottom hole of belt feed lever (29) for right-hand feed operation.



- 23 Position belt feed lever (29) so toe end is aligned with slots of cover subassembly (28) and belt feed slide assembly (30). Using screwdriver, press in on shoulder pin (31) and install belt feed lever (29) on pivot stud (41). Install lock pin (27) to secure.

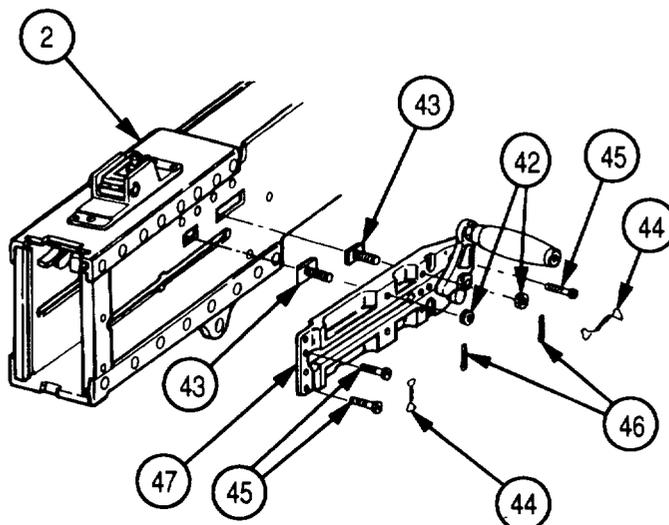


**2-4. CHANGING MACHINE GUN FROM LEFT-HAND FEED TO RIGHT-HAND FEED
 (cont)**

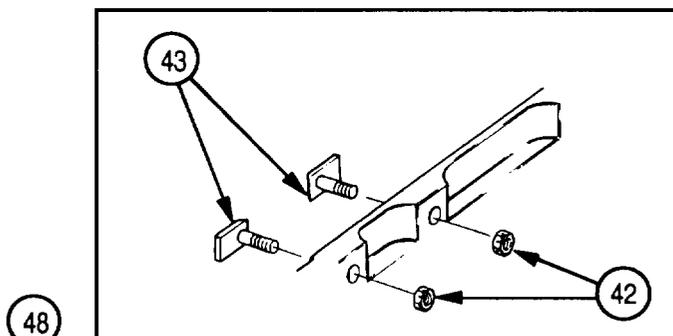
NOTE

Removal of two hex nuts (42) will cause two shoulder bolts (43) to drop into interior of receiver (2).

- 24 Cut safety wires (44) and remove three screws (45). Remove two cotter pins (46) and two hex nuts (42). Remove retracting slide assembly (47) from right side of receiver (2). Retrieve the shoulder bolts (43). Discard cotter pins (46).

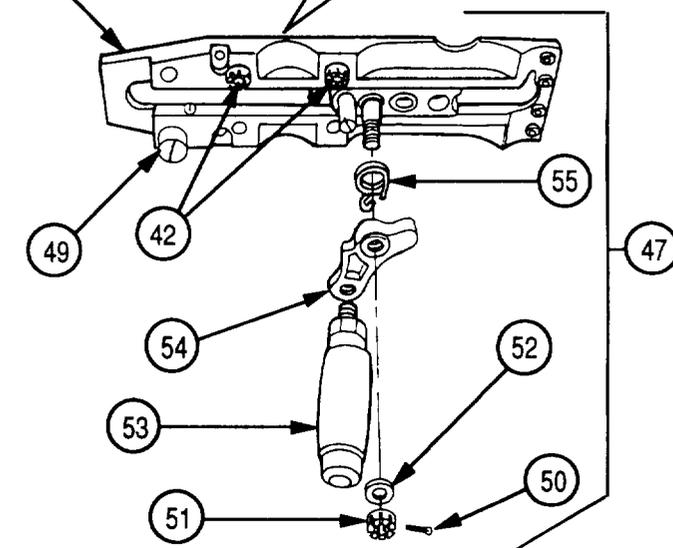


- 25 Rotate retracting slide assembly (47) as shown and position beveled edges of two shoulder bolts (43) to the outside and install the two shoulder bolts (43) into the top holes in the retracting slide bracket (48). Loosely install two hex nuts (42) on the two shoulder bolts (43).

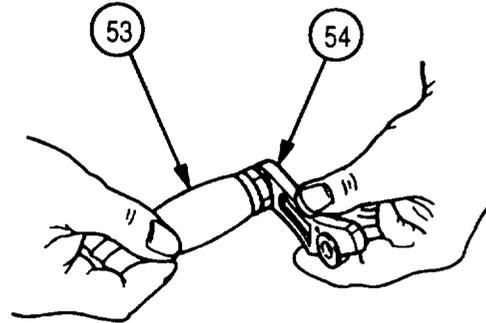


- 26 Remove shoulder screw (49) from top hole in retracting slide bracket (48) and install in lower hole in retracting slide bracket (48).

- 27 Remove cotter pin (50), hex nut (51), flat washer (52), retracting slide handle (53), lever (54), and spring (55) from retracting slide bracket (48). Maintain spring (55) in unit arms room. Discard cotter pin (50).



- 28 Reinstall retracting slide handle (53) to lever (54) on opposite side of lever (54).



WARNING

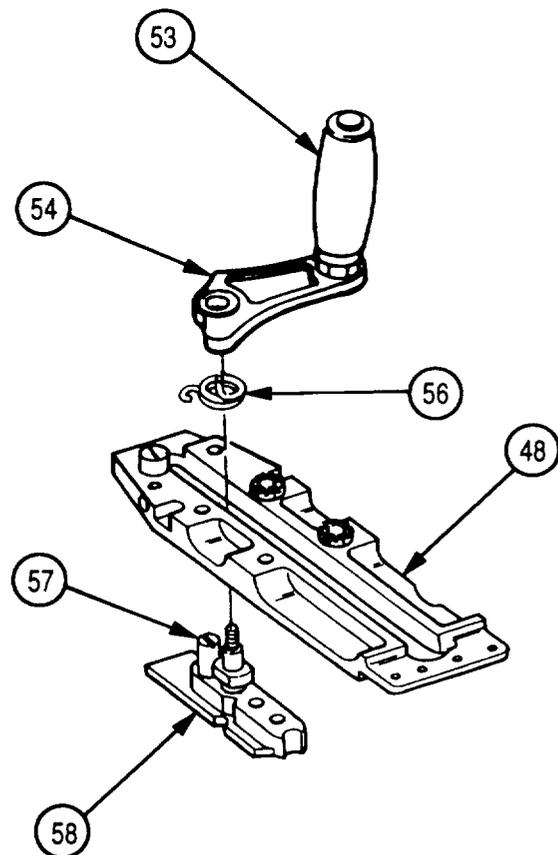
To avoid injury to your eyes, use care when removing and installing spring-loaded parts.

- 29 Acquire spring (56) (used for left side mounting of retracting slide) and align spring (56), retracting slide handle (53), and lever (54).

NOTE

Ensure tang of spring (56) is inserted in hole in lever (54) and loop of spring is positioned correctly over shoulder pin (57) of retracting slide (58).

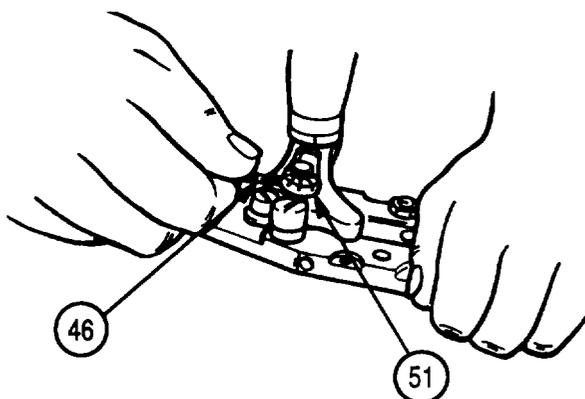
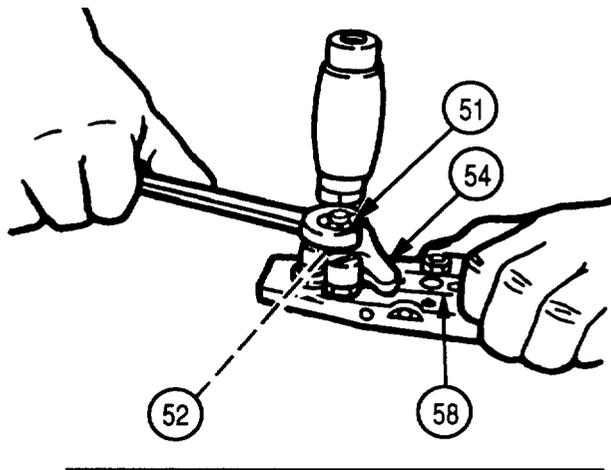
- 30 Install retracting slide (58) into the retracting slide bracket (48). Position spring (56), lever (54), and retracting slide handle (53) on retracting slide (58). Position spring (56) over shoulder pin (57).



NOTE
Parts exploded for clarity

2-4. CHANGING MACHINE GUN FROM LEFT-HAND FEED TO RIGHT-HAND FEED
 (cont)

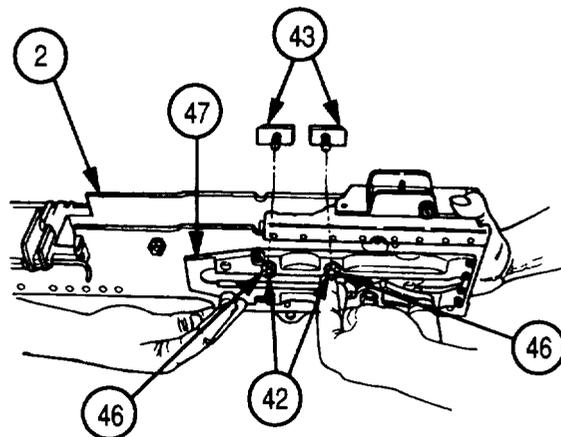
- 31 Install flat washer (52) and hex nut (51) on retracting slide (58). Align hex nut slot with hole in stud. Ensure hex nut (51) is not tightened to restrict movement of lever (54). Install new cotter pin (46) in hex nut (51) to secure.



NOTE

Ensure beveled edges of shoulder bolts (43) face out in opposite directions.

- 32 Install retracting slide assembly (47) to the left side of receiver (2) and tighten two hex nuts (42). Secure hex nuts (42) with two new cotter pins (46).



CAUTION

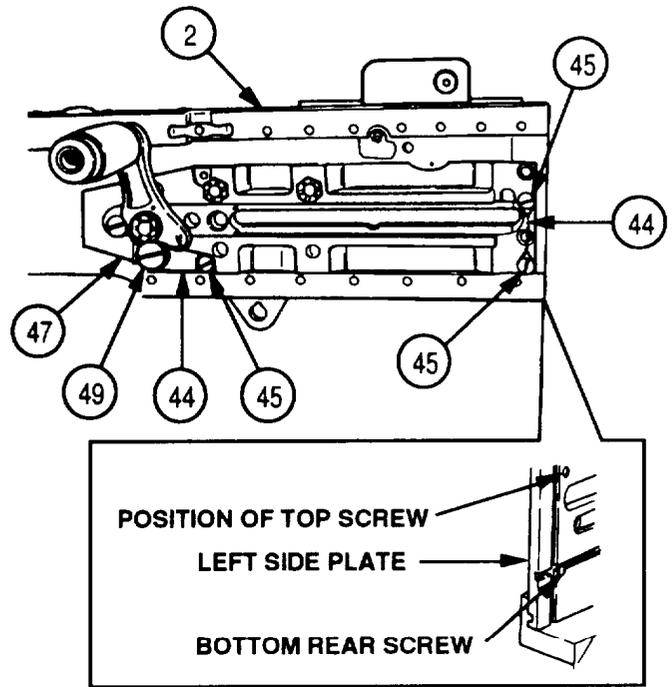
Reduce length of bottom rear screw (with file or stone) as required to avoid interference with functioning of weapon. The screw should not protrude into side plate slot as illustrated.

- 33 Install three screws (45) on retracting slide assembly (47), securing it to receiver (2).

NOTE

Safety wire (44) must be installed on shank of shoulder screw (49) and screw (45).

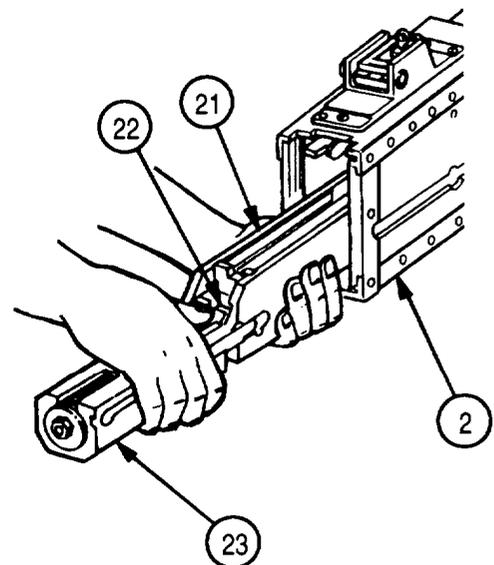
- 34 Install safety wire (44) on shoulder screw (49) and screw (45) and between two screws (45).



CAUTION

While installing barrel buffer assembly (23) and barrel extension assembly (21) into receiver, maintain thumb pressure on buffer accelerator (22).

- 35 Maintain thumb pressure on buffer accelerator (22). Install barrel buffer assembly (23) and barrel extension assembly (21) in receiver (2).



2-4. CHANGING MACHINE GUN FROM LEFT-HAND FEED TO RIGHT-HAND FEED
(cont)

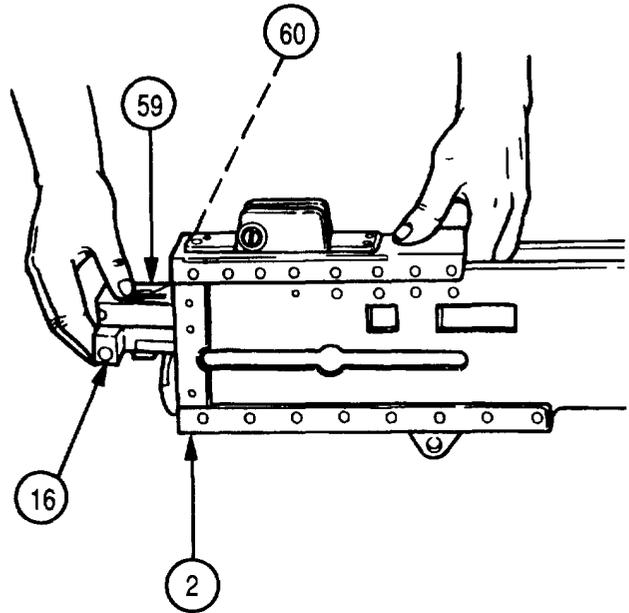
CAUTION

When installing bolt assembly, do not trip buffer accelerator.

NOTE

Ensure cocking lever (59) is forward before installing bolt assembly into receiver.

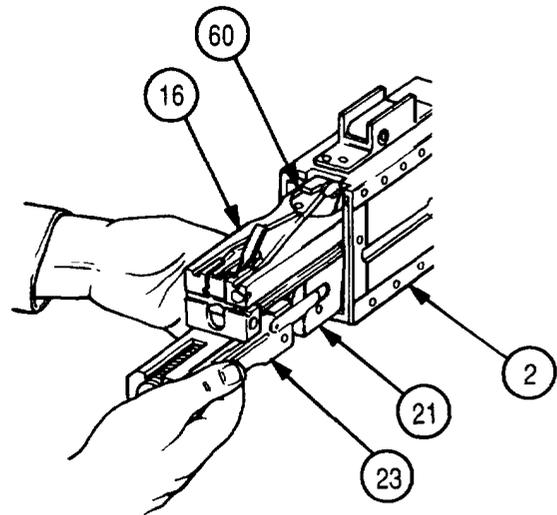
- 36 Push bolt assembly (16) forward into receiver (2) until bolt latch (60) engages notches in top of bolt assembly (16).



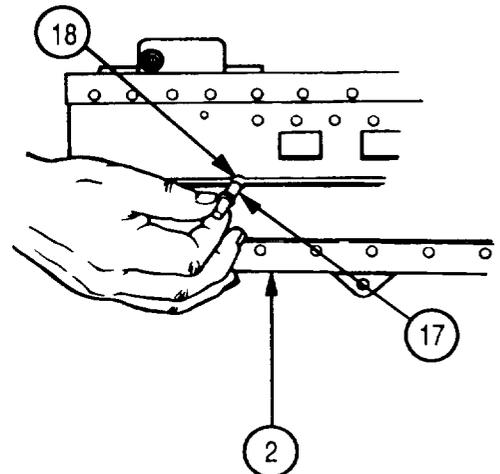
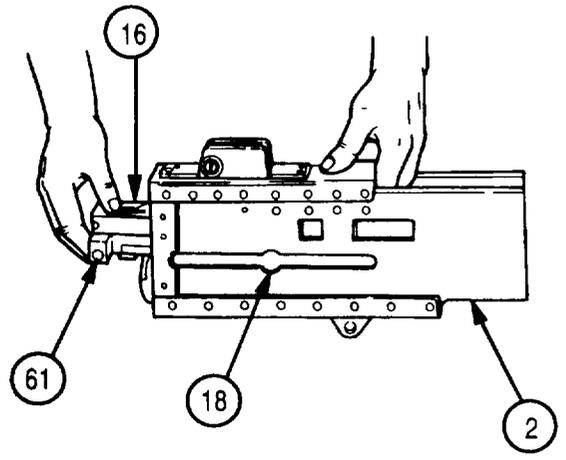
NOTE

If unable to install by performing step 36, perform step 37.

- 37 Remove barrel extension assembly (21) and barrel buffer assembly (23) from the receiver (2). Install bolt assembly (16) into barrel extension assembly (21) and barrel buffer assembly (23) then install into the receiver (2).
- 38 Raise bolt latch (60) and push bolt assembly (16) into receiver (2).



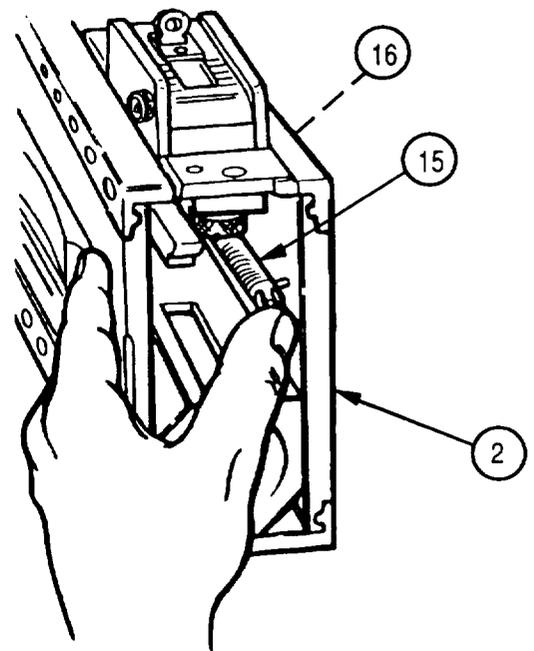
- 39 Align hole (61) in bolt assembly (16) with bolt stud hole (18) in receiver (2) and install bolt stud (17) in hole in bolt assembly (16).



WARNING

To avoid injury to your eyes, use care when removing and installing spring-loaded parts.

- 40 Install driving spring rod assembly (15) in upper right-hand corner hole in bolt assembly (16). Push forward and to the right until driving spring rod assembly tang engages in hole in side plate of receiver (2).



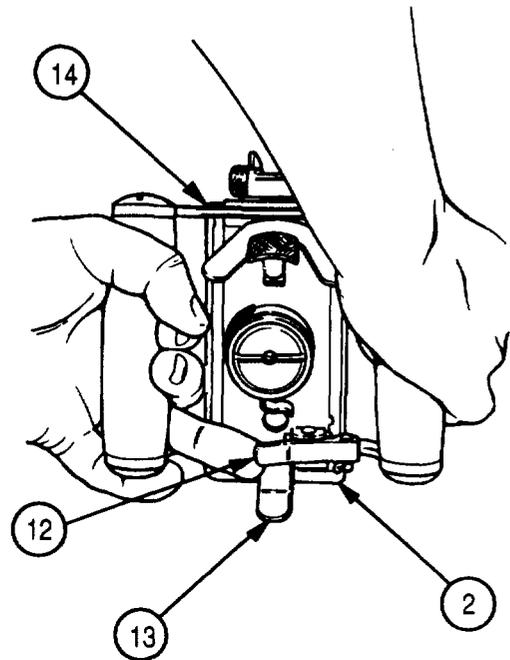
2-4. CHANGING MACHINE GUN FROM LEFT-HAND FEED TO RIGHT-HAND FEED (cont)

- 41 Install backplate assembly (14) in receiver grooves. Pull backplate latch lock (12) straight back, while lifting up on backplate latch (13). Lower backplate assembly (14) down until engaged in receiver (2).

NOTE

Test for proper locking of backplate assembly by pulling up on the backplate assembly.

- 42 Pull backplate latch lock (12) back and pull up on backplate assembly (14) to ensure proper locking.
- 43 Lift backplate latch (13) up and pull upon backplate assembly (14) to ensure proper locking.

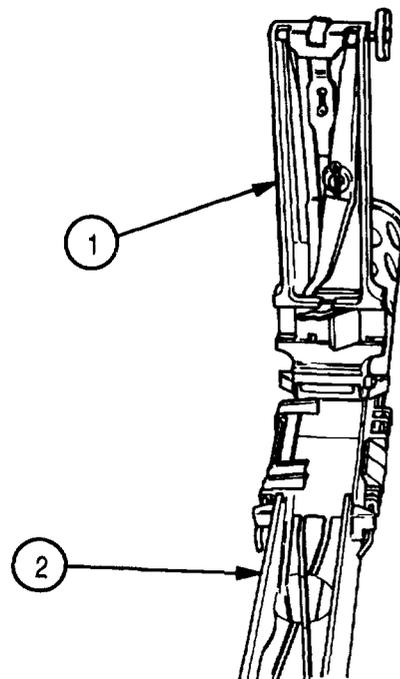


- 44 Close cover assembly (1), making sure it latches securely to receiver (2).

NOTE

Ensure barrel is installed properly. Refer to operator's manual.

- 45 Load five or more linked dummy rounds and hand operate weapon to ensure all components are functioning properly. Weapon should function through a complete cycle.



Section III. PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)

2-5. GENERAL

This section contains the procedures and instructions necessary to perform preventive maintenance checks. These checks are to be performed by maintenance personnel with assistance, where practical, of the operator/crew who will clean and lubricate in accordance with TM 9-1005-213-10, operator's manual.

2-6. PREVENTIVE MAINTENANCE CHECKS AND SERVICES

WARNING

- DO NOT keep live ammunition near work/maintenance area.
- Be sure to clear weapon before disassembling, cleaning, inspecting, transporting, or storing. Clearing consists of unloading the machine gun and visually inspecting weapon and chamber to ensure all rounds have been removed. Do not release the bolt or press the trigger.

a. General. The quarterly PMCS procedures are contained in Table 2-2. They are arranged in logical sequence requiring a minimum amount of time and motion on the part of the persons performing them.

b. Item No. Column. Numbers in this column are for reference. When completing DA Form 2404, Equipment Inspection and Maintenance Worksheet, include the item number for the check/service indicating a fault. Item numbers also appear in the order that you must do the checks and services in the interval listed.

c. Interval Column. This column gives the designated interval when each check is to be performed.

d. Location/Item To Be Checked Or Serviced Column. This column lists the items to be checked or serviced. The location of the item within the end item appears underlined above the item name.

e. Procedure Column. This column contains a brief description of the procedure by which the check is to be performed. It contains all the information required to accomplish the checks and services.

f. Not Fully Mission Capable If: Column. This column contains a brief statement of the condition that would cause the covered equipment to be less than fully ready to perform its assigned mission.

2-6. PREVENTIVE MAINTENANCE CHECKS AND SERVICES (cont)

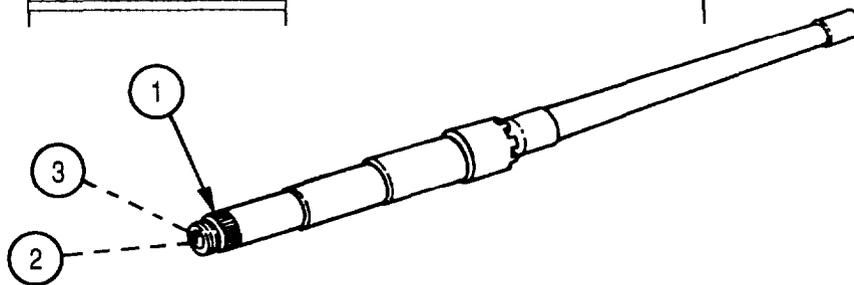
Table 2-2. Unit Preventive Maintenance Checks and Services (PMCS) Quarterly Schedule

Item No.	Interval	Location	Procedure	Not Fully Mission Capable If:
		Item to be Checked or Serviced		

WARNING

- Be sure to clear weapon before disassembling, cleaning, inspecting, transporting, or storing. Clearing consists of unloading the machine gun and visually inspecting weapon and chamber to ensure all rounds have been removed. Do not release the bolt or press the trigger.
- To avoid injury to your eyes, use care when removing and installing spring-loaded parts.

1	Quarterly	Annual DS safety and serviceability inspection and gaging	Check to ensure annual DS safety and serviceability inspection and gaging has been done and that the next gaging and inspection is scheduled. If annual gaging has not been performed in the last year, notify direct support maintenance.	Annual gaging has not been performed.
		Barrel Assembly		



2	Quarterly	Barrel locking notches (1)	Check for wear.	Barrel can be turned in either direction when in the locked position.
3	Quarterly	Bore (2)	Check for pits, bulges, metal fouling, and rings.	Pits, bulges, metal fouling, or rings are present.

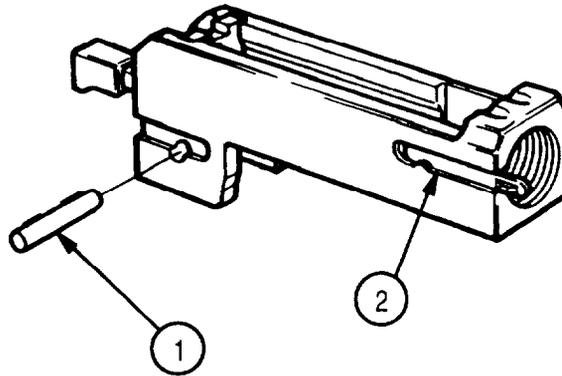
Table 2-2. Unit Preventive Maintenance Checks and Services (PMCS) Quarterly Schedule (cont)

Item No.	Interval	Location	Procedure	Not Fully Mission Capable If:
		Item to be Checked or Serviced		

NOTE

Disregard the "ring" located approximately 8 to 10 in. (20.32 to 25.40 cm) from the breech end. This is a gap which allows for expansion (when the barrel gets hot from firing) of the stellite liner.

4	Quarterly	Chamber (3)	Check for pits, bulges, metal fouling, and rings.	Pits, bulges, metal fouling, or rings are present.
		Barrel Extension Assembly		

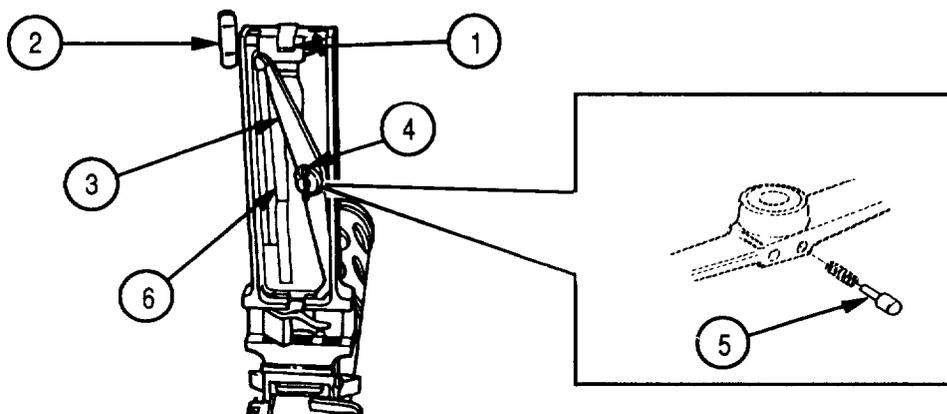


5	Quarterly	Breech Lock Pin Assembly (1)	a. Check for looseness and wear.	Loose or worn.
			b. Check for broken, not set, or missing spring.	Broken, not set, or missing.
6	Quarterly	Barrel Locking Spring (2)	a. Check staking for looseness.	Loose or not staked.
			b. Check barrel locking spring for retention.	Barrel assembly can be unscrewed.

2-6. PREVENTIVE MAINTENANCE CHECKS AND SERVICES (cont)

Table 2-2. Unit Preventive Maintenance Checks and Services (PMCS) Quarterly Schedule (cont)

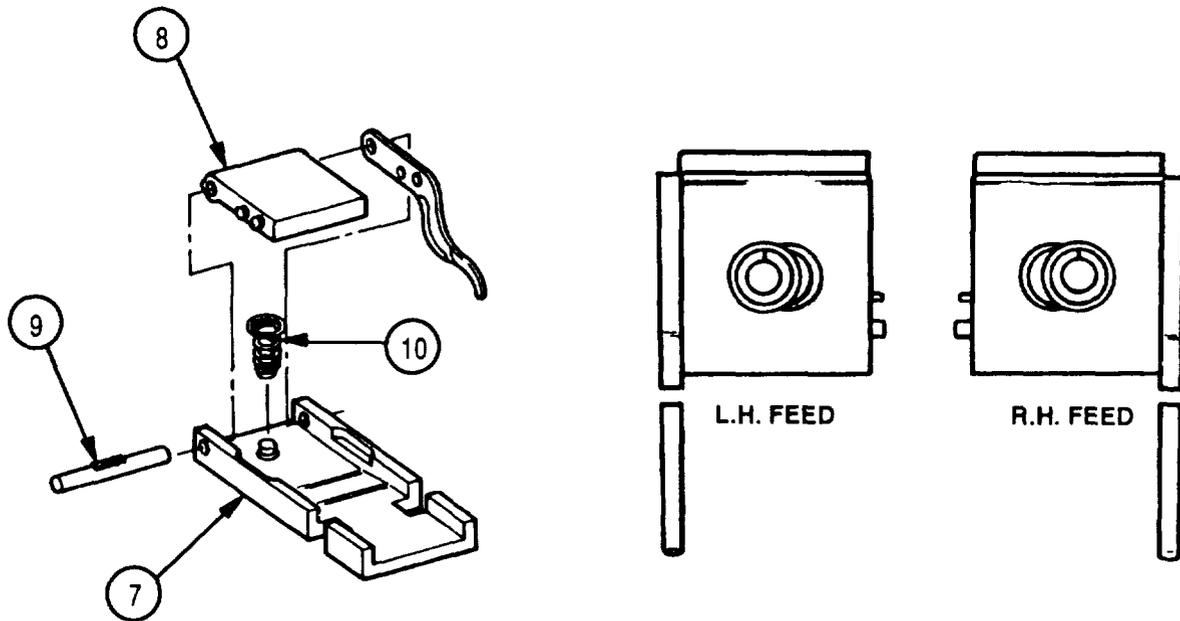
Item No.	Interval	Location	Procedure	Not Fully Mission Capable If:
		Item to be Checked or Serviced		
		Cover Assembly		



7	Quarterly	Cover Latch (1) and Cover Latch Lever (2)	Check if broken or missing.	Broken or missing.
8	Quarterly	Belt Feed Lever (3)	<p>a. Check for cracks, breaks, or bends.</p> <p>NOTE Do NOT use a cotter pin in place of lock pin.</p> <p>b. Check for missing lock pin (4).</p> <p>c. Check for burred, bent, or missing shoulder pin (5).</p> <p>d. Check belt feed lever (3) for the correct direction of feed (left or right).</p>	Cracked, broken, or bent.
9	Quarterly	Cover Extractor Spring (6)	Check if burred or broken.	Burred or broken.

Table 2-2. Unit Preventive Maintenance Checks and Services (PMCS) Quarterly Schedule (cont)

Item No.	Interval	Location	Procedure	Not Fully Mission Capable If:
		Item to be Checked or Serviced		

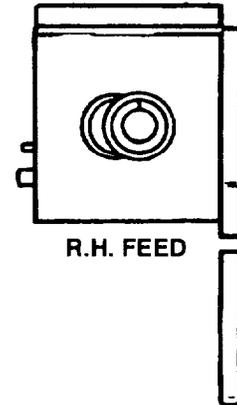
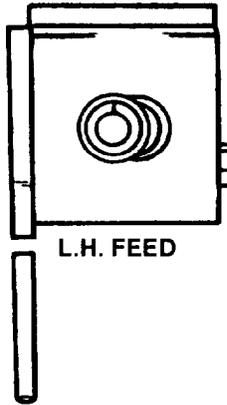
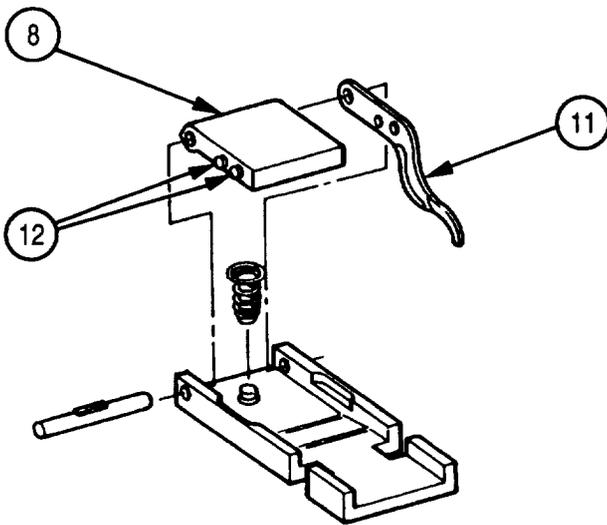


10	Quarterly	Belt Feed Assembly	<ul style="list-style-type: none"> a. Check belt feed slide assembly (7) for burrs, cracks, and binding. b. Check belt feed pawl (8) for binding in belt feed slide assembly. c. Check spring pin (9) for looseness. d. Check for weak, broken, or missing spring (10). 	<ul style="list-style-type: none"> Burred, cracked, or binding. Binding. Loose. Weak, broken, or missing.
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2-6. PREVENTIVE MAINTENANCE CHECKS AND SERVICES (cont)

Table 2-2. Unit Preventive Maintenance Checks and Services (PMCS) Quarterly Schedule (cont)

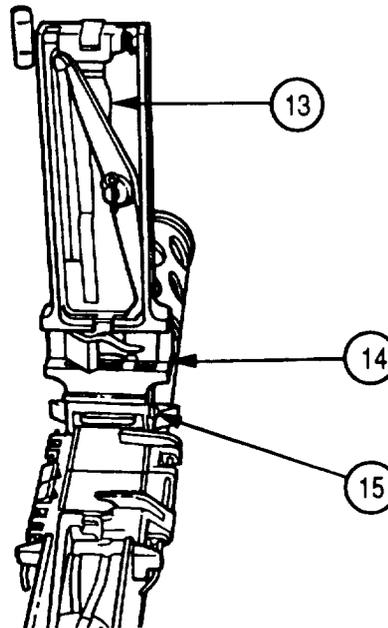
No.	Item Interval	Location	Procedure	Not Fully Mission Capable If:
		Item to be Checked or Serviced		



			e. Check for bent or broken pawl arm (11).	Bent or broken.
			f. Check spring for correct installation (oval end should be in belt feed pawl (8) with loop pointing down and away from pawl arm (11)).	Installed incorrectly.
			g. Check for bent or broken pins (12).	Bent or broken.

Table 2-2. Unit Preventive Maintenance Checks and Services (PMCS) Quarterly Schedule (cont)

Item No.	Interval	Location	Procedure	Not Fully Mission Capable If:
		Item to be Checked or Serviced		



11	Quarterly	Flat Spring (13)	Check for weak, broken, or not seated over cover latch.	Weak, broken, or not properly seated.
12	Quarterly	Cover Grooves (14)	Check for burrs, cracks, and damage.	Burred, cracked, or damaged.
13	Quarterly	Cover Pin (15)	Check if burred, bent, worn, or missing.	Burred, bent, worn, or missing.
		Bolt Assembly		

CAUTION

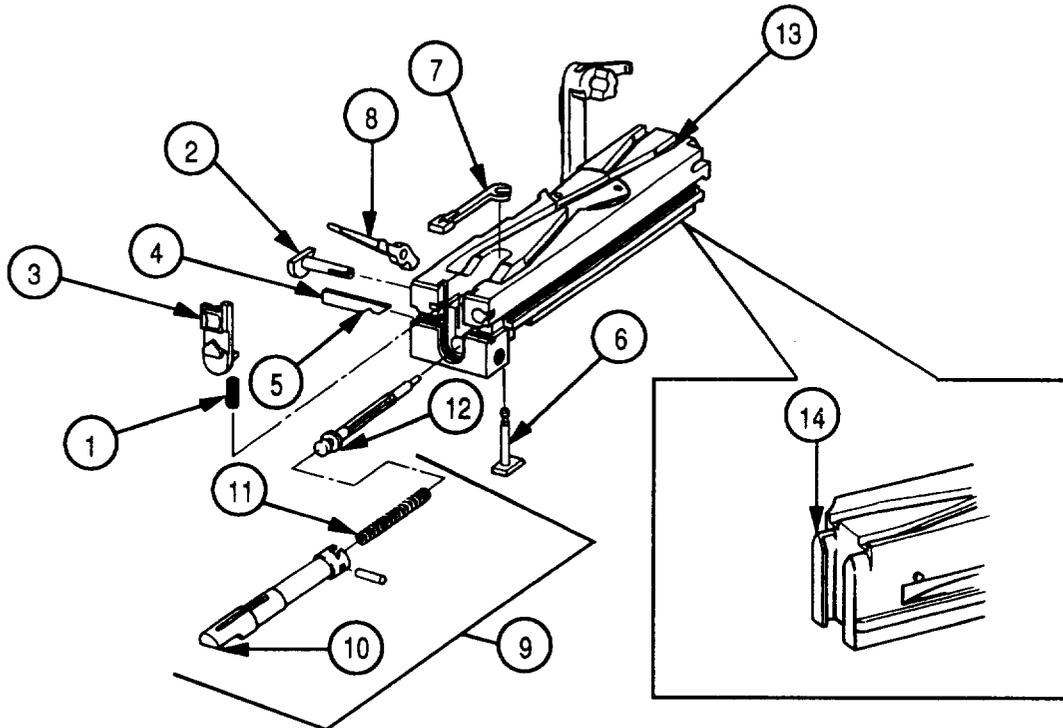
If the bolt is retracted with the cover up and then cover is closed and the bolt released, the bolt feed lever tang will not seat in the bolt groove. This results in a battered tang and a burred bolt body.

14	Quarterly	Bolt Assembly Body	Check for burrs and failure to slide freely.	Burred or fails to slide freely.
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2-6. PREVENTIVE MAINTENANCE CHECKS AND SERVICES (cont)

Table 2-2. Unit Preventive Maintenance Checks and Services (PMCS) Quarterly Schedule (cont)

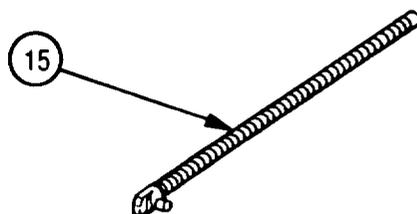
Item No.	Interval	Location	Procedure	Not Fully Mission Capable If:
		Item to be Checked or Serviced		



15	Quarterly	Sear Spring (1)	Check for deformity, weakness, or incorrect installation (should be in sear hole and recess in the bottom of the bolt).	Deformed, weak, or incorrectly installed.
16	Quarterly	Cocking Lever Pin (2)	Check if burred or broken.	Burred or broken.
17	Quarterly	Sear (3)	Check for burrs.	Burred.
18	Quarterly	Sear Slide (4)	a. Check sear slide for free movement in guide grooves. b. Check for distorted notch (5).	Binding. Distorted.

Table 2-2. Unit Preventive Maintenance Checks and Services (PMCS) Quarterly Schedule (cont)

Item No.	Interval	Location	Procedure	Not Fully Mission Capable If:
		Item to be Checked or Serviced		
19	Quarterly	Accelerator Stop (6) and Accelerator Stop Lock (7)	Check if bent or broken.	Bent or broken.
20	Quarterly	Cocking Lever (8)	Check if burred or bent (especially where the lever cams).	Burred or bent.
21	Quarterly	Firing Pin Extension (9)	a. Check for binding. b. Check if bent or cracked. c. Check for distorted notch (10). d. Check for weak or broken firing pin spring (11).	Binding. Bent or cracked. Distorted. Weak or broken.
22	Quarterly	Firing Pin (12)	Check for cracks, chipped or sharp tip. Tip should be smooth and well rounded.	Cracked, bent, or broken.
23	Quarterly	Bolt Cam Grooves (13) and T-Slot (14)	a. Check for burrs or cracks. b. Check for chipped T-slot.	Burred or cracked. Chipped.

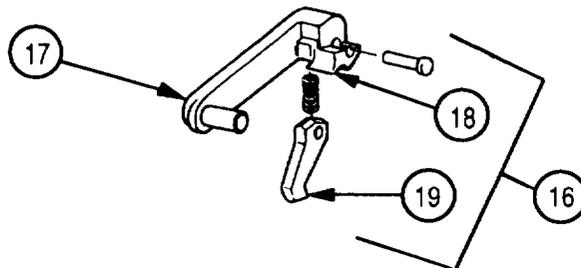


24	Quarterly	Driving Spring Rod Assembly (15)	a. Check for broken springs. b. Check for flat spots on coils.	Broken. Flattened.
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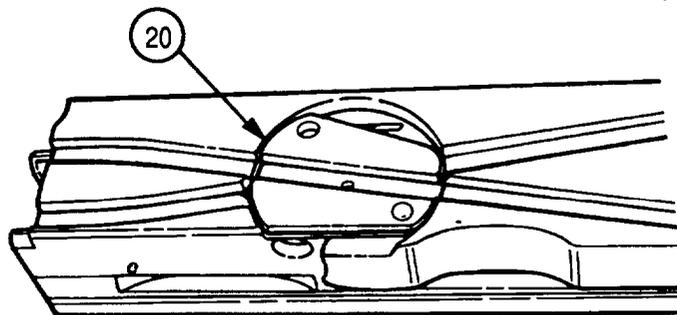
2-6. PREVENTIVE MAINTENANCE CHECKS AND SERVICES (cont)

Table 2-2. Unit Preventive Maintenance Checks and Services (PMCS) Quarterly Schedule (cont)

Item No.	Interval	Location	Procedure	Not Fully Mission Capable If:
		Item to be Checked or Serviced		



25	Quarterly	Cartridge Extractor (16)	a. Check for bent arm (17). b. Check for chipped claw (18). c. Check for broken bolt ejector (19) and staking.	Bent. Chipped. Broken or not staked.
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CAUTION

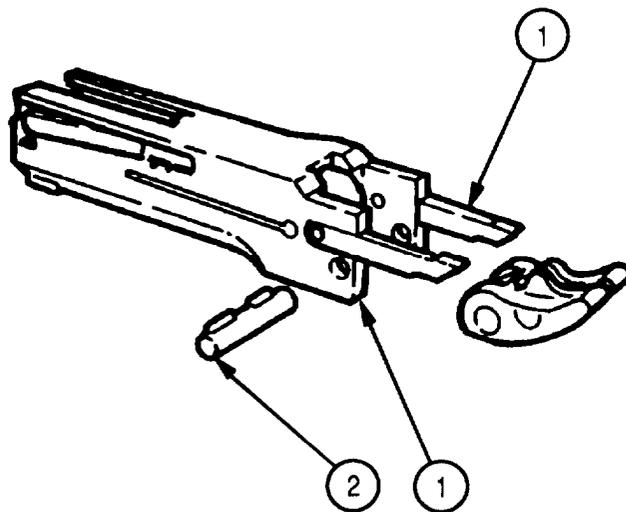
Incorrect installation of bolt switch can lead to battered belt feed lever if cover is closed and an attempt is made to function test the weapon.

NOTE Correct installation of bolt switch (20) for left-hand feed is shown above.

26	Quarterly	Bolt Switch (20)	Check for burrs, looseness, and incorrect installation.	Burred, loose, or incorrectly installed.
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Table 2-2. Unit Preventive Maintenance Checks and Services (PMCS) Quarterly Schedule (cont)

Item No.	Interval	Location	Procedure	Not Fully Mission Capable If:
		Item to be Checked or Serviced		
		Barrel Buffer Assembly		



27	Quarterly	Lock Depressors (1)	a. Check if cracked or broken. b. Check for failure to stay in barrel buffer body or tendency to move sideways (slight up and down movement is acceptable).	Cracked or broken. Pulls out or loose (side-ways).
28	Quarterly	Accelerator Pin Assembly (2)	a. Check for looseness or wear. b. Check for broken, not set, or missing spring.	Loose or worn. Broken, not set, or missing.

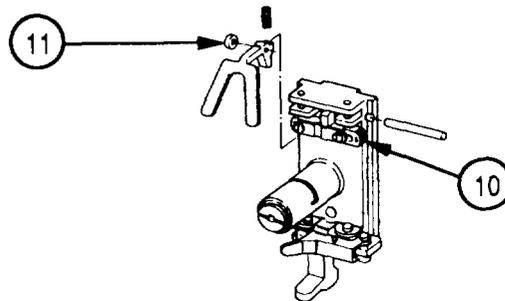
2-6. PREVENTIVE MAINTENANCE CHECKS AND SERVICES (cont)

Table 2-2. Unit Preventive Maintenance Checks and Services (PMCS) Quarterly Schedule (cont)

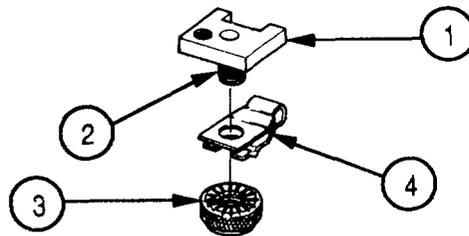
Item No.	Interval	Location	Procedure	Not Fully Mission Capable If:
		Item to be Checked or Serviced		
		Back Plate Assembly		
29	Quarterly	Upper (1) and Lower (2) Handle Frames	Check if bent, cracked, or broken.	Bent, cracked, or broken.
30	Quarterly	Handle Grips (3)	a. Check for cracks. b. Check for missing screws (4).	Cracked. Missing.
31	Quarterly	Bolt Latch Release Lock (5)	Check if broken or fails to hold the release down.	Broken or fails to hold release.
32	Quarterly	Bolt Latch Release (6) and Spring (7)	Check if cracked or broken. Check if spring is broken or missing.	Cracked, broken, or missing.
33	Quarterly	Trigger (8) and Spring (9)	Check if cracked or broken. Check if spring is broken or missing.	Cracked, broken, or missing.

Table 2-2. Unit Preventive Maintenance Checks and Services (PMCS) Quarterly Schedule (cont)

Item No.	Interval	Location	Procedure	Not Fully Mission Capable If:
		Item to be Checked or Serviced		



34	Quarterly	Safety (10) (M48 only)	a. Place in S (safe) position and attempt to fire. b. Check for missing sleeve spacer (11).	Fires on S (safe). Missing.
		Trigger Lever Stop Assembly		

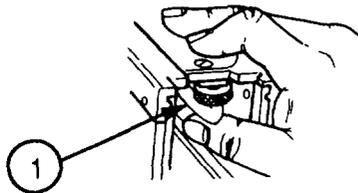


35	Quarterly		a. Check if adjustable stop (1) is missing or broken, or has stripped screw threads (2).	Broken, missing, or stripped.
			b. Check for loose, stripped, or missing timing adjustment nut (3).	Loose, stripped, or missing.
			c. Check for weak or broken flat spring (4).	Weak or broken.

2-6. PREVENTIVE MAINTENANCE CHECKS AND SERVICES (cont)

Table 2-2. Unit Preventive Maintenance Checks and Services (PMCS) Quarterly Schedule (cont)

Item No.	Interval	Location	Procedure	Not Fully Mission Capable If:
		Item to be Checked or Serviced		
		Trigger Lever		



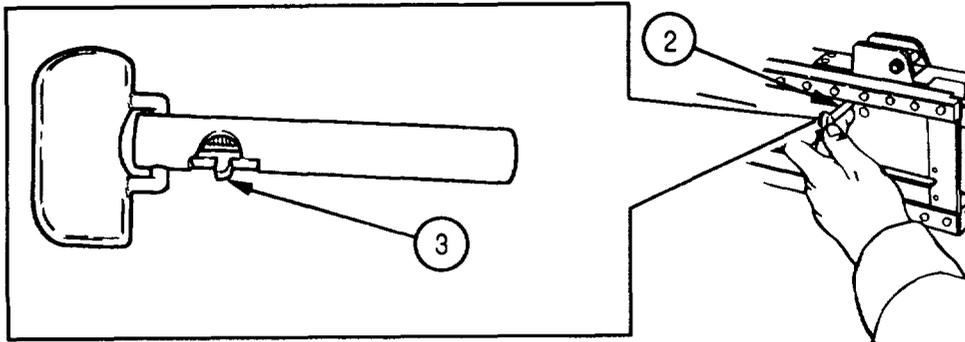
36

- a. Check trigger lever (1) for binding.
- b. Check if bent, cracked, or broken.
- c. Check installation (ensure notch is in top).

Binding.

Bent, cracked, or broken.

Incorrectly installed or wrong type.

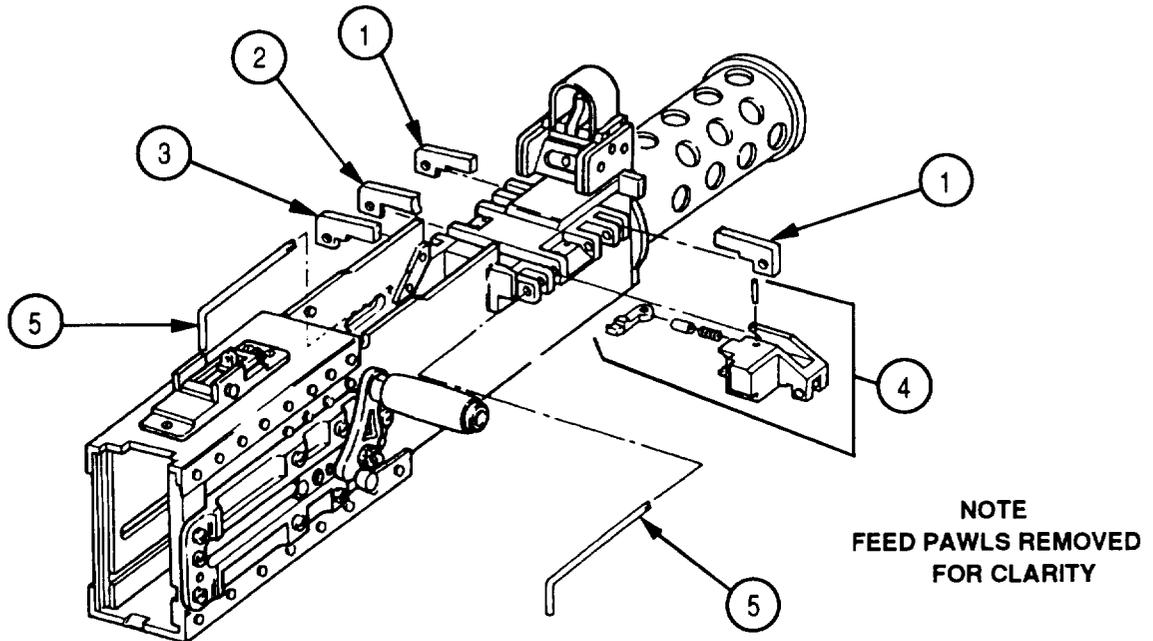


- d. Check for bent or missing trigger lever pin (2) and for a broken lock (3).

Bent, missing, or broken.

Table 2-2. Unit Preventive Maintenance Checks and Services (PMCS) Quarterly Schedule (cont)

Item No.	Interval	Location	Procedure	Not Fully Mission Capable If:
		Item to be Checked or Serviced		
		Cartridge Stops		



37	Quarterly	Front Cartridge Stop (1) (RH Feed)/Front Cartridge Stop (1) (LH Feed)	Check if broken, tight fitting, and incorrectly assembled.	Broken, tight fitting, or incorrectly assembled.
38	Quarterly	Link Stripper (2) (RH Feed Only)	Check if broken, tight fitting, and incorrectly assembled.	Broken, tight fitting, or incorrectly assembled.
39	Quarterly	Rear Cartridge Stop (3) (RH Feed Only)/Rear Cartridge Stop Assembly (4) (LH Feed Only)	Check if broken, tight fitting, and incorrectly assembled.	Broken, tight fitting, or incorrectly assembled.
40	Quarterly	Pin (5)	Check if broken or missing.	Broken or missing.

2-6. PREVENTIVE MAINTENANCE CHECKS AND SERVICES (cont)

Table 2-2. Unit Preventive Maintenance Checks and Services (PMCS) Quarterly Schedule (cont)

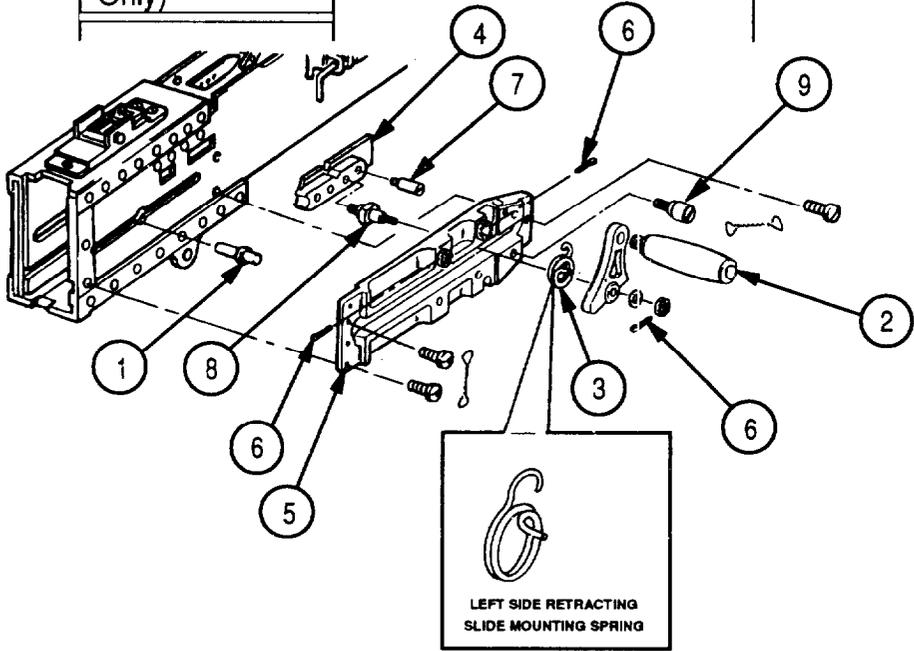
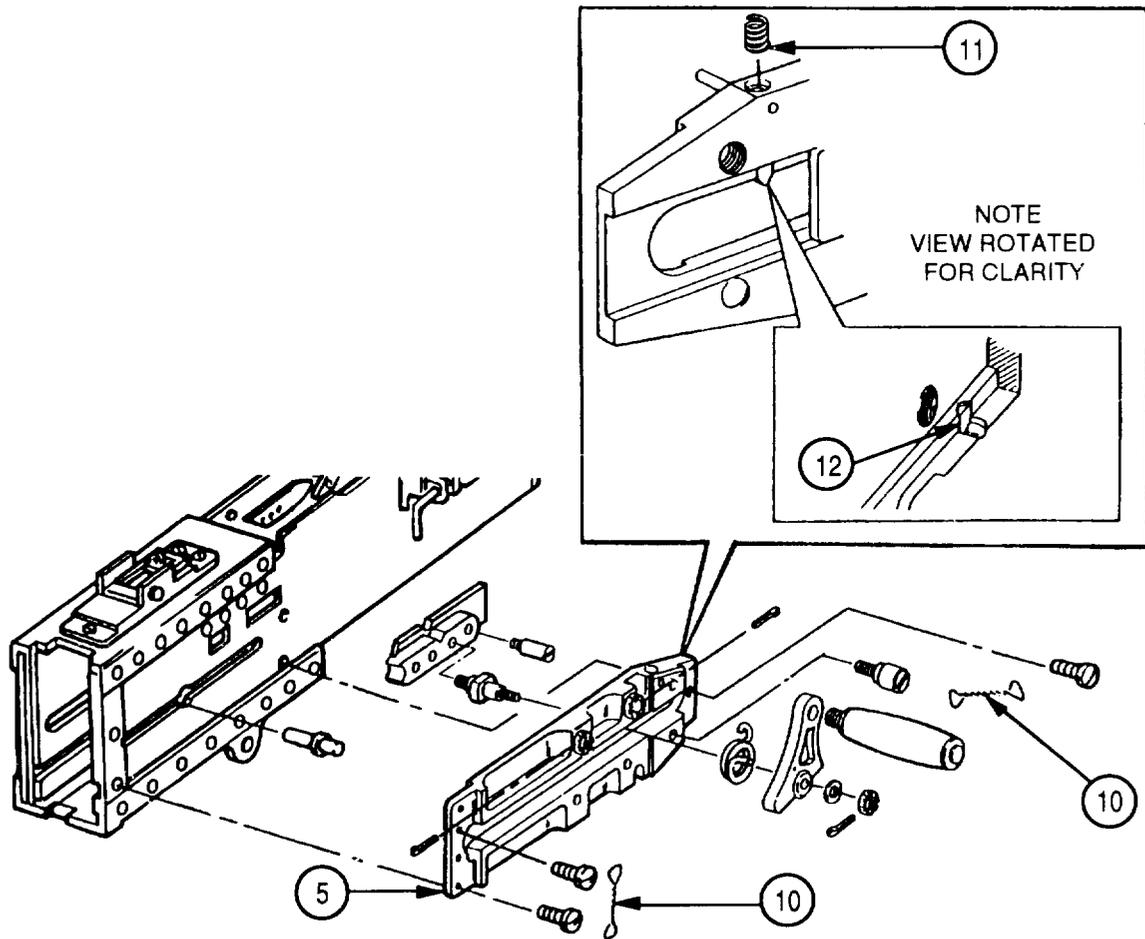
Item No.	Interval	Location Item to be Checked or Serviced	Procedure	Not Fully Mission Capable If:
		Retracting Slide Assembly (Flex Only)		
				
41	Quarterly	Bolt Stud (1)	Check if burred or broken.	Burred or broken.
42	Quarterly	Retracting Slide Handle (2) and Spring (3)	Check for cracks. Check for spring tension and proper assembly.	Cracked. Broken or incor- rectly assembled.
43	Quarterly	Retracting Slide (4)	Check for burrs and binding in bracket (5).	Burred or binding.
44	Quarterly	Cotter Pins (6)	Check if missing or broken.	Missing or broken.
45	Quarterly	Shoulder Pin (7), Stud (8), and Shoulder Screw (9)	Check if loose or broken.	Loose or broken.

Table 2-2. Unit Preventive Maintenance **Checks and Services (PMCS) Quarterly Schedule (cont)**

Item No.	Interval	Location	Procedure	Not Fully Mission Capable If:
		Item to be Checked or Serviced		

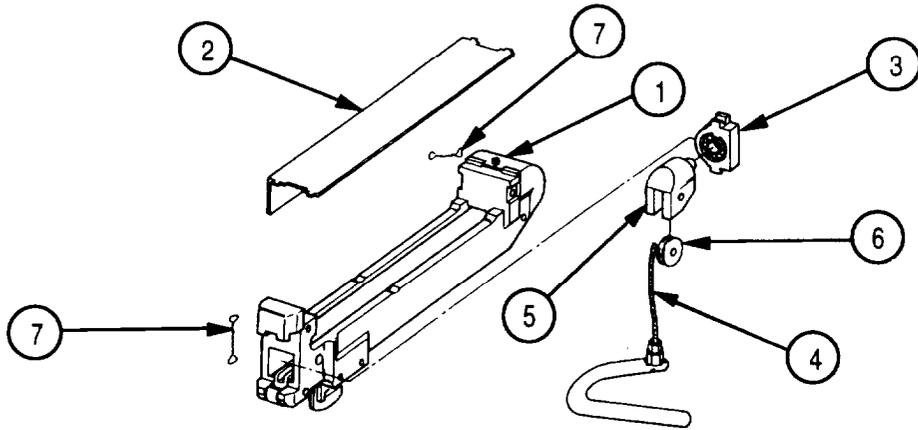


46	Quarterly	Safety Wires (10)	Check if broken or missing.	Broken or missing.
47	Quarterly	Spring (11)	Check plunger (12) for proper assembly with bracket (5) and spring (11). Check for spring pressure when plunger (12) is depressed.	Broken, missing, or incorrectly assembled.

2-6. PREVENTIVE MAINTENANCE CHECKS AND SERVICES (cont)

Table 2-2. Unit Preventive Maintenance Checks and Services (PMCS) Quarterly Schedule (cont)

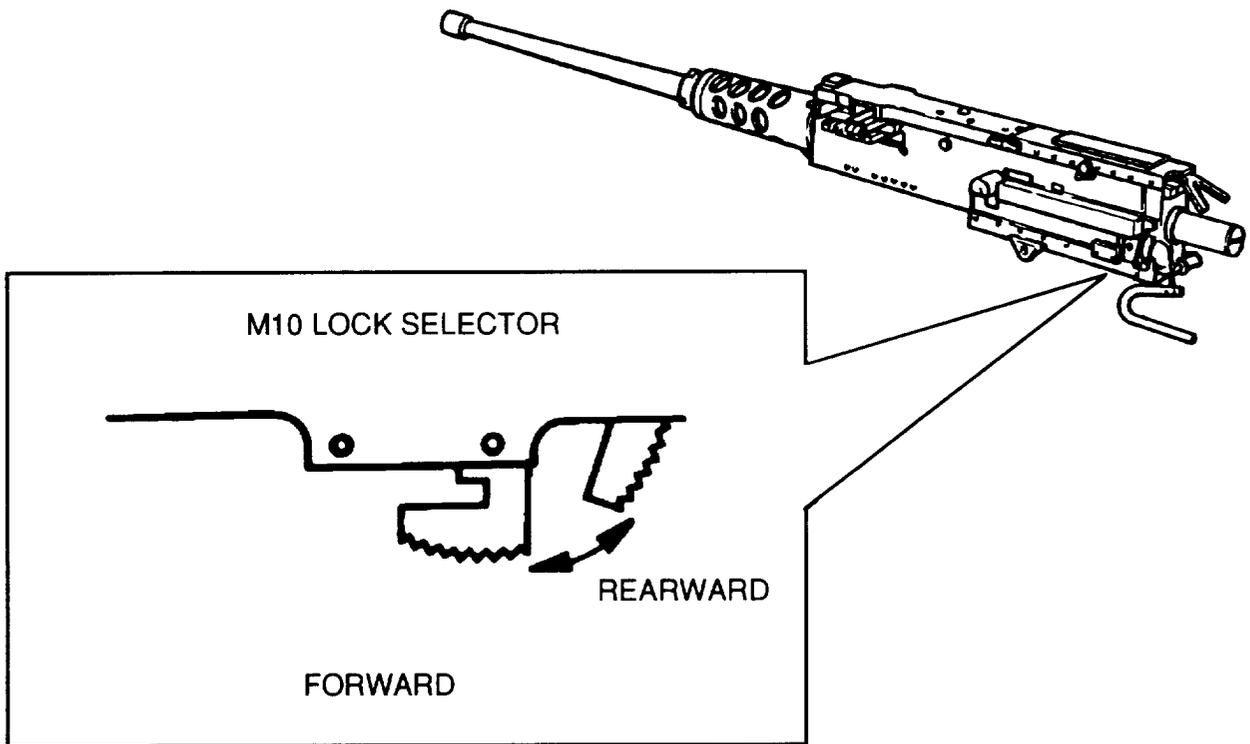
Item No.	Interval	Location	Procedure	Not Fully Mission Capable If:
		Item to be Checked or Serviced		
		M10 Manual Charger		



48	Quarterly	Channel Housing (1)	Check if dented, twisted, or cracked.	Dented, twisted, or cracked.
49	Quarterly	Charger Bolt Cover (2)	Check if dented, twisted, or cracked.	Dented, twisted, or cracked.
50	Quarterly	Swivel Pulley Plate (3)	Check for signs of damage.	Damaged.
51	Quarterly	Charger Cable Assembly (4)	a. Check if kinked, twisted, or missing. b. Check for broken strands.	Kinked (to adversely affect smooth operation), twisted, or missing. Broken.
52	Quarterly	Swivel (5)	Check pulley (6) for burrs and binding.	Burred or binding.
53	Quarterly	Safety Wires (7)	Check if broken or missing.	Broken or missing.

Table 2-2. Unit Preventive Maintenance Checks and Services (PMCS) Quarterly Schedule (cont)

Item No.	Interval	Location	Procedure	Not Fully Mission Capable If:
		Item to be Checked or Serviced		
54	Quarterly	M10 Manual Charger	a. Check for looseness (when mounted on gun). b. Check slide for proper functioning.	Loose. Malfunctioning.



NOTE

Slide lock pawl lever will engage and disengage the M10 lock selector when the selector is manually operated. When lever is disengaged from the selector, the slide lock pawl will lock in rearward position. When the selector is engaged, the slide lock pawl will return to the forward position as the handle is moved toward lever.

Section IV. TROUBLESHOOTING

2-7. TROUBLESHOOTING

a. The symptom index can be used as a quick guide to troubleshooting. Common malfunctions are listed in cycle of function order with a page number reference to the troubleshooting table where a test or inspection and corrective action are provided.

b. This manual cannot list all malfunctions that may occur, nor all tests or inspections and corrective actions. If a malfunction is not listed or is not corrected by listed corrective actions, notify direct support maintenance.

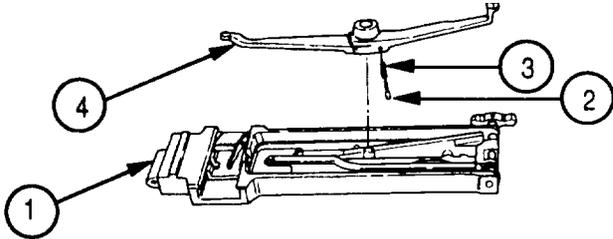
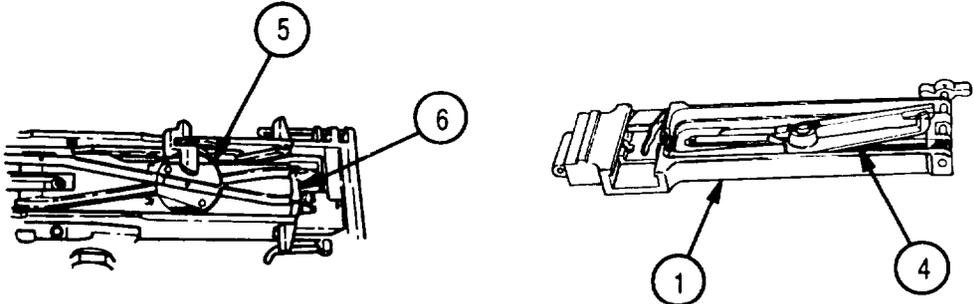
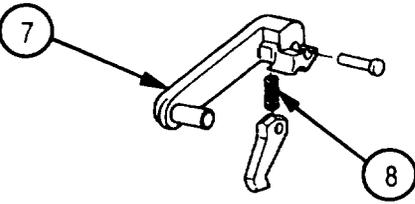
NOTE

- Refer to Operator’s Manual for disassembly and assembly.
- Check headspace and timing BEFORE beginning troubleshooting procedures.

SYMPTOM INDEX

	Troubleshooting Procedure Page
M2 MACHINE GUN	
Weapon will not feed	2-37
Round will not chamber	2-40
Bolt will not lock	2-42
Weapon will not fire	2-42
Weapon will not unlock	2-44
Weapon will not extract	2-45
Weapon will not eject	2-46
Weapon will not cock	2-47
Weapon has uncontrolled fire	2-48
Bolt assembly is improperly installed	2-48

Table 2-3. UNIT TROUBLESHOOTING

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
M2 MACHINE GUN		
1. WEAPON WILL NOT FEED.	 <p>A technical drawing of the M2 machine gun cover assembly. Callout 1 points to the cover assembly. Callout 2 points to a shoulder pin. Callout 3 points to a spring. Callout 4 points to the belt feed lever.</p>	<p>Step 1. Check cover assembly (1) for defective shoulder pin (2); spring (3); or burred, broken, or bent belt feed lever (4).</p> <p>Replace defective shoulder pin, spring, and/or belt feed lever (p 2-70).</p>
	 <p>Two technical drawings. The left drawing shows a bolt assembly with callouts 5 and 6. The right drawing shows the cover assembly with callouts 1 and 4.</p>	<p>Step 2. Check bolt switch (5) in bolt assembly (6) or belt feed lever (4) in cover assembly (1) for improper assembly.</p> <p>Reassemble bolt switch (p 2-69) or belt feed lever (p 2-70).</p>
	 <p>A technical drawing showing a cartridge extractor (callout 7) and an ejector spring (callout 8).</p>	<p>Step 3. Check for defective cartridge extractor (7) and ejector spring (8).</p> <p>Notify direct support maintenance.</p>

2-7. TROUBLESHOOTING (cont)

Table 2-3. UNIT TROUBLESHOOTING (cont)

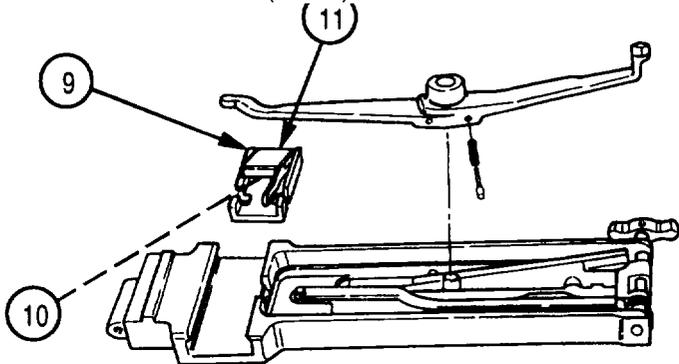
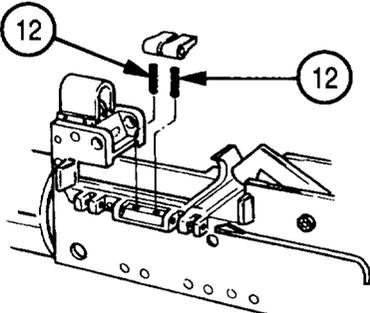
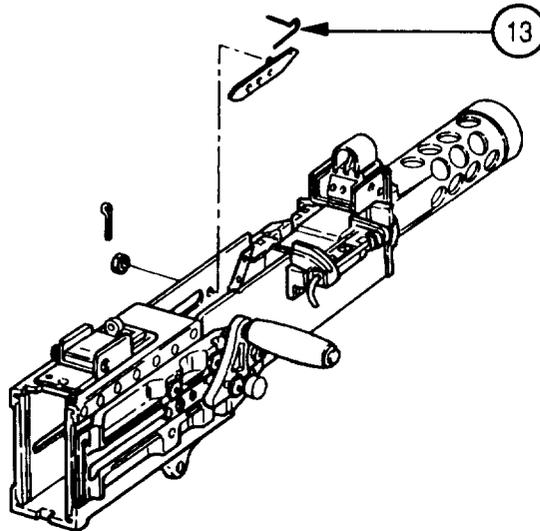
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
M2 MACHINE GUN (cont)		
1. WEAPON WILL NOT FEED. (cont)		
		
	Step 4. Check belt feed slide assembly (9) for defective spring (1 O) under belt feed pawl (11).	Replace defective spring (p 2-70).
	Step 5. Check for defective belt feed pawl(11).	Replace defective belt feed pawl (p 2-70).
	Step 6. Check for defective belt feed slide assembly (9).	Replace defective belt feed slide assembly (p 2-70).
		
	Step 7. Check for defective belt holding pawl springs (12).	Replace defective belt holding pawl springs (p 2-53).

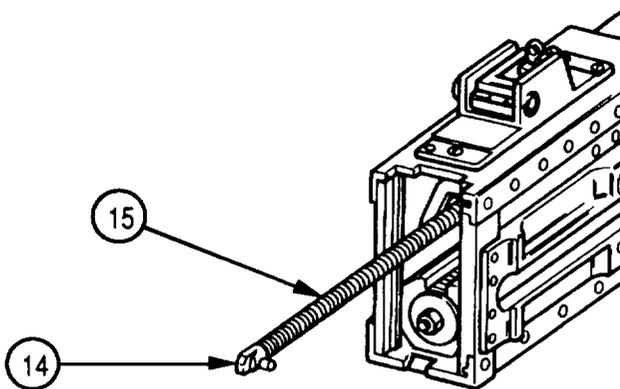
Table 2-3. UNIT TROUBLESHOOTING (cont)

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
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Step 8. Check for defective extractor switch spring (13).

Notify direct support maintenance.



Step 9. Check driving spring rod assembly (14) for defective rod springs (15).

Replace defective driving spring rod assembly (p 2-53).

2-7. TROUBLESHOOTING (cont)

Table 2-3. UNIT TROUBLESHOOTING (cont)

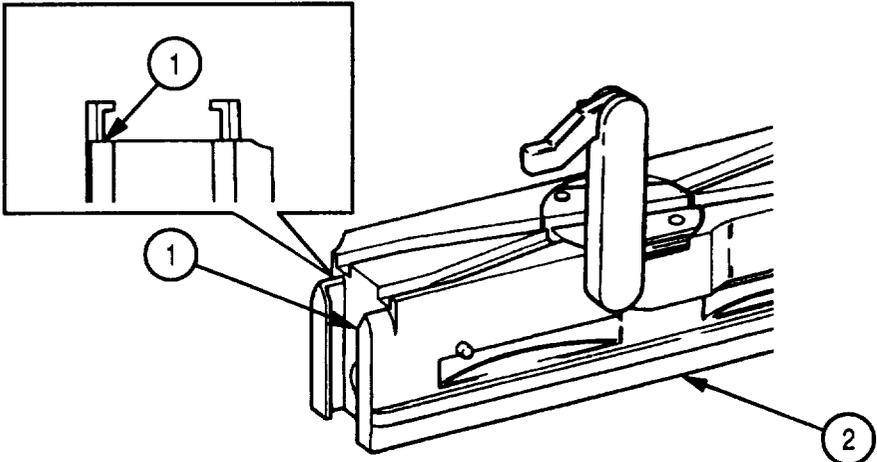
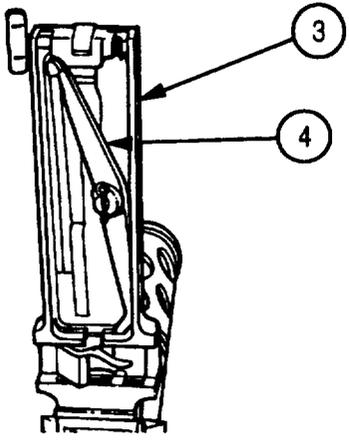
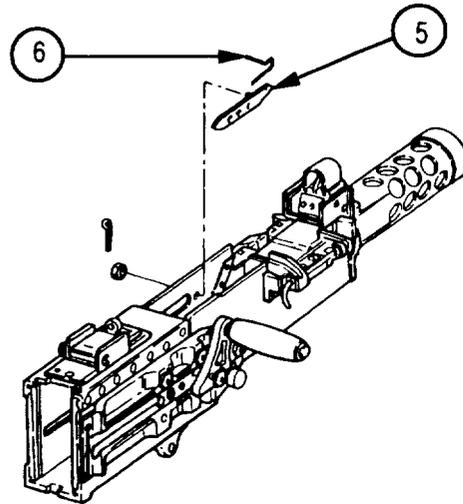
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
M2 MACHINE GUN (cont)		
2. ROUND WILL NOT CHAMBER.		<p>Step 1. Check for defective T-slot (1) in bolt (2).</p> <p>Notify direct support maintenance.</p>
		<p>Step 2. Check cover assembly (3) for bent or broken belt feed lever (4).</p> <p>Replace defective belt feed lever (p 2-70).</p>

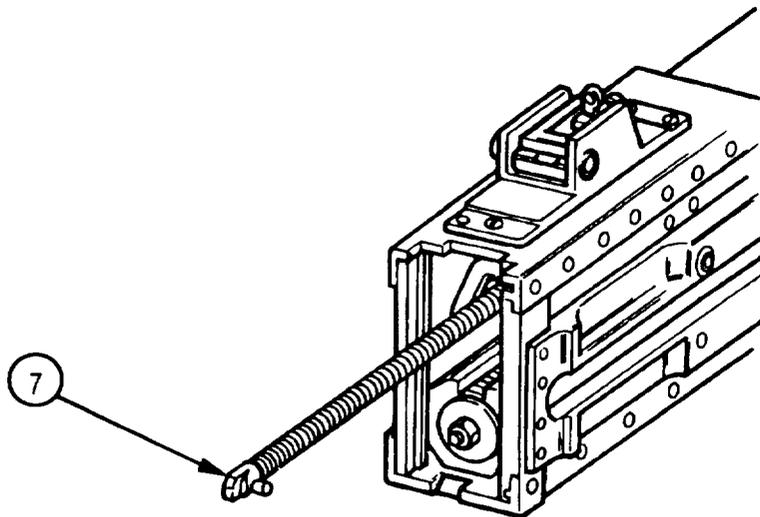
Table 2-3. UNIT TROUBLESHOOTING (cont)

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
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Step 3. Check for defective extractor switch (5) or extractor switch spring (6).

Notify direct support maintenance.



Step 4. Check for defective driving spring rod assembly (7).

Replace driving spring rod assembly (p 2-53).

2-7. TROUBLESHOOTING (cont)

Table 2-3. UNIT TROUBLESHOOTING (cont)

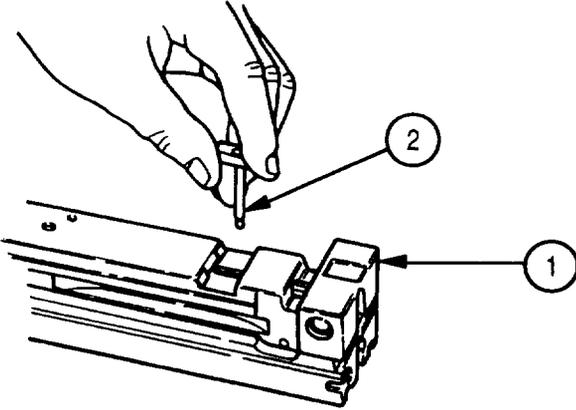
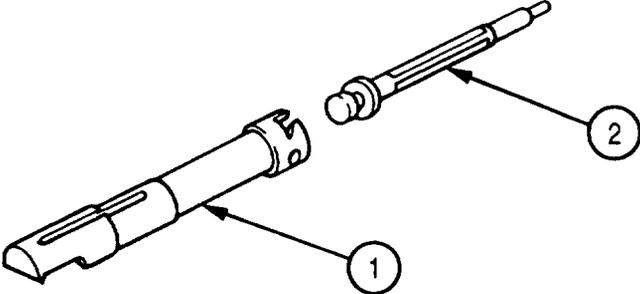
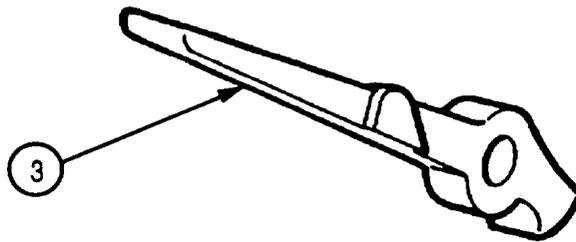
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
M2 MACHINE GUN (cont)		
3. BOLT WILL NOT LOCK.	 A technical drawing showing a hand using a screwdriver to adjust a small component labeled '2' on a bolt assembly labeled '1'. The bolt assembly is shown in a side view, and the hand is positioned above it, pointing the screwdriver at the accelerator stop.	Check bolt assembly (1) for broken or improperly assembled accelerator stop (2).
		Replace broken accelerator stop (p 2-69) or install accelerator stop properly.
4. WEAPON WILL NOT FIRE.	 A technical drawing showing two components: a firing pin extension labeled '1' and a firing pin labeled '2'. The firing pin is shown inserted into the firing pin extension.	Step 1. Check for defective firing pin extension (1) and firing pin (2).
		Notify direct support maintenance.

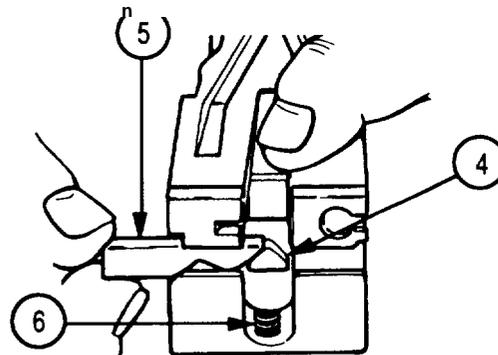
Table 2-3. UNIT TROUBLESHOOTING (cont)

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
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Step 2. Check cocking lever (3) of bolt assembly for defects or improper assembly.

Replace defective cocking lever (p 2-69) or install cocking lever properly.



Step 3. Check bolt assembly for defective sear (4) or improper assembly of sear slide (5).

Replace defective sear (p 2-69) or install sear slide properly.

Step 4. Check bolt assembly for defective sear spring (6).

Replace defective sear spring (p 2-69).

2-7. TROUBLESHOOTING (cont)

Table 2-3. UNIT TROUBLESHOOTING (cont)

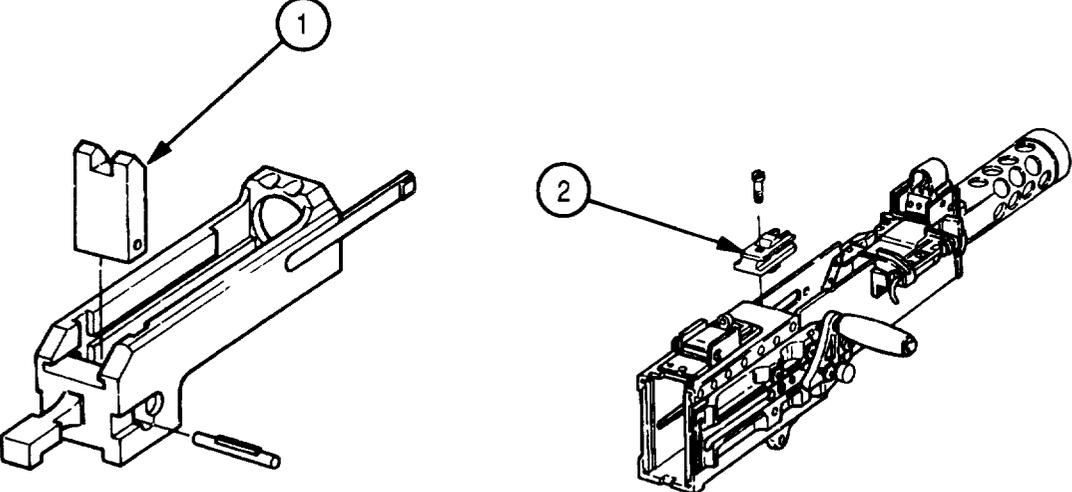
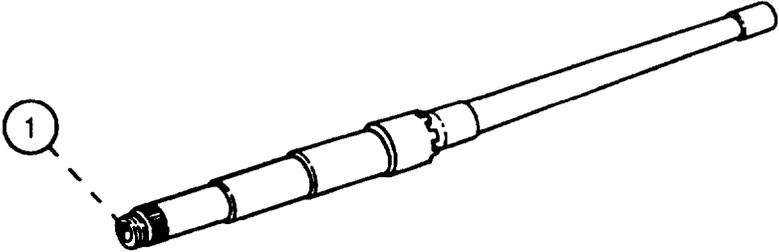
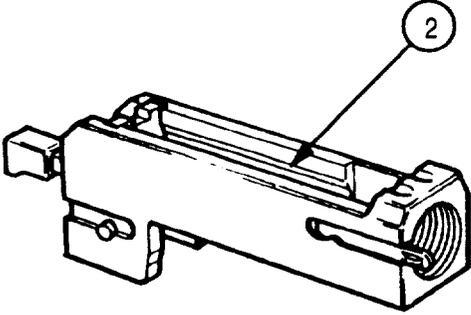
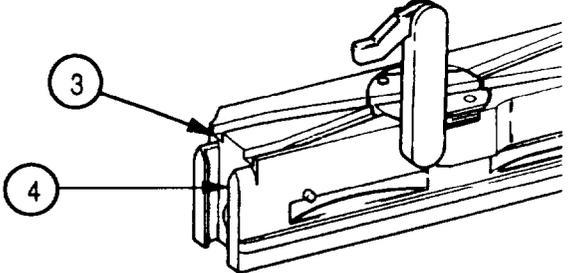
MALFUNCTION		
TEST OR INSPECTION		
CORRECTIVE ACTION		
M2 MACHINE GUN (cont)		
5. WEAPON WILL NOT UNLOCK.		
Step 1. Check for obstruction in receiver group.		
Remove obstruction.		
		
Step 2. Check for damaged breech lock (1) or breech lock cam (2). Check for improper assembly of breech lock (1).		
Replace defective breech lock (p 2-53) or install breech lock properly. Notify direct support maintenance if breech lock cam is damaged.		

Table 2-3. UNIT TROUBLESHOOTING (cont)

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
6. WEAPON WILL NOT EXTRACT.	 <p data-bbox="354 926 1015 961">Step 1. Check for defective (pitted) chamber (1).</p> <p data-bbox="581 989 1031 1024">Replace barrel assembly (p 2-53).</p>	  <p data-bbox="354 1564 1226 1600">Step 2. Check for burrs on rails (2) of barrel extension assembly.</p> <p data-bbox="581 1627 787 1663">Remove burrs.</p> <p data-bbox="354 1690 1063 1726">Step 3. Check for burrs on rails (3) of bolt assembly.</p> <p data-bbox="581 1753 787 1789">Remove burrs.</p> <p data-bbox="354 1816 933 1852">Step 4. Check for broken T-slot (4) in bolt.</p> <p data-bbox="581 1879 1039 1915">Notify direct support maintenance.</p>

2-7. TROUBLESHOOTING (cont)

Table 2-3. UNIT TROUBLESHOOTING (cont)

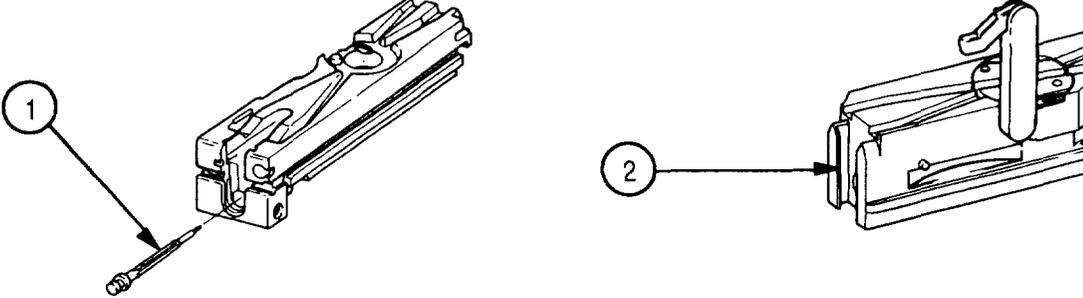
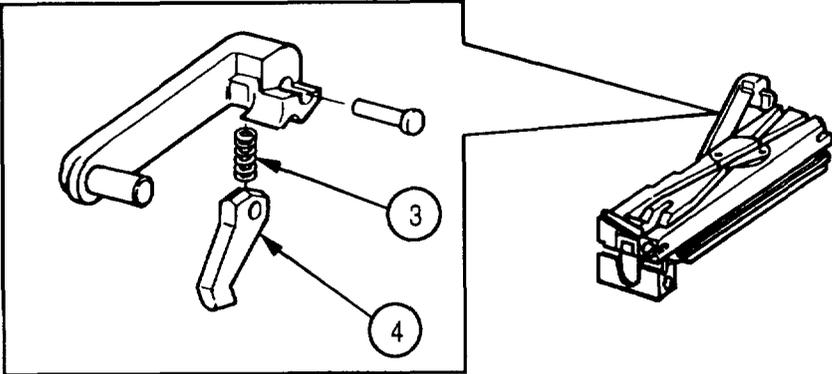
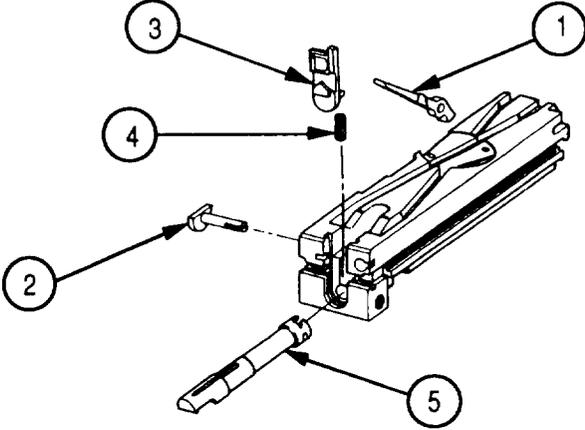
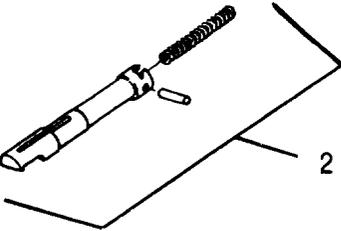
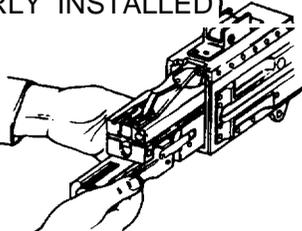
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
M2 MACHINE GUN (cont)		
7. WEAPON WILL NOT EJECT.		
	Step 1. Check for defective firing pin (1).	Notify direct support maintenance.
	Step 2. Check for burrs in T-slot (2).	Notify direct support maintenance.
		
	Step 3. Check for defective ejector spring (3).	Notify direct support maintenance.
	Step 4. Check for defective ejector (4).	Notify direct support maintenance.

Table 2-3. UNIT TROUBLESHOOTING (cont)

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
8. WEAPON WILL NOT COCK.		Step 1. Check bolt assembly for defective cocking lever (1). Replace defective cocking lever (p 2-69).
		Step 2. Check bolt assembly for defective cocking lever pin (2). Replace defective cocking lever pin (p 2-69).
		Step 3. Check bolt assembly for defective sear (3). Replace defective sear (p 2-69).
		Step 4. Check bolt assembly for defective sear spring (4). Replace defective sear spring (p 2-69).
		Step 5. Check for defective firing pin extension assembly (5). Notify direct support maintenance.

2-7. TROUBLESHOOTING (cont)

Table 2-3. UNIT TROUBLESHOOTING (cont)

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
M2 MACHINE GUN (cont)		
9. WEAPON HAS UNCONTROLLED FIRE.		<p>Step 1. Check bolt assembly for defective sear (1).</p> <p>Replace defective sear (p 2-69).</p> 
	<p>Step 2. Check for defective firing pin extension assembly (2).</p> <p>Notify direct support maintenance.</p>	
10. BOLT ASSEMBLY IS IMPROPERLY INSTALLED		<p>Check for proper installation of bolt assembly.</p> <p>Reassemble components and/or notify direct support maintenance.</p>

Section V. MAINTENANCE PROCEDURES

2-8. GENERAL MAINTENANCE

a. Cleaning Instructions. Refer to TM 9-1005-213-10 for general cleaning and lubricating instructions. Refer to Table 2-4 for detailed cleaning procedures. Dry cleaning solvent (item 14, appx C) may be used to clean or wash grease and oil from the machine gun. Moving surfaces should be cleaned frequently to ensure proper functioning. Navy users refer to the applicable Maintenance Requirement Card.

b. Disassembly and Reassembly Procedures.

(1) Complete disassembly of a unit is not always necessary in order to make a required replacement or repair. Good judgement should be used to keep disassembly and reassembly operations to a minimum.

(2) During reassembly, assemblies should be assembled first, then installed to form a complete unit.

(3) Lubricate frictional sliding surfaces before reassembly with lubricating oil (LSA) (item 18, appx C).

c. Finished Surfaces. All treated areas, which reflect light, will be refinished to match the appearance of new parts.

d. Improperly Installed Bolt Assembly. If the bolt assembly is installed in the receiver with the cocking lever improperly positioned (not pointed towards the barrel assembly), the following two procedures can be used to free the bolt assembly without damaging components.

WARNING

- Be sure to clear weapon before disassembling, cleaning, inspecting, transporting, or storing. Clearing consists of unloading the machine gun and visually inspecting weapon and chamber to ensure all rounds have been removed. Do not release the bolt or press the trigger.
- Do not remove the backplate unless the bolt is in the forward position.
- Do not attempt to charge machine gun without the baseplate assembled to machine gun. Stand to one side when removing baseplate.

NOTE

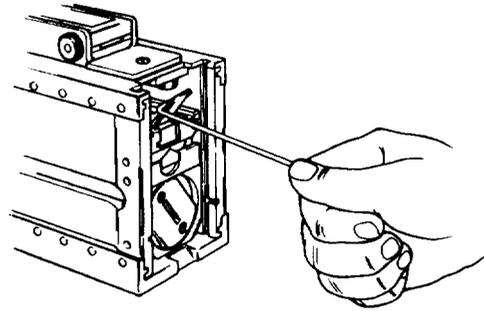
For both procedures, ensure baseplate, driving spring rod assembly, and bolt stud are removed.

2-8. GENERAL MAINTENANCE (cont)

(1) Fabricate a hook-shaped piece of brass rod (Figure D-1).

(2) Place metal hook around the cocking lever, halfway up the cocking lever. If placed higher, the cocking lever will jam.

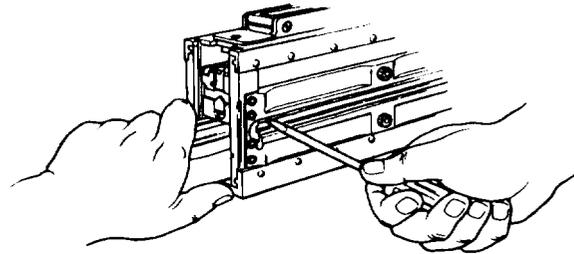
(3) Press down hard on the cocking lever as you pull back with several hard pulls of the tool. The bolt should come free of the receiver assembly.



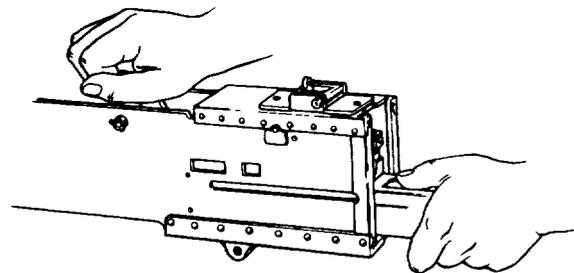
OR

(4) Ensure backplate, driving spring rod assembly, and bolt stud are removed.

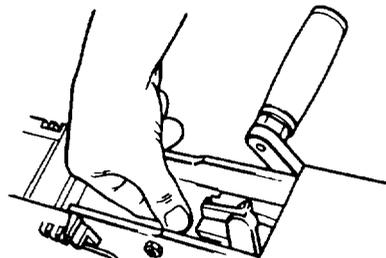
(5) Depress buffer body lock with a pointed object as you slide the buffer assembly out about 2.00 in. (5.08 cm).



(6) Slide the bolt assembly forward as you pull the buffer assembly to the rear. The bolt forces the accelerator down and allows the buffer assembly to be moved. You may need to slide the bolt assembly back and forth several times before you can pull the buffer assembly out.



(7) Push down on the front of the barrel extension assembly. Slide the bolt assembly out of the receiver. If the bolt hangs up, pull the barrel extension forward and up until the bolt assembly slides out.



e. Marking of Small Arms. The marking of small arms by use of permanent etching, painting (oil or latex), stamping, or burning on metal, rubber-coated material, synthetic material, or wood components is strictly forbidden. However, the use of white tape, masking tape, embossed tape, bar codes, or tags is permissible.

Table 2-4. DETAILED CLEANING PROCEDURES

Step	Procedure
	<p style="text-align: center;">M2 MACHINE GUN</p> <p style="text-align: center;">WARNING</p> <ul style="list-style-type: none"> • After firing, ensure that sufficient time is allowed for weapon to cool before performing inspection or cleaning procedures. • Be sure to clear weapon before disassembling, cleaning, inspecting, transporting, or storing. Clearing consists of unloading the machine gun and visually inspecting weapon and chamber to ensure all rounds have been removed. Do not release the bolt or press the trigger. <p style="text-align: center;">CAUTION</p> <p>The use of gasoline; kerosene; benzene (benzol); household cleaners; or high pressure water, steam, or air for cleaning the weapon is prohibited. Use only authorized cleaning materials (appx C).</p> <p>1 Immediately after firing (or as soon as possible) thoroughly clean and lubricate the weapon to maintain reliability and combat effectiveness. Follow procedures below.</p> <p style="text-align: center;">NOTE</p> <p>Do not dilute rifle bore cleaner (RBC). Do not add antifreeze. Shake well before using.</p> <p>2 Disassemble the machine gun into groups and assemblies. (Refer to operator's manual.)</p> <p>3 Clean bore and chamber with brushes or swab (items 7,8, or 24, appx C) saturated with RBC (item 11, appx C) until a clean swab can be run through the barrel without detecting any decontamination. Wipe dry and lubricate. (Refer to operator's manual.)</p> <p>4 Clean all metal surfaces that are subject to powder fouling with RBC (item 11, appx C), wipe dry, and lubricate. (Refer to operator's manual.)</p> <p style="text-align: center;">WARNING</p> <p>Dry cleaning solvent (SD) (item 14, appx C) is flammable and should not be used near an open flame. Use only in well ventilated areas. This solvent evaporates quickly and has a drying effect on the skin. When used without gloves, it may cause cracks in the skin and, in some cases, mild irritation or inflammation.</p> <p style="text-align: center;">CAUTION</p> <p>The back plate assembly will not be submerged in solvents or other cleaning fluids. Use oily cloth on exterior surfaces to prevent corrosion.</p>

2-8. GENERAL MAINTENANCE (cont)

Table 2-4. DETAILED CLEANING PROCEDURES (cont)

Step	Procedure
5	<p>Clean all other surfaces not covered in steps 3 and 4 with SD (item 14, appx C) or RBC (item 11, appx C), wipe dry, and lubricate.</p> <p style="text-align: center;">WARNING</p> <p>Avoid skin contact with carbon removing compound (CRC) (item 9, appx C). The compound should be washed off thoroughly with running water if it comes in contact with the skin. A good lanolin base cream, after exposure to compound, is helpful. Use of rubber gloves (item 16, appx C) and protective equipment is required.</p>
6	<p>On component parts which have a hard carbon residue, it may be necessary to clean those parts with CRC (item 9, appx C). Depending on the amount of carbon residue, soak 2 to 16 hours, rinse with water and SD (item 14, appx C), brush with a stiff bristle brush, wipe the parts dry, and lubricate.</p>

2-9. GENERAL

a. Unit Maintenance. Unit maintenance is limited to replacement of common hardware and minor components, and to checking and adjusting headspace and timing.

b. Direct Support Maintenance. Direct support repairs assemblies/subassemblies of the machine gun and performs the annual gaging/inspection requirements.

c. Initial Setup. In order to reduce the space required for the initial setup portion of the maintenance procedures, the following data is standard for all initial setups:

(1) Materials/Parts - includes only items applicable to the procedure.

(2) Tools and Special Tools - includes only the standard tool set applicable to the procedure.

(3) Personnel Required - includes the following designated joint service descriptions that are applicable to all unit maintenance procedures:

(a) Army: Military Occupational Specialty (MOS) 92Y Supply Clerk/Unit Armorer for unit maintenance and MOS45B Small Arms Repairman for direct support maintenance.

(b) Air Force: Air Force Specialty Code (AFSC) 3P1XX Combat Arms Training and Maintenance Journeyman, Craftsman, and 3P1XXA Gunsmith.

(c) Navy: Gunner's Mate Guns (GMG).

(d) Marine Corps: Military Occupational Specialty(MOS)2111 Unit Armorer (infantry Weapon Repairer).

(4) References - includes the operator's manual for joint service use:

(a) ARMY TM 9-1005-213-10. Operator's Manual.

(b) ARMY TM 9-1005-213-23P. Repair Parts and Special Tools List (RPSTL).

(c) MS35540. installation of Safety Wire and Cotter Pins.

(5) Equipment Condition - is listed as applicable to the procedure.

WARNING

Be sure to clear weapon before disassembling, cleaning, inspecting, transporting, or storing. Clearing consists of unloading the machine gun and visually inspecting weapon and chamber to ensure all rounds have been removed. Do not release the bolt or press the trigger.

2-10. M2 MACHINE GUN, M48 AND FLEX — MAINTENANCE INSTRUCTIONS

THIS TASK COVERS:

a. Disassembly

b. inspection/Repair

c. Reassembly

INITIAL SETUP

Tools and Special Tools

Small arms repairman tool kit (SC 5180-95-CL-A07)

Materials/Parts

Cotter pin (12003201)

Dummy rounds

Personnel Required (2)

MOS 92Y Supply clerk/unit armorer

References

TM 9-1005-213-10

TM 9-1005-213-23P

Equipment Conditions

M2 machine gun removed/dismounted (TM 9-1005-213-10)

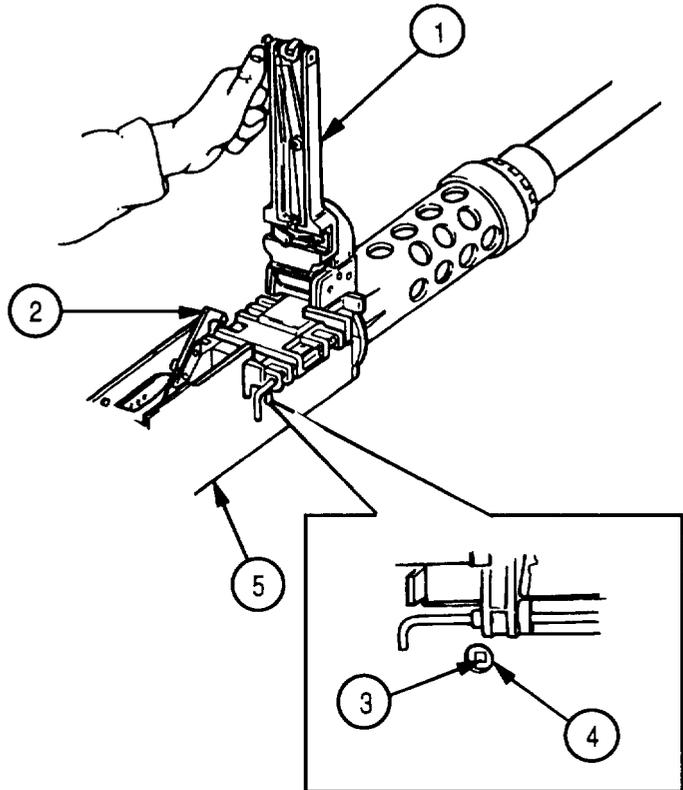
2-10. M2 MACHINE GUN, M48 AND FLEX—MAINTENANCE INSTRUCTIONS (cont)

DISASSEMBLY

WARNING

Be sure to clear weapon before disassembling, cleaning, inspecting, transporting, or storing. Clearing consists of unloading the machine gun and visually inspecting weapon and chamber to ensure all rounds have been removed. Do not release the bolt or press the trigger.

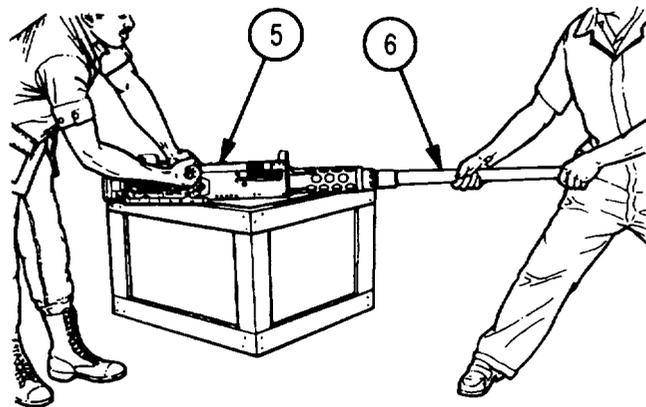
- 1 Raise cover assembly (1) all the way up. Retract bolt assembly (2) far enough for barrel locking spring lug (3) to center in barrel locking spring hole (4) on right hand side of receiver (5).



- 2 Uncrew and remove barrel assembly (6) from receiver (5).

NOTE

For repair/replacement of flash suppressor, refer to paragraph 2-11. For repair/replacement of barrel carrier assembly, refer to paragraph 2-14.

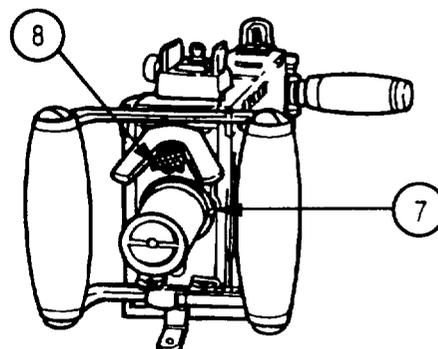


WARNING

- Do not attempt to remove backplate assembly unless the bolt is in the forward position.
- Do not stand behind weapon while removing backplate assembly.

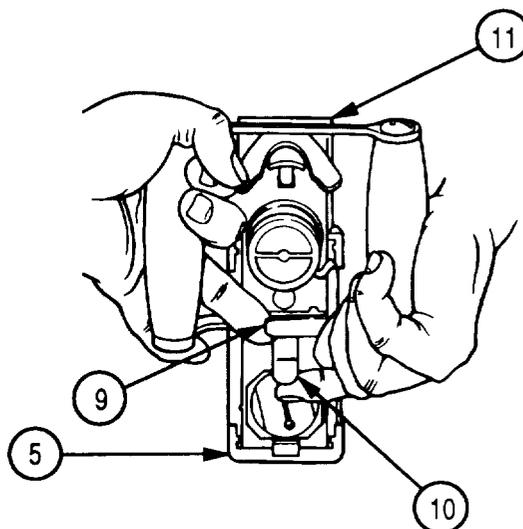
NOTE

Step 3 applies to Flex machine gun only.



3 Ensure bolt latch release lock (7) is in unlocked (semi-automatic) position. The bolt latch release (8) must be in the up position (not locked down).

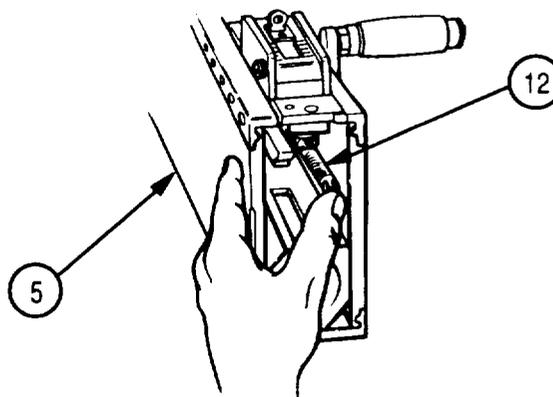
4 Pull backplate latch lock (9) straight back, lifting upon backplate latch (10). Raise backplate assembly (11) straight up and remove from receiver (5).



WARNING

To avoid injury to your eyes, use care when removing and installing spring-loaded parts.

5 Push rear of driving spring rod assembly (12) forward and to the left until free from the side of receiver (5). Remove driving spring rod assembly (12).



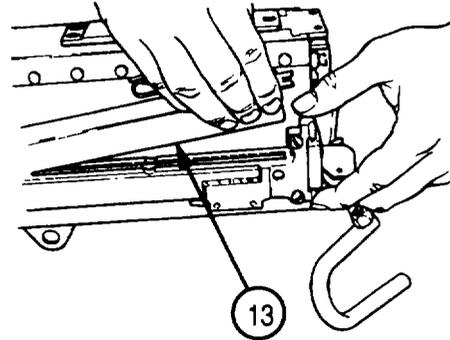
2-10. M2 MACHINE GUN, M48 AND FLEX—MAINTENANCE INSTRUCTIONS (cont)

DISASSEMBLY (cont)

NOTE

Step 6 applies to M48 only.

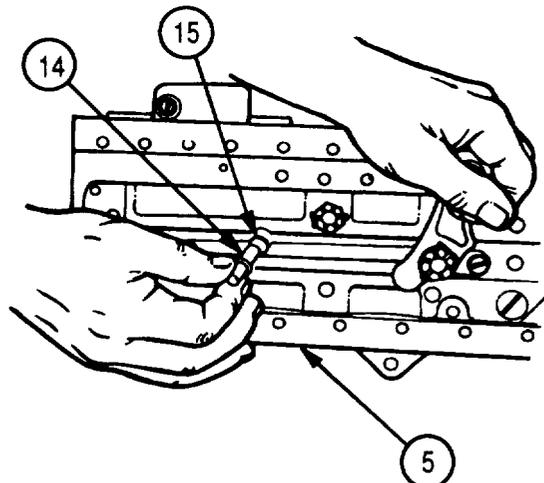
- 6 Remove M10 manual charger cover (13).



NOTE

Bolt stud is removed from right side of flex and left side of M48 machine gun.

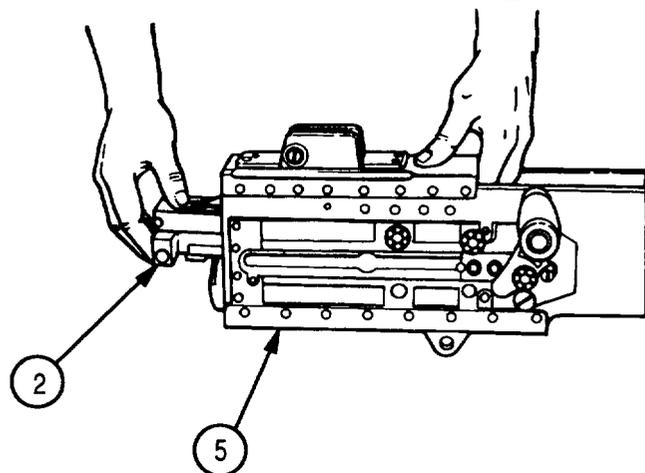
- 7 Retract bolt assembly far enough to align bolt stud (14) with (enlarged) bolt stud hole (15) in receiver (5). Remove bolt stud (14).



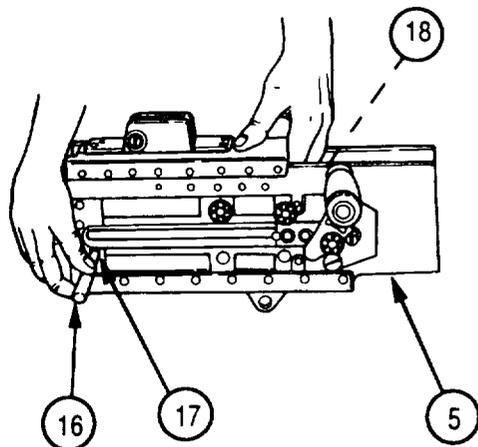
NOTE

Bolt latch must be pushed up to remove bolt assembly (Flex only).

- 8 Remove bolt assembly (2) from receiver (5).



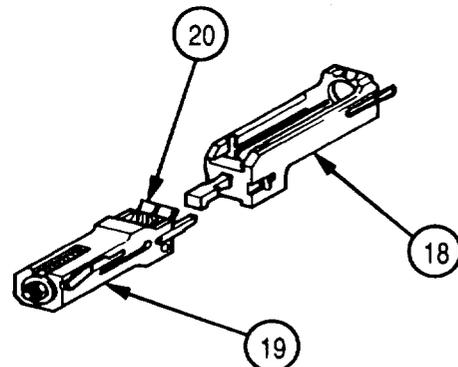
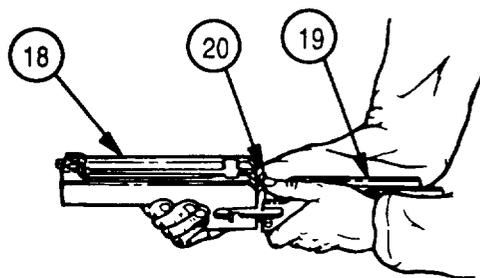
- 9 Install pointed end of punch (16) into hole (17) in receiver (5) and depress buffer body lock while applying rearward pressure on barrel extension assembly (18).



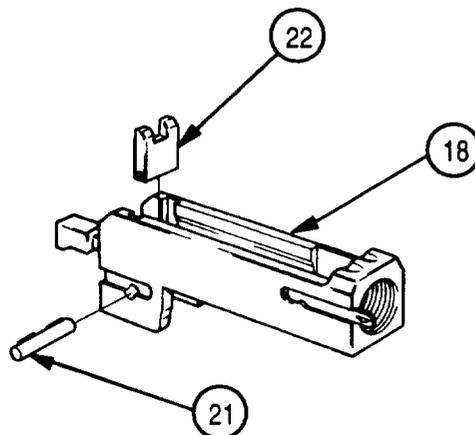
WARNING

Maintain thumb pressure on buffer accelerator while removing barrel buffer assembly and barrel extension assembly.

- 10 Remove barrel buffer assembly (19) and barrel extension assembly (18) together. Separate the assemblies by pushing forward on tips of buffer accelerator (20).



- 11 Use pointed end of punch to remove breech lock pin assembly (21) and breech lock (22) from barrel extension assembly (18).



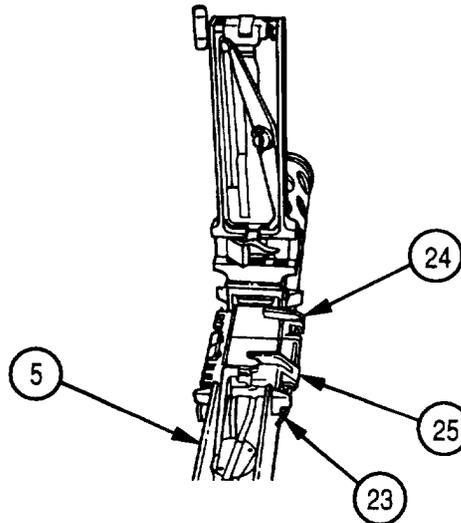
2-10. M2 MACHINE GUN, M48 AND FLEX—MAINTENANCE INSTRUCTIONS (cont)

DISASSEMBLY (cont)

NOTE

Step 12 is for left-hand feed only.

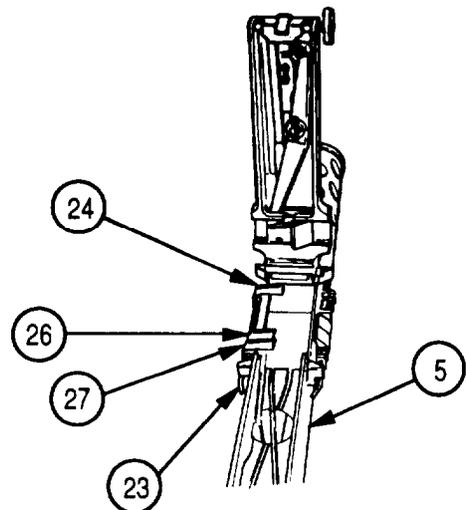
- 12 Remove belt holding pawl pin (23) attaching front cartridge stop (24) and rear cartridge stop assembly (25) to receiver (5). Remove front cartridge stop (24) and rear cartridge stop assembly (25).



NOTE

Step 13 is for right-hand feed only.

- 13 Remove belt holding pawl pin (23) attaching front cartridge stop (24), link stripper (26), and rear cartridge stop (27) to receiver (5). Remove front cartridge stop (24), link stripper (26), and rear cartridge stop (27).



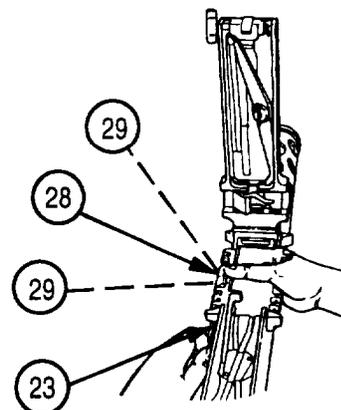
WARNING

To avoid injury to your eyes, use care when removing and installing spring-loaded parts.

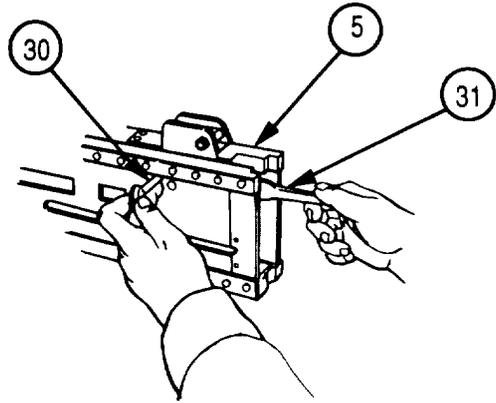
NOTE

Hold down on belt holding pawl assembly to prevent loss of springs.

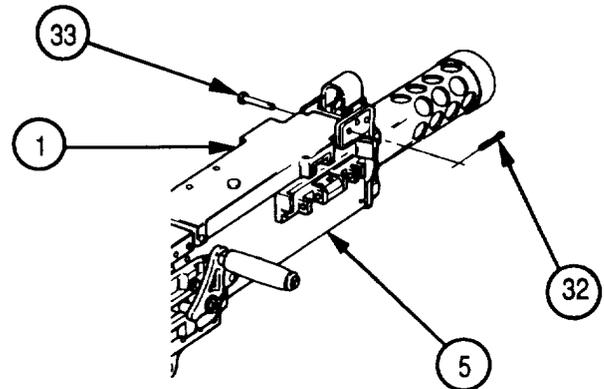
- 14 Remove belt holding pawl pin (23), belt holding pawl assembly (28), and two belt holding pawl springs (29).



- 15 Raise loop of trigger lever pin (30) and rotate pin until loop is in vertical position. Reach inside receiver (5) and hold trigger lever (31) while removing trigger lever pin (30). Remove trigger lever (31).

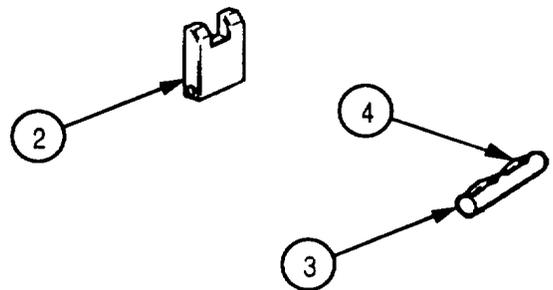
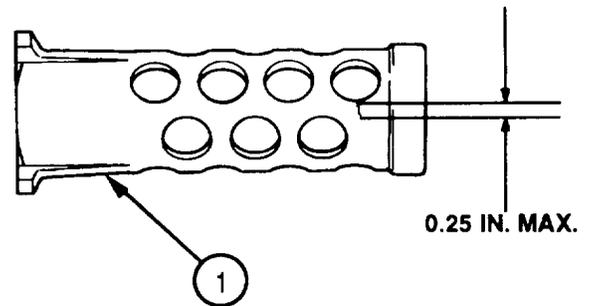


- 16 Close cover assembly (1) so it is latched securely to receiver (5). Remove and discard cotter pin (32). Drive out pin (33).



INSPECTION/REPAIR

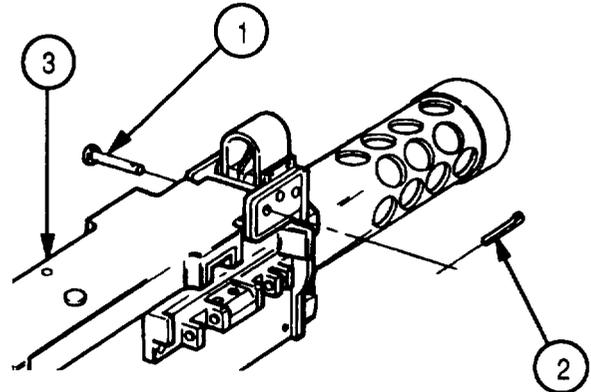
- 1 Check for missing, damaged, or worn parts.
- 2 Check barrel support (1) for cracks. Cracks up to 0.25 in. (0.64 cm) maximum in length are permitted at cooling holes. No more than five cracks allowed per support. No more than three cracks are allowed in succession in any direction. If damaged, notify direct support maintenance. Original surface imperfections are permitted.
- 3 Check breech lock (2) beveled edges for rolled back, broken, or chipped edges. Replace breech lock if edges are rolled back, broken, or chipped.
- 4 Check breech lock pin assembly (3) for broken, not set, missing spring (4), or damage to pin assembly. Replace breech lock pin assembly if spring is broken or missing or pin is damaged.
- 5 Repair is by replacement of authorized parts (TM 9-1005-213-23P).



2-10. M2 MACHINE GUN, M48 AND FLEX—MAINTENANCE INSTRUCTIONS (cont)

REASSEMBLY

- 1 Drive in pin (1) and secure with new cotter pin (2). Open cover assembly (3) all the way up.

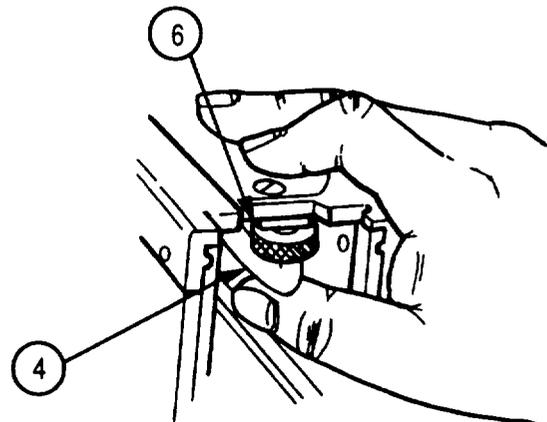
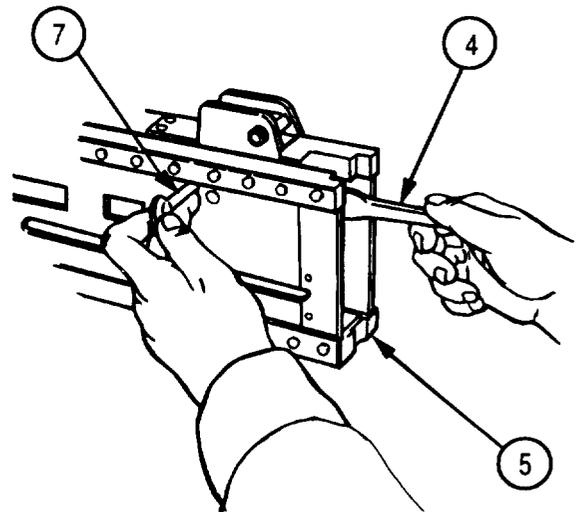


- 2 Install trigger lever (4) in receiver (5).

NOTE

Ensure trigger lever is aligned directly under timing nut (6).

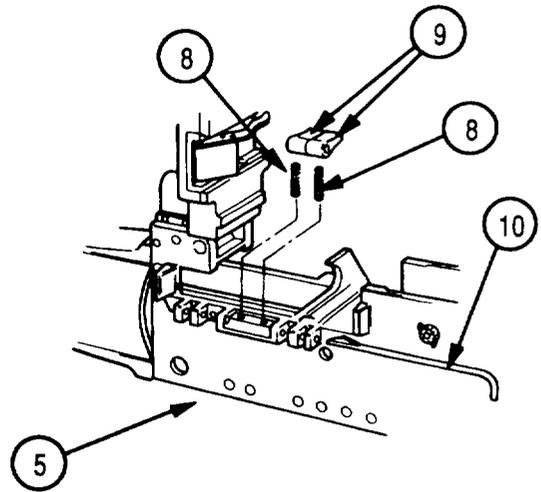
- 3 Align hole in trigger lever (4) with mounting hole in receiver (5).
- 4 Place trigger lever pin (7), loop end vertical, in assembly hole on left side plate of receiver (5).
- 5 Match key on trigger lever pin (7) with keyway in side plate of receiver (5) and install trigger lever pin (7) completely.
- 6 Rotate trigger lever pin (7) 90 degrees to lock securely in place, and fold down out of the way.
- 7 Check that trigger lever (4) moves freely.



WARNING

To avoid injury to your eyes, use care when removing and installing spring-loaded parts.

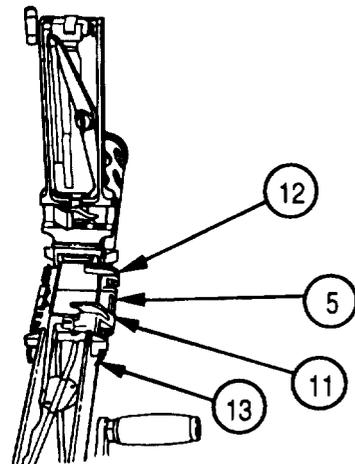
- 8 Seat two belt holding pawl springs (8) in place on receiver (5).
- 9 Place belt holding pawl assembly (9) on belt holding pawl springs (8). Compress belt holding pawl springs (8) and insert belt holding pawl pin (10).



NOTE

Steps 10 and 11 are for left-hand feed only.

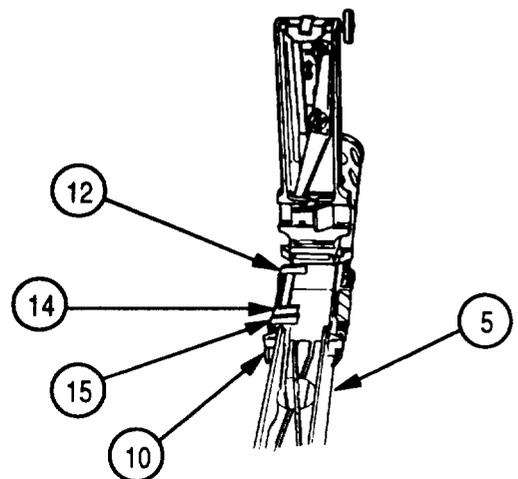
- 10 Place rear cartridge stop assembly (11) and front cartridge stop (12) on receiver (5).
- 11 Install belt holding pawl pin (13) with hooked end to rear.



NOTE

Steps 12 and 13 are for right-hand feed only.

- 12 Place front cartridge stop (12), link stripper (14), and rear cartridge stop (15) on receiver (5).
- 13 Install belt holding pawl pin (10) with hooked end to rear.

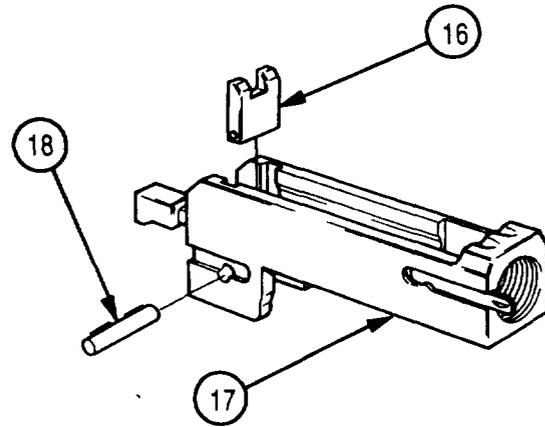


2-10. M2 MACHINE GUN, M48 AND FLEX—MAINTENANCE INSTRUCTIONS (cont)

REASSEMBLY (cont)

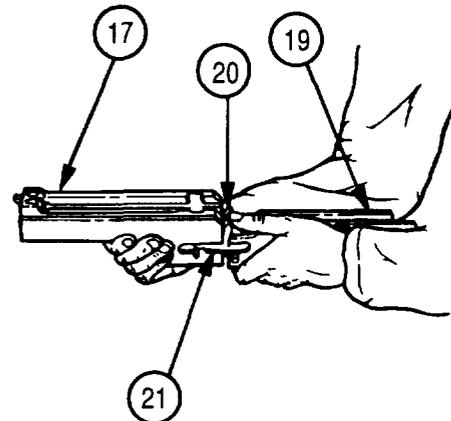
14 Install breech lock (16) in barrel extension assembly (17) with double beveled edge up and to the front of barrel extension assembly (17).

15 Install breech lock pin assembly (18) in barrel extension assembly (17). Ensure both ends of breech lock pin assembly (18) are flush with sides of barrel extension assembly (17).



16 Hold barrel buffer assembly (19) with buffer accelerator (20) up and engage notch on shank of barrel extension assembly (17) with cross groove in piston rod of barrel buffer assembly (19).

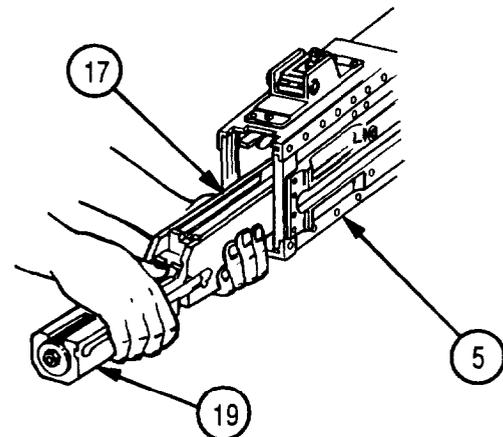
17 Align breech lock depressors (21) in grooves of barrel extension assembly (17) and push barrel buffer assembly (19) forward.



WARNING

Maintain thumb pressure on buffer accelerator while installing barrel buffer assembly and barrel extension assembly into receiver.

18 Install barrel buffer assembly (19) and barrel extension assembly (17) in receiver (5).



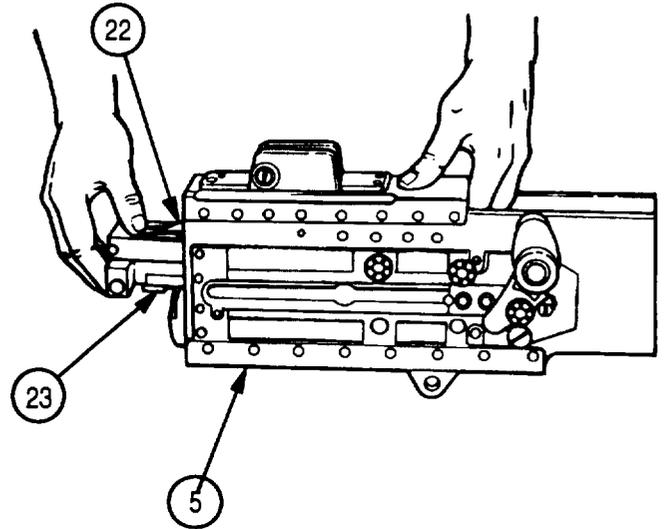
CAUTION

When installing bolt assembly, do not trip buffer accelerator.

NOTE

Ensure cocking lever (22) is forward before installing bolt assembly (23) into receiver (5).

- 19 Push bolt assembly (23) forward into receiver (5) until bolt latch engages notches in top of bolt assembly (23).

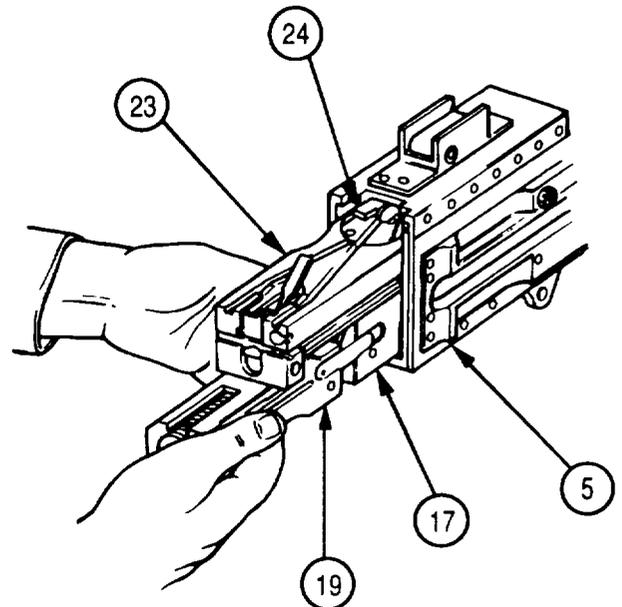


NOTE

If unable to install by performing step 19, perform step 20.

- 20 Remove barrel extension assembly (17) and barrel buffer assembly (19) from the receiver (5). Install bolt assembly (23) into the barrel extension assembly (17) and barrel buffer assembly (19) and then install into the receiver (5).

- 21 Raise bolt latch (24) and push bolt assembly (23) into receiver (5).



2-10. M2 MACHINE GUN, M48 AND FLEX—MAINTENANCE INSTRUCTIONS (cont)

REASSEMBLY (cont)

- 22 Align hole (25) in bolt assembly (23) with bolt stud hole (26) in receiver (5) and install bolt stud (27) in hole (25) in bolt assembly (23).

NOTE

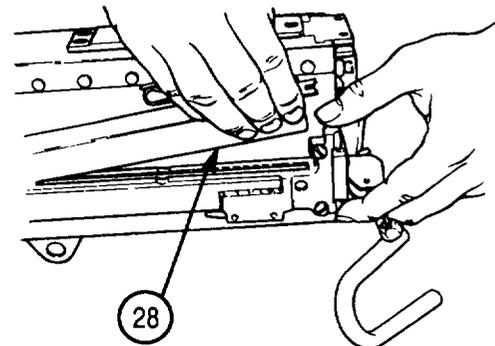
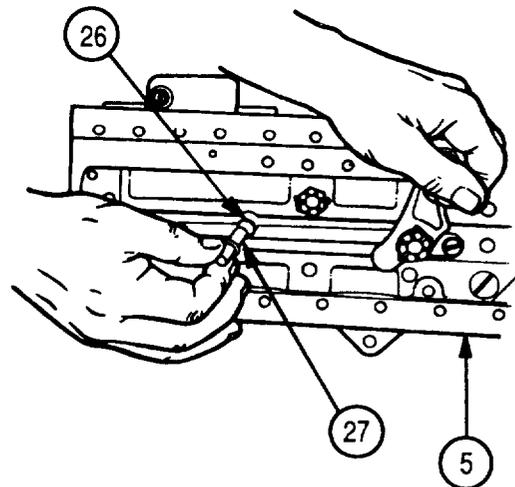
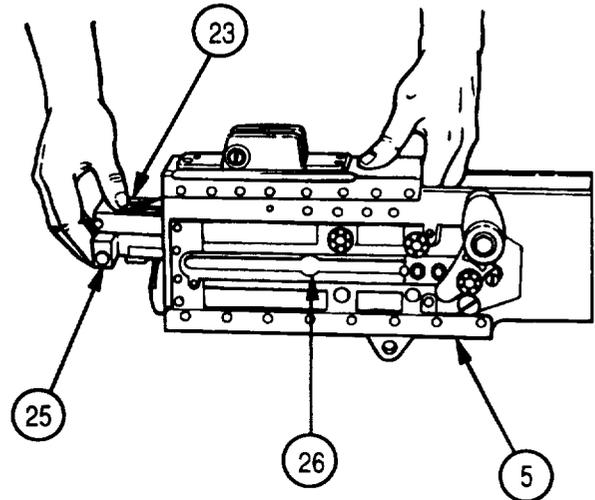
The bolt stud (27) is installed in the right side of the receiver and bolt assembly for the Flex and in the left side of the receiver and bolt assembly for the M48.

- 23 Place bolt assembly (23) in forward position.

NOTE

Step 24 applies to M48 only.

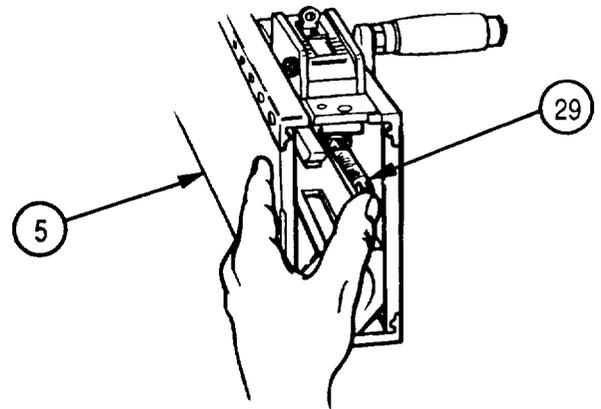
- 24 Replace M10 manual charger cover (28).



WARNING

To avoid injury to your eyes, use care when removing and installing spring-loaded parts.

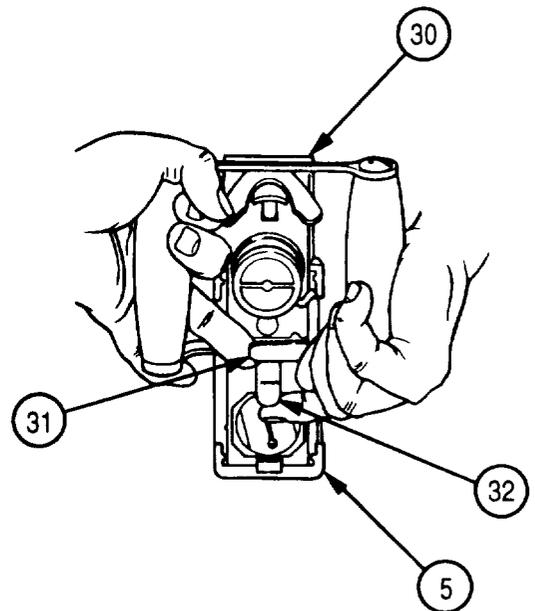
- 25 Install driving spring rod assembly (29) in upper right hand corner of bolt assembly. Push forward and to the right until driving spring rod assembly (29) engages in hole in side plate of receiver (5) and not in the groove for the backplate.



NOTE

Step 26 applies to both Flex and M48 backplanes.

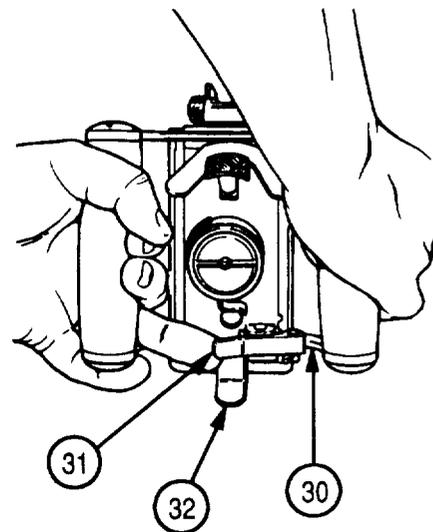
- 26 Install backplate assembly (30) in receiver (5) grooves. Pull backplate latch lock (31) while lifting upon backplate latch (32). Lower backplate assembly (30) down until engaged in receiver (5).



NOTE

Test for proper locking of backplate assembly (30) by pulling up on the backplate assembly.

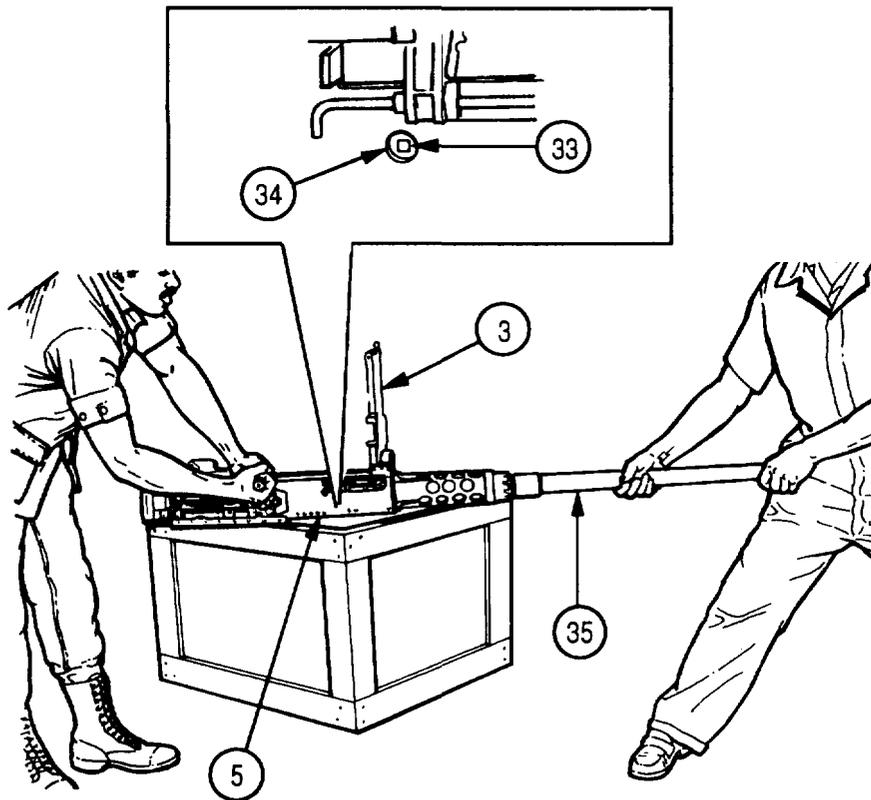
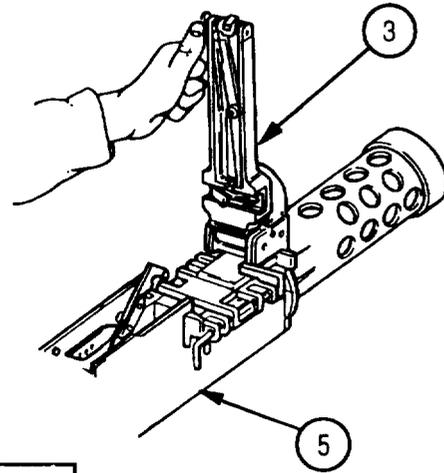
- 27 Pull backplate latch lock (31) back and pull up on backplate assembly (30) to ensure proper locking.
- 28 Lift backplate latch (32) up and pull upon backplate assembly (30) to ensure proper locking.



2-10. M2 MACHINE GUN, M48 AND FLEX—MAINTENANCE INSTRUCTIONS (cont)

REASSEMBLY (cont)

29 Close cover assembly (3), making sure it latches securely to receiver (5). Reopen cover assembly (3).



- 30 Retract bolt assembly far enough for barrel locking spring lug (33) to center in barrel locking spring hole (34) on right hand side of receiver (5).
- 31 Install and screw barrel assembly (35) completely into receiver (5). Unscrew barrel assembly until two clicks are heard and check headspace and timing. Refer to operator's manual.
- 32 Load five or more linked dummy rounds (use links from expended ammunition), close cover assembly (3), and hand operate weapon to ensure all components are functioning properly. Weapon should function through a complete cycle.

2-11. FLASH SUPPRESSOR — MAINTENANCE INSTRUCTIONS

THIS TASK COVERS:

- a. Removal/Disassembly b. Inspection/Repair c. Reassembly/Installation

INITIAL SETUP

Tools and Special Tools

Small arms repairman tool kit (SC 5180-95-CL-A07)

Materials/Parts

Self-locking nut (4) (MS51943-2)

References

TM 9-1005-213-10

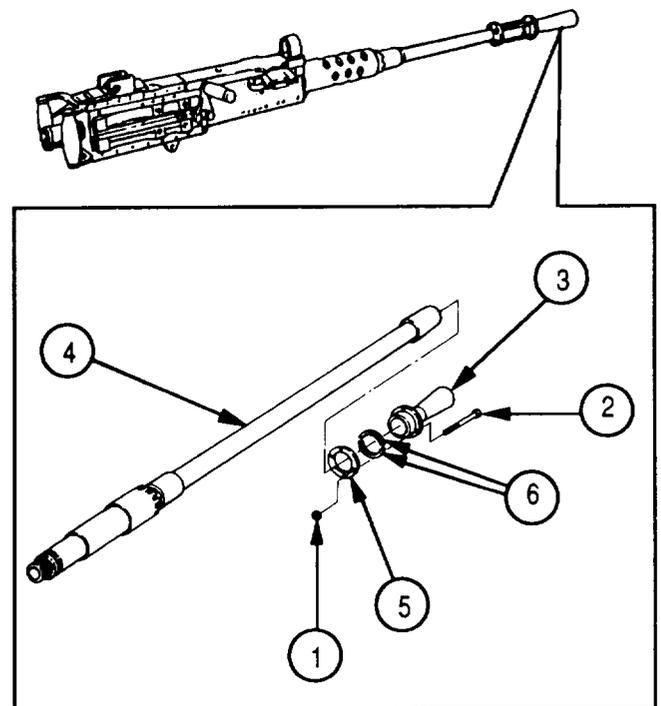
TM 9-1005-213-23P

Equipment Conditions

M2 machine gun removed/dismounted (TM 9-1005-213-10)

REMOVAL/DISASSEMBLY

- 1 Remove four self-locking nuts (1) and four hex head capscrews (2). Discard self-locking nuts (1).
- 2 Remove cone (3) from barrel assembly (4) and ring (5).
- 3 Remove two ring spacers (6) and ring (5) from barrel assembly (4).



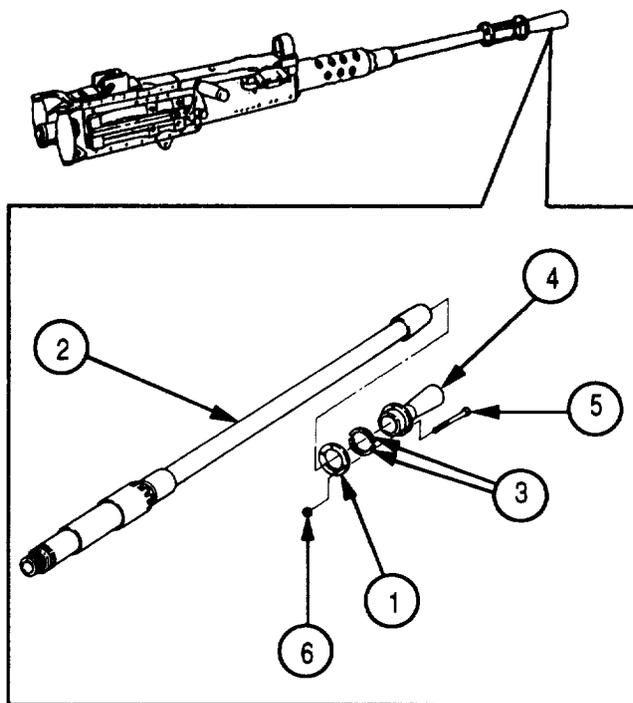
2-11. FLASH SUPPRESSOR — MAINTENANCE INSTRUCTIONS (cont)

INSPECTION/REPAIR

- 1 Check for missing, damaged, or worn parts.
- 2 Repair is by replacement of authorized parts (TM 9-1005-213-23P).

REASSEMBLY/INSTALLATION

- 1 Install ring (1) on barrel assembly (2) so ring (1) counterbore faces muzzle end of barrel assembly.
- 2 Install two ring spacers (3) in ring (1) counterbore.
- 3 Install cone (4) on end of muzzle.
- 4 Secure cone (4) to end of barrel assembly (2) and ring (1) with four hex head cap-screws (5) and four new self-locking nuts (6).



2-12. BOLT ASSEMBLY--MAINTENANCE INSTRUCTIONS

THIS TASK COVERS:		
a. Disassembly	b. Inspection/Repair	c. Reassembly
INITIAL SETUP		
Tools and Special Tools Small arms repairman tool kit (SC 5180-95-CL-A07)		
References TM 9-1005-213-10 TM 9-1005-213-23P		

DISASSEMBLY

Refer to TM 9-1005-213-10 for removal of bolt assembly.

INSPECTION/REPAIR

- 1 Check for missing, damaged, or worn parts.
- 2 Repair is by replacement of authorized parts (TM 9-1005-213-23P).

REASSEMBLY

Refer to TM 9-1005-213-10 to reassemble weapon. Check and adjust headspace and timing.

2-13. COVER ASSEMBLY—MAINTENANCE INSTRUCTIONS

THIS TASK COVERS:

- a. Removal/Disassembly b. Inspection/Repair c. Reassembly/Installation

INITIAL SETUP

Tools and Special Tools

Small arms repairman tool kit (SC 5180-95-CL-A07)

Materials/Parts

Cotter pin (MS24665-814)

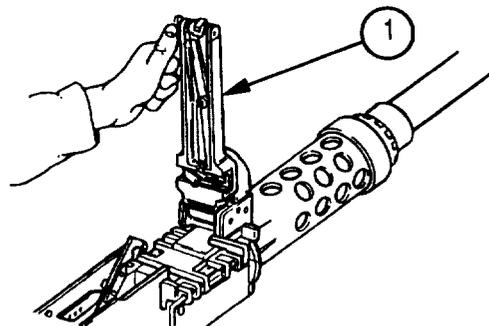
Cotter pin (12003201)

References

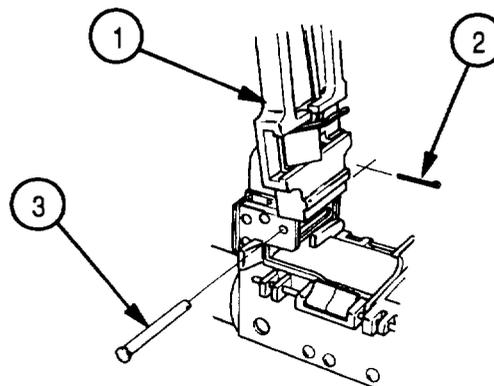
TM 9-1005-213-23P

REMOVAL/DISASSEMBLY

1 Raise cover assembly (1) all the way up.



2 Remove and discard cotter pin (2). Using punch, drive out and remove pin (3). Remove cover assembly (1).



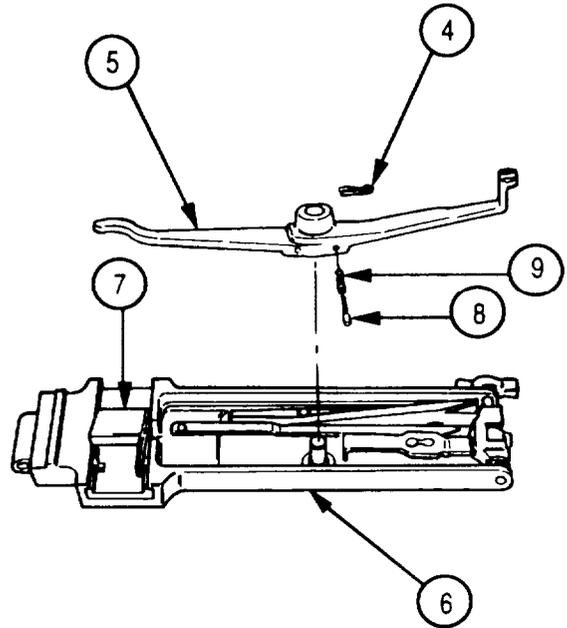
3 Remove lock pin (4) from belt feed lever (5).

WARNING

To avoid injury to your eyes, use care when removing and installing spring-loaded parts.

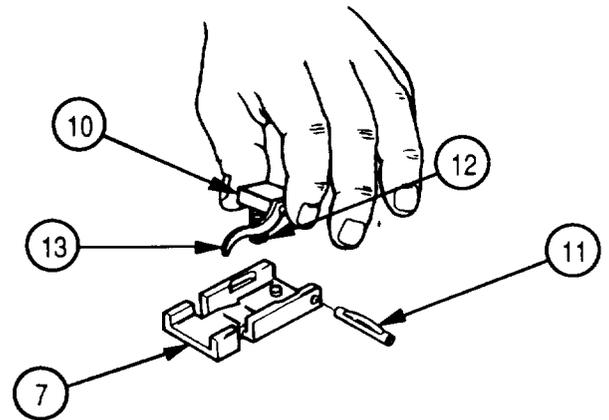
4 Push belt feed lever (5) from left to right until toe end is aligned with slot in cover (6) and slot in belt feed slide assembly (7). Remove belt feed lever (5), shoulder pin (8), and spring (9).

5 Pull out belt feed slide assembly (7) from cover (6).

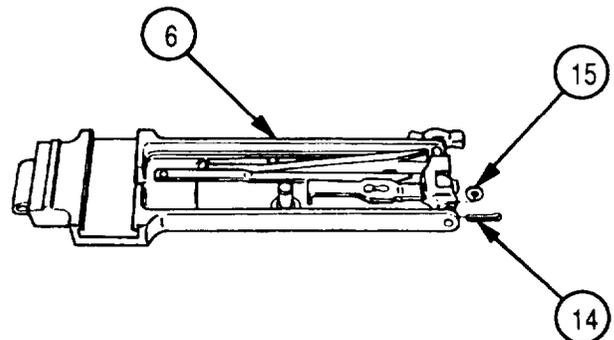


6 Hold belt feed pawl (10) down while removing spring pin (11) from belt feed slide assembly (7).

7 Slowly let belt feed pawl (10) rise to control spring (12). Remove belt feed pawl (10) from belt feed slide assembly (7). Remove spring (12) and belt feed pawl arm (13) from belt feed pawl (10).



8 Remove, only if damaged, cotter pin (14) and flat washer (15) from cover (6). Discard cotter pin.



ARMY TM 9-1005-213-23
MARINE CORPS TM 02498A-23/2
AIR FORCE TO 11W2-213-172
NAVY SW 361-AC-MMM-010

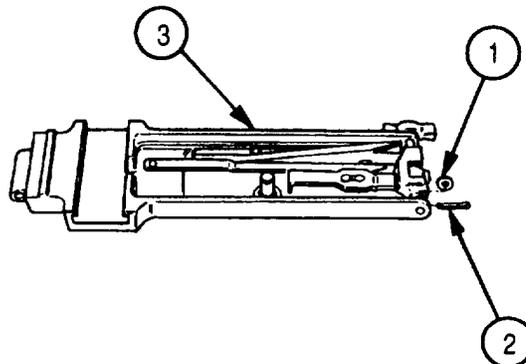
2-13. COVER ASSEMBLY—MAINTENANCE INSTRUCTIONS (cont)

INSPECTION/REPAIR

- 1 Check for missing, damaged, or worn parts.
- 2 Repair is by replacement of authorized parts (TM 9-1005-213-23P).

REASSEMBLY/INSTALLATION

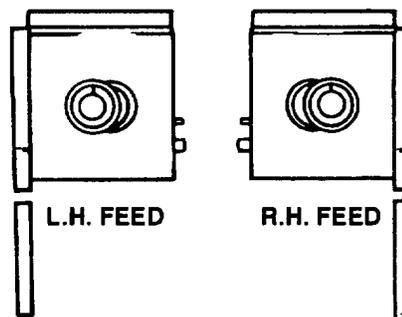
- 1 If removed, install flat washer (1) and new cotter pin (2) on cover (3).



- 2 Assemble belt feed pawl arm (4) on belt feed pawl (5).

WARNING

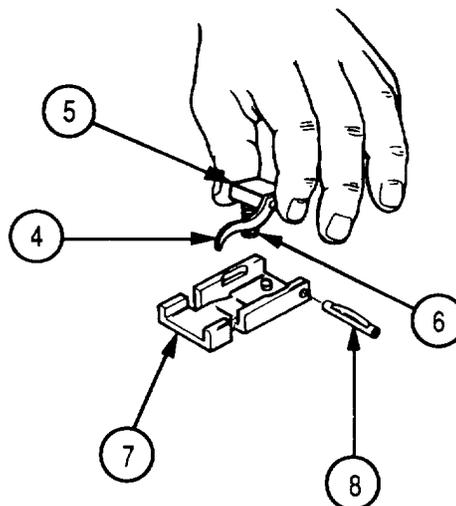
To avoid injury to your eyes, use care when removing and installing spring-loaded parts.



NOTE

Refer to illustration for correct position of spring (6) for left or right-hand feed.

- 3 Assemble large end of spring (6) in hole in belt feed pawl (5) with the foot of the spring in the side opposite the belt feed pawl arm (4).
- 4 Install belt feed pawl (5) with attached parts on belt feed slide assembly (7), aligning spring (6) on pin of belt feed slide assembly (7). Secure with spring pin (8).

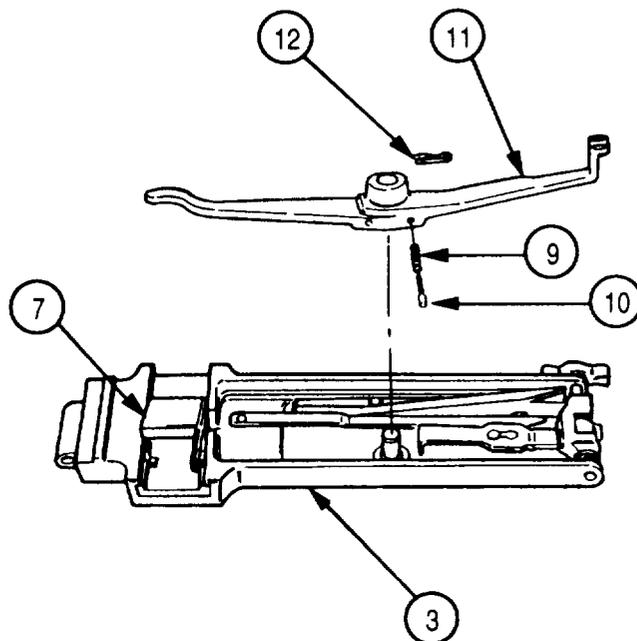


- 5 Push belt feed slide assembly (7) into cover (3).

NOTE

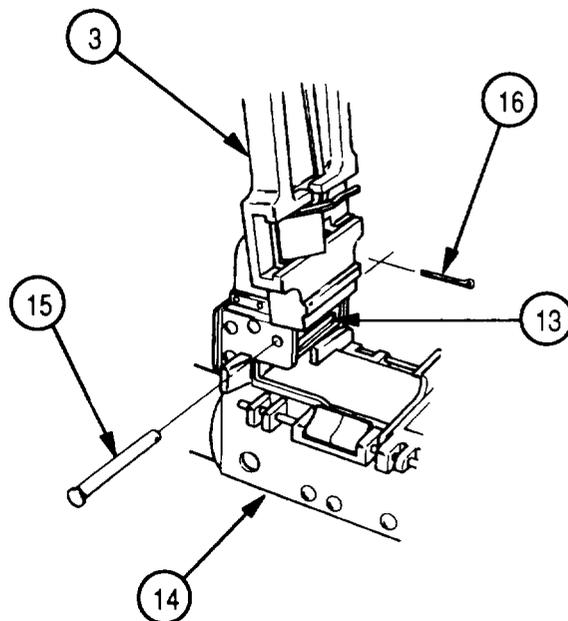
Be sure spring and shoulder pin are installed in the correct hole of belt feed lever. The upper hole of belt feed lever is for left-hand feed; the lower hole is for right-hand feed.

- 6 Install spring (9) and shoulder pin (10) in belt feed lever (11).
- 7 Depress shoulder pin (10) and align belt feed lever (11) with slot in cover (3) and slot in belt feed slide assembly (7). Install belt feed lever (11) in cover (3).
- 8 Install lock pin (12) to secure belt feed lever (11).



- 9 Position cover assembly (3) against cover detent pawl (13) on receiver (14). Close cover (3).

- 10 Install pin (15) and new cotter pin (16).



2-14. BARREL CARRIER ASSEMBLY — MAINTENANCE INSTRUCTIONS

THIS TASK COVERS:

- a. Removal/Disassembly b. Inspection/Repair c. Reassembly/Installation

INITIAL SETUP

Applicable Configuration
Flex only

Tools and Special Tools
Small arms repairman tool kit (SC 5180-95-CL-A07)

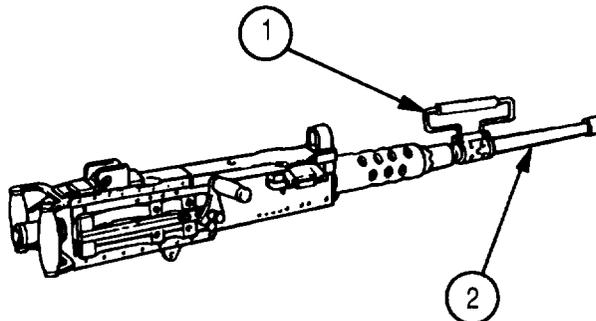
Materials/Parts
Retaining pin (5013507)

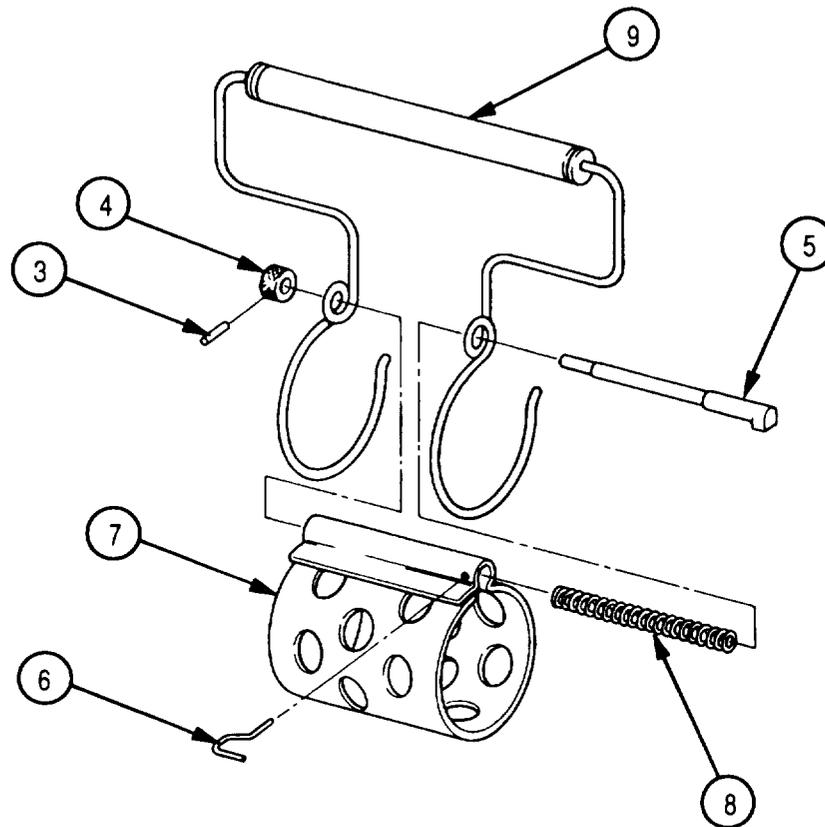
References
TM 9-1005-213-10
TM 9-1005-213-23P

Equipment Conditions
M2 machine gun removed/dismounted (TM 9-1005-213-10)
Page 2-67 Flash suppressor removed

REMOVAL/DISASSEMBLY

- 1 Place barrel carrier assembly (1) in the unlocked position and remove from barrel assembly (2).





2 Using punch, remove spring pin (3) from knob (4) on bolt (5). Remove knob (4).

3 Remove and discard retaining pin (6) from sleeve assembly (7). Remove spring (8) and bolt (5)

4 Remove sleeve assembly (7) from handle (9).

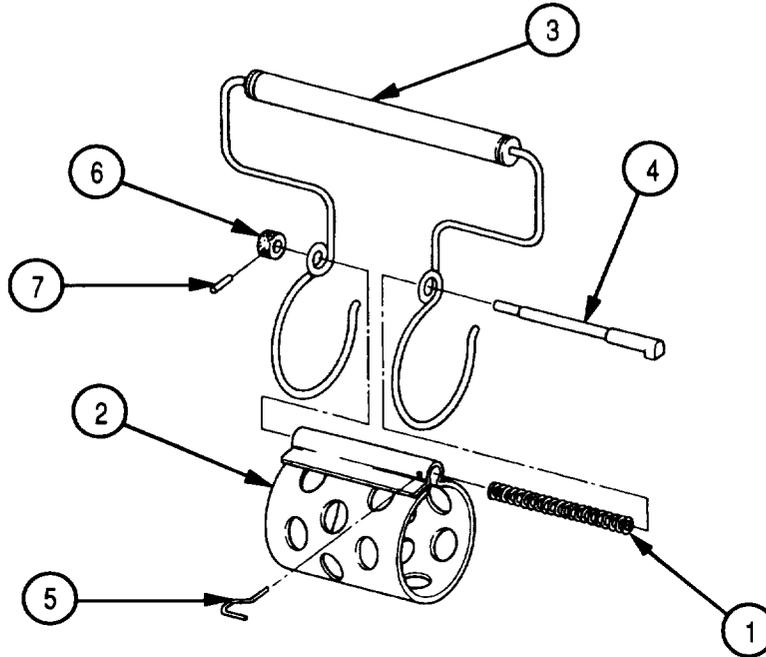
INSPECTION/REPAIR

1 Check for missing, damaged, or worn parts.

2 Repair is by replacement of authorized parts (TM 9-1005-213-23P).

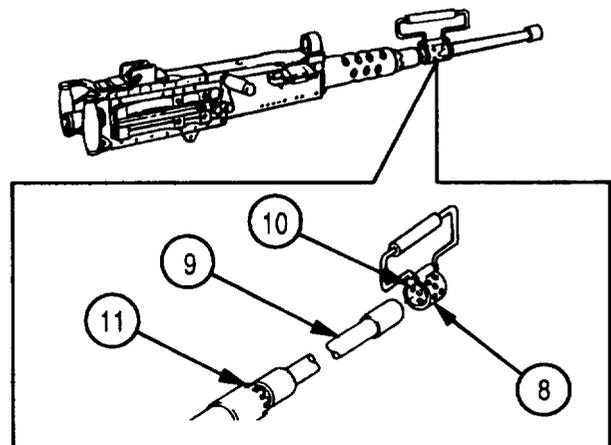
2-14. BARREL CARRIER ASSEMBLY — MAINTENANCE INSTRUCTIONS (cont)

REASSEMBLY/INSTALLATION



- 1 Install spring (1) in sleeve assembly (2).
- 2 Position sleeve assembly (2) in handle (3), aligning sleeve assembly (2) with small loops of handle (3).
- 3 Install bolt (4) in sleeve assembly (2).
- 4 Install new retaining pin (5) in sleeve assembly (2). Bend retaining pin (5) to secure.
- 5 Install knob (6) on bolt (4) and install spring pin (7) in knob (6).

- 6 Install barrel carrier assembly (8) on barrel assembly (9). Ensure bolt head (10) is engaged in barrel notch (11).



CHAPTER 3

DIRECT SUPPORT MAINTENANCE INSTRUCTIONS

Section I. TROUBLESHOOTING

3-1. TROUBLESHOOTING

a. The symptom index can be used as a quick guide to troubleshooting. Common malfunctions are listed in cycle of function order with a page number reference to troubleshooting table 3-1 where a test or inspection and corrective action are provided.

b. This manual cannot list all malfunctions that may occur, nor all tests or inspections and corrective actions. If a malfunction is not listed or is not corrected by listed corrective action, notify your supervisor.

NOTE

- Refer to Operator's Manual for disassembly and assembly.
- Check headspace and timing BEFORE beginning troubleshooting procedures

SYMPTOM INDEX

M2 MACHINE GUN	Troubleshooting Procedure Page
Weapon will not feed	3-2
Round will not chamber	3-5
Bolt will not lock	3-6
Weapon will not fire	3-8
Weapon will not unlock	3-10
Weapon will not extract	3-11
Weapon will not eject	3-12
Weapon will not cock	3-12
Weapon has uncontrolled fire	3-13
Bolt assembly is improperly installed	3-14

3-1. TROUBLESHOOTING (cont)

Table 3-1. DIRECT SUPPORT TROUBLESHOOTING

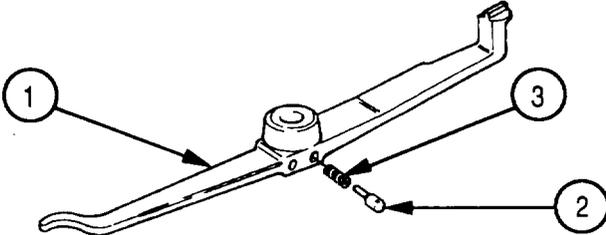
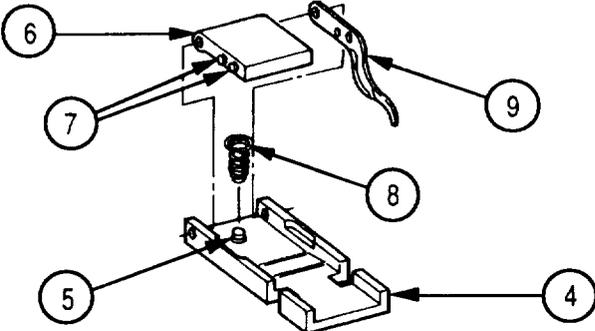
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
M2 MACHINE GUN		
1. WEAPON WILL NOT FEED.		
 <p>A technical drawing of the belt feed lever assembly. Callout 1 points to the belt feed lever, callout 2 points to the shoulder pin, and callout 3 points to the spring coils.</p>		
Step 1.	Check for burred, broken, or bent belt feed lever (1), broken or bent shoulder pin (2), or broken or crushed coils on spring (3).	Replace defective belt feed lever, shoulder pin, or spring on cover assembly (p 2-70).
 <p>A technical drawing of the belt feed slide assembly. Callout 4 points to the slide assembly, callout 5 points to a stud, callout 6 points to a pawl, callout 7 points to a pin, callout 8 points to a spring, and callout 9 points to a pawl arm.</p>		
Step 2.	Check for burred, broken, or bent belt feed slide assembly (4); broken or bent stud (5); burred, broken, or cracked belt feed pawl (6); bent or missing pins (7); broken or crushed coils on spring (8); or broken or cracked belt feed pawl arm (9).	Replace defective belt feed slide assembly, belt feed pawl, belt feed pawl arm, or spring (p 2-70).

Table 3-1. DIRECT SUPPORT TROUBLESHOOTING (cont)

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
	<p>A technical drawing showing a side view of a belt holding pawl mechanism. A circular callout labeled '10' points to a coiled spring that supports the pawl.</p>	<p>Step 3. Check for broken or crushed coils on belt holding pawl springs (10).</p> <p>Replace defective belt holding pawl springs (p 2-53).</p>
	<p>A technical drawing showing a driving spring rod assembly. A circular callout labeled '11' points to the main rod assembly, and another labeled '12' points to a small pin at the end of the rod. A separate circular callout labeled '13' points to a coiled spring attached to the rod.</p>	<p>Step 4. Check for bent driving spring rod assembly (11) and/or broken pin (12). Check for broken or crushed coils on rod springs (13).</p> <p>Replace defective driving spring rod assembly (p 2-53).</p>
	<p>A technical drawing showing a cartridge stop assembly. A circular callout labeled '14' points to a small rectangular stop component. Another circular callout labeled '15' points to a larger, more complex rear cartridge stop assembly.</p>	<p>Step 5. Check for burred, broken, or cracked front cartridge stop (14) or rear cartridge stop assembly (15).</p> <p>Repair (p 3-66) or replace (p 2-53) defective rear cartridge stop assembly. Replace defective front cartridge stop (p 2-53).</p>

3-1. **TROUBLESHOOTING** (cont)

Table 3-1. **DIRECT SUPPORT TROUBLESHOOTING** (cont)

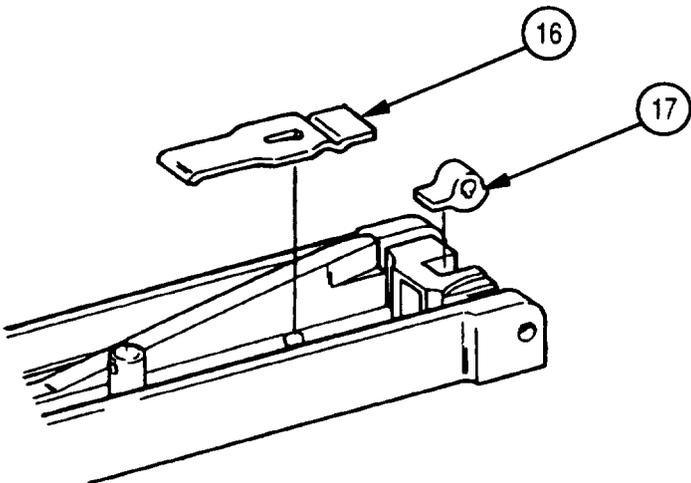
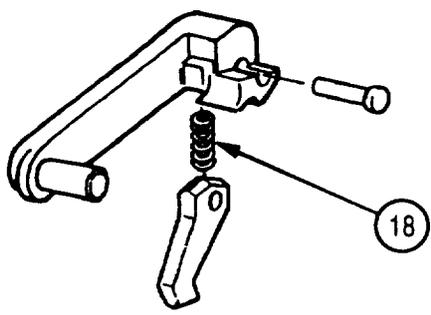
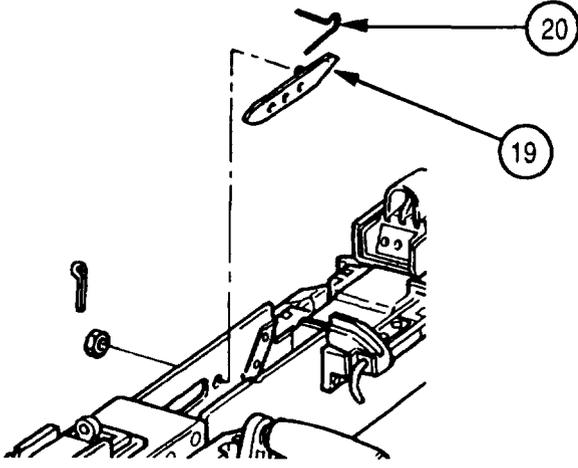
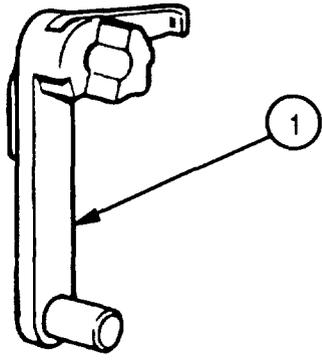
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
M2 MACHINE GUN (cont)		
1. WEAPON WILL NOT FEED. (cont)		<p>Step 6. Check for broken flat spring (16). Ensure flat spring has retained its tension. Check for burred or broken cover latch (17).</p> <p>Replace defective flat spring or cover latch on cover assembly (p 3-48)</p>
		<p>Step 7. Check for broken or crushed coils on spring (18) in cartridge extractor.</p> <p>Replace defective spring (p 3-42).</p>

Table 3-1. DIRECT SUPPORT TROUBLESHOOTING (cont)

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
	 <p>The diagram shows a detailed view of a firearm's extractor mechanism. A dashed line indicates the position of the extractor switch (19) and its spring (20). Callout 19 points to the switch itself, and callout 20 points to the spring. Other parts of the mechanism are shown in solid lines.</p>	<p>Step 8. Check for burred, cracked, or broken extractor switch (19) or broken extractor switch spring (20).</p> <p>Replace defective extractor switch or extractor switch spring (p 3-24).</p>
2. ROUND WILL NOT CHAMBER.		 <p>The diagram shows a side view of a cartridge extractor. Callout 1 points to the main body of the extractor.</p>
		<p>Step 1. Check for burred, broken, or bent cartridge extractor (1).</p> <p>Replace defective cartridge extractor (p 3-42).</p>

3-1. TROUBLESHOOTING (cont)

Table 3-1. DIRECT SUPPORT TROUBLESHOOTING (cont)

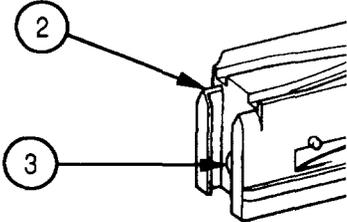
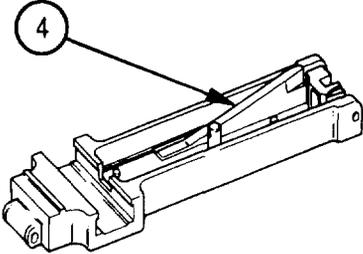
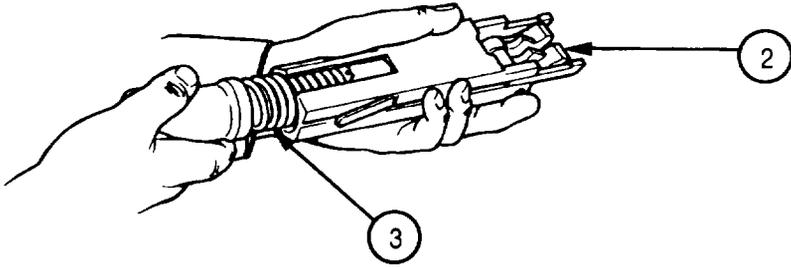
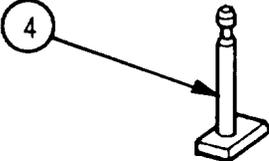
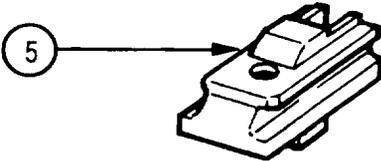
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
M2 MACHINE GUN (cont)		
2. ROUND WILL NOT CHAMBER. (cont)		
		
<p>Step 2. Check for bent, broken, or cracked T-slot (2), or cracked or broken recoil plate (3).</p>		
<p>Replace defective bolt subassembly (p 3-42).</p>		
		
<p>Step 3. Check for burred, scored, loose, or deformed cam (4).</p>		
<p>Replace defective cover subassembly (p 3-48).</p>		
3. BOLT WILL NOT LOCK.		
		
<p>Step 1. Check for chipped, cracked, broken, or improperly assembled breech lock (1).</p>		
<p>Replace defective breech lock (p 2-53) or install properly.</p>		

Table 3-1. DIRECT SUPPORT TROUBLESHOOTING (cont)

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
	<p>Step 2. Check for burred, cracked, chipped, or broken buffer accelerator (2) or broken or crushed coils on spring (3).</p>	<p>Replace defective buffer accelerator or spring (p 3-45).</p>
	<p>Step 3. Check for burred, broken, or bent accelerator stop (4).</p>	<p>Replace defective accelerator stop (p 2-69).</p>
	<p>Step 4. Adjust breechlock cam (5) if required (p 3-24) and/or check for burred, scored, or deformed breechlock cam (5).</p>	<p>Replace defective breechlock cam (p 3-67).</p>

3-1. TROUBLESHOOTING (cont)

Table 3-1. DIRECT SUPPORT TROUBLESHOOTING (cont)

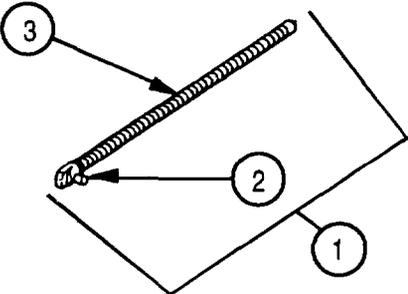
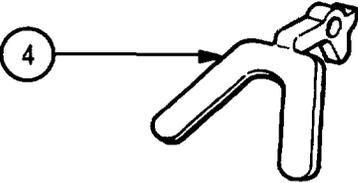
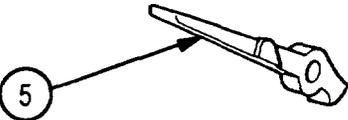
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
M2 MACHINE GUN (cont)		
4. WEAPON WILL NOT FIRE.	 <p>The diagram shows a driving spring rod assembly. Callout 1 points to the main rod, callout 2 points to a small pin at the tip, and callout 3 points to the coiled spring section.</p>	<p>Step 1. Check for bent driving spring rod assembly (1), broken pin (2), or broken or crushed coils on rod springs (3).</p> <p>Replace defective driving spring rod assembly (p 2-53).</p>
	 <p>The diagram shows a trigger mechanism. Callout 4 points to the trigger itself.</p>	<p>Step 2. Check for bent or broken trigger (4).</p> <p>Replace defective trigger (p 3-35 (FLEX) or p 3-39 (M48)).</p>
	 <p>The diagram shows a cocking lever. Callout 5 points to the lever.</p>	<p>Step 3. Check for burred, broken, or bent cocking lever (5).</p> <p>Replace defective cocking lever (p 2-69).</p>

Table 3-1. DIRECT SUPPORT TROUBLESHOOTING (cont)

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
CORRECTIVE ACTION		
<p>Step 4. Check for burred or broken sear (6). Ensure sear notch (7) has a sharp edge and is not chipped or broken. Check for broken or crushed coils on sear spring (8).</p>		
<p>Replace defective sear or sear spring (p 2-69).</p>		
<p>Step 5. Check for burred, broken, or bent firing pin (9).</p>		
<p>Replace defective firing pin (p 3-42).</p>		

3-1. TROUBLESHOOTING (cont)

Table 3-1. DIRECT SUPPORT TROUBLESHOOTING (cont)

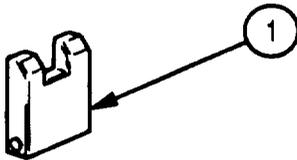
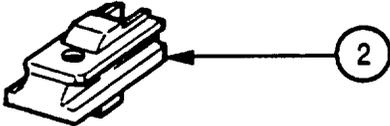
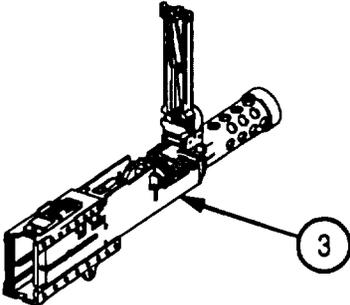
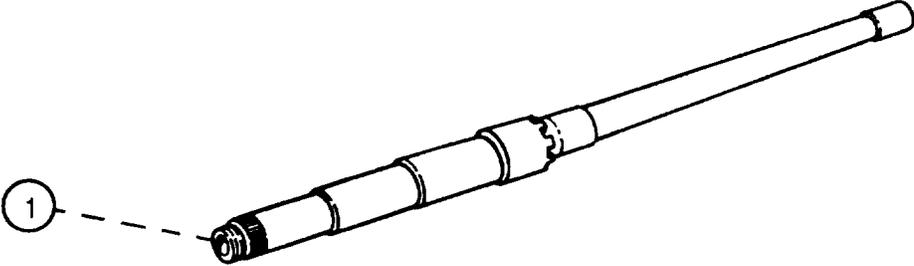
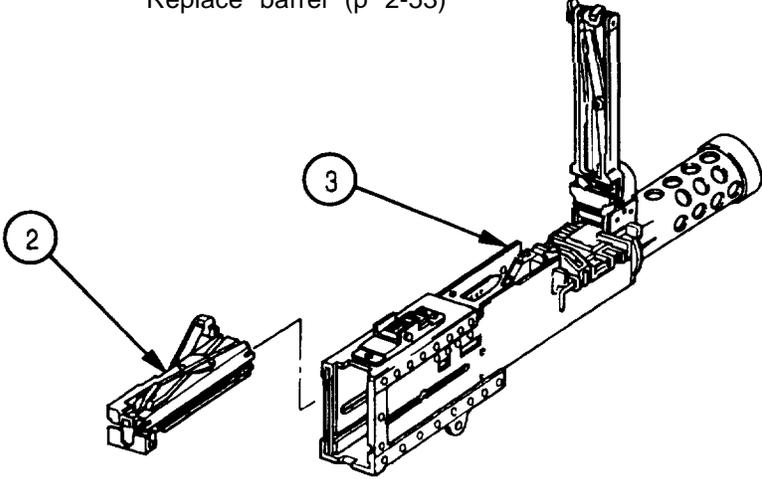
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
M2 MACHINE GUN (cont)		
5. WEAPON WILL NOT UNLOCK.		
		<p>Step 1. Check for chipped, cracked, broken, or improperly assembled breech lock (1).</p> <p>Replace defective breech lock (p 2-53) or install properly.</p>
		<p>Step 2. Adjust breechlock cam (2) (p 3-67), if required, and/or check for burred, scored, or deformed breechlock cam (2).</p> <p>Replace defective breechlock cam (p 3-67).</p>
		<p>Step 3. Check for any obstruction in receiver (3).</p> <p>Remove obstruction.</p>

Table 3-1. DIRECT SUPPORT TROUBLESHOOTING (cont)

MALFUNCTION TEST OR INSPECTION CORRECTIVE ACTION
<p data-bbox="203 489 690 520">6. WEAPON WILL NOT EXTRACT.</p>  <p data-bbox="362 1157 876 1188">Step 1. Check for pitted chamber (1).</p> <p data-bbox="586 1220 889 1251">Replace barrel (p 2-53)</p>  <p data-bbox="354 1793 1468 1856">Step 2. Check for burrs on bolt assembly (2) and inside of receiver (3) which may cause insufficient recoil.</p> <p data-bbox="586 1892 1117 1923">Remove burrs and reassemble (p 2-53).</p>

3-1. TROUBLESHOOTING (cont)

Table 3-1. DIRECT SUPPORT TROUBLESHOOTING (cont)

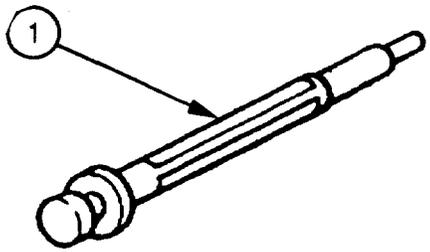
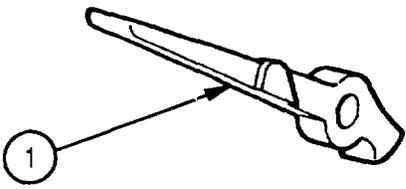
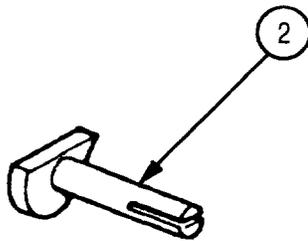
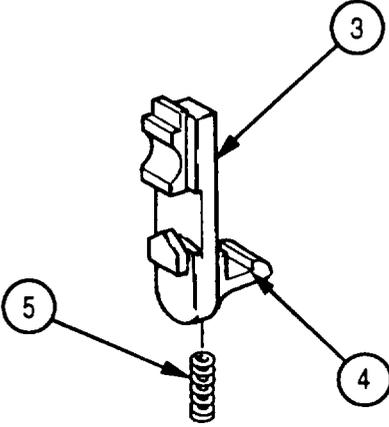
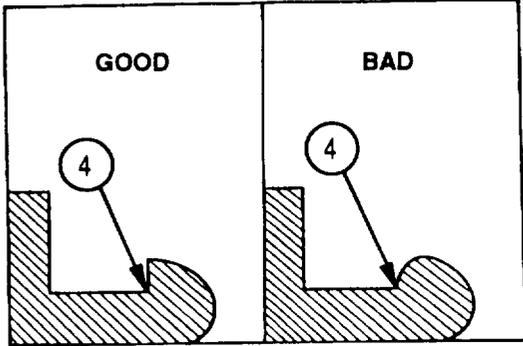
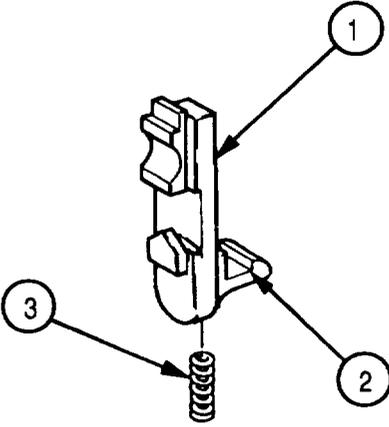
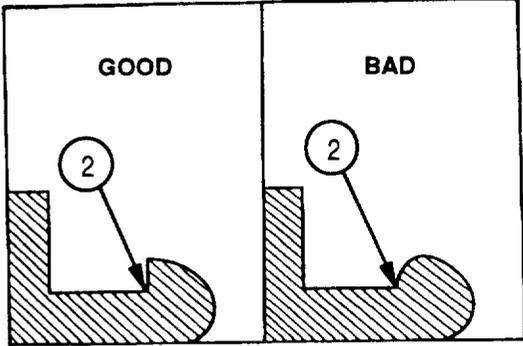
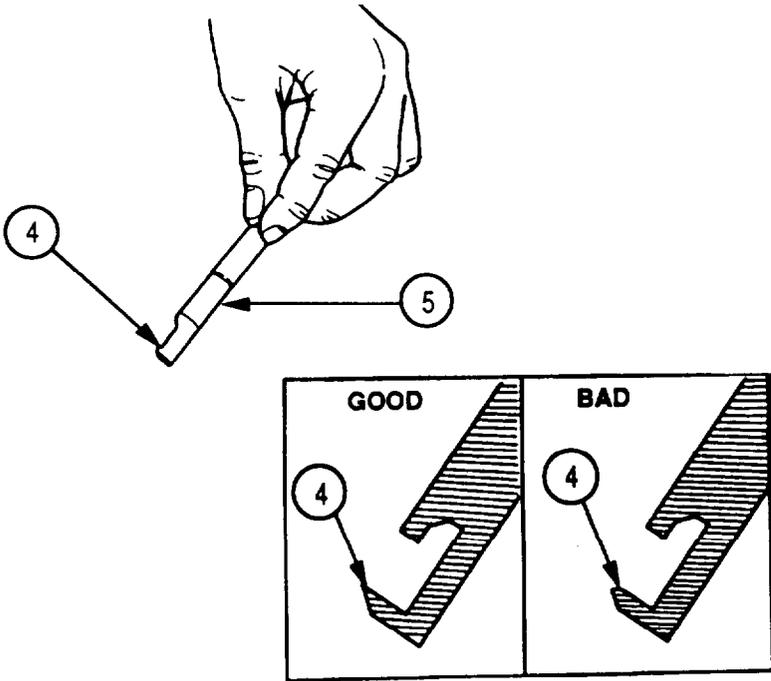
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
M2 MACHINE GUN (cont)		
7. WEAPON WILL NOT EJECT.		<p>Check for burred, broken, or bent firing pin (1).</p> <p>Replace defective firing pin (p 3-42).</p>
8. WEAPON WILL NOT COCK.		
<p>Step 1. Check for burred, bent, or broken cocking lever (1) or burred, bent, or broken cocking lever pin (2).</p> <p>Replace defective cocking lever or cocking lever pin (p 2-69).</p>		

Table 3-1. DIRECT SUPPORT TROUBLESHOOTING (cont)

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION	
		<p>Step 2. Check for broken sear (3). Ensure sear notch (4) has a sharp edge and is not chipped or broken. Check sear spring (5) for broken or crushed coils.</p> <p>Replace defective sear or sear spring (p 2-69).</p>	
<p>9. WEAPON HAS UNCONTROLLED FIRE.</p>			<p>Step 1. Check for broken sear (1). Ensure sear notch (2) has a sharp edge and is not chipped or broken. Check sear spring (3) for broken or crushed coils.</p> <p>Replace defective sear or sear spring (p 2-69).</p>

3-1. **TROUBLESHOOTING** (cont)

Table 3-1. DIRECT SUPPORT TROUBLESHOOTING (cont)

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
M2 MACHINE GUN (cont)		
9. WEAPON HAS UNCONTROLLED FIRE. (cont)		
		
<p>Step 2. Check for broken notch (4) on firing pin extension (5).</p>		
<p>Replace defective firing pin extension assembly (p 3-42).</p>		
10. BOLT ASSEMBLY IS IMPROPERLY INSTALLED.		
<p>Check for improper assembly of components.</p>		
<p>Reassemble components correctly (p 2-53).</p>		

Section II. DIRECT SUPPORT MAINTENANCE PROCEDURES

3-2. GENERAL MAINTENANCE

- a. Refer to page 2-49 and TM 9-1005-213-10 for general maintenance instructions.
- b. Before performing barrel erosion check, refer to TM 9-4933-208-34 for instructions on use of the M6A1 barrel erosion gage kit.
- c. For installation of safety wire and cotter pins, refer to MS35540.

3-3. M2 MACHINE GUN—ANNUAL GAGING

THIS TASK COVERS:

- a. Barrel Erosion/Breech Bore Check
- b. Cover Latch - Top Plate Clearance Check
- c. Breech Lock Cam - Bottom Plate Clearance Check
- d. Headspace/Timing Check
- e. Trigger Lever Clearance Check
- f. Trigger Lever - Bolt Clearance Check
- g. Bolt Latch Assembly - Receiver Sideplate Clearance Check
- h. Firing Pin Protrusion Check
- i. Firing Pin Hole Check
- j. Buffer Rod Assembly Check

INITIAL SETUP

Tools and Special Tools

Barrel erosion gage (7274725)
Breechbore gage (7319900)
Field maintenance small arms shop set (SC 4933-95-CL-A11)
Firing pin protrusion gage (7799739)
Oil buffer rod gage (7106326)
Plug gage (7458406)
Wear check gage (7274730)

Personnel Required

MOS 45B small arms repairman (2)

References

TB 43-0240
TM 9-1005-213-10

Equipment Conditions

M2 machine gun removed/dismounted (TM 9-1005-213-10)

3-3. M2 MACHINE GUN—ANNUAL GAGING (cont)

WARNING

- Be sure to clear weapon before disassembling, cleaning, inspecting, transporting, or storing. Clearing consists of unloading the machine gun and visually inspecting the weapon and chamber to ensure all rounds have been removed. Do not release the bolt or press the trigger.
- Never remove the backplate assembly until the chamber has been cleared and the bolt is forward.

BARREL EROSION/BREECH BORE CHECK

NOTE

- Small arms gages will be inspected and certified annually. The gages will not be used unless they are accompanied with the appropriate gage record. Refer to TB 43-0240 for requirements.
- Inspect barrel to determine if barrel is lined or unlined.

- 1 Visually inspect bore. A small ring will appear approximately 9 in. (23 cm) from chamber if barrel is lined.

NOTE

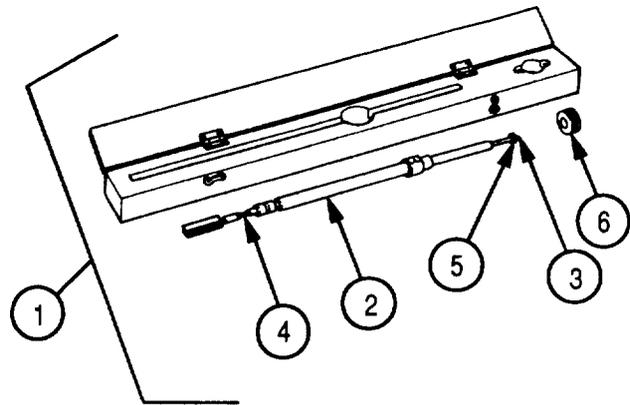
Steps 2 thru 8 are for use when barrel is lined.

- 2 Test barrel for barrel erosion with M6A1 gage kit (1).

NOTE

Barrel erosion gage must be prechecked before using it.

- 3 Precheck barrel erosion gage (2) by retracting tapered rod (3). Set reject ring (4) flush with rear face of gage tube, thus expanding collet (5) to indicate a reject condition. Insert collet (5) of gage into wear check gage (6). Collet (5) should contact inside diameter of check gage (6) and produce a slight drag. Check gage (6) is worn when the collet (5) fails to produce contact. Turn in worn or damaged gages for calibration or disposal.

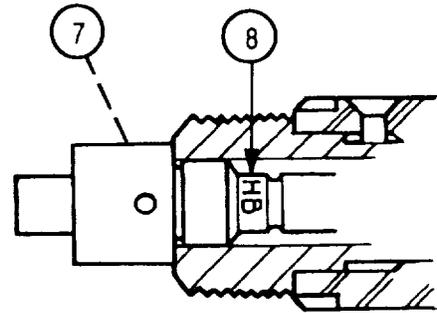


CAUTION

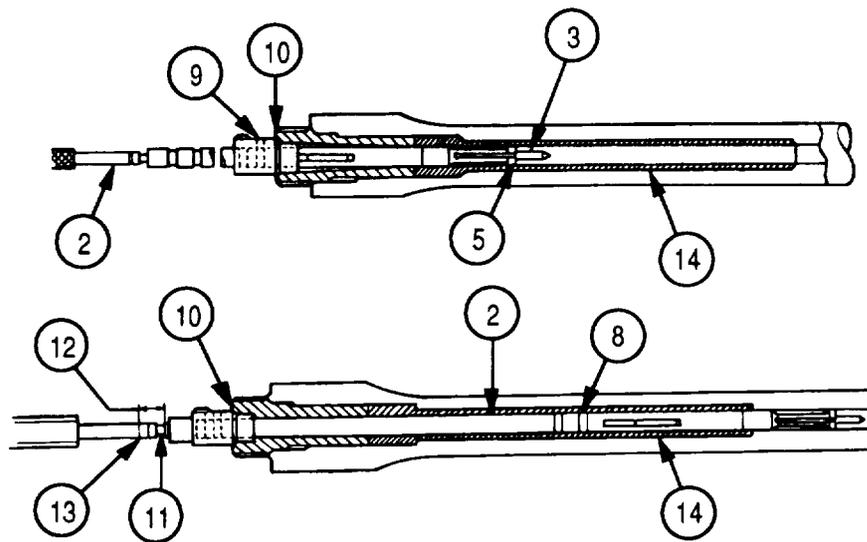
Retract tapered rod before inserting or removing barrel erosion gage into or from the barrel to avoid unnecessary wear and damage.

NOTE

False readings may be obtained if the chamber and barrel are not thoroughly cleaned.



- 4 Measure wear in barrel liner by first engaging breech stop detent ball (7) into groove so that the letters HB on gage tube (8) are immediately to the FRONT of the stop for checking M2 heavy barrels.



- 5 Retract the tapered rod (3) and insert barrel erosion gage (2) into barrel until stop (9) is seated flush against the breech end of barrel (10).
- 6 Tapered rod is pushed gently, but firmly, into the gage tube until it is stopped by the collet engaging the bore.
- 7 The reading is taken from the rod at the rear of the gage tube (8). The recessed portion (11) of the rod indicates that barrel is new or has no appreciable wear. Barrels within serviceable range (12) are useable. The REJECT line (13) indicates an unserviceable barrel. To measure wear ahead of liner (14), move stop to proper rearward groove. Use of gage is same as above.
- 8 Remove gage and store in the M6A1 gage kit case.

3-3. M2 MACHINE GUN—ANNUAL GAGING (cont)

BARREL EROSION/BREECH BORE CHECK (cont)

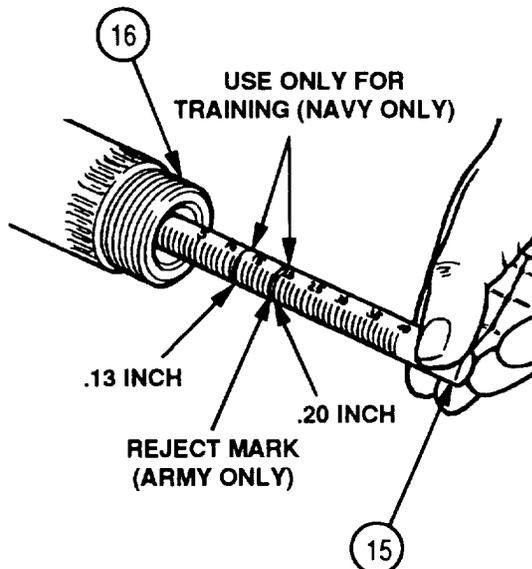
NOTE

Steps 9 thru 11 are for use when barrel is unlined.

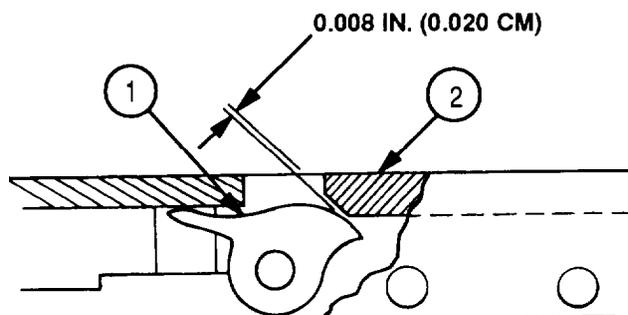
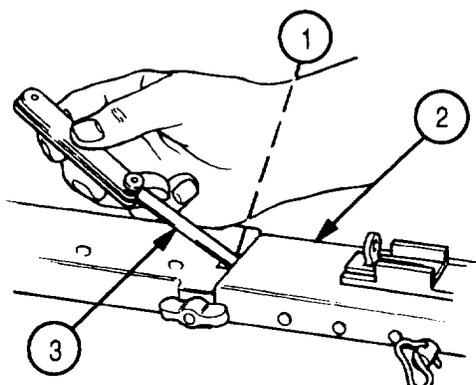
- 9 Insert breechbore gage (15) into chamber end of barrel and slide gage forward until tapered section of gage contacts lands of rifling.
- 10 Use end of barrel (16) as a reference and read gage to nearest 0.1 in. graduation.
- 11 When gage indicates a reading of 0.20 in., the barrel must be rejected for use.

NOTE

For Navy users, reject barrel for use when obtaining a reading of 0.13 in. Barrel may be used for training purposes with a reading between 0.13 in. and 0.20 in.



COVER LATCH - TOP PLATE CLEARANCE CHECK

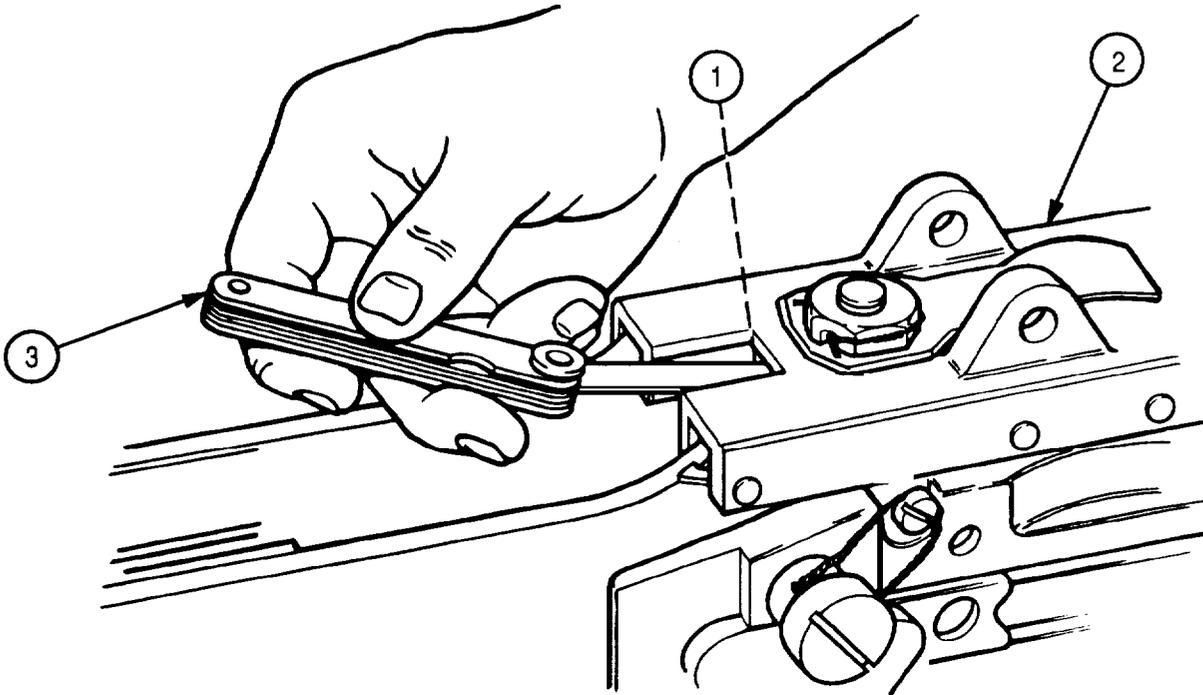


Check clearance between cover latch (1) and notch in top plate (2) with a feeler gage (3). Maximum clearance is 0.008 in. (0.020 cm).

NOTE

Maximum clearance for accompanying troops overseas is 0.025 in. (0.064 cm).

BREECH LOCK CAM - BOTTOM PLATE CLEARANCE CHECK

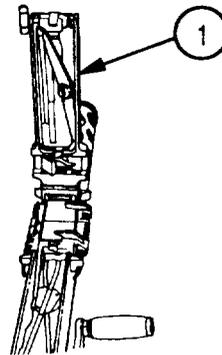


Check clearance between breech lock cam (1) and bottom plate (2) with a feeler gage (3). Maximum clearance is 0.008 in. (0.020 cm) and minimum clearance is 0.001 in. (0.003 cm).

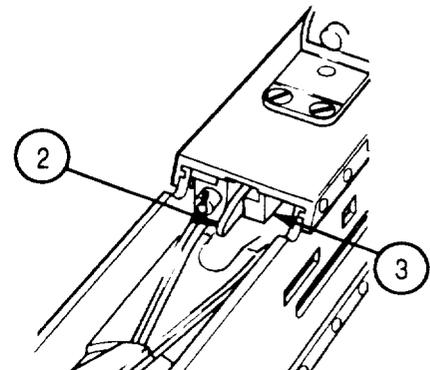
HEADSPACE/TIMING CHECK

Refer to operator's manual (TM 9-1005 -213-10).

TRIGGER LEVER CLEARANCE CHECK



- 1 Open cover (1).
- 2 Check for binding/lack of clearance between trigger lever (2) and top plate bracket (3).



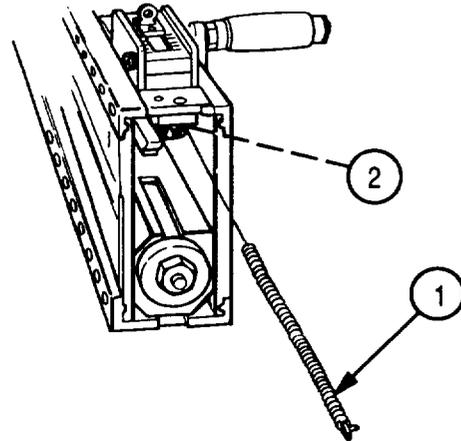
3-3. M2 MACHINE GUN—ANNUAL GAGING (cont)

TRIGGER LEVER - BOLT CLEARANCE CHECK

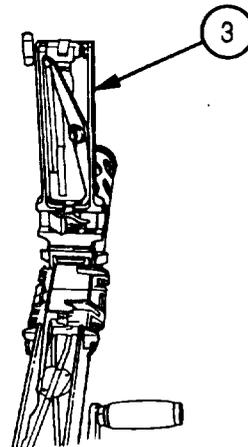
WARNING

Do not remove backplate assembly unless bolt assembly is in forward position. Stand to one side when removing backplate assembly.

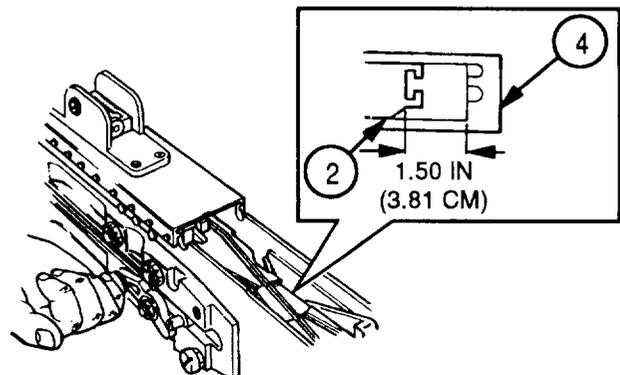
- 1 Remove backplate assembly from receiver. Refer to paragraph 2-10.
- 2 Remove driving spring rod assembly (1) from bolt assembly (2).



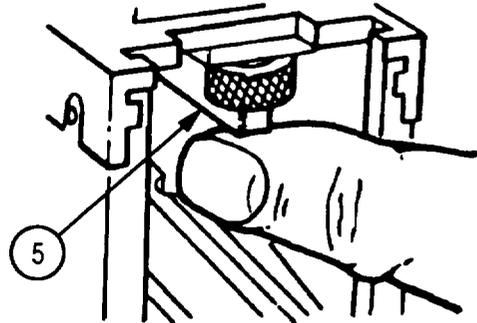
- 3 Raise cover (3).



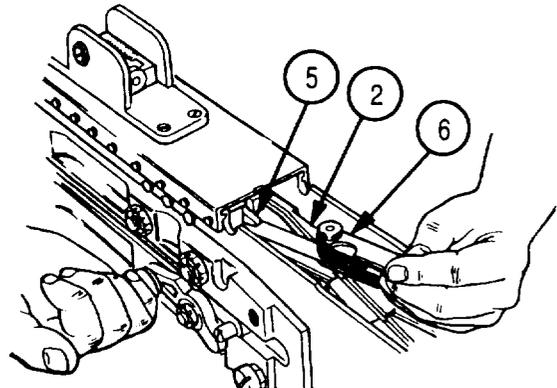
- 4 Retract bolt assembly (2) rearward until face of bolt assembly (2) is 1.50 in. (3.81 cm) from inside edge of barrel extension assembly (4).



5 Push upon trigger lever (5).



6 Check clearance between trigger lever (5) and bolt assembly (2) with a feeler gage (6). Minimum clearance is 0.005 in. (0.013 cm).

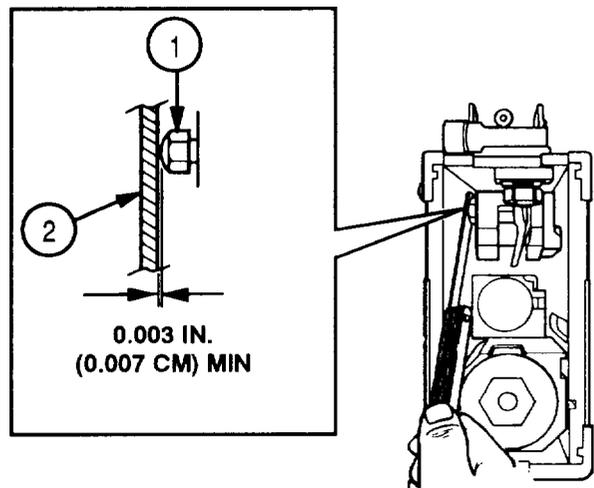


BOLT LATCH ASSEMBLY - RECEIVER SIDEPLATE CLEARANCE CHECK

NOTE

Check is not required when alternate bolt latch with flange is installed.

Check clearance between bolt latch assembly (1) and receiver sideplate (2). Minimum clearance is 0.003 in. (0.007 cm).



3-3. M2 MACHINE GUN—ANNUAL GAGING (cont)

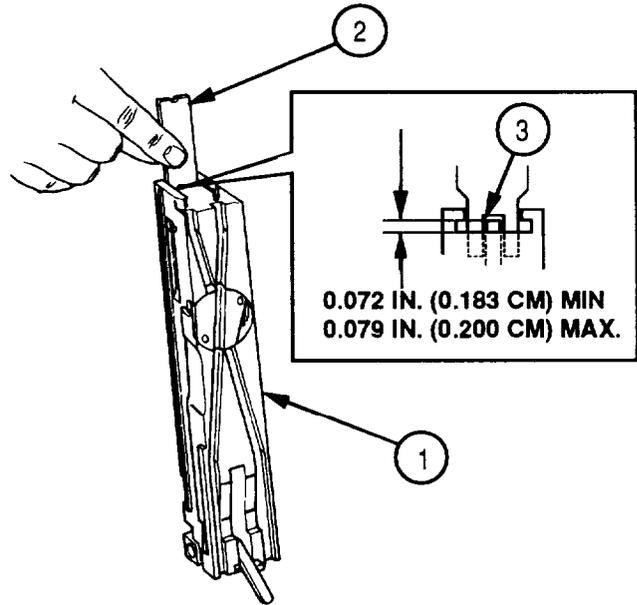
FIRING PIN PROTRUSION CHECK

- 1 Remove bolt assembly. Refer to paragraph 2-10.

WARNING

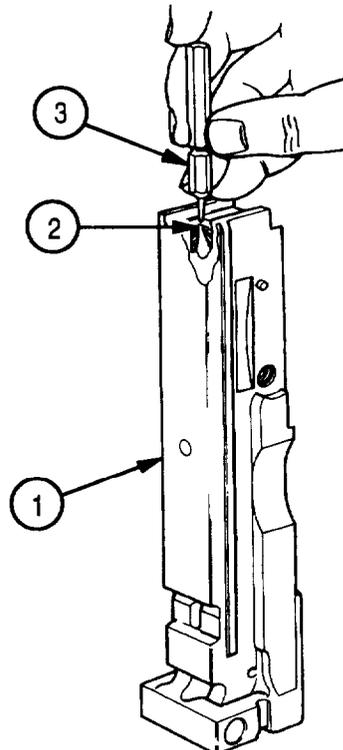
Ensure cocking lever is in the rearward position.

- 2 Check firing pin protrusion through face of fully assembled bolt assembly (1) by using firing pin protrusion gage (2). Release sear and allow firing pin (3) to extend through bolt face hole. Check that firing pin protrusion is within 0.079 in. (0.201 cm) maximum and 0.072 in. (0.183 cm) minimum from bolt assembly face.



FIRING PIN HOLE CHECK

- 1 Remove bolt assembly components from bolt (1). Refer to operator's manual (TM 9-1005-213-10).
- 2 Check firing pin hole (2) in bolt using plug gage (3). Hole tolerance is 0.084 in. (0.213 cm) maximum. Plug gage (3) entering firing pin hole all the way and elongation of firing pin hole (2) are cause for rejection.
- 3 Assemble components of bolt assembly. Refer to operator's manual (TM 9-1005-213-10).



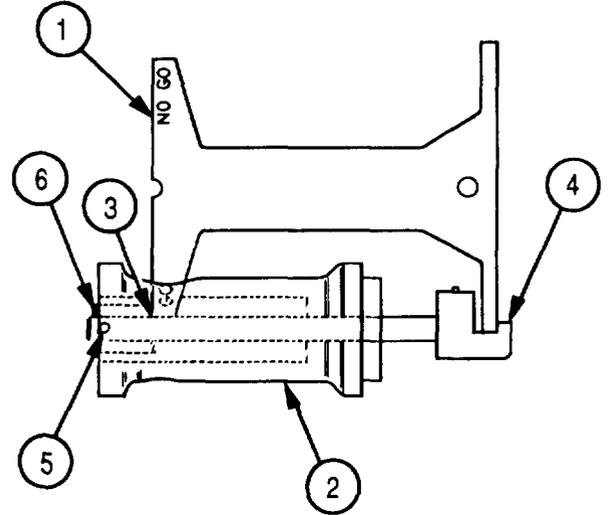
BUFFER ROD ASSEMBLY CHECK

- 1 Remove buffer assembly, spring, and buffer guide from body assembly. Refer to paragraph 3-9.

NOTE

Steps 2 thru 5 are for use when newer style of buffer assembly is used.

- 2 Using oil buffer rod gage (1), measure overall length of buffer assembly (2). Rear face of tube (3) to forward inside face of engaging notch (4) must be between 6.086 and 6.117 in. (15.458 and 15.537 cm).
- 3 If out of adjustment, remove and discard cotter pin (5) from nut (6). Adjust nut (6) in accordance with oil buffer rod gage (1).
- 4 Install a new cotter pin (5) into nut (6).

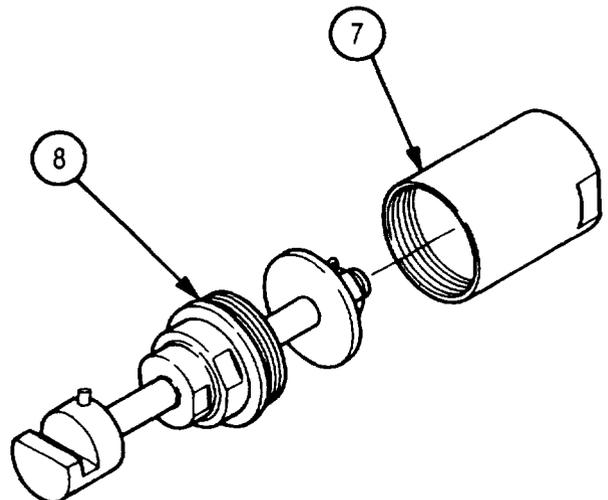


- 5 Refer to paragraph 3-9 for reassembly of buffer assembly, buffer guide, and spring.

NOTE

Steps 6 thru 12 are for use when older style of buffer assembly is used.

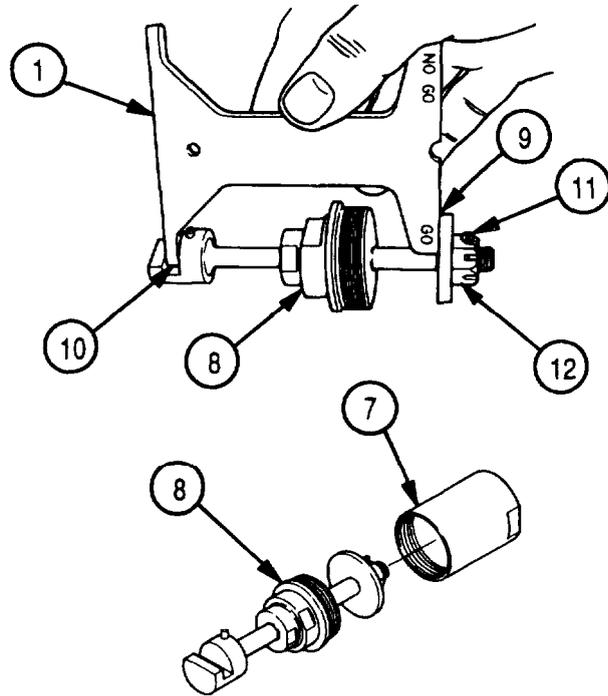
- 6 Remove buffer assembly, spring, and buffer guide from body assembly. Refer to paragraph 3-9.
- 7 Remove oil buffer tube (7) from buffer assembly (8).



3-3. M2 MACHINE GUN—ANNUAL GAGING (cont)

BUFFER ROD ASSEMBLY CHECK (cont)

- 8 Using oil buffer rod gage (1), measure overall length of buffer assembly (8). Rear face of tube (9) to forward inside face of engaging notch (10) must be between 6.086 and 6.117 in. (15.458 and 15.537 cm).
- 9 If out of adjustment, remove and discard cotter pin (11) from nut (12). Adjust nut (12) in accordance with oil buffer rod gage (I).
- 10 Install a new cotter pin (11) into nut (12).
- 11 Install oil buffer tube (7) onto buffer assembly (8).
- 12 Refer to paragraph 3-9 for reassembly of buffer assembly, buffer guide, and spring.

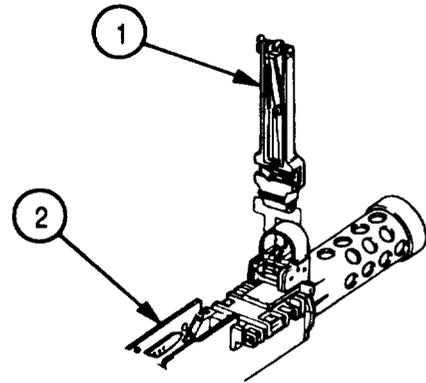


3-4. M2 **MACHINE GUN—MAINTENANCE INSTRUCTIONS**

THIS TASK COVERS:		
a. Disassembly	b. Inspection/Repair	c. Reassembly
INITIAL SETUP		
Tools and Special Tools Bolt latch spring tool assembly (71 85892) Field maintenance small arms shop set (SC 4933-95-CL-A11) Wrench, spanner (7188742)	Personnel Required MOS 456 small arms repairman (2)	References TM 9-1005-213-23P
Materials/Parts Cotter pin (MS24665-283) Cotter pin (MS24665-298) Cotter pin (MS24665-814) Cotter pin (2) (MS24554-816)	Equipment Conditions Page 2-53 M2 machine gun partially disassembled	

DISASSEMBLY

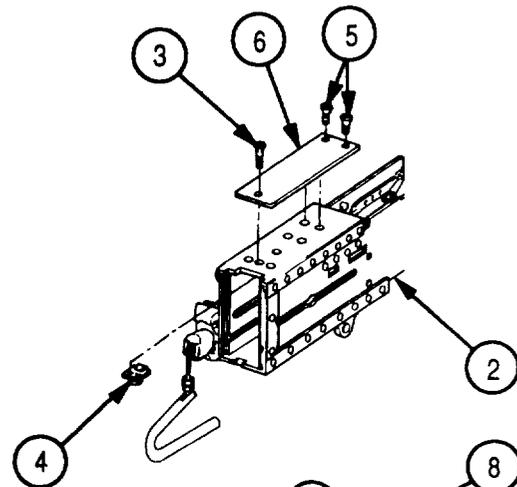
- 1 Refer to page 2-70 for removal of cover assembly (1).
- 2 Unlatch cover assembly (1) and remove from receiver (2).



NOTE

Steps 3 and 4 apply to M48 only.

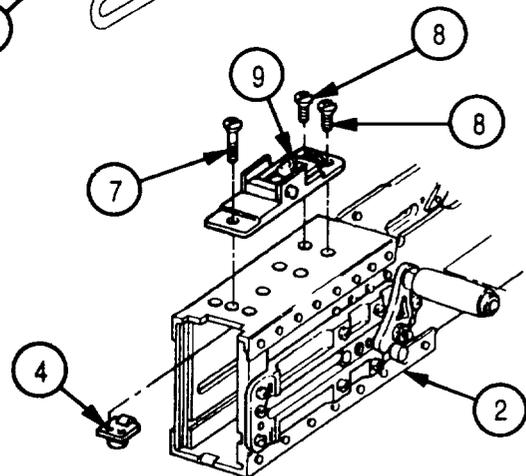
- 3 Remove screw (3) and remove trigger lever stop assembly (4) from inside receiver (2).
- 4 Remove two screws (5) and cover plate (6) from top of receiver (2).



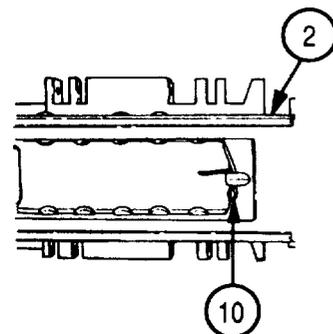
NOTE

Steps 5 and 6 apply to Flex only.

- 5 Remove screw (7) and remove trigger lever stop assembly (4) from inside receiver (2).
- 6 Remove two screws (8) and rear sight assembly (9) from top of receiver (2).



- 7 If damaged, remove cotter pin (10) from lock located at front of receiver (2).



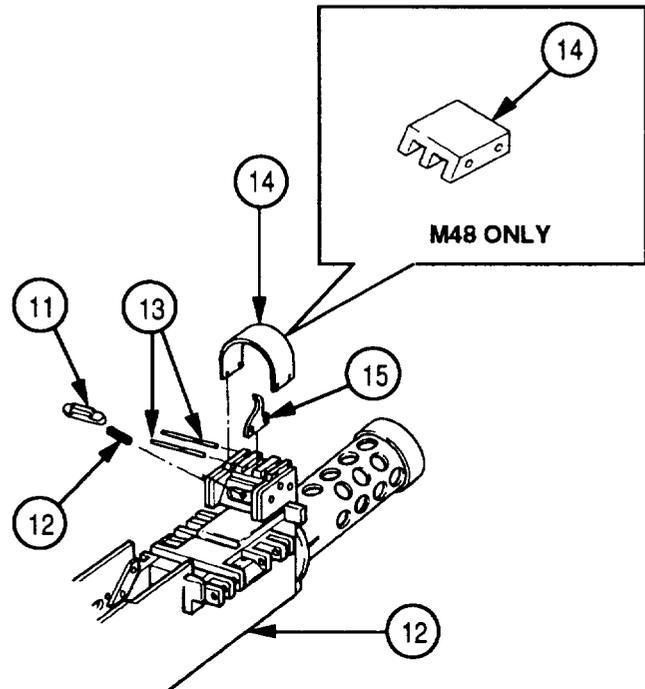
3-4. M2 MACHINE GUN—MAINTENANCE INSTRUCTIONS (cont)

DISASSEMBLY (cont)

WARNING

To avoid injury to your eyes, use care when removing and installing spring-loaded parts.

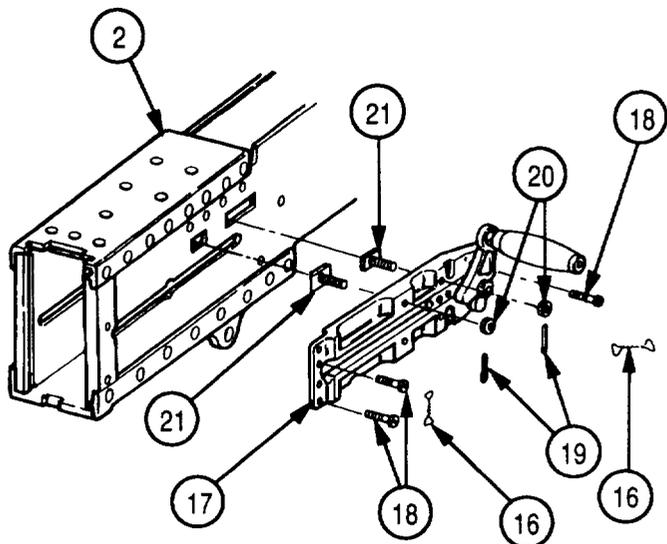
- 8 Remove pawl (11) and spring (12) from receiver (2).
- 9 Remove two pins (13), cover (14), and front sight (Flex only) (15) from receiver (2).



NOTE

Step 10 applies to Flex only.

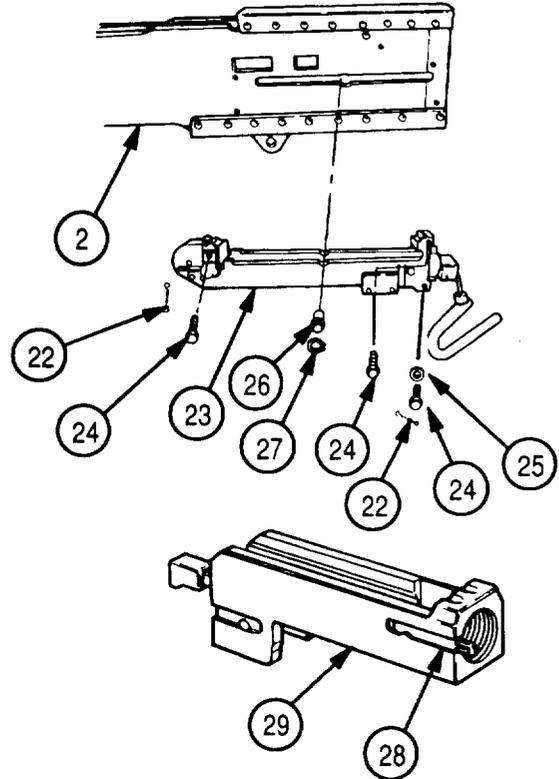
- 10 Remove two sets of safety wires (16) from retracting slide assembly (17) mounting hardware. Remove three screws (18), two cotter pins (19), and two hex nuts (20). Discard cotter pins, retrieve two shoulder bolts (21) that fell into the receiver (2). Remove retracting slide assembly (17) from receiver (2).



NOTE

Steps 11 and 12 apply to M48 only.

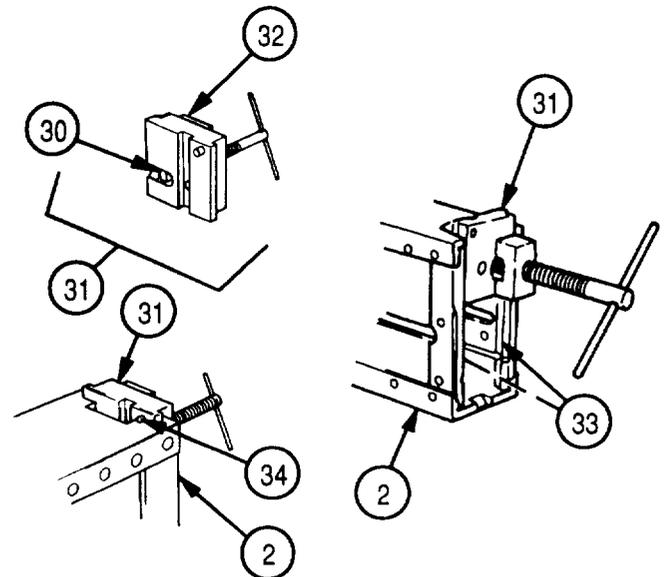
- 11 Remove two sets of safety wires (22) from M10 manual charger (23) mounting hardware. Remove three screws (24), flat washer (25), and M10 manual charger (23) from receiver (2).
- 12 Remove bolt stud assembly (26) from receiver (2). Remove retaining ring (27) if damaged or worn.
- 13 If damaged, remove barrel locking spring (28) from barrel extension assembly (29).



NOTE

Steps 14 thru 19 apply to Flex only.

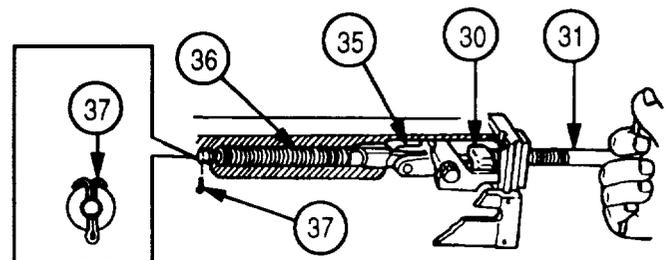
- 14 Ensure operating head (30) of bolt latch spring tool assembly (31) is screwed counterclockwise (ccw) into bracket (32) before sliding into backplate grooves (33) on receiver (2). Slide bolt latch spring tool assembly (31) into receiver (2) until stop (34) is in contact with top of receiver.



WARNING

Carefully remove bolt latch assembly; the spring is under heavy tension and could cause injury if released accidentally.

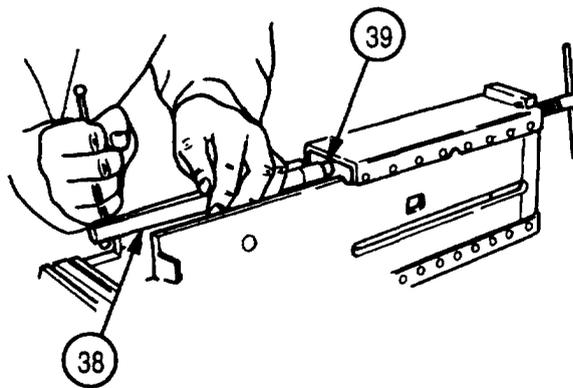
- 15 Turn bolt latch spring tool assembly (31) clockwise (cw) until operating head (30) contacts bolt latch assembly (35) and compresses spring (36). Remove and discard cotter pin (37) from bolt latch assembly (35).



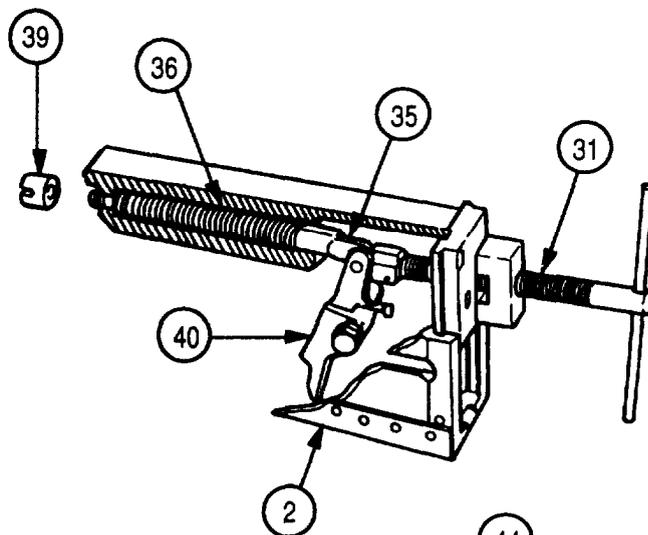
3-4. M2 MACHINE GUN—MAINTENANCE INSTRUCTIONS (cont)

DISASSEMBLY (cont)

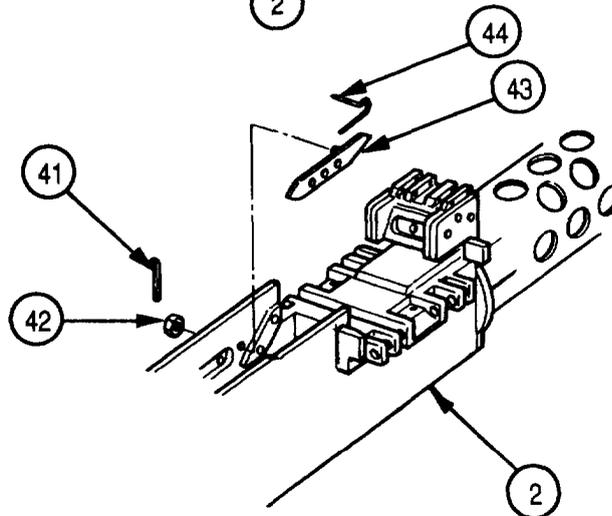
- 16 Install wrench (38) on nut (39). Turn wrench (38) counterclockwise (ccw) and remove nut (39).



- 17 Install nut (39) back on bolt latch assembly (35) and screw nut (39) two turns onto bolt latch assembly (35) threads.
- 18 Unscrew bolt latch spring tool assembly (31) counterclockwise (ccw) until lever (40) drops down. Screw bolt latch spring tool assembly (31) clockwise (cw) and compress spring (36) until nut (39) can be removed from bolt latch assembly (35).



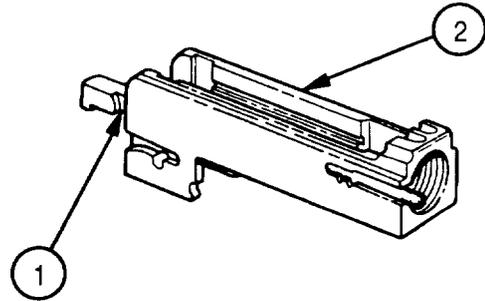
- 19 Remove nut (39). Unscrew bolt latch spring tool assembly (31) counterclockwise (ccw) and remove from receiver (2). Remove bolt latch assembly (35).



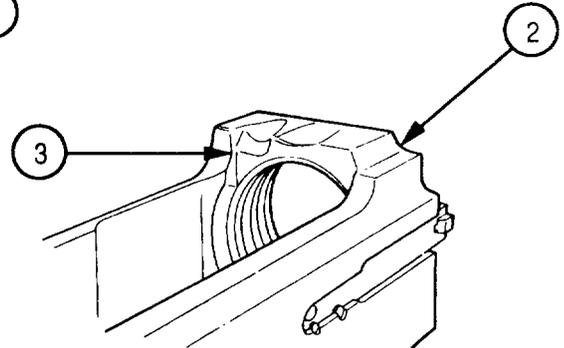
- 20 Remove cotter pin (41), nut (42), extractor switch (43), and extractor switch spring (44) from receiver (2). Discard cotter pin (41).

INSPECTION/REPAIR

- 1 Check shaft (1) on barrel extension assembly (2) for any movement. Check for broken or chipped edges. Replace barrel extension assembly if any movement is present or if edges are broken or chipped.



- 2 Check upper left hand corner (3) of barrel extension assembly (2) for any broken or sharp edges. File or stone area and edges smooth. Screw barrel completely into barrel extension assembly. Replace barrel extension assembly if barrel cannot be screwed completely into the barrel extension assembly.

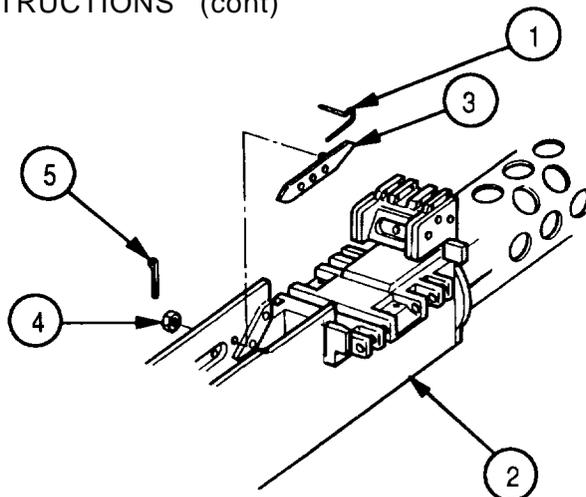


- 3 Check for missing, damaged, or worn parts.
- 4 Repair is by replacement of authorized parts (TM 9-1005-213-23P).
- 5 Backplate assembly is a repairable assembly; refer to page 3-35 for Flex and page 3-39 for M48.
- 6 Bolt assembly is a repairable assembly; refer to page 3-42.
- 7 Barrel buffer assembly is a repairable assembly; refer to page 3-45.
- 8 Cover assembly is a repairable assembly; refer to page 3-48.
- 9 Retracting slide assembly is a repairable assembly; refer to page 3-50.
- 10 M10 manual charger is a repairable assembly; refer to page 3-53.
- 11 Rear sight assembly is a repairable assembly; refer to page 3-61.
- 12 Trigger lever stop assembly is a repairable assembly; refer to page 3-63.
- 13 Bolt latch assembly is a repairable assembly; refer to page 3-64.
- 14 Rear cartridge stop assembly is a repairable assembly; refer to page 3-66.
- 15 Receiver assembly is a repairable assembly; refer to page 3-67.

3-4. M2 MACHINE GUN—MAINTENANCE INSTRUCTIONS (cont)

REASSEMBLY

- 1 Install extractor switch spring (1) in recess inside receiver (2). Install extractor switch (3) through receiver and secure with nut (4). Install new cotter pin (5).



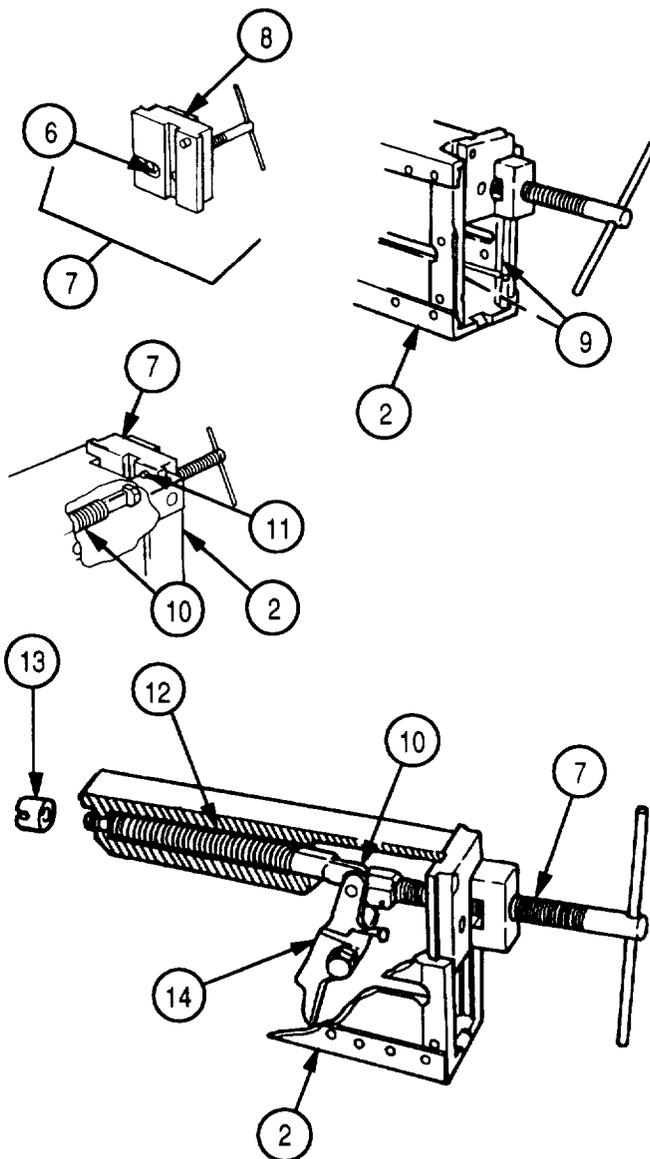
WARNING

Carefully install bolt latch assembly in receiver assembly. The spring is under heavy tension and could cause injury if released accidentally.

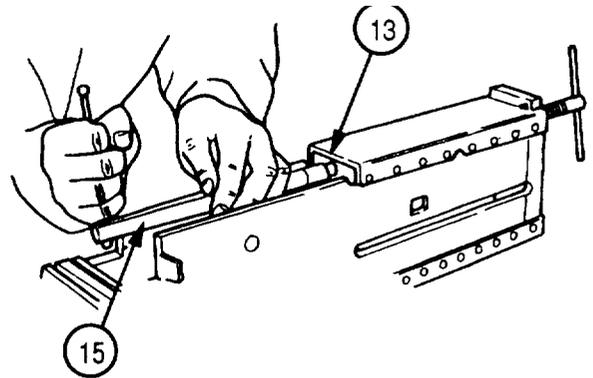
NOTE

Steps 2 thru 9 apply to Flex only.

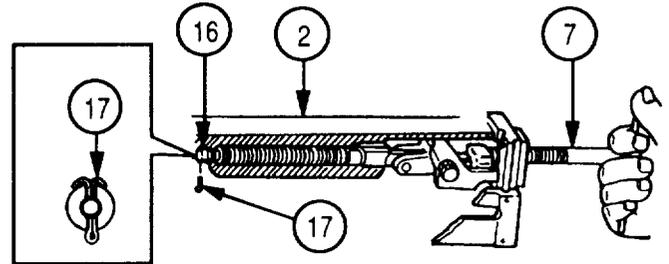
- 2 Ensure operating head (6) of bolt latch spring tool assembly (7) is screwed counterclockwise (ccw) into bracket (8) before sliding it into backplate grooves (9) in receiver (2).
- 3 Install bolt latch assembly (10) in receiver (2). Slide bolt latch spring tool assembly (7) into backplate grooves (9) until stop (11) contacts top of receiver (2).
- 4 Screw in bolt latch spring tool assembly (7) clockwise (cw), compressing spring (12) so that nut (13) can be installed on bolt latch assembly (10). Screw nut (13) two turns on to bolt latch assembly threads.
- 5 Unscrew bolt latch spring tool assembly (7) counterclockwise (ccw). Ensure bolt latch assembly (10) is held on by nut (13).
- 6 Lift upon lever (14) until it is level with top of receiver (2). Screw in on bolt latch spring tool assembly (7) clockwise (cw) and compress spring (12).



7 Tighten nut (13) with wrench (15). Line up slot in nut (13) with hole in bolt latch assembly eccentric pin (16).

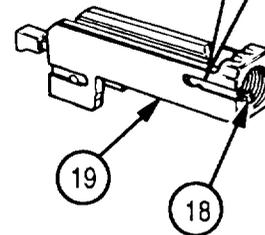
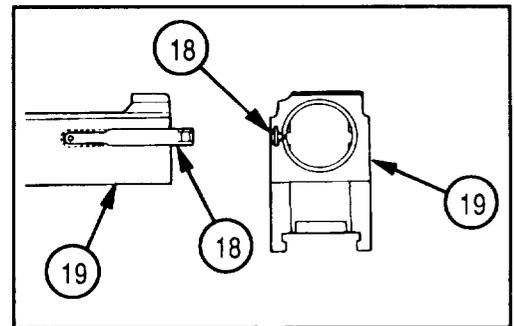


8 Install new cotter pin (17) and spread ends to secure. Ensure cotter pin (17) is installed from the bottom, as shown.



9 Unscrew bolt latch spring tool assembly (7) counterclockwise (ccw) and slide out of receiver (2).

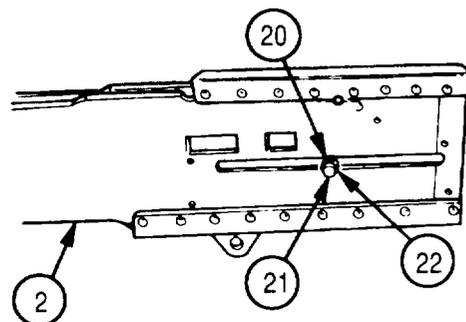
10 If removed, install new barrel locking spring (18) in barrel extension assembly (19) until it reaches the end of its groove. Stake barrel extension assembly (19) into notch of spring (18) in one place only.



NOTE

Steps 11 and 12 apply to M48 only.

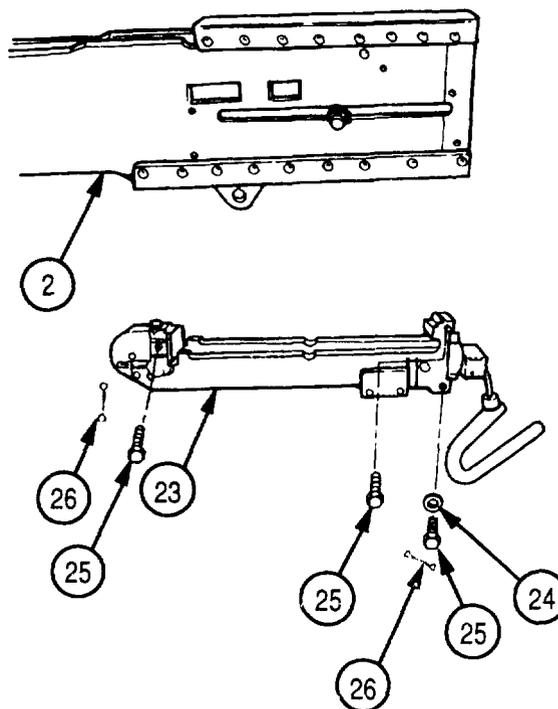
11 If removed, install new retaining ring (20). Install bolt stud assembly (21) in receiver (2) through bolt stud assembly hole (22).



3-4. M2 MACHINE GUN—MAINTENANCE INSTRUCTIONS (cont)

REASSEMBLY (cont)

- 12 Install M10 manual charger (23) on left side of receiver (2) and secure with flat washer (24) and three screws (25). Install two sets of new safety wires (26) to M10 manual charger mounting hardware.



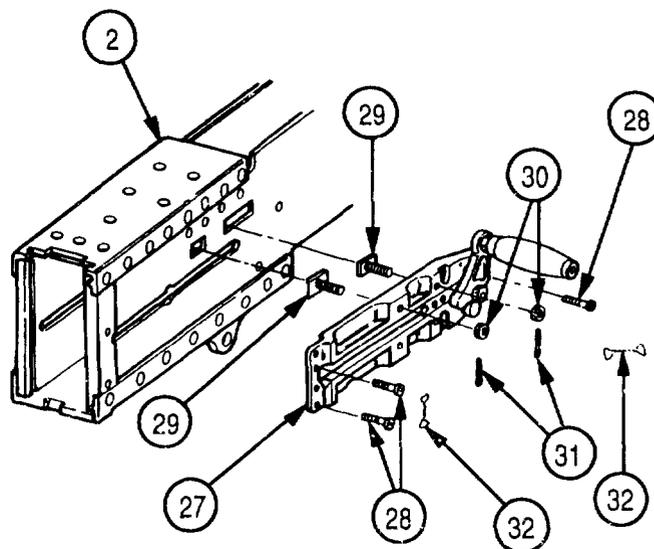
CAUTION

Reduce length of bottom rear screw (with file or stone) as required to avoid interference with functioning of weapon. Screw should not protrude into sideplate slot.

NOTE

Steps 13 thru 15 apply to Flex only.

- 13 Install retracting slide assembly (27) to receiver (2) and secure with three screws (28). From inside receiver (2), install two shoulder bolts (29). Ensure that beveled edges of shoulder bolts (29) face out in opposite directions. Tighten two hex nuts (3) and install two new cotter pins (31).
- 14 Install two new safety wires (32) to mounting hardware.

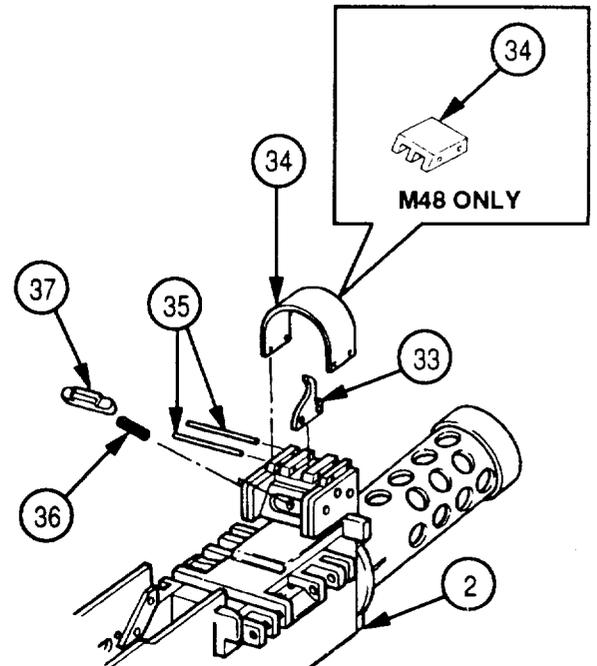


- 15 Install front sight (Flex only) (33) and cover (34) to receiver (2) and secure with two pins (35).

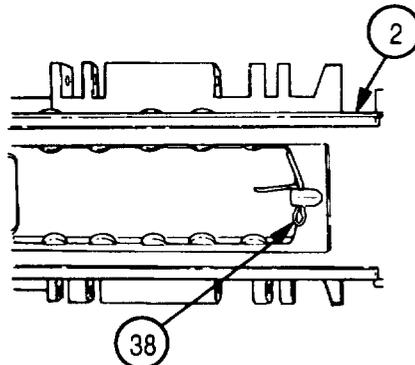
WARNING

To avoid injury to your eyes, use care when removing and installing spring-loaded parts.

- 16 Install spring (36) and pawl (37) on receiver (2).



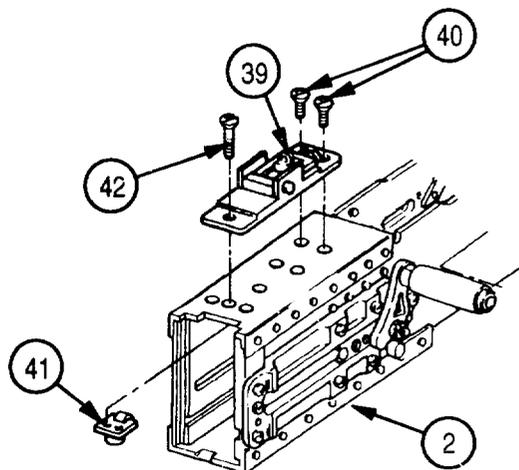
- 17 If removed, install new cotter pin (38) in lock located at front of receiver (2).



NOTE

Steps 18 thru 20 apply to Flex only.

- 18 Install rear sight assembly (39) on top of receiver (2) and secure front end with two screws (40).
- 19 Install trigger lever stop assembly (41) inside receiver (2) and align locating holes in receiver (2) and rear sight assembly (39). Install screw (42) to secure rear sight assembly (39) and trigger lever stop assembly (41) to receiver (2).



- 20 Stake screws (40) and (42).

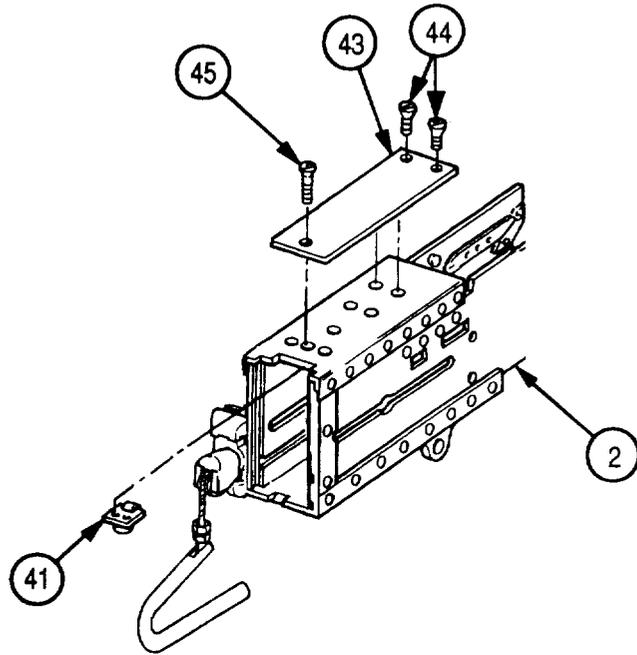
3-4. M2 MACHINE GUN—MAINTENANCE INSTRUCTIONS (cont)

REASSEMBLY (cont)

NOTE

Steps 21 thru 23 apply to M48 only.

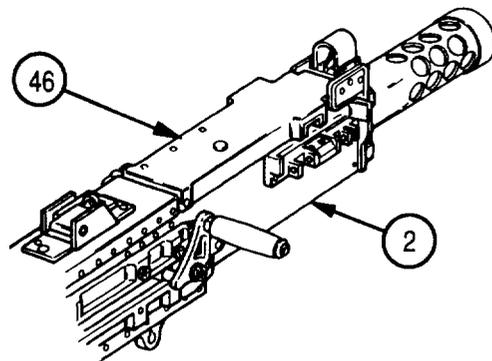
- 21 Install cover plate (43) on top of receiver (2) and secure front end with two screws (44).
- 22 Install trigger lever stop assembly (41) inside receiver (2) and align locating holes in receiver (2) and cover plate (43). Install screw (45) to secure cover plate (43) and trigger lever stop assembly (41) to receiver (2).
- 23 Stake screws (44) and (45).



- 24 Install cover assembly (46) on receiver (2) and latch front to secure.

- 25 Complete reassembly; refer to paragraph 2-10.

- 26 Function test weapon. Refer to page 2-66.



3-5. BACKPLATE ASSEMBLY—MAINTENANCE INSTRUCTIONS

THIS TASK COVERS:		
a. Disassembly	b. Inspection/Repair	c. Reassembly
INITIAL SETUP		
Applicable Configurations Flex		
Tools and Special Tools Field maintenance small arms shop set (SC 4933-95-CL-A11)		
Materials/Parts Key (5262799)		
References TM 9-1005-213-23P		
Equipment Conditions Page 2-53 Backplate assembly removed		

DISASSEMBLY

WARNING

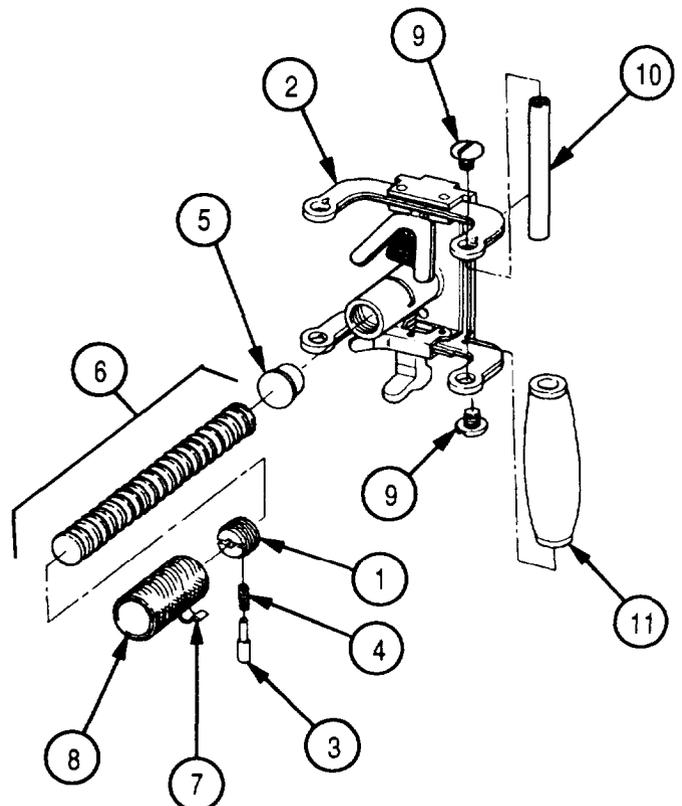
To avoid injury to your eyes, use care when removing and installing spring-loaded parts.

- 1 Remove plug (1) from backplate (2). Remove pin (3) and spring (4) from plug (1).

NOTE

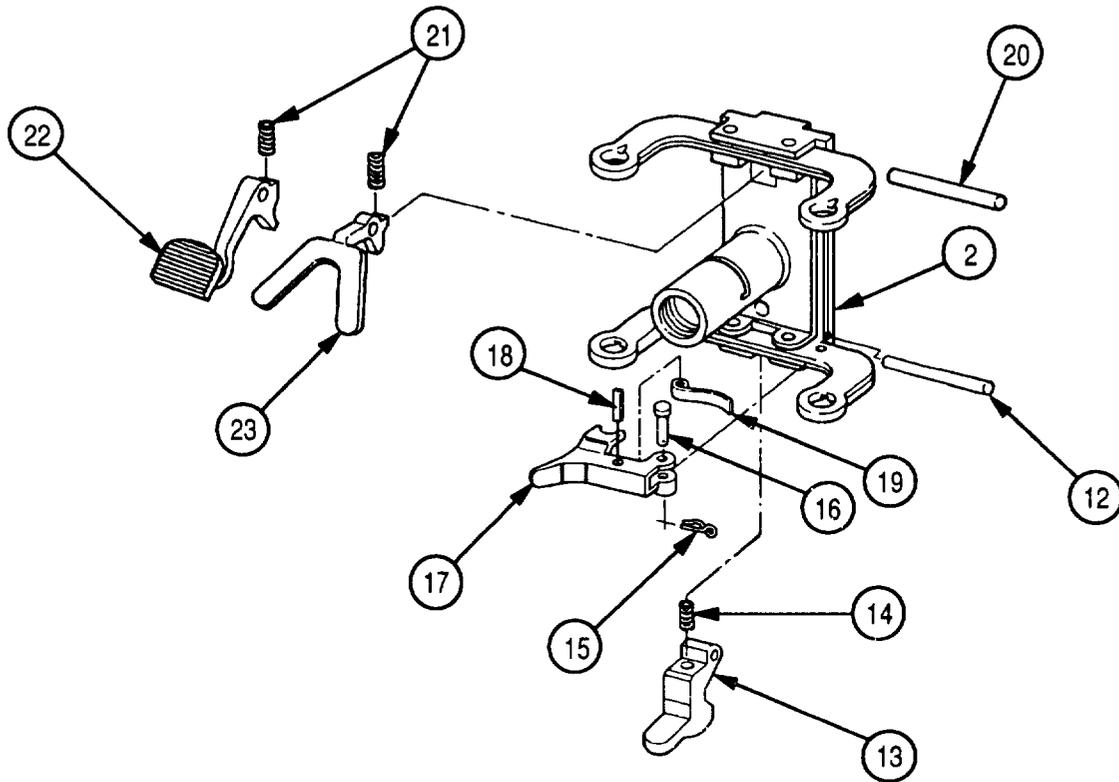
There are 22 disks.

- 2 Push out recoil mechanism buffer (5); remove disks (6) and recoil mechanism buffer (5).
- 3 Lift up on bolt latch release lock (7) and pull off buffer tube (8) from backplate (2).
- 4 Remove four screws (9), two tubes (10), and two handle grips (11).



3-5. BACKPLATE ASSEMBLY-MAINTENANCE INSTRUCTIONS (cont)

DISASSEMBLY (cont)



5 Remove pin (12), backplate latch (13), and spring (14).

6 Remove lock pin (15), headed pin (16), and backplate latch lock (17).

7 Remove and discard key (18). Remove flat spring (19) from backplate latch lock (17).

8 Remove pin (20), two springs (21), bolt latch release (22), and trigger (23) from backplate (2).

INSPECTION/REPAIR

1 Check for missing, damaged, or worn parts.

2 Repair is by replacement of authorized parts (TM 9-1005-213-23P).

3 Backplate is a repairable assembly; refer to page 3-38.

REASSEMBLY

NOTE

Ensure springs are in recesses of bolt latch release, backplate latch, and trigger.

- 1 Install two springs (1), trigger (2), bolt latch release (3), and pin (4) in backplane (5). Peen metal of backplate (5) over both ends of pin (4).
- 2 Assemble flat spring (6) to backplate latch lock (7) and secure with new key (8) by bending over ends of key (8).
- 3 Position backplate latch lock (7) on backplate (5) and secure with headed pin (9) and lock pin (10).
- 4 Install spring (11) in backplate latch (12) and secure in backplate (5) with pin (13). Peen metal of backplate (5) over both ends of pin (13).
- 5 Install two tubes (14) in two handle grips (15). Position handle grips (15) in backplate (5) and secure with four screws (16). Grips (15) must not rotate after assembly. After tightening, stake metal of screws (16) into slots in backplate frames.
- 6 Install buffer tube (17) in backplate (5) making sure that bolt latch release lock (18) enters groove in backplate (5).

NOTE

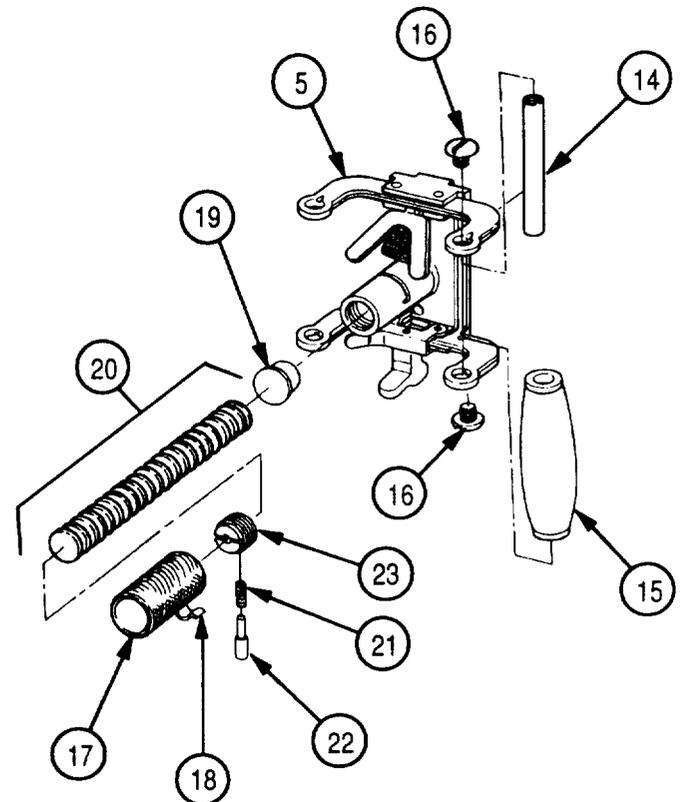
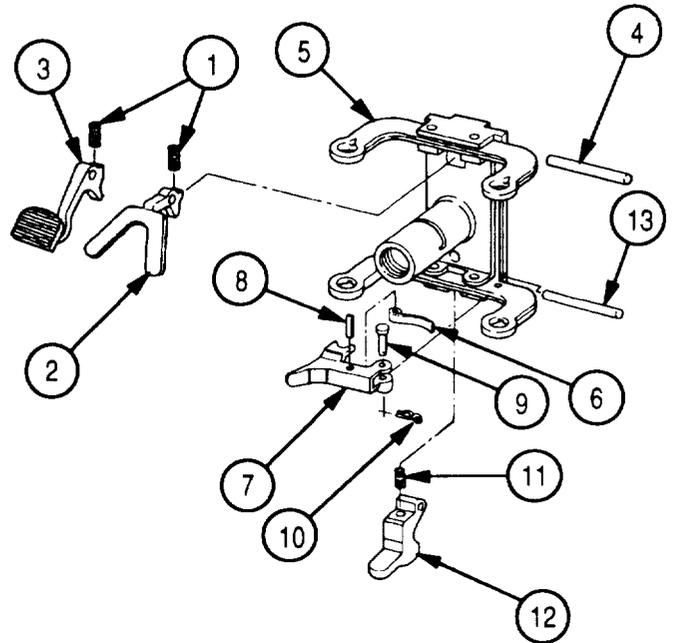
There are 22 disks.

- 7 Install recoil mechanism buffer (19) and disks (20) in backplate.

NOTE

Plug must not protrude more than one thread or be below flush.

- 8 Install spring (21) and pin (22) in plug (23). Screw plug (23) into backplate (5). Tighten plug (23). Back off only until pin (22) is aligned in notch.



3-6. BACKPLATE—MAINTENANCE INSTRUCTIONS

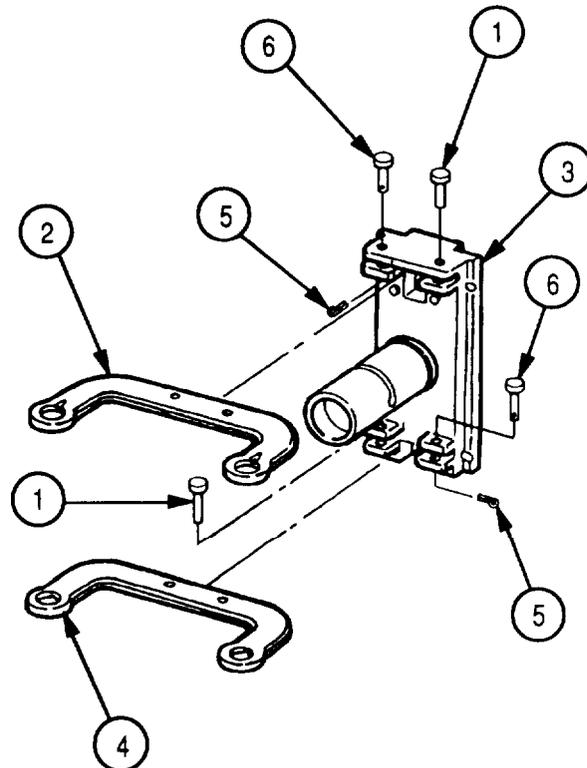
THIS TASK COVERS:		
a. Disassembly	b. Inspection/Repair	c. Reassembly
INITIAL SETUP Applicable Configurations Flex Tool and Special Tools Field maintenance small arms shop set (SC 4933-95-CL-A11) References TM 9-1005-213-23P Equipment Conditions Page 3-35 BackPlate disassembled		

DISASSEMBLY

NOTE

Steps 1 and 2 are for riveted backplanes only. Rivets will be replaced by headed pins and lock pins at reassembly.

- 1 Remove two rivets (1) and frame (2) from plate (3). Discard rivets.
- 2 Remove two rivets (1) and frame (4) from plate (3). Discard rivets.
- 3 Remove two lock pins (5), two headed pins (6), and frame (2) from plate (3).
- 4 Remove two lock pins (5), two headed pins (6), and frame (4) from plate (3).

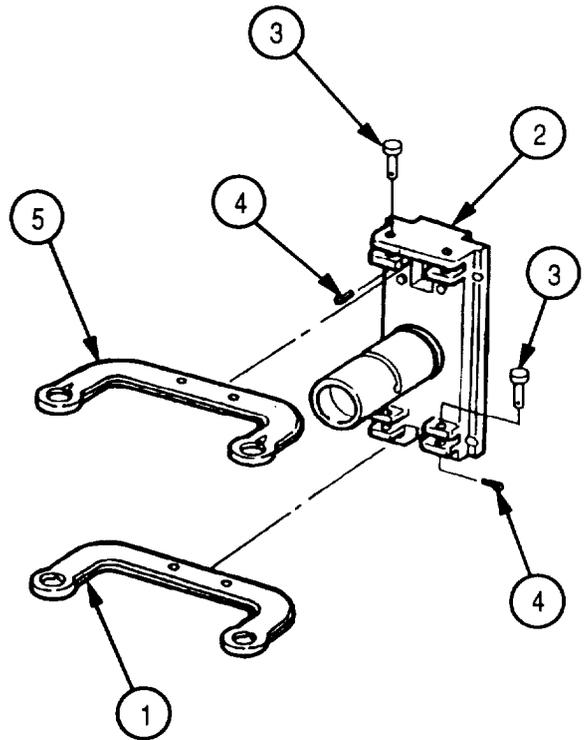


INSPECTION/REPAIR

- 1 Check for out-of round holes. Check for missing, damaged, or worn parts.
- 2 Repair is by replacement of authorized parts (TM 9-1005-213-23P).

REASSEMBLY

- 1 Position frame (1) in plate (2) and secure with two headed pins (3) and two lock pins (4).
- 2 Position frame (5) in plate (2) and secure with two headed pins (3) and two lock pins (4).

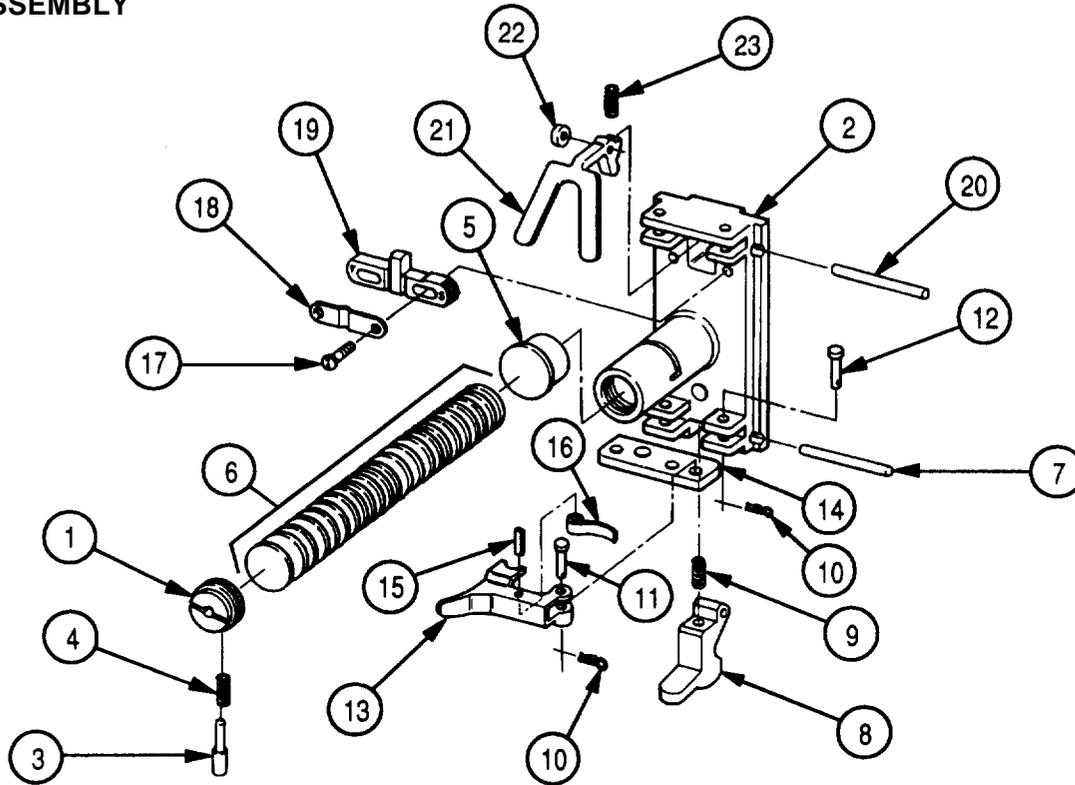


3-7. BACKPLATE ASSEMBLY—MAINTENANCE INSTRUCTIONS

THIS TASK COVERS		
a. Disassembly	b. Inspection/Repair	c. Reassembly
INITIAL SETUP		
Applicable Configurations M48		
Tools and Special Tools Field maintenance small arms shop set (SC 4933-95-CL-A11)		
Materials/Parts Key (5262799)		
References TM 9-1005-213-23P		
Equipment Conditions Page 2-53 Backplate assembly removed		

3-7. BACKPLATE ASSEMBLY—MAINTENANCE INSTRUCTIONS (cont)

DISASSEMBLY



WARNING

To avoid injury to your eyes, use care when removing and installing spring-loaded parts.

1 Remove plug (1) from backplate (2). Remove pin (3) and spring (4) from plug (1).

NOTE

There are 22 disks.

2 Push out recoil mechanism buffer (5); remove disks (6) and recoil mechanism buffer (5).

3 Remove pin (7), backplate latch (8), and spring (9).

4 Remove three lock pins (10), headed pin (11), two headed pins (12), backplate latch lock (13), and plate spacer (14) from backplate (2).

5 Remove and discard key (15). Remove flat spring (16) from backplate latch lock (13).

6 Remove two screws (17), flat spring (18), and safety (19) from backplate (2).

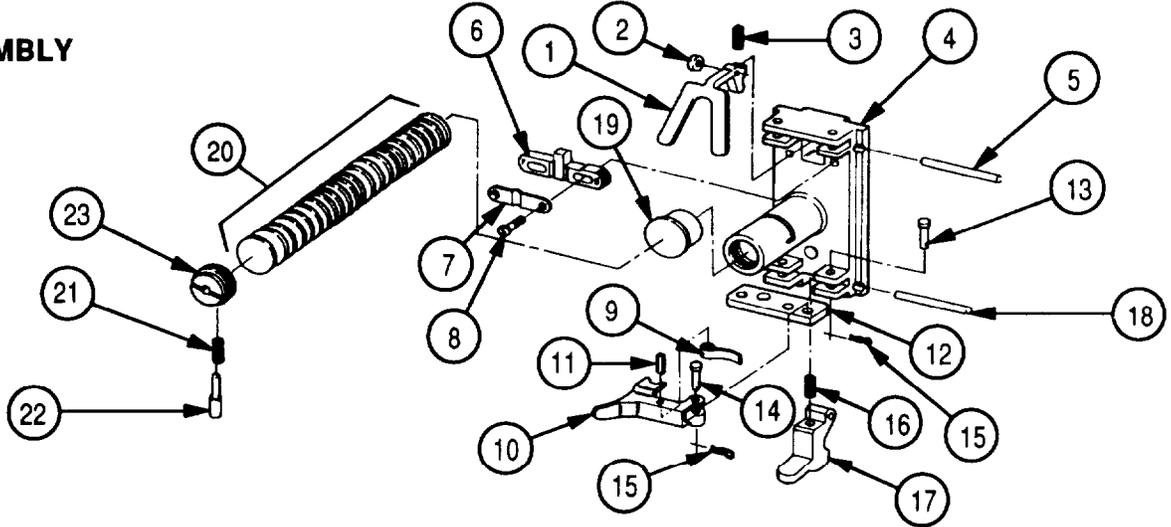
7 Remove pin (20), trigger (21), sleeve spacer (22), and spring (23) from backplate (2).

INSPECTION/REPAIR

1 Check for missing, damaged, or worn parts.

2 Repair is by replacement of authorized parts (TM 9-1005-213-23P).

REASSEMBLY



WARNING

To avoid injury to your eyes use care when removing and installing spring-loaded parts.

NOTE

Ensure springs are in recesses of backplate latch and trigger.

- 1 Position trigger (1), sleeve spacer (2), and spring (3) on backplate (4) and secure with pin (5). Peen metal of backplate (4) over both ends of pin (5).
- 2 Install safety (6) and flat spring (7) on backplate (4) and secure with two screws (8).
- 3 Assemble flat spring (9) to backplate latch lock (10) and secure with new key (11) by bending over ends of key (11).
- 4 Install plate spacer (12), backplate latch lock (10), two headed pins (13), headed pin (14), and three lock pins (15).
- 5 Install spring (16), backplate latch (17), and pin (18). Peen metal of backplate (4) over both ends of pin (18).
- 6 Install recoil mechanism buffer (19) and 22 disks (20) in backplate (4).

NOTE

Plug must not protrude more than one thread or be below flush.

- 7 Install spring (21) and pin (22) in plug (23). Screw plug (23) into backplate (4). Tighten plug (23) until tight. Back off only until pin (22) is aligned in notch.

3-8. BOLT ASSEMBLY, CARTRIDGE EXTRACTOR, FIRING PIN EXTENSION ASSEMBLY, AND BOLT SUBASSEMBLY—MAINTENANCE INSTRUCTIONS

THIS TASK COVERS:

- a. Disassembly b. Inspection/Repair c. Reassembly

INITIAL SETUP

Tools and Special Tools

- Field maintenance small arms shop set (SC 4933-95-CL-A11)
- Firing pin tool assembly (6243646)

Materials/Parts

- Headed pin (5009273)

References

- TM 9-1005-213-10
- TM 9-1005-213-23P

Equipment Conditions

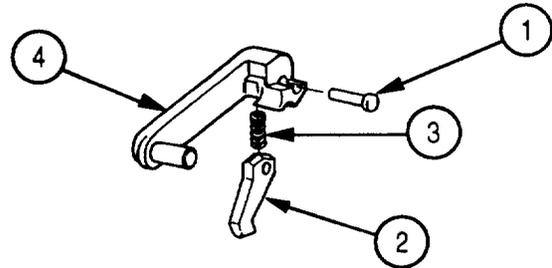
- Page 2-53 Bolt assembly removed
- Page 2-69 Bolt assembly partially disassembled

DISASSEMBLY

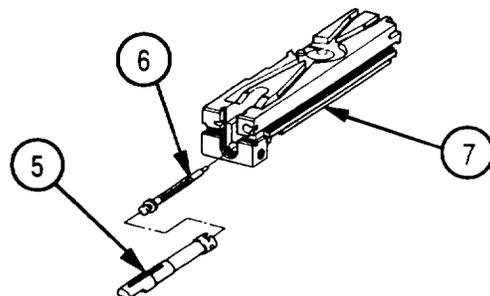
WARNING

To avoid injury to your eyes, use care when removing or installing spring-loaded parts.

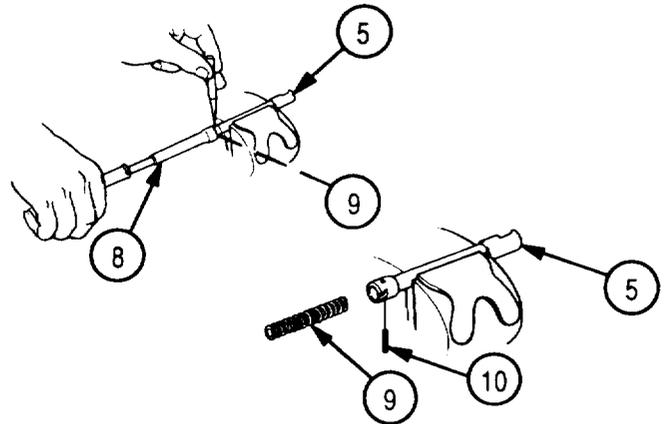
- 1 Drive out headed pin (1) and remove bolt ejector (2) and spring (3) from extractor (4). Discard headed pin (1).



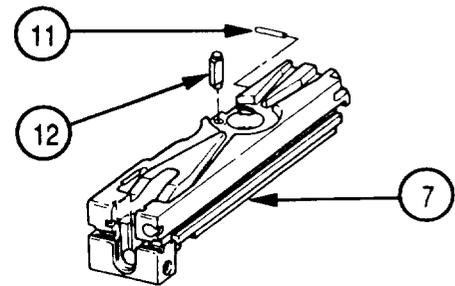
- 2 Remove firing pin extension assembly (5) and firing pin (6) from bolt subassembly (7). Separate firing pin (6) from firing pin extension assembly (5).



- Place firing pin extension assembly (5) in vise. Use firing pin tool assembly (8) to compress firing pin spring (9). Drive out pin (10) and remove spring (9) from firing pin extension (5).

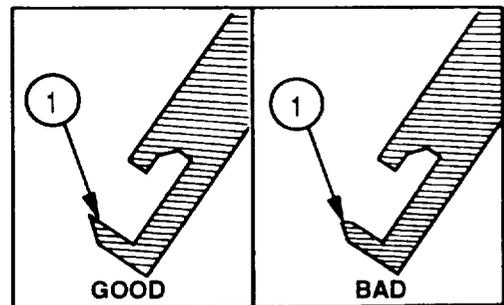
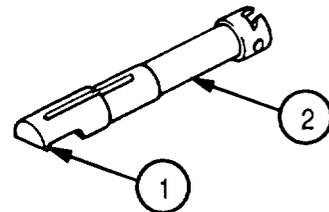


- If damaged, drive out pin (11) and pin (12) from bolt subassembly (7).



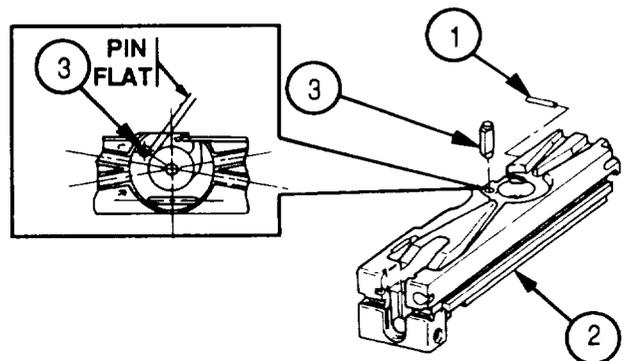
INSPECTION/REPAIR

- Check that notch angle (1) of firing pin extension (2) is sharp and does not have a feather edge.
- Inspect bolt face for pits and/or eroded areas up to maximum 0.062 in. (0.157 cm) long or wide, 0.031 in. (0.079 cm) deep in scattered or random pattern, or rings 0.031 in. (0.079 cm) deep and 0.062 in. (0.157 cm) wide.
- Check for missing, damaged, or worn parts.
- Repair is by replacement of authorized parts (TM 9-1005-213-23P).



REASSEMBLY

- If removed, press fit new pin (1) in bolt (2). Pin (1) should protrude no more than 0.078 in. (0.198 cm) maximum and no less than 0.062 in. (0.157 cm) minimum. If necessary, stone or file top and bottom of pin (1) to meet assembly dimensions.
- If removed, press fit new pin (3) in bolt (2) with flat of pin (3) facing as shown.



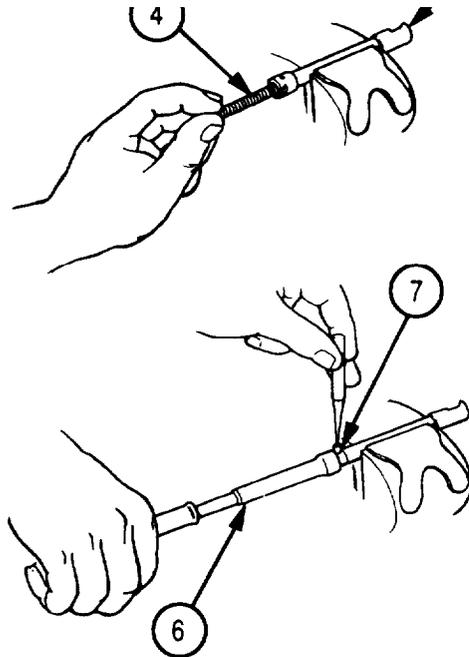
3-8. BOLT ASSEMBLY, CARTRIDGE EXTRACTOR, FIRING PIN EXTENSION ASSEMBLY, AND BOLT SUBASSEMBLY—MAINTENANCE INSTRUCTIONS (cont)

REASSEMBLY (cont)

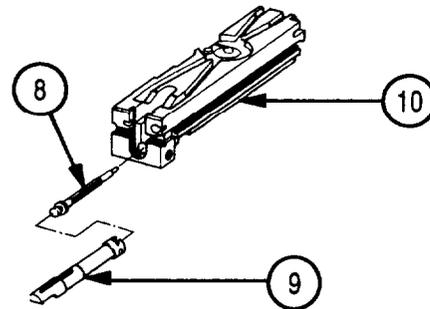
WARNING

To avoid injury to your eyes, use care when removing and installing spring-loaded parts.

- 3 Install firing pin spring (4) into firing pin extension (5). Use firing pin tool assembly (6) to compress firing pin spring (4). Drive in pin (7) to secure firing pin spring (4). Stake pin hole area to prevent loss of pin (7).



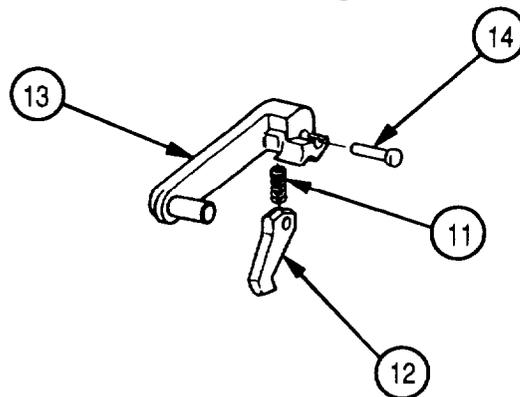
- 4 Position firing pin (8) in slot in firing pin extension assembly (9). Install firing pin extension assembly (9) in bolt subassembly (10) with notch downward.



NOTE

Ensure spring is in recess of extractor.

- 5 Install spring (11) and bolt ejector (12) in extractor (13) and secure with pin (14). Ejector (12) must pivot freely. Peen metal of pin (14) to secure ejector (12).
- 6 Refer to operator's manual (TM 9-1005-213-10) for further reassembly of bolt assembly.

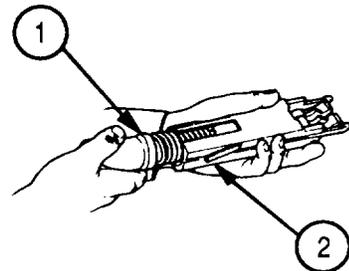


3-9. BARREL BUFFER ASSEMBLY—MAINTENANCE INSTRUCTIONS

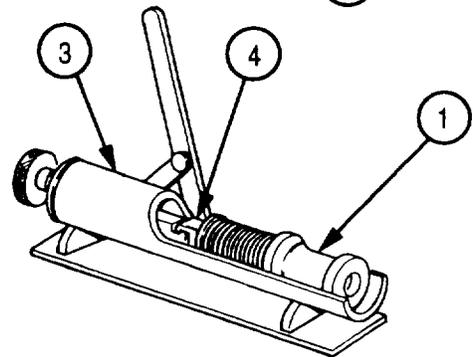
THIS TASK COVERS:		
a. Disassembly	b. Inspection/Repair	c. Reassembly
INITIAL SETUP		
Tools and Special Tools Oil buffer tool assembly (7319903) Field maintenance small arms shop set (SC 4933-95-CL-A11)		
References TM 9-1005-213-10 TM 9-1005-213-23P		
Equipment Conditions Page 2-53 Barrel buffer assembly removed		

DISASSEMBLY

1 Remove buffer assembly (1) with attached parts from barrel buffer body (2).



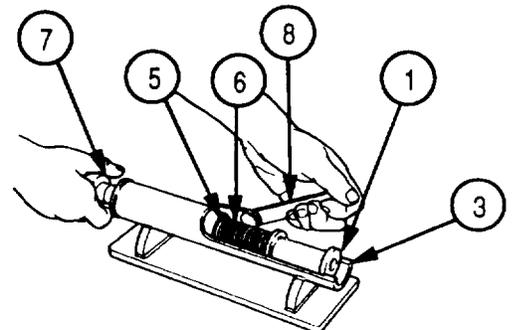
2 Place buffer assembly (1) in oil buffer tool assembly (3), with buffer assembly (1) mating with tool assembly latch (4).



WARNING

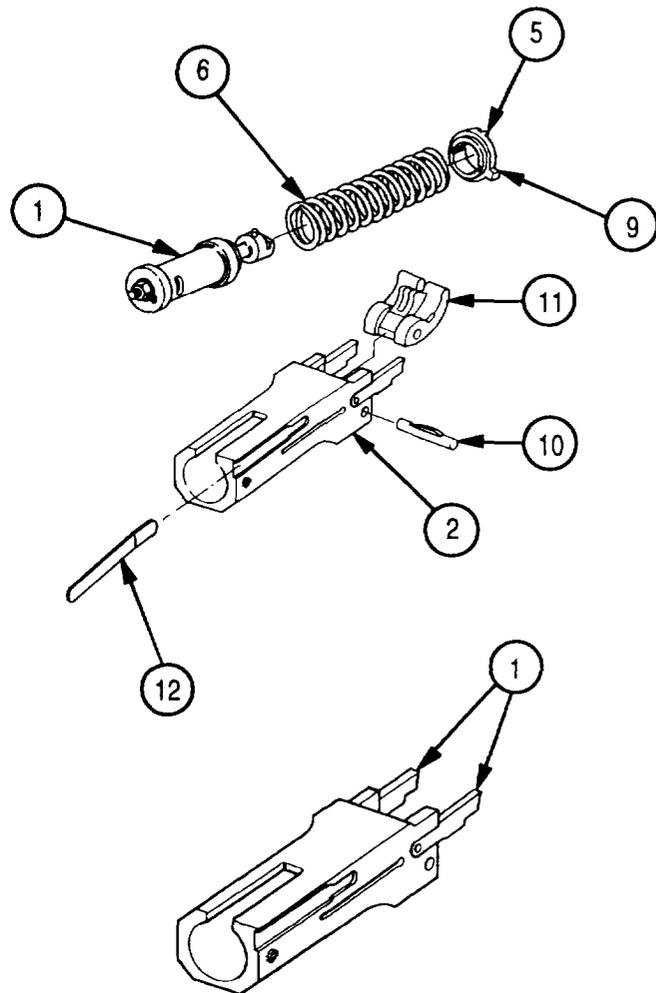
To avoid injury to your eyes, use care when removing and installing spring-loaded parts

3 Squeeze buffer guide (5) and spring (6) together. Turn knob (7) 1/4 turn to release buffer guide (5) from buffer assembly (1). Slowly release handle (8) and remove buffer assembly (1), spring (6), and buffer guide (5) from oil buffer tool assembly (3).



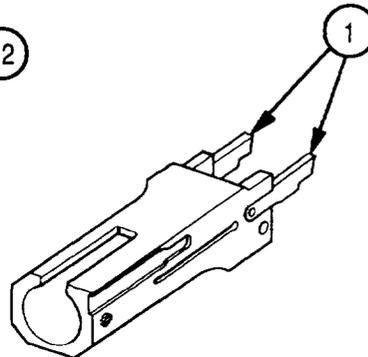
3-9. BARREL BUFFER ASSEMBLY—MAINTENANCE INSTRUCTIONS (cont)

- 4 Remove buffer guide (5) with attached key (9) and spring (6) from buffer assembly (1).
- 5 Remove accelerator pin assembly (10) and buffer accelerator (11) from barrel buffer body (2).
- 6 If damaged, drive out buffer body lock (12) to remove.



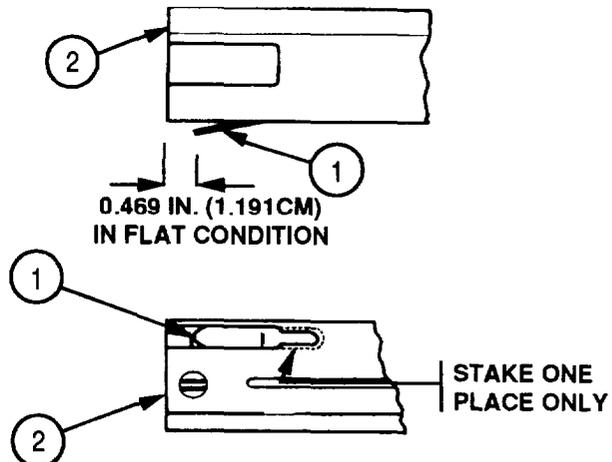
INSPECTION/REPAIR

- 1 Check lock depressors (1). Lock depressors may have movement as long as the movement does not cause the weapon to malfunction.
- 2 Check for missing, damaged, or worn parts.
- 3 Repair is by replacement of authorized parts (TM 9-1005-213-23P).

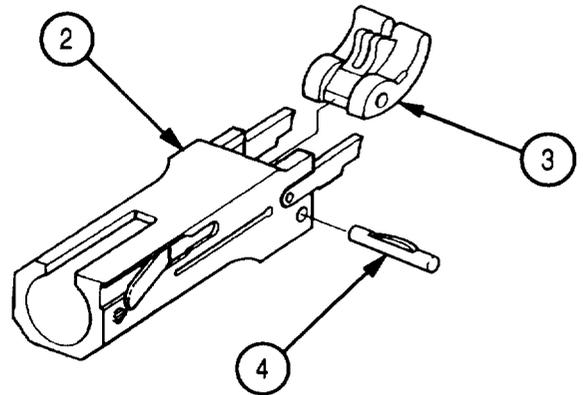


REASSEMBLY

- 1 If removed, install new buffer body lock (1) in barrel buffer body (2) until it reaches the end of its groove. With buffer body lock (1) in flat condition, there must be a minimum of 0.469 in. (1.191 cm) clearance between edge of barrel buffer body and buffer body lock as shown. Stake buffer body lock (1) to barrel buffer body (2), one place only.



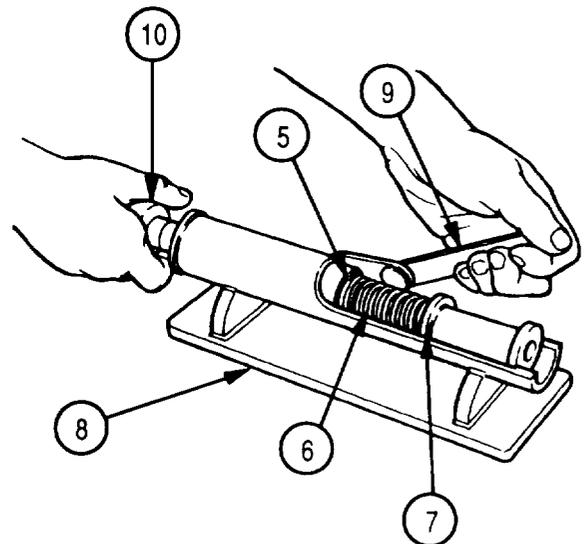
- 2 Position buffer accelerator (3) in barrel buffer body (2) and secure with accelerator pin assembly (4).



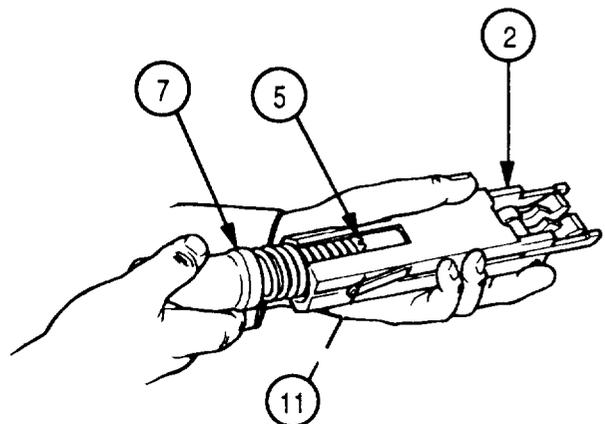
WARNING

To avoid injury to your eyes, use care when removing and installing spring-loaded parts.

- 3 Position buffer guide (5), spring (6), and buffer assembly (7) in oil buffer tool assembly (8). Compress spring (6) using handle (9). Turn knob (10) 1/4 turn to lock buffer guide (5) to buffer assembly (7). Release handle (9) and remove assembled buffer assembly (7) from oil buffer tool assembly (8).



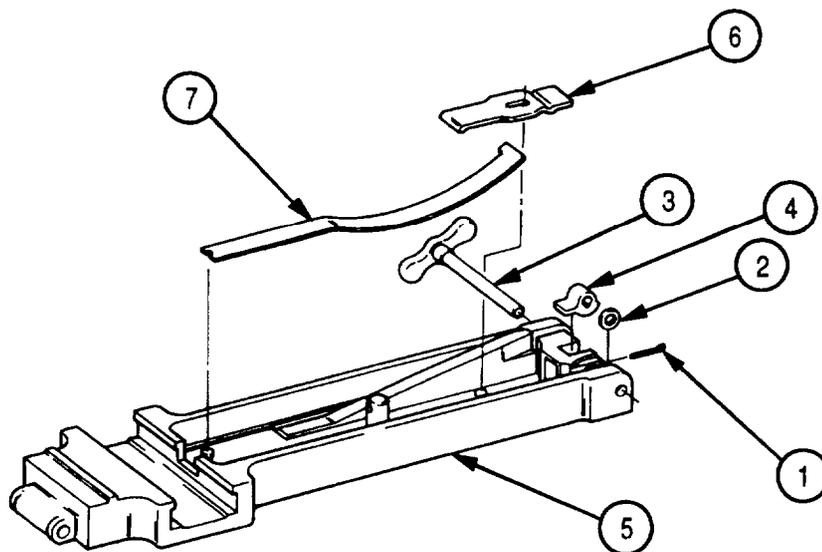
- 4 Install buffer assembly (7) in barrel buffer body (2) while aligning key (11) of buffer guide (5) with slot in barrel buffer body (2).



3-10. COVER ASSEMBLY—MAINTENANCE INSTRUCTIONS

THIS TASK COVERS:		
a. Disassembly	b. Inspection/Repair	c. Reassembly
INITIAL SETUP		
Tools and Special Tools Field maintenance small arms shop set (SC 4933-95-CL-A11)		
Materials/Parts Cotter pin (MS24665-814)		
References TM 9-1005-213-23P		
Equipment Conditions Page 2-70 Cover assembly removed and partially disassembled		

DISASSEMBLY



- 1 Remove cotter pin (1), flat washer (2), cover latch lever (3), and cover latch (4) from cover (5). Discard cotter pin (1).

WARNING

To avoid injury to your eyes, use care when removing and installing spring-loaded parts.

- 2 Pull down on flat spring (6) until it can be lifted off stud in cover (5).
- 3 Pry cover extractor spring (7) from cover (5); let cover extractor spring (7) rise slowly to remove.

INSPECTION/REPAIR

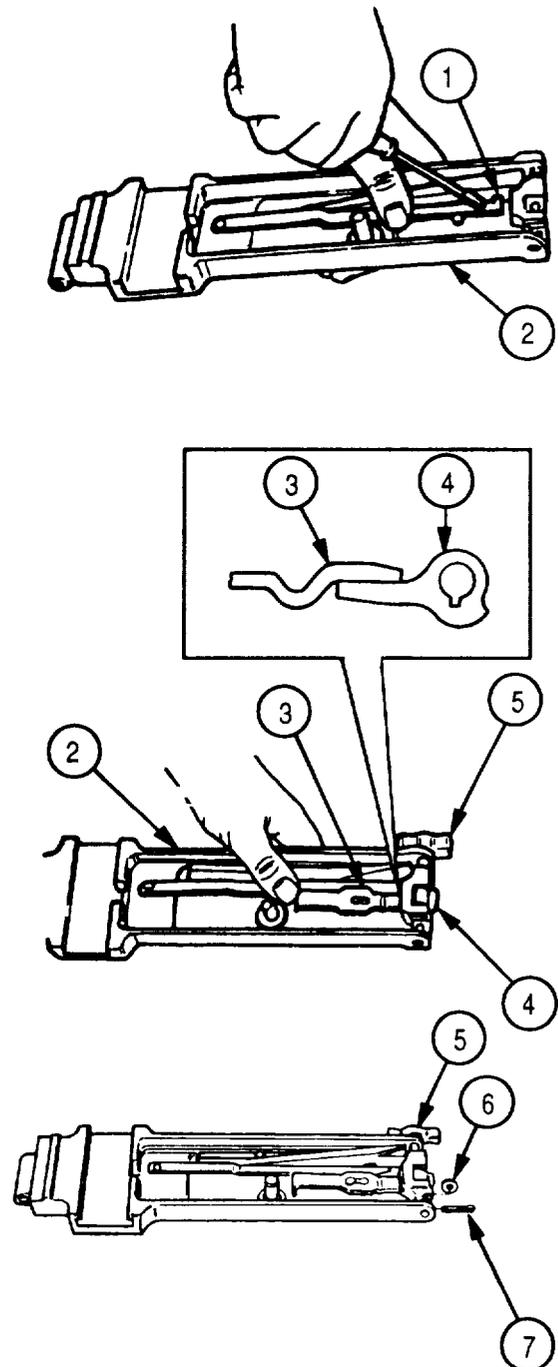
- 1 Check for missing, damaged, or worn parts.
- 2 Repair is by replacement of authorized parts (TM 9-1005-213-23P).

REASSEMBLY

WARNING

To avoid injury to your eyes, use care when removing and installing spring-loaded parts.

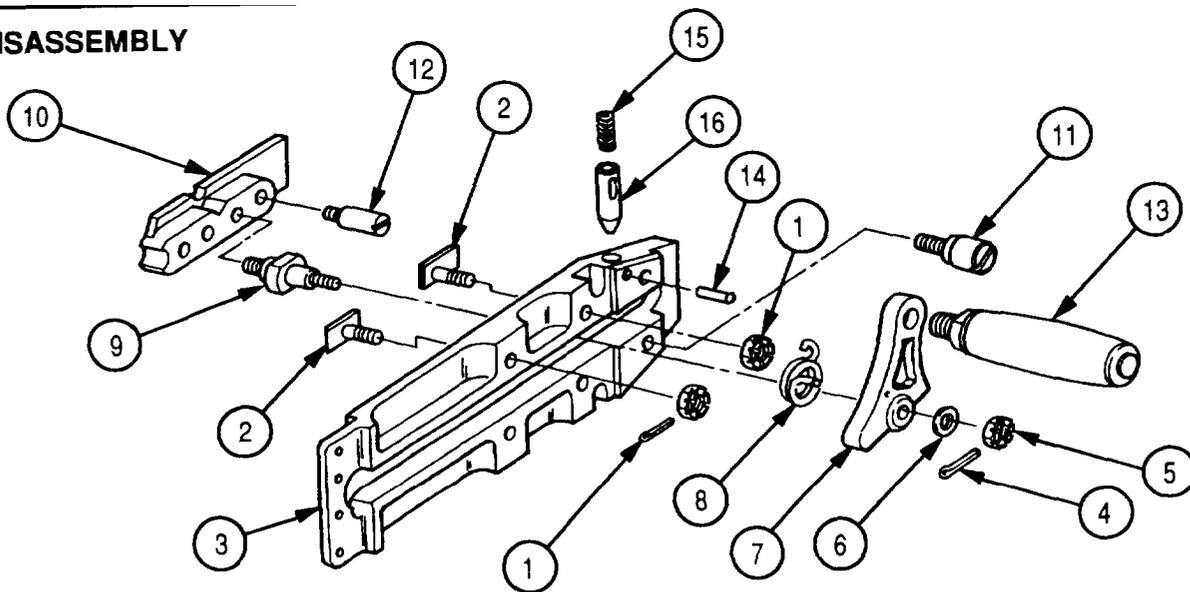
- 1 Place forked end of cover extractor spring (1) under stud in cover (2) and push lip of cover extractor spring (1) into slot of cover (2) to install cover extractor spring (1) in cover (2).
- 2 Position large end of slot in flat spring (3) over stud in cover (2). Push flat spring (3) up until stud in cover (2) is in small end of flat spring (3) slot.
- 3 Install cover latch (4) and cover latch lever (5) in cover (2). Be sure cover latch (4) is under lip on flat spring (3).
- 4 Install flat washer (6) and new cotter pin (7) on cover latch lever (5).
- 5 Refer to paragraph 3-3 for inspection when cover assembly is fitted to receiver assembly.



3-11. RETRACTING SLIDE ASSEMBLY—MAINTENANCE INSTRUCTIONS

THIS TASK COVERS:		
a. Disassembly	b. Inspection/Repair	c. Reassembly
INITIAL SETUP		
Applicable Configuration Flex		
Tools and Special Tools Field maintenance small arms shop set (SC 4933-95-CL-A11)		
Materials/Parts Cotter pin (MS24665-816)		
References TM 9-1005-213-23P		
Equipment Conditions Page 3-24 Retracting slide assembly removed		

DISASSEMBLY



- 1 Remove two nuts (1) and two shoulder bolts (2) from retracting slide bracket (3).
- 2 Remove and discard cotter pin (4). Remove hex nut (5), washer (6), lever (7), and spring (8) from retracting slide stud (9). Remove retracting slide (10) and shoulder screw (11) from retracting slide bracket (3).
- 3 Remove shoulder pin (12) and stud (9) from retracting slide (10).

4 Remove retracting slide handle (13) from lever (7).

WARNING

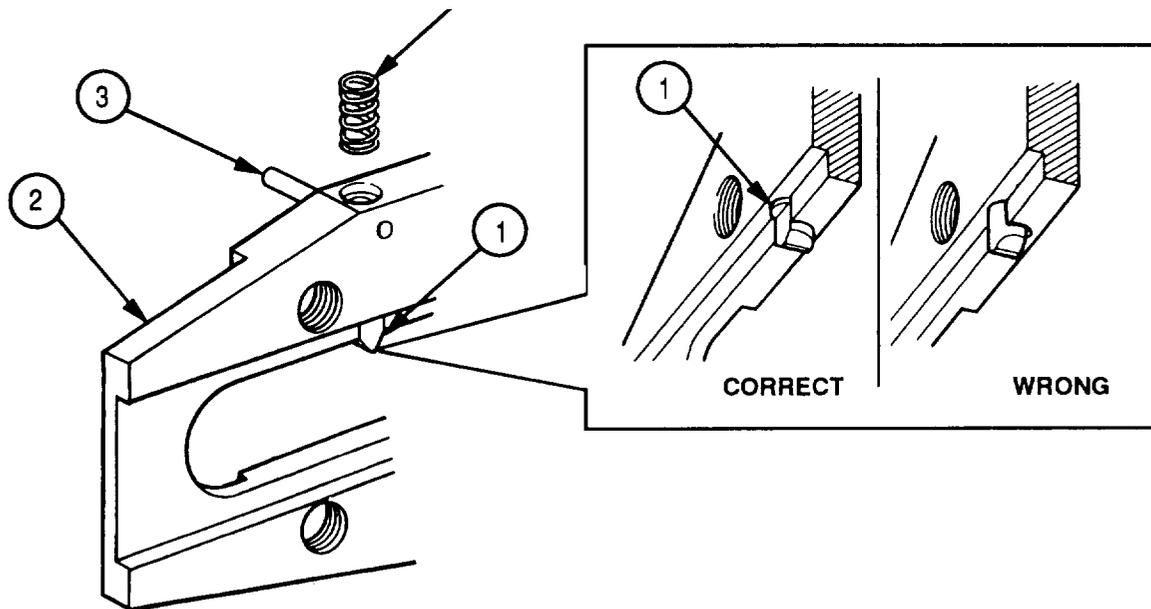
To avoid injury to your eyes, use care when removing and installing spring-loaded parts.

5 Remove straight pin (14), spring (15), and plunger (16) from retracting slide bracket (3).

INSPECTION/REPAIR

- 1 Check for missing, damaged, or worn parts.
- 2 Repair is by replacement of authorized parts (TM 9-1005-213-23P).

REASSEMBLY



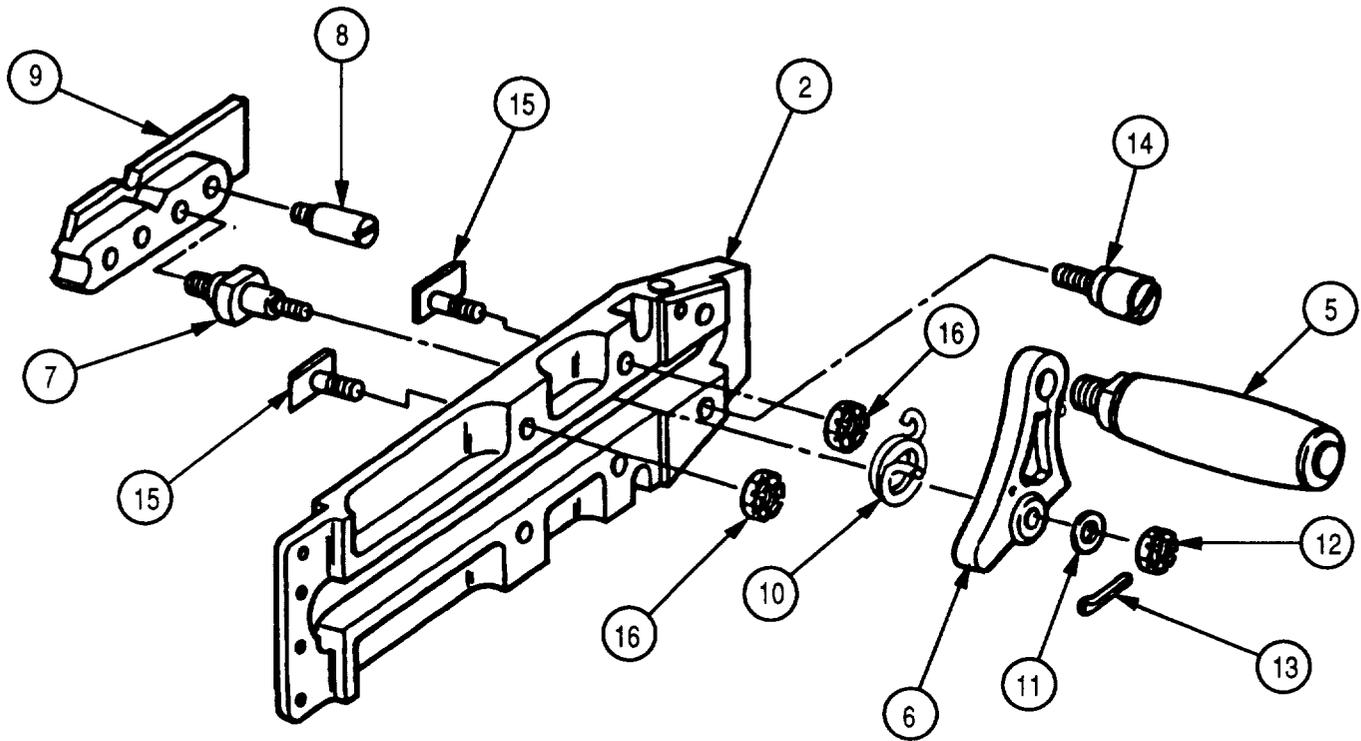
WARNING

To avoid injury to your eyes, use care when removing and installing spring-loaded parts.

- 1 Position plunger (1) so that flat side is flush with track in retracting slide bracket (2) so straight pin (3) can be partially installed.
- 2 Place spring (4) in plunger (1) and push down on spring (4) to complete installation of straight pin (3). Straight pin (3) should be flush with retracting slide bracket (2).

3-11. RETRACTING SLIDE ASSEMBLY—MAINTENANCE INSTRUCTIONS (cont)

REASSEMBLY (cont)



3 Install retracting slide handle (5) on lever (6).

4 Install stud (7) and shoulder pin (8) on retracting slide (9), and position retracting slide (9) into retracting slide bracket (2).

5 Install spring (10), lever (6), flat washer (11), hex nut (12), and new cotter pin (13) on stud (7).

6 Install shoulder screw (14) on retracting slide bracket (2).

7 Position two shoulder bolts (15) through retracting slide bracket (2) and loosely install two hex nuts (16).

NOTE

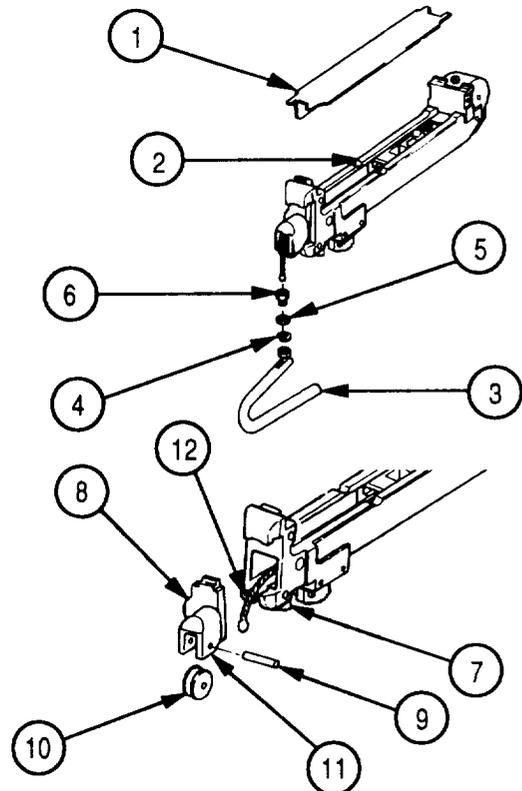
Shoulder bolts and hex nuts will be repositioned and tightened when retracting slide assembly is installed on receiver, see page 3-24.

3-12. M10 MANUAL CHARGER—MAINTENANCE INSTRUCTIONS

THIS TASK COVERS:		
a. Disassembly	b. Inspection/Repair	c. Reassembly
INITIAL SETUP		
Applicable Configuration M48		
Tools and Special Tools Field maintenance small arms shop set (SC 4933-95-CL-A11)		
Materials/Parts Grease (item 17, appx C) Lockwasher (MS35333-41)		
References TM 9-1005-213-23P		
Equipment Conditions Page 3-24 MI O manual charger removed and reassembled		

DISASSEMBLY

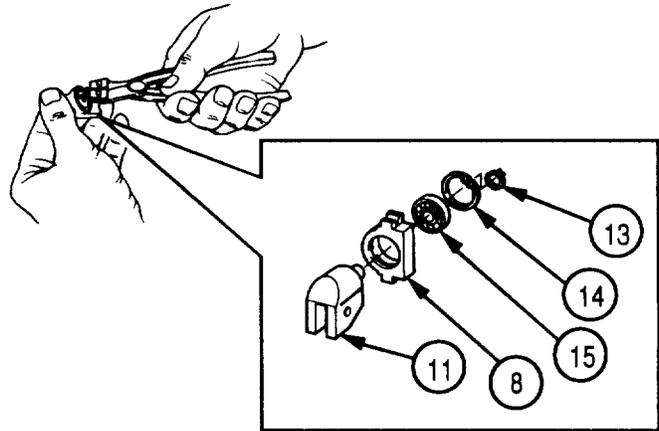
- 1 Remove charger bolt cover (1) from channel housing (2).
- 2 Remove manual control handle (3), split washer (4), and lockwasher (5) from bushing (6). Discard lockwasher (5). Remove bushing (6).
- 3 Depress lock-release lever (7) and pull out swivel pulley plate (8) with attached parts.
- 4 Remove spring pin (9) and pulley (10) from swivel (11). Remove swivel (11) and attached parts from charger cable assembly (12).



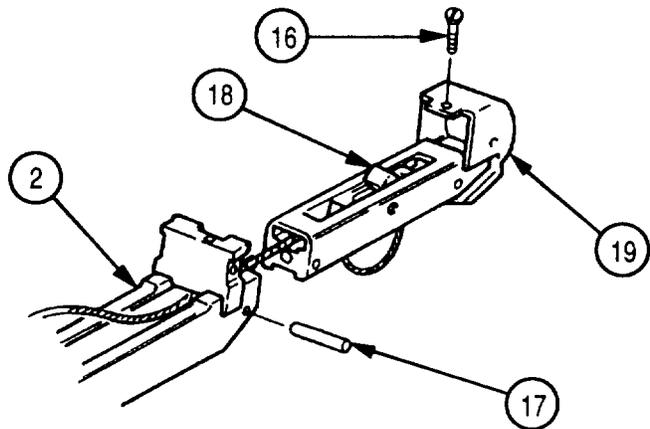
3-12. M10 MANUAL CHARGER—MAINTENANCE INSTRUCTIONS (cont)

DISASSEMBLY (cont)

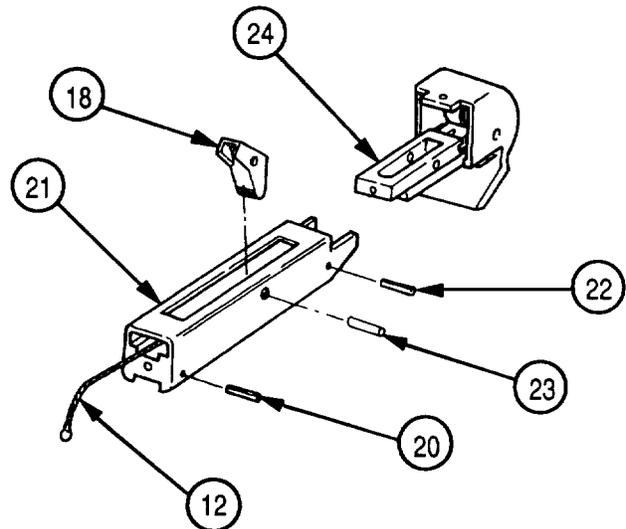
5 Using retaining ring pliers, remove external retaining ring (13) and internal retaining ring (14). Remove ball bearing (15) and swivel plate (8) from swivel (11).



6 Remove screw (16) and spring pin (17).
 7 Press down on lock-release lever (18) and remove holder (19) with attached parts from channel housing (2).



8 Remove spring pin (20). Remove ball end of charger cable assembly (12) from socket in cable guide slide (21) and pull out charger cable assembly (12) to remove charger cable assembly (12) from cable guide slide (21).



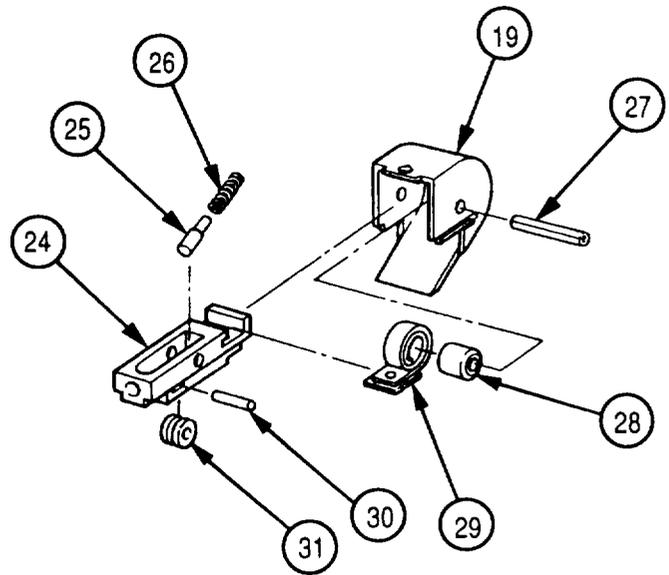
9 Remove spring pin (22). Align locking release lever straight pin (23) with clearance hole in cable guide slide (21). Remove pin (23) and locking release lever (18).

10 Pull pulley retainer slide (24) with attached parts out of cable guide slide (21).

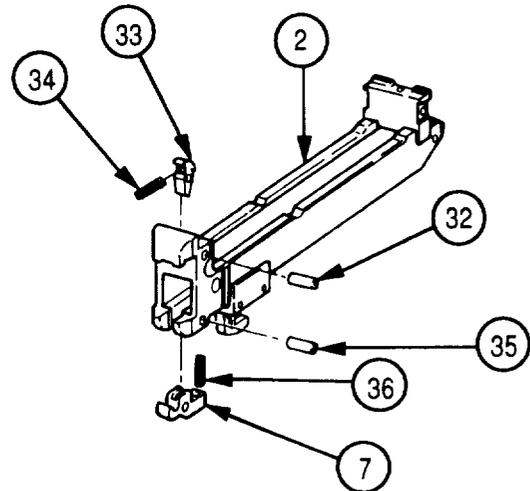
WARNING

To avoid injury to your eyes, use care when removing and installing spring-loaded parts.

- 11 Remove plunger (25), spring (26), spring pin (27), holder (19), sleeve bearing (28), spring (29), straight pin (30), and groove pulley (31) from pulley retainer slide (24).

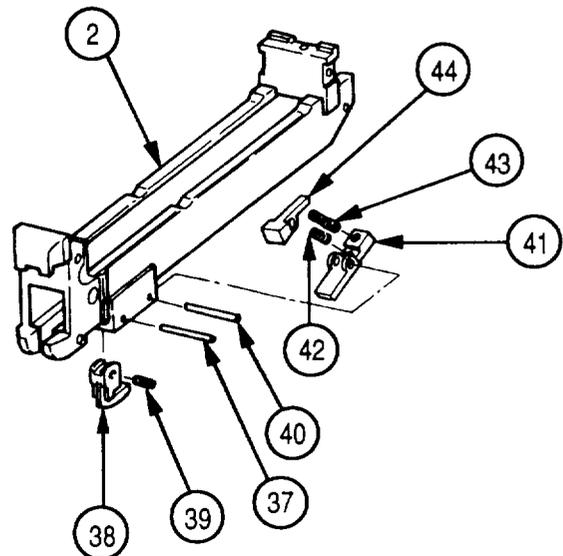


- 12 Remove sleeve bearing (32), lock-release lever (33), and spring (34) from channel housing (2).



- 13 Remove sleeve bearing (35), lock-release lever (7), and spring (36) from channel housing (2).

- 14 Remove spring pin (37), M10 lock selector (38), and spring (39) from channel housing (2).



- 15 Remove spring pin (40), slide lock pawl lever (41), two springs (42 and 43), and slide lock pawl (44) from channel housing (2).

3-12. M10 MANUAL CHARGER—MAINTENANCE INSTRUCTIONS (cont)

INSPECTION/REPAIR

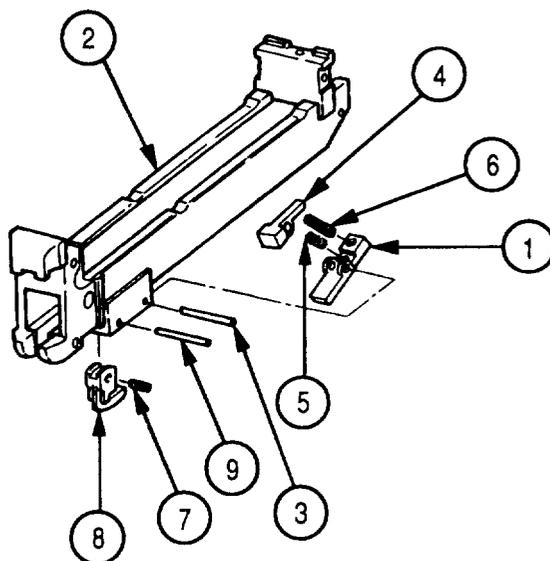
- 1 Check for missing, damaged, or worn parts.
- 2 If channel housing is damaged, replace entire M10 manual charger.
- 3 Repair is by replacement of authorized parts (TM 9-1005-213-23P).

REASSEMBLY

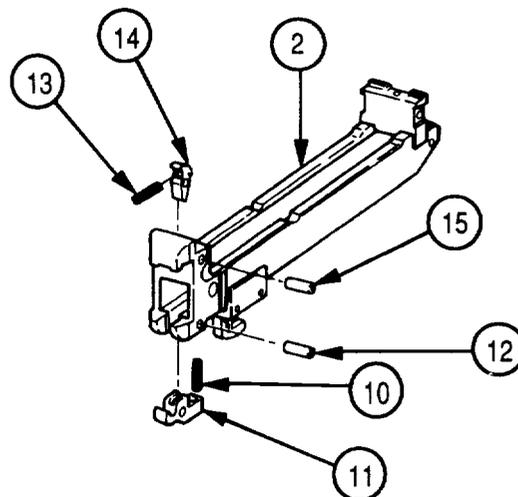
WARNING

To avoid injury to your eyes, use care when removing and installing spring-loaded parts.

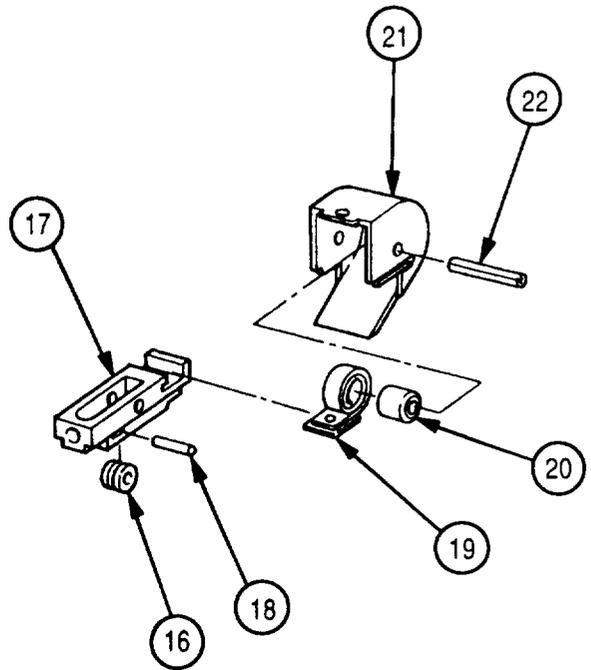
- 1 Install slide lock pawl lever (1) in channel housing (2). Position spring pin (3) through one side of both channel housing (2) and slide lock pawl lever (1). Install slide lock pawl (4) and spring (5). Drive spring pin (3) through, securing to channel housing (2). Install spring (6).
- 2 Install spring (7) and M10 lock selector (8) in channel housing (2) and secure with spring pin (9).



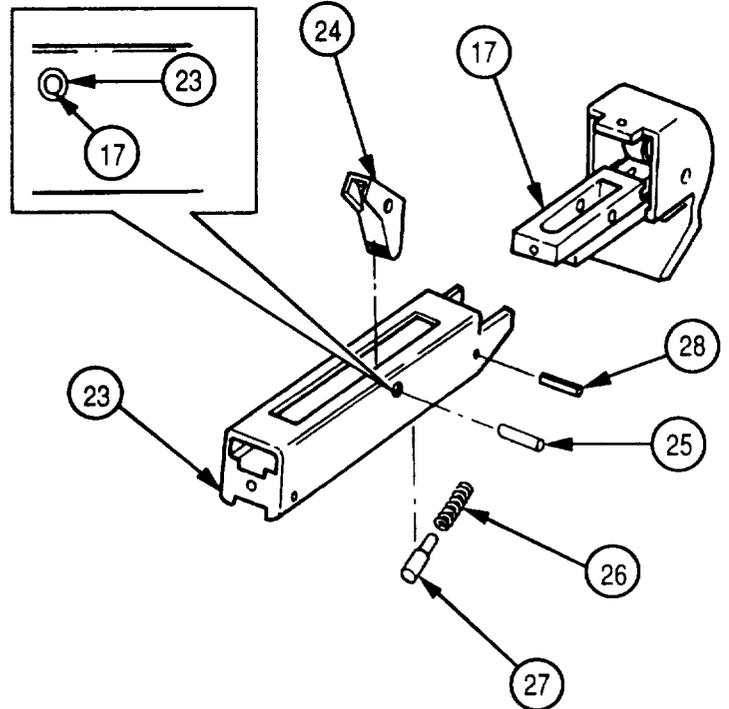
- 3 Install spring (10) and lock-release lever (11) in channel housing (2) and secure with sleeve bearing (12).
- 4 Install spring (13) and lock-release lever (14) in channel housing (2) and secure with sleeve bearing (15).



- 5 Install groove pulley (16) in pulley retainer slide (17) and secure with straight pin (18).
- 6 Install spring (19), sleeve bearing (20), and holder (21) on pulley retainer slide (17), and secure with spring pin (22).



- 7 Install pulley retainer slide (17) with attached parts into cable guide slide (23).
- 8 Align holes in cable guide slide (23) and pulley retainer slide (17) as shown. Install lock release lever (24) and secure with straight pin (25). Install spring (26) and plunger (27) as shown.
- 9 Secure pulley retainer slide (17) and cable guide slide (23) with spring pin (28).

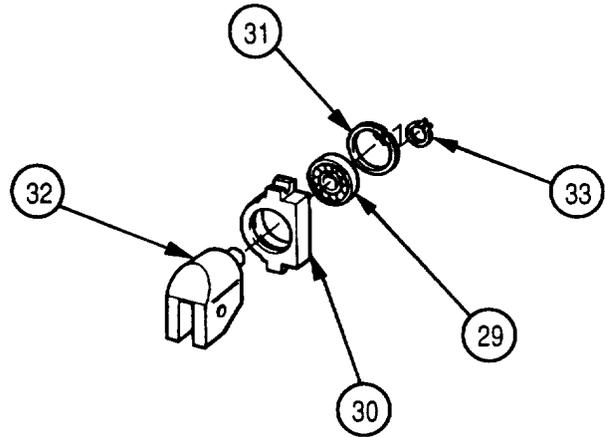


3-12. M10 MANUAL CHARGER—MAINTENANCE INSTRUCTIONS (cont)

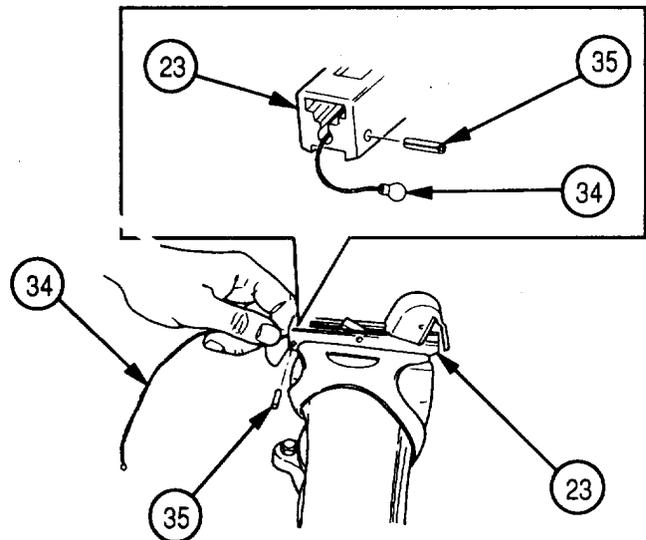
REASSEMBLY (cont)

10 Pack ball bearing (29) with grease (item 17, appx C) and install squarely in swivel pulley plate (30) and secure with internal retaining ring (31).

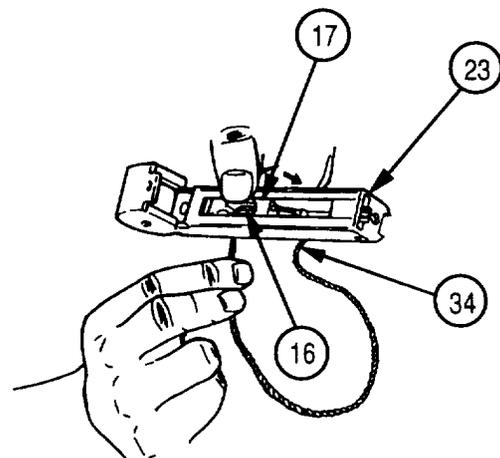
11 Install swivel (32) through ball bearing (29) and secure with external retaining ring (33).



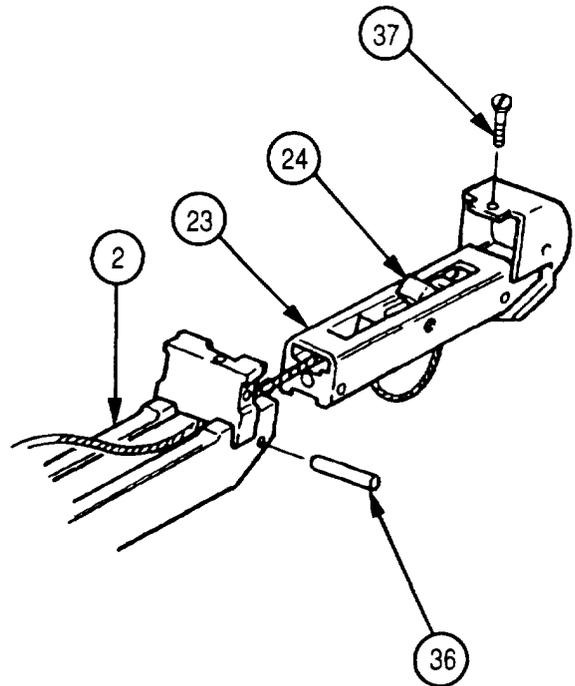
12 Position ball end of charger cable assembly (34) in socket in cable guide slide (23) and secure with spring pin (35).



13 Thread charger cable assembly (34) through groove pulley (16), cable guide slide (23), and pulley retainer slide (17). Be sure charger cable assembly (34) seats in groove in groove pulley (16); pull charger cable assembly (34) tight.



- 14 Press down on lock-release lever (24) and install cable guide slide (23) with attached parts in channel housing (2). Secure with spring pin (36) and screw (37).

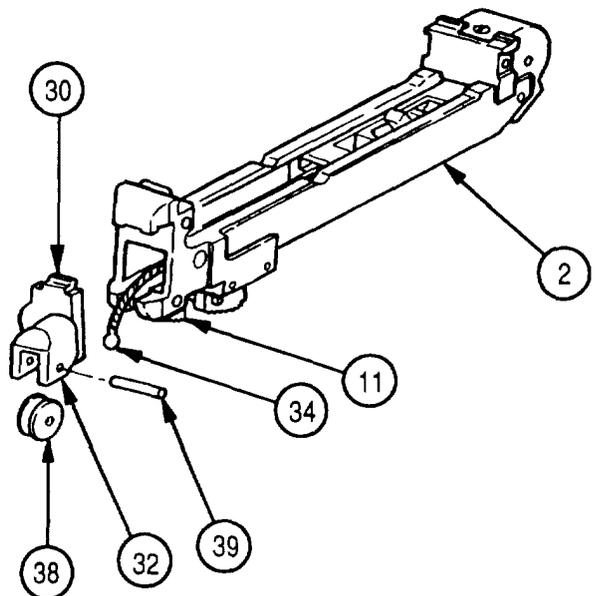


- 15 Position charger cable assembly (34) into swivel (32). Install pulley (38) in swivel (32) and secure with spring pin (39).

NOTE

Be sure you install the swivel pulley plate with attached parts to the channel housing in the correct position for mounting to the machine gun.

- 16 Install swivel pulley plate (30) with attached parts into channel housing (2). Be sure lock-release lever (11) secures swivel pulley plate (30).



3-12. M10 MANUAL CHARGER—MAINTENANCE INSTRUCTIONS (cont)

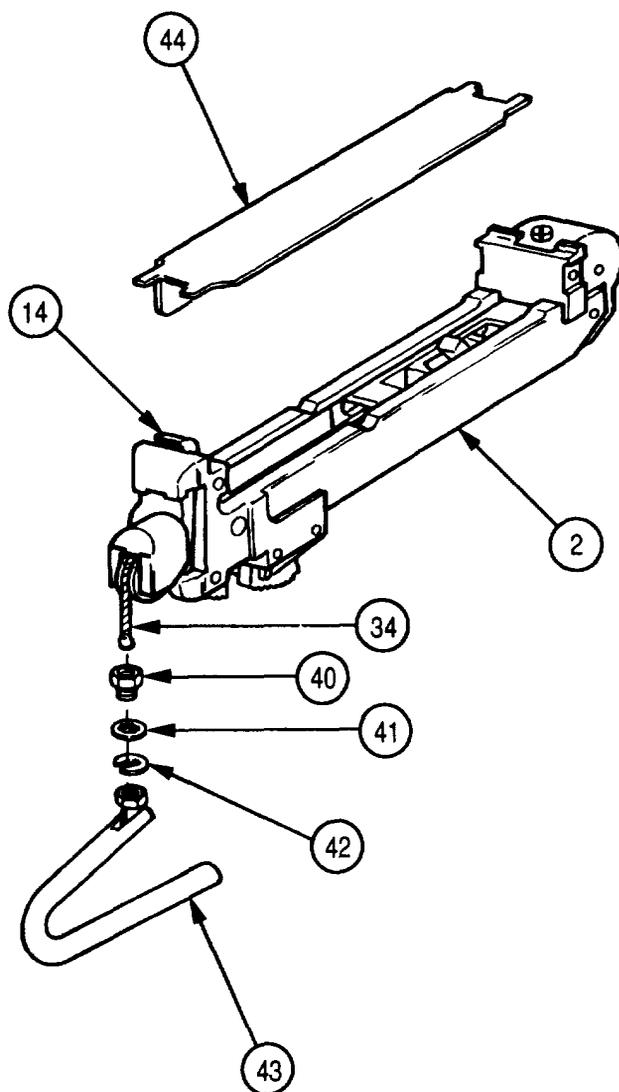
REASSEMBLY (cont)

- 17 Install bushing (40), new lockwasher (41), and split washer (42) on charger cable assembly (34).
- 18 Install manual control handle (43) on bushing (40).
- 19 Install M10 manual charger on receiver and perform function test, page 2-35.

NOTE

Be sure you install charger bolt cover to the channel housing in the correct position for your machine gun.

- 20 Install charger bolt cover (44) on channel housing (2), aligning forks of cover with channel housing (2) and lock-release lever (14).



3-13. REAR SIGHT ASSEMBLY—MAINTENANCE INSTRUCTIONS

THIS TASK COVERS:		
a. Disassembly	b. Inspection/Repair	c. Reassembly
INITIAL SETUP		
Applicable Configuration Flex		
Tools and Special Tools Field maintenance small arms shop set (SC 4933-95-CL-A11)		
References TM 9-1005-213-10 TM 9-1005-213-23P		
Equipment Conditions Page 3-24 Rear sight assembly removed		

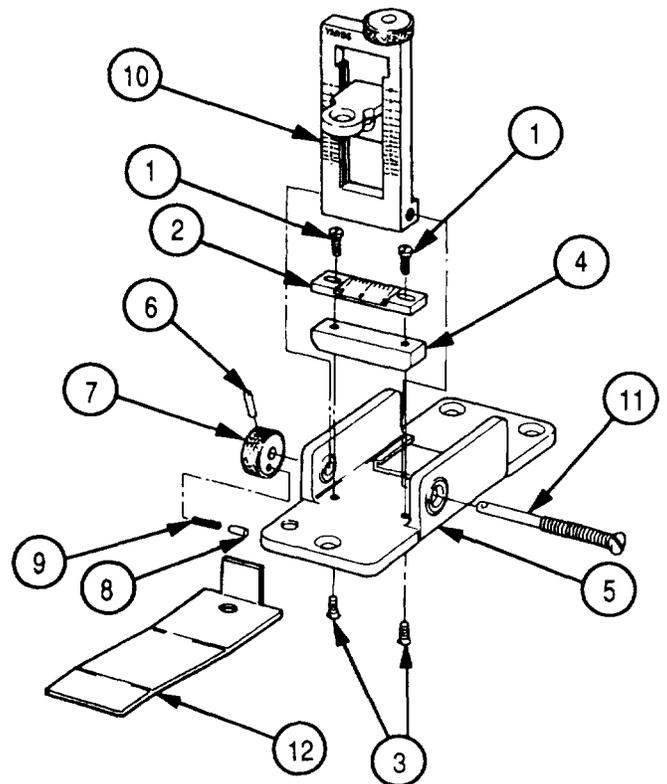
DISASSEMBLY

- 1 Remove two short screws (1) and scale (2).
- 2 Remove two long screws (3) and riser (4) from base (5).

WARNING

To avoid injury to your eyes, use care when removing and installing spring-loaded parts.

- 3 Remove spring pin (6) and windage screw knob (7). Remove plunger (8) and spring (9) from windage screw knob (7).
- 4 Lift leaf assembly (10) to vertical position and push down to remove screw (11). Lift out leaf assembly (10) to remove.
- 5 Remove flat spring (12) from base (5).



3-13. REAR SIGHT ASSEMBLY—MAINTENANCE INSTRUCTIONS (cont)

INSPECTION/REPAIR

- 1 Check for missing, damaged, or worn parts.
- 2 If the base is damaged, replace entire rear sight assembly.
- 3 Repair is by replacement of authorized parts (TM 9-1005-213-23P).

REASSEMBLY

- 1 Install flat spring (1) into base (2).
- 2 Position leaf assembly (3) on flat spring (1).
Align leaf assembly (3) with holes in base (2)
and install screw (4) from the right side.

WARNING

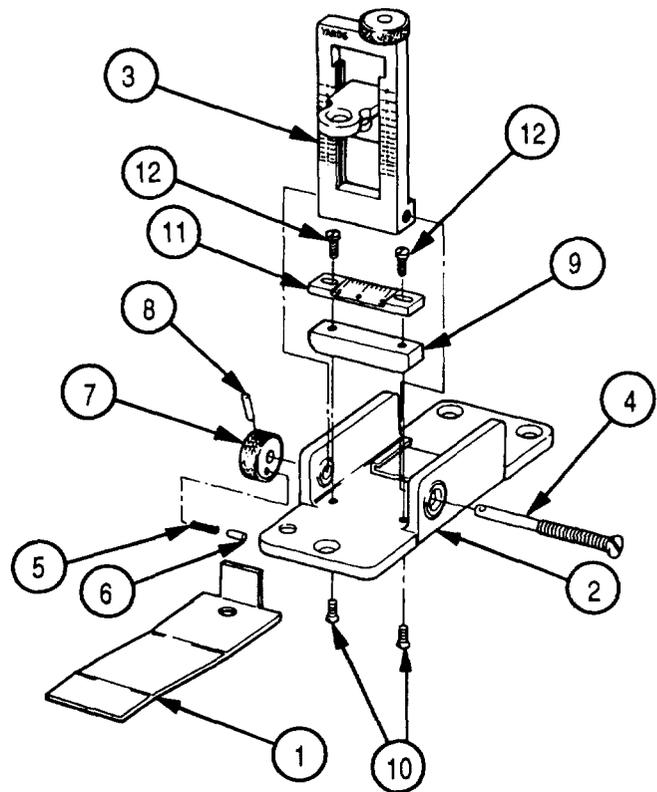
To avoid injury to your eyes, use care when removing and installing spring-loaded parts.

- 3 Install spring (5) and plunger (6) in windage screw knob (7).
- 4 Install windage screw knob (7) on screw (4) and secure with spring pin (8) installed flush or below surface. If new screw (4) was installed, drill 0.062+0.003 in. (0.157+0.008 cm) hole through screw (4) using windage screw knob (7) as a template.

NOTE

With windage screw knob (7) installed, there should be no noticeable lateral movement of screw (4). Leaf assembly (3) must be capable of full lateral adjustment without binding.

- 5 Install riser (9) and secure with two long screws (10).
- 6 Install scale (11) and secure with two short screws (12).
- 7 Perform functional check (TM 9-1005-213-10).



3-14. TRIGGER LEVER STOP ASSEMBLY—MAINTENANCE INSTRUCTIONS

THIS TASK COVERS:		
a. Disassembly	b. Inspection/Repair	c. Reassembly
INITIAL SETUP		
Tools and Special Tools Field maintenance small arms shop set (SC 4933-95-CL-A1 1)		
References TM 9-1005-21 3-23P		
Equipment Conditions Page 2-53 BackPlate and trigger lever removed Page 3-24 Trigger lever stop assembly removed		

DISASSEMBLY

Unscrew and remove timing adjustment nut (1) and flat spring (2) from adjustable stop (3).

Inspection/REPAIR

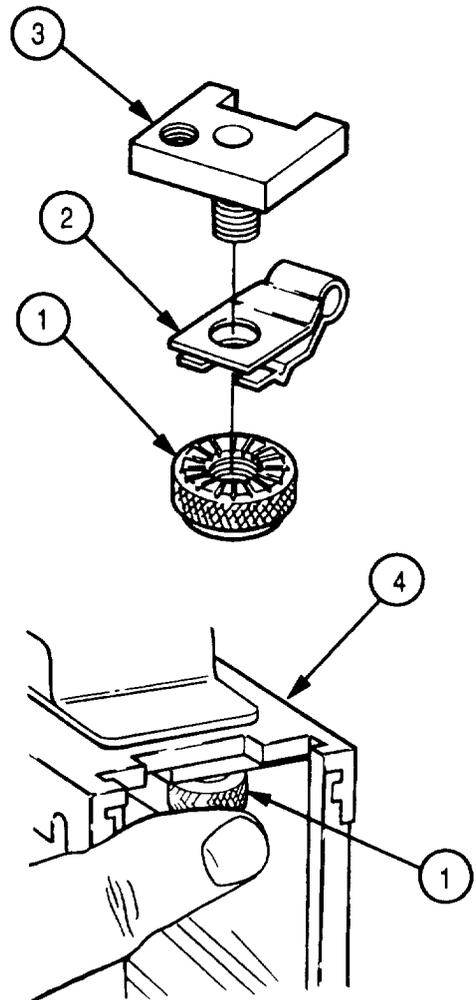
- 1 Check for missing, damaged, or worn parts.
- 2 If the adjustable stop (3) is damaged, replace entire trigger lever stop assembly.
- 3 Repair is by replacement of authorized parts (TM 9-1005-213-23P).

REASSEMBLY

NOTE

When installing flat spring, be sure that V-notch is pointing down toward the timing adjustment nut.

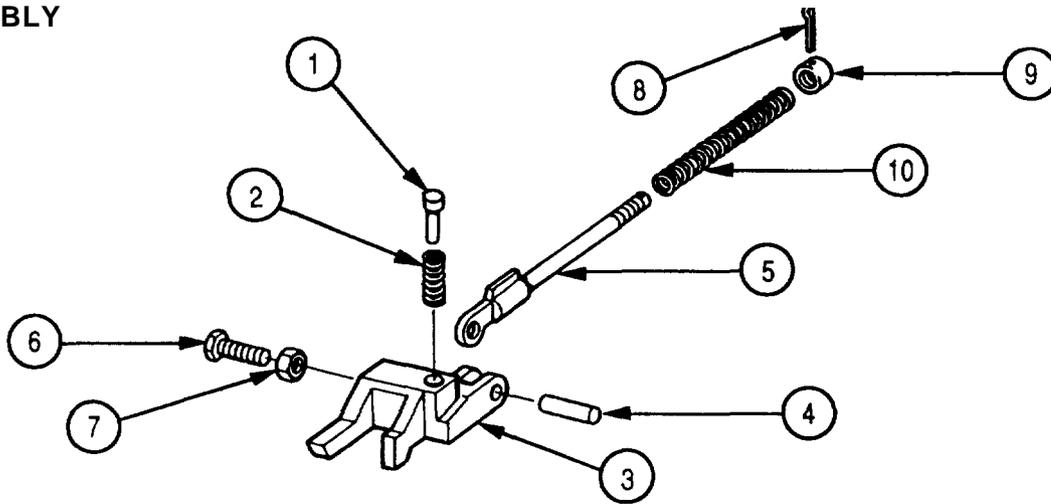
- 1 Install flat spring (2) on adjustable stop (3) and secure with timing adjustment nut (1).
- 2 Perform function test after installation into receiver (4). Check for weak flat spring (2) by applying single finger pressure to timing adjustment nut (1). If timing adjustment nut (1) can be moved in either direction, flat spring (2) is weak or worn.



3-15. BOLT LATCH ASSEMBLY-MAINTENANCE INSTRUCTIONS

THIS TASK COVERS:		
a. Disassembly	b. Inspection/Repair	c. Reassembly
INITIAL SETUP		
Applicable Configuration Flex		
Tools and Special Tools Field maintenance small arms shop set (SC 4933-95-CL-AI 1)		
Materials/Parts Cotter pin (MS24665-298)		
References TM 9-1005-21 3-23P		
Equipment Conditions Page 2-53 Backplate and trigger lever removed Page 3-24 Bolt latch assembly and trigger lever stop assembly removed		

DISASSEMBLY

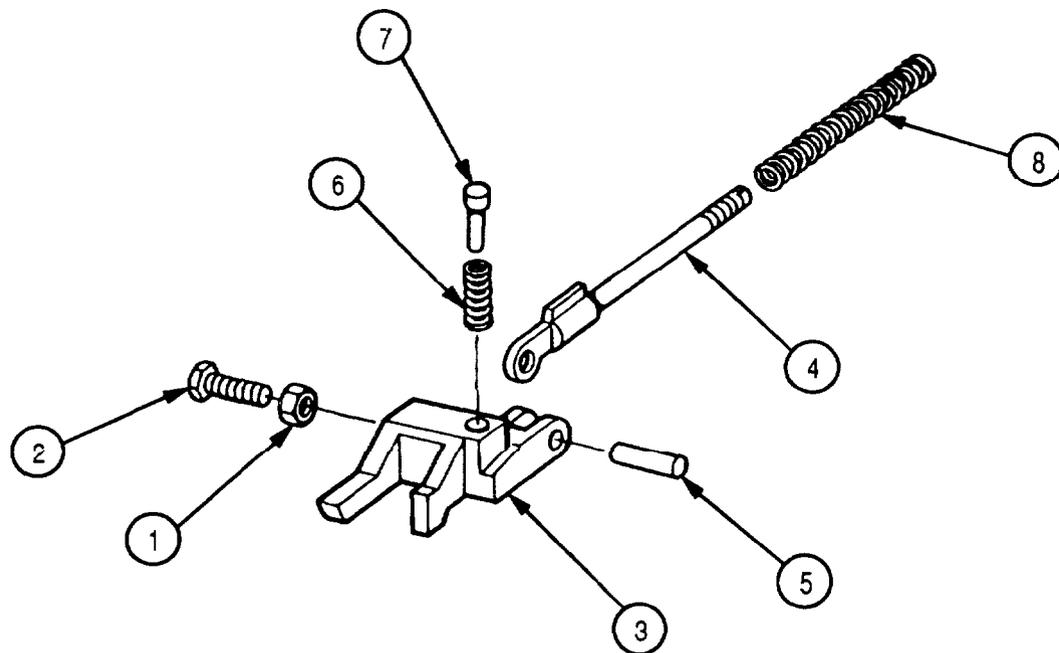


- 1 Remove shoulder pin (1) and spring (2) from lever (3).
- 2 Remove straight pin (4) to remove eccentric pin (5) from lever (3).
- 3 Remove machine bolt (6) and hex nut (7) from lever (3).
- 4 If present, remove cotter pin (8) and nut (9). Discard cotter pin,
- 5 Remove spring (10) from eccentric pin (5).

INSPECTION/REPAIR

- 1 Check for missing, damaged, or worn parts.
- 2 Repair is by replacement of authorized parts (TM 9-1005-213-23P).

REASSEMBLY



- 1 Screw hex nut (1) onto machine bolt (2) and tighten. Install machine bolt (2) in lever (3) and tighten.
- 2 Position eccentric pin (4) in lever (3) and secure with straight pin (5).
- 3 Install spring (6) and shoulder pin (7) in lever (3).
- 4 Install spring (8) on eccentric pin (4).

NOTE

Nut and cotter pin will be installed in page 3-24 when bolt latch assembly is installed.

- 5 Refer to page 3-24 for installation of bolt latch assembly and to page 3-15 for inspection of bolt latch assembly clearance between machine bolt (2) head and left side plate of receiver.

3-16. REAR CARTRIDGE STOP ASSEMBLY—MAINTENANCE INSTRUCTIONS

THIS TASK COVERS:

a. Disassembly

b. Inspection/Repair

c. Reassembly

INITIAL SETUP

Applicable Configuration
Flex, left-hand feed

Tools and Special Tools
Field maintenance small arms shop set (SC 4939-95-CL-A1 1)

References
TM 9-1005-21 3-23P

Equipment Conditions
Page 2-53 Rear cartridge stop assembly removed

WARNING

To avoid injury to your eyes, use care when removing and installing spring-loaded parts.

DISASSEMBLY

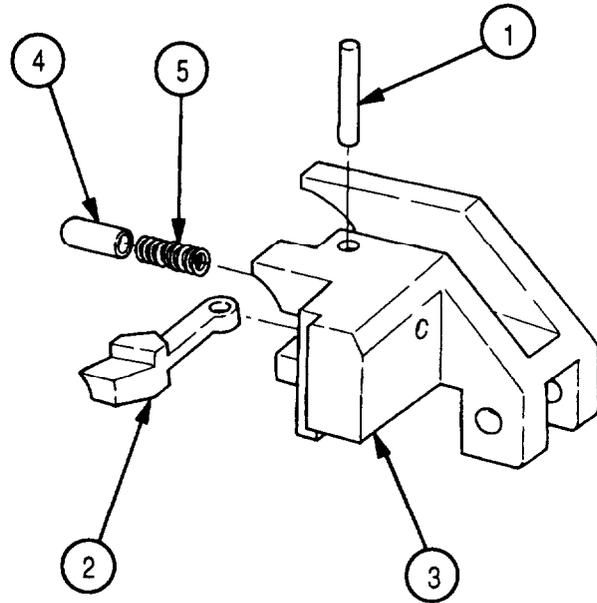
- 1 Drive out and remove straight pin (1) and pawl (2) from stop (3).
- 2 Remove plunger (4) and spring (5).

Inspection/REPAIR

- 1 Check for missing, damaged, or worn parts.
- 2 If the stop is damaged, replace entire rear cartridge stop assembly.
- 3 Repair is by replacement of authorized parts (TM 9-1005-213-23P).

REASSEMBLY

- 1 Position spring (5), plunger (4), and pawl (2) in stop (3) and secure with straight pin (1).
- 2 Peen edge of hole in stop (3) to hold straight pin (1) in place.



3-17. RECEIVER ASSEMBLY—MAINTENANCE INSTRUCTIONS

THIS TASK COVERS:		
a. Disassembly	b. Inspection/Repair	c. Reassembly
INITIAL SETUP		
Tools and Special Tools Field maintenance small arms shop set (SC 4933-95-CL-A1 1)		
Materials/Parts Cotter pin (MS24665-357) Safety wire (MS20995C41)		
References TM 9-1005-213-10 TM 9-1005-21 3-23P		
Equipment Conditions Field stripped, see Operator's Manual		

DISASSEMBLY

NOTE

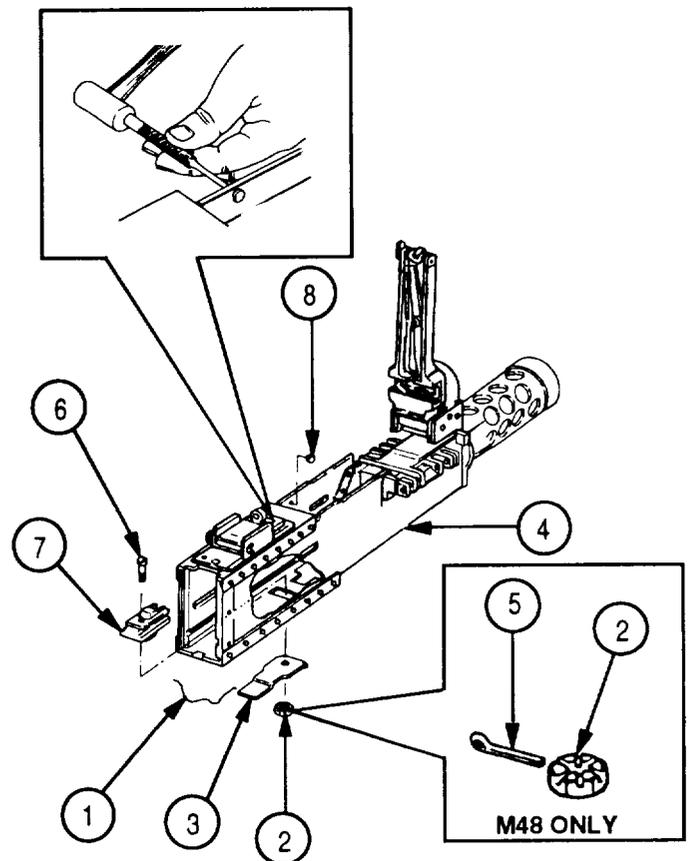
Step 1 is for Flex only.

- 1 Remove and discard safety wire (1). Remove slotted nut (2) and flat spring (3) from bottom plate of receiver (4).

NOTE

Step 2 is for M48 only.

- 2 Remove and discard cotter pin (5). Remove slotted nut (2).
- 3 Remove screw (6) and breechlock cam (7).
- 4 If damaged, remove bolt stop (8) from left side plate of receiver (4).



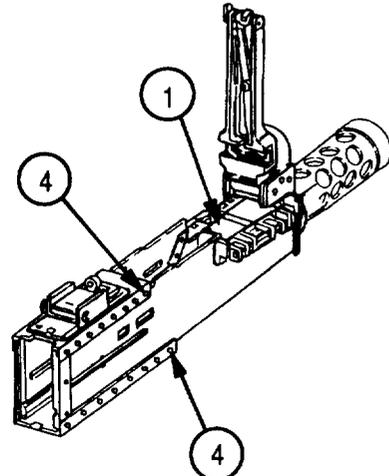
3-17. RECEIVER ASSEMBLY—MAINTENANCE INSTRUCTIONS (cont)

INSPECTION/REPAIR

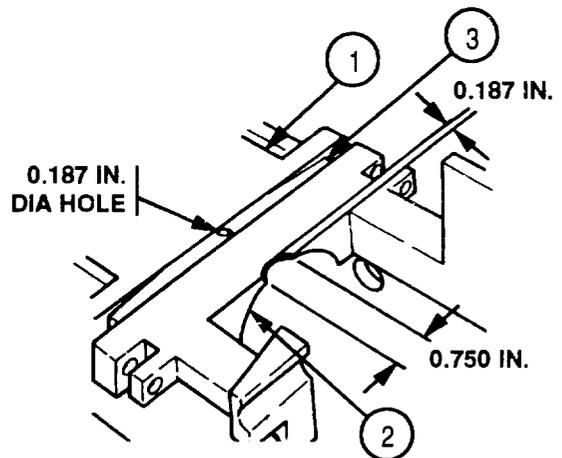
- 1 Check for missing, damaged, or worn parts.
- 2 Check trunnion block (1) for cracks or wear. Trunnion block is unserviceable if cracked or worn beyond the repaired areas.

NOTE

Trunnion block maybe modified by grinding or drilling as illustrated in order to salvage receiver assembly.



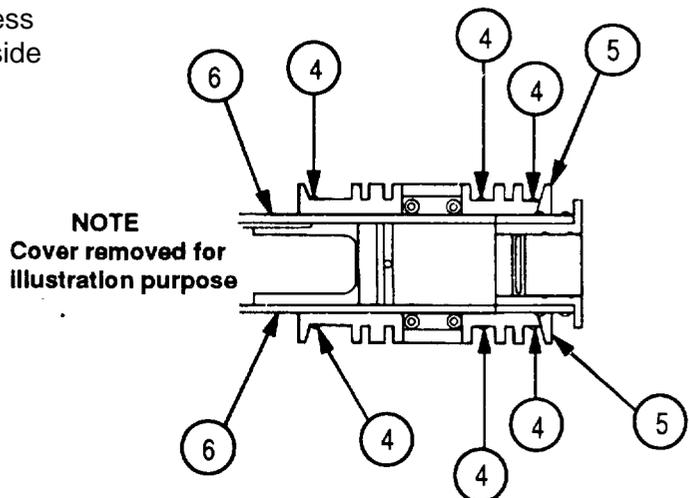
- 3 Receiver assembly with cracked trunnion block (1) or ragged edges on the rear thin portion of the barrel hole (2) maybe repaired by grinding a 0.750 in. (1.905 cm) radius, not to exceed a maximum depth of 0.187 in. (0.475 cm), as shown.



- 4 Receiver assembly with a hole broken through the feedway of trunnion block stripper slot (3) may be repaired by drilling a 0.187 in. (0.475 cm) diameter hole, centered in slot (3) to include damaged area.

- 5 Check rivets (4), they may turn but there should be no relative movement between the assembled parts. The maximum looseness permitted between the brackets (5) and side plates (6) is 0.010 in. (0.025 cm).

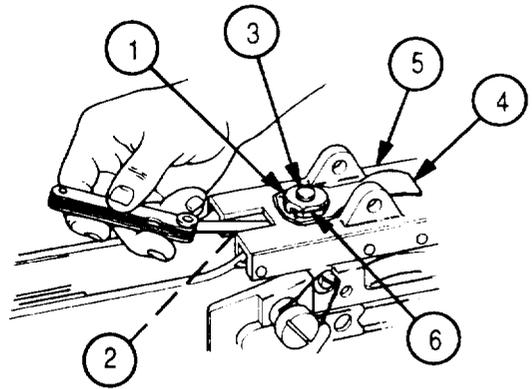
- 6 Repair is by replacement of authorized parts (TM 9-1005-213-23P).



REASSEMBLY

NOTE

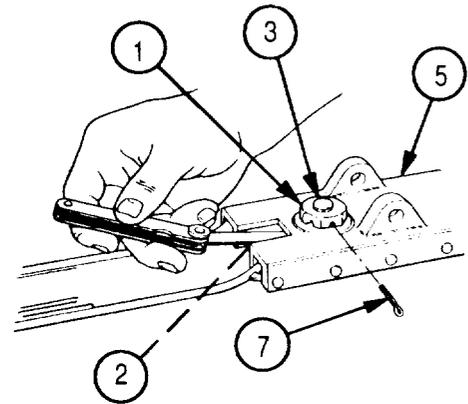
- Ensure slotted nut (1) is positioned with slots next to receiver for both types (Flex and M48).
- Step 1 is for Flex only.



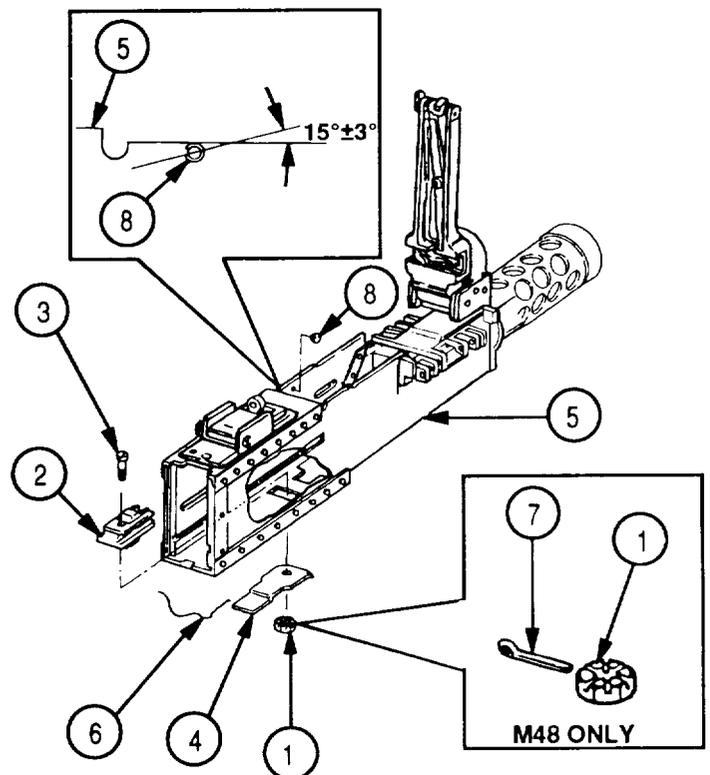
- 1 Position breechlock cam (2), screw (3), and flat spring (4) on bottom plate of receiver (5) and secure with slotted nut (1). Using a feeler gage, check clearance between breechlock cam (2) and bottom plate of receiver (5). Maximum clearance is 0.008 in. (0.020 cm) and minimum clearance is 0.001 in. (0.003 cm). Secure slotted nut (1), screw (3), and flat spring (4) together with safety wire (6).

NOTE

Step 2 is for M48 only.



- 2 Position breechlock cam (2) and screw (3) on bottom plate of receiver (5) and secure with slotted nut (1). Using a feeler gage, check clearance between breechlock cam (2) and bottom plate of receiver (5). Maximum clearance is 0.008 in. (0.020 cm) and minimum clearance is 0.001 in. (0.003 cm). Secure slotted nut (1) and screw (3) together with new cotter pin (7).
- 3 If removed, install bolt stop (8) in left inside plate of receiver (5) as shown.
- 4 Refer to page 3-15 for inspection of breechlock cam (2) fit with receiver (5).



Section III. PREPARATION FOR STORAGE OR SHIPMENT

3-18. CLEANING, DRYING, AND PRESERVATION

a. The M2 machine gun shall be disassembled as necessary to accomplish the cleaning. All surfaces shall be cleaned with solvent cleaning compound (item 12, appx C) and dried with clean dry wiping rags.

b. Preserve all surfaces of the M2 machine gun with lubricating oil (item 19, appx C).

3-19. PACKAGING

Packaging, if required, for shipping/storage which will not exceed 90 days shall be as follows:

a. Clean in accordance with TM 9-1005-213-10.

b. Wrap with barrier material (item 2, appx C).

c. Place in bag (item 1, appx C) or wrap with barrier material (item 2, appx C) and seal with tape (item 25, appx C).

d. Place one or more of item in minimum size container. Block and brace in accordance with MIL-STD-1186. Cushion the M2 with cushioning material (item 13, appx C) and use fiberboard (item 15, appx C) as filler to create a tight pack.

(1) Fiberboard containers shall be in accordance with PPP-B-636 (item 4, appx C) and may be Class Domestic. Gross weight and size of the material shall determine grade of fiberboard container. Fiberboard boxes (item 3, appx C) may also be used.

(2) Wood containers shall be in accordance with PPP-B-601 (item 5, appx C) or PPP-B-621 (item 6, appx C).

e. Equivalent materials may be used.

f. Mark in accordance with MIL-STD-129.

3-20. PACKING

a. The unit container shall be packed in wooden box (item 5, appx C).

b. Nail top to shipping box.

c. Secure box with steel straps (item 22, appx C).

3-21. MARKING

- a. Serial number is required and shall be listed on the packing list. Packing list shall be put Inside of the fiberboard box.
- b. Apply the following marking on the outside of each fiberboard box:
 - (1) National Stock Number.
 - (2) Federal Item Name.
 - (3) One Each.
 - (4) Date.
 - (5) Weight: Cube.
- c. Only the following markings shall be applied by stencil or label to exterior of shipping box:
 - (1) Address of Destination.
 - (2) Weight and Cube.

Section IV. PRE-EMBARKATION INSPECTION OF MATERIEL IN UNITS ALERTED FOR OVERSEAS MOVEMENT

Refer to TB 9-1000-247-34.

Air Force users use annual gaging procedures, see page 3-15.

APPENDIX A

REFERENCES

A-1. SCOPE

This appendix lists all forms, technical manuals/technical orders, and miscellaneous publications referenced in this manual.

A-2. FORMS

AFTO Form 22	Technical Order System Publication Improvement Report and Reply
AFTO Form 105	Inspection, Maintenance, and Firing Data for Ground Weapons
DA Form 2028	Recommended Changes to Publications and Blank Forms
DA Form 2028-2	Recommended Changes to Equipment Technical Publications
DA Form 2404	Equipment Inspection and Maintenance Work Sheet
NAVMC 10722	Marine Corps Recommended Changes to Publications
SF 364	Report of Discrepancy
SF 368	Product Quality Deficiency Report (Category 11)
TMDER NAVSEA 9086/10	Publication Improvement Report (Navy)

A-3. TECHNICAL MANUAL/TECHNICAL ORDERS

SW 361-AO-MMO-010.	Small Arms Machine Gun Mounts Mk26, Mk46, Mk58, Mk78, and Mk82 Description, Operation, Maintenance and Illustrated Parts Breakdown
TM 9-1005-213-10	Operator's Manual for Machine Gun, Caliber .50, Browning M2, Heavy Barrel, Flexible and Turret Type
TM 9-1005-213-23 P	Unit and Direct Support Maintenance Repair Parts and Special Tools List (Including Depot Repair Parts and Special Tools List) for Machine Gun, Caliber .50, Browning M2, Heavy Barrel, Flexible and Turret Type

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A-3. TECHNICAL MANUALS/TECHNICAL ORDERS (cont)

TM 9-1005-245-13&P	Operator's, Unit, and Direct Support Maintenance Manual with Repair Parts and Special Tools List (RPSTL) for Machine Gun Mounts and Combinations for Tactical/Armored Vehicles and Ground Mounting
TM 9-1010-231-13&P	Operator's, Unit, and Direct Support Maintenance Manual with Repair Parts and Special Tools List (RPSTL) for Mount, Machine Gun, Mk64
TM 9-1300-206	Ammunition and Explosives Standards
TM 9-4933-208-34	Operator's, Unit, and Direct Support Maintenance Manual for Kits, Barrel and Breechlock Gage M8, M6A1
TM 750-244-7	Procedures for Destruction of Equipment in Federal Supply Classifications 1000, 1005, 1010, 1020, 1025, 1030, 1055, 1090, and 1095 to Prevent Enemy Use
TM 1005-13&P/1	Operator's, Unit, and Direct Support Maintenance Manual with Repair Parts and Special Tools List (RPSTL) for Machine Gun Mounts and Combinations for Tactical/Armored Vehicles and Ground Mounting
TM 4700-15/1	Equipment Record Procedures
TM 08686A-13&P/1	Operator's, Unit, and Direct Support Maintenance Manual with Repair Parts and Special Tools List (RPSTL) for Mount, Machine Gun, Mk64
TO 00-35 D-54	Air Force Material Deficiency Reporting and Investigating System
TO 11W-1-10	Historical Data Recording of Inspection, Maintenance, and Firing Data for Ground Weapons
TO 11 W2-8-1 -322	Operator's, Unit, and Direct Support Maintenance Manual with Repair Parts and Special Tools List (RPSTL) for Machine Gun Mounts and Combinations for Tactical/Armored Vehicles and Ground Mounting
TO 11 W2-8-32-4	Operator's, Unit, and Direct Support Maintenance Manual with Repair Parts and Special Tools List (RPSTL) for Mount, Machine Gun, Mk64

A-4. MISCELLANEOUS PUBLICATIONS

AFP 50-36, Volume 1	USAF Combat Arms Training and Maintenance Program Training Management and Range Operations
AFR 50-36	USAF Combat Arms Training and Maintenance Program
CTA 50-970	Expendable/Durable Items (Except: Medical, Class V, Repair Parts and Heraldic Items)
DA PAM 25.30	Consolidated Index of Army Publications and Blank Forms
DA PAM 738-750	The Army Maintenance Management System (TAMMS)
FM 17-12-1	Tank Combat Tables
FM 21-11	First Aid for Soldiers
MCO P4610.19	Transportation and Travel Record of Transportation Discrepancies
MCO 4855.10	Quality Deficiency Report
MIL-STD-129	Marking for Shipment and Storage
MIL-STD-1 186	Cushioning, Anchoring, Bracing, Blocking and Waterproofing; with Appropriated Test Methods
MS 35540	General Practices for Safety Wiring and Cotter Pinning
SL 1-2/SL 1.3	Publications Stocked by USMC (INDEX)
TB 9.1 000.247.34	Standards for Overseas Shipment of Small Arms and Fire Control Materials
TB 43-0240	Inspection and Calibration of Small Arms Gages

APPENDIX B

MAINTENANCE ALLOCATION CHART

Section 1. INTRODUCTION

B-1 . THE ARMY MAINTENANCE SYSTEM MAC

a. This introduction (Section 1) provides a general explanation of all maintenance and repair functions authorized at various maintenance levels under the standard Army Maintenance System concept.

b. The Maintenance Allocation Chart (MAC) in section II designates overall authority and responsibility for the performance of maintenance functions on the identified end item or component. The application of the maintenance functions to the end item or component will be consistent with the capacities and capabilities of the designated maintenance levels, which are shown in the MAC in column (4) as:

Unit - includes two subcolumns, C (operator/crew) and O (unit) maintenance.

Direct Support - includes an F subcolumn.

General Support - includes an H subcolumn.

Depot - includes a D subcolumn.

c. Section III lists the tools and test equipment (both special tools and common tool sets) required for each maintenance function as referenced from section II.

d. Section IV contains supplemental instructions and explanatory notes for a particular maintenance function.

B-2. MAINTENANCE FUNCTIONS

Maintenance functions will be limited to and defined as follows:

a. Inspect. To determine the serviceability of an item by comparing its physical, mechanical, and/or electrical characteristics with established standards through examination (e.g., by sight, sound, or feel).

b. Test. To verify serviceability by measuring the mechanical, pneumatic, hydraulic, or electrical characteristics of an item and comparing those characteristics with prescribed standards.

c. Service. Operations required periodically to keep an item in proper operating condition; i.e., to clean (includes decontaminate, when required), to preserve to drain, to paint, or to replenish fuel, lubricants, chemical fluids, or gases.

d. Adjust. To maintain or regulate, within prescribed limits, by bringing into proper position, or by setting the operating characteristics to specified parameters.

B-2. MAINTENANCE FUNCTIONS (cont)

e. Align. To adjust specified variable elements of an item to bring about optimum or desired performance.

f. Calibrate. To determine and cause corrections to be made or to be adjusted on instruments or test, measuring, and diagnostic equipment used in precision measurement. Consists of comparisons 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.

g. Remove/install. To remove and install the same item when required to perform service or other maintenance functions. install may be the act of emplacing, seating, or fixing into position a spare, repair part, or module (component or assembly) in a manner to allow the proper functioning of an equipment or system.

h. Replace. To remove an unserviceable item and install a serviceable counterpart in its place. Replace is authorized by the MAC and assigned maintenance level is shown as the 3d position code of the SMR code.

i. Repair. The application of maintenance services¹, including fault location/troubleshooting², removal/installation, and disassembly/assembly³ procedures, and maintenance actions⁴ to identify troubles and restore serviceability to an item by correcting specific damage, fault, malfunction, or failure in a part, subassembly, module (component or assembly), end item, or system.

j. Overhaul. That maintenance effort (service/action) prescribed to restore an item to a completely serviceable/operational condition as required by maintenance standards in appropriate technical publications (i.e., DMWR), Overhaul is normally the highest degree of maintenance performed by the Army. Overhaul does not normally return an item to like new condition.

k. Rebuild. Consists of those services/actions necessary for the restoration of unserviceable equipment to a like new condition in accordance with original manufacturing standards. Rebuild is the highest degree of materiel maintenance applied to Army equipment. The rebuild operation includes the act of returning to zero those age measurements (e.g., hours/miles) considered in classifying Army equipment/components.

¹Services - Inspect, test, service, adjust, align, calibrate, and/or replace.

²Fault location/troubleshooting - The process of investigating and detecting the cause of equipment malfunctioning; the act of isolating a fault within a system or unit under test (UUT).

³Disassembly/assembly - The step-by-step breakdown (taking apart) of a spare/functional group coded item to the level of its least component that is assigned an SMR code for the level of maintenance under consideration (i.e., identified as maintenance significant).

⁴Actions - Welding, grinding, riveting, straightening, facing, machining, and/or resurfacing.

B-3. EXPLANATION OF COLUMNS IN THE MAC, SECTION II

a. Column 1, Group Number. Column 1 lists functional group code numbers, the purpose of which is to identify maintenance significant components, assemblies, subassemblies, and modules with the next higher assembly.

b. Column 2, Component/Assembly. Column 2 contains the item names of components, assemblies, subassemblies, and modules for which maintenance is authorized.

c. Column 3, Maintenance Function. Column 3 lists the functions to be performed on the item listed in Column 2. (For detailed explanation of these functions, see paragraph B-2.)

d. Column 4, Maintenance Level. Column 4 specifies each level of maintenance authorized to perform each function listed in column 3 by indicating work time required (expressed as manhours in whole hours or decimals) in the appropriate subcolumn. This work-time figure represents the active time required to perform that maintenance function at the indicated level of maintenance. If the number or complexity of the tasks within the listed maintenance function vary at different maintenance levels, appropriate work-time figures are to be shown for each level. The work-time figure represents the average time required to restore an item (assembly, subassembly, component, module, end item, or system) to a serviceable condition under typical field operating conditions. This time includes preparation time (including any necessary disassembly/assembly time), troubleshooting/fault location time, and quality assurance time in addition to the time required to perform the specific tasks identified for the maintenance functions authorized in the maintenance allocation chart. The symbol designations for the various maintenance levels are as follows:

- cOperator or crew maintenance
- o Unit maintenance
- FDirect support maintenance
- LSpecialized Repair Activity (SRA)⁵
- HGeneral support maintenance
- DDepot maintenance

e. Column 5, Tools and Test Equipment Reference Code. Column 5 specifies, by code, those common tool sets (not individual tools), common TMDE, and special tools, special TMDE, and special support equipment required to perform the designated function. Codes are keyed to tools and test equipment in section III .

f. Column 6, Remarks. When applicable, this column contains a letter code, in alphabetical order, which is keyed to the remarks contained in Section IV.

⁵This maintenance level is not included in Section 11, column (4) of the Maintenance Allocation Chart. Functions to this level of maintenance are identified by a work-time figure in the H column of Section 11, column (4), and an associated reference code is used in the Remarks column (6). This code is keyed to Section IV, Remarks, and the SRA complete repair application is explained there.

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B-4. EXPLANATION OF COLUMNS IN TOOL AND TEST EQUIPMENT REQUIREMENTS, SECTION III

- a. **Column 1, Reference Code.** The tool and test equipment reference code correlates with a code used in the MAC, section II column 5.
- b. **Column 2, Maintenance Level.** The lowest level of maintenance authorized to use the tool or test equipment.
- c. **Column 3, Nomenclature.** Name or identification of the tool or test equipment.
- d. **Column 4, National Stock Number.** The National stock number of the tool or test equipment.
- e. **Column 5, Tool Number.** The manufacturer's part number, model number, or type number.

B-5. EXPLANATION OF COLUMNS IN REMARKS, SECTION IV

- a. **Column 1, Remarks Code.** The code recorded in column 6, section II
- b. **Column 2, Remarks.** This column lists information pertinent to the maintenance function being performed as indicated in the MAC, section II.

**Section II. MAINTENANCE ALLOCATION CHART
 FOR M2 MACHINE GUN**

(1) Group Number	(2) Component/ Assembly	(3) Maintenance Function	(4) Maintenance Level					(5) Tools And Equipment Ref Code	(6) Remarks Code
			Unit	DS	GS	Depot			
			C	O	F	H	D		
01	Machine Gun, Flex (7265636) and Machine Gun, M48 Turret Type (12002952)	Inspect	0.2	0.2	0.1			1 thru 5, 11	
		Test	0.1						
		Service	0.2	0.2	0.2				
		Replace Repair	0.3 0.1	0.4		*	6,7,10,11		
0101	Flash Suppressor (7162072)	Inspect	0.1						
		Service	0.1						
		Replace	0.1				10		
		Repair	0.1				10		

.Work times are included in the DMWR.

**MAINTENANCE ALLOCATION CHART
 FOR M2 MACHINE GUN (cont)**

(1) Group Number	(2) Component/ Assembly	(3) Maintenance Function	(4) Maintenance Level					(5) Tools And Equipment Ref Code	(6) Remarks Code
			Unit		DS	GS	Depot		
			C	O	F	H	D		
0102	Backplate Assembly, Spade Grip (6535477)	Inspect	0.1	0.1	0.1			6	
		Service	0.1	0.1					
		Replace			0.1				
		Repair			0.4				
010201	Backplate Assembly, Without Latch (5564307)	Inspect		0.1	0.1			6 6	
		Service	0.1	0.1					
		Replace			0.1				
		Repair			0.2				
0103	Backplate Assembly (12937677)	Inspect	0.1	0.1	0.1			6	
		Service	0.1	0.1					
		Replace			0.1				
		Repair			0.2				
0104	Bolt Assembly, Breech (6528322)	Inspect	0.1	0.1	0.1			6,8,10	
		Service	0.1	0.1					
		Replace			0.1				
		Repair		0.1	0.1				
010401	Extractor, Car- tridge (6008959)	Inspect	0.1	0.1	0.1			6 6	
		Service	0.1	0.1					
		Replace			0.1				
		Repair			0.1				
010402	Extension Assem- bly, Firing Pin (6008976)	Inspect	0.1	0.1	0.1			6 6	
		Service	0.1	0.1					
		Replace			0.1				
		Repair			0.1				
010403	Bolt Subassembly (6147463)	Inspect	0.1	0.1	0.1			6 6	
		Service	0.1	0.1					
		Replace			0.1				
		Repair			0.1				

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**MAINTENANCE ALLOCATION CHART
 FOR M2 MACHINE GUN (cont)**

(1) Group Number	(2) Component/ Assembly	(3) Maintenance Function	(4) Maintenance Level					(5) Tools And Equipment Ref Code	(6) Remarks Code
			Unit		DS	GS	Depot		
			C	O	F	H	D		
0105	Buffer, Recoil Mechanism (7266821)	Inspect	0.1	0.1	0.1				
		Service	0.1						
		Replace Repair			0.1 0.1			6,9	
0106	Cover Assembly (6528309)	Inspect	0.1	0.1	0.1				
		Service	0.1	0.1					
		Replace Repair		0.1	0.1			10 6,10	
0107	Slide Assembly, Retracting (11010439)	Inspect	0.1	0.1	0.1				
		Service	0.1	0.1					
		Replace Repair			0.1 0.1			6 6	
0108	Charger, Gun, Caliber .50, M10 (7267982)	Inspect	0.1	0.1	0.1				
		Service	0.1	0.1					
		Replace Repair			0.1 0.4			6 6	
010801	Stud Assembly, Bolt Charger (7268490)	Inspect	0.1	0.1	0.1				
		Service	0.1	0.1					
		Replace Repair			0.1 0.1			6 6	
0109	Sight Assembly, Rear (12003047)	Inspect	0.1	0.1	0.1				
		Service	0.1	0.1					
		Replace Repair			0.2 0.1			6 6	
0110	Stop Assembly, Adjustable, Trigger Lever (7265212)	Inspect	0.1	0.1	0.1				
		Service	0.1	0.1					
		Replace Repair			0.1 0.1			6 6	
0111	Latch Assembly, Bolt (8448125)	Inspect	0.1	0.1	0.1				
		Service	0.1	0.1					
		Replace Repair			0.1 0.1			6 6	

**MAINTENANCE ALLOCATION CHART
 FOR M2 MACHINE GUN (cont)**

(1) Group Number	(2) Component/ Assembly	(3) Maintenance Function	(4) Maintenance Level					(5) Tools And Equipment Ref Code	(6) Remarks Code
			Unit		DS	GS	Depot		
			C	O	F	H	D		
0112	Stop Assembly, Cartridge, Rear (5577409)	Inspect Service Replace Repair	0.1 0.1	0.1 0.1	0.1			6 6	
0113	Receiver, Cartridge (6535480)	Inspect Service Replace Repair Overhaul	0.1 0.1	0.1 0.1	0.1		0.1 *	6,10	
0114	Handle, Manual Control, Barrel (5504080)	Inspect Service Replace Repair	0.1 0.1	0.1 0.1				10	

* Work times are included in DMWR

**Section III. TOOLS AND TEST EQUIPMENT REQUIREMENTS
 FOR M2 MACHINE GUN**

(1) Tool or Test Equipment Ref Code	(2) Maintenance Level	(3) Nomenclature	(4) National Stock Number	(5) Tool Number
1	F	Gage, Breechbore	5120-00-731-9900	7319900
2	F	Gage Kit, Barrel Erosion, M6A1	...	5910287
3	F	Plug Gage, Firing Pin Hole	5220-00-917-1067	7458406

**TOOLS AND TEST EQUIPMENT REQUIREMENTS
 FOR M2 MACHINE GUN (cont)**

(1) Tool or Test Equipment Ref Code	(2) Maintenance Level	(3) Nomenclature	(4) National Stock Number	(5) Tool Number
4	F	Protrusion Gage, Firing Pin	6695-00-197-4421	7799739
5	F	Rod Gage, Oil Buffer	6695-00-710-6326	7106326
6	F	Shop Set, Small Arms: Field Maintenance, Basic Less Power	4933-00-754-0664	SC 4933-95- CL-A11
7	F	Tool Assembly, Bolt Latch Assembly	4933-00-718-5892	7185892
8	F	Tool Assembly, Firing Pin	4933-00-624-3646	6243646
9	F	Tool Assembly, Oil Buffer Rod Assembly	4933-00-731-9903	7319903
10	O	Tool Kit, Small Arms Repairman	5180-00-357-7770	SC 5180-95- CL-A07
11	F	Wrench, Spanner	5120-00-718-8742	7188742

**Section IV. REMARKS
 FOR
 M2 MACHINE GUN**

Not applicable.

APPENDIX C

EXPENDABLE AND DURABLE ITEMS LIST

Section I. INTRODUCTION

C-1 . SCOPE

This appendix lists expendable and durable items you will need to maintain the M2 machine gun. This listing is for informational purposes only and is not authority to requisition the listed items. These items are authorized to you by CTA 50-970, Expendable/Durable Items (Except Medical, Class V, Repair Parts, and Heraldic Items).

C-2. EXPLANATION OF COLUMNS

a. Column (1) - Item Number. This number is assigned to the entry in the listing for referencing when required (e.g., "Use cleaning compound, item 10, appx C").

b. Column (2) - Level. This column identifies the lowest level of maintenance that requires the listed item.

- C - Operator/Crew
- O - Unit Maintenance
- F - Direct Support Maintenance

c. Column (3) - National Stock Number. This is the National stock number assigned to the item; use it to request or requisition the item.

d. Column (4) - Description. Indicates the Federal item name and, if required, a description to identify the item. The last line for each item indicates the Contractor and Government Entity Code (CAGEC) in parenthesis followed by the part number.

e. Column (5) - Unit of Measure (U/M)/Unit of Issue (U/I). This measure is expressed by a two-character alphabetical abbreviation (e.g., EA, IN., PR). If the unit of measure differs from the unit of issue as shown in the Army Master Data File (AMDF), requisition the lowest unit of issue that will satisfy your requirements.

Section II. EXPENDABLE AND DURABLE ITEMS LIST

(1) Item Number	(2) Level	(3) National Stock Number	(4) Description	(5) (U/M)/(U/I)
1	F	8135-00-543-6574	BAG, SLEEVE AND TUBING: interior packaging (81349) MIL-B-117	EA
2	F	8135-00-753-4661	BARRIER MATERIAL: greaseproofed, waterproofed, flexible (81349) MIL-B-121	YD/RO
3	F	...	BOX, FIBERBOARD: corrugated, triple-wall (81348) PPP-B-640	EA
4	F	8115-00-190-5002	BOX, FIBERBOARD: weather resistant (81348) PPP-B-636	EA
5	F	...	BOX, WOODEN: cleated plywood (81348) PPP-B-601	EA
6	F	...	BOX, WOODEN: nailed and locked, corner (81348) PPP-B-621	EA
7	C	1005-00-550-4037	BRUSH, CLEANING, SMALL ARMS BORE (19204) 5504037	EA
8	C	1005-00-766-0915	BRUSH, CLEANING, SMALL ARMS, CHAMBER (19204) 7790737	EA
9	C	6850-00-965-2332	CARBON REMOVING COMPOUND: dip type, rinsing required (81348) P-C-111, type II	GL
10	C	DODAC 1305-A560	CARTRIDGE, .50 CALIBER, DUMMY M2	AR
11	C	6850-00-224-6657	CLEANING COMPOUND, RIFLE BORE (RBC): 8-oz (237-ml) can (81349) MIL-C-372	OZ

EXPENDABLE AND DURABLE ITEMS LIST (cont)

(1) Item Number	(2) Level	(3) National Stock Number	(4) Description	(5) (U/M)/(U/I)
12	F	6850-00-753-4806	CLEANING COMPOUND, SOLVENT: 1-gal. (3.79-l) can (81349) MIL-C-372	GL
13	F	...	CUSHIONING MATERIAL: cellulosic (81348) PPP-C-843	AR
14	O	6850-00-281-1985	DRY CLEANING SOLVENT: type 1, 1-gal. (3.79-l) can (81348) P-D-680	GL
15	F	...	FIBERBOARD: corrugated and solid sheet stock (container grade), and cut shapes (81348) PPP-F-320	AR
16	C	8415-00-823-7457	GLOVES, CHEMICAL RESISTANT (ZZ-G-381) type 3	PR
17	F	9150-00-190-0905	GREASE, AUTOMOTIVE AND ARTILLERY (GAA): -65 to +225 °F (-54 to +107 °C) effective temperature range 5-lb (2.27-kg) can (81349) MIL-G-10924	CN
18	C	9150-00-687-4241	LUBRICATING OIL (LSA): 1-qt (0.95-l) can (81349) MIL-L-46000	QT
19	F F	9150-00-231-6689 9150-00-231-9062	LUBRICATING OIL, GENERAL PURPOSE (PL-S): noncorrosive, low temp 1-qt (0.95-l) can 5-gal. (18.93-l) can (81348) VV-L-800	QT GL

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EXPENDABLE AND DURABLE ITEMS LIST (cont)

(1) Item Number	(2) Level	(3) National Stock Number	(4) Description	(5) (U/M)/(U/I)
20	C	1005-00-653-5441	ROD, CLEANING, SMALL ARMS (19204) 6535441	EA
21	C	1005-00-556-4102	ROD, CLEANING, SMALL ARMS: set (19204) 5564102	EA
22	F	8135-00-286-8565	STRAP, STEEL (81348) QQ-S-781	LB
23	C	1005-00-716-2704	SWAB HOLDER SECTION (19205) 7162704	EA
24	C	1005-00-288-3565	SWAB, SMALL ARMS CLEANING COTTON, 2-1/2 SQ IN., 200 in. bundle (19204) 5019316	EA/PG
25	F	7510-00-297-6655	TAPE, PAPER: opaque, water-resistant (81348) PPP-T-76	YD

APPENDIX D

ILLUSTRATED LIST OF MANUFACTURED ITEMS

D-1. INTRODUCTION

a. This appendix includes complete instructions for making items authorized to be manufactured or fabricated at unit and direct support maintenance.

b. A part number index in alphanumeric order is provided for cross-referencing the part number of the item to be manufactured to the figure which covers fabrication criteria.

c. All bulk materials needed for manufacture of an item are listed by part number or specification number in a tabular list on the illustration.

D-2. MANUFACTURED ITEMS PART NUMBER INDEX

Part Number	Figure
...	D-1
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D-3. MANUFACTURED ITEMS ILLUSTRATIONS

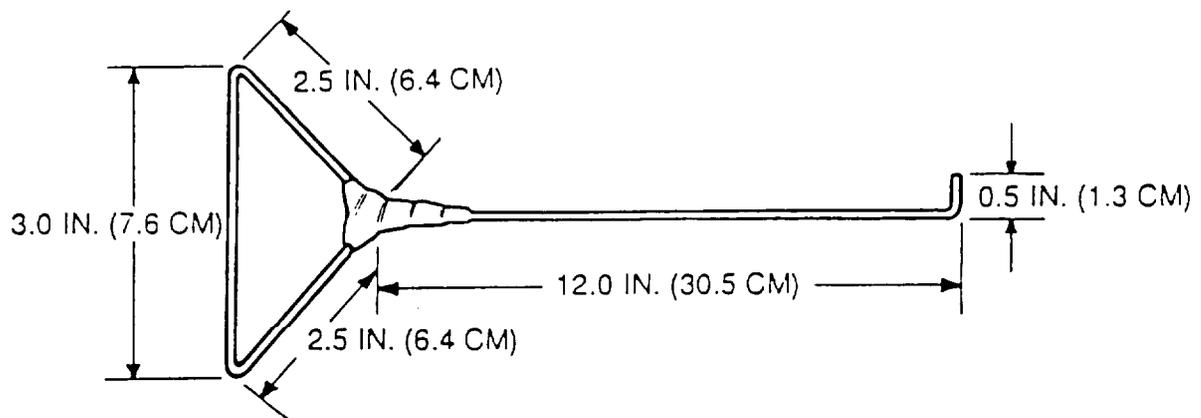


Figure D-1. Removal Tool For Improperly Installed Bolt.

NOTES:

1. Fabricate from 20.5 in. (52.1 cm) long rod of 3/8 in. dia. brass alloy NSN 9525-00-249-7441.
2. Wrap tape (item 25, appx C) where triangle joins.

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D-3. MANUFACTURED ITEMS ILLUSTRATIONS (cont)



Nomenclature	Part Number	National Stock Number
Wire, Nonelectrical	MS20995C41	9505-00-331-3275
Wire, Nonelectrical	QQW461	9505-00-684-4843

Figure D-2. Safety Wire.

NOTES:

1. Fabricate wire from National Stock Number found in figure.
2. Cut wire to necessary length.
3. Refer to MS33540 for installation of safety wire.

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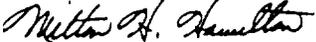
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Unit and DS Maintenance Manual, Machine Guns, Cal. 50, M2

BE EXACT... PIN-POINT WHERE IT IS

PAGE NO	PARA-GRAPH	FIGURE NO	TABLE NO
B-7			

IN THIS SPACE TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT:

SECTION III , Item 2

ADD: down parts of M6A1 Gage Kit PN 5910287

Nomenclature	NSN	Tool No.
Carrying Case, Gage	5140-00-313-9487	7319997
Gage, Breechbore	5210-00-317-2502	7274725
Gage, Wear Check	5210-00-317-2503	7274730

REASON: Gage Numbers are called out on page 3-15 and components of Gage Set are called out in TM 9-1005-213-23P

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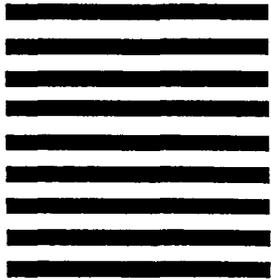
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THE METRIC SYSTEM AND EQUIVALENTS

LINEAR MEASURE

1 Centimeter = 10 Millimeters = 0.01 Meter = 0.3937 Inch
 1 Decimeter = 10 Centimeters = 3.94 Inches
 1 Meter = 10 Decimeters = 100 Centimeters
 = 1000 Millimeters -39.37 Inches
 1 Dekameter = 10 Meters = 32.8 Feet
 1 Hectometer = Dekameters = 328.08 Feet
 1 Kilometer = 10 Hectometers = 1000 Meters
 = 0.621 Mile = 3,280.8 Feet
 Millimeters = Inches times 25.4
 Inches = Millimeters divided by 25.4

WEIGHTS

1 Centigram = 10 Milligrams = 0.154 Grain
 1 Decigram = 10 Centigrams = 1.543 Grains
 1 Gram = 0.001 Kilogram = 10 Decigrams
 = 1000 Milligrams = 0.035 Ounce
 1 Dekagram = 10 Grams = 0.353 Ounce
 1 Hectogram = 10 Dekagrams = 3.527 Ounces
 1 Kilogram = 10 Hectograms = 1000 Grams = 2.205 Pounds
 1 Quintal = 100 Kilograms = 220.46 Pounds
 1 Metric Ton = 10 Quintals = 1000 Kilograms = 1.1 Short Tons

LIQUID MEASURE

1 Milliliter = 0.001 Liter = 0.034 Fluid Ounce
 1 Centiliter = 10 Milliliters = 0.34 Fluid Ounce
 1 Deciliter = 10 Centiliter = 3.38 Fluid Ounces
 1 Liter = 10 Deciliter = 1000 Milliliters = 33.82 Fluid Ounces
 1 Dekaliter = 10 Liters - 2.64 Gallons
 1 Hectoliter = 10 Dekaliters = 26.42 Gallons
 1 Kiloliter = 10 Hectoliters = 264.18 Gallons

SQUARE MEASURE

1 Sq Centimeter = 100 Sq Millimeters = 0.155 Sq Inch
 1 Sq Decimeter = 100 Sq Centimeters = 15.5 Sq Inches
 1 Sq Decimeter = Meter (Centare) = 10 Sq Decimeters
 = 10,000 Sq centimeters = 10.764 Sq Feet
 1 Sq Dekameter (Are) = 100 Sq Meters = 1,076.4 Sq Feet
 1 Sq Hectometer (Hectare) = 100 Sq Dekameters
 = 2.471 Acres
 1 Sq Kilometer = 100 Sq Hectometers = 1,000,000 Sq Meters
 = 0.386 Sq Mile

CUBIC MEASURE

1 Cu Centimeter = 1000 Cu Millimeters = 0.061 Cu Inches
 1 Cu Decimeter = 1000 Cu Centimeters = 61.02 Cu Inches
 1 Cu Meter = 1000 Cu Decimeters = 1,000,000 Cu Centimeters
 = 35.31 Cu Feet

TEMPERATURE

5/9 (°F - 32°) = °C
 9/5 (°C + 32°) = °F
 -35° Fahrenheit is equivalent to -37° Celsius
 0° Fahrenheit is equivalent to -37° Celsius
 32° Fahrenheit is equivalent to 0° Celsius
 90° Fahrenheit is equivalent to 32.2° Celsius
 100° Fahrenheit is equivalent to 38° Celsius
 212° Fahrenheit is equivalent to 100° Celsius

APPROXIMATE CONVERSION FACTORS

<u>TO CHANGE</u>	<u>TO</u>	<u>MULTIPLY BY</u>	<u>TO CHANGE</u>	<u>TO</u>	<u>MULTIPLY BY</u>
Inches	Centimeters	2.540	Centimeters	Inches	0.394
Feet	Meters	0.305	Meters	Feet	3.280
Yards	Meters	0.914	Meters	Yards	1.094
Miles	Kilometers	1.609	Kilometers	Miles	0.621
Square Inches	Square Centimeters	6.451	Square Centimeters	Square Inches	0.155
Square Feet	Square Meters	0.093	Square Meters	Square Feet	10.764
Square Yard	Square Meters	0.836	Square Meters	Square Yards	1.196
Square Miles	Square Kilometers	2.590	Square Kilometers	Square Miles	0.386
Acres	Square Hectometers	0.405	Square Hectometers	Acres	2.471
Cubic Feet	Cubic Meters	0.028	Cubic Meters	Cubic Feet	35.315
Cubic Yards	Cubic Meters	0.765	Cubic Meters	Cubic Yards	1.308
Fluid Ounces	Milliliters	29.573	Milliliters	Fluid Ounces	0.034
Pints	Liters	0.473	Liters	Pints	2.113
Quarts	Liters	0.946	Liters	Quarts	1.057
Gallons	Liters	3.785	Liters	Gallons	0.264
Ounces	Grams	28,349	Grams	Ounces	0.035
Pounds	Kilograms	0.454	Kilograms	Pounds	2.205
Short Tons	Metric Tons	0.907	Metric Tons	Short Tons	1.102
Pound-Feet	Newton-Meters	1.356	Newton-Meters	Pound-Feet	0.738
Pound-Inches	Newton-Meters	0.11375	Kilopascals	Pounds per Square Inch	0.145
Pounds per Square Inch	Kilopascals	6.895	Kilometers per Liter	Miles per Gallon	2.354
Ounce-Inches	Newton-Meters	0.007062	Kilometers per Hour	Miles per Hour	0.621
Miles per Gallon	Kilometers per Liter	0.425	°Fahrenheit	°Celsius	°C = (°F-32)x5/9
Miles per Hour	Kilometers per Hour	1.609	°Celsius	°Fahrenheit	°F = (9/5x°C)=32

