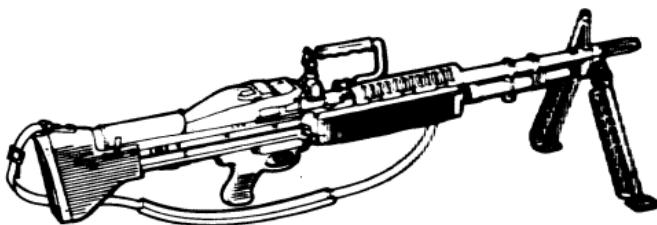


TM 9-1005-224-10



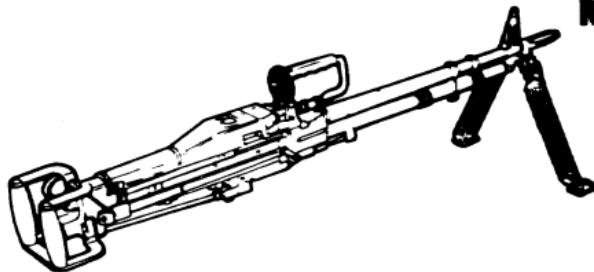
**OPERATOR'S MANUAL
FOR**

**MACHINE GUN, 7.62-MM, M60 W/E
(1005-00-605-7710)**

**MOUNT, TRIPOD, MACHINE GUN, 7.62-MM, M122
(1005-00-710-5599)**

AND

**MACHINE GUN, 7.62-MM, M60D W/E
(1005-00-909-3002)**



**HEADQUARTERS, DEPARTMENT OF THE ARMY
JULY 1985**

SAFETY INFORMATION

WARNING

Be sure to clear weapon before starting inspection.

If cover is opened on a hot cartridge (hot barrel), an open-cover cookoff could occur and result in serious injury or death. Evacuate area for 15 minutes and then do IMMEDIATE ACTION. Refer to page 2-35.

Never reload a runaway machine gun until it has been repaired. Be sure machine gun is cleared before moving it.

When removing a stuck unfired cartridge, stay clear of the muzzle. Do not allow cartridge to contact any hard surface. Cartridge may fire on contact. Remove a stuck unfired cartridge using the same procedures for removing a stuck or ruptured cartridge case.

Before field stripping check that the bolt is in forward position.

Bolt assembly is under spring tension; it can twist and injure your hand.

Barrels issued for a specific gun will not be changed from gun to gun. Each barrel and bolt assembly should be tagged during cleaning with the serial number of the receiver (gun) and should remain together as initially assigned. Interchanging barrels may result in injury or death.

Insert the hinge pin from one side and the hinge pin latch from the opposite side.

After unloading dummy round, be sure the barrel is cleared.

Ammunition to be used in machine gun is authorized in Chapter 5.

SAFETY INFORMATION (CONT)

WARNING

Keep weapon pointed at target - down range/impact area.

Keep safety on S until you're ready to fire.

Always check the chamber/bore after clearing the weapon.

Check barrel bore and chamber before firing.

Do not interchange bolt assemblies or components from one weapon to another. This may cause injury or death to personnel.

Change hot barrels with your heat protective mitten only or by holding bipod legs. (Refer to page 3-5 for additional hot barrel procedures.)

Do not interchange leaf springs from one model weapon to another.

Check that assigned and spare barrels have been headspaced and tagged to your receiver.

Rotate usage of the barrels.

Firing Blank Cartridges

Do not fire blank ammunition toward personnel within 20 feet of the muzzle. Fragments of a closure wad or particles of unburned propellant might inflict injury within that range.

For first aid information see FM 21-11.

TECHNICAL MANUAL
No. 9-1005-224-10

*TM 9-1005-224-10
HEADQUARTERS
DEPARTMENT OF THE ARMY

Washington, DC, 30 July 1985

Operator's Manual

for

MACHINE GUN, 7.62-MM, M60 W/E
(1005-00-605-7710)

MOUNT, TRIPOD, MACHINE GUN, 7.62-MM, M122
(1005-00-710-5599)

AND

MACHINE GUN, 7.62-MM, M60D W/E
(1005-00-909-3002)

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 or DA Form 2028 (Recommended Changes to Equipment Publications and Blank Forms) direct to: Commander, US Army Armament, Munitions and Chemical Command, ATTN: AMSMC-MAS, Rock Island, IL 61299-6000. A reply will be furnished to you.

*This manual supersedes TM 9-1005-224-10, dated 16 March 1981.

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CHAPTER 1

INTRODUCTION

Section I. GENERAL INFORMATION

SCOPE.

Type of Manual: Operator's Manual.

Model Numbers and Equipment Names: M60 7.62-mm Machine Gun, M60D 7.62-mm Machine Gun, and M122 7.62-mm Machine Gun Tripod Mount.

Purpose of Equipment:

The M60 7.62-mm Machine Gun is a general purpose weapon capable of being fired from several mounts or handheld. The weapon's primary use is for ground operations.

The M60D 7.62-mm Machine Gun is a general purpose weapon capable of being fired from several mounts. The weapon's primary use is for support of ground operations. The M60D is an aircraft door-mounted or vehicle-mounted machine gun.

The M122 7.62-mm Machine Gun Tripod Mount is a stable mount used with the M60 machine gun. The weapon can be quickly removed or installed on the mount when necessary.

MAINTENANCE FORMS AND RECORDS. Department of the Army forms and procedures used for equipment maintenance will be those prescribed by DA PAM 738-750, the Army Maintenance Management System (TAMMS).

REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR's).

If your machine gun or tripod mount 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 (Quality Deficiency Report). Mail it to us at Commander, US Army Armament, Munitions and Chemical Command, ATTN: AMSMC-QAD (R), Rock Island, IL 61299-6000. We'll send you a reply.

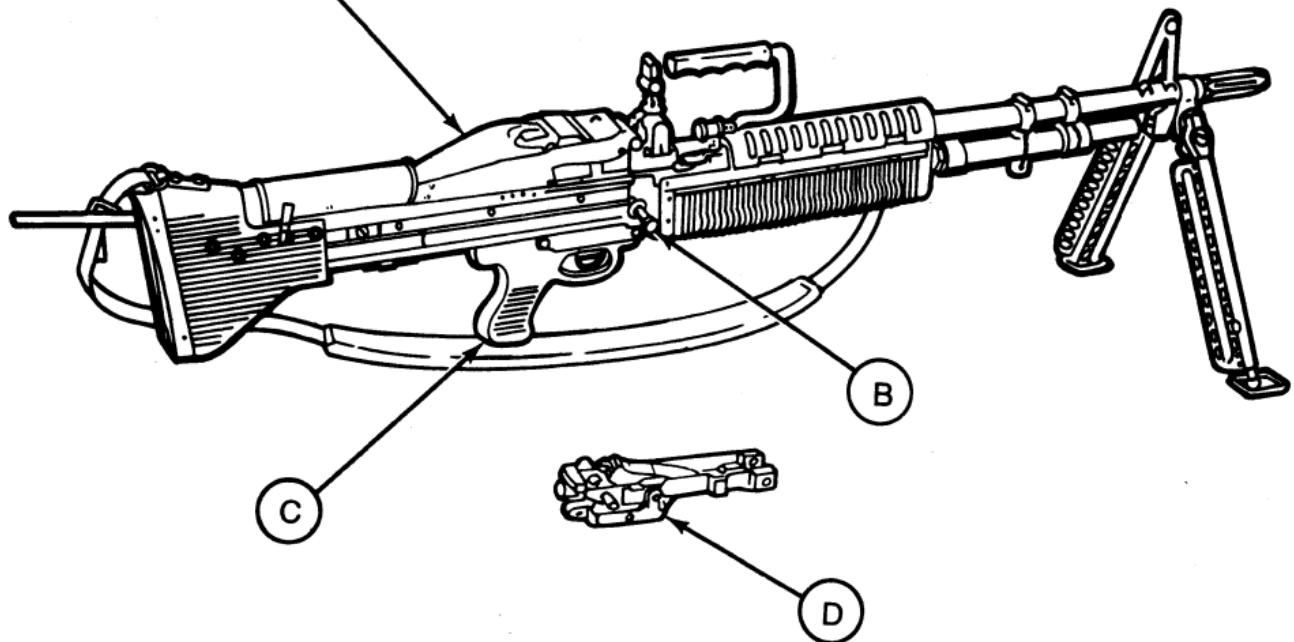
Section II. EQUIPMENT DESCRIPTION

EQUIPMENT CHARACTERISTICS, CAPABILITIES AND FEATURES. The M60 and M60D are air-cooled and have fixed headspace allowing quick barrel changes for cooling and maintenance when required. In order to extend the life of the barrels, retain accuracy, and allow for continuous firing over long periods of time, two barrel assemblies are issued with each gun. The machine guns are gas-operated and fire from open bolt position.

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS.

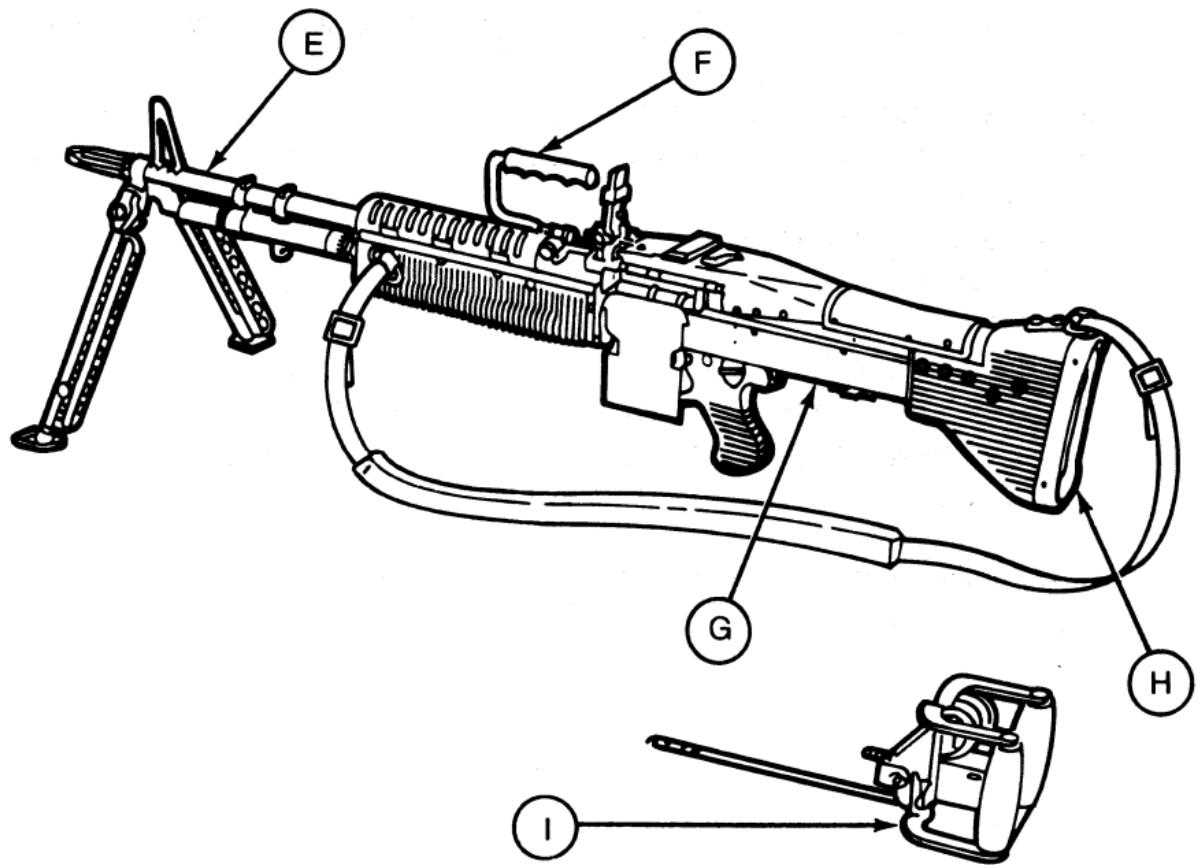
M60 and M60D Machine Gun.

- (A) COVER ASSEMBLY.** Positions and holds cartridge in place for stripping, feeding link belt, and chambering rounds.
- (B) COCKING HANDLE ASSEMBLY.** Provides a means to manually move the bolt assembly to the rear.
- (C) TRIGGER MECHANISM AND GRIP ASSEMBLY (M60 ONLY).** Controls the firing of the machine gun.
- (D) SEAR AND SAFETY HOUSING (M60D ONLY).** Controls the firing of the machine gun.



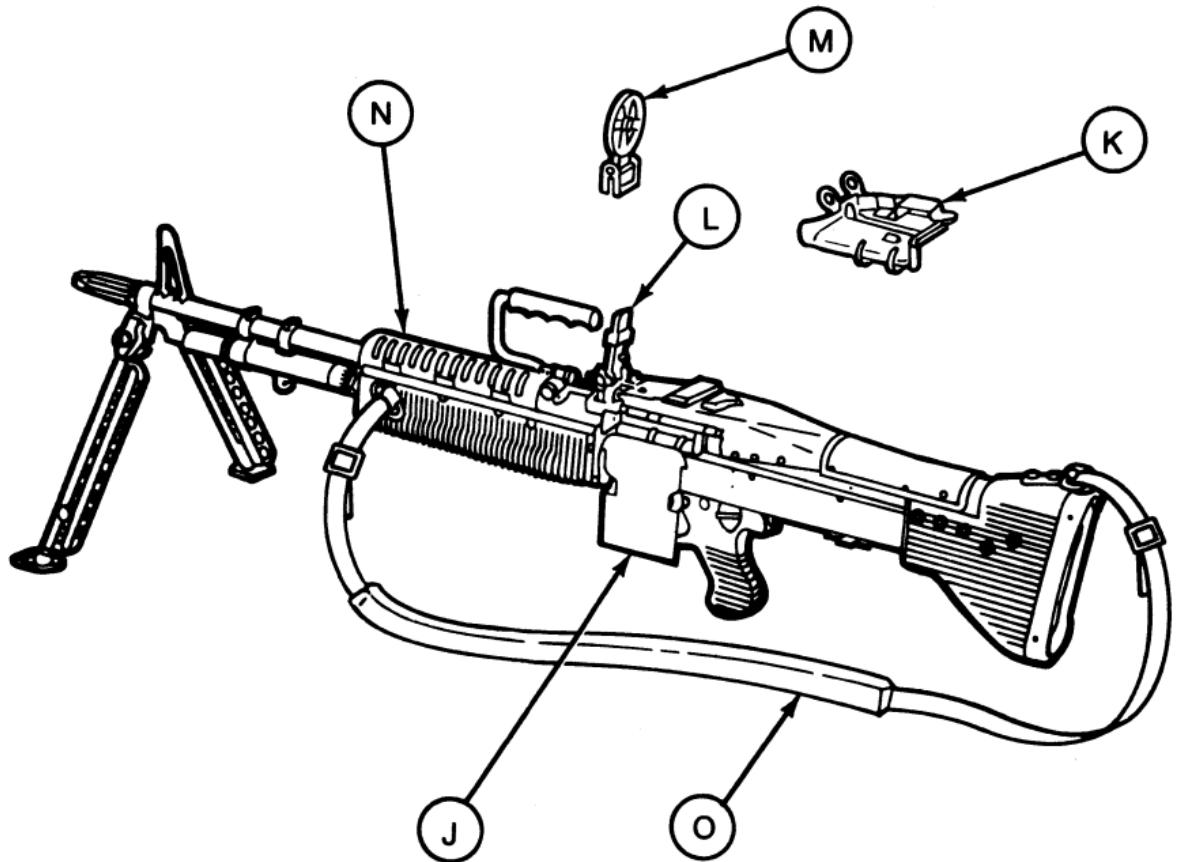
LOCATION AND DESCRIPTION OF MAJOR COMPONENTS (CONT.).

- E BARREL AND BIPOD ASSEMBLY.** The barrel assembly houses cartridges for firing. The bipod assembly provides a semistable platform when the machine gun is fired from the prone position.
- F CARRYING HANDLE ASSEMBLY.** Provides a means to carry the machine gun with one hand. The carrying handle assembly folds down when the rear sight is used and the machine gun is fired.
- G RECEIVER ASSEMBLY.** Supports all major components. Houses internal parts and, through a series of cam ways, controls operation of weapon.
- H SHOULDER GUN STOCK (M60 ONLY).** Provides a suitable surface to stabilize the weapon against the shoulder while firing the machine gun from any position except from the hip.
- I GRIP AND TRIGGER ASSEMBLY (M60D ONLY).** Provides handles to move machine gun and houses the machine gun trigger.



LOCATION AND DESCRIPTION OF MAJOR COMPONENTS (CONT).

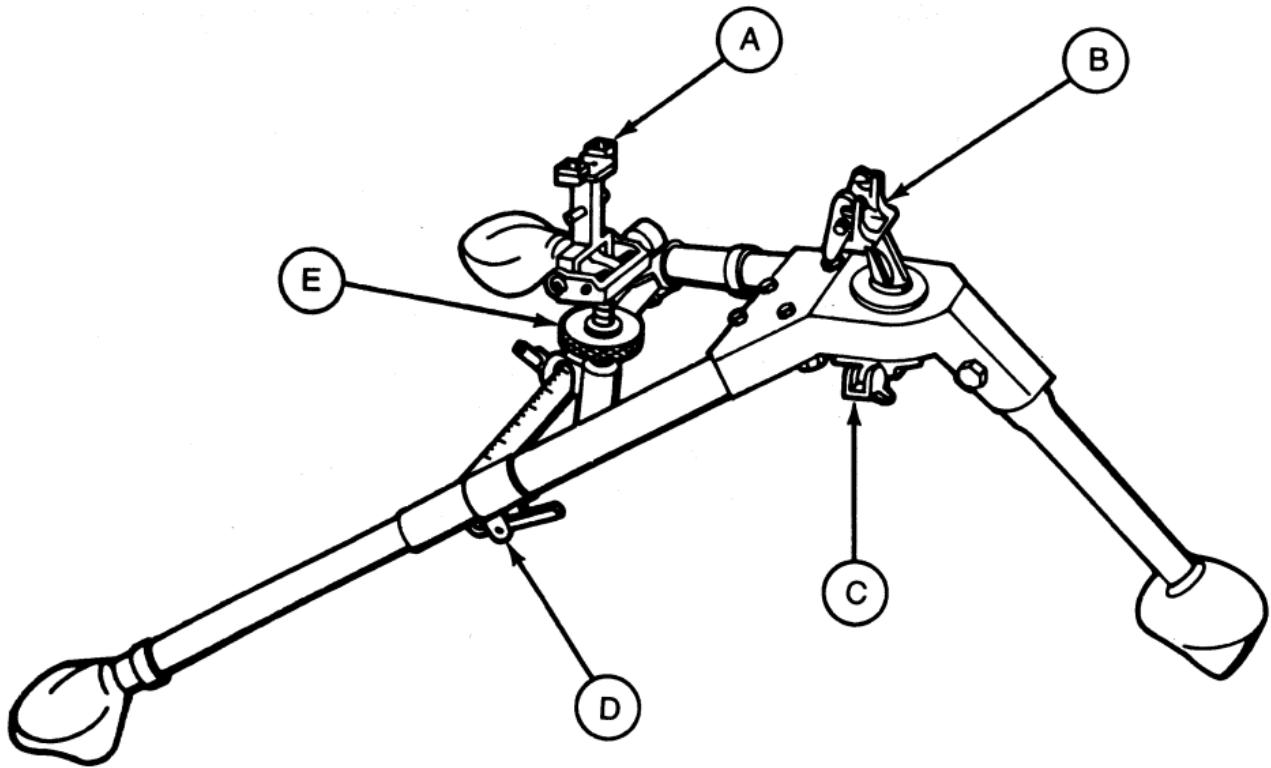
- J** **CARTRIDGE FEED TRAY AND HANGER ASSEMBLY (M60 ONLY).** Guides cartridges for positioning and feeding. The hanger assembly supports the bandoleer.
- K** **CARTRIDGE TRAY ASSEMBLY (M60D ONLY).** Guides cartridges for positioning and feeding.
- L** **REAR SIGHT ASSEMBLY (M60 ONLY).** Provides a means to aim the machine gun at the target with accuracy. The sight adjusts horizontally as well as vertically.
- M** **REAR SIGHT ASSEMBLY (M60D ONLY).** Provides a means to aim the machine gun in the general area of the target. The rear sight is nonadjustable.
- N** **FOREARM ASSEMBLY (M60 ONLY).** Provides a hand hold when firing from the hip or from a standing or kneeling position.
- O** **SMALL ARMS SLING (M60 ONLY).** Used for support during assault firing and for transport.



LOCATION AND DESCRIPTION OF MAJOR COMPONENTS (CONT.).

M122 Machine Gun Tripod Mount.

- (A) ADAPTER ASSEMBLY.** Quickly connects the traversing and elevating mechanism to the rear of the machine gun.
- (B) PINTLE ASSEMBLY.** Quickly connects the machine gun to the tripod.
- (C) PINTLE LOCK ASSEMBLY.** Quickly unlocks the pintle assembly from the tripod.
- (D) REAR LEG LATCH.** Locks the rear legs in the extended position. Unlocks so the rear legs can be placed in the closed position for carrying.
- (E) TRAVERSING AND ELEVATING MECHANISM ASSEMBLY.** Adjusts for elevation and azimuth.



DIFFERENCES BETWEEN MODELS. Differences between the M60 and M60D machine gun are listed below.

Assembly/Component	M60	M60D
Tray and hanger assembly	X	
Cartridge feed tray assembly		X
Dust and moisture seal boot		X
Forearm assembly	X	
Grip and trigger assembly		X
Gun adapter		X
Magazine hanger assembly		X
Rear sight (adjustable)	X	
Rear sight (nonadjustable)		X
Receiver assembly	X	
Receiver assembly		X
Sear and safety housing assembly		X
Sear assembly link and spring		X
Shoulder gun stock	X	
Small arms sling	X	
Trigger mechanism grip assembly	X	
Quick release pin		X

EQUIPMENT DATA.

M60 Machine Gun.

Weight	.....	23 lb (10.43 kg)
Length	.....	43.5 in. overall (1.1 m overall)
Range	.....	Ref to FT 7.62-A-2
Rate of fire (cyclic)	.....	550 rd per min (approx)
Muzzle velocity	.....	2,850 0 FPS
Capacity of bandoleer	.....	100 rds
Rifling:		
Number of lands	.....	4
Right hand twist	.....	One turn in 12 in. (30.54 cm)
Trigger pull:		
Maximum	.....	11.5 lb (5.2 kg)
Minimum	.....	6.0 lb (2.7 kg)

EQUIPMENT DATA (CONT.).

M122 Tripod Mount.

Weight	.....	15 lb (6.8 kg)
Length:		
Extended	.....	32.5 in. (82.6 cm)
Folded for transportation	.....	27 in. (68.6 cm)
Spread of rear legs	.....	30 in. (76.2 cm)
Height	.....	14 in. (35.6 cm)
Traversing range:		
Using traversing bar	.....	50 degrees
Free	.....	360 degrees (6,400 mils)
Elevating range:		
Free	.....	56 degrees
Locked	.....	26 degrees
Least increment	.....	1 mil
Elevating handwheel, graduated	.....	1 mil

M60D Machine Gun.

Weight	.....	25 lbs (11.33 kg)
Length	.....	43.5 in. overall (1.1 m overall)
Range:		
Rate of fire (cyclic)	.....	550 rd per min (approx)
Muzzle velocity	.....	2850. 2850 FPS
Rifling:		
Number of lands	.....	4
Right hand twist	.....	One turn in 12 in. (30.54 cm)
Trigger pull at sear activator:		
Maximum	.....	20 lb (9.06 kg)
Minimum	.....	10.5 lb (4.75 kg)

CHAPTER 2

OPERATING INSTRUCTIONS

Section I. DESCRIPTION AND USE OF OPERATOR'S CONTROLS AND INDICATORS

M60 MACHINE GUN.

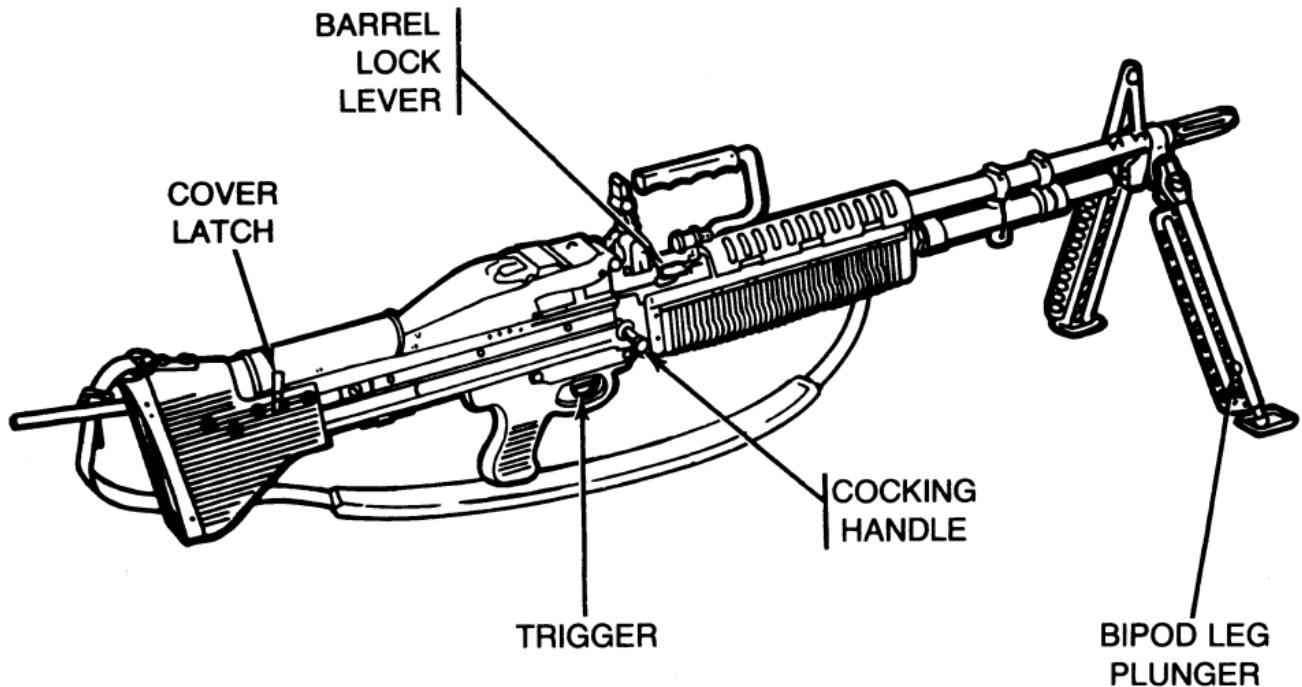
COCKING HANDLE. Pull back to move bolt rearward.

COVER LATCH. Holds cover closed. Pull back on lower end of latch to open.

BARREL LOCK LEVER. Locks barrel in place. To unlock barrel, push in on barrel lock lever from left side of weapon and raise lever.

BIPOD LEG PLUNGER. Depress to extend or retract bipod foot.

TRIGGER. Pull rearward to fire weapon. Release to stop firing.



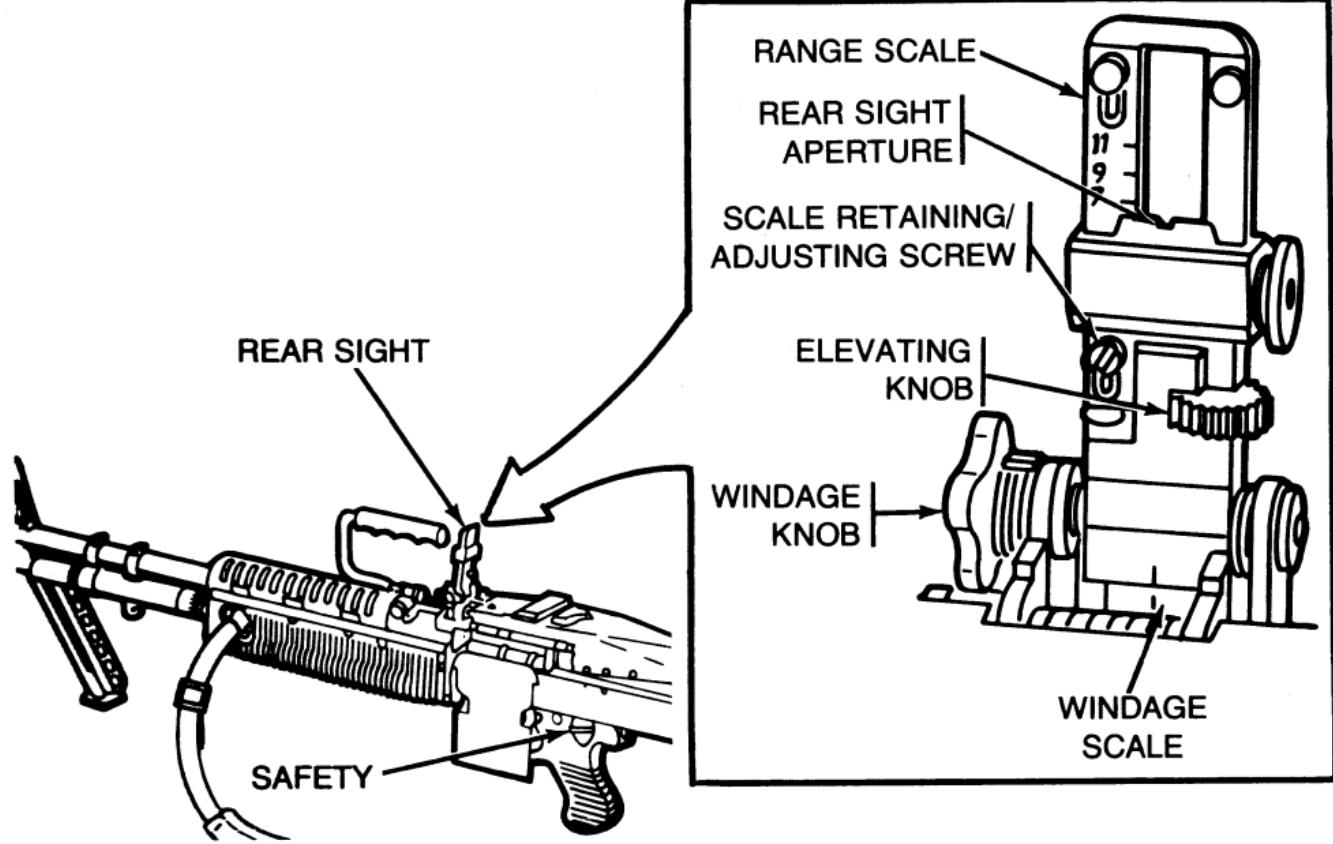
M60

M60 MACHINE GUN (CONT).

SAFETY. Move safety up to F (fire) and down to S (safe).

REAR SIGHT. Adjustable to 1100 meters,

- *Range Scale* - graduated from 300 to 1100 meters.
- *Scale Retaining/Adjusting Screw* - locks range scale in place.
- *Elevating Knob* - use for minor (fine) adjustments in range.
- *Windage Scale* - adjusts for left or right wind.
- *Windage Knob* - locks windage scale in place.
- *Rear Sight Aperture* - lines up with front sight for long range targets.



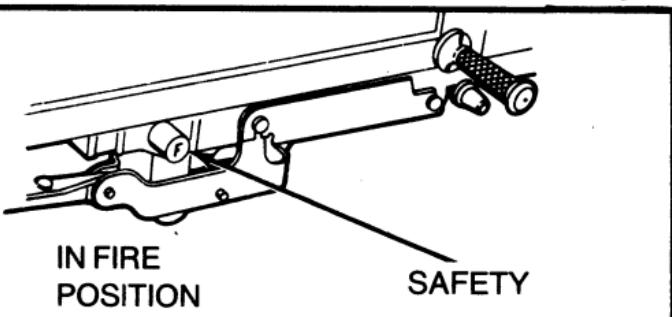
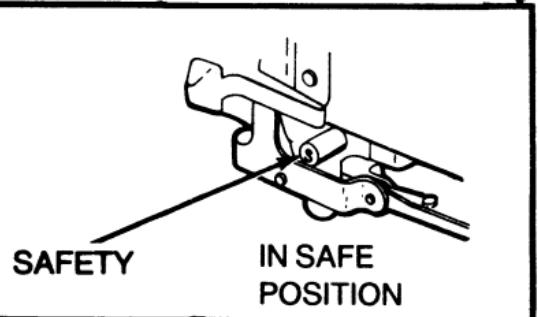
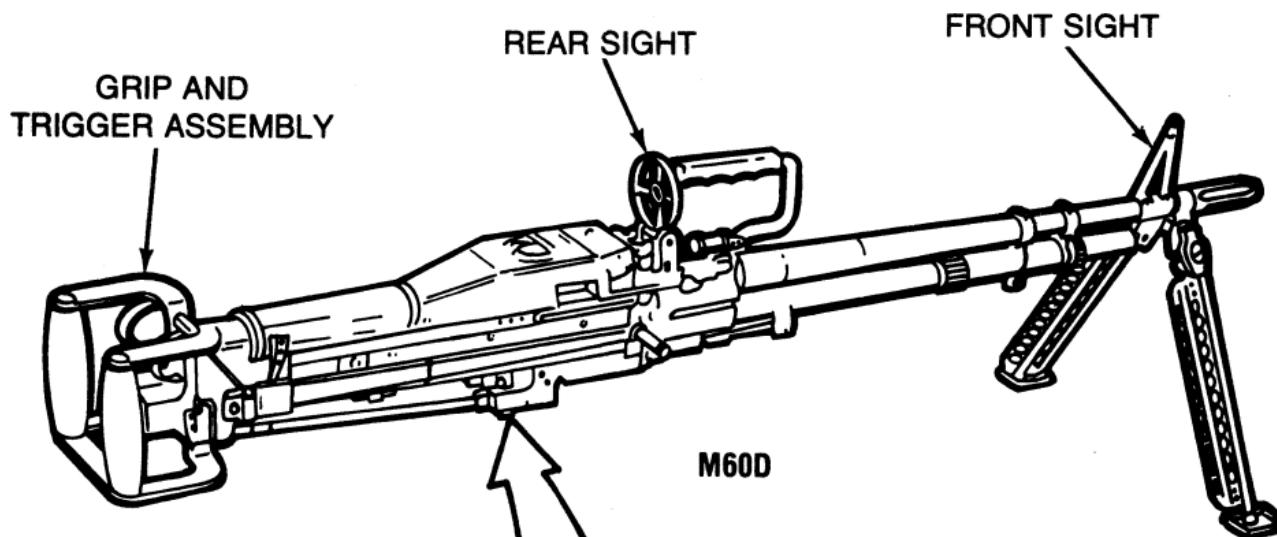
M60

M60D MACHINE GUN.

GRIP AND TRIGGER ASSEMBLY. Pull back on both triggers to fire. Release to stop firing.

SAFETY. Push to right for S (safe), to left for F (fire).

REAR AND FRONT SIGHTS. Aim through ring sight (rear sight) and front sight to line up target. Fire. Adjust range by watching tracers.



M122 TRIPOD MOUNT.

RELEASE LEVER. Pull release lever down to release gun from tripod mount.

UPPER ELEVATING SCREW AND PLATE WITH SCALE. Use scale to judge target range.

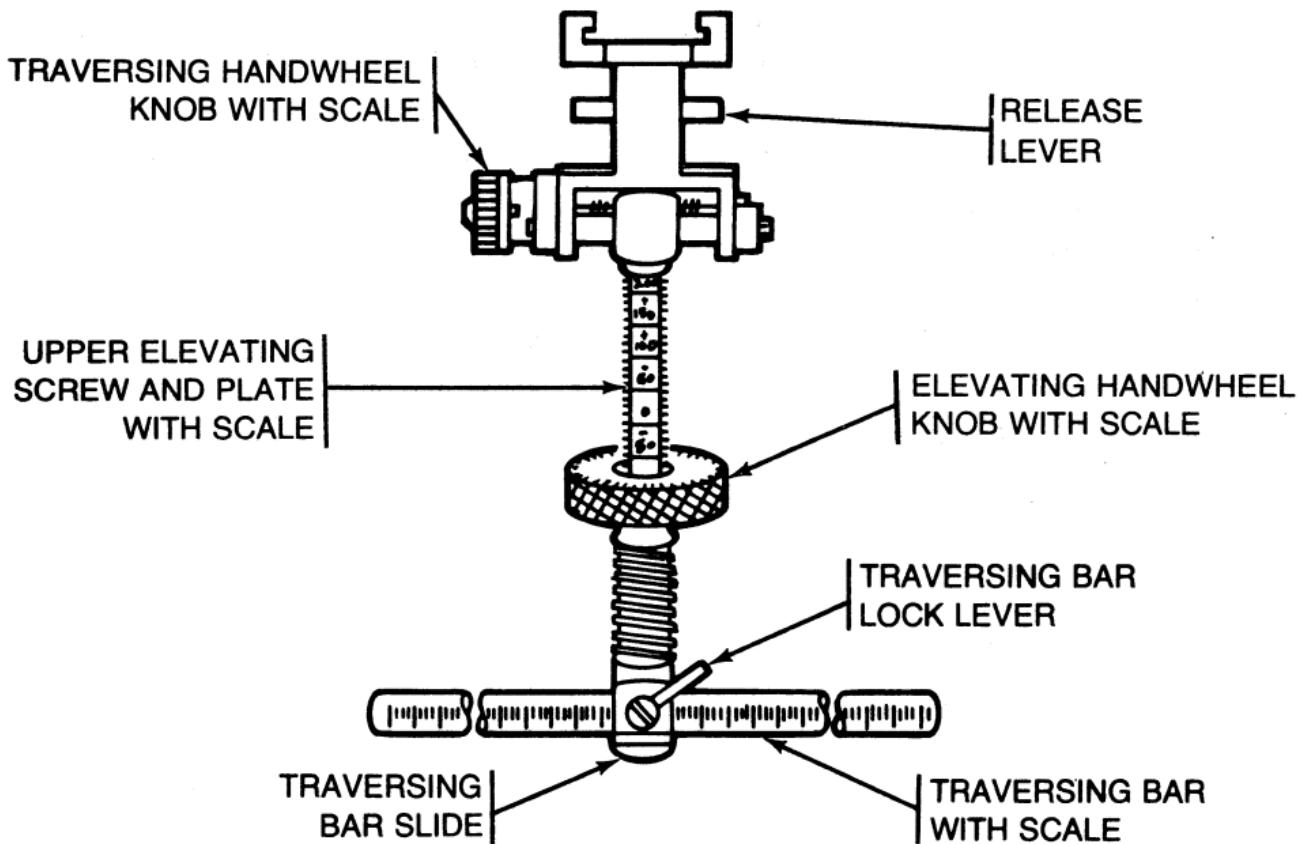
ELEVATING HANDWHEEL KNOB WITH SCALE. Use scale to make minor adjustments in range. Each click moves the gun up or down 1 mil.

TRAVERSING BAR SLIDE. Makes major traversing adjustments quickly. Read scale on left edge of slide.

TRAVERSING BAR WITH SCALE. Marked in 5 mil increments.

TRAVERSING BAR LOCK LEVER. Turn right to lock traversing bar with scale in place.

TRAVERSING HANDWHEEL KNOB WITH SCALE. Use to make minor traversing adjustments. Each click moves the gun left or right 1 mil.



Section II. PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)

GENERAL

Always keep in mind the CAUTIONS and WARNINGS when performing your before (B) or during (D) PMCS. The numbers in the item number column shall be used for the "TM Number" column on DA Form 2404, Equipment Inspection and Maintenance Worksheet, in recording results of PMCS. After you operate, perform your after (A) PMCS.

Perform BEFORE PMCS if: (1) you are the assigned operator and the machine gun has been stored and not used for a period of 90 days or (2) you have been issued the machine gun for the first time.

WARNING

DO NOT INTERCHANGE BARREL ASSEMBLY OR BOLT ASSEMBLY FROM ONE MACHINE GUN TO ANOTHER. DOING SO MAY RESULT IN INJURY OR DEATH.

NOTE

PMCS is the same for both the M60 and M60D machine gun except where noted.

OPERATOR/CREW PMCS

B - Before

D- During

A - After

Perform before operations PMCS if you are operating the weapon for the first time.

Item No.	Interval			Item To Be Inspected Procedure	Equipment is NOT READY/AVAILABLE IF:
	B	D	A		
WARNING					
1	•			M60/M60D MACHINE GUN TOOLS AND EQUIPMENT. Visually check for missing or damaged tools and equipment (app B, C, and D).	
2	•			BARREL ASSEMBLY. Open cover, pull bolt to rear, push cocking handle forward and lock. Close cover, place on safe (S). Tilt weapon end to end to make sure gas piston slides freely (a clicking sound will be heard as the piston slides in the cylinder). Run a dry swab through the bore to remove excess CLP or obstructions.	

Gas piston will not slide. Obstruction in barrel. ←

OPERATOR/CREW PMCS (CONT)

B - Before

D- During

A - After

Perform before operations PMCS if you are operating the weapon for the first time.

Item No.	Interval			Item To Be Inspected Procedure	Equipment is NOT READY/AVAILABLE IF:
	B	D	A		
3	•			<p>TRIGGER MECHANISM GRIP ASSEMBLY (M60). Make sure flat leaf spring is in place (p 3-16). Check that safety is in F position. Pull bolt to rear, move safety to S. Push charging handle forward and lock and pull the trigger.</p> <p>SEAR AND SAFETY HOUSING ASSEMBLY (M60D). Make sure flat leaf spring is in place (p 3-16). Check that safety is in F position. Pull bolt to rear, move safety to S. Push charging handle forward and lock and pull the trigger.</p>	
4	•			<p>COVER ASSEMBLY. Lightly lubricate all moving parts with CLP (item 1, app D) on a clean swab (item 3, app D).</p>	<p>Weapon functions with safety at S. ←</p>

OPERATOR/CREW PMCS (CONT)

B - Before D- During A - After

Perform before operations PMCS if you are operating the weapon for the first time.

Item No.	Interval			Item To Be Inspected Procedure	Equipment is NOT READY/AVAILABLE IF:
	B	D	A		
5	●			GUN RECEIVER ASSEMBLY. Check for free movement of cocking handle. Check barrel lock lever. Make sure it locks barrel in place.	Cocking handle binds or barrel is loose. ←
6		●		M60/M60D MACHINE GUN. Erratic or sluggish firing may indicate carbon buildup. Switch barrels (p 3-15). If firing is still erratic or sluggish, field-strip the weapon and perform the necessary maintenance (p 3-8, section III) to complete the fire mission.	Weapon ceases to operate. ←
7	●			SMALL ARMS SLING (M60). Inspect sling for damage and for missing or loose sling swivels.	

OPERATOR/CREW PMCS (CONT)

B - Before

D- During

A - After

Perform before operations PMCS if you are operating the weapon for the first time.

Item No.	Interval			Item To Be Inspected Procedure	Equipment is NOT READY/AVAILABLE IF:
	B	D	A		
8			●	M60/M60D MACHINE GUN. Field-strip, clean, inspect and lubricate entire weapon (p 3-8).	
9			●	M60/M60D MACHINE GUN (INSPECTION). Inspect operating rod assembly and barrel assembly for burrs, cracks and chips. Make sure the gas piston slides back and forth freely. Inspect components of trigger assembly for wear. Place safety in F position, sear should move slightly. Inspect breech bolt assembly for defects - e.g., cracks or chips. Reassemble weapon and check for proper functioning.	Weapon fails to function properly or has damaged or missing parts.

OPERATOR/CREW PMCS (CONT)

B - Before

D- During

A - After

Perform before operations PMCS if you are operating the weapon for the first time.

Item No.	Interval			Item To Be Inspected Procedure	Equipment is NOT READY/AVAILABLE IF:
	B	D	A		
10			●	TRIPOD MOUNT M122. Clean and lubricate tripod, traversing and elevating mechanism assembly, and pintle assembly (p 4-1).	
11			●	TRIPOD MOUNT M122. Inspect traversing bar assembly for tightness when legs are extended. Make sure sleeve latch operates freely. Make sure traversing handwheels operate freely. Be sure all scale readings are legible and zero indexes line up (FM 23-67).	

Section III. OPERATION UNDER USUAL CONDITIONS

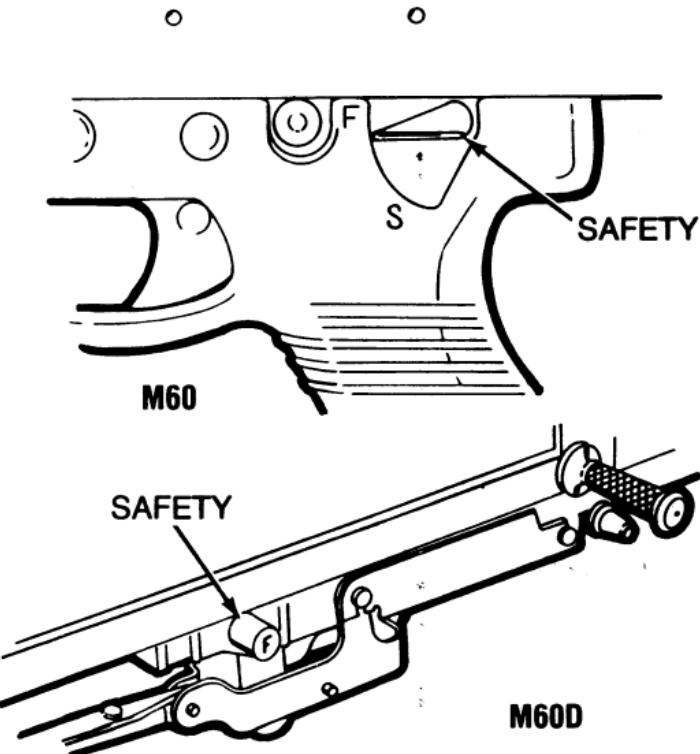
ASSEMBLY AND PREPARATION FOR USE

LOADING

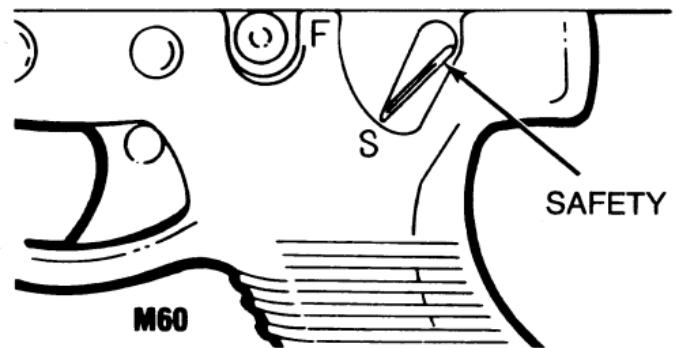
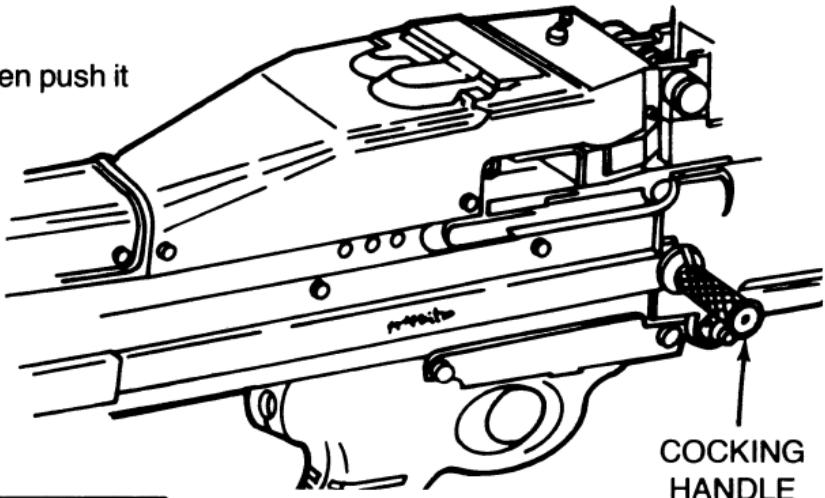
NOTE

The following procedures illustrate the M60 machine gun except where the M60 parts differ from M60D parts, then both weapons are illustrated.

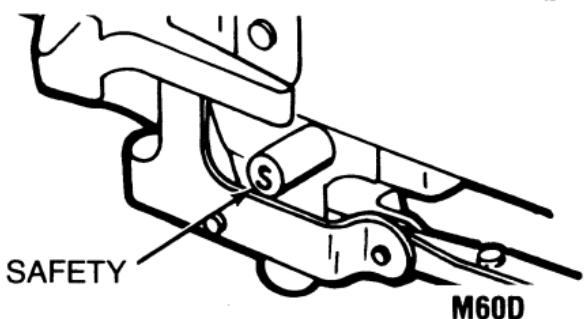
- 1 Point weapon down range.
- 2 Safety should be on F.
 - M60 - Move safety to F.
 - M60D - Press in on F.



3 Pull cocking handle rearward, then push it forward until it locks.



4 M60 - Move safety to S.



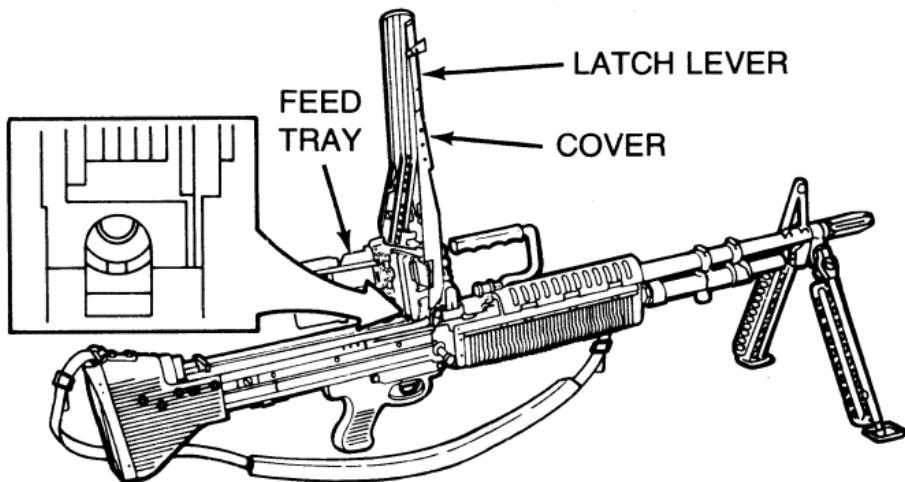
M60D - Press in on S.

ASSEMBLY AND PREPARATION FOR USE (CONT)

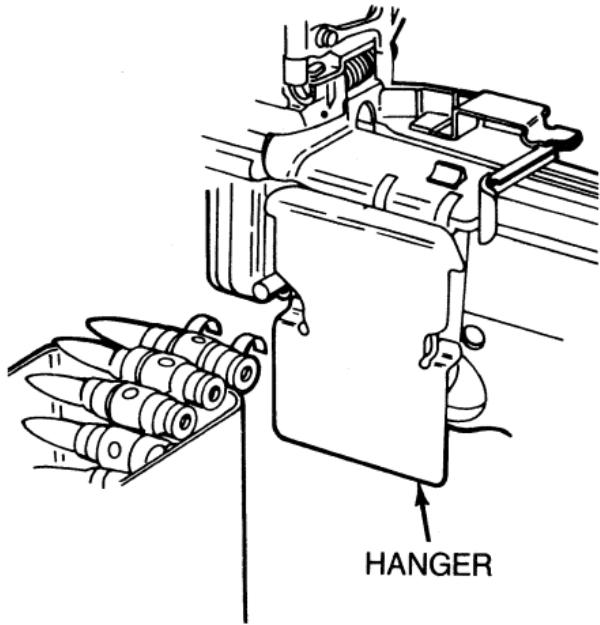
LOADING (CONT)

CAUTION

Bolt assembly must be rearward when opening or closing the cover.

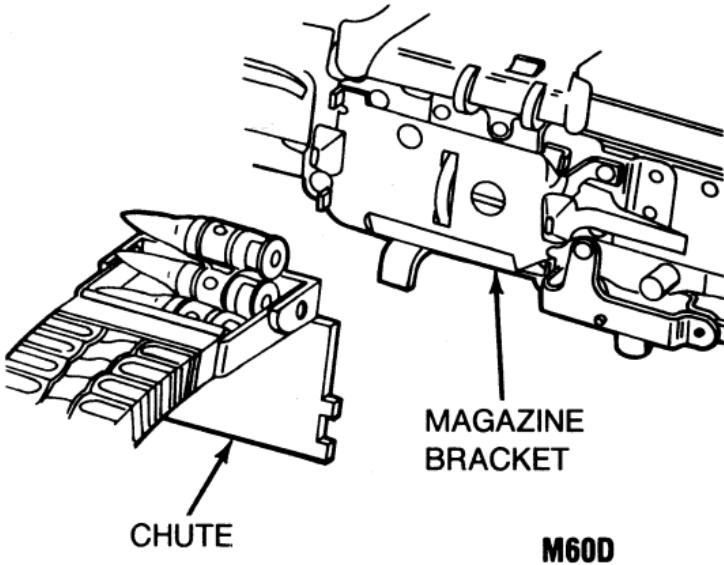


- 5 Turn latch lever and open cover.
- 6 Raise cartridge feed tray and check chamber for ammunition.



M60

7 M60 - Place bandoleer on bandoleer hanger.



M60D

M60D - Attach ammunition chute to magazine bracket.

ASSEMBLY AND PREPARATION FOR USE (CONT)

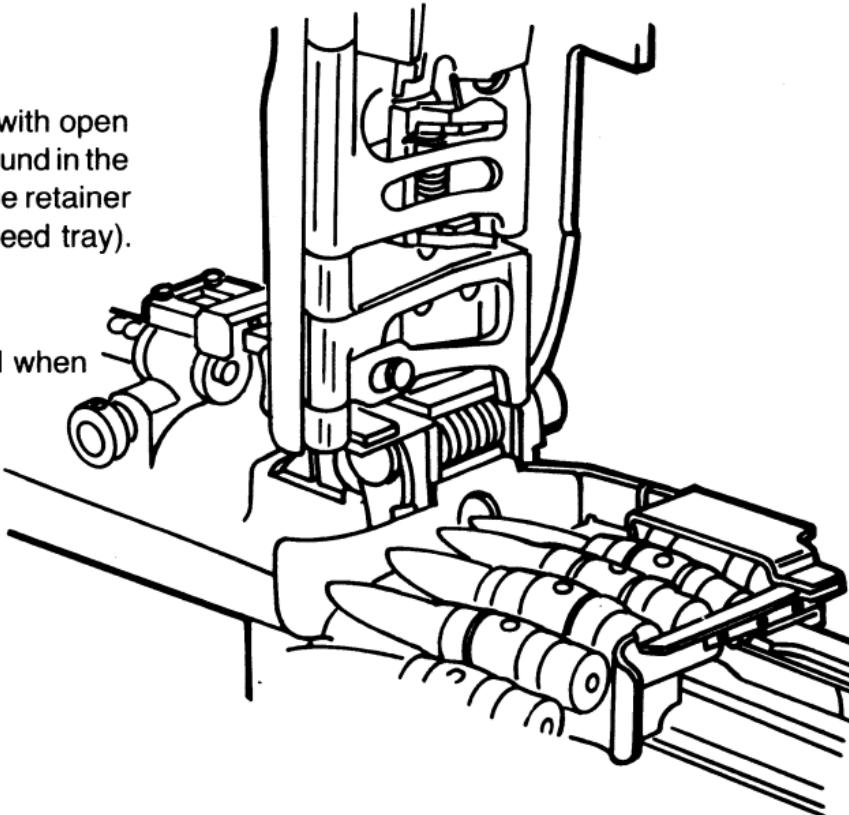
LOADING (CONT)

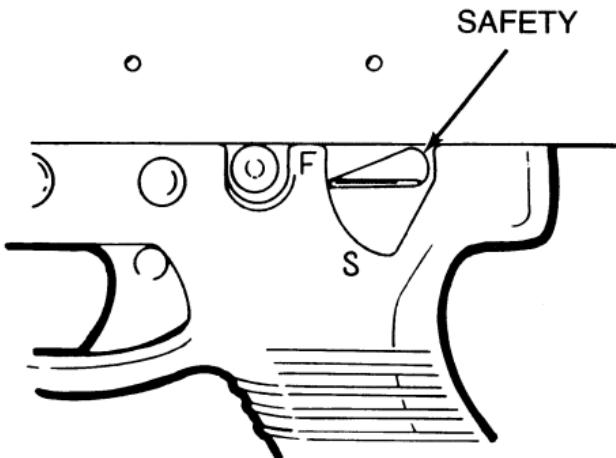
- 8 Place ammunition on feed tray, with open side of links down and with first round in the feed groove. (Make sure cartridge retainer pawl holds ammunition link on feed tray).

CAUTION

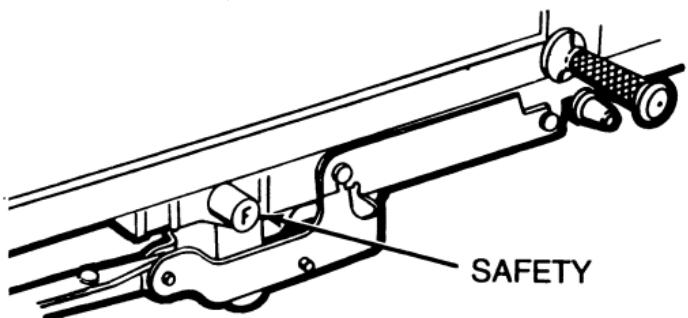
Bolt assembly must be rearward when opening or closing the cover.

- 9 Close cover.





M60



M60D

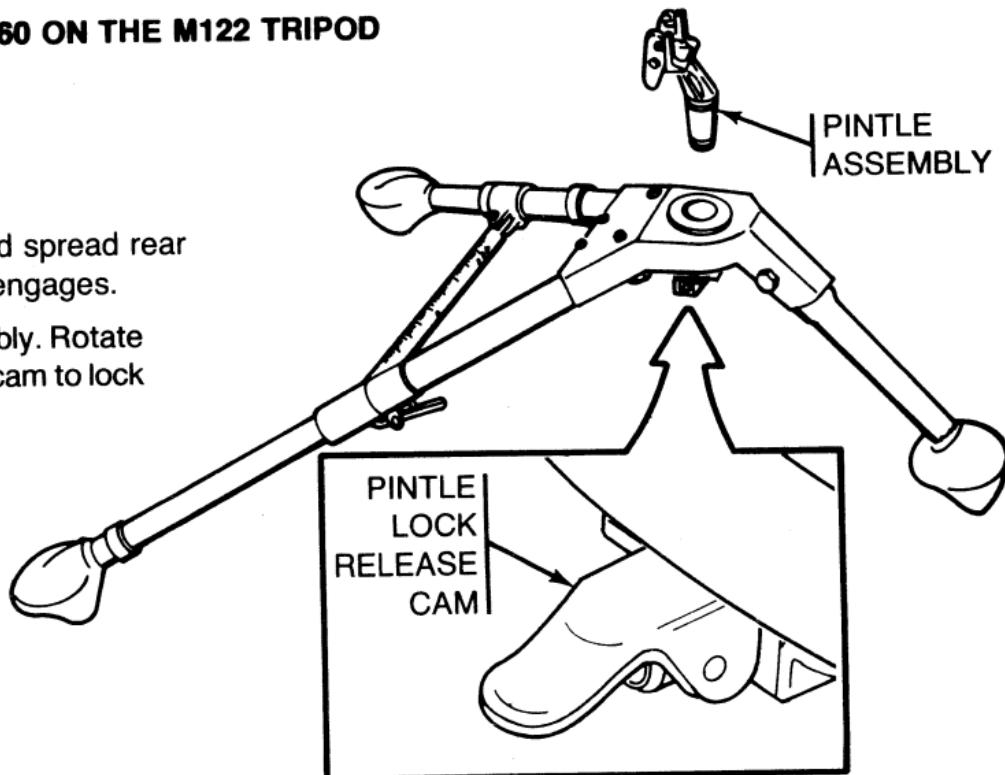
10 M60 - Move safety to F.
M60D - Press in on F.

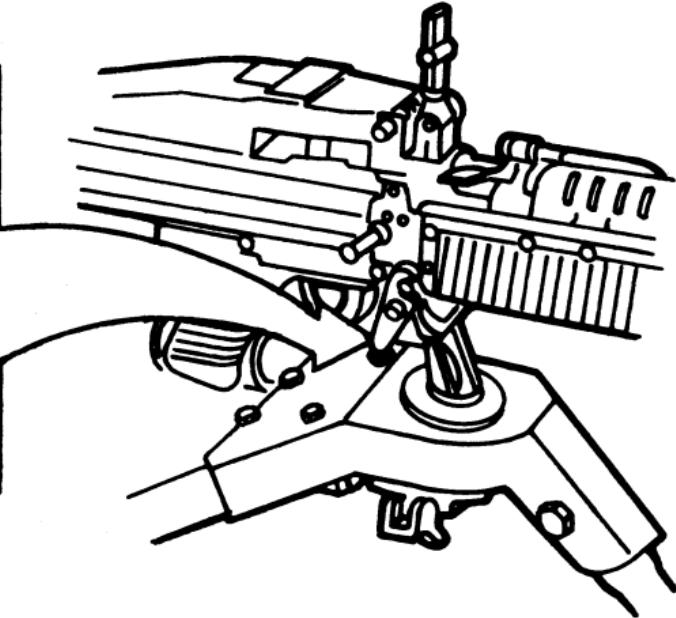
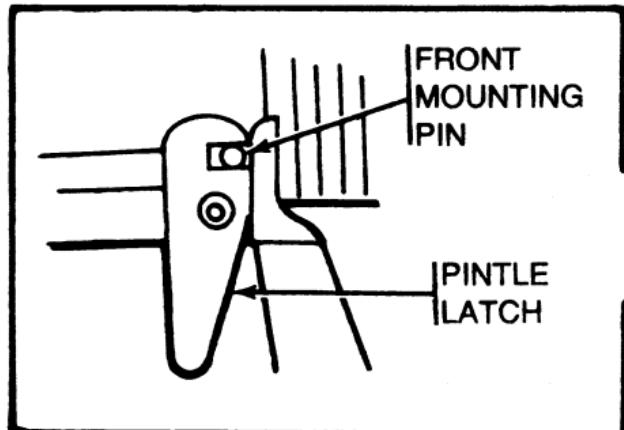
11 The gun is ready to fire.

ASSEMBLY AND PREPARATION FOR USE (CONT)

HOW TO PUT THE M60 ON THE M122 TRIPOD

- 1 Unfold front leg and spread rear legs until leg lock engages.
- 2 Insert pintle assembly. Rotate pintle lock release cam to lock (see FM 23-67).

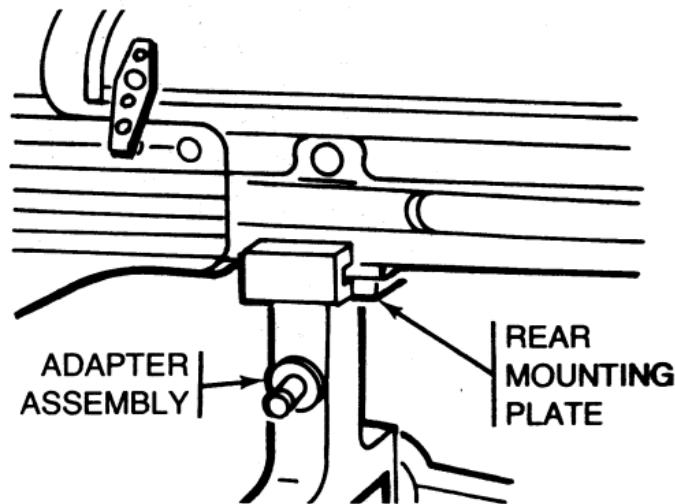
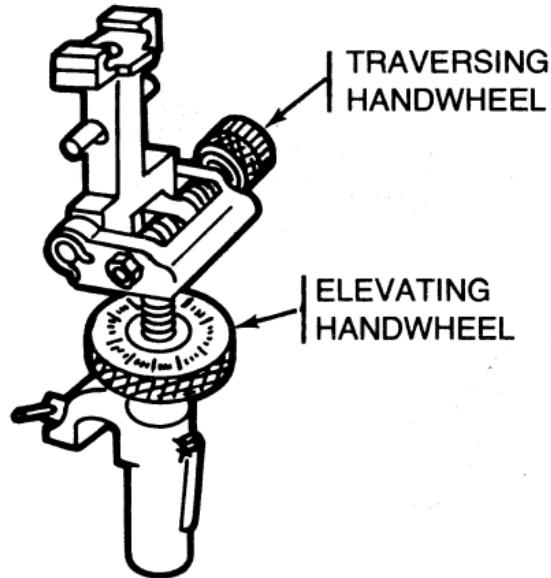




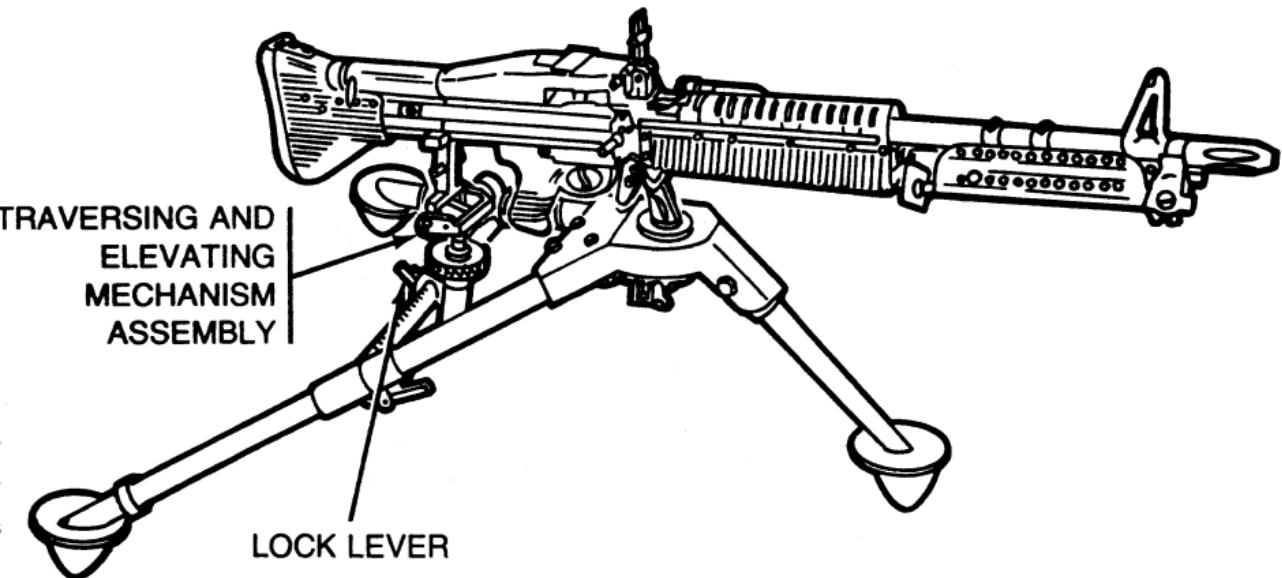
- 3 Place ends of machine gun's front mounting pin on top of pintle assembly.
- 4 Press bottom of latch to open pintle assembly. The ends of machine gun mounting pin should lock in place on pintle assembly.

ASSEMBLY AND PREPARATION FOR USE (CONT)

HOW TO PUT M60 ON THE M122 TRIPOD (CONT)



- 5 Center (zero) traversing handwheel and elevating handwheel on traversing and elevating mechanism assembly (see FM 23-67).
- 6 Slide adapter assembly on machine gun's rear mounting plate from the rear to the front.

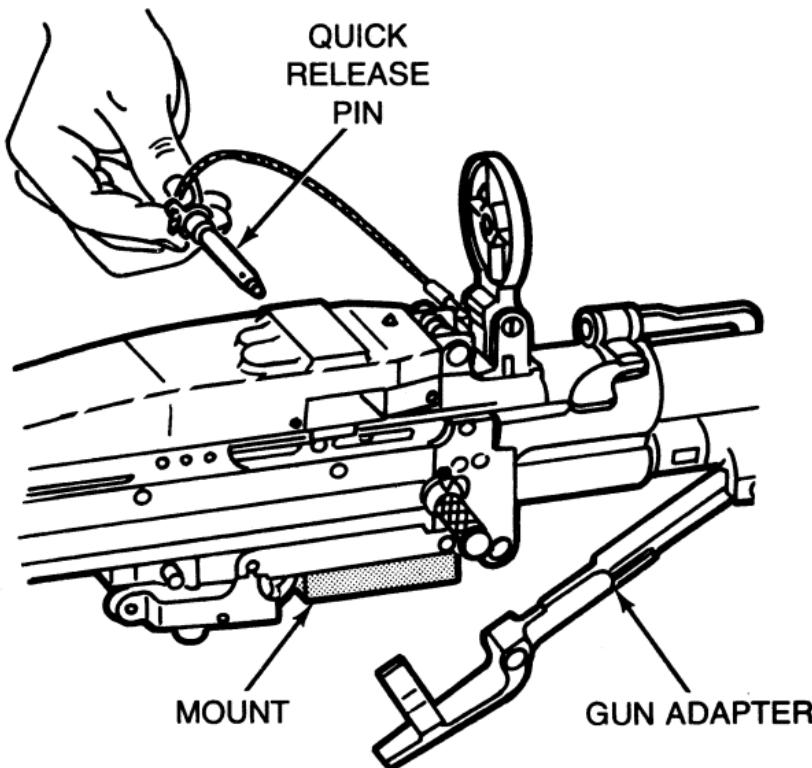


- 7 Position traversing and elevating mechanism assembly on traversing bar. Rotate lock lever to secure.

ASSEMBLY AND PREPARATION FOR USE (CONT)

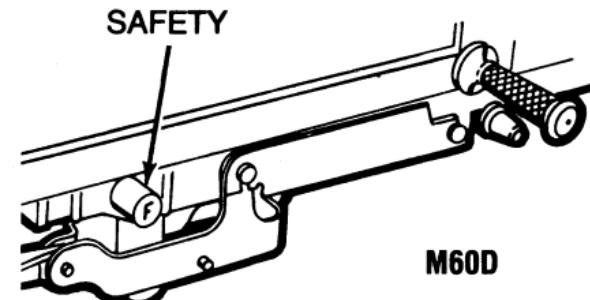
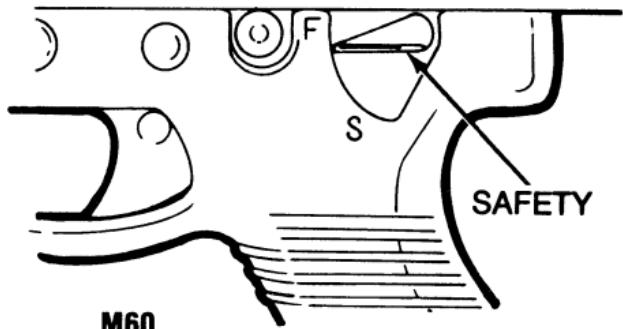
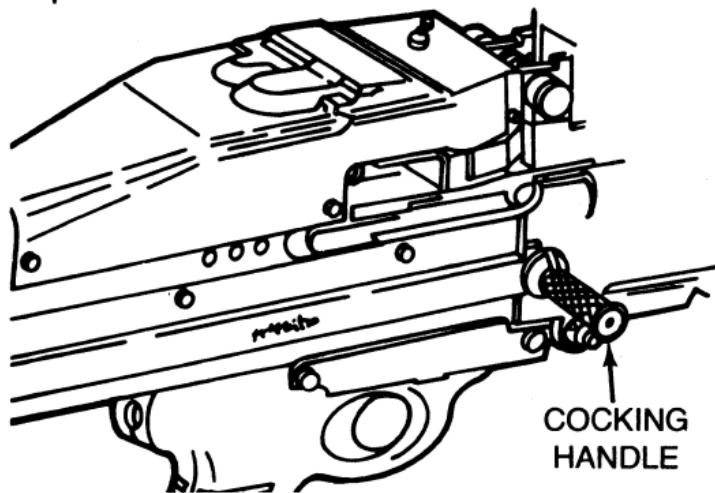
HOW TO PUT THE M60D ON VEHICLES

- 1 Pull quick release pin.
- 2 Lower gun adapter.
- 3 Attach M60D machine gun to vehicle or aircraft mount using applicable manual.
- 4 Raise gun adapter.
- 5 Insert quick release pin.



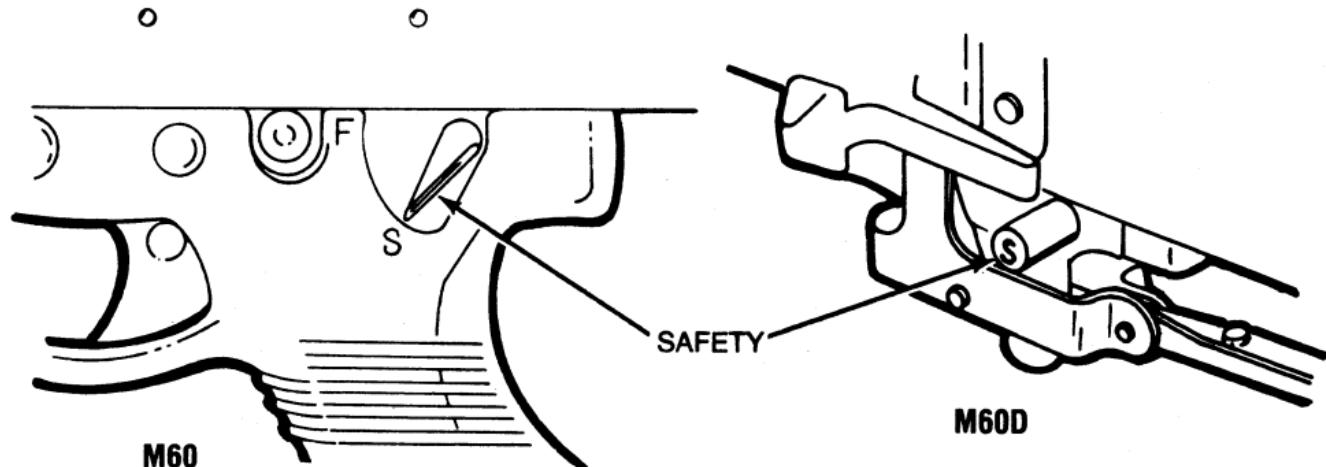
CLEARING AND UNLOADING

- 1 Point weapon down range.
- 2 Open cover.
- 3 Safety should be on F.
 - M60 - Move safety to F.
 - M60D - Press in on F.
- 4 Pull cocking handle rearward, then push it forward until it locks.



ASSEMBLY AND PREPARATION FOR USE (CONT)

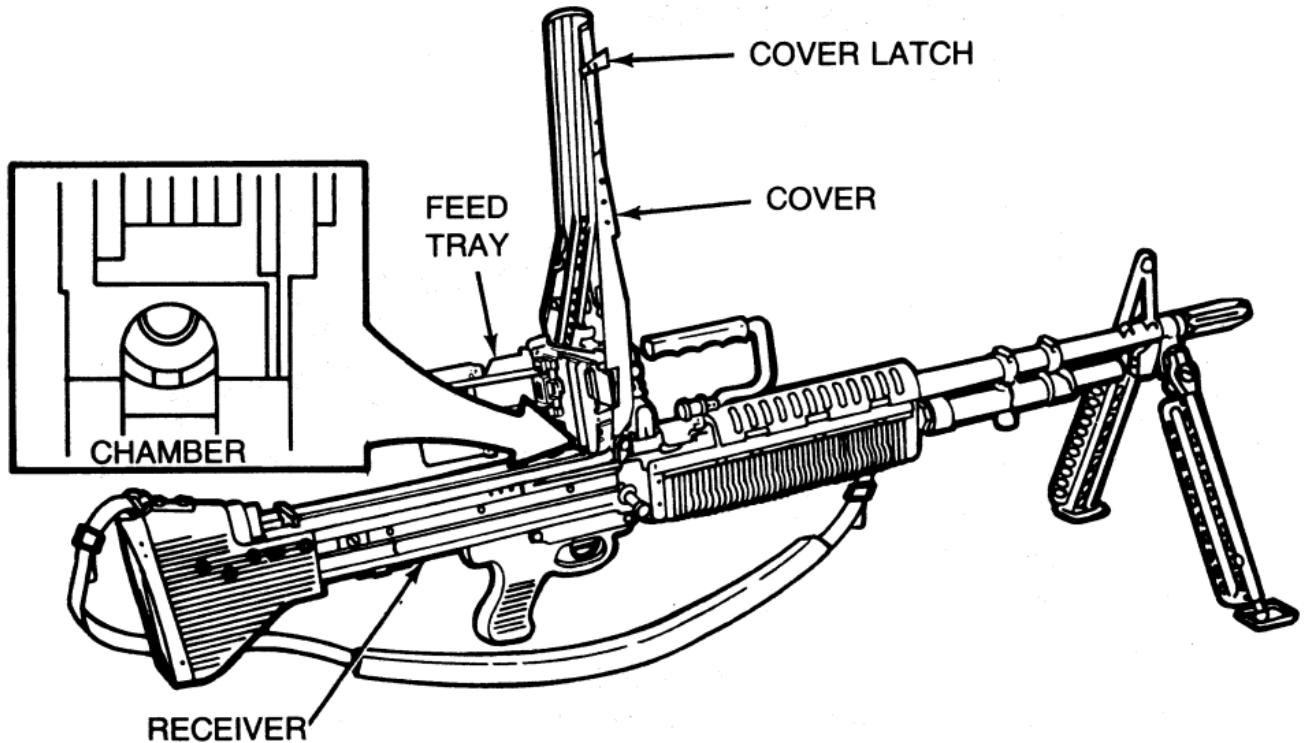
CLEARING AND UNLOADING (CONT)



- 5 M60 - Move safety to S.
M60D - Press in on S.

WARNING

If cover is opened on a hot cartridge (hot barrel), an open cover cookoff could occur and result in serious injury or death. Evacuate area for 15 minutes and then do IMMEDIATE ACTION, page 2-35.

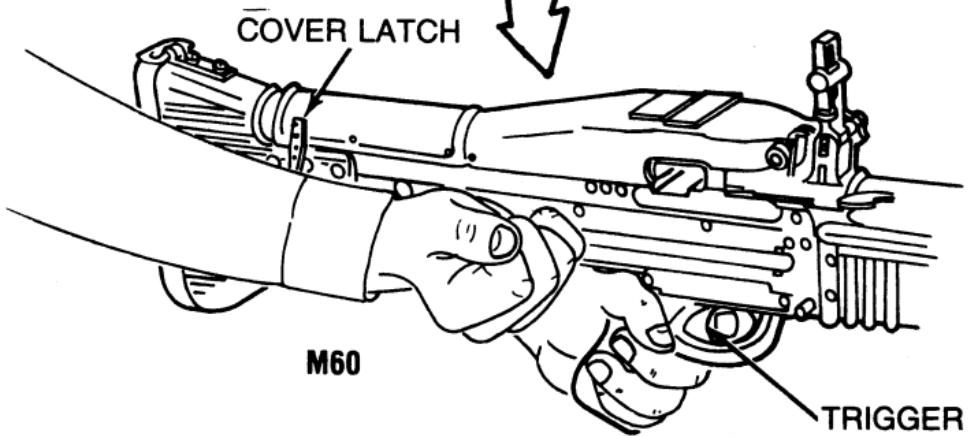
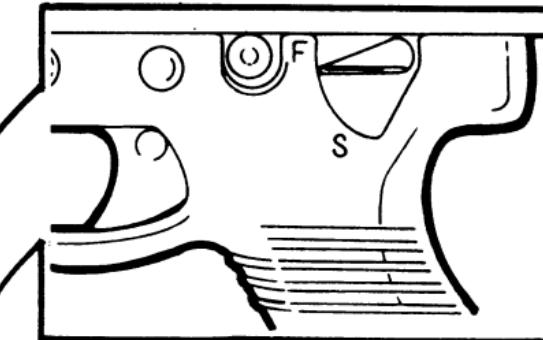


- 6 Remove ammunition and link belt and raise feed tray.
- 7 Eyeball chamber. If empty, go to step 8. If a round is chambered, see page 2-39 for stuck or ruptured cartridge case and page 3-3 for troubleshooting.

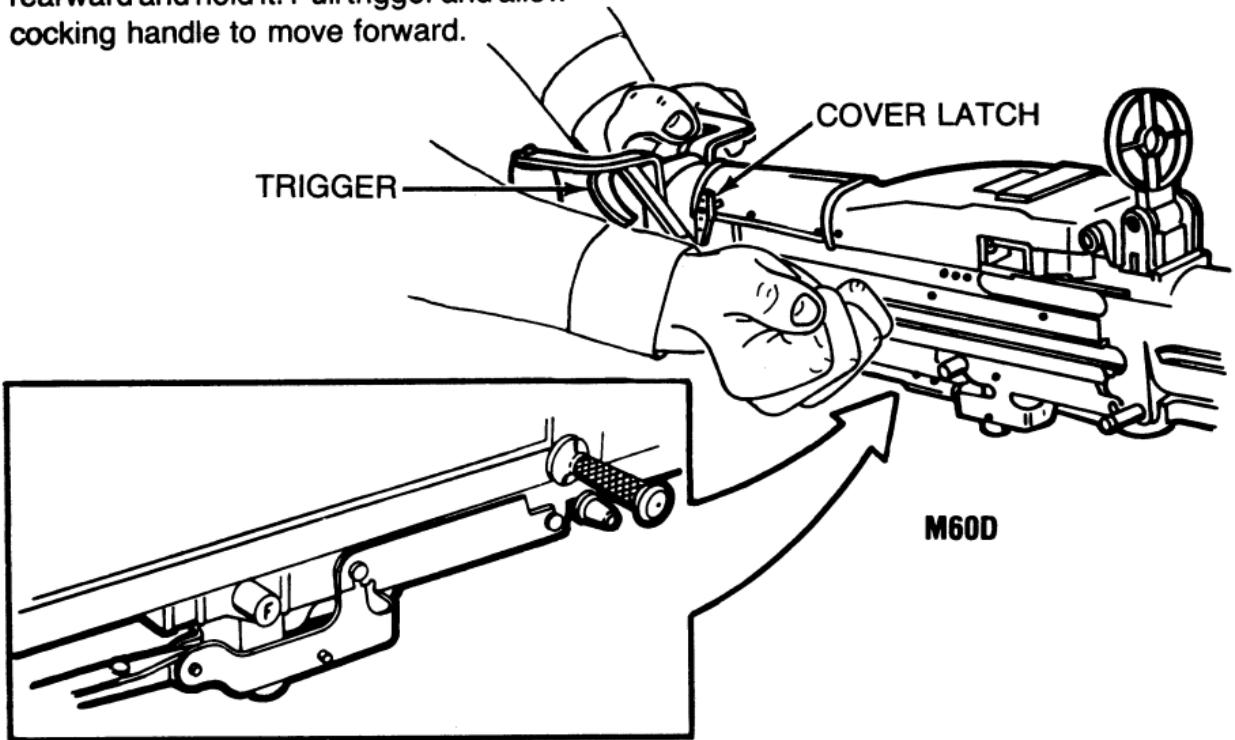
ASSEMBLY AND PREPARATION FOR USE (CONT)

CLEARING AND UNLOADING (CONT)

- 8 Lower feed tray.
- 9 Close cover. Cover latch should catch and hold cover closed.
- 10 M60 - Move safety to F. Pull cocking handle rearward and hold it. Pull trigger and allow cocking handle to move forward.



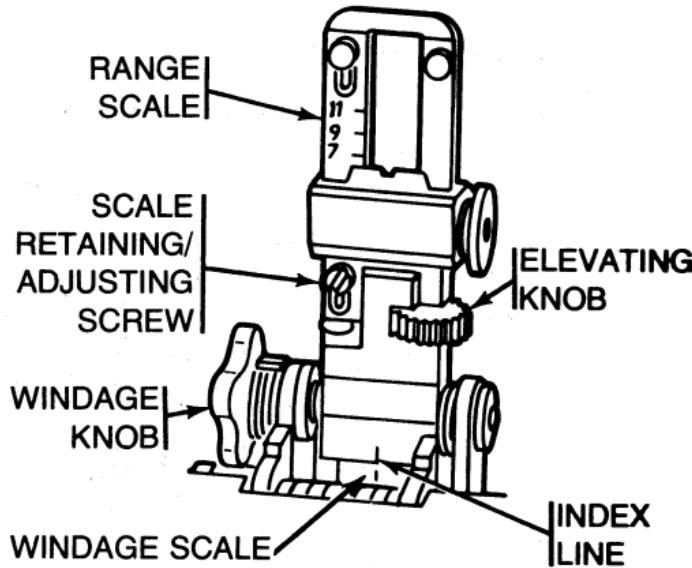
M60D - Press in on F. Pull cocking handle rearward and hold it. Pull trigger and allow cocking handle to move forward.



INITIAL ADJUSTMENTS, DAILY CHECKS, AND SELF-TEST

FIELD ZEROING

- 1 Choose a target between 300 and 700 meters.
- 2 Place range scale to the target on rear sights.
- 3 Zero windage scale with index line.
- 4 Aim at six o'clock on bottom of target.
- 5 Fire a burst of 6 to 9 rounds and observe impact of burst.
- 6 Correct for left or right wind by adjusting windage knob. Then correct range by adjusting elevating knob. Adjust until a burst of 6 to 9 rounds is on target.
- 7 Loosen scale retaining/adjusting screw and adjust elevation scale to reflect the range to the target.



NOTE

One mil is equal to one meter at 1000 meters.

OPERATING PROCEDURES

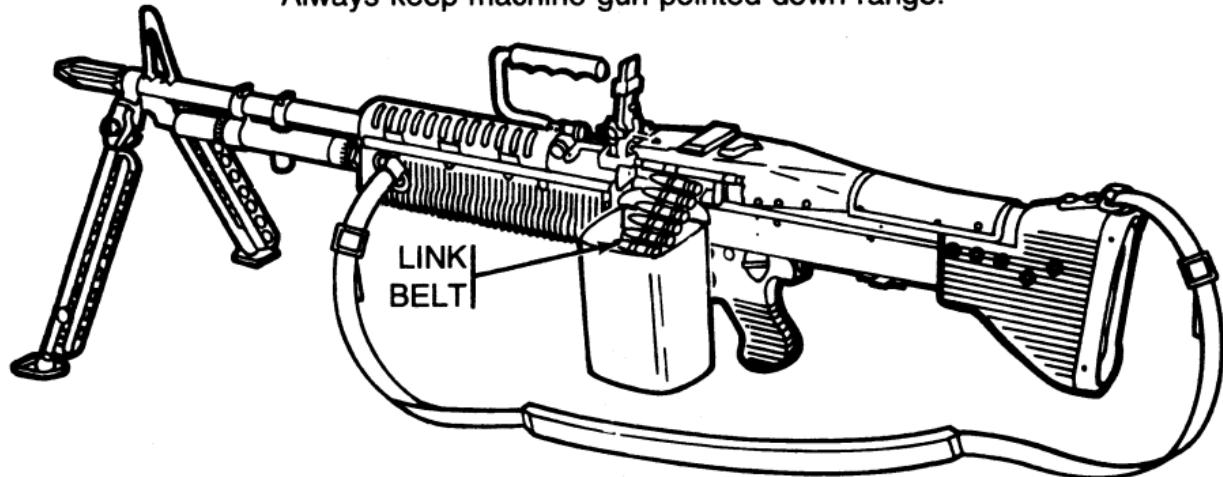
IMMEDIATE ACTION

RUNAWAY M60 MACHINE GUN

- 1 If runaway occurs (machine gun won't stop firing), take the following actions to correct it quickly.

WARNING

Always keep machine gun pointed down range.

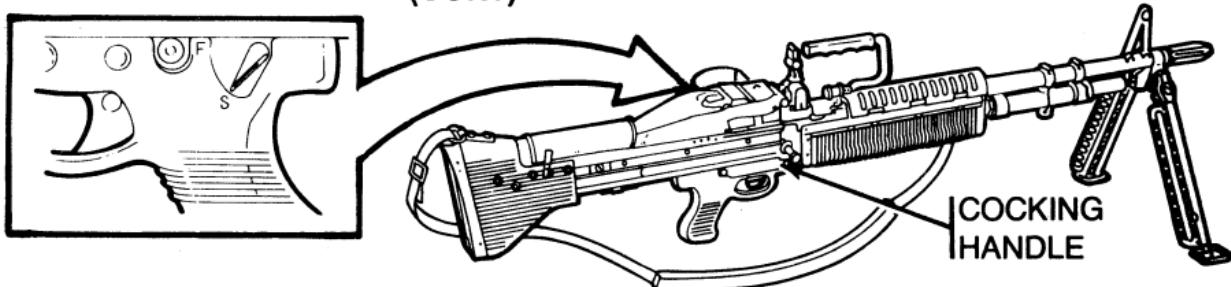


- 2 Break link belt (grasp belt and twist it firmly) or let machine gun fire if near end of link belt.

OPERATING PROCEDURES (CONT)

IMMEDIATE ACTION (CONT)

RUNAWAY M60 MACHINE GUN (CONT)



- 3 Pull cocking handle all the way back and hold it. Place safety to S and remove link belt.
- 4 Clear machine gun (p 2-25).

WARNING

Never reload a runaway machine gun until it has been repaired. Be sure machine gun is cleared before moving it.

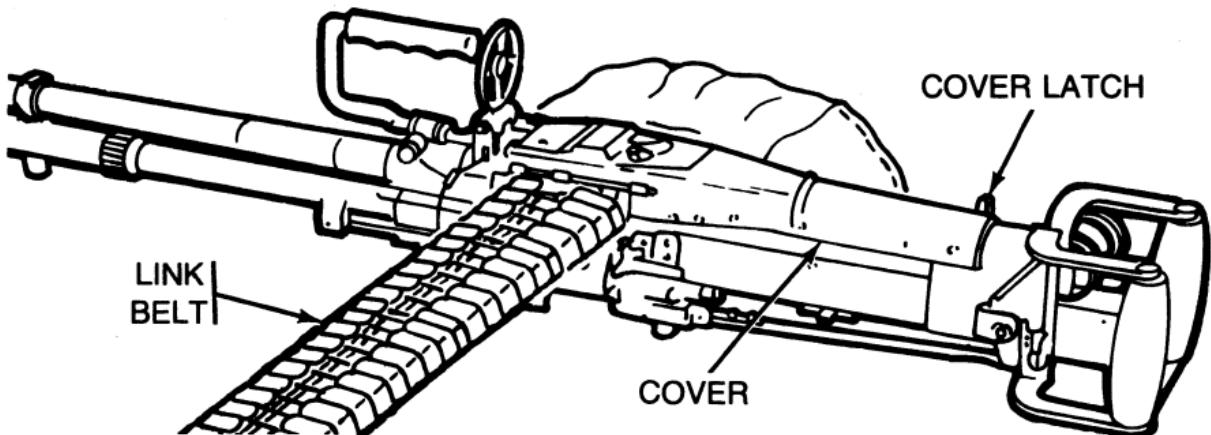
- 5 Notify organizational maintenance for repairs.

RUNAWAY M60D MACHINE GUN

- 1 If runaway occurs (machine gun won't stop firing), take the following actions to correct it quickly.

WARNING

Always keep machine gun pointed down range.



- 2 Let machine gun fire if near end of link belt.
- 3 Rotate cover latch and open cover.

OPERATING PROCEDURES (CONT)

IMMEDIATE ACTION (CONT)

RUNAWAY M60D MACHINE GUN (CONT)

- 4 Clear machine gun (p 2-25).

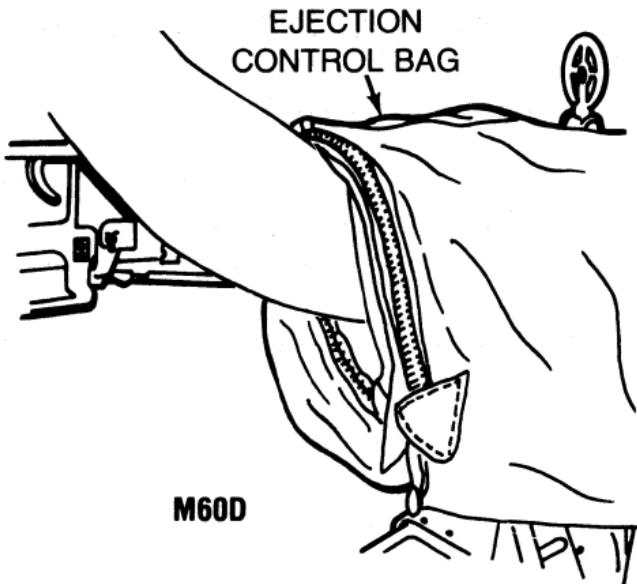
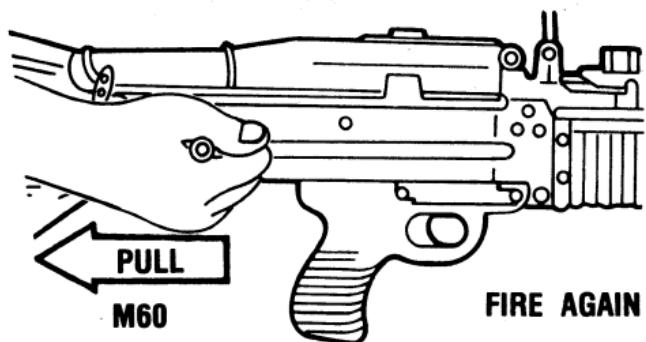
WARNING

Never reload a runaway machine gun until it has been repaired. Be sure machine gun is cleared before removing it from mount.

- 5 Notify organizational maintenance for repairs.

MISFIRE

If the weapon stops firing before you complete your mission, take IMMEDIATE ACTION within 10 seconds.



- 1 M60 - Pull cocking handle rearward.
M60D - Unzip ejection control bag and pull cocking handle rearward.
- 2 Check ejection port (M60 ONLY).
- 3 If a round or cartridge case is ejected, push cocking handle forward and fire again.

OPERATING PROCEDURES (CONT)

IMMEDIATE ACTION (CONT)

MISFIRE (CONT)

WARNING

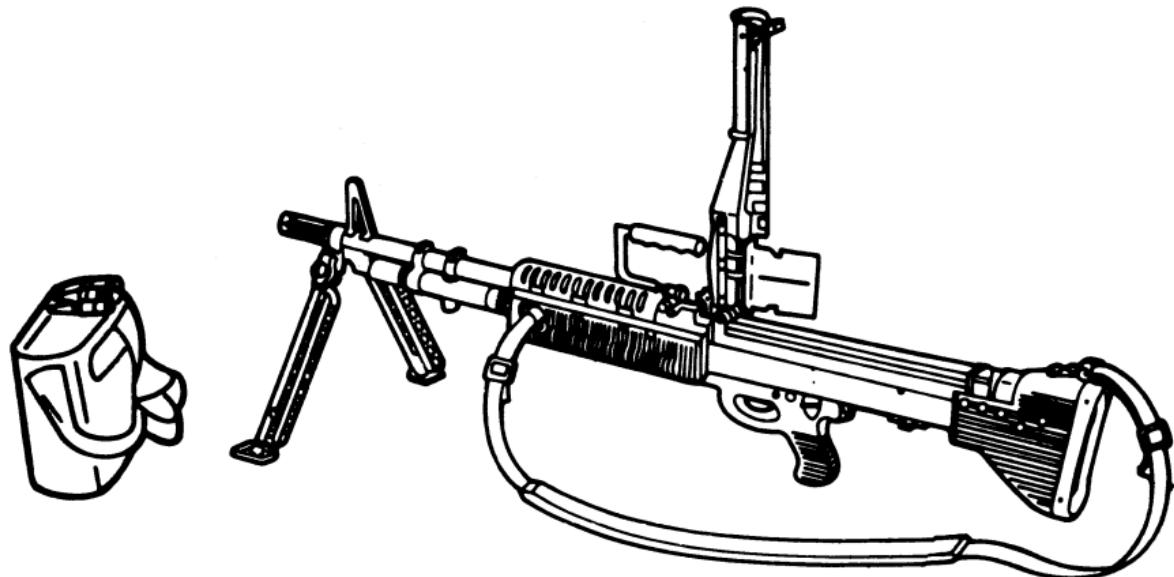
If cover is opened on a hot cartridge (hot barrel), an open-cover cookoff could occur and result in serious injury or death. Close cover and evacuate area for 15 minutes.

- 4 If nothing is ejected and the barrel is hot enough to cause a cookoff (200 rounds fired within 2 minutes), wait at least 15 minutes (make sure bolt is locked rearward). Repeat steps for IMMEDIATE ACTION.
- 5 If IMMEDIATE ACTION fails to remove cartridge case, take REMEDIAL ACTION on page 2-37.

REMEDIAL ACTION (STEPS TO TAKE IF IMMEDIATE ACTION - MISFIRE - DOES NOT WORK)

WARNING

If cover is opened on a hot cartridge (hot barrel), an open-cover cookoff could occur and result in serious injury or death. Close cover and evacuate area for 15 minutes.



OPERATING PROCEDURES (CONT)

REMEDIAL ACTION (CONT)

- 1 Keep weapon on target (down range/impact area). Clear weapon when barrel is cool (after 15 minutes wait) using the following steps.
- 2 Pull cocking handle rearward.
- 3 If a round is not ejected:
M60 - Place safety to S.
M60D - Press in on S.
- 4 Open cover, remove ammunition link belt and raise feed tray.
- 5 Inspect receiver, chamber, extractor, and ammunition.
- 6 If a round is in chamber, lower feed tray and close cover.
- 7 Push cocking handle forward.
- 8 M60 - Place safety to F.
M60D - Press in on F.
- 9 Attempt to fire.
- 10 If a round is fired and ejected, reload and continue to fire.
- 11 If weapon does not fire or eject, clear and unload weapon, and notify organizational maintenance for repair.

REMOVING STUCK OR RUPTURED CARTRIDGE CASE (WHEN ROUND FIRES BUT CARTRIDGE CASE DOES NOT EXTRACT)

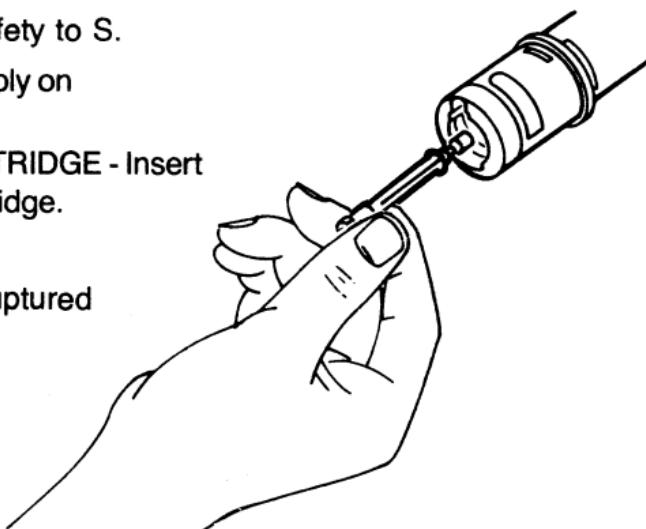
WARNING

When removing a stuck unfired cartridge, stay clear of the muzzle. Do not allow cartridge to contact any hard surface. Cartridge may fire on contact. Remove a stuck unfired cartridge using the same procedures for removing a stuck or ruptured cartridge case.

- 1 Pull cocking handle rearward and place safety to S.
- 2 Remove barrel (see removal of barrel assembly on page 3-15).
- 3 STUCK CARTRIDGE CASE/UNFIRED CARTRIDGE - Insert cleaning rod in muzzle and tap out case/cartridge.

RUPTURED CARTRIDGE CASE

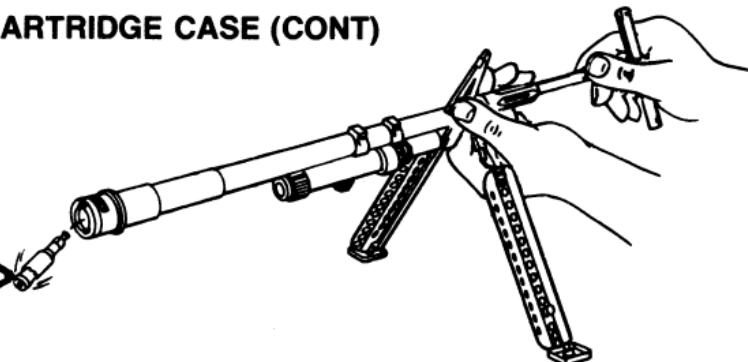
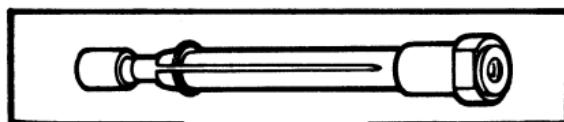
- a. Push ruptured cartridge extractor inside ruptured case in chamber until it seats.



OPERATING PROCEDURES (CONT)

REMEDIAL ACTION (CONT)

REMOVING STUCK OR RUPTURED CARTRIDGE CASE (CONT)

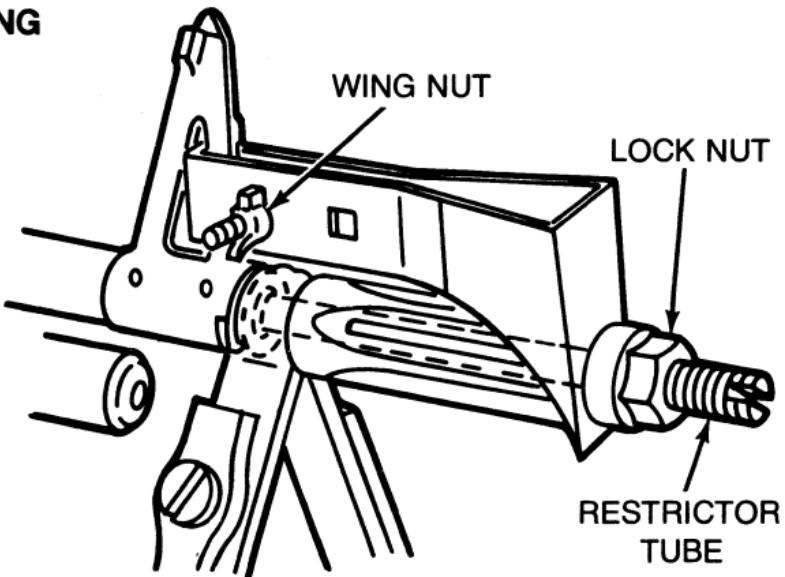


- b. Lightly tap out with cleaning rod.
- c. Remove extractor from cartridge case.
- d. Unscrew extractor tool and remove cartridge case. Reassemble extractor tool.
- 4 Install barrel. See reassembly on page 3-36.
- 5 Close cover.
- 6 Hold cocking handle rearward.
- 7 Place safety to F.
- 8 Pull trigger and ease cocking handle forward.
- 9 Once weapon is cleared, do not place safety to S when bolt is forward. Leave safety at F.

OPERATION OF AUXILIARY EQUIPMENT

INSTALLING M13A1 BLANK FIRING ATTACHMENT

- 1 Loosen lock nut and turn restrictor tube out a few turns.
- 2 Loosen wing nut a few turns.
- 3 Slide restrictor tube in flash suppressor as far as possible.
- 4 Clamp blank firing attachment around front sight.
- 5 Tighten wing nut fingertight.
- 6 Screw restrictor tube in until it seats tight against muzzle end of barrel to prevent gas leakage.
- 7 Tighten lock nut.

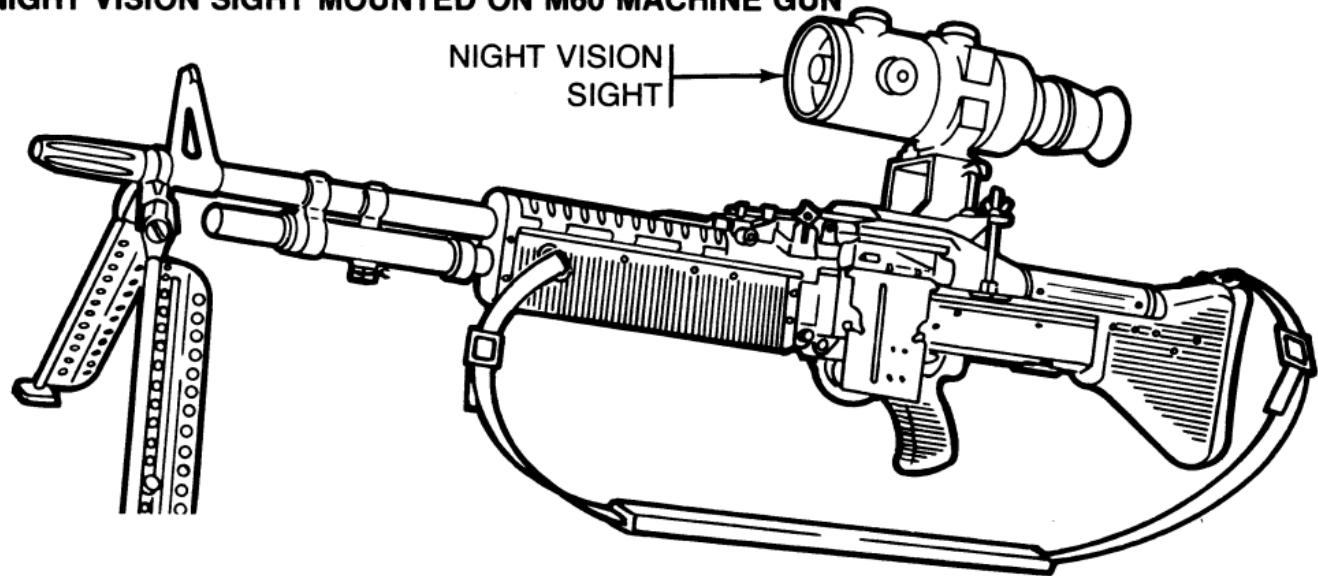


NOTE

After Firing 500 Blank Rounds: Clean gun including barrel assembly, gas cylinder, gas piston, gas port, chamber bore, and Blank Firing Attachment (BFA). If necessary, clean gun before firing 500 blank rounds.

OPERATION OF AUXILIARY EQUIPMENT (CONT)

NIGHT VISION SIGHT MOUNTED ON M60 MACHINE GUN



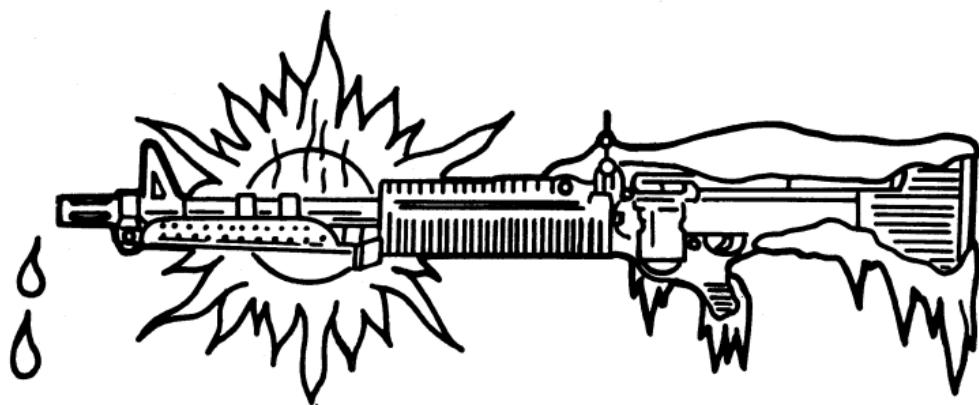
To mount night vision sight AN/PVS-4 on the M60 machine gun, refer to TM 11-5855-213-10.

PREPARATION FOR MOVEMENT

Refer to FM 23-67.

Section IV. OPERATION UNDER UNUSUAL CONDITIONS

PROTECTIVE MEASURES FOR UNUSUAL CONDITIONS



In Extremely Cold Climate: Lubricate according to Lube Guide (p 3-0). Use CLP lightly and keep weapon free of moisture.

PROTECTIVE MEASURES FOR UNUSUAL CONDITIONS (CONT)

In Hot, Wet Climate: Lubricate and inspect at least twice monthly. Use light coat of CLP and keep weapon dry.

In Hot, Dusty, and Sandy Areas: Inspect daily and clean frequently. Wipe CLP from exposed surfaces and keep sand out of parts. Cover weapon as much as possible.

After Exposure to Water: First make sure weapon is dry before lubricating. Then disassemble, clean, lubricate, and reassemble weapon as soon as possible.

Nuclear, Biological and Chemical (NBC) Reconnaissance and Decontamination Operations: General procedures can be found in FM 3-87, FM 21-40 and TM 3-220.

DATA SECTION (DETAILED LEGEND) FOR RANGE CARD

Purpose of the Range Card and Data Section: To prerecord information on various targets to use during limited visibility or to adjust fire rapidly.

Target Numbers (Reference Numbers): Indicate reference points in field of fire.

Information on Each Target Includes:

- Target description.
- Range to target.
- Elevation setting on traversing and elevating mechanism to hit target.
- Deflection setting on traversing and elevating mechanism to hit target.
- Any pertinent remarks.

Reference: FM 23-67

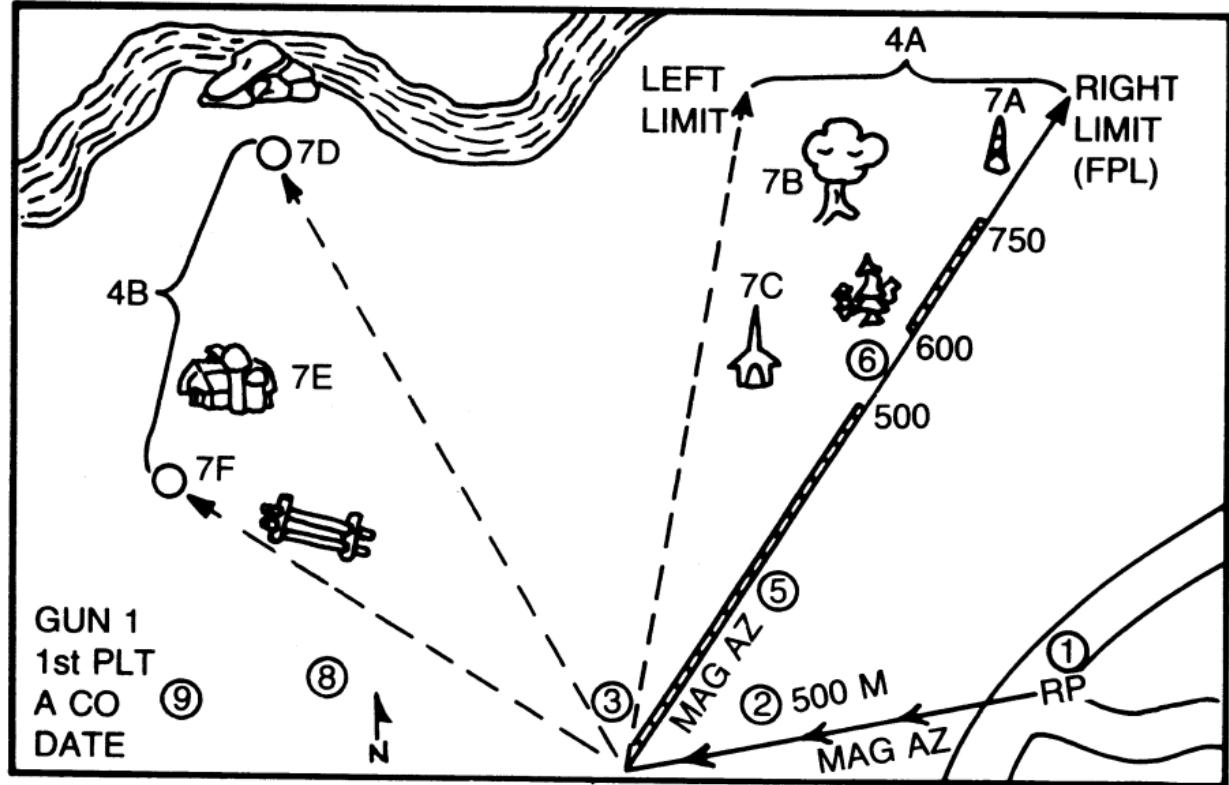
PREPARING A RANGE CARD

In a defensive situation, make a range card. The essential elements of the range card are:

- 1 A known Reference Point (RP).
- 2 The direction and distance from the RP to the machine gun.
- 3 The machine gun position.
- 4A The sector of fire with left and right limits (in this case, also Final Protective Line, FPL).
- 4B Secondary sector.
- 5 The MAGnetic AZimuth (MAG AZ) of the FPL.
- 6 Dead space in the FPL where there is no grazing fire.
- 7 Reference points (target numbers) within the sector of fire (7A thru 7F).
- 8 Magnetic north.
- 9 Gun unit and date.

A detailed legend or data section will accompany the range card. See page 2-45.

SAMPLE RANGE CARD



CHAPTER 3

MAINTENANCE INSTRUCTIONS

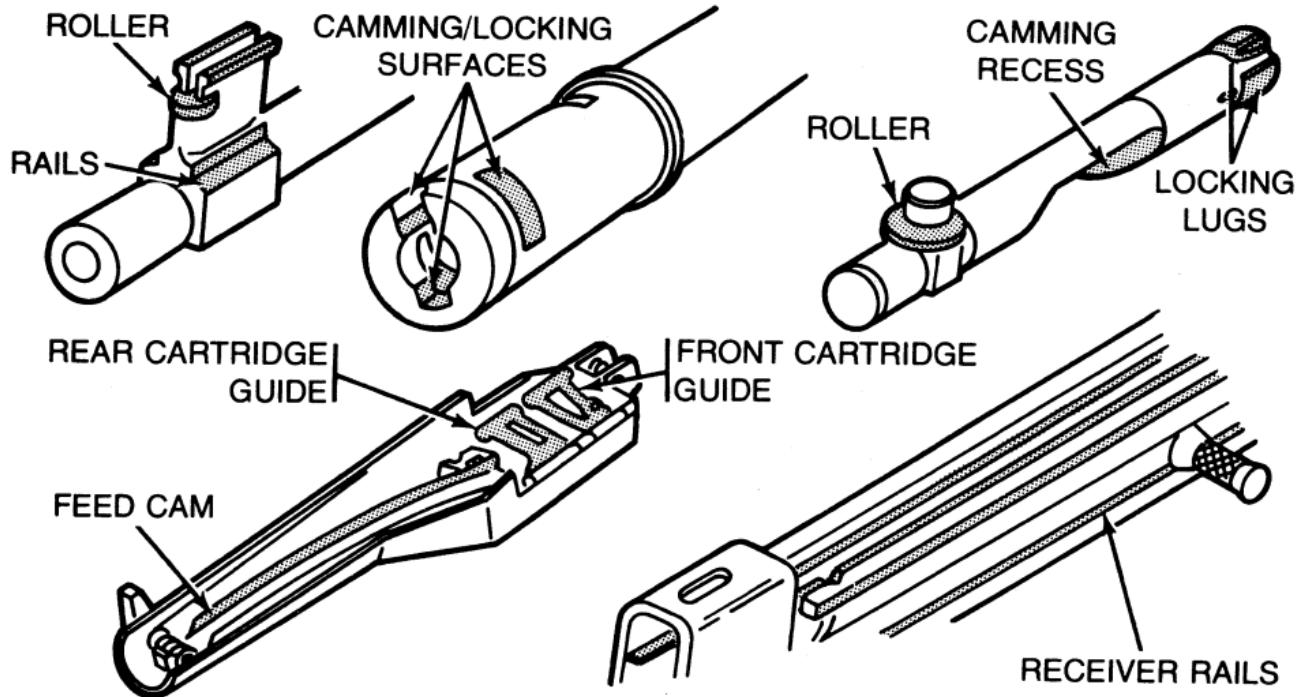
Section I. LUBRICATION INSTRUCTIONS

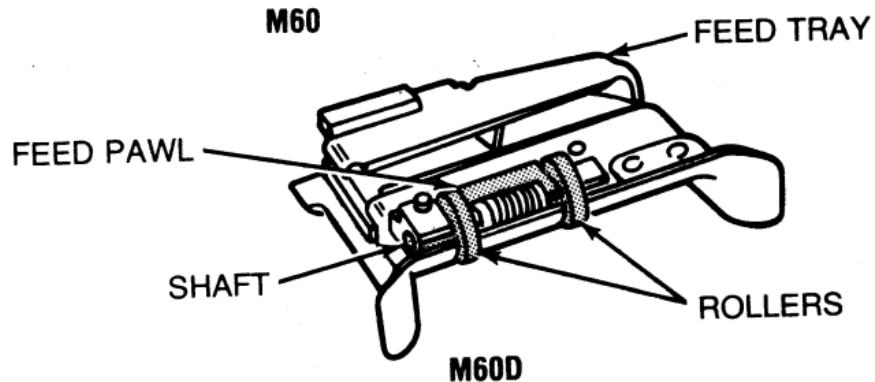
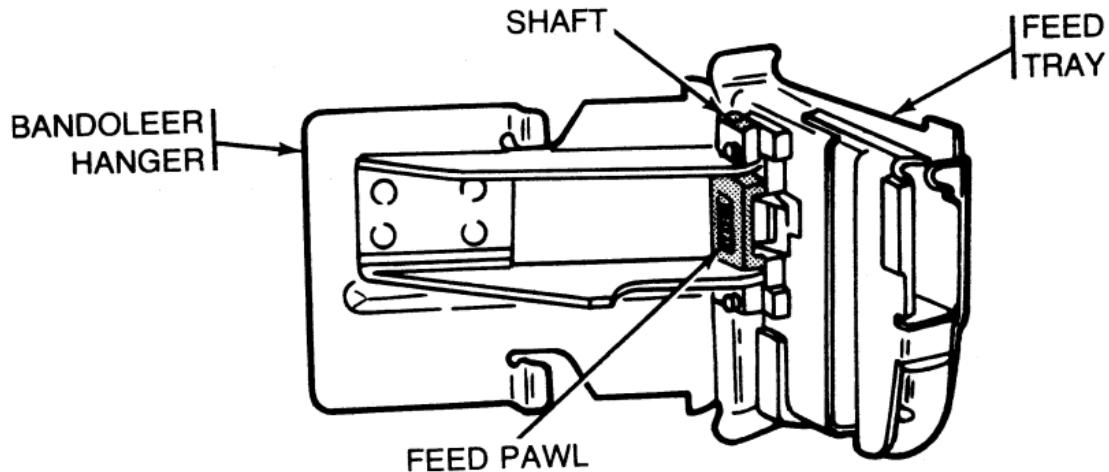
LUBE GUIDE

- 1 *Cleaner, Lubricant and Preservative (CLP) (item 1, app D).* Lubricate machine gun with CLP only. Remove excessive CLP from the bore before firing.
- 2 *Lightly Lubricate.* A film of CLP barely visible to the eye.
- 3 *Generously Lubricate.* Heavy enough so CLP can be spread with finger.
- 4 Usable at all temperatures.

LUBE GUIDE (CONT)

5 *External Surfaces.* Put CLP (item 1, app D) on a clean swab (item 3, app D) and generously lubricate all shaded areas. Lightly lubricate all other areas except rubber-coated parts.





Section II. TROUBLESHOOTING PROCEDURES

INTRODUCTION

The table lists the common malfunctions which you may find during the operation or maintenance of the machine gun or its components. You should perform the tests/inspections and corrective actions in the order listed.

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 your supervisor.

TROUBLESHOOTING

WARNING

Keep weapon pointed at target impact area. Never stand in front of weapon or expose body or hands to breech, ejection port, or muzzle.

TROUBLESHOOTING (CONT)

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
COOK OFF*	<p>Hot barrel</p> <p>If you have fired 200 or more rounds within 2 minutes (rapid rate of fire), barrel will be hot enough to cause cook off.</p>	Cool weapon for 15 minutes.
FAILURE TO FIRE	<p>Check ammunition.</p> <p>Check for broken or damaged firing pin.</p> <p>Check for weak or broken firing pin spring, guide assembly, or driving spring.</p>	<p>Replace faulty ammunition.</p> <p>Notify organizational maintenance.</p> <p>Notify organizational maintenance.</p>
FAILURE TO EXTRACT	Broken extractor or spring	Notify organizational maintenance.

*COOK OFF - A misfire of a chambered round caused by the weapon overheating.

TROUBLESHOOTING (CONT)

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
SLUGGISH OPERATION	Short recoil	Clean gas port, piston, gas cylinder, operating rod, and chamber (see p 3-27).
	Gas piston installed backwards.	Install correctly.
	Dirty ammunition or chamber	Clean chamber and/or use new ammunition.
WADDING AND UNBURNED POWDER	Friction from dirt, carbon, burrs or lack of lubrication	Clean and lubricate or notify organizational maintenance of any burrs.
FAILURE TO CHAMBER	Manually charge weapon (if firing blanks).	Clean and lubricate or notify organizational maintenance.
	Ruptured cartridge case	Remove (p 2-39).
	Carbon buildup in gas cylinder	Remove carbon.
	Carbon buildup in receiver assembly	Remove carbon.

TROUBLESHOOTING (CONT)

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
FAILURE TO CHAMBER (CONT)	Damaged round	*Remove round and recharge weapon.
	Dirty chamber	Clean or replace barrel.
FAILURE TO EJECT	Frozen, damaged, or missing ejector spring	Notify organizational maintenance.
	Short recoil	Clean gas port, piston, gas cylinder, chamber, and operating rod tube (p 3-27).
FAILURE TO COCK OR RUNAWAY GUN	Operating rod sear notch or sear worn	Notify organizational maintenance.
	Sear plunger or spring broken or missing	Notify organizational maintenance.

*Dispose of damaged round according to range SOP.

TROUBLESHOOTING (CONT)

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
FAILURE TO FEED	Insufficient gas pressure (short recoil)	Clean gas system, chamber, and socket (p 3-27).
	Improper lubrication	Lubricate as necessary (p 3-1).
	Defective ammunition or links	Use new ammunition belt.
	Ammunition belt installed wrong	Install with open side of link down (p 2-18).
	Damaged or weak operating parts	Notify organizational maintenance.
	Obstruction in receiver assembly	Remove.

Section III. MAINTENANCE PROCEDURES

FIELD-STRIPPING MACHINE GUN

WARNING

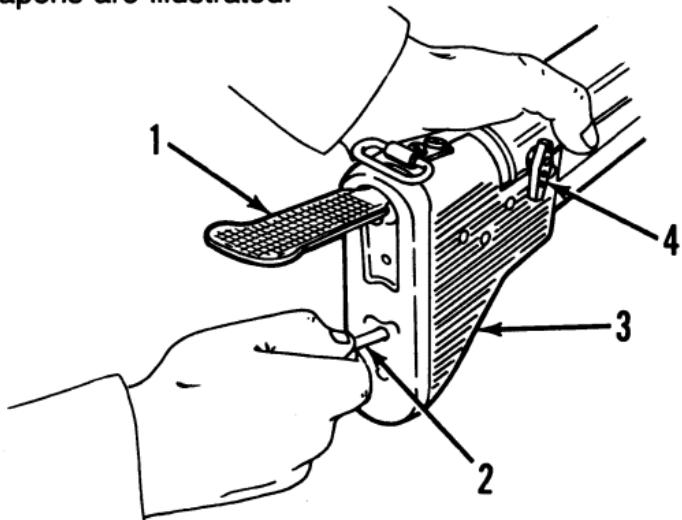
Before field stripping, clear and check that the bolt is in forward position.

NOTE

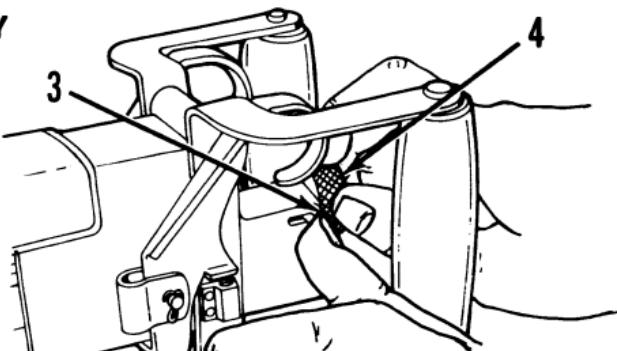
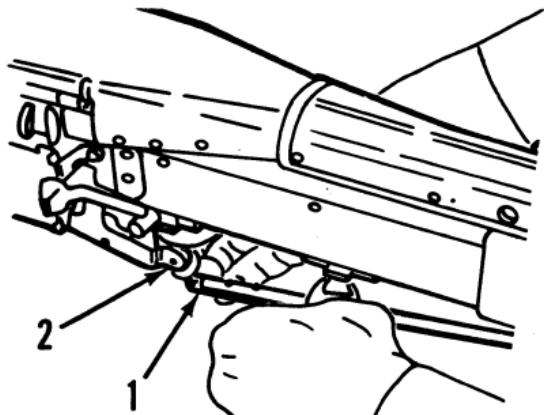
The following procedures illustrate the M60 machine gun except where M60 parts differ from M60D parts, then both weapons are illustrated.

M60 SHOULDER GUN STOCK

- 1 Lift shoulder rest (1), insert cleaning rod (2) in hole to release latch. Pull shoulder gun stock (3) from receiver.
- 2 Turn latch lever (4) and open cover.



M60D SPADE AND TRIGGER GRIP ASSEMBLY

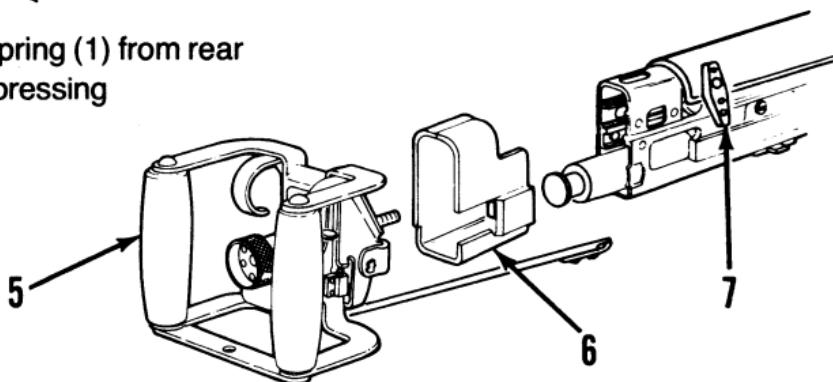


- 2 Press and hold end of spring pin (3) forward while unscrewing knob and pin assembly (4).

- 1 Unsnap sear assembly link and spring (1) from rear of sear assembly activator (2) by pressing downward with thumb.

- 3 Remove grip and trigger assembly (5) and dust and moisture boot (6).

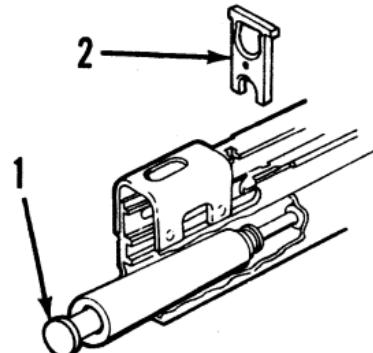
- 4 Turn latch lever (7) and open cover.



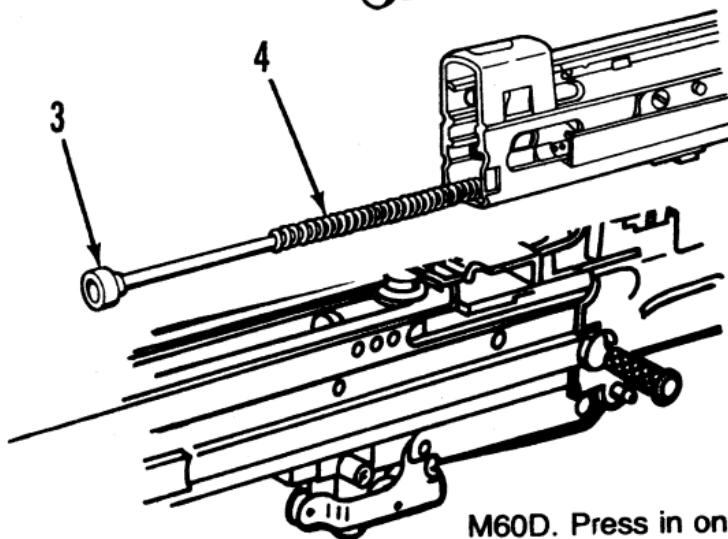
FIELD-STRIPPING MACHINE GUN (CONT)

BOLT ASSEMBLY AND OPERATING ROD ASSEMBLY

- 1 Apply slight palm pressure to rear of hydraulic buffer assembly (1). Lift out buffer retaining yoke (2) and remove buffer assembly (1).

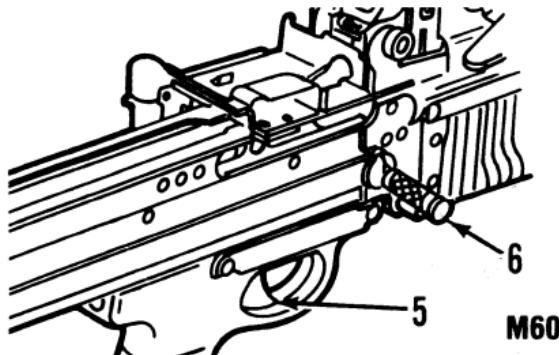


- 2 Remove guide assembly (3) and drive spring (4).

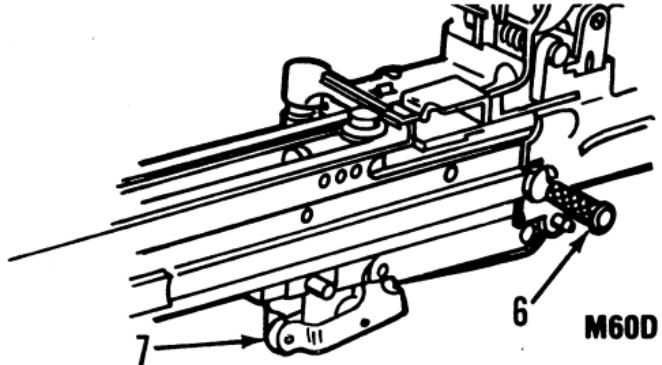


- 3 M60. Place safety to F

M60D. Press in on F.



4 M60. Pull trigger (5) and hold it while pulling cocking handle assembly (6) rearward.

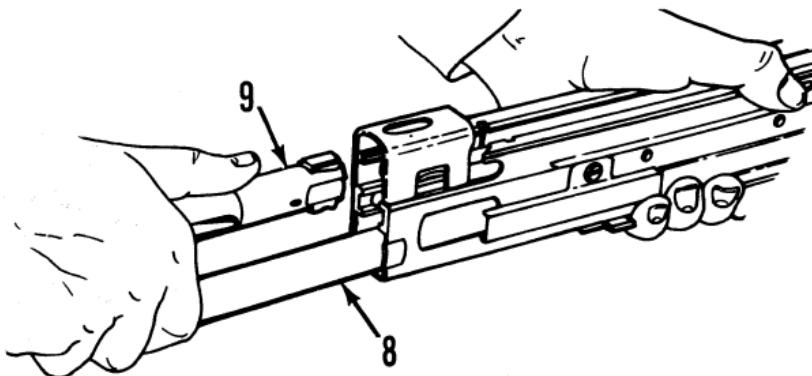


M60D. Pull down and hold sear assembly activator (7) while pulling cocking handle assembly (6) rearward.

WARNING

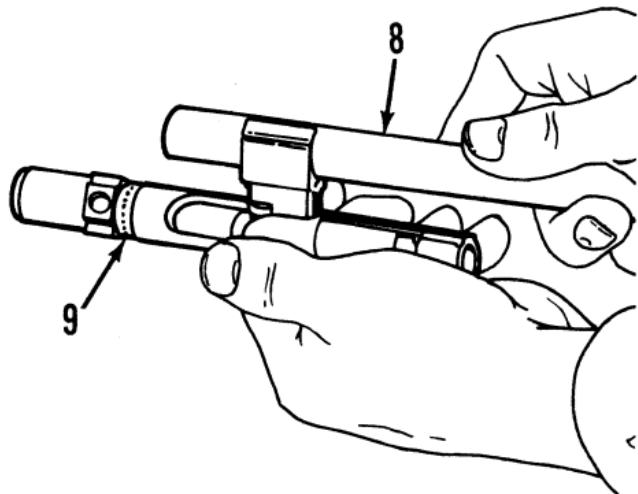
Bolt assembly is under spring tension; it can twist and injure your hand.

5 Remove operating rod assembly (8) and bolt assembly (9) as a unit.

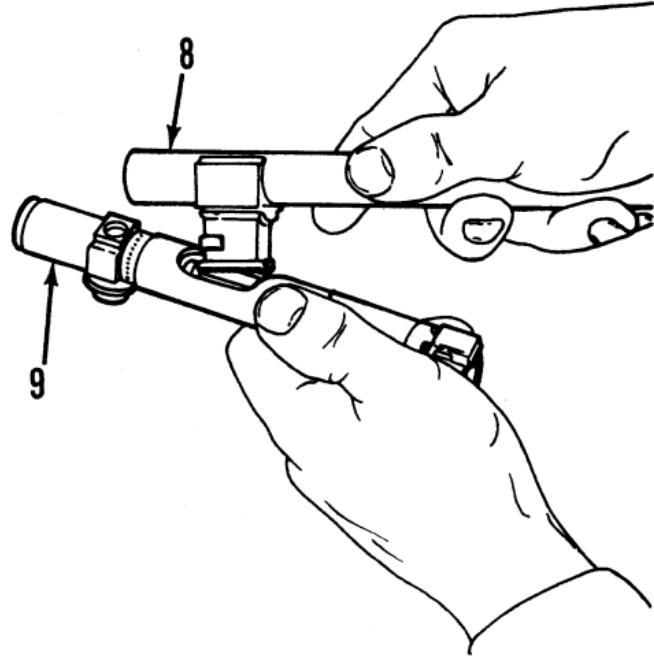


FIELD-STRIPPING MACHINE GUN (CONT)

BOLT ASSEMBLY AND OPERATING ROD ASSEMBLY (CONT)



6 Push operating rod assembly (8) toward rear of slot in bolt assembly (9).



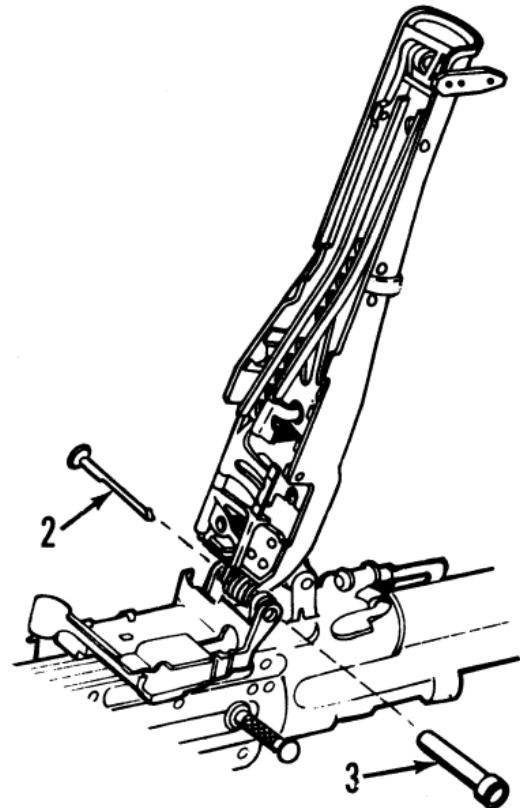
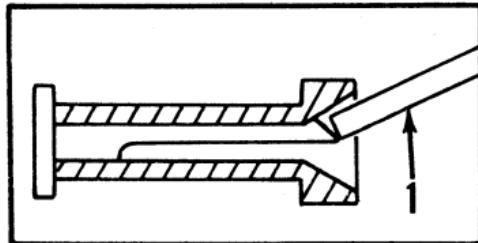
7 Separate operating rod assembly (8) from bolt assembly (9).

COVER ASSEMBLY AND M60 HANGER AND CARTRIDGE FEED TRAY ASSEMBLY OR M60D CARTRIDGE FEED TRAY ASSEMBLY

CAUTION

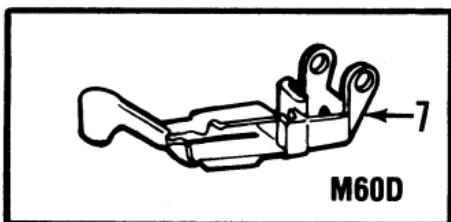
Do not use tip of driving spring guide assembly as a tool.

- 1 Use a cleaning rod (1) to unlatch hook of hinge pin latch (2). Remove hinge pin latch (2) and cover hinge pin (3).

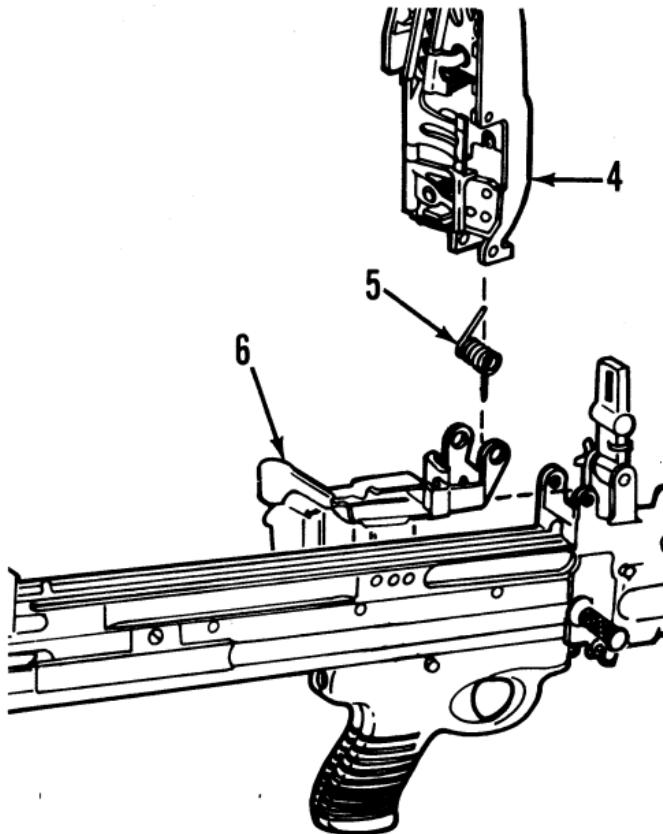


FIELD-STRIPPING MACHINE GUN (CONT)

COVER ASSEMBLY AND M60 HANGER AND CARTRIDGE FEED TRAY ASSEMBLY OR M60D CARTRIDGE FEED TRAY ASSEMBLY (CONT)

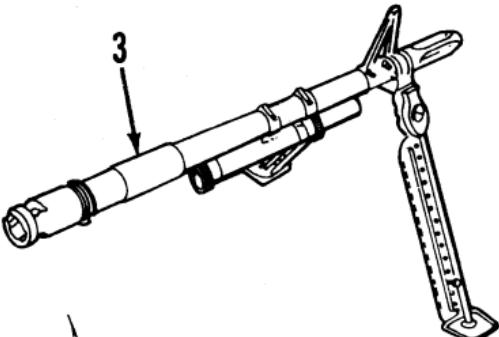
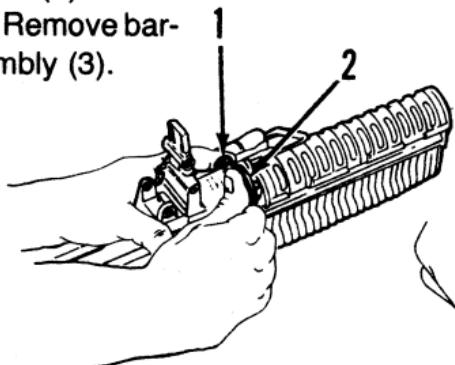


- 2 Remove cover assembly (4), torsion spring (5), and M60 hanger and cartridge feed tray assembly (6) or M60D cartridge feed tray assembly (7).

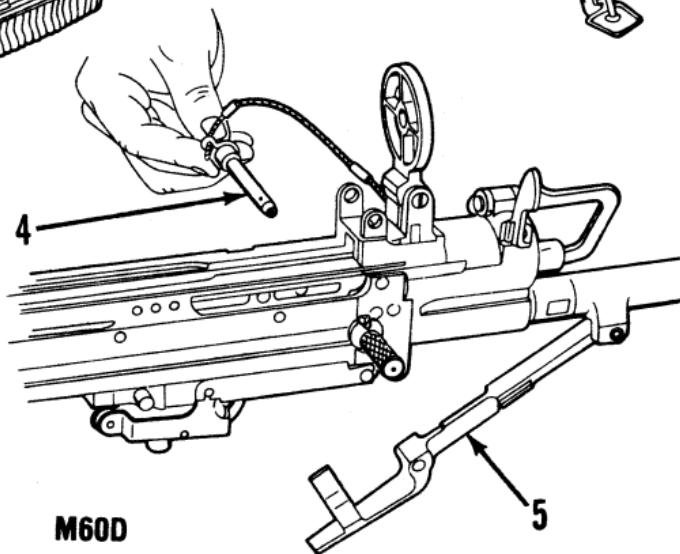


BARREL AND BIPOD ASSEMBLY

- 1 Push in spring detent (1) and raise barrel lock (2). Remove barrel and bipod assembly (3).

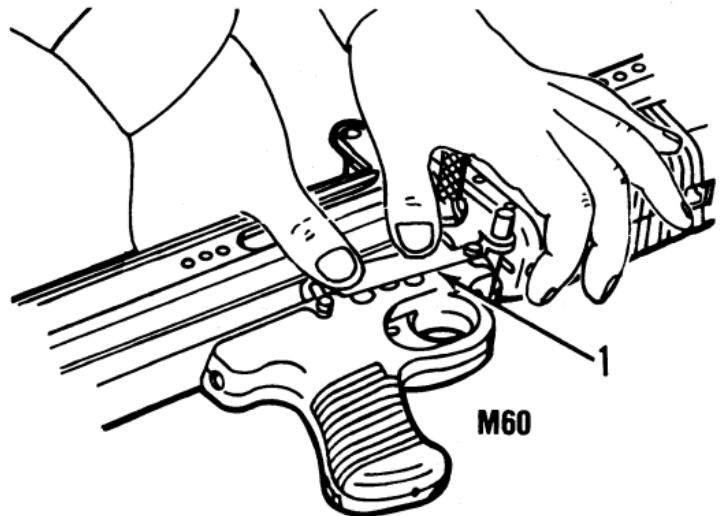


- 2 M60D. Pull quick release pin (4) out of receiver assembly and let gun adapter (5) swing down.

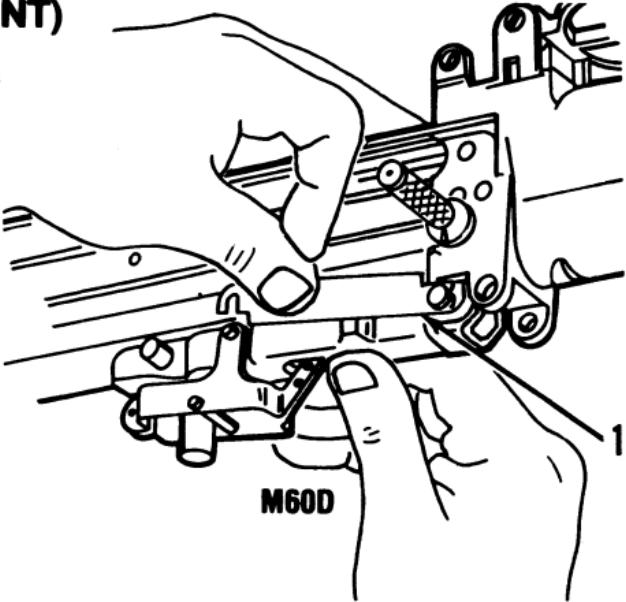


FIELD-STRIPPING MACHINE GUN (CONT)

M60 TRIGGER MECHANISM GRIP ASSEMBLY OR M60D SEAR AND SAFETY HOUSING ASSEMBLY

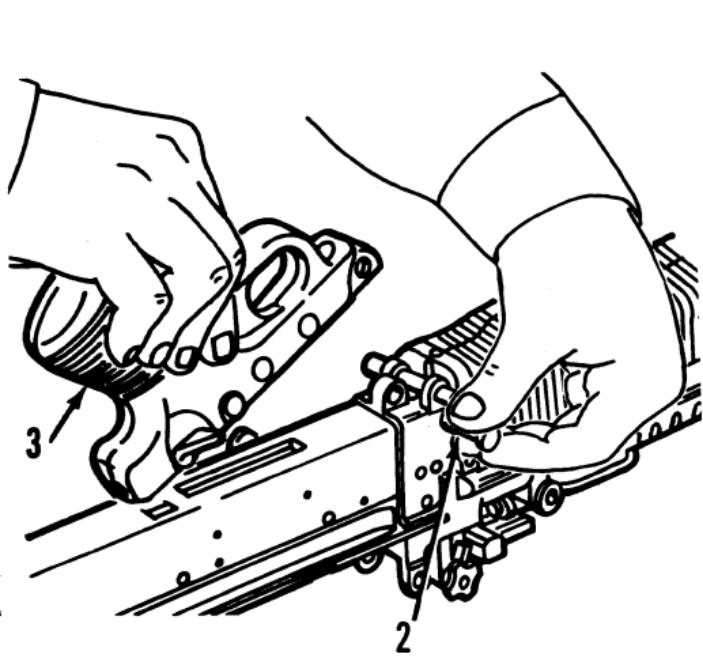


- 1 M60 and M60D. Push in and remove flat leaf spring (1).

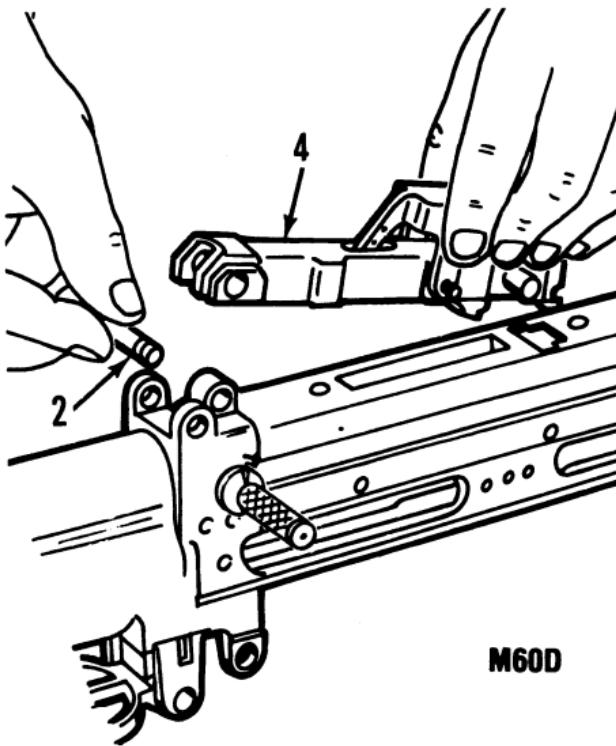


CAUTION

Care should be taken, when disassembling M60 and M60D in the same work area, to ensure proper leaf spring remains with the appropriate model weapon.



M60



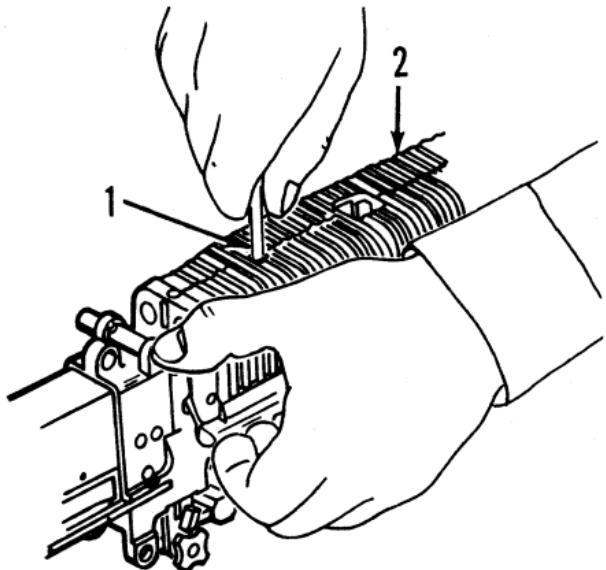
M60D

2 **M60.** Push out front pin (2) and slide trigger mechanism grip assembly (3) slightly forward and pull out to remove.

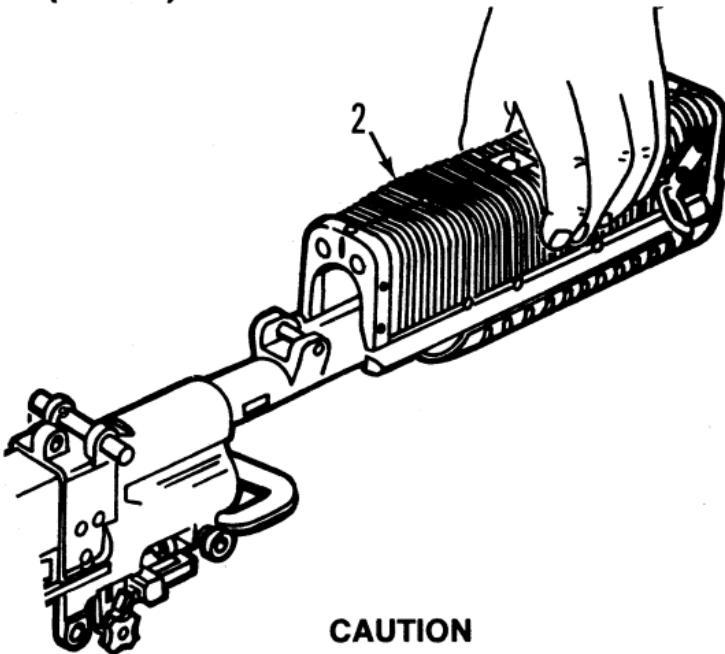
M60D. Push out front pin (2) and slide sear and safety housing (4) slightly forward and pull out to remove.

FIELD-STRIPPING MACHINE GUN (CONT)

FOREARM ASSEMBLY



- 1 Insert cleaning rod (1) or combination wrench through opening in forearm assembly (2) and push down on spring.



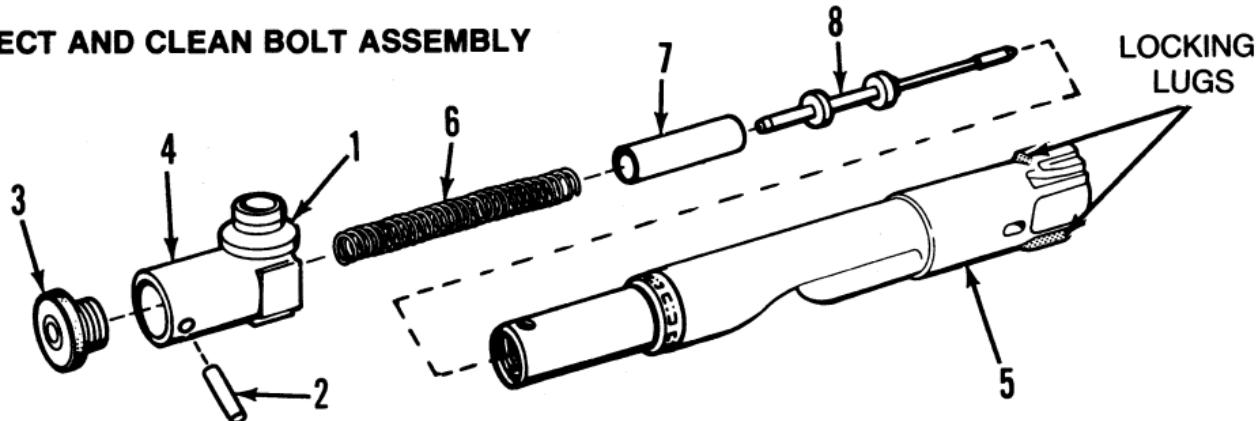
CAUTION

Be careful not to damage internal ribs of forearm assembly.

- 2 Lift and gently slide forearm assembly (2) from receiver.

MAINTENANCE OF BOLT ASSEMBLY AND OPERATING ROD ASSEMBLY

INSPECT AND CLEAN BOLT ASSEMBLY



- 1 Inspect bolt assembly for burrs and cracks, especially in the locking lugs area.
- 2 Make sure roller (1) operates freely and is not cracked, especially in the locking lug area.

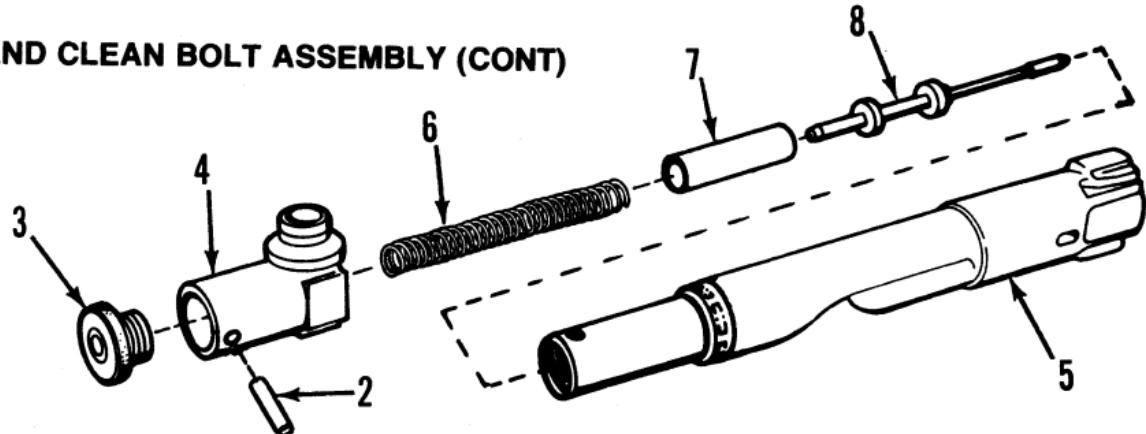
NOTE

Rotate cam actuator assembly so holes line up with headless straight pin. Use reamer or combination wrench to remove or replace headless straight pin.

- 3 Remove headless straight pin (2) and unscrew bolt plug assembly (3). Remove cam actuator assembly (4) from breech bolt (5). Separate spring (6), guide (7), and firing pin (8).

MAINTENANCE OF BOLT ASSEMBLY AND OPERATING ROD ASSEMBLY (CONT)

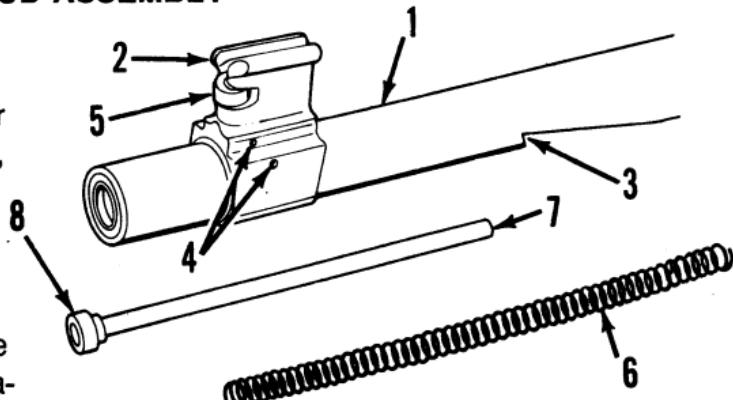
INSPECT AND CLEAN BOLT ASSEMBLY (CONT)



- 4 Make sure spring (6) is not kinked.
- 5 Inspect threads on bolt plug assembly (3) and in breech bolt (5) for damage.
- 6 Clean powder fouling, corrosion, and dirt from all parts with CLP (item 1, app D).
- 7 Drop firing pin (8) into breech bolt (5). Assemble and drop guide (7) and spring (6) into breech bolt (5).
- 8 Assemble cam actuator assembly (4) on breech bolt with roller to front. Screw in bolt plug assembly (3) and aline three holes. Insert headless straight pin (2). Make sure cam actuator assembly (4) rotates freely when headless straight pin (2) is fully seated.

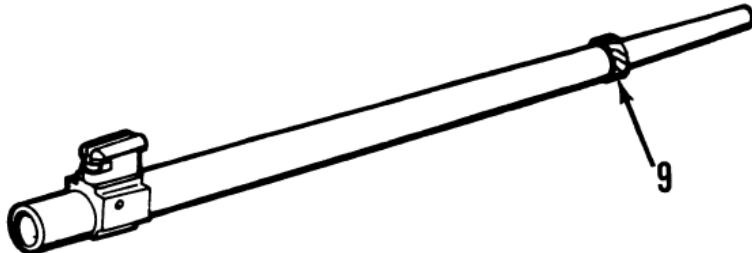
INSPECT AND CLEAN OPERATING ROD ASSEMBLY

- 1 Inspect operating rod (1), yoke (2), sear notch (3), and pins (4) for burrs, cracks, and chips.
- 2 Make sure roller (5) operates freely.
- 3 Inspect driving spring (6) for tension, kinks, breaks, and wear.
- 4 Check guide assembly (7) to make sure stop (8) is tight. If loose, notify organizational maintenance.
- 5 Clean powder fouling, corrosion, and dirt from all parts with CLP (item 1, app D).
- 6 Clean fluted carbon remover (9).



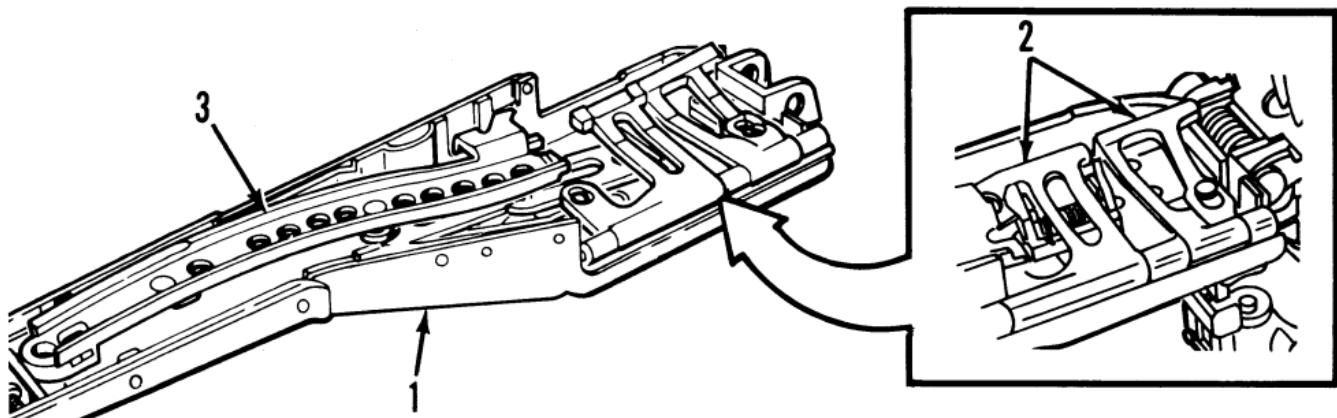
NOTE

Use fluted carbon remover (9)
to clean inside of receiver
(p 3-32).



MAINTENANCE OF COVER ASSEMBLY AND M60 HANGER AND CARTRIDGE FEED TRAY ASSEMBLY OR M60D CARTRIDGE FEED TRAY ASSEMBLY

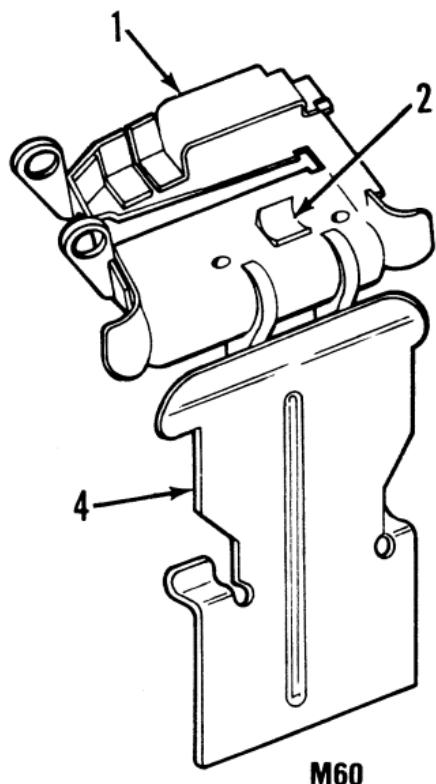
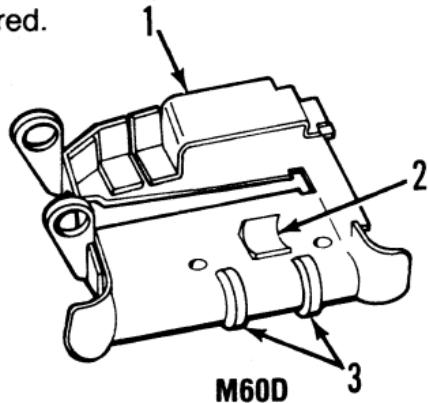
INSPECT AND CLEAN COVER ASSEMBLY (M60 AND M60D)



- 1 Inspect cover assembly (1) for bent, burred, cracked, loose, or missing parts.
- 2 Check spring action of front and rear cartridge guides (2), feed pawls (beneath the cartridge guides), and feed cam assembly (3).
- 3 Make sure feed cam assembly is secure and operates freely.
- 4 Clean powder fouling, corrosion, and dirt from all areas with CLP (item 1, app D).

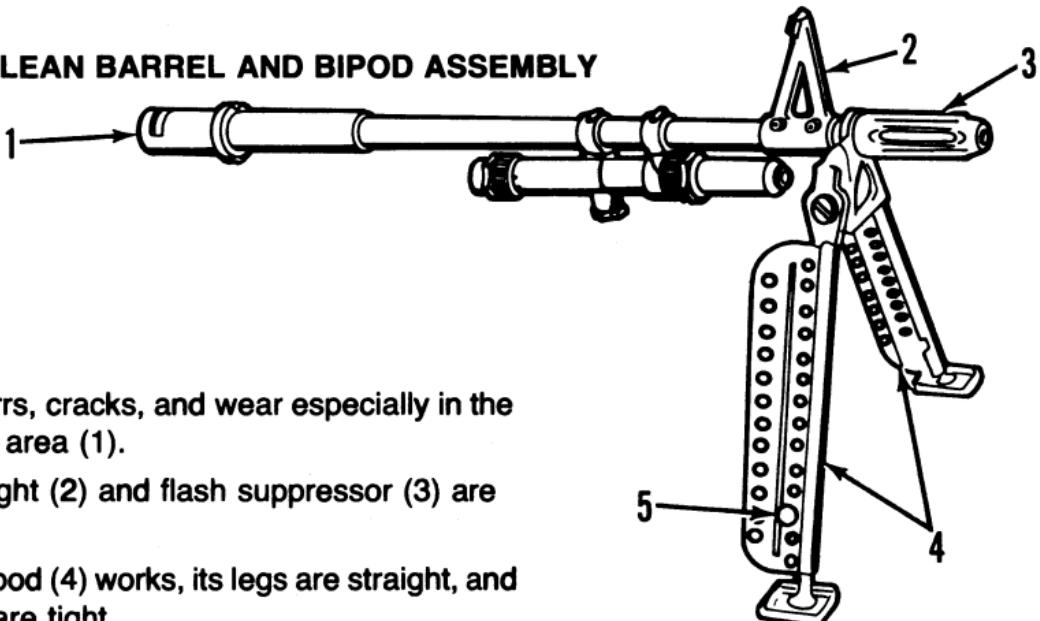
INSPECT AND CLEAN M60 HANGER AND CARTRIDGE FEED TRAY ASSEMBLY OR M60D CARTRIDGE FEED TRAY ASSEMBLY

- 1 Inspect for burred, cracked, missing, or loose parts.
- 2 Check that feed tray (1) fits on receiver and that feed pawl (2) works properly.
- 3 M60D - Make sure rollers (3) do not bind.
- 4 M60 - Inspect for obstructions on hanger (4).
- 5 Clean corrosion and dirt from all areas with CLP (item 1, app D).
- 6 Remove CLP from top surface of feed tray (1) if gun is to be fired.



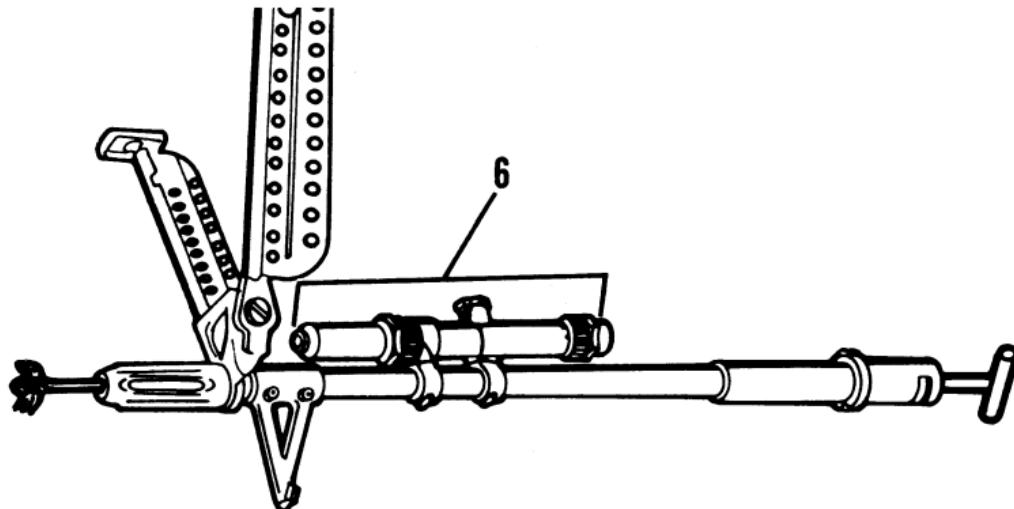
MAINTENANCE OF BARREL AND BIPOD ASSEMBLY (INCLUDING GAS SYSTEM)

INSPECT AND CLEAN BARREL AND BIPOD ASSEMBLY



WARNING

Barrels issued for a specific gun will not be changed from gun to gun. Each barrel and bolt assembly should be tagged during cleaning with the serial number of the receiver (gun) and should remain together as initially assigned.



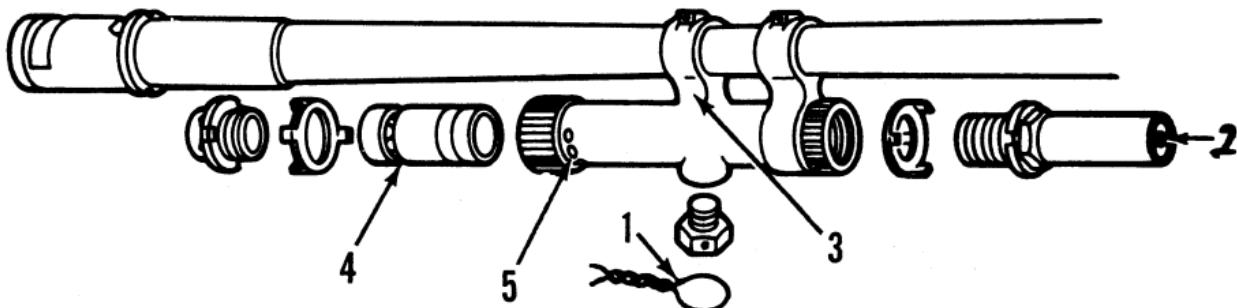
- 5 Turn barrel upside down for cleaning. This will keep gas piston and inside of gas cylinder (6) dry.
- 6 Run a cleaning rod with swab (item 3, app D) saturated with CLP (item 1, app D) through bore. Leave bore wet.

MAINTENANCE OF BARREL AND BIPOD ASSEMBLY (INCLUDING GAS SYSTEM) (CONT)

INSPECT AND CLEAN GAS SYSTEM

NOTE

Gas piston clicks when barrel is tilted. Take gas system (gas cylinder) apart only when you don't hear a click.

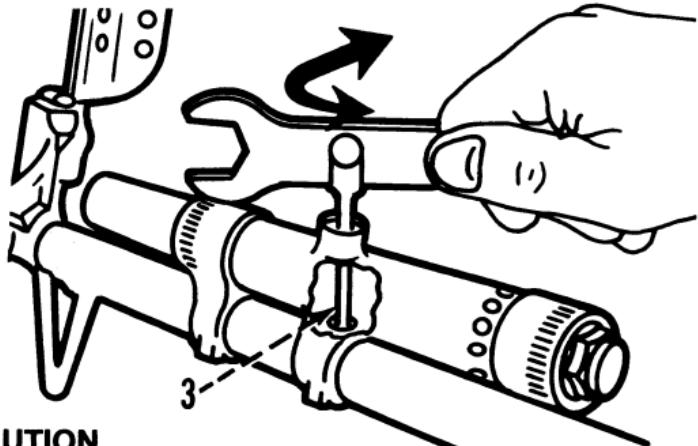


- 1 Use combination wrench and clean swab (item 3, app D) to clean powder fouling, corrosion, and dirt from all parts.
- 2 Remove safety wire (1) (notify organizational maintenance).
- 3 Disassemble gas cylinder with combination wrench.
- 4 Clean extension vent hole (2) with safety wire.

CAUTION

Insert reamer carefully to prevent damage.

- 5 Clean gas port (3), gas piston hole (4), and gas cylinder vent holes (5) with reamer portion of wrench.



CAUTION

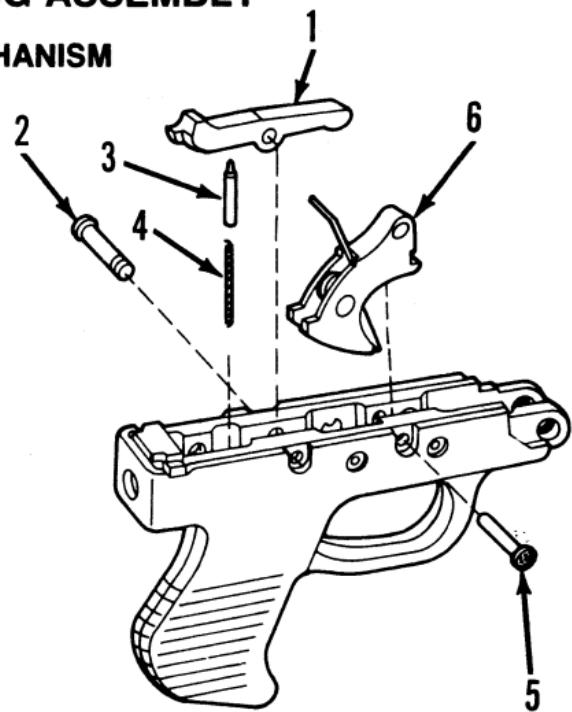
Make sure you do not install piston backward. Do not get CLP in gas system.

- 6 Bottom the reamer in the hole in the gas port (3) to make sure you have removed all carbon. Run small arms cleaning brush (bore) through bore to remove carbon deposits.
- 7 Reassemble gas system (gas cylinder).
- 8 Notify organizational maintenance to replace safety wire (1) promptly on completion of mission.
- 9 When safety wire is not available, check gas system periodically for tightness.

MAINTENANCE OF M60 TRIGGER MECHANISM GRIP ASSEMBLY OR M60D SEAR AND SAFETY HOUSING ASSEMBLY

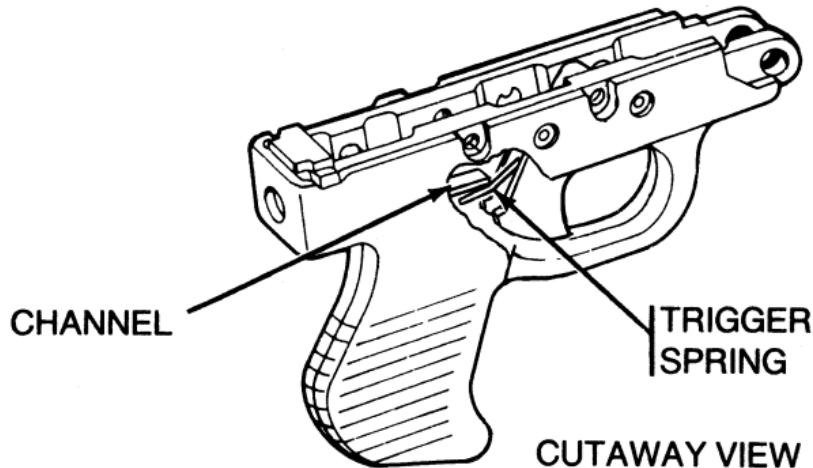
INSPECT AND CLEAN M60 TRIGGER MECHANISM GRIP ASSEMBLY

- 1 Hold down on sear (1) and remove sear pin (2).
- 2 Remove sear (1), sear plunger (3), and spring (4).
- 3 Remove trigger pin (5) and trigger (6).
- 4 Clean powder fouling, corrosion, and dirt from all areas with CLP (item 1, app D) and with a small arms cleaning brush.



M60

- 5 Inspect sear (1) for chips, cracks, and signs of wear.
- 6 Inspect sear plunger (3) and spring (4) for signs of wear.
- 7 Position trigger (6) in grip so that the trigger spring is under the channel. Aline holes and insert trigger pin (5) through the right side of grip and secure trigger (6).

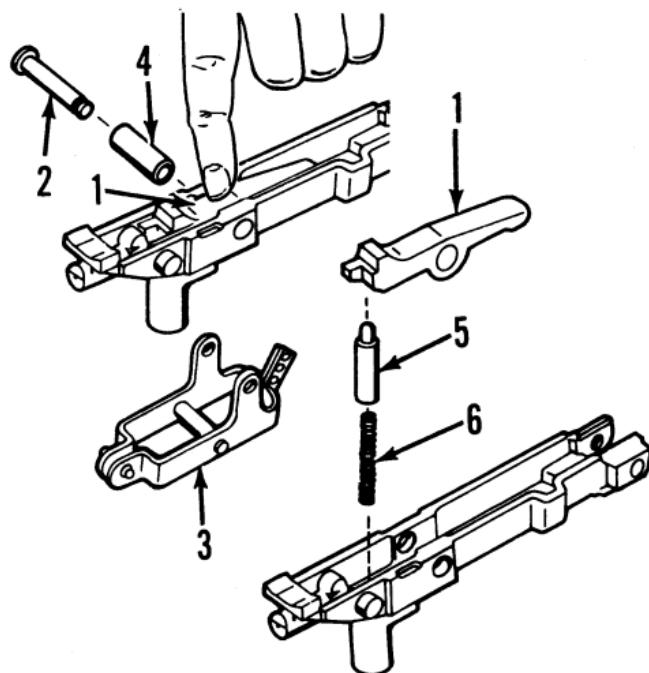


- 8 Insert spring (4) and sear plunger (3) into hole. Position sear (1) and apply slight pressure to aline holes. Insert sear pin (2) through left side of grip and secure sear.
- 9 Check safety while pulling trigger back:
 - F - Sear moves freely.
 - S - Sear moves slightly.

MAINTENANCE OF M60 TRIGGER MECHANISM GRIP ASSEMBLY OR M60D SEAR AND SAFETY HOUSING ASSEMBLY (CONT)

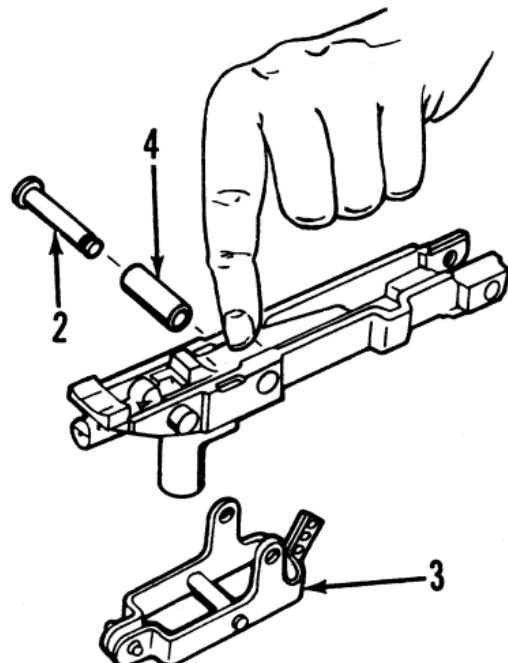
INSPECT AND CLEAN M60D SEAR AND SAFETY HOUSING ASSEMBLY

- 1 Hold down top of sear (1) and remove sear pin (2), sear assembly activator (3) and sleeve bushing (4).
- 2 Lift out sear (1), sear plunger (5), and spring (6).
- 3 Clean powder fouling, corrosion, and dirt from all parts with CLP (item 1, app D) with a small arms cleaning brush.
- 4 Check sear (1) for chips, cracks, and signs of wear.
- 5 Check sear plunger (5) and spring (6) for signs of wear.
- 6 Insert spring (6) and sear plunger (5) into hole. Position sear (1) into housing.



M60D

- 7 Apply slight pressure to aline holes and insert sleeve bushing (4).
- 8 Position sear assembly activator (3) on bottom of sear housing and secure with sear pin (2).
- 9 Check safety while pulling down on sear assembly activator.
 - F - Sear moves freely.
 - S - Sear moves slightly.

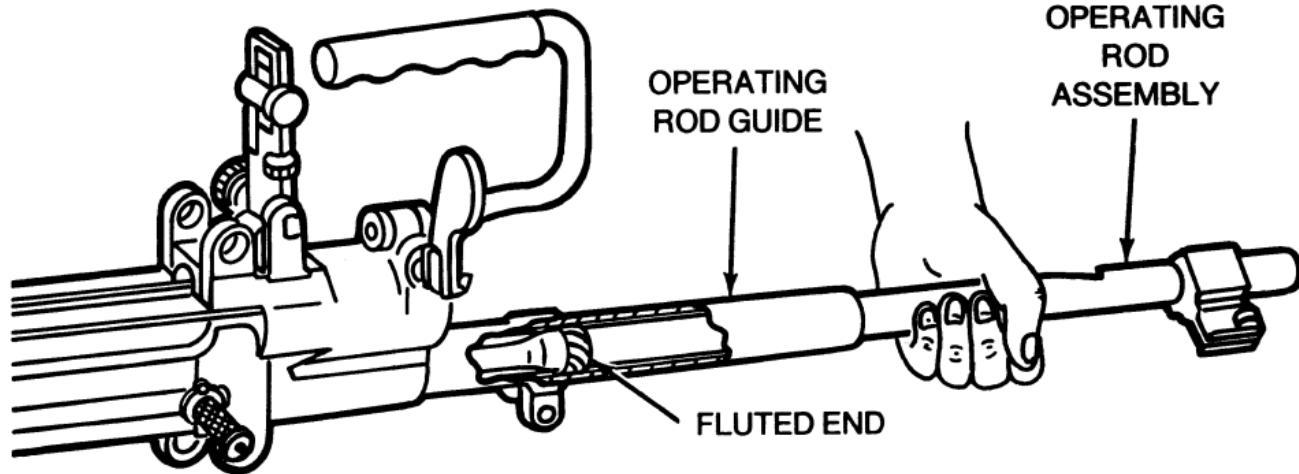


M60D

MAINTENANCE OF RECEIVER

INSPECT AND CLEAN RECEIVER

- 1 Clean powder fouling, corrosion, and dirt from all areas with CLP (item 1, app D) and small arms brushes.
- 2 When weapon is disassembled, use fluted end of operating rod assembly to remove carbon from operating rod guide of receiver (p 3-21).
- 3 Check receiver rails for burrs and wear.
- 4 Check that cocking handle moves freely.



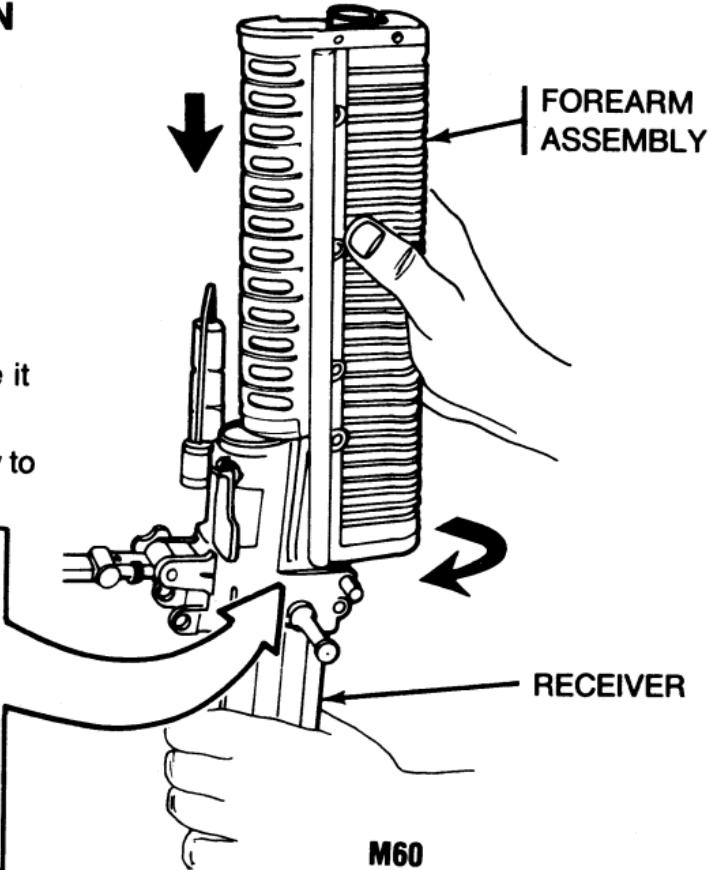
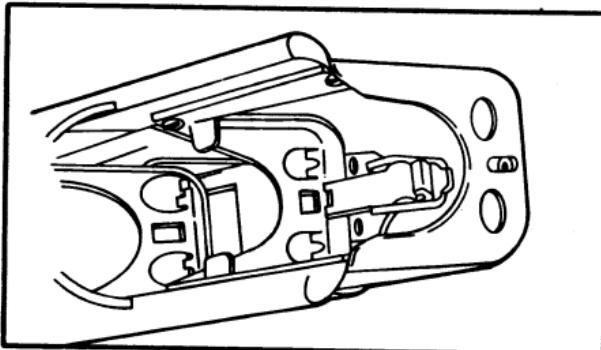
REASSEMBLING MACHINE GUN

M60 FOREARM ASSEMBLY

CAUTION

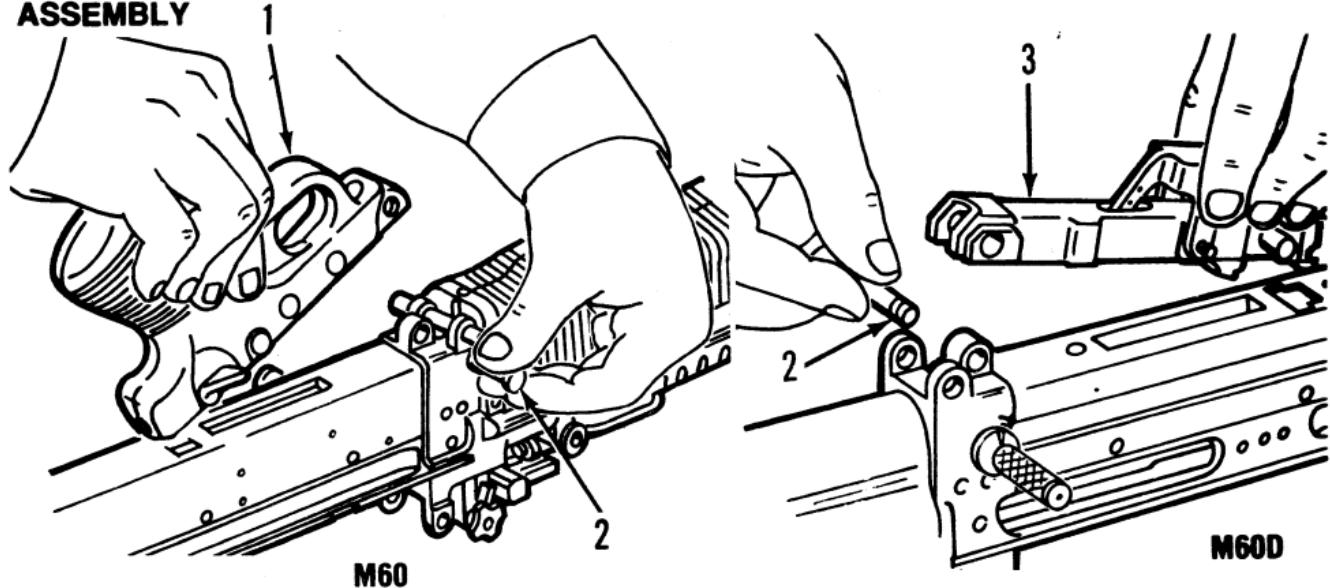
When installing forearm assembly, be careful not to damage its internal ribs.

- 1 Slightly tip forearm assembly and slide it onto receiver.
- 2 Press in on bottom of forearm assembly to latch.



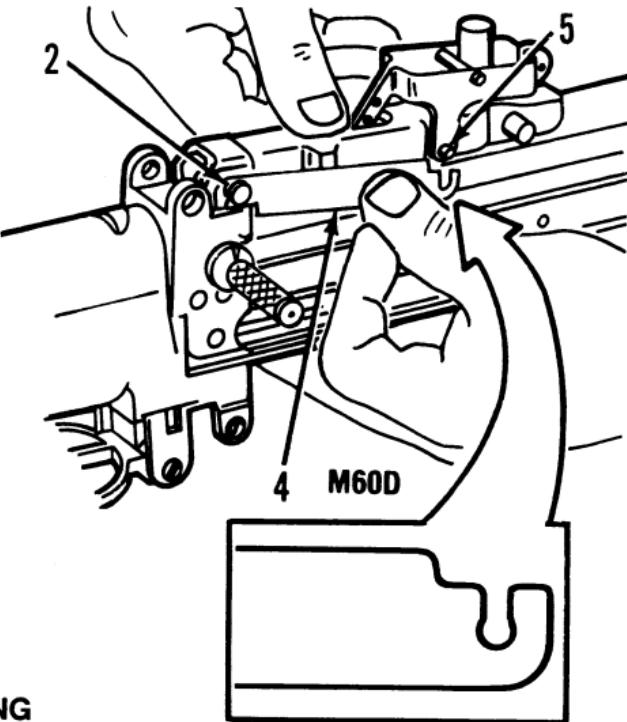
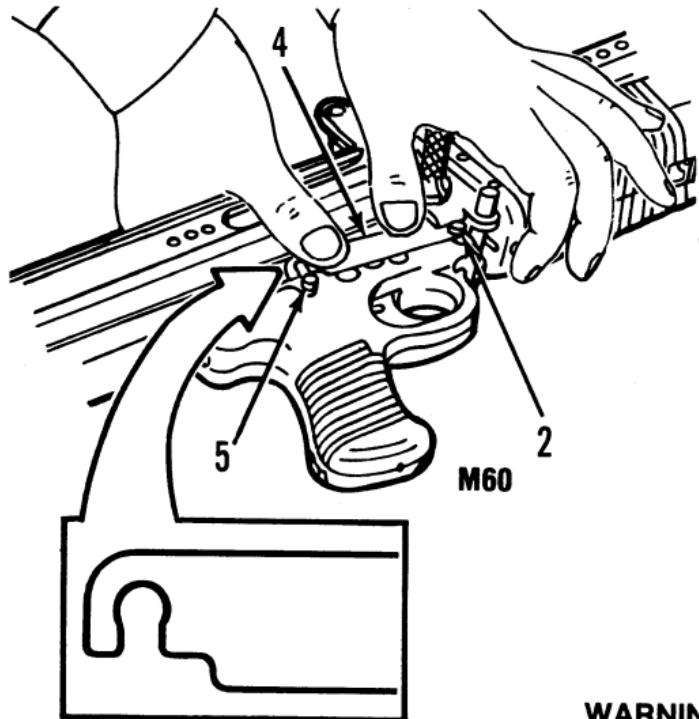
REASSEMBLING MACHINE GUN (CONT)

M60 TRIGGER MECHANISM GRIP ASSEMBLY OR M60D SEAR AND SAFETY HOUSING ASSEMBLY



- 1 M60. Position trigger mechanism assembly (1) on bottom of receiver, align holes, and install front pin (2) from the left side.

- 1 M60D. Position sear and safety housing assembly (3) on bottom of receiver, align holes and install front pin (2) from the left side.



WARNING

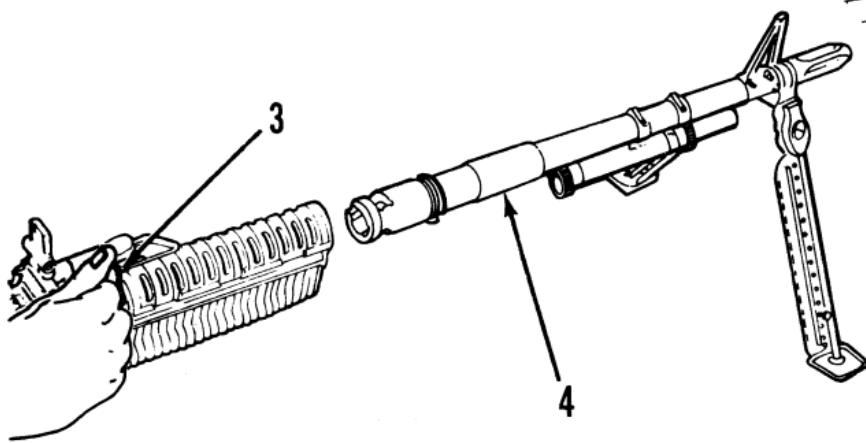
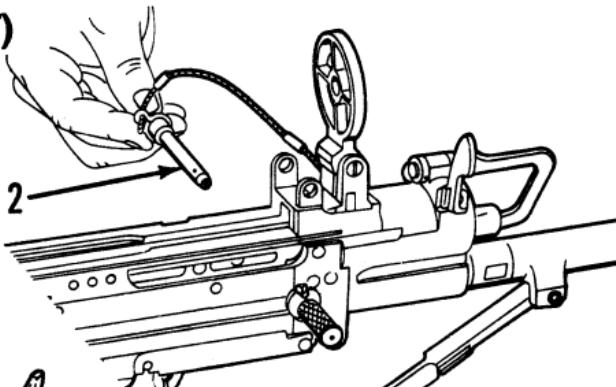
Do not interchange leaf springs from one model weapon to another.

- 2 M60 AND M60D. Slide slotted end of flat leaf spring (4) on front pin (2). The hooked end of flat leaf spring should bend outward. Push down and slide hooked end of flat leaf spring onto grooved pin (5).

REASSEMBLING MACHINE GUN (CONT)

BARREL AND BIPOD ASSEMBLY

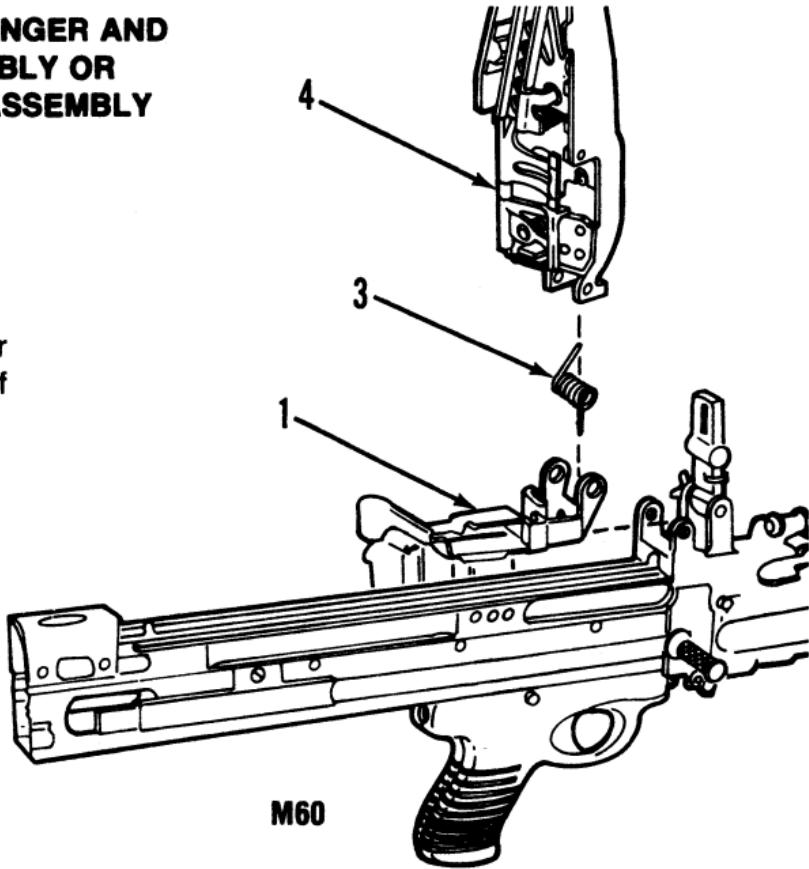
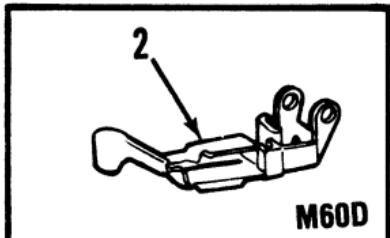
- 1 M60D. Raise gun adapter (1), align holes, and insert quick release pin (2) to secure gun adapter to receiver.



- 2 M60 AND M60D. Make sure barrel lock (3) is up (unlocked). Install barrel and bipod assembly (4). Push barrel lock (3) down to lock.

COVER ASSEMBLY AND M60 HANGER AND CARTRIDGE FEED TRAY ASSEMBLY OR M60D CARTRIDGE FEED TRAY ASSEMBLY

- 1 M60 OR M60D. Position M60 hanger and cartridge feed tray assembly (1) or M60D cartridge tray assembly (2) on receiver.
- 2 Install torsion spring (3) and cover assembly (4). Make sure ends of torsion spring stick in holes of cover and receiver.



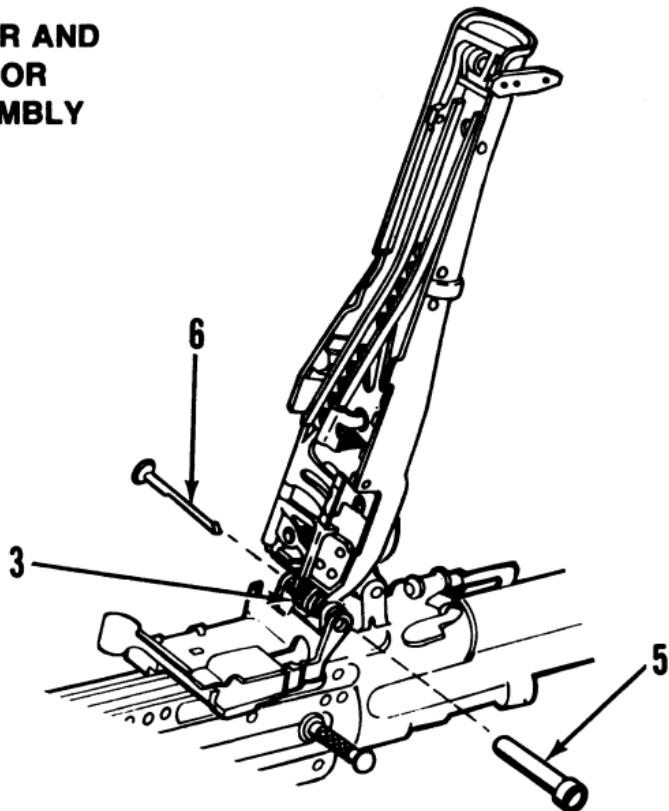
REASSEMBLING MACHINE GUN (CONT)

COVER ASSEMBLY AND M60 HANGER AND CARTRIDGE FEED TRAY ASSEMBLY OR M60D CARTRIDGE FEED TRAY ASSEMBLY (CONT)

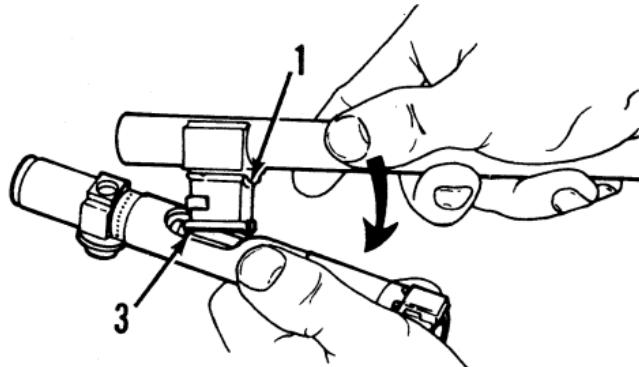
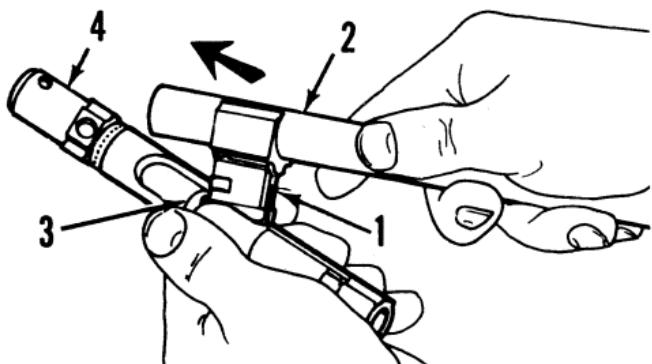
NOTE

Insert the hinge pin from one side and the hinge pin latch from the opposite side.

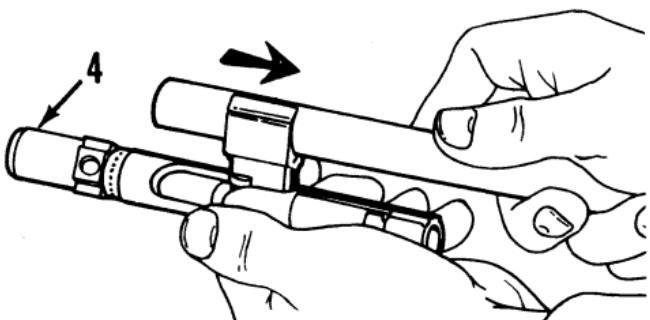
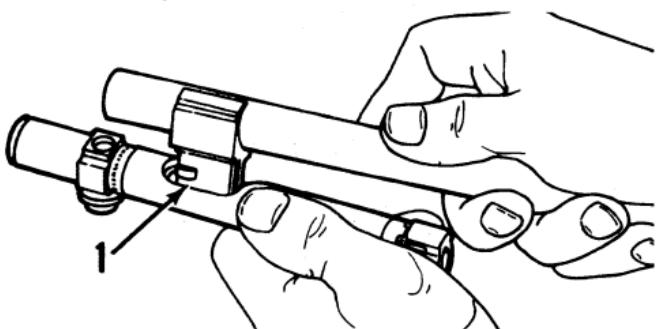
- 3 Apply slight pressure to line up torsion spring (3) and insert cover hinge pin (5). Install hinge pin latch (6) through hinge pin until it locks. Keep cover assembly open until machine gun is reassembled.



BOLT ASSEMBLY AND OPERATING ROD ASSEMBLY



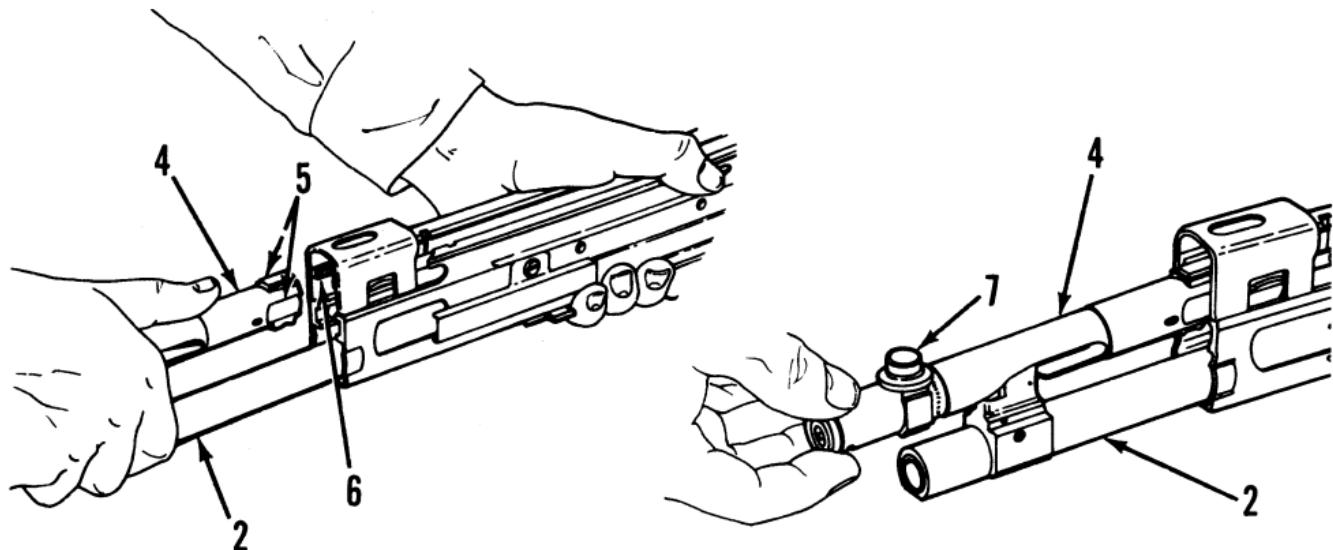
- 1 Place yoke (1) of operating rod assembly (2) against spool of firing pin (3) in slot of bolt assembly (4) and push spool in direction of arrow.



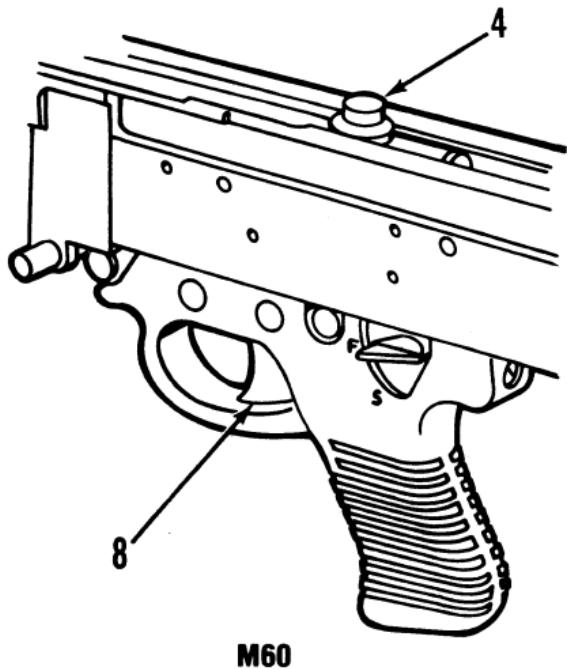
- 2 Seat yoke (1) between spools of firing pin. Let yoke slide back in bolt assembly (4).

REASSEMBLING MACHINE GUN (CONT)

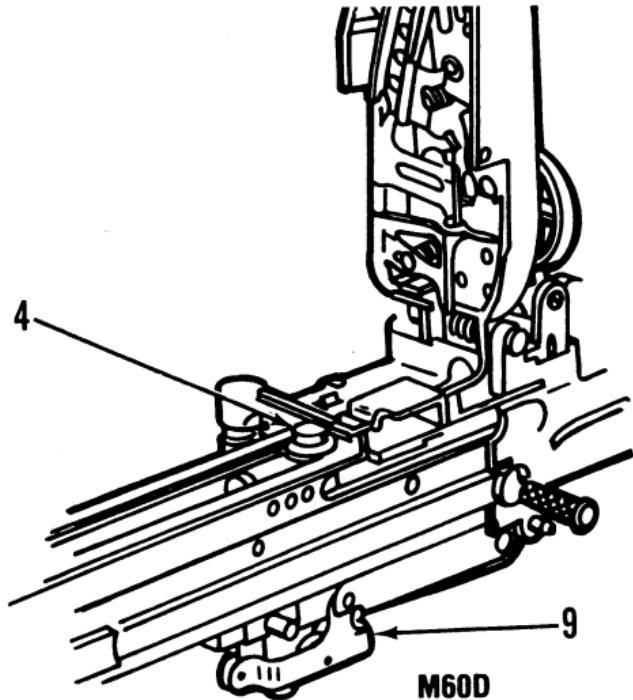
BOLT ASSEMBLY AND OPERATING ROD ASSEMBLY (CONT)



- 3 Start operating rod assembly (2) with bolt assembly (4) into weapon. Turn bolt assembly (4) so that stripping lugs (5) line up with upper rails (6). Push in until stripping lugs (5) engage rails (6).
- 4 Turn roller (7) straight up and push bolt assembly (4) and operating rod assembly (2) as a unit into weapon.



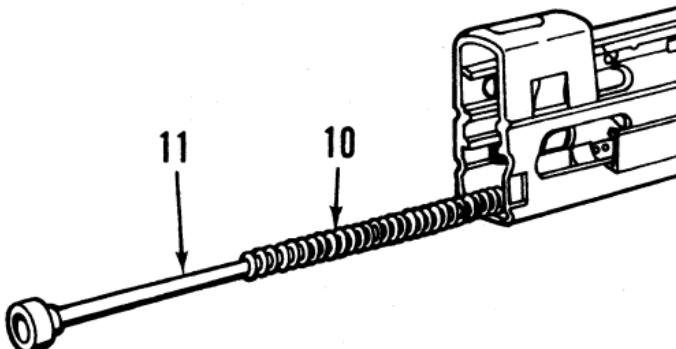
5 M60. Place safety to F. Pull back on trigger (8) and hold while pushing bolt assembly (4) into receiver until it locks in place.



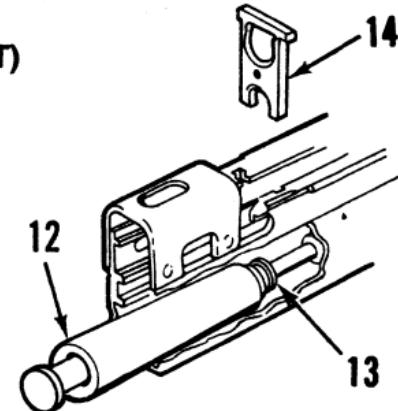
M60D. Press in on F. Pull down and hold sear assembly activator (9) while pushing bolt assembly (4) into receiver until it locks in place.

REASSEMBLING MACHINE GUN (CONT)

BOLT ASSEMBLY AND OPERATING ROD ASSEMBLY (CONT)



- 6 Install drive spring (10) and guide assembly (11) in rear of receiver.

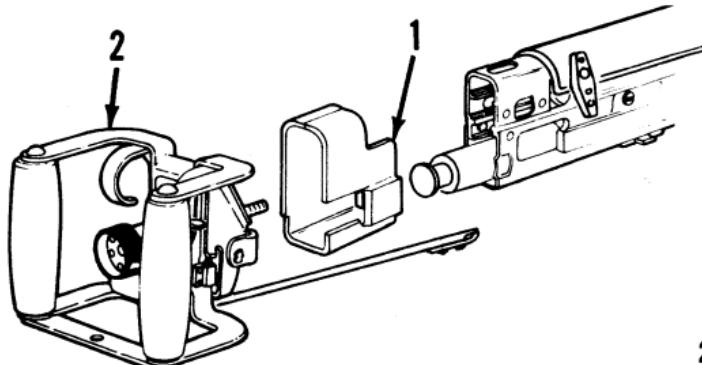


- 7 Insert buffer assembly (12) against end of guide assembly and push until groove (13) on buffer assembly lines up with slot for buffer retaining yoke (14).
- 8 Insert buffer retaining yoke (14).

M60 SHOULDER GUN STOCK

- 1 Position shoulder gun stock on rear of receiver and push until it snaps in place.
- 2 Pull cocking handle rearward to lock bolt assembly to rear. Place safety to S.
- 3 Close cover.
- 4 Hold charging handle, pull trigger, and ease charging handle forward.

M60D SPADE AND TRIGGER GRIP ASSEMBLY

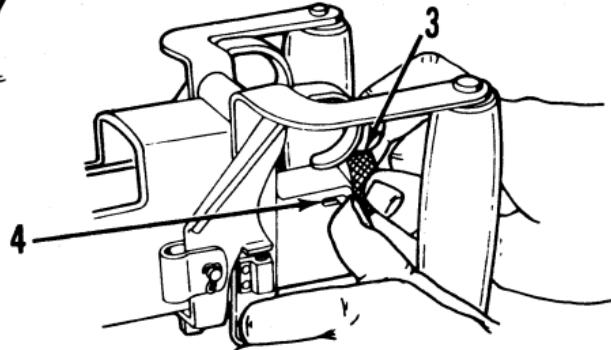


1 Install dust and moisture boot (1) and position grip and trigger assembly (2) on receiver.

4 Pull cocking handle rearward to lock bolt assembly to rear. Press in on S.

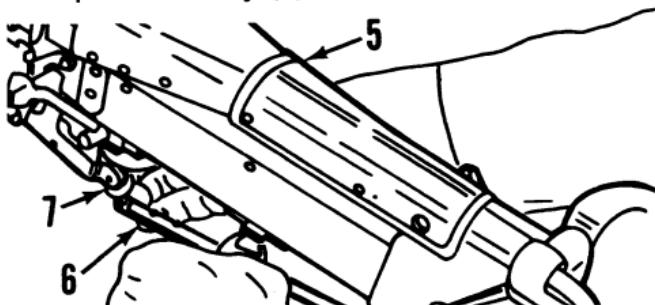
5 Close cover (5).

6 Snap end of sear assembly link and spring (6) on end of sear assembly activator (7).



2 Turn knob and pin assembly (3) until clicking is heard. Then press and hold spring pin (4) and turn knob (3) until tight.

3 Release spring pin (4) and turn knob and pin assembly (3) until it locks.



MAINTENANCE CHECKLIST

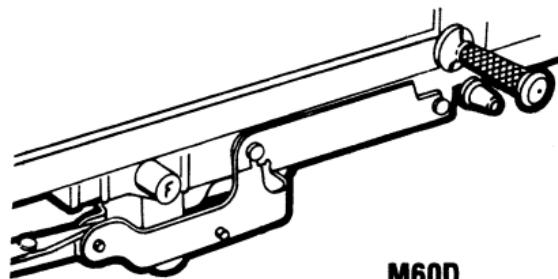
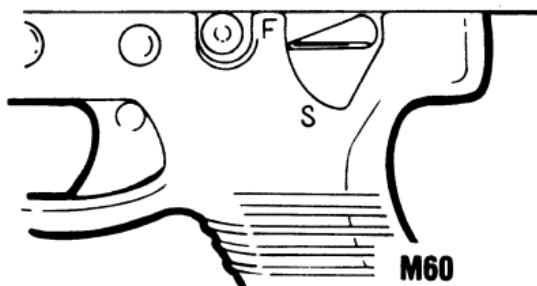
Check the cleanliness and overall condition of the following:

- Barrel assembly. Chamber bore and flash suppressor, gas cylinder, gas port, and gas piston
- Receiver assembly. Operating rod guide, rails, and rear bridge rivets
- Bolt assembly
- Front and rear sights
- M60 Shoulder gun stock
- Bipod assembly
- M60D Sear and safety housing assembly
- M60 Trigger mechanism grip assembly
- M60D Spade and trigger grip assembly
- Cocking handle assembly
- Cover assembly and M60 hanger and cartridge feed tray assembly
- Cover assembly and M60D cartridge feed tray assembly
- Forearm assembly
- Blank firing attachment (BFA). Clean after firing 500 rounds or after each day's firing, whichever comes first. Remember BFA causes carbon fouling.
- M122 Tripod mount. Traversing and elevating mechanism
- Small arms sling

INSPECT OR CHECK OUT YOUR MACHINE GUN

Bolt assembly rearward? Good. Safety in S? Good. Gun cleared? Good.

- 1 Load machine gun with dummy ammunition (p 2-14).
- 2 Pull trigger. Nothing should happen.



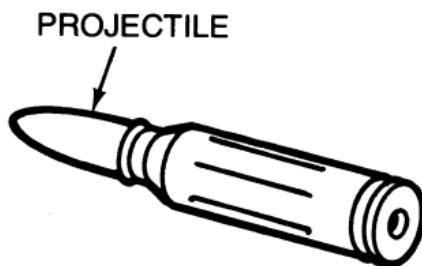
- 3 M60. Place safety to F.
M60D. Press in on F.
- 4 Pull trigger. Bolt assembly should move forward, strip and chamber a dummy round, and lock.
- 5 Pull cocking handle back. Dummy round should eject, and bolt assembly should lock to rear.

INSPECT OR CHECK OUT YOUR MACHINE GUN (CONT)

WARNING

After unloading dummy round, be sure the barrel is cleared.

- 6 M60. Place safety to S.
M60D. Press in on S.
- 7 Unload dummy ammunition and
clear weapon (p 2-25).



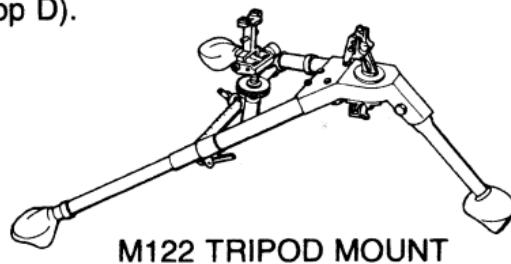
DUMMY ROUND

- 8 Be sure that projectile stays on dummy round.
- 9 Close cover and latch.
- 10 M60. Place safety to F. Pull cocking handle, pull trigger, and ease bolt assembly forward.
M60D. Press in on F. Pull cocking handle, pull trigger, and ease bolt assembly forward.

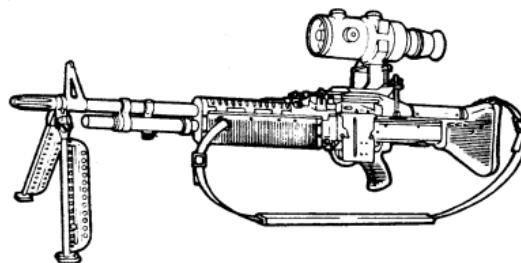
CHAPTER 4

MAINTENANCE OF AUXILIARY EQUIPMENT

MACHINE GUN M122 TRIPOD MOUNT. Clean and lubricate with CLP (item 1, app D) and wiping rag (item 2, app D).



NIGHT VISION SIGHT AN/PVS-4. Refer to TM 11-5855-213-10 for maintenance.



NIGHT VISION SIGHT

CHAPTER 5

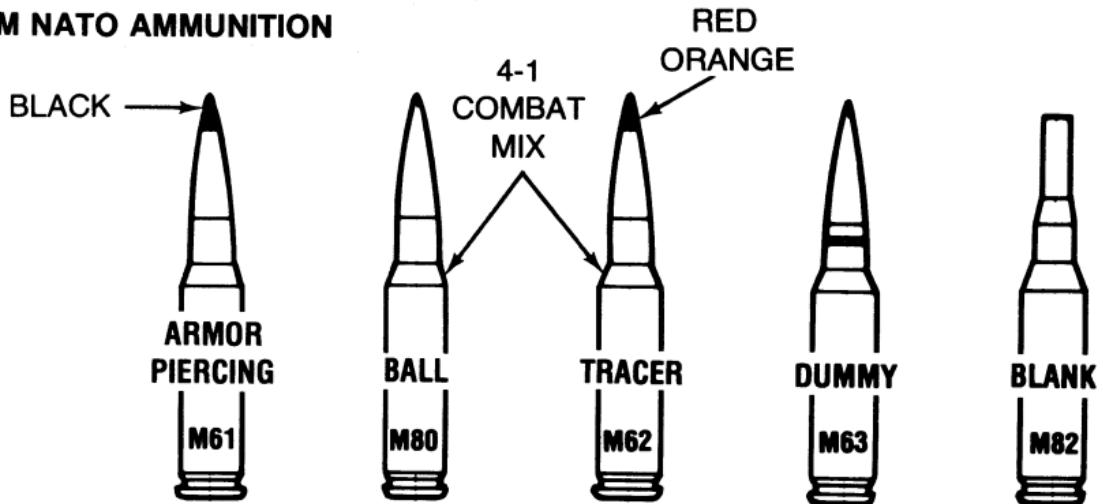
AMMUNITION

WARNING

This is the only ammunition authorized for use in your machine gun. If it is not shown, it is not authorized.

AMMUNITION WHICH FAILS TO FIRE. Dispose of any ammunition, which fails to fire, according to authorized procedures.

7.62-MM NATO AMMUNITION



CARE, HANDLING, AND PRESERVATION.

- a. Do not open ammunition containers until the ammunition is to be used. Ammunition removed from the airtight containers, particularly in damp climates, is likely to corrode.
- b. Protect ammunition from mud, dirt, and water. If the ammunition gets wet or dirty, wipe it off prior to use. Wipe off light corrosion as soon as it is discovered. Heavily corroded cartridges or cartridges which have dented cases or loose projectiles should not be fired.
- c. Do not expose ammunition to the direct rays of the sun. If the powder is hot, excessive pressure may be developed when the gun is fired.
- d. Do not oil or grease ammunition. Dust and other abrasives collecting on oiled or greased ammunition will damage the operating parts of the gun, and oil on cartridges will produce excessive chamber pressure.

APPENDIX A REFERENCES

SCOPE. This appendix lists all forms, field manuals, and technical manuals referenced in this manual.

CONSOLIDATED TABLE OF ALLOWANCES.

CTA 8-100 Army Medical Department Expendable/Durable Items.

CTA 50-970 Expendable/Durable Items (Except: Medical, Class V, Repair Parts, and Heraldic Items)

FIELD MANUALS.

FM 3-87 Nuclear, Biological and Chemical (NBC) Reconnaissance and Decontamination Operations (How to Fight)

FM 21-11 First Aid for Soldiers

FM 21-40 NBC (Nuclear, Biological and Chemical) Defense

FM 23-67 Machinegun 7.62-MM, M60

FIRING TABLE.

FT 7.62-A-2 Machine Gun, 7.62-MM: M60 on Mount, Machine Gun: 7.62-MM, M122 and Machine Gun, 7.62-MM: M73 on Tank, Combat, Full-Tracked: 105-MM Gun, M60 Series and Rifle, 7.62-MM: M14: Firing Cartridge, 7.62-MM, Ball, NATO, M59; Cartridge, 7.62-MM, Ball, NATO, M80; Cartridge, 7.62-MM: AP, NATO, M61 and Cartridge, 7.62-MM: Tracer, NATO, M62

FORMS.

DA Form 2028 Recommended Changes to Publications and Blank Forms
SF 368 Quality Deficiency Report

TECHNICAL MANUALS.

TM 3-220 Chemical, Biological, and Radiological (CBR) Decontamination
TM 11-5855-213-10 Operator's Manual for Night Vision Sight, Individual Served Weapon, AN/PVS-4

MISCELLANEOUS PUBLICATIONS.

DA PAM 738-750 The Army Maintenance Management System (TAMMS)
A-1/(A-2 blank)

APPENDIX B

COMPONENTS OF END ITEM AND BASIC ISSUE ITEMS LISTS

Section I. INTRODUCTION

SCOPE. This appendix lists components of end item and basic issue items for the M60/M60D machine gun to help you inventory items required for safe and efficient operation.

GENERAL. The Components of End Item and Basic Issue Items Lists are divided into the following sections:

- a. *Section II. Components of End Item.* This listing is for informational purposes only and is not authority to requisition replacements. These items are part of the end item but are removed and separately packaged for transportation or shipment. As part of the end item, these items must be with the end item whenever it is issued or transferred between property accounts. Illustrations are furnished to assist you in identifying the items.
- b. *Section III. Basic Issue Items.* These are the minimum essential items required to place the M60/M60D machine gun in operation, to operate it, and to perform emergency repairs. Although shipped separately packaged, BII must be with the M60/M60D machine gun during operation and whenever it is transferred between property accounts. The illustrations will assist you with hard-to-identify items. This manual is your authority to request/requisition replacement BII, based on TOE/MTOE authorization of the end item.

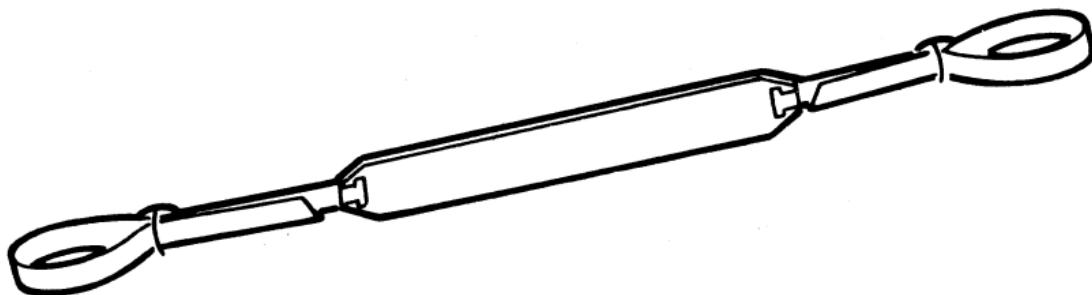
EXPLANATION OF COLUMNS. The following provides an explanation of columns found in the tabular listings:

- a. *Column (1) - Illustration Number (Illus Number).* This column indicates the number of the illustration in which the item is shown.
- b. *Column (2) - National Stock Number.* Indicates the National stock number assigned to the item and will be used for requisitioning purposes.
- c. *Column (3) - Description.* Indicates the Federal item name and, if required, a minimum description to identify and locate the item. The last line for each item indicates the FSCM (in parentheses) followed by the part number. If item needed differs for different models of this equipment, the model is shown under the "Usable On" heading in this column. These codes are identified as:

<i>Code</i>	<i>Used On</i>
023	Model M60
G79	Model M60D

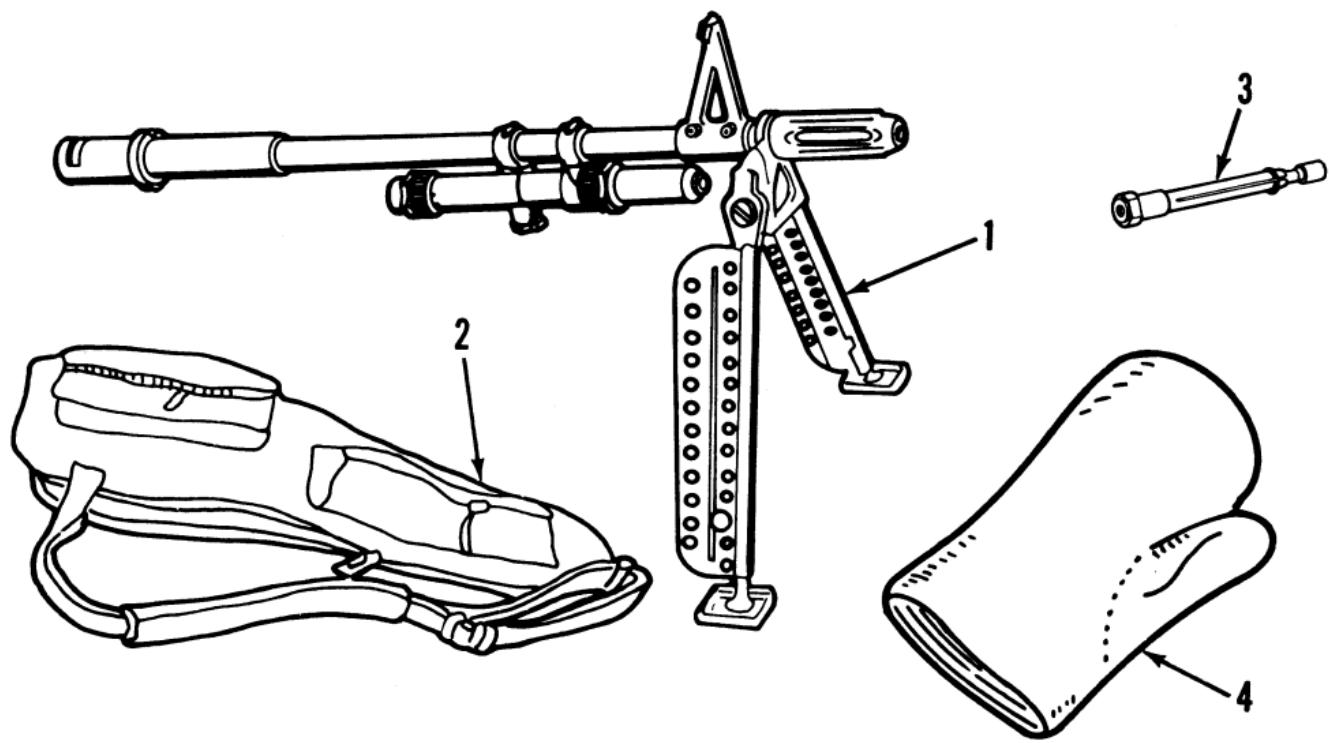
- d. *Column (4) - Unit of Measure (U/M).* Indicates the measure used in performing the actual operational/maintenance function. This measure is expressed by a two-character alphabetical abbreviation (e.g., ea, in., pr).
- e. *Column (5) - Quantity Required (Qty rqr).* Indicates the quantity of the item authorized to be used with/on the equipment.

Section II. COMPONENTS OF END ITEM



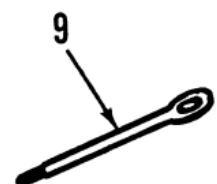
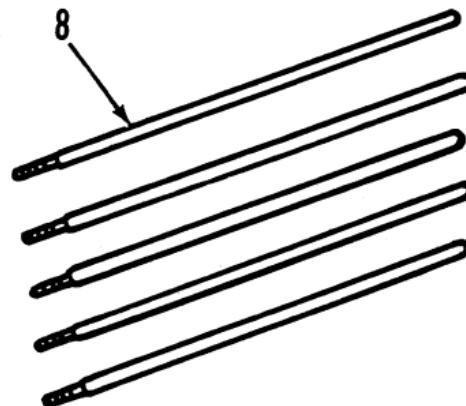
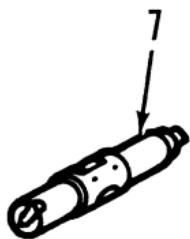
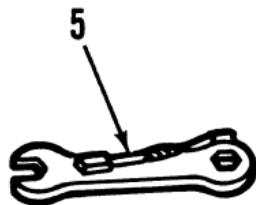
(1) Illus Number	(2) National Stock Number	(3) Description FSCM and Part Number	Usable On Code	(4) U/M	(5) QTY rqr
1	1005-00-312-7177	SLING, SMALL ARM (19204) 12002983	023	EA	1

Section III. BASIC ISSUE ITEMS



Section III. BASIC ISSUE ITEMS

(1) Illus Number	(2) National Stock Number	(3) Description FSCM and Part Number	(4) Usable On Code	(5) QTY rqr
1	1005-00-608-5001	BARREL AND BIPOD ASSEMBLY (19204) 7269027	EA	1
2	1005-00-791-5420	CASE, CARRYING, BARREL ASSEMBLY AND EQUIPMENT (19205) 7791009	EA	1
3	4933-00-652-9950	EXTRACTOR, RUPTURED CARTRIDGE CASE (19205) 7790352	EA	1
4	8415-01-092-0039	MITTEN, HEAT PROTECTIVE (81349) MIL-M-11199	EA	1



(1) Illus Number	(2) National Stock Number	(3) Description FSCM and Part Number	(4) Usable On Code	(5) QTY rqr
5	5120-00-461-1075	WRENCH, SCREWDRIVER AND REAMER (COMBINATION) (19204) 8448458	EA	1
6		TM 9-1005-224-10	EA	1
7	1005-00-793-6761	HANDLE ASSEMBLY: CLEANING ROD (19204) 7266115	EA	1
8	1005-00-726-6109	ROD SECTIONS, CLEANING, SMALL ARMS (19204) 7266109	EA	5
9	1005-00-726-6110	SWAB HOLDER SECTION, SMALL ARMS CLEANING ROD (19204) 7266110	EA	1

APPENDIX C

ADDITIONAL AUTHORIZATION LIST

Section I. INTRODUCTION

SCOPE. This appendix lists additional items you are authorized for the support of the M60/M60D Machine Gun.

GENERAL. This list identifies items that do not have to accompany the M60/M60D Machine Gun and that do not have to be turned in with it. These items are all authorized to you by CTA, MTOE, TDA, or JTA.

EXPLANATION OF LISTING. National stock numbers, descriptions, and quantities are provided to help you identify and request the additional items you require to support this equipment. The items are listed in alphabetical sequence by item name under the type document (i.e., CTA, MTOE, TDA, or JTA) which authorizes the item(s) to you. If item required differs for different models of this equipment, the model is shown under the "Usable on" heading in the description column. These codes are identified as:

Code	Used On
O23	Model M60
G79	Model M60D

Section II. ADDITIONAL AUTHORIZATION LIST

(1) NATIONAL STOCK NUMBER	(2) DESCRIPTION FSCM & PART NUMBER	(3) USABLE ON CODE	(4) U/M	QTY AUTH
MTOE AUTHORIZED ITEMS				
5855-00-629-5334	SIGHT, NIGHT VISION AN/PVS-4: (80063) SMD850300-1	023	EA	1
CTA AUTHORIZED ITEMS				
1005-00-556-4174	BRUSH, CLEANING, SMALL ARMS: (BORE) (19204) 5564174	EA		2

(1) NATIONAL STOCK NUMBER	(2) DESCRIPTION FSCM & PART NUMBER	(3) USABLE ON CODE	(4) QTY AUTH U/M
CTA AUTHORIZED ITEMS (CONT)			
1005-00-690-3115	BRUSH, CLEANING, SMALL ARMS: (CHAMBER) (19204) 7790452	EA	1
1005-00-350-4100	BRUSH, CLEANING, SMALL ARMS: (RECEIVER) (19204) 8448466	EA	1
1005-00-140-3515	FIRING ATTACHMENT, BLANK: (19204) 12002981	EA	1

APPENDIX D

EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST

Section I. INTRODUCTION

SCOPE. This appendix lists expendable supplies and materials you will need to operate and maintain the M60/M60D Machine Gun. These items are authorized to you by CTA 50-970, Expendable/Durable Items (Except Medical, Class V, Repair Parts, and Heraldic Items), or CTA 8-100, Army Medical Department Expendable/Durable Items.

EXPLANATION OF COLUMNS.

- a. *Column (1) - Item Number.* This number is assigned to the entry in the listing and is referenced in the narrative instructions to identify the material (e.g., "Use wiping rag, item 2, app D").
- b. *Column (2) - Level.* This column identifies the lowest level of maintenance that requires the listed item.

C - Operator/Crew

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

EXPLANATION OF COLUMNS (CONT.).

- 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 Federal Supply Code for Manufacturer (FSCM) in parentheses followed by the part number.
- e. *Column (5) - Unit of Measure (U/M).* Indicates the measure used in performing the actual maintenance function. 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, requisition the lowest unit of issue that will satisfy your requirements.

Section II. EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST

(1) ITEM NUMBER	(2) LEVEL	(3) NATIONAL STOCK NUMBER	(4) DESCRIPTION	(5) U/M
1	C	9150-01-102-1473	CLEANER, LUBRICANT AND PRESERVATIVE: (CLP) 1/2 oz bottle (81349) MIL-L-63460	OZ
2	C	7920-00-205-1711	RAG WIPING: (cotton) 50 lb bdl (81348) A-A-531	LB
3	C	1005-00-288-3565	SWAB, SMALL ARMS CLEANING: (cotton) 2 1/2 in. sq (1000 per pkg) (19204) 5019316	PG

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By Order of the Secretary of the Army:

JOHN A. WICKHAM, JR.
General, United States Army
Chief of Staff

Official:

DONALD J. DELANDRO
Brigadier General, United States Army
The Adjutant General

Distribution:

To be distributed in accordance with DA Form 12-40, Operator Maintenance requirements for Machine Gun 7.62-MM, M60, Mount Tripod, M122.

TM 9-1005-224-10: MACHINE GUN, 7.62-MM M60
W/E, MOUNT, TRIPOD, MACHINE GUN, 7.62-MM,
M122, AND MACHINE GUN, 7.62-MM, M60D W/E

PIN : 026382-000