



TECHNICAL MANUAL

**UNIT AND DIRECT MAINTENANCE MANUAL
INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST**



M60D, 7.62 MM, MACHINE GUN



U.S. ORDNANCE

M600

PROVEN UNDER FIRE

WARNING

The M60D Series Machine Guns should be inspected and gauged at least once annually for safety and serviceability. Initial gauging is required one year from receipt of the weapons.

A two year interval may be maintained by some units unless preventive maintenance checks and services (PMCS) or other physical evidence indicates that an individual unit's M60D Machine Guns require inspection/gauging 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. That will not affect other units in regard to the interval of inspection.

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.

Personnel operating vapor degreaser are warned not to breathe the vapor fumes.

Before starting an inspection, be sure to clear the weapon. Do not actuate the trigger before clearing the weapon. Inspect the chamber to make sure it is empty and free of obstructions. Check to see there are no obstructions in the barrel and no ammunition is in position to be chambered.

Using paint thinners, gasoline, kerosene, benzene (benzol), water, steam, or air for cleaning the weapon is prohibited. Use only authorized cleaning materials.

Be careful when removing and installing spring-loaded components. Carelessness could cause injury.

To prevent possible body injuries and aircraft damage, personnel should not stand the weapon on its barrel assembly when disassembling or assembling the weapon.

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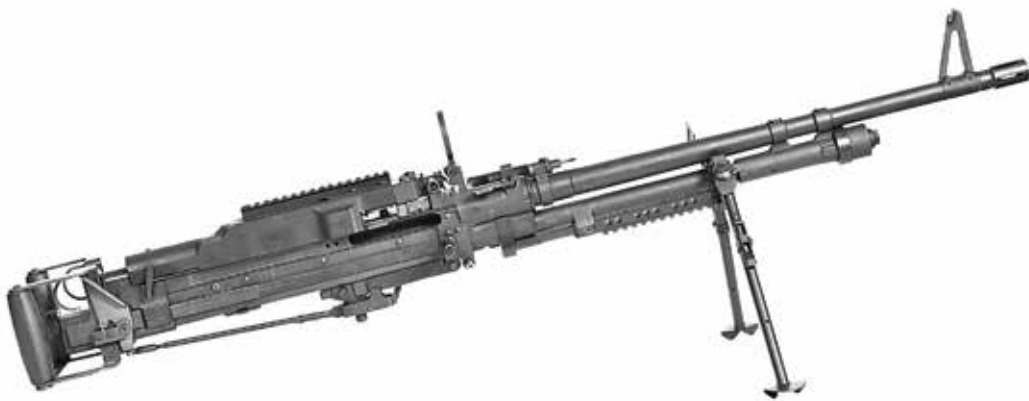
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M60D 7.62-MM MACHINE GUN

Full External View

CHAPTER 1 | INTRODUCTION

GENERAL INFORMATION

01

SCOPE

Type of Manual:

Unit, Direct Support, Maintenance.

Model Number and Equipment Names:

M60D 7.62-mm machine gun.

Purpose:

The M60D 7.62-mm machine gun is a general purpose weapon capable of being fired from several mounts. The weapon is mainly used for support of ground operations. The M60D is an aircraft door-mounted, or vehicle mounted machine gun.

OFFICIAL NOMENCLATURE, NAMES AND DESIGNATIONS

This listing includes nomenclature cross-references used in this manual:

Common Name**Official Nomenclature**

Bipod Legs	Leg, Machine Gun, RH
	Leg, Machine Gun, LH

EQUIPMENT DESCRIPTION AND DATA

02

EQUIPMENT CHARACTERISTICS, CAPABILITIES, AND FEATURES

M60D Machine Gun. The M60D machine gun is an air-cooled, disintegrating link, belt fed, gas operated weapon. The operating cycle begins from an open bolt position. The weapon features fixed head space, which permits rapid changing of barrels.



M60D 7.62-MM MACHINE GUN

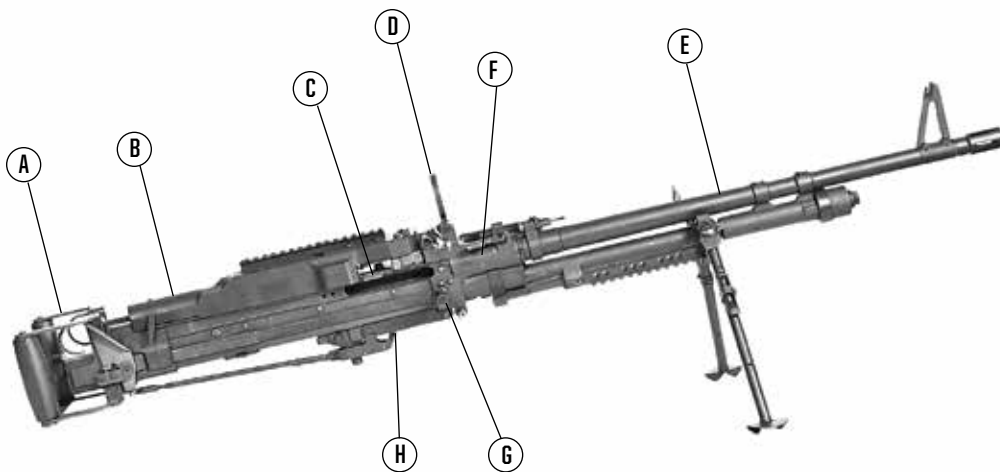
EQUIPMENT DESCRIPTION AND DATA

02

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS

The M60D machine gun consists of the following major external components:

- A **GRIP AND TRIGGER ASSEMBLY.** Provides handles to move machine gun toward the target and houses the machine gun trigger.
- B **COVER ASSEMBLY.** Positions and holds cartridges in place for stripping, feeding link belt, and chambering rounds.
- C **CARTRIDGE FEED TRAY ASSEMBLY.** Guides cartridges for positioning and feeding.
- D **REAR SIGHT.** Provides a means to aim the machine gun in the general area of the target. The rear sight is non-adjustable.
- E **BARREL AND CARRYING HANDLE ASSEMBLY.** The barrel assembly houses cartridges for firing and directing projectiles. The 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.
- F **RECEIVER AND BIPOD ASSEMBLY.** The receiver supports all major components. Major components houses internal parts and, through a series of cam ways, controls operation of weapon. The bipod assembly provides a semistable platform when the machine gun is fired from other than the designated mount.
- G **COCKING HANDLE ASSEMBLY.** Provides a means to manually move the bolt assembly Ato the rear.
- H **SEAR AND SAFETY HOUSING.** Provides controls for firing the machine gun.



EQUIPMENT DESCRIPTION AND DATA

02

M60D EQUIPMENT DATA

Weight _____ 25 lbs (10.42 kg)
Length _____ 43.5 in. overall (1.1 m overall)
Rate of fire (cyclic) _____ 550 rd per min (approx)
Muzzle velocity _____ 2800 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 | **UNIT MAINTENANCE
INSTRUCTIONS**

REPAIR PARTS, SPECIAL TOOLS, AND SUPPORT EQUIPMENT

03

COMMON TOOLS AND EQUIPMENT

For authorized common tools and equipment, refer to Modified Table of Organization and Equipment (MTOE) applicable to your unit.

SPECIAL TOOLS AND SUPPORT EQUIPMENT

Tools and test equipment are listed in work package 54, pg. 184. Special tools and support equipment are listed and illustrated in work package 54, pg. 184.

REPAIR PARTS

Repair parts are listed and illustrated in work packages 38, pg. 158 through 53, pg. 183 of this manual.

SERVICE UPON RECEIPT

04

GENERAL

- a. Inspect the machine gun for damage incurred during shipment.
- b. Check the machine gun against the packing slip to see if shipment is complete.
- c. Check to see whether the equipment has been modified.

SERVICE UPON RECEIPT**04****SERVICE UPON RECEIPT OF MATERIALS****WARNING**

Before starting an inspection, be sure to clear the weapon. Do not actuate the trigger before clearing the weapon. Inspect the chamber to make sure it is empty and free of obstructions. Check to see there are obstructions in the barrel and no ammunition is in position to be chambered.

Table 1. Service Upon Receipt (cont)

LOCATION	ITEM	ACTION
1. Container	a. Machine gun	a. Remove machine gun from container. b. Inspect the equipment for damage incurred during shipment.
	b. Basic issue items	c. Check the equipment against the packing list to see if the shipment is complete.
2. Machine Gun	a. Barrel assembly	Remove volatile corrosion inhibitor (VCI) bore tube from barrel and discard.
	b. All parts	a. Field-strip machine gun and inspect for missing, damaged, and rusted or corroded parts. b. Clean and lubricate. c. Reassemble. d. Operate by hand using belted dummy cartridges. e. Check to see whether the equipment has been modified.

PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)

05

General

This work package contains the procedures and instructions necessary to perform preventive maintenance checks and services. These services are to be performed by unit maintenance personnel with the assistance, where practical, of the operator/crew who will clean and lubricate.

NOTE

Maintenance of some assemblies are not authorized by the maintenance allocation chart Appendix A (37, pg. 146) to unit maintenance. Ensure that no work is being accomplished beyond the scope authorized to unit maintenance. Evacuate to direct support maintenance for repairs when necessary.

The **PMCS procedures** are contained in the table following. They are arranged in logical sequence requiring a minimum amount of time and motion on the part of the persons performing them and are arranged so that there will be minimum interference between persons performing checks simultaneously on the same end item.

Item No. Column. Checks and services are numbered in disassembly sequence.

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

Item To Be Checked Or Serviced Column. This column lists the items to be checked or serviced.

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. Information marked SH indicates a specific equipment shortcoming and the procedure needed to correct the shortcoming.

“Not Fully Mission Capable If:” Column. This column contains a brief statement of the condition (e.g., malfunction, shortage) that would cause the covered equipment to be less than fully ready to perform its assigned mission.

WARNING

Before starting an inspection, be sure to clear the weapon. Do not actuate the trigger before clearing the weapon. Inspect the chamber to make sure it is empty and free of obstructions. Check to see there are no obstructions in barrel and no ammunition is in position to be chambered.

NOTE

When weapon has not been used, perform preventive maintenance every 90 days unless inspection reveals more frequent servicing is necessary.

If the M60D machine gun has to go to direct support maintenance for any repair, both barrel assemblies must be turned in with the weapon.

Coordinate cleaning and lubrication with crew/operator as part of quarterly service.

PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)

05

WARNING

INTERVAL: It is recommended that PMCS is performed at a quarterly interval by qualified personnel certified by the manufacturer. PMCS intervals may be adjusted if quarterly maintenance or other physical evidence indicate an individual unit's M60 D machine guns require PMCS at a more frequent/less frequent interval. If it is determined that a biannual PMCS interval is necessary for an individual unit, only that unit will be affected. That will not affect other units in regard to the interval of PMCS.

Manufacturer recommends that machine gun part replacements are made only after following PMCS procedures done by qualified personnel.

PMCS must be completed by a direct unit support level by qualified personnel prior to issuance to firing units.

At a minimum, gauging must be conducted annually at the direct unit support level by qualified personnel.

NOTE

For machine guns loaded on aircraft in ready condition, manufacturer recommends the operator clean, dry, inspect, and lightly lubricate immediately following flight status.

Table 1. PREVENTIVE MAINTENANCE CHECKS AND SERVICES

ITEM NO.	INTERVAL	MAN-HOUR	ITEM CHECK OR SERVICE	PROCEDURE	NOT FULLY MISSION CAPABLE IF:
1			M60D Machine Gun	<ul style="list-style-type: none"> a. Visually inspect machine gun for general appearance, condition, and operation. Operate the weapon by hand using dummy rounds/cartridges. b. Make sure all serial numbers and identification numbers are legible. c. Inspect for burrs or damage on exterior of weapon. d. Check to make sure weapon is properly assembled. e. Field-strip the weapon, as necessary, to perform detail inspection. f. Repair or replace all authorized components (07, pg. 42). If additional repair is needed, notify direct support maintenance. g. Unit maintenance personnel should confirm assigned barrel and spare barrel are headspaced and tagged to the receiver. 	Barrel and spare barrel not properly headspaced/ tagged to weapon.

PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)

05

Table 1. PREVENTIVE MAINTENANCE CHECKS AND SERVICES (cont)

ITEM NO.	INTERVAL	MAN-HOUR	ITEM CHECK OR SERVICE	PROCEDURE	NOT FULLY MISSION CAPABLE IF:
1 (cont)				<p>h. Check that flat leaf spring is the proper type for weapon and is installed correctly.</p> <p>i. Assemble the weapon Make sure all components are lubricated and installed correctly.</p> <p>j. Visually inspect all external aluminum parts for a dull black finish.</p> <p>k. Check to ensure annual direct support maintenance safety and serviceability inspection and gauging has been done and that the next gauging and inspection is scheduled. If annual gauging has not been performed within the last year, notify direct support maintenance.</p>	<p>Leaf spring is incorrect type or improperly installed.</p> <p>Annual gauging has not been performed.</p>
2			Grip and Trigger Assembly	<p>a. Check for burred, bent, and damaged components.</p> <p>b. Check trigger (1) for free movement.</p> <p>c. Check sear assembly link and spring (2) for proper adjustments. (Refer to 07 for adjustments.)</p> <p>d. Check that grip and trigger assembly (3) is securely fastened to the receiver assembly.</p> <p>e. Repair or replace (08, pg. 52).</p>	<p>Damaged so as to prevent proper operation of trigger assembly or cannot be retained on receiver.</p> <p>Trigger is not free.</p> <p>Sear assembly link and spring are out of adjustment.</p> <p>Grip and trigger assembly are not secure.</p>

PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)

05

Table 2. PREVENTIVE MAINTENANCE CHECKS AND SERVICES

ITEM NO.	INTERVAL	MAN-HOUR	ITEM CHECK OR SERVICE	PROCEDURE	NOT FULLY MISSION CAPABLE IF:
				<p style="text-align: center;">CAUTION</p> <p>Do not allow breech bolt to slam closed when the weapon is empty, as this will cause damage to locking surfaces on the breech bolt or barrel socket.</p> <p style="text-align: center;">NOTE</p> <p>Burrs or raised surfaces may be removed or smoothed using a fine grit sharpening stone. DO NOT change the dimensions of any component by stoning. Cracks, chips, dents, or gouges on components shall be reported to direct support maintenance for repair or replacement.</p> <p>Cracks, chips, dents, or gouges on breech bolt locking surfaces can damage the barrel socket. Damage to barrel socket locking surfaces can damage the breech bolt. If either condition exists, notify direct support maintenance for replacement or repair.</p>	
3			Breech Bolt Assembly	a. Inspect firing pin helical compression spring for tension.	



NOTE

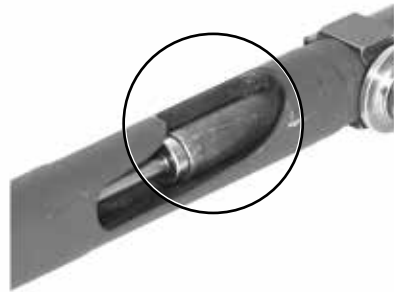
Check spring tension. Remove the bolt from operating rod, turn bolt so you can see spring guide and firing pin, shake bolt moderately, if firing pin moves; replace firing pin spring.

PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)

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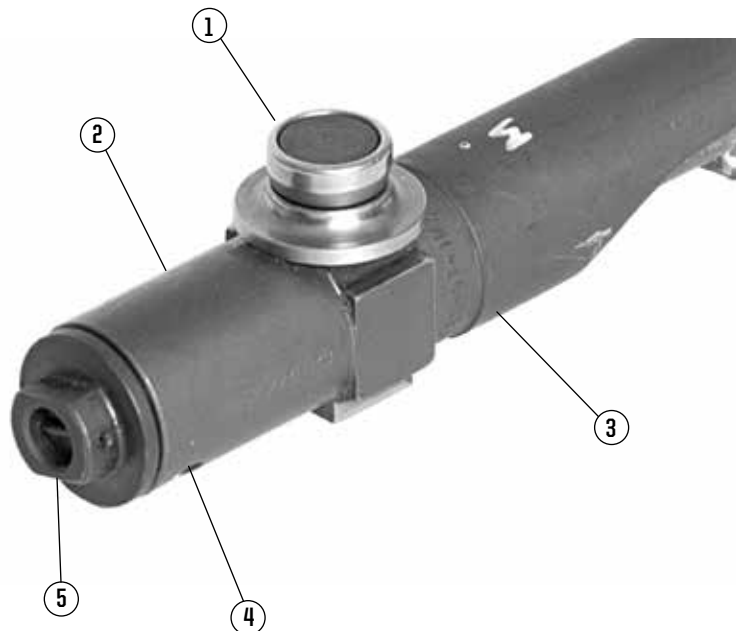
Table 2. PREVENTIVE MAINTENANCE CHECKS AND SERVICES (cont)

ITEM NO.	INTERVAL	MAN-HOUR	ITEM CHECK OR SERVICE	PROCEDURE	NOT FULLY MISSION CAPABLE IF:
3 (cont)				b. Inspect bolt body for burrs or damage in the areas indented.	Damaged beyond repair by stoning.



c. Make sure breech bolt operates correctly. Roller (1) on cam actuator assembly (2) should rotate freely, and cam actuator assembly should rotate freely on breech bolt (3). Inspect bolt assembly for missing headless straight pin (4) securing plug assembly (5).

Roller and cam actuator assembly do not rotate freely. Parts missing or broken.



PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)

05

Table 2. PREVENTIVE MAINTENANCE CHECKS AND SERVICES (cont)

ITEM NO.	INTERVAL	MAN-HOUR	ITEM CHECK OR SERVICE	PROCEDURE	NOT FULLY MISSION CAPABLE IF:
3 (cont)				<p>d. Inspect firing pin (6) in breech bolt. Firing pin (6) must not be cracked or bent and must have a well-rounded point.</p> <p>e. Inspect cartridge ejector (7) for freedom of movement. When cartridge ejector is depressed/released, helical compression spring must return cartridge ejector to normal position.</p> <p>f. Inspect cartridge extractor (8) for chipped or damaged hook portion and for freedom of movement. When cartridge extractor is depressed/released, helical compression spring must return cartridge extractor to normal position.</p>	<p>Firing pin broken/cracked. Point flattened.</p> <p>Parts damaged or missing.</p> <p>Parts damaged or missing.</p>
				<p>g. Inspect for pits on breech bolt face. Make sure that firing pin hole is round and not elongated.</p> <p>h. Repair or replace all authorized components (09, pg. 56). If addition repair is needed, notify direct support maintenance.</p>	<p>Major pits on bolt face. Elongated/out-of-round firing pin hole.</p>



PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)

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Table 2. PREVENTIVE MAINTENANCE CHECKS AND SERVICES (cont)

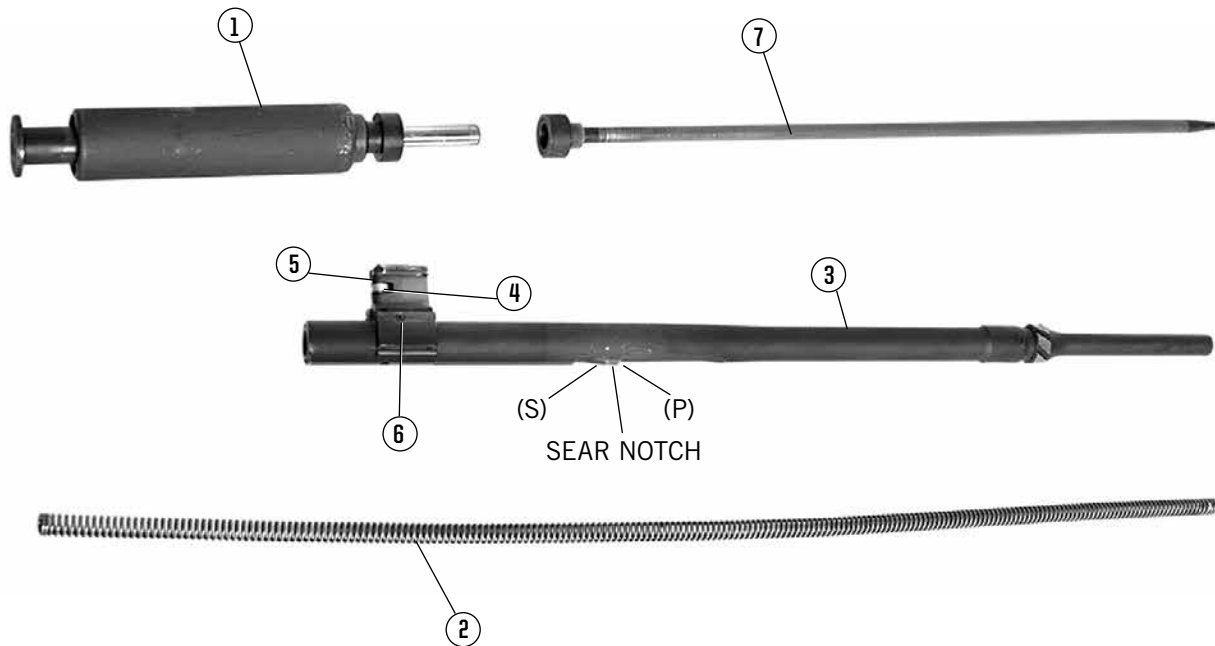
ITEM NO.	INTERVAL	MAN-HOUR	ITEM CHECK OR SERVICE	PROCEDURE	NOT FULLY MISSION CAPABLE IF:
4			Operating Rod Assembly and Hydraulic Buffer Assembly	<p>a. Inspect buffer assembly (1) for damage, rust, and burrs. Depress plunger to check its movement. If buffer assembly is faulty, replace buffer assembly.</p> <p>b. Inspect helical compression spring (2) for damage and for signs of weakness, burrs, or sharp edges. The minimum length of the drive spring will be 23-1/4 inches long with no maximum length.</p> <p>c. Inspect operating rod assembly (3) for damage or obstructions in the helical compression spring hole. Linear-rotary roller (4) must be free of cracks and rotate freely. Inspect both sear notches.</p> <p>d. If pin is loose or missing, notify direct support maintenance. Make sure that yoke and tube assembly (5) is tight on operating rod assembly and that spring pin (6) does not protrude on either side. Check yoke and tube assembly for damage.</p> <p>e. Notify direct support maintenance for replacement or repair of operating rod beyond assembly.</p> <p>f. Inspect guide assembly (7) for straightness; the drive spring guide will only be considered unserviceable when the rod becomes so distorted as to cause binding of the spring or when the rod with the spring installed cannot be inserted in the operating rod well.</p>	<p>Buffer assembly is faulty.</p> <p>Spring is damaged/broken or less than 23-1/4 in length.</p> <p>Parts are missing/damaged. Roller does not rotate freely. Pin is loose.</p> <p>Any part other than the roller is loose. Retaining pin protrudes.</p> <p>Guide is broken or bent beyond standards.</p> <p>Rod is distorted so as to cause binding.</p>

PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)

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NOTE

Primary (P) notch is normal sear notch. Secondary (S) notch is short recoil sear notch.

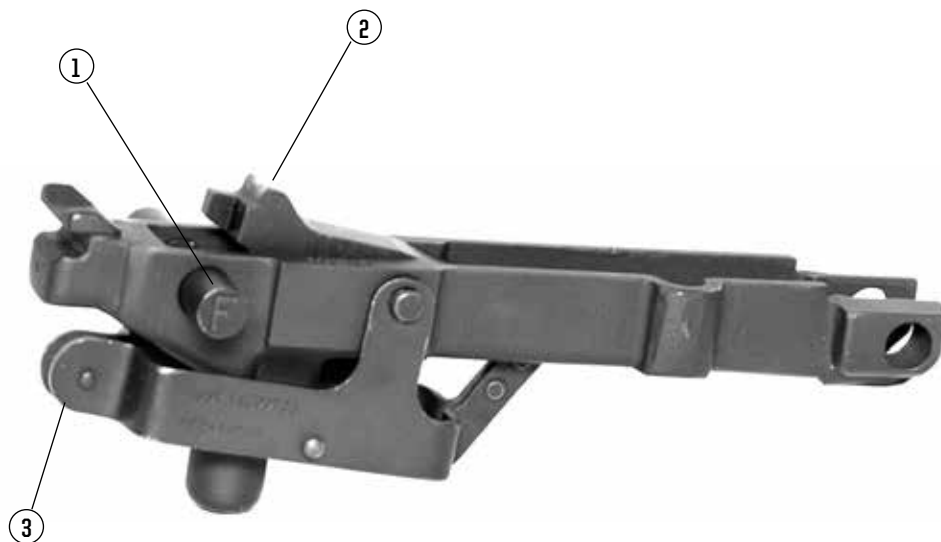


PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)

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Table 2. PREVENTIVE MAINTENANCE CHECKS AND SERVICES (cont)

ITEM NO.	INTERVAL	MAN-HOUR	ITEM CHECK OR SERVICE	PROCEDURE	NOT FULLY MISSION CAPABLE IF:
5			Sear and Safety Housing Assembly	<p>a. Check components for freedom of movement.</p> <p>b. Check for broken or missing parts, and deformed or weak springs.</p> <p>c. When safety is in safe position, make sure small arms safety (1) prevents sear (2) from being activated. Make sure sear (2) can be actuated when small arms safety (1) is in fire position and sear assembly activator (3) is moved.</p> <p>d. Repair or replace sear and safety housing assembly (11).</p>	<p>Parts are missing/ broken. Springs are deformed/weak and prevent proper functioning.</p> <p>Safety does not function properly or sear assembly activator does not move.</p>



PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)

Table 2. PREVENTIVE MAINTENANCE CHECKS AND SERVICES (cont)

ITEM NO.	INTERVAL	MAN-HOUR	ITEM CHECK OR SERVICE	PROCEDURE	NOT FULLY MISSION CAPABLE IF:
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NOTE

Check both barrel assemblies when performing PMCS.

Burrs or raised surfaces may be removed or smoothed using a fine grit sharpening stone. DO NOT change the dimensions of any components by stoning. Components with cracks, chips, dents, or gouges shall be reported to direct support maintenance for repair or replacement.

Cracks, chips, dents, or gouges on breech bolt locking surfaces can damage the barrel socket. Damage to barrel socket locking surfaces can damage the breech bolt. Notify direct support maintenance for replacement or repair if either condition exists.

6

Barrel and Carry Handle Assemblies

- a. Inspect barrel assembly and carry handle assembly for damage. Headless straight pin (1) must be tight and staked at both ends to hold flash suppressor (2). Check suppressor for looseness, if loose notify direct support maintenance.
- b. Tilt barrel (3) to make sure gas piston moves freely, make sure bleeder hole is open.

Barrel assembly damaged. Suppressor straight pin missing. Suppressor loose.

Gas piston does not move.

NOTE

Check for broken or cracked gas piston when it is removed for cleaning.

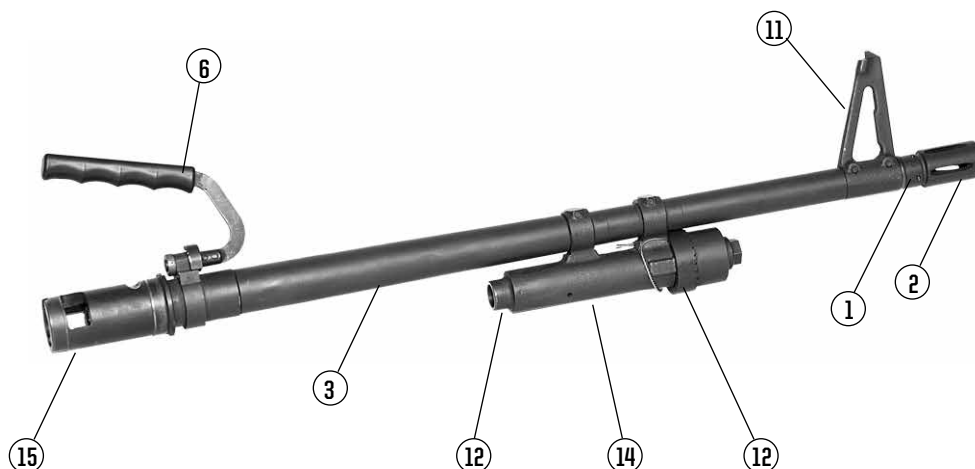
- c. Inspect carrying handle assembly (6). Check gas cylinder vent plug for wiring. Replace if missing. See (12, pg. 68) for instructions.

PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)

05

Table 2. PREVENTIVE MAINTENANCE CHECKS AND SERVICES (cont)

ITEM NO.	INTERVAL	MAN-HOUR	ITEM CHECK OR SERVICE	PROCEDURE	NOT FULLY MISSION CAPABLE IF:
6 (cont)			Barrel and Carrying Handle Assembly (cont)	<p>d. Inspect front sight (11) for looseness or any damage (bent).</p> <p>e. Inspect key washers (12) for broken tabs. If broken, replace, and notify direct support for additional repair if necessary.</p> <p>Inspect gas cylinder (14) for looseness. If loose notify direct support maintenance.</p> <p>f. Inspect for loose or cracked barrel socket (15).</p> <p>g. Repair (see 12, pg. 68). If additional repair is necessary, notify direct support maintenance.</p> <p>h. Inspect carrying handle assembly (6) for cracks. It must be held securely by spring tension. Rubber coating must not be gummy or retain finger impressions. Abrasions, cuts, gouges, or holes in the rubber are acceptable. Loose bonding of rubber near cuts, etc., is acceptable provided cuts do not interfere with the operator's grip on the weapon.</p>	<p>Front sight is loose.</p> <p>Gas cylinder loose.</p> <p>Socket loose or cracked.</p>

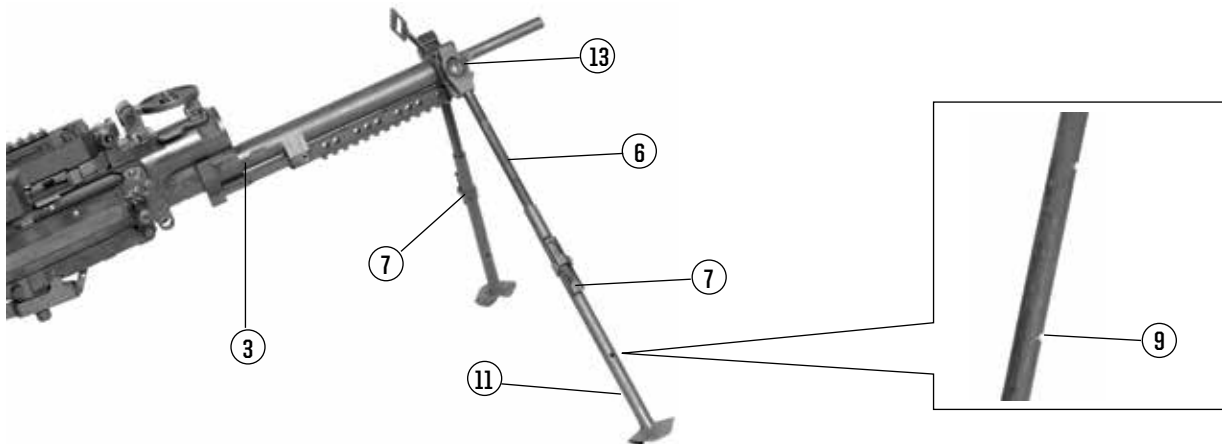


PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)

05

Table 2. PREVENTIVE MAINTENANCE CHECKS AND SERVICES (cont)

ITEM NO.	INTERVAL	MAN-HOUR	ITEM CHECK OR SERVICE	PROCEDURE	NOT FULLY MISSION CAPABLE IF:
7			Bipod Assembly	<p>a. Check bipod legs for ease of extension and retraction by:</p> <ol style="list-style-type: none"> 1. Check bipod legs do not come off. Grasp each leg and pull sharply down to ensure they fully extend but do not come off the bipod assembly. 2. Press leg locks and ensure legs fully retract. 3. Check leg locks (7) for retention at each detent (9) by pushing on leg bottom (11) at each detent (9) position. 4. Press leg locks and pull sharply downward. Bipod legs should not come off. 5. Check bipod shoulder screws (13) for tightness and staking. 	Bipod legs come fully off.

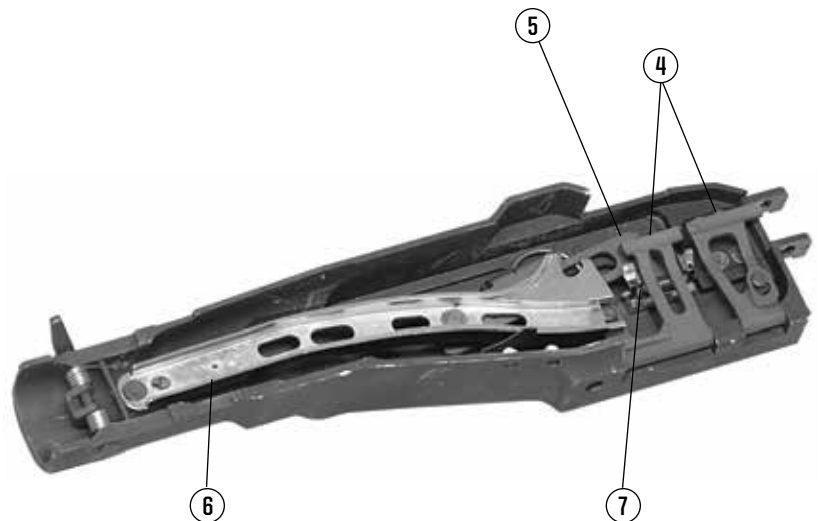
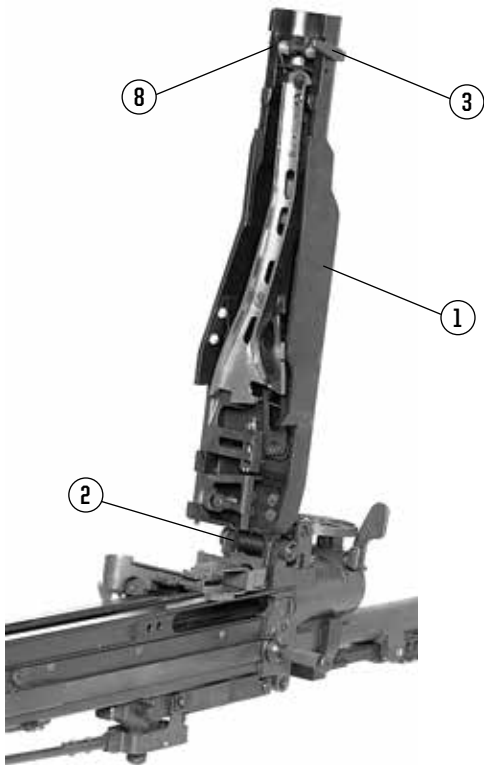


PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)

05

Table 2. PREVENTIVE MAINTENANCE CHECKS AND SERVICES (cont)

ITEM NO.	INTERVAL	MAN-HOUR	ITEM CHECK OR SERVICE	PROCEDURE	NOT FULLY MISSION CAPABLE IF:
8			Cover Assembly	<p>a. Inspect for proper operation. Cover assembly (1) must be held open by spring (2) tension, and held closed by cover latch (3).</p> <p>b. Make sure cover assembly opens and closes freely.</p> <p>c. Inspect for damaged or missing components.</p> <p>d. Check that front and rear cartridge guides (4) operate smoothly. Ensure that flat washers are not damaged and that shouldered pins are not loose (no movement).</p> <p>e. Make sure springs allow feed lever assembly (5) feed cam assembly (6), and feed pawl assembly (7) to operate freely. Check that latch lever assembly shaft (8) operates freely.</p> <p>f. Repair or replace all authorized components (13, pg.74). If additional repair is necessary, notify direct support maintenance.</p> <p>g. Visually inspect that all external aluminum parts have a dull black finish.</p>	<p>Cover latch does not hold cover closed.</p> <p>Parts missing, loose or damaged</p> <p>Cover components do not operate smoothly.</p> <p>Missing finish allows light reflection.</p>

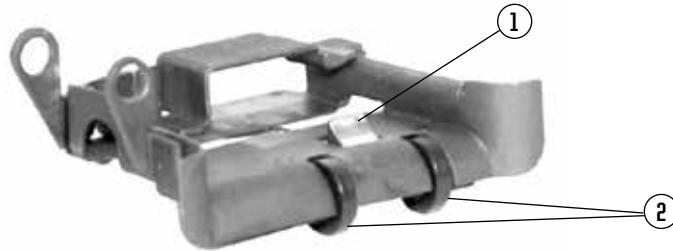


PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)

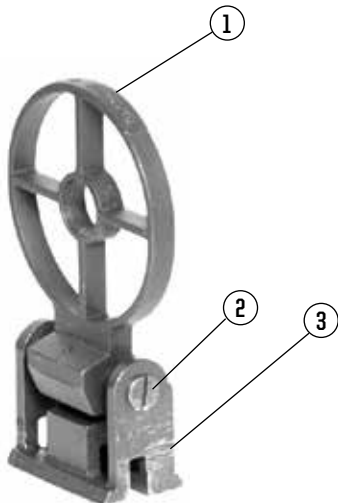
05

Table 2. PREVENTIVE MAINTENANCE CHECKS AND SERVICES (cont)

ITEM NO.	INTERVAL	MAN-HOUR	ITEM CHECK OR SERVICE	PROCEDURE	NOT FULLY MISSION CAPABLE IF:
9			Cartridge Feed Tray Assembly	a. Inspect feed tray assembly for cracks or distortion. Inspect belt holding cartridge retainer pawl (1) and helical torsion spring for weakness or damage. b. Inspect linear rotary rollers (2) for freedom of movement. c. Inspect spot welds for evidence of separation or failure. d. Repair (14, pg. 82).	Tray cracked or distorted. Welds cracked or separated.



10			Rear Sight	a. Check for burred, bent, or damaged components. b. Make sure rear sight assembly is secured to receiver assembly. c. Make sure sight ring (1) and rear sight retainer (2) are secured to rear sight base (3). d. Make sure sight ring rotates smoothly from horizontal to vertical position. e. Make sure sight ring is retained when placed in vertical position by spring tension. f. Notify direct support maintenance if repair is necessary.	Parts bent or damaged. Sight loose on receiver. Rear sight does not stay in vertical position. Sight ring does not rotate smoothly.
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PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)

05

Table 2. PREVENTIVE MAINTENANCE CHECKS AND SERVICES (cont)

ITEM NO.	INTERVAL	MAN-HOUR	ITEM CHECK OR SERVICE	PROCEDURE	NOT FULLY MISSION CAPABLE IF:
11			Gun Receiver Assembly	<p>a. Inspect barrel lock (1) and barrel lock ring (2). Make sure barrel assembly is secured to receiver assembly.</p> <p>b. Inspect magazine bracket assembly (3) for damage and positive spring tension of latches (4).</p> <p>c. Make sure cocking handle assembly (6) works without binding. Reassemble weapon and perform operation check.</p> <p>d. Make sure forward rail is secure and held in place by spring pin.</p> <p>e. Inspect quick release pin (8) to make sure that bearing ball works properly, and that wire rope assembly secures quick release pin (8) to rear sight.</p> <p>f. Repair or replace authorized components (07, pg. 42). If additional repair is necessary, notify direct support maintenance.</p> <p>g. Check for loose receiver bridge and/or rivets. If loose return to depot level maintenance.</p> <p>h. Inspect for missing finish. Apply solid film lubricant on shiny surfaces.</p>	<p>Barrel does not lock onto receiver.</p> <p>Magazine bracket assembly damaged or loose.</p> <p>Cocking handle binds.</p> <p>Spring pin is missing.</p> <p>Ball bearing is missing or not working properly.</p> <p>Rivets loose or missing.</p> <p>Finish is missing from one third or more of the receiver.</p>

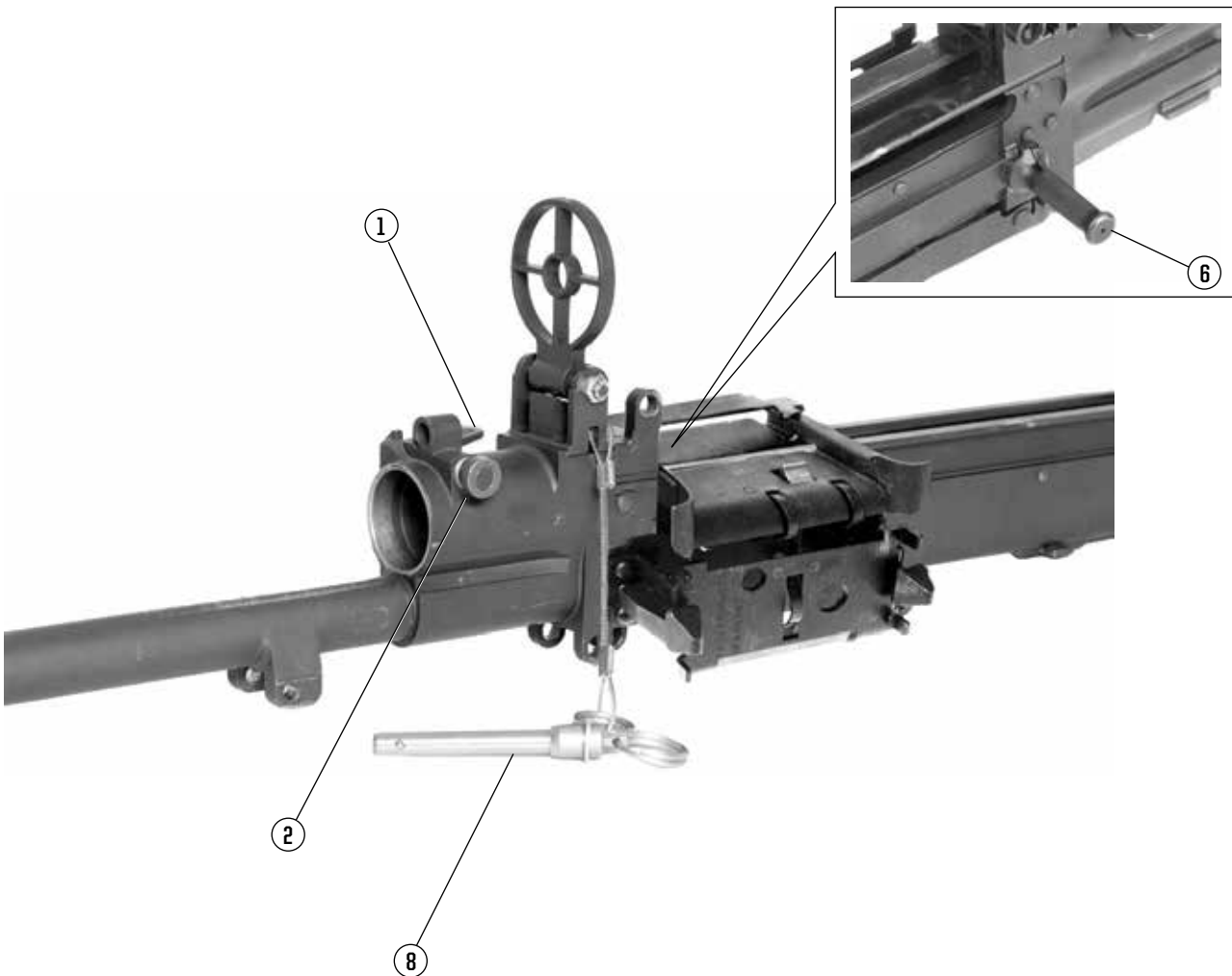
PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)

05

NOTE

Coordinate cleaning and lubrication with crew/operator as part of quarterly services.

The breakthrough of the wall in the forearm spring catch notch of the receiver extension (tube) is not cause for rejection.





U.S. ORDNANCE

M60D

PROVEN UNDER FIRE

TROUBLE SHOOTING PROCEDURES

06

INITIAL SETUP

MAINTENANCE LEVEL: Unit and Direct Support

GENERAL

This section contains troubleshooting information for locating and correcting most of the operating troubles which may develop in your machine gun. Each malfunction for an individual component, unit, or system is followed by a list of tests or inspections which will help you to determine corrective actions to take. You should perform the tests/inspections and corrective actions in the order listed.

This manual cannot list all possible malfunctions that may occur, nor all tests or inspections and corrective actions. If a malfunction is not listed (except when malfunction and cause are obvious) or is not corrected by listed corrective actions, notify your supervisor.

TROUBLE SHOOTING PROCEDURES




SYMPTOM INDEX

SYMPTOM	PAGE
Failure to feed _____	28 - 30
Failure to chamber _____	30 - 31
Failure to lock _____	32
Failure to fire _____	33 - 34
Failure to unlock _____	34
Failure to extract _____	35 - 36
Failure to eject _____	36 - 37
Failure to cock _____	37 - 38
Sluggish operation _____	39
Uncontrolled fire (runaway gun) _____	40 - 41

TROUBLE SHOOTING PROCEDURES

06

Table 1. TROUBLE SHOOTING PROCEDURES

MALFUNCTION	TEST TO INSPECT	CORRECTIVE ACTION
<p>1. Failure To Feed</p>	<p>1. Check cover assembly for weak feed pawl assembly and helical torsion spring. Inspect feed lever assembly for damage.</p> 	<p>Notify direct support maintenance.</p>
	<p>2. Check cartridge guides and helical compression springs for defects. Ensure that flat washers are not damaged and that shouldered pins are not loose (no movement).</p> 	<p>Notify direct support maintenance.</p>
	<p>3. Check cover assembly for defective cover latch.</p> 	<p>If repair is necessary, notify direct support maintenance.</p>

TROUBLE SHOOTING PROCEDURES

06

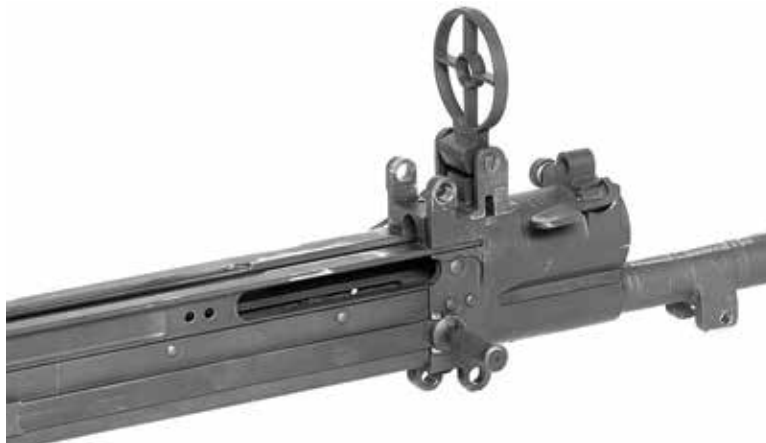
MALFUNCTION	TEST TO INSPECT	CORRECTIVE ACTION
1. FAILURE TO FEED (cont)	4. Check feed cam assembly for defects.	Notify direct support maintenance.



5. Check operating rod assembly for broken helical compression spring.	Replace defective helical compression spring.
--	---



6. Check receiver assembly for obstruction.	Remove obstruction, clean and lubricate.
---	--



TROUBLE SHOOTING PROCEDURES

06

MALFUNCTION	TEST TO INSPECT	CORRECTIVE ACTION
<p>1. FAILURE TO FEED (cont)</p>	<p>7. Check cam actuator assembly for proper assembly and defects.</p>	<p>Replace cam actuator assembly (09, pg. 56).</p>

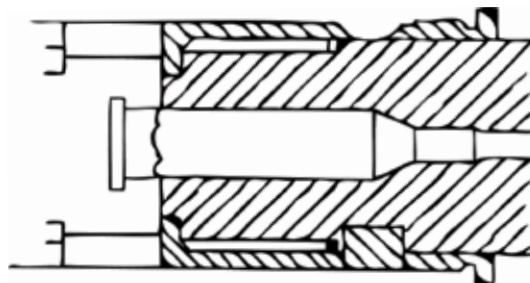


<p>8. Check for lubrication.</p>	<p>Lubricate.</p>
<p>9. Check for blockage in gas cylinder gas port</p>	<p>Clean gas port.</p>



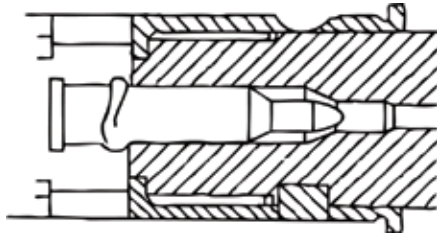
*NOTE: Cutaway Image.

<p>2. FAILURE TO CHAMBER</p>	<p>1. Check for ruptured cartridge case.</p>	<p>Remove.</p>
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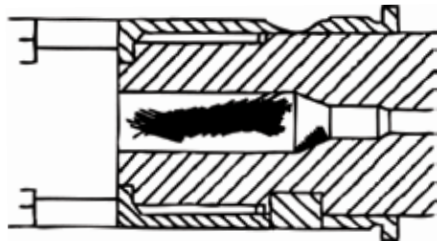


TROUBLE SHOOTING PROCEDURES

MALFUNCTION	TEST TO INSPECT	CORRECTIVE ACTION
<p>2. FAILURE TO CHAMBER (cont)</p>	<p>2. Check cam actuator assembly for proper assembly and defects.</p>	<p>Replace cam actuator assembly (09, pg. 56).</p>



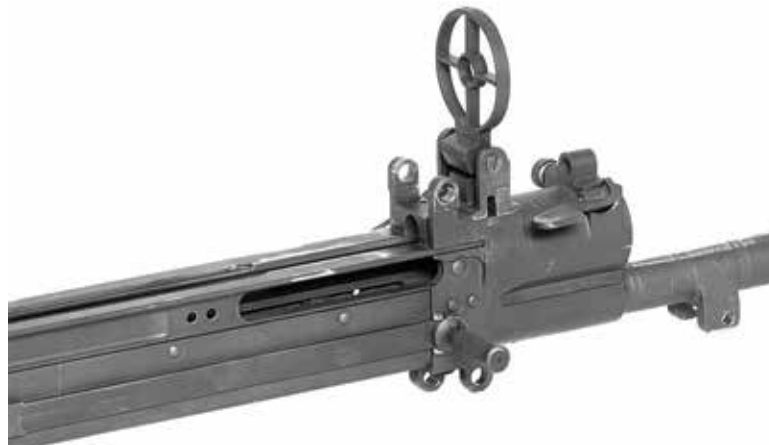
<p>3. Check chamber for dirt.</p>	<p>Clear barrel and clean and lubricate as required.</p>
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<p>4. Check gas cylinder for carbon buildup.</p>	<p>Remove carbon.</p>
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<p>5. Check receiver assembly for carbon buildup.</p>	<p>Remove carbon.</p>
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TROUBLE SHOOTING PROCEDURES

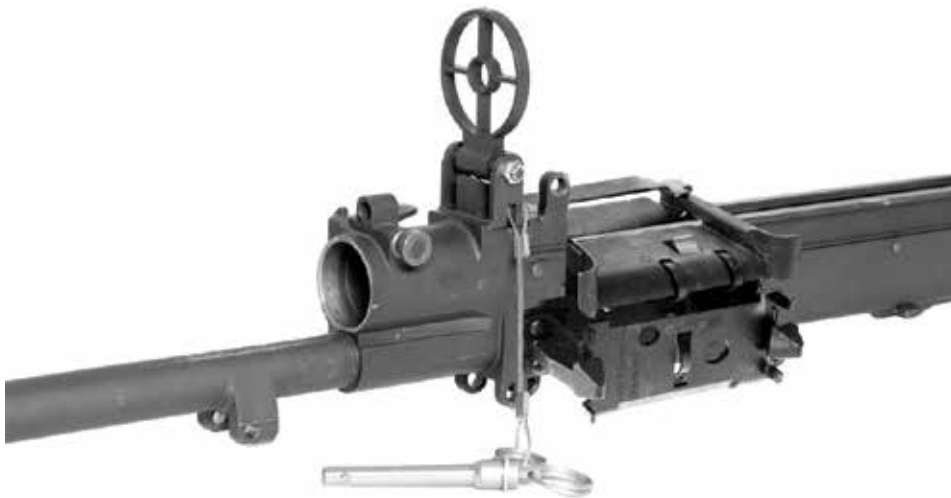
06

MALFUNCTION	TEST TO INSPECT	CORRECTIVE ACTION
<p>3. FAILURE TO LOCK</p>	<p>1. Check for broken or short helical compression spring (23 1/4 inches minimum).</p>	<p>Replace helical compression spring.</p>



2. Check chamber, receiver extension, and receiver assembly for foreign matter.

Clean and lubricate.



3. Check barrel socket to make sure there is no burr, mutilation, and/or chipping.

Notify direct support maintenance.



TROUBLE SHOOTING PROCEDURES

MALFUNCTION	TEST TO INSPECT	CORRECTIVE ACTION
<p>4. FAILURE TO FIRE</p>	<p>1. Check breech bolt assembly for broken firing pin or broken helical compression spring.</p>	<p>Replace firing pin or helical compression spring (09, pg. 56).</p>



2. Check that grip and trigger assembly is properly connected and secured to the sear and safety housing assembly by inspecting the sear assembly activator, sear link nut, and the sear assembly link and spring.

Connect and secure components (11, pg. 64).



3. Check sear assembly link and spring for adjustment.

Adjust sear assembly link and spring (07, pg. 42).

TROUBLE SHOOTING PROCEDURES

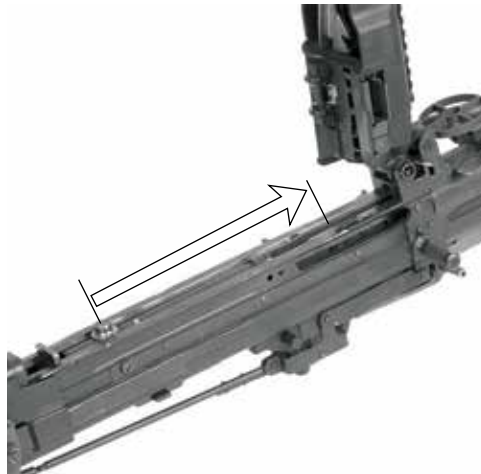
06

MALFUNCTION	TEST TO INSPECT	CORRECTIVE ACTION
<p>4. FAILURE TO FIRE (cont)</p>	<p>4. Check for broken or defective sear plunger and/or helical compression spring.</p>	<p>Replace sear plunger and/or helical compression spring.</p>



5. Check to make sure breech bolt assembly goes into lock position.

See FAILURE TO LOCK for correction.



<p>5. FAILURE TO UNLOCK</p>	<p>1. Check breech bolt assembly for a broken firing pin.</p>	<p>Replace firing pin (09, pg. 56).</p>
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TROUBLE SHOOTING PROCEDURES

06

MALFUNCTION	TEST TO INSPECT	CORRECTIVE ACTION
<p>6. FAILURE TO EXTRACT</p>	<ol style="list-style-type: none"> 1. Check for chipped or broken cartridge extractor. 2. Check for broken extractor helical compression spring. 3. Check for defective extractor plunger. 	<p>Replace cartridge extractor (09, pg. 56).</p> <p>Replace extractor helical compression spring (09, pg. 56).</p> <p>Replace extractor plunger (09, pg. 56).</p>



4. Check operating rod assembly, operating rod tube of receiver assembly, and gas cylinder system for carbon. Carbon on these components can cause short recoil.

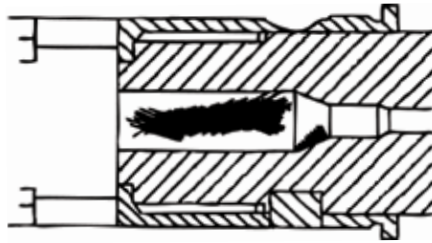
Clean and lubricate operating rod and receiver assemblies. Clean gas cylinder system only if necessary.



TROUBLE SHOOTING PROCEDURES

06

MALFUNCTION	TEST TO INSPECT	CORRECTIVE ACTION
<p>6. FAILURE TO EXTRACT (cont)</p>	<p>5. Check for dirty or pitted chamber.</p>	<p>Clean and lubricate.</p>



<p>7. FAILURE TO EJECT</p>	<p>1. Check for frozen or damaged cartridge ejector or weak helical compression spring.</p>	<p>Replace cartridge ejector or helical compression spring (09, pg. 56).</p>
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TROUBLE SHOOTING PROCEDURES

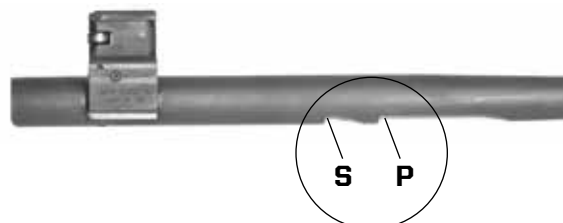
MALFUNCTION	TEST TO INSPECT	CORRECTIVE ACTION
<p>7. FAILURE TO EJECT (cont)</p>	<p>2. Check operating rod assembly, operating rod tube of receiver assembly, and gas cylinder system for carbon. Carbon on these components can cause short recoil.</p>	<p>Clean and lubricate operating rod and receiver assemblies. Clean gas cylinder system only if necessary.</p>



<p>8. FAILURE TO COCK</p>	<p>1. Check to see if sear is broken or worn.</p>	<p>Replace sear (11, pg. 64).</p>
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<p>2. Check operating rod sear notch (P) for damage or rounding.</p>	<p>Notify direct support maintenance.</p>
--	---



TROUBLE SHOOTING PROCEDURES

MALFUNCTION	TEST TO INSPECT	CORRECTIVE ACTION
<p>8. FAILURE TO COCK (cont)</p>	<p>3. Check sear plunger and helical compression spring for breaks or defects.</p>	<p>Replace sear plunger and helical compression spring (11, pg. 64).</p>



4. Check operating rod assembly, operating rod tube of receiver assembly, and gas cylinder system for carbon. Carbon on these components can cause a short recoil.

Clean and lubricate operating rod and receiver assemblies. Clean gas cylinder system only if necessary.



TROUBLE SHOOTING PROCEDURES

06

MALFUNCTION	TEST TO INSPECT	CORRECTIVE ACTION
<p>9. SLUGGISH OPERATION</p>	<p>1. Check for loose machine-threaded plug.</p>	<p>Tighten machine-threaded plug (12, pg. 68).</p>
	<p>2. Check gas cylinder and gas port for carbon buildup.</p>	<p>Clean gas cylinder and gas port (15, pg. 86).</p>
	<p>3. Check machine gun for lubrication.</p>	



*NOTE: Cutaway Image.

TROUBLE SHOOTING PROCEDURES

06

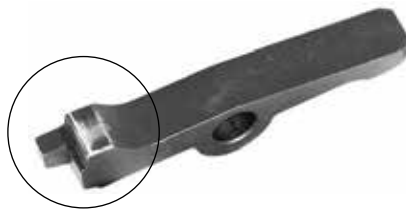
MALFUNCTION	TEST TO INSPECT	CORRECTIVE ACTION
<p>10. UNCONTROLLED FIRE (runaway gun)</p>		

WARNING

A runaway gun will not be reloaded until all corrective actions have been completed.

1. Check for broken or defective sear.

Replace sear (11, pg. 64).
Reinstall.



2. Make sure sear is not installed backwards.

Reinstall properly (11, pg. 64).

3. Check sear plunger and spring for damage.

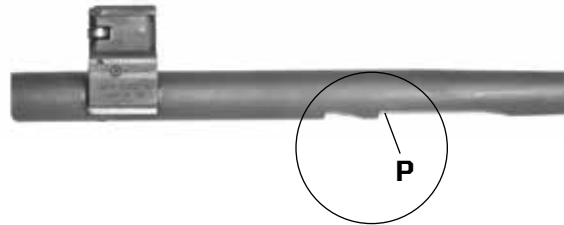
Replace sear plunger or spring as necessary.



TROUBLE SHOOTING PROCEDURES

06

MALFUNCTION	TEST TO INSPECT	CORRECTIVE ACTION
<p>10. UNCONTROLLED FIRE (runaway gun)</p>	<p>4. Check operating rod for damaged sear notch (P).</p>	<p>Notify direct support maintenance.</p>



5. Check gas cylinder and gas port for carbon buildup.

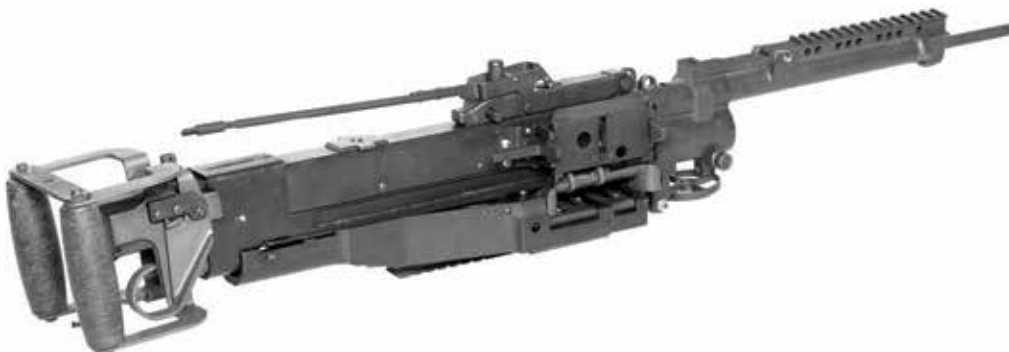
Clean gas cylinder and gas port (12, pg. 68).



*NOTE: Cutaway Image.

6. Check sear assembly link and spring for adjustments.

Adjust sear assembly link and spring (07, pg. 42).



MAINTENANCE: M60D MACHINE GUN

07

THIS TASK COVERS: Inspection, Disassembly, Repair, Reassembly

INITIAL SETUP

Maintenance Level

Unit

Tools and Special Tools

Echelon Tool Kit

Trouble shooting References

Refer to 06, pg. 27

Materials/Parts

Brush, cleaning, tool and parts

Cloth, abrasive (crocus)

Dry cleaning solvent (SD)

Gloves, rubber (item 8, app D)

Lubricant (as required)

Lubricant, solid film

Rag, wiping

General Safety Instructions

WARNING

Make sure weapon is cleared and there are no obstructions in the barrel or chamber. Be careful when removing and installing spring-loaded components. Carelessness could cause injury.

INSPECTION

WARNING

Before starting an inspection, be sure to clear the weapon. Do not actuate the trigger before clearing the weapon. Inspect the chamber to make sure it is empty and free of obstructions. Check to see there are no obstructions in the barrel and no ammunition is in position to be chambered.

CAUTION

Do not allow breech bolt to slam closed when the weapon is empty, as this will cause damage to locking surfaces on the barrel socket and breech bolt.

Burrs or raised surfaces may be removed or smoothed using a fine grit sharpening stone. DO NOT change the dimensions of any component by stoning. Components with cracks, chips, dents, or gouges shall be reported to direct support maintenance for repair or replacement.

1. Inspect general condition of machine gun.
2. Inspect for missing, loose, or damaged parts.
3. Check for proper cleaning and lubrication.
4. Make sure latches and controls operate properly.
5. Check to make sure gas cylinder extension is secured and safety wired.

MAINTENANCE: M60D MACHINE GUN

07

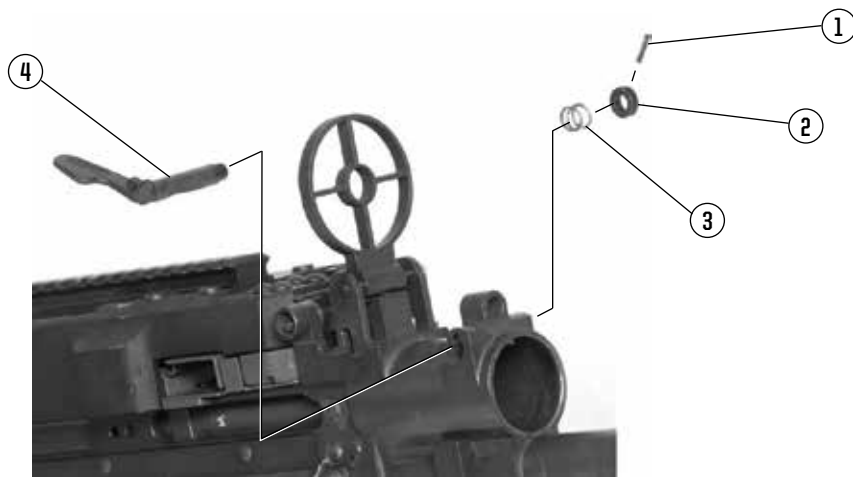
DISASSEMBLY

1. Field-strip the weapon.

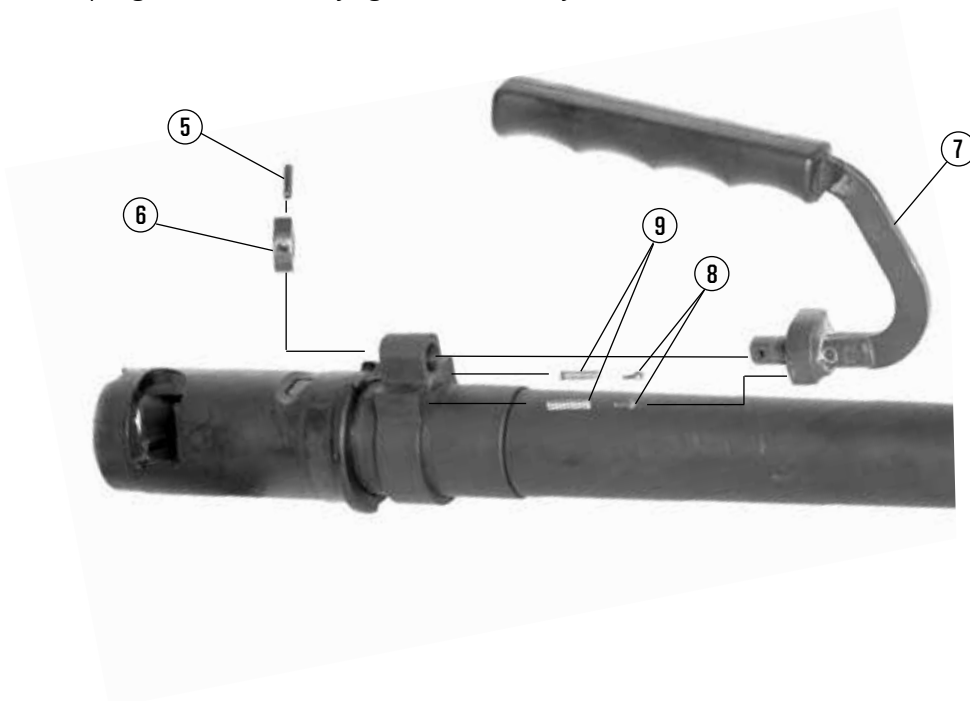
NOTE

The following procedures are performed only when a specific repair is required.

2. Remove spring pin (1), barrel lock ring (2) and helical compression spring (3) using a 3/32-inch drive pin punch and hammer. Push out barrel lock (4).



3. Remove spring pin (5) and barrel lock ring (6) using a 3/32-inch drive pin punch and hammer. Carefully slide out carrying handle assembly (7), while catching detent plunger (8) and helical compression spring (9). Remove carrying handle assembly (7).

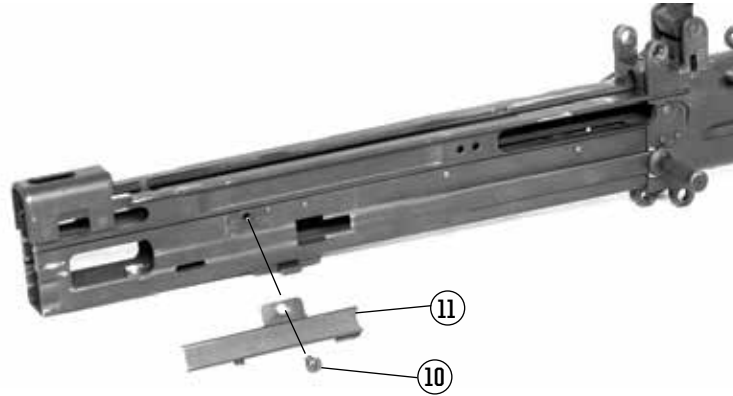


MAINTENANCE: M60D MACHINE GUN

07

DISASSEMBLY (cont)

- Remove assembled washer screw (10) and cocking handle guide (11) using a flat tip screwdriver.



REPAIR

WARNING

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.

Using paint thinner, gasoline, kerosene, benzene (benzol), water, steam, or air for cleaning the weapon is prohibited. Use only authorized cleaning materials.

CAUTION

Before starting an inspection, be sure to clear the weapon. Do not actuate the trigger before clearing the weapon. Inspect the chamber to make sure it is empty and free of obstructions. Check to see there are no obstructions in the barrel and no ammunition is in position to be chambered.

- Repair by replacing all authorized parts.
- Clean rusted or shiny metal surfaces with crocus cloth. Wash thoroughly with dry cleaning solvent (SD).

CAUTION

If solid film lubricant comes in contact with any moving or internal part, clean part with dry cleaning solvent.

- Following manufacturers instructions for use, apply solid film lubricant to all external surfaces showing wear and allow weapon to dry 12 hours before being used.
- Once repair/replacement is completed, lubricate according to operator's manual.

MAINTENANCE: M60D MACHINE GUN

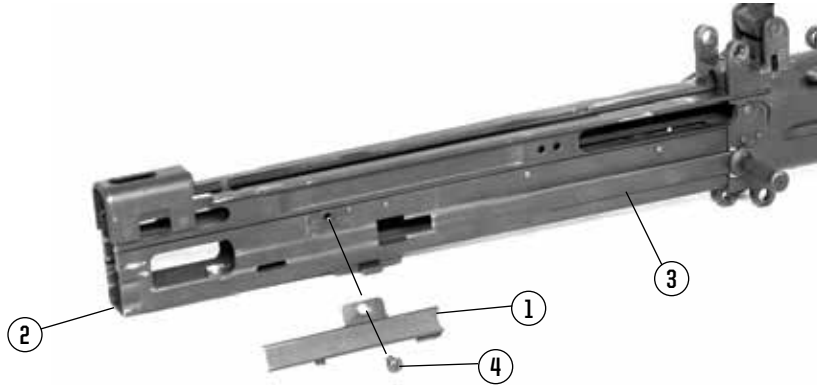
07

REASSEMBLY

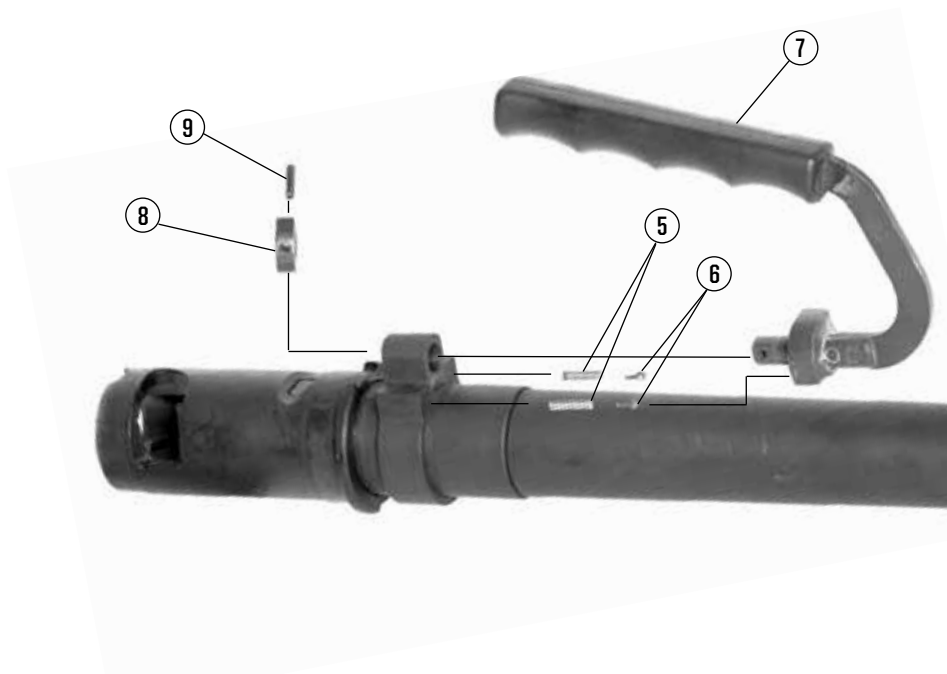
NOTE

The following procedures are only performed when a specific repair is required.

1. Place cocking handle guide (1) against receiver assembly (2) and engage tabs into receiver slots and position over end of cocking handle assembly (3).



2. Install assembled washer screw (4) and tighten using flat tip screwdriver.
3. Install helical compression spring (5), detent plunger (6), and carrying handle assembly (7) on barrel assembly.

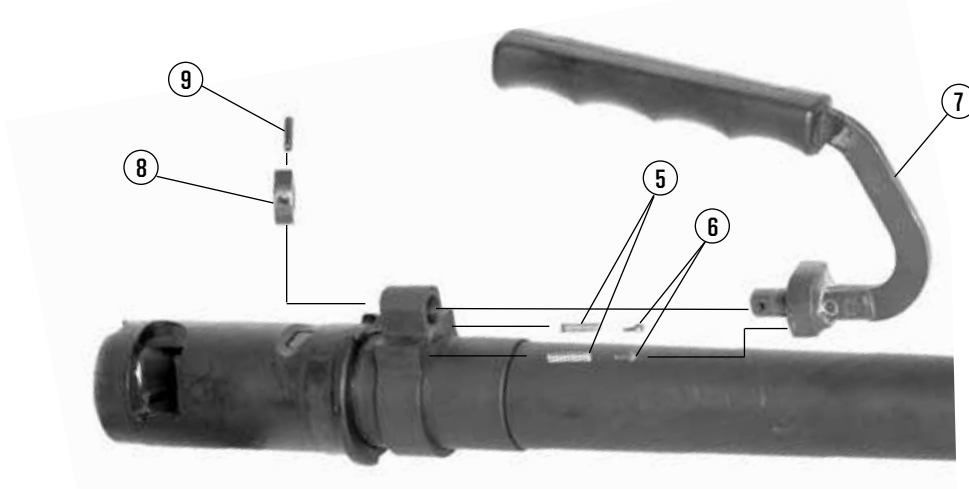


MAINTENANCE: M60D MACHINE GUN

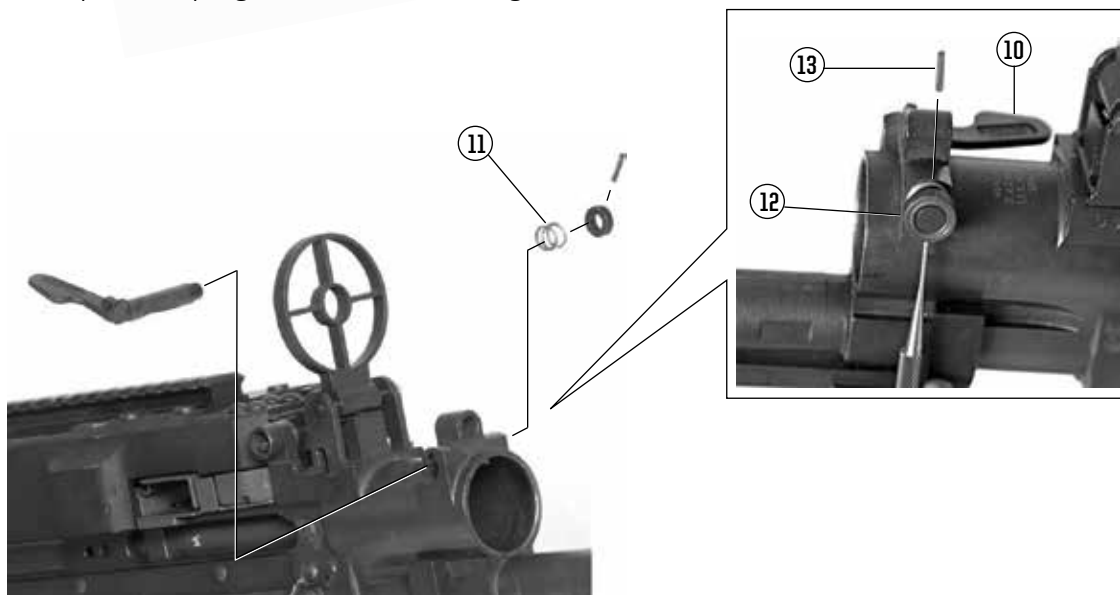
07

REASSEMBLY (cont)

4. Install barrel lock ring (8) and secure with spring pin (9) using a 1/8-inch drive pin punch and hammer.



5. Install barrel lock (10) from the right side of receiver assembly (2).
6. Install helical compression spring (11) and barrel lock ring (12).



7. Apply pressure to barrel lock (10) and barrel lock ring (12), and slip a 3/32-inch drive pin punch into pin hole of barrel lock ring to align.
8. Remove drive pin punch by driving spring pin (13) into pin hole using hammer.

END OF TASK

MAINTENANCE: M60D MACHINE GUN

07

DISASSEMBLY

1. Field-strip weapon.

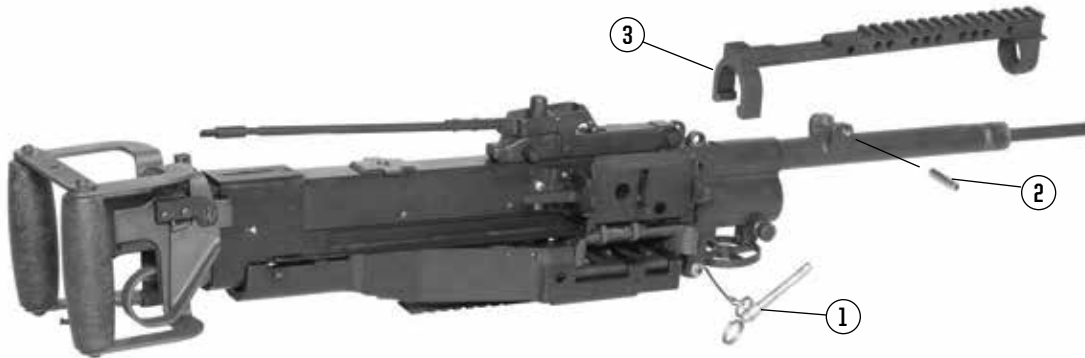
WARNING

The following procedures are only performed when a specific repair is required.

WARNING

Check chamber area to make sure there is no ammunition present. If ammunition is present, remove it.

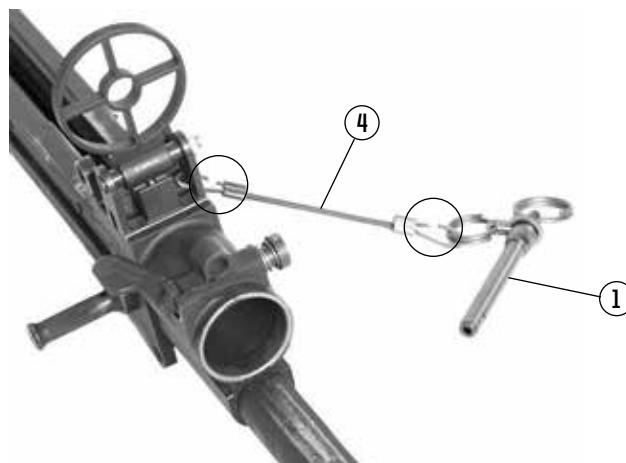
2. Disengage quick release pin (1). Using a 1/16-inch drive pin punch and hammer, drive out spring pin (2) and remove gun adapter (3).



WARNING

Wire rope assembly must be replaced whenever quick release pin is replaced.

3. Using diagonal pliers, cut both loops in end of and discard wire rope assembly (4), remove quick release pin (1).



MAINTENANCE: M60D MACHINE GUN

REPAIR

WARNING

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.

Using paint thinners, gasoline, kerosene, benzene (benzol), water, steam, or air for cleaning the weapon is prohibited. Use only authorized cleaning materials.

CAUTION

The buffer assembly will not be submerged in solvents or other cleaning fluids. Using lubricant on a cloth, wipe exterior surfaces to prevent corrosion.

Care **MUST** be exercised to avoid getting cleaner, lubricant and preservative (CLP/RBC) in the gas cylinder when cleaning the barrel. Position the gas cylinder above the barrel during cleaning. The gas cylinder components will be removed and cleaned only when inspection reveals that the piston will no longer move within the cylinder under its own weight when the barrel is tilted end to end. If gas cylinder components are cleaned, wipe interior of cylinder and piston dry before reassembly. After reassembly, check for movement of gas piston by manually tilting the barrel assembly. Rewire gas cylinder vent plug.

NOTE

Do not dilute CLP/RBC. Shake well before using.

1. Repair by replacing all authorized parts.
2. Once repair/replacement is completed, clean and lubricate.
3. Repair of subassemblies is covered in the following work packages:

Barrel assembly _____	12	pg. 68
Breech bolt assembly _____	09	pg. 56
Cartridge feed tray assembly _____	14	pg. 82
Cover assembly _____	13	pg. 74
Grip and trigger assembly _____	08	pg. 52
Operating rod assembly _____	10	pg. 63
Sear and safety housing assembly _____	11	pg. 64

4. Clean rusted or shiny metal surfaces with crocus cloth. Wash thoroughly with dry cleaning solvent.

CAUTION

If solid film lubricant comes in contact with any moving or internal part, clean part with dry cleaning solvent.

5. Following manufacturer's instructions for use, apply solid film lubricant to all external surfaces showing wear and allow weapon to dry 12 hours before being used.

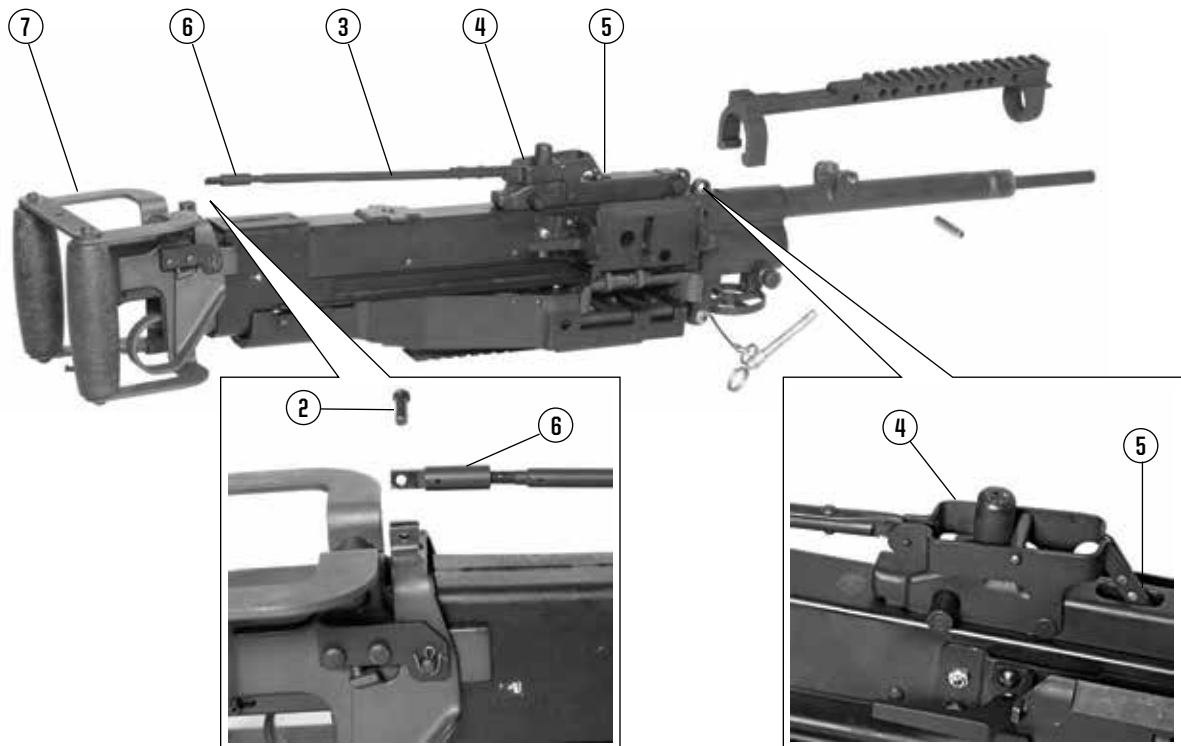
MAINTENANCE: M60D MACHINE GUN**07****REPAIR (cont)**

6. On component parts which have a hard carbon residue, it may be necessary to use CLP/RBC to begin repair. Depending on the amount of carbon residue, coat parts 2 to 16 hours, brush, wipe dry with wiping rag, and lubricate as necessary.

NOTE

The following procedures are performed only when a specific repair is required.

7. Remove cotter pin and headed grooved pin (2).



8. Grasp sear link and spring assembly (3) and push forward until sear assembly activator (4) just touches sear (5). Hold sear link and spring assembly (3) while you position sear link nut (6) to fit in slot of grip and trigger assembly (7).
9. With sear link nut (6) in slot of grip and trigger assembly (7), sight through the holes to determine the amount of adjustment required to align holes. Pull sear link nut (6) out of slot and adjust by turning sear link nut (6), repeating procedures until holes align.
10. Lift sear link nut (6) out of slot and rotate one-half turn clockwise. Push sear assembly link and spring (3) rearward and insert headed grooved pin (2). There should be a slight gap between sear (5) and sear assembly activator (4). Reinstall cotter pin. Lock sear link nut (6) and sear assembly link and spring (3) with safety wire.

MAINTENANCE: M60D MACHINE GUN

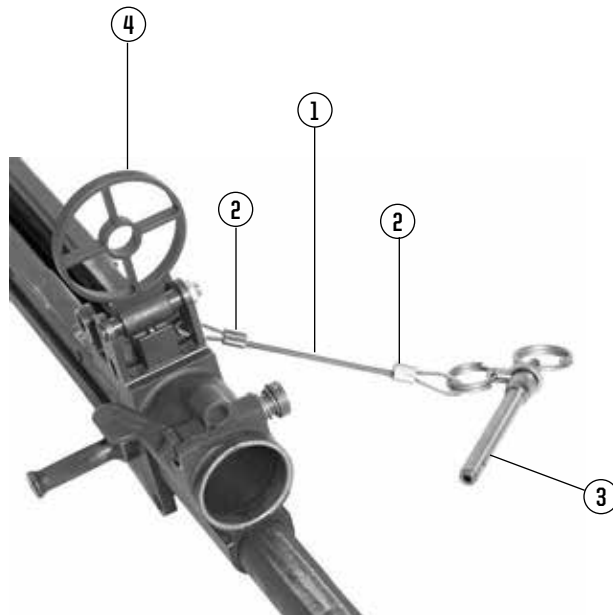
07

REASSEMBLY

NOTE

The following procedures are performed only when a specific repair is required.

1. For maintenance on cocking handle guide, carrying handle assembly, and barrel lock, refer to maintenance procedures (07, pg. 42).
2. With new wire rope assembly (1) and new swaging sleeves (2), securely connect quick release pin (3) using the following procedures:
 - a. Insert one end of wire rope assembly (1) through swaging sleeve (2) and through the opening in base of rear sight (4). Loop wire assembly (1) around the front of rear sight (4) base and insert end back through swaging sleeve (2). Using parallel pliers, crimp swaging sleeve (2) to wire rope assembly (1).
 - b. Insert other end of wire rope assembly (1) through another swaging sleeve (2) and through ring of quick release pin (3). Loop wire rope assembly (1) around quick release pin (3), and insert the end back through swaging sleeve (2). Using parallel pliers, crimp swaging sleeve (2) to wire rope assembly (1).

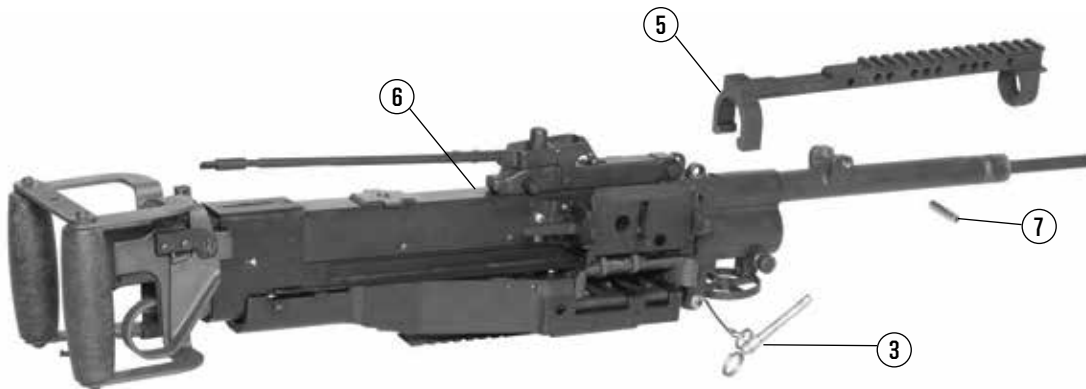


MAINTENANCE: M60D MACHINE GUN

07

REASSEMBLY (cont)

3. Place gun adapter (5) on bottom of receiver assembly (6), align holes, and install spring pin (7). Using hammer, drive in spring pin (7) until flush.



4. Insert quick release pin (3).

END OF TASK

MAINTENANCE: GRIP AND TRIGGER ASSEMBLY

08

THIS TASK COVERS: Inspection, Disassembly, Repair, Reassembly

INITIAL SETUP

Maintenance Level

Unit

Tools and Special Tools

Echelon Tool Kit

Materials/Parts

Cloth, abrasive (crocus)
 Dry cleaning solvent (SD)
 Gloves, rubber
 Lubricant, solid film

General Safety Instructions

WARNING

Be careful when removing and installing spring-loaded components. Carelessness could cause injury.

INSPECTION

1. Inspect general condition of grip and trigger assembly.
2. Inspect for missing, loose, or damaged parts.
3. Inspect for no binding of parts.

DISASSEMBLY

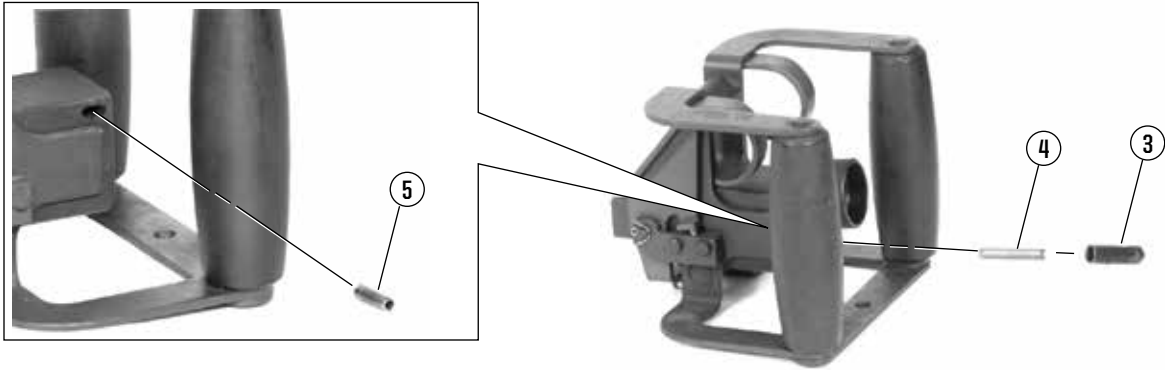
1. Remove retaining ring (1) and slide out knob and pin assembly (2).



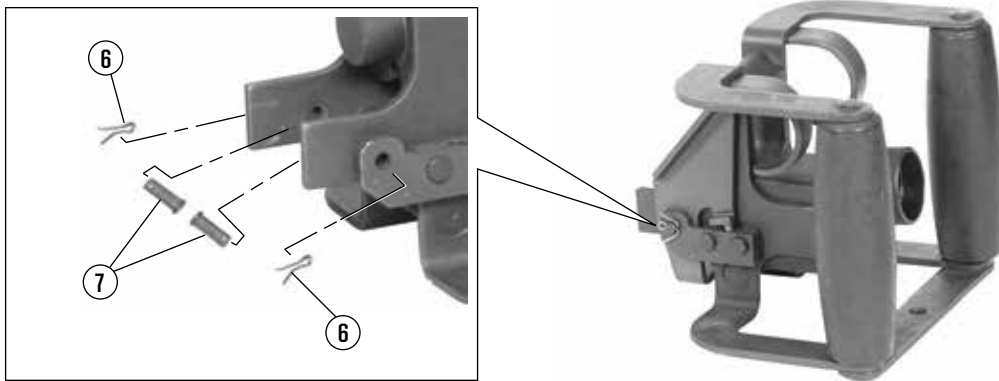
MAINTENANCE: GRIP AND TRIGGER ASSEMBLY

DISASSEMBLY (cont)

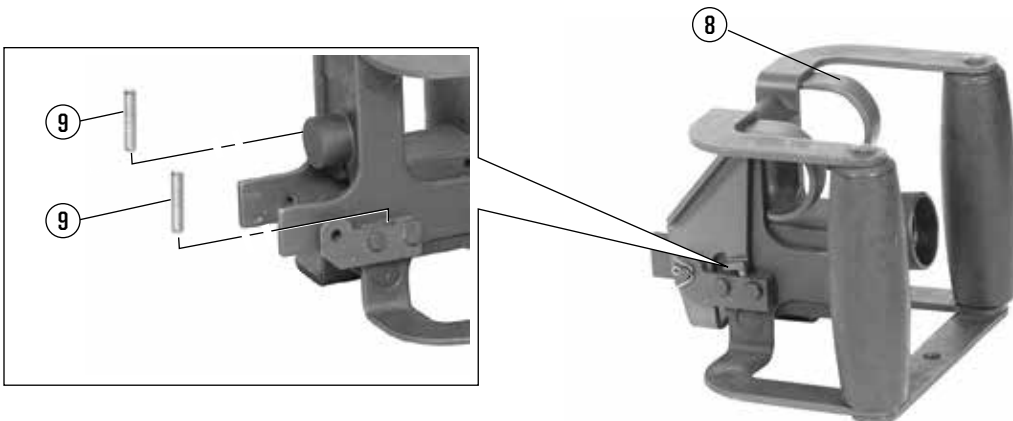
2. Hold down headless shoulder pin (3) and helical compression spring (4) while removing spring pin (5).



3. Remove cotter pins (6) and push out headed grooved pins (7).



4. Raise up grip and trigger assembly (8) and remove helical compression springs (9).



MAINTENANCE: GRIP AND TRIGGER ASSEMBLY

08

REPAIR

WARNING

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.

1. Repair by replacing all authorized parts.
2. Clean rusted or shiny metal surfaces with crocus cloth. Wash thoroughly with dry cleaning solvent (SD).

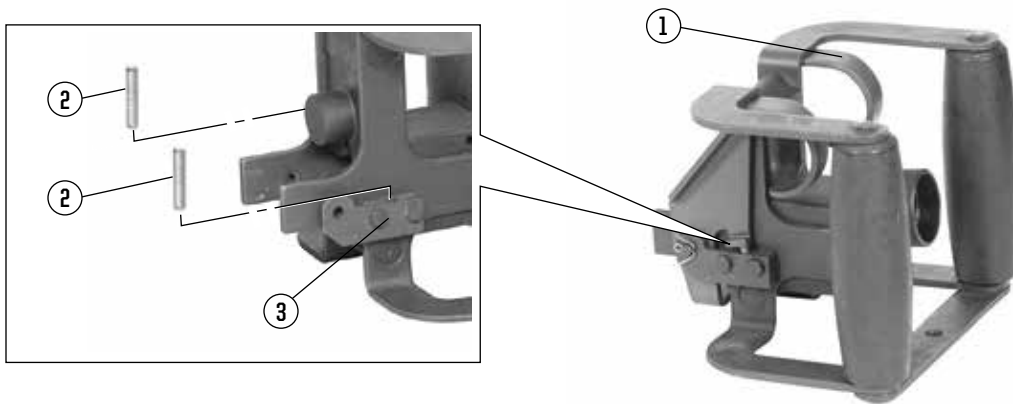
CAUTION

If solid film lubricant comes in contact with any moving or internal part, clean part with dry cleaning solvent.

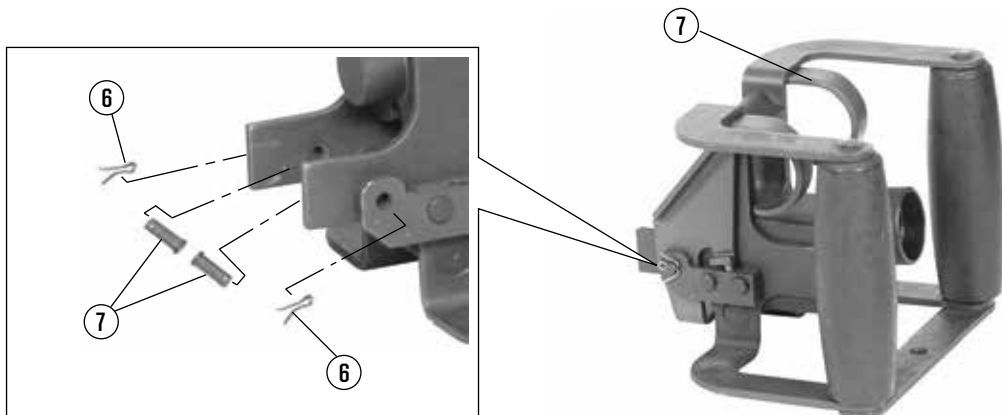
3. Following manufacturer's instructions for use, apply solid film lubricant to all external surfaces showing wear and allow weapon to dry 12 hours before being used.
4. Damage not repaired by minor replacement of parts will cause replacement of entire assembly.

REASSEMBLY

1. Raise up grip blocks (3) and trigger assembly (1) and insert helical compression springs (2) into trigger stop.



2. Align holes in grip and trigger assembly (1), install headed grooved pins (7), and secure with cotter pins (6).

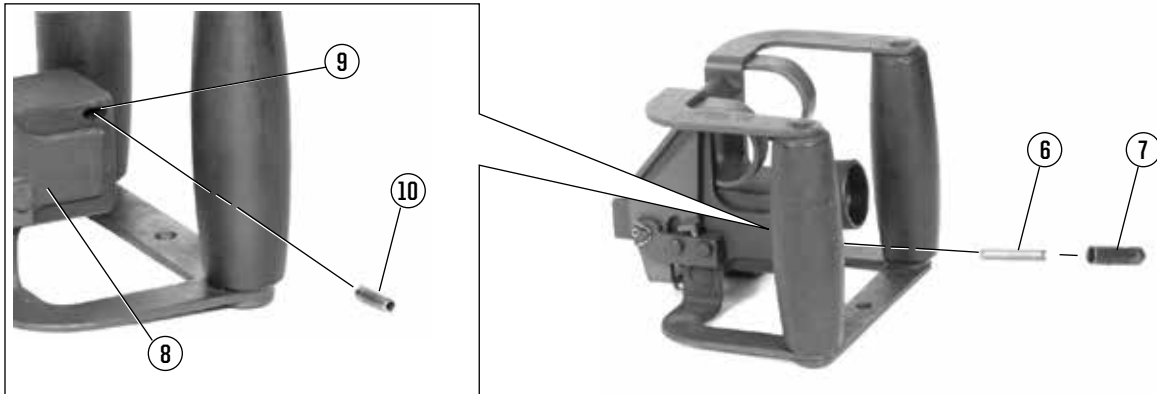


MAINTENANCE: GRIP AND TRIGGER ASSEMBLY

08

REASSEMBLY

3. Place helical compression spring (6) and headless shoulder pin (7) in back plate (8), and align holes in headless shoulder pin (7) with slot (9) in back plate (8).



4. Press in on headless shoulder pin (7) and insert spring pin (10) through slot (9) and into hole of headless shoulder pin (7). Using a hammer, drive spring pin (10) into hole.
5. Install knob and pin assembly (11) through back plate (8) and secure with retaining ring (12).

**END OF TASK**

MAINTENANCE: BREECH BOLT ASSEMBLY

09

THIS TASK COVERS: Inspection, Disassembly, Repair, Reassembly

INITIAL SETUP

Maintenance Level

Unit

Materials/Parts

Lubricant (as required)

Tools and Special Tools

Echelon Tool Kit

General Safety Instructions

WARNING

Be careful when removing and installing spring-loaded components. Carelessness could cause injury.

The weapon's breech bolt assembly will be used to check headspace. Do not intermix the breech bolt assembly or barrel and bipod assembly without checking headspace requirements.

CAUTION

Do not allow breech bolt to slam closed when the weapon is empty, as this will cause damage to the locking surfaces on the barrel socket and breech bolt.

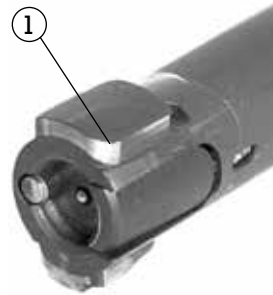
NOTE

Headspace will be gauged annually, using appropriate gauges, by direct support maintenance personnel. If space is faulty, a new breech bolt or test bolt gauge is required to determine if the barrel or breech bolt is defective.

MAINTENANCE: BREECH BOLT ASSEMBLY**09****INSPECT****NOTE**

No cracks are permitted in this area. Notify direct support maintenance if cracks are found.

1. Inspect back side of breech bolt assembly bottom lug (1) for minor chips, dents, gouges, and burrs. These conditions may be corrected by stoning.

**CAUTION**

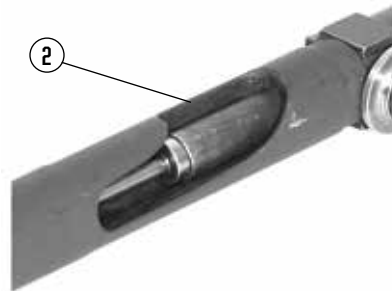
If sharp edges or burrs are present, notify direct support maintenance for replacement.

2. Inspect front side of breech bolt assembly bottom lug (1) for sharp edges or burrs.

NOTE

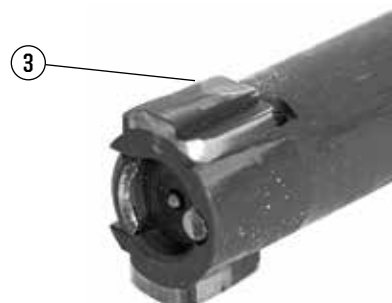
Raised or rough surfaces can be repaired by stoning. Notify direct support maintenance for replacement if stoning fails.

3. Inspect breech bolt assembly cam area (2) for raised or rough surfaces.

**NOTE**

Rounding or mutilation found on breech bolt locking surfaces will cause damage to mating locking surfaces on the barrel socket. If breech bolt is rounded or mutilated, notify direct support maintenance.

4. Inspect left front corner of breech bolt assembly stripping lug (3). A stripping lug showing complete loss of original radius surface area due to chipping may still be used.



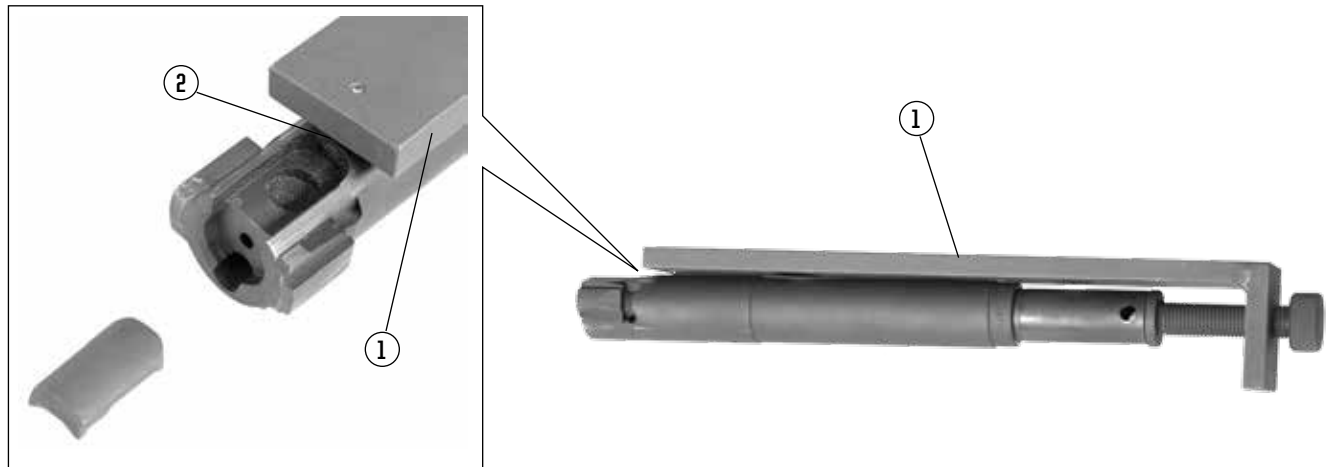
MAINTENANCE: BREECH BOLT ASSEMBLY

09

5. Inspect back side of breech bolt assembly stripping lug (3). Burrs may be smoothed by stoning but cracks, chips, dents, or gouges are not repairable in this area. If cracks, chips, dents, or gouges are present, notify direct support maintenance.

DISASSEMBLY EXTRACTOR

1. Place extractor tool "tooth" (1) onto extractor plunger detent (2).



2. Thread extractor tool (3) until helical spring is full compressed.

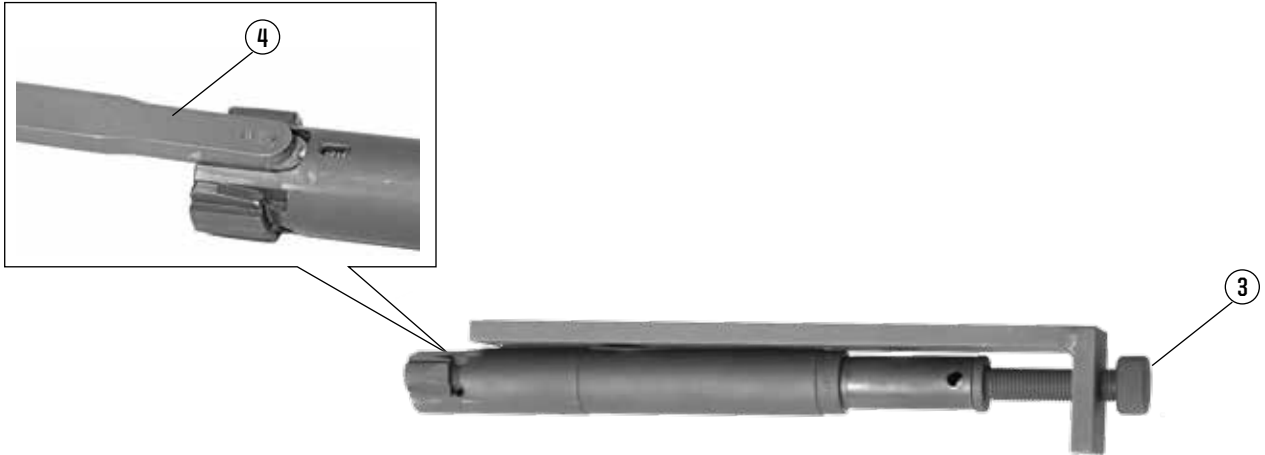


3. At this point, extractor is no longer under spring tension and can be removed.

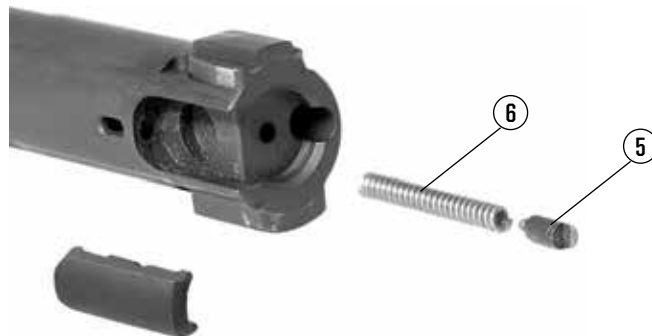
MAINTENANCE: BREECH BOLT ASSEMBLY

DISASSEMBLY EXTRACTOR (cont)

4. While controlling (4) extractor plunger and helical spring, release tension on extractor tool (3).

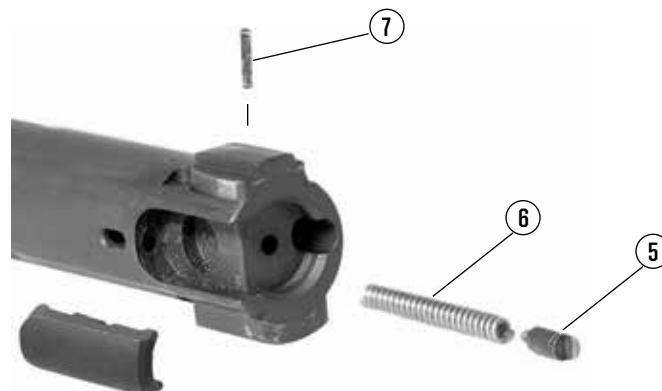


5. Slide extractor plunger (5) and helical spring (6) free from bolt.



DISASSEMBLY EJECTOR

1. Using a punch, hammer ejector spring pin (7) free from breech bolt.
2. Slide ejector helical spring (6) and plunger (5) free from breech bolt.



MAINTENANCE: BREECH BOLT ASSEMBLY

09

INSPECT

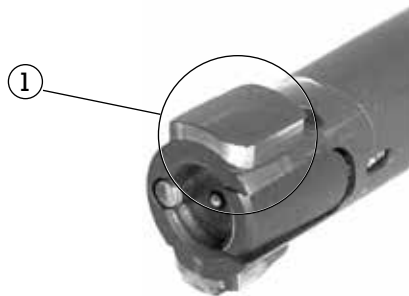
1. Repair by replacing all authorized components.

NOTE

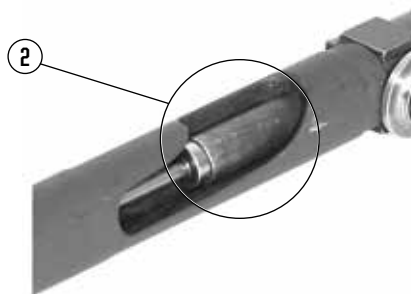
Burrs or raised surfaces may be removed or smoothed using a fine grit sharpening stone. DO NOT change the tolerances of any component by stoning. Components with cracks, chips, dents, or gouges shall be reported to direct support maintenance for repair or replacement.

Cracks, chips, dents, or gouges on breech bolt locking surfaces and rounding/mutilation of the rear locking surface can damage the mating locking surfaces of the barrel socket. Damage to barrel socket locking surfaces can damage the breech bolt. Notify direct support maintenance for replacement or repair if either condition exists.

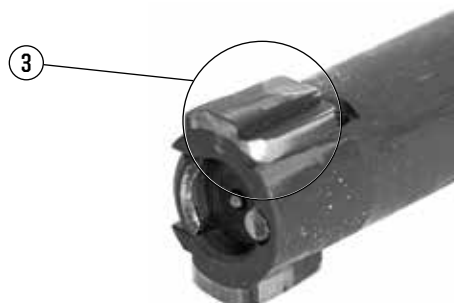
2. Repair by stoning burrs and raised surfaces from bottom lug's (1) forward corner and rear locking surface. No cracks, chips, dents, and gouges are permitted on the rear locking surface.



3. Repair cam area (2) by stoning raised or rough surfaces.



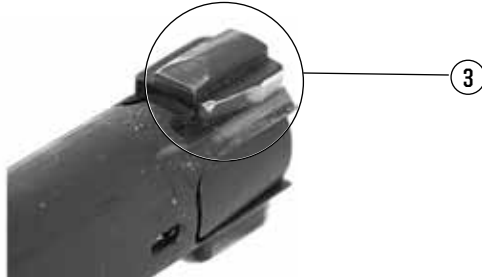
4. Repair camming surface of stripping lug (3) by stoning the forward edge. A stripping lug showing complete loss of original radius surface area may still be used.



MAINTENANCE: BREECH BOLT ASSEMBLY

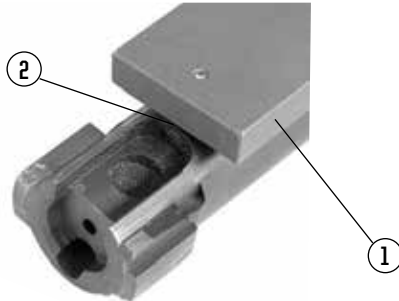
09

5. Repair by stoning burrs or raised surfaces from rear locking surface of stripping lug (4). No cracks, chips, dents, or gouges are permitted in this area.



REASSEMBLY EXTRACTOR

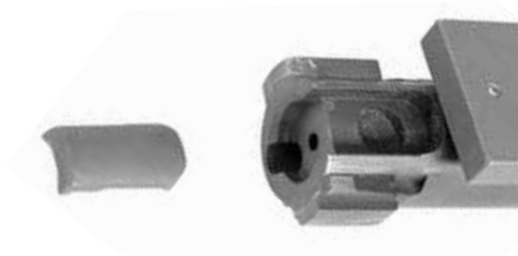
1. Slide extractor replacement tool underneath extractor detent until tooth on tool catches edge inside bolt recess.



2. Place the compression tool (1) into the extractor detent and compress spring (2).



3. Replace extractor.



4. Release spring tension with extractor tool (3).

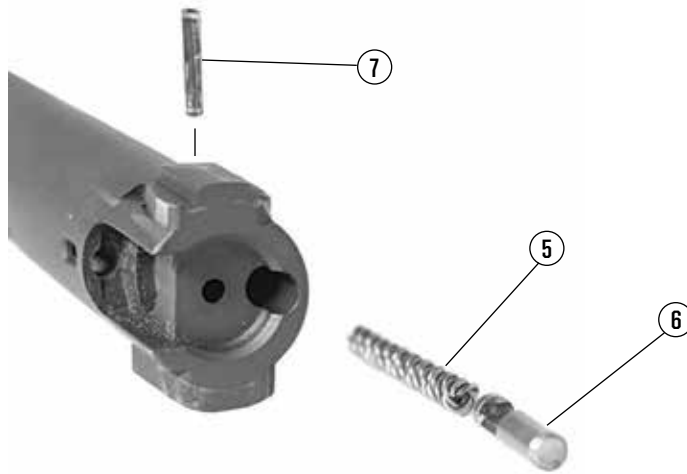


MAINTENANCE: BREECH BOLT ASSEMBLY

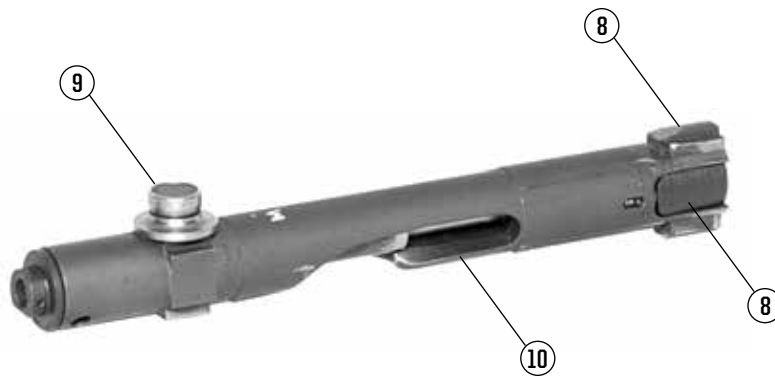
09

REASSEMBLY EJECTOR

1. Slide ejector cartridge (6) and helical spring (5) back into breech bolt.
2. Re-tap spring pin (7) back into its original position.



3. Secure by tapping spring pin (7) until it is flush with body of breech bolt (3).
4. Apply lubricant sparingly to bolt locking lugs (8), actuator roller (9), and camming recess (10).

**END OF TASK**

MAINTENANCE: OPERATING ROD ASSEMBLY**10****THIS TASK COVERS: Inspection, Disassembly, Repair, Reassembly****INITIAL SETUP****Maintenance Level**

Unit

Materials/Parts

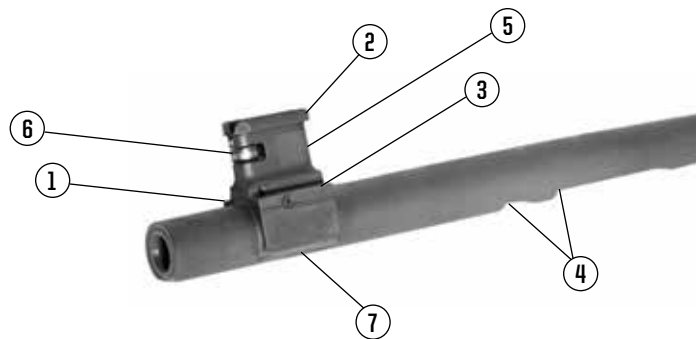
Lubricant (as required)

Tools and Special Tools

Echelon Tool Kit

REPAIR

1. Check for burrs, cracks, distortion, and mutilation on yoke area (1), firing pin bearing area (2), guide ways (3), and sear notches (4).
2. Raised or upset areas are unacceptable on tower area (5), firing pin bearing area (2), and guide ways (3). Remove burrs and sharp edges by stoning.
3. Apply lubricant sparingly on linear-rotating roller (6) and surfaces (7) immediately below the yoke which ride within the receiver assembly rails.

**END OF TASK**

MAINTENANCE: SEAR AND SAFETY HOUSING ASSEMBLY

11

THIS TASK COVERS: Inspection, Disassembly, Repair, Reassembly

INITIAL SETUP

Maintenance Level

Unit

Materials/Parts

Cloth, abrasive (crocus)
 Dry cleaning solvent (SD)
 Gloves, rubber
 Lubricant, solid film

Tools and Special Tools

Echelon Tool Kit

Troubleshooting References

Refer to 06, pg. 27

General Safety Instructions

WARNING

Be careful when removing and installing spring-loaded components. Carelessness could cause injury.

INSPECTION

1. Inspect sear and safety housing assembly for bent, broken, or missing parts.
2. Inspect that small arms safety prevents sear from moving when in safe (S) position but allows sear to move freely when in fire (F) position.

DISASSEMBLY

1. Field-strip weapon.

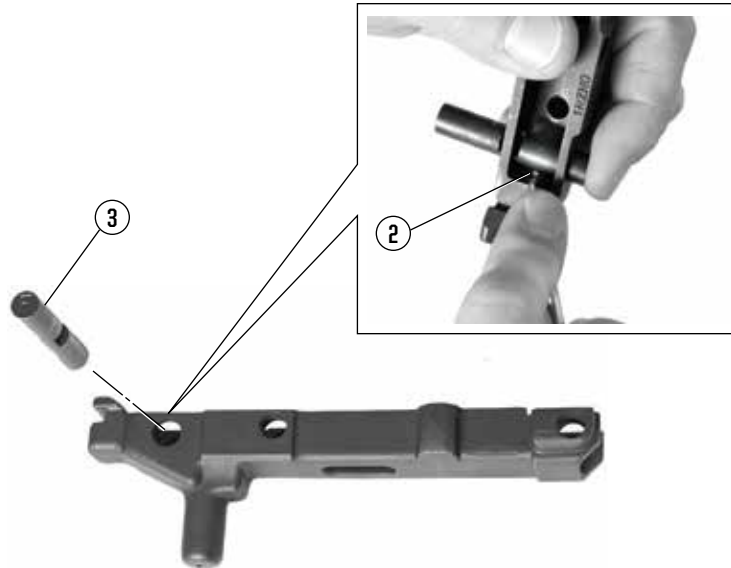
NOTE

The following procedures are in addition to field-stripping.

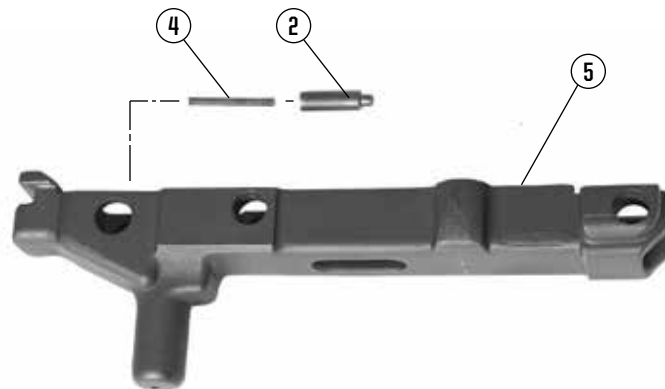
MAINTENANCE: SEAR AND SAFETY HOUSING ASSEMBLY

DISASSEMBLY (cont)

2. Hold sear and safety housing firmly. Depress safety plunger (2) while removing small arms safety (3). Release pressure on safety plunger (2).



3. Lift out safety plunger (2) and helical compression spring (4) from the sear housing (5).



MAINTENANCE: SEAR AND SAFETY HOUSING ASSEMBLY

11

REPAIR

WARNING

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.

1. Repair by replacing all authorized components.
2. Clean rusted metal surfaces with crocus cloth. Wash thoroughly with dry cleaning solvent.

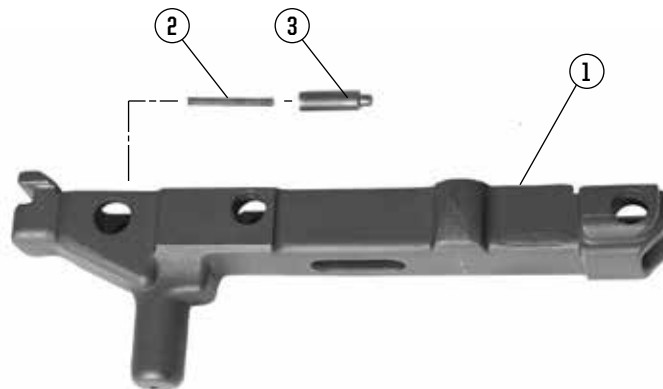
CAUTION

If solid film lubricant comes in contact with any moving or internal part, clean part with dry cleaning solvent.

3. Following manufacturer's instructions for use, apply solid film lubricant to all external surfaces showing wear and allow weapon to dry 12 hours before being used.

REASSEMBLY

1. Hold sear and safety housing (1) securely in hand.



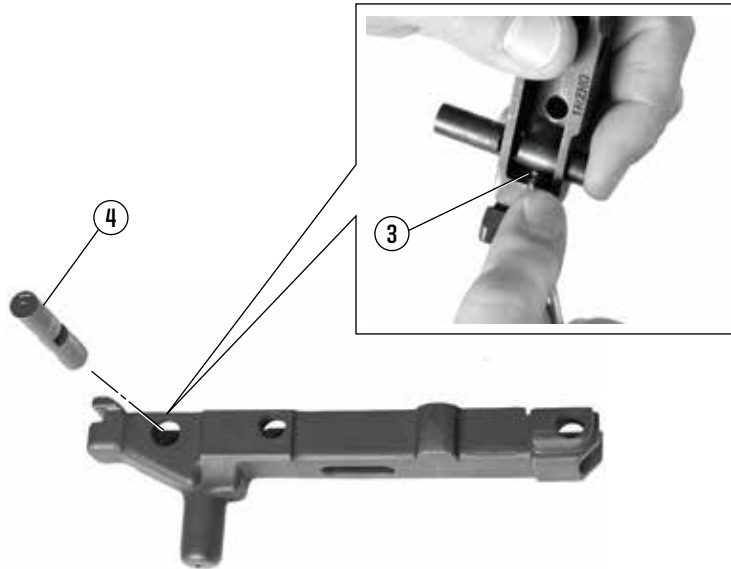
2. Install helical compression spring (2) and safety plunger (3) into sear housing (1).

MAINTENANCE: SEAR AND SAFETY HOUSING ASSEMBLY

11

REASSEMBLY (cont)

3. Press in on safety plunger (3) with scribe while installing small arms safety (4).



4. Reassemble the weapon.

END OF TASK

MAINTENANCE: BARREL ASSEMBLY

12

THIS TASK COVERS: Inspection, Disassembly, Repair, Reassembly

INITIAL SETUP

Maintenance Level

Unit

Tools and Special Tools

Echelon Tool Kit

Troubleshooting References

Refer to 06, pg. 27

Materials/Parts

Cloth, abrasive (crocus)
Dry cleaning solvent (SD)
Gloves, rubber
Lubricant (as required)
Lubricant, solid film
Rag, wiping

INSPECTION

1. Inspect gas extension for tightness and safety wiring.
2. Inspect general appearance of barrel and carry handle assembly.

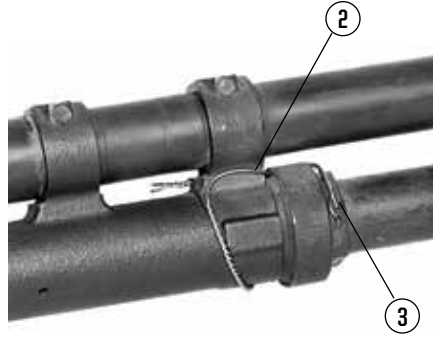


MAINTENANCE: BARREL ASSEMBLY

12

DISASSEMBLY

1. Using diagonal cutting pliers, cut safety wire (2) and (3), and discard.



2. Using combination wrench, remove lock nut (1) and vent plug (2). Tilt barrel, gas piston (7) should fall out.



MAINTENANCE: BARREL ASSEMBLY

12

REPAIR

WARNING

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.

CAUTION

Care **MUST** be exercised to avoid getting lubricant or oil in the gas cylinder when cleaning the barrel. Position the gas cylinder above the barrel during cleaning. The gas cylinder components will be removed and cleaned only when inspection reveals that the piston will no longer move within the cylinder under its own weight when the barrel is tilted end for end. If gas cylinder components are cleaned, wipe interior of cylinder and piston dry before reassembly. After reassembly, check for movement of gas piston by manually tilting the barrel assembly. Rewire vent plug.

NOTE

Do not dilute lubricant. Shake well before using.

Burrs or raised surfaces may be removed or smoothed using a fine grit sharpening stone. **DO NOT** change the tolerances of any component by stoning. Cracks, chips, dents, or gouges on components shall be reported to direct support maintenance for repair or replacement.

Cracks, chips, dents, or gouges on breech bolt locking surfaces can damage the barrel socket. Damage to barrel socket locking surfaces can damage the breech bolt. Notify direct support maintenance for replacement or repair if either condition exists.

No abrasive materials will be used to clean the gas piston or the inside of the gas cylinder (i.e. green pads, steel wool or crocus cloth). The receiver brush will not be used to clean inside of gas cylinder.

1. The use of crocus cloth is restricted for external surfaces only.

CAUTION

If solid film lubricant comes in contact with any moving or internal part, clean part with dry cleaning solvent.

2. Following manufacturers instructions for use, apply solid film lubricant to all external surfaces showing wear and allow weapon to dry 12 hours before being used.
3. Repair by replacing safety wire.

MAINTENANCE: BARREL ASSEMBLY

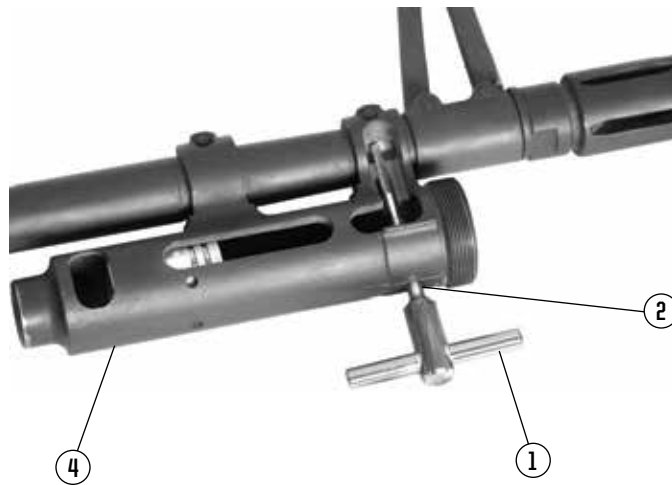
12

REPAIR (cont)

NOTE

Restore gas cylinder assembly to a serviceable condition by performing the following procedures.

4. Insert reamer (1) all the way in the machine thread plug hole (2) to make sure all carbon is removed from holes in gas cylinder (4) and wipe carbon residue from gas cylinder (4).



*NOTE: Cutaway Image.

5. Remove carbon from gas piston and wipe carbon residue from gas piston.

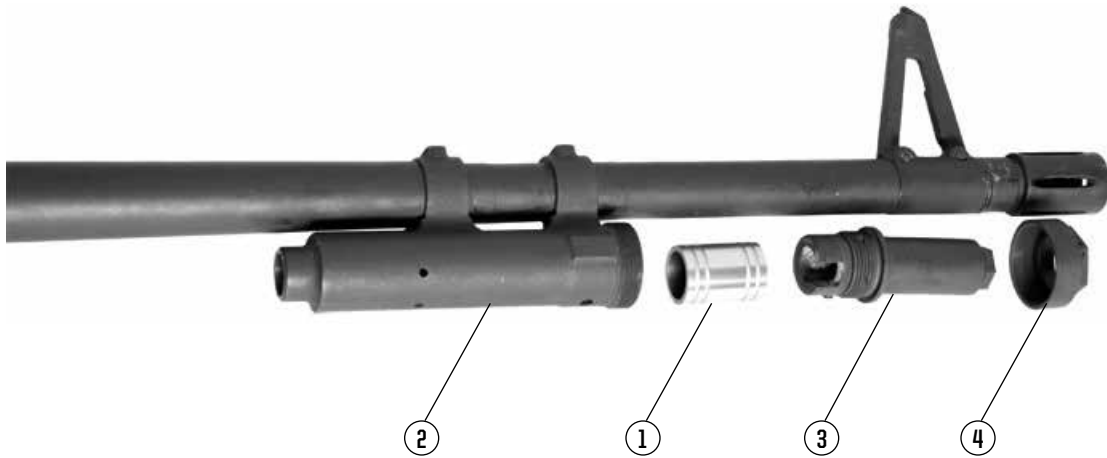


MAINTENANCE: BARREL ASSEMBLY

12

REASSEMBLY

1. Install gas piston (1) in gas cylinder (2).
2. Install and tighten vent plug (3) and then lock nut (4).

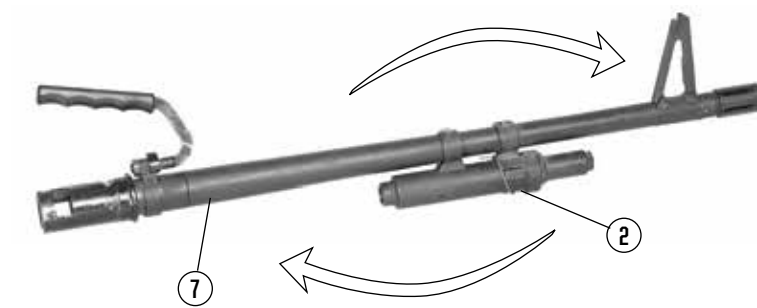


MAINTENANCE: BARREL ASSEMBLY

12

REASSEMBLY (cont)

3. Tilt barrel (7) up and down. Gas piston should click as it moves inside gas cylinder (2). If click is not heard, disassemble, clean, and assemble again.



4. Secure gas extension assembly shown, using safety wire.

**END OF TASK**

MAINTENANCE: COVER ASSEMBLY

13

THIS TASK COVERS: Inspection, Disassembly, Repair, Reassembly

INITIAL SETUP

Maintenance Level

Unit

Tools and Special Tools

Echelon Tool Kit

Troubleshooting References

Refer to 06. pg. 27

Materials/Parts

Brush, cleaning, tool and parts

Dry cleaning solvent (SD)

Gloves, rubber

Lacquer

Lubricant (as required)

Rag, wiping

General Safety Instructions

WARNING

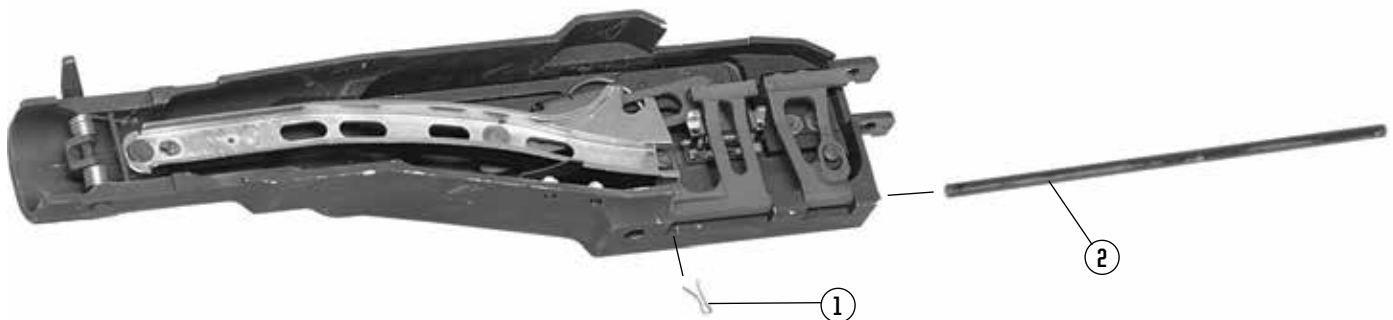
Dry cleaning solvent (SD) is flammable. Do not clean parts near an open flame or in a smoking area. Dry cleaning solvent evaporates quickly and has drying effect on the skin. When used without protective gloves, solvent may cause irritation to or cracking of the skin.

INSPECTION

1. Inspect cover assembly for broken, bent, worn, or missing parts.
2. Inspect cover assembly for proper cleaning and lubrication.
4. Visually inspect external surfaces for dull black finish.

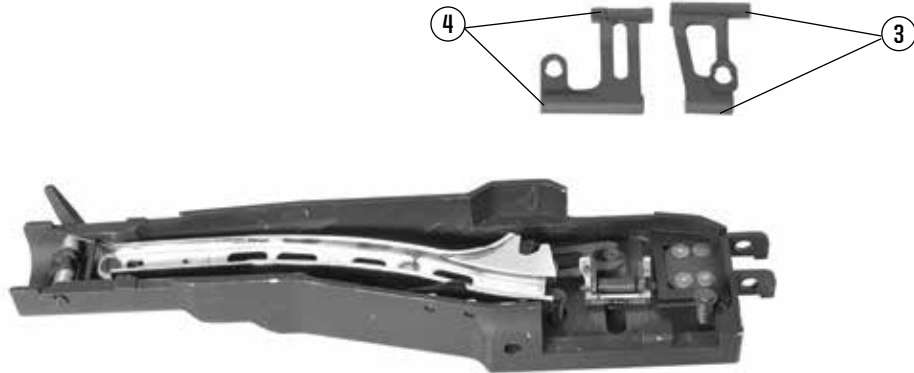
DISASSEMBLY

1. Remove guide cotter pin (1) and straight shaft (2).

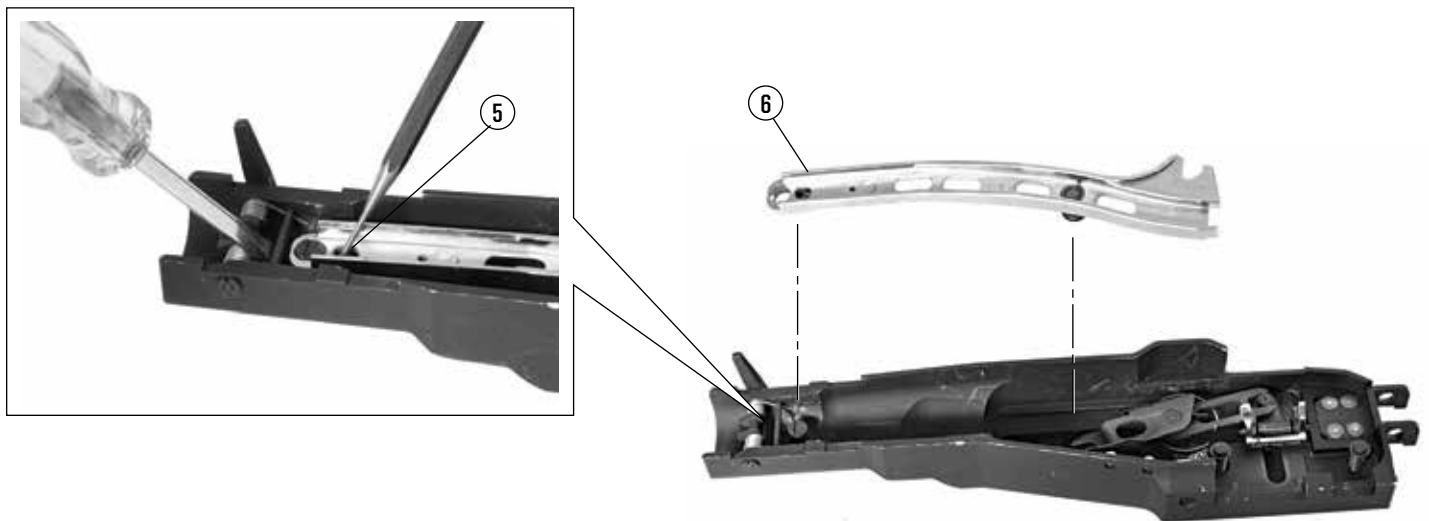


MAINTENANCE: COVER ASSEMBLY

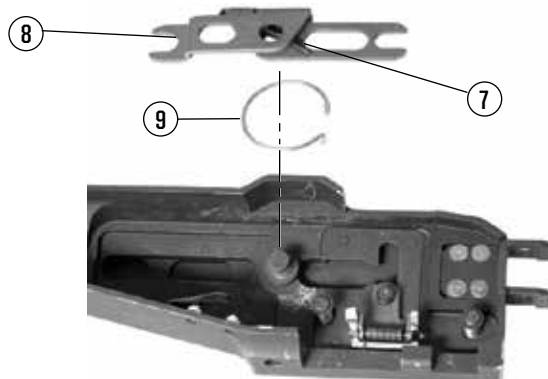
2. Push down and over to remove front (3) and rear (4) cartridge guides.



3. Pull back on feed cam retainer (5) with punch and lift out feed cam assembly (6).



4. Press in on spring lever clip (7) and lift out feed lever assembly (8).

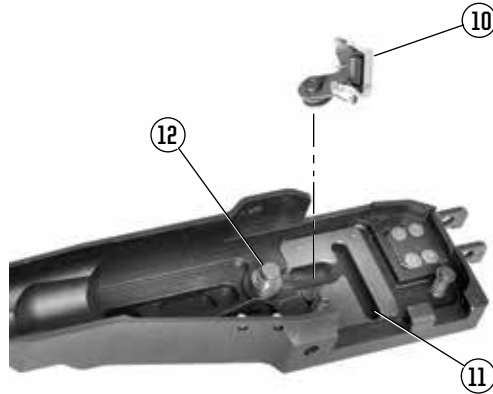


5. Lift out helical torsion spring (9).

MAINTENANCE: COVER ASSEMBLY

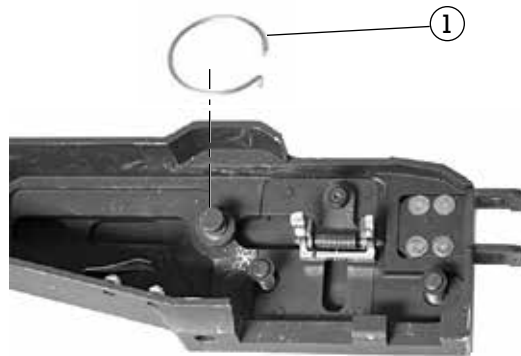
13

- Slide feed pawl assembly (10) in slot (11) and guide it toward feed lever stud (12). Remove feed pawl assembly (10).

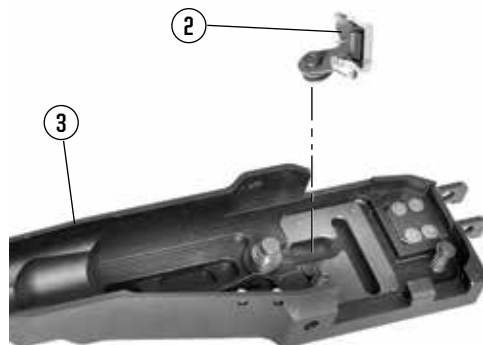


REPAIR

- Replace damaged helical torsion spring (1).



- Clean powder-fouled parts with CLP/Break Free/RBC and a brush. Wipe all parts clean and remove excess CLP/RBC with a wiping rag.
- Apply a coating of lubricant on the lower surfaces and frame mating areas of feed pawl assembly (2).



- Dampen wiping rag with lubricant and wipe each part before reassembling cover assembly (3).

MAINTENANCE: COVER ASSEMBLY

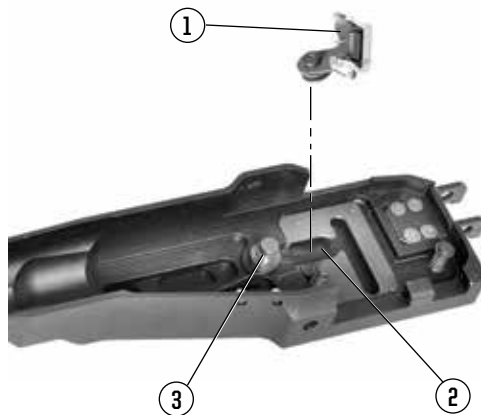
13

REPAIR (cont)

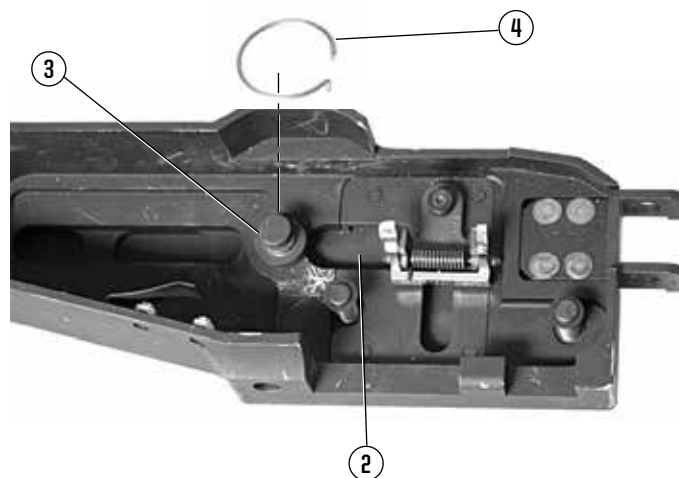
5. Refinish exterior of all aluminum parts not having a dull black finish by painting with a black lusterless lacquer.
6. Clean worn or flaking surfaces with crocus cloth. Wash thoroughly with dry cleaning solvent.
7. Following manufacturer's instructions for use, apply lacquer to all external aluminum surfaces showing wear and allow to dry for appropriate length of time before being used.

REASSEMBLY

1. Place feed pawl assembly (1) in slot (2) near feed lever stud (3) and slide it into narrow leg of slot (2).



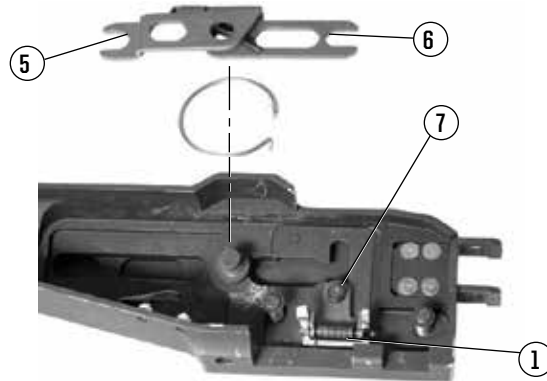
2. Place helical torsion spring (4) around feed lever stud (3) and hook one end of helical torsion spring in slot (2).



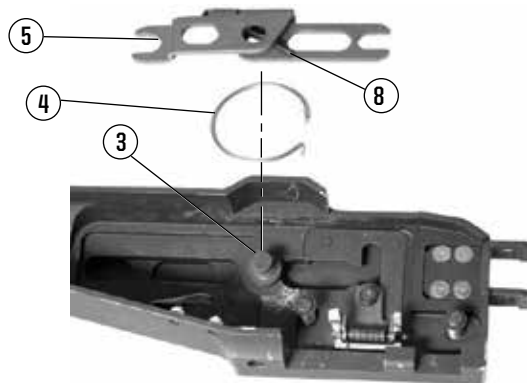
MAINTENANCE: COVER ASSEMBLY

13

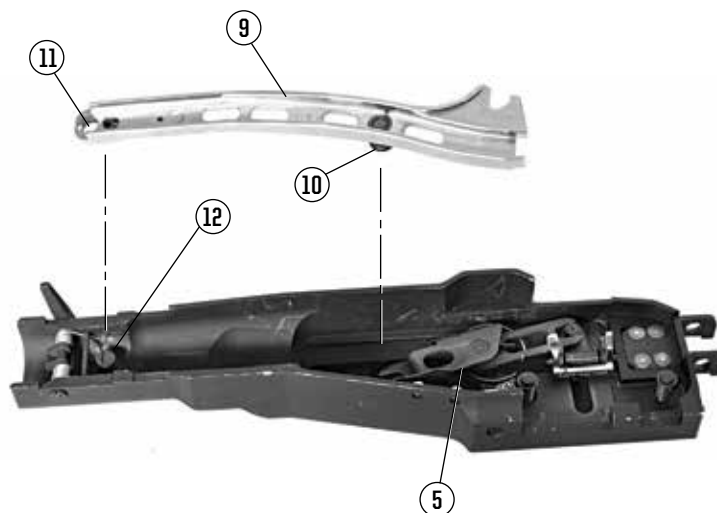
3. Position feed lever assembly (5) so slot (6) is aligned above projection (7) on feed pawl assembly (1).



4. Press spring lever clip (8) in feed lever assembly (5) and place on feed lever stud (3). Make sure helical torsion spring (4) rests against side of feed lever assembly (5).



5. Align feed cam assembly (9) with feed lever assembly (5) so cam stud (10) enters slot in the end of feed lever assembly (5). Align hole (11) over cover stud (12).

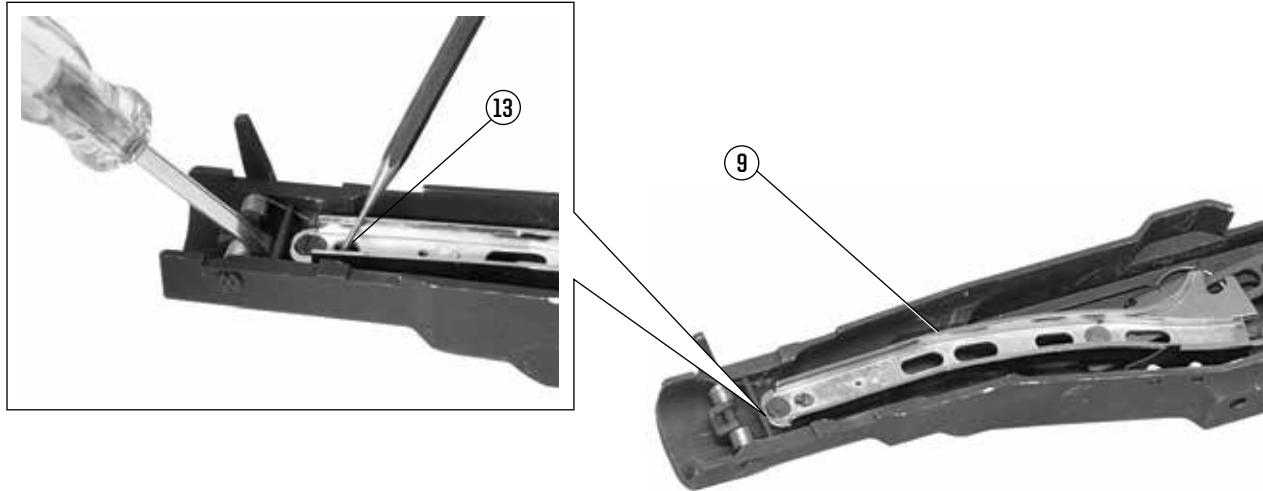


MAINTENANCE: COVER ASSEMBLY

13

REASSEMBLY (cont)

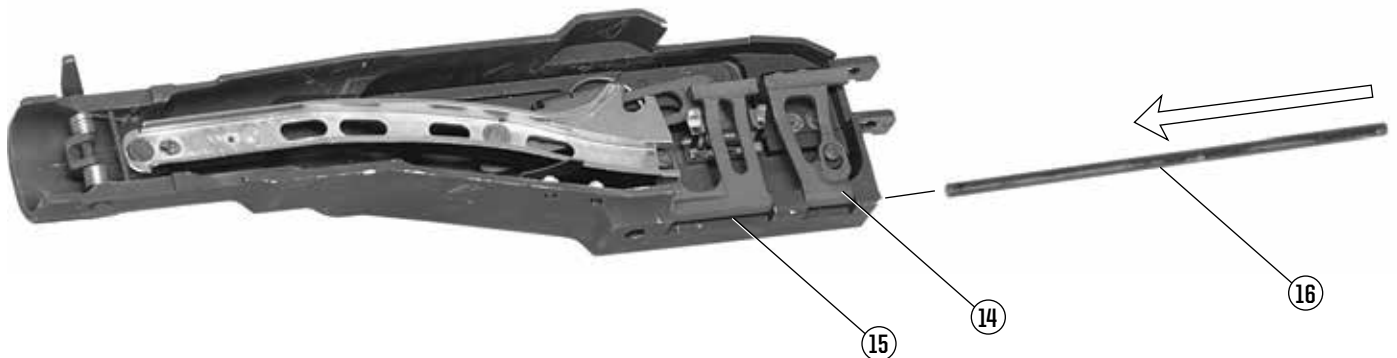
- Pull back on feed cam retainer (13) with punch and press down on feed cam assembly (9) to latch it.



- Move feed pawl assembly (1) back and forth several times to check it for freedom of movement. Make sure feed pawl assembly (1) does not bind. If binding is present, notify direct support maintenance.



- Install front (14) and rear (15) cartridge guides. Secure with straight shaft (16).



MAINTENANCE: COVER ASSEMBLY

13

REASSEMBLY (cont)

9. Install guide cotter pin (17) bend prongs of guide retaining pin around straight shaft so ends do not stick out.



END OF TASK



U.S. ORDNANCE

M60D

PROVEN UNDER FIRE

MAINTENANCE: CARTRIDGE FEED TRAY ASSEMBLY

14

THIS TASK COVERS: Disassembly, Repair, Reassembly

INITIAL SETUP

Maintenance Level

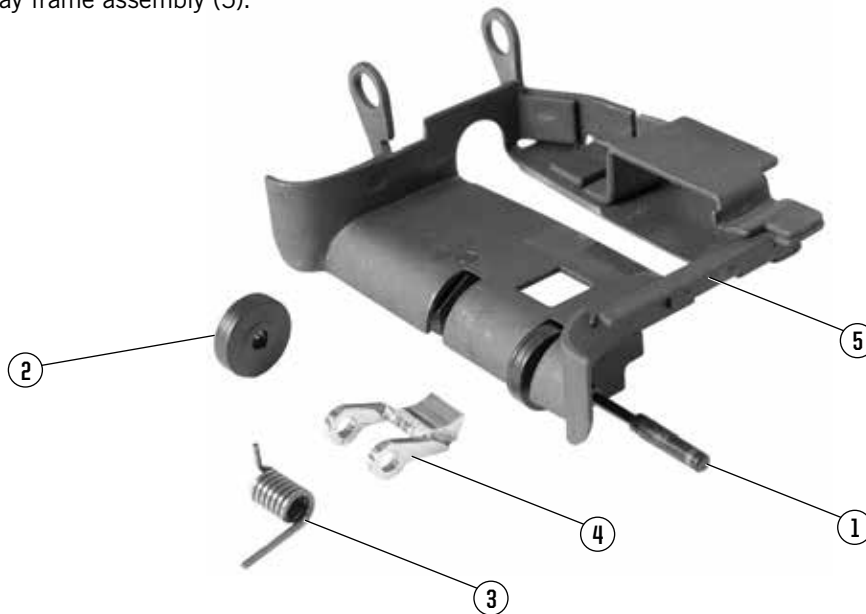
Unit

Tools and Special Tools

Echelon Tool Kit

DISASSEMBLY

1. Slowly tap cartridge shaft (1) part way out with a hammer and 3/32-inch drive pin punch and remove one yoke roller (2), helical torsion spring (3), and cartridge retainer pawl (4) from underside of cartridge tray frame assembly (5).



2. Remove cartridge shaft (1) and separate second yoke roller (2) from cartridge tray frame assembly (5).

REPAIR

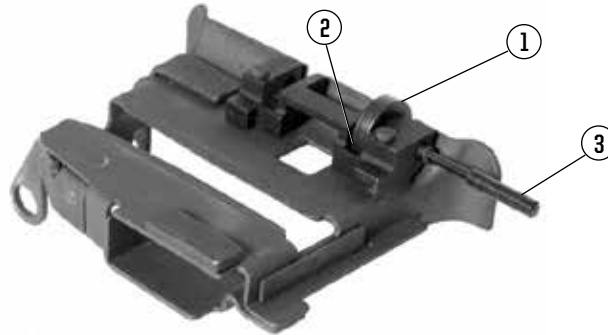
Repair by replacing all authorized components.

MAINTENANCE: CARTRIDGE FEED TRAY ASSEMBLY

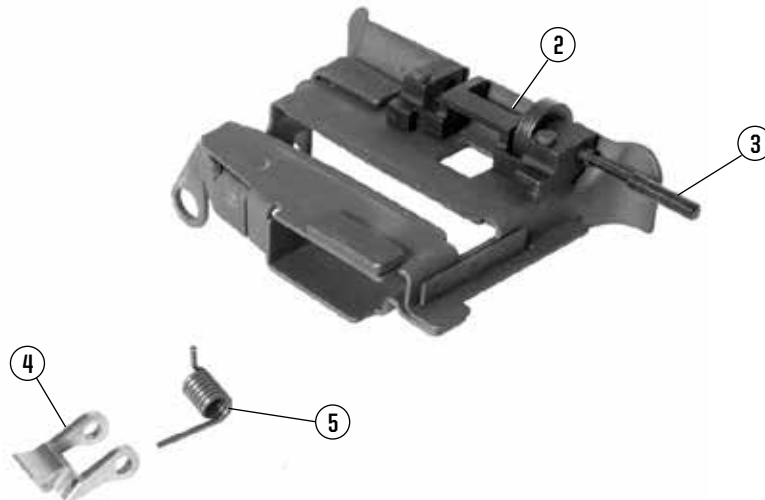
14

REASSEMBLY

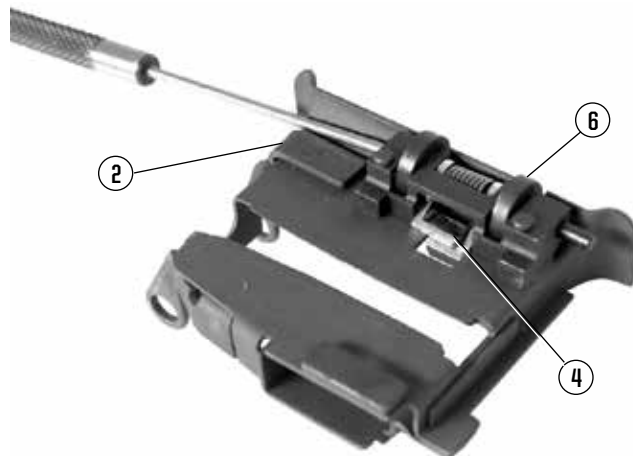
1. Attach one yoke roller (1) to cartridge tray frame assembly (2) and insert cartridge shaft (3) in part way.



2. Insert cartridge retainer pawl (4) and helical torsion spring (5) as a unit from underside of cartridge tray frame assembly (2) and align helical torsion spring (5) with cartridge shaft (3).



3. Insert second yoke roller (6) in cartridge tray frame assembly (2). Insert 3/32-inch drive pin punch in other side and work it through cartridge retainer pawl (4) and helical torsion spring (5) to help keep all parts in line.

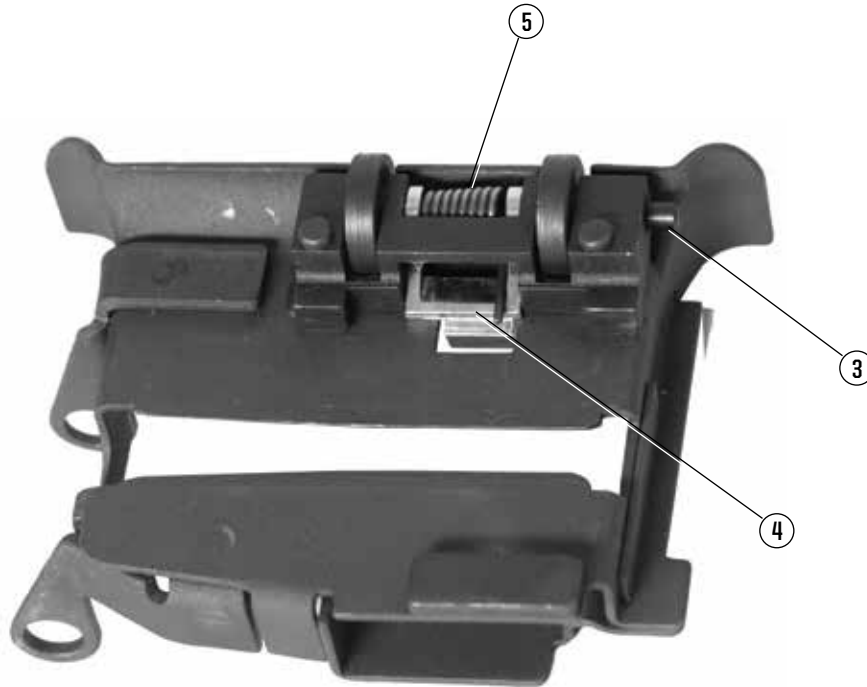


MAINTENANCE: CARTRIDGE FEED TRAY ASSEMBLY

14

REASSEMBLY (cont)

4. Use hammer to tap cartridge shaft (3) and drive it through retainer pawl (4), helical torsion spring (5) until it drives out drive pin punch. Flush both ends of the cartridge shaft (3).

**END OF TASK**



U.S. ORDNANCE

M60D

PROVEN UNDER FIRE

LUBRICATION INSTRUCTIONS

15

Weapons NOT in use or that are to be stored in the arms room for prolonged periods should have all interior and exterior metal parts lubricated and a light film of lubricant applied to the interior of the gas cylinder and the gas piston following cleaning and inspection.

The use of lubricant will not eliminate periodic cleaning and/or inspection to ensure that corrosion is not forming. Remove excess lubricant from the remainder of the weapon. Avoid lubricant contact with non-metallic surfaces.

PREPARATION FOR STORAGE OR SHIPMENT

16

ADMINISTRATIVE STORAGE

Refer to Chapter 3, 36 (pg. 145).

Manufacturer recommends use of a dry, temperature controlled storage area for long-term storage. Machine guns should be packaged in protective cases to prevent any damage to due to falls.

Weapons placed in long-term storage should be inspected every 90 days. Weapons must be inspected for any visual indicators of corrosion.

Before being placed into storage, machine guns must be clean, dry, and lubricated with a light coat of CLP/Break Free.

CHAPTER 3 | **DIRECT SUPPORT
MAINTENANCE INSTRUCTIONS**

REPAIR PARTS, SPECIAL TOOLS AND SUPPORT EQUIPMENT

17

COMMON TOOLS AND EQUIPMENT

For authorized common tools and equipment refer to Modified Table of Organization and Equipment (MTOE) applicable to your unit.

SPECIAL TOOLS AND SUPPORT EQUIPMENT

Tools and Test equipment requirements are listed in 37, pg. 147. Echelon Tool Kit tools and support equipment are listed and illustrated in 54, pg. 184 of this manual.

REPAIR PARTS

Repair parts are listed and illustrated in 37, pg. 147 through 53, pg. 183 of this manual.

TROUBLESHOOTING

18

TROUBLESHOOTING PROCEDURES

Refer to work package 06, pg. 27 of this manual.

MAINTENANCE PROCEDURES

19

GENERAL

Without a gauge, or inspection criteria, to determine if any component part or assembly of a weapon has excessive wear and/or how deep of a crescent/half-moon appearance make the component/assembly unserviceable, the determining factors will have to remain as follows:

- a. The functional/operational check with dummy cartridges.
- b. The experience and judgmental expertise of the DS armorer and/or maintenance personnel to determine that a component, assembly or repair part needs replacement.

NOTE

When a weapon is received by direct support with a maintenance request, all gauging requirements must be checked as a standard maintenance procedure. In addition, the weapon must be inspected and any other deficiencies found will be repaired, or noted for repair, at the appropriate maintenance level. As a minimum requirement, for active duty M60D guns the headspace and gauging must be verified annually by direct support personnel.

If the M60D machine gun has to go to direct support maintenance for any repair, both barrel assemblies must be turned in with the weapon.

Burrs or raised surfaces may be removed or smoothed using a fine grit sharpening stone. DO NOT change the dimensions of any components by stoning. Cracks, chips, dents, or gouges on components shall be reported to the appropriate maintenance level for repair or replacement.

Cracks, chips, dents, or gouges on breech bolt locking surfaces can damage the barrel socket. Damage to barrel socket locking surfaces can damage the breech bolt.

MAINTENANCE: M60D MACHINE GUN

SECTION 1 of 2

20

THIS TASK COVERS: Disassembly, Repair, Test/Inspection, Reassembly

INITIAL SETUP

Maintenance Level

Direct Support

Tools and Special Tools

Combination square (GGG-S-656)
or equivalent)
Dial indicating scale (AAA-S-133)
or equivalent)
Firing pin protrusion gauge (7274754)
Headspace gauge (7274790)
Machinist's steel rule (GGG-R-791
or equivalent)
Plain cylindrical plug gauge (7458598)
Small Arms Gauge Kit MS (5910297)
Echelon Tool Kit
Test bolt gauge (7799699)

Materials/Parts

Identification tag
Lacquer
Wire, Nonelectrical (MS20995C32)

Troubleshooting References

Refer to 06, pg. 27

General Safety Instructions

CAUTION

The ability to detect oil movement on or around the rivet head and/or between riveted components does not classify rivets as being loose, and is an unauthorized procedure.

NOTE

The disassembly/reassembly procedures in this paragraph are additions to those described in organizational maintenance (07, pg. 42).

Before doing the trigger pull test for M60D, the weapons must be reassembled.

No stamping or etching is authorized. Use tags for identification.

DISASSEMBLY

WARNING

Make sure weapon is cleared and that there are no obstructions in the barrel.

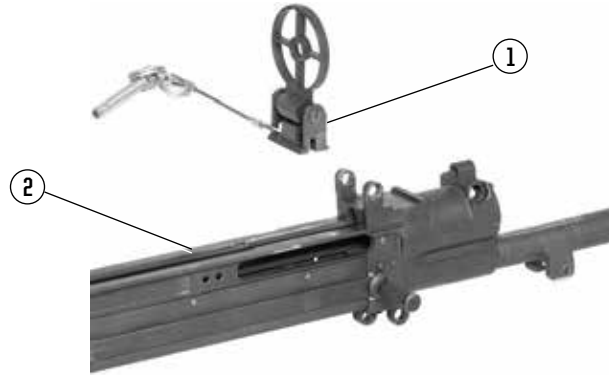
1. Field-strip weapon.

MAINTENANCE: M60D MACHINE GUN

20

DISASSEMBLY (cont)

2. Remove rear sight (1) from receiver assembly (2).



REPAIR

1. Repair by replacing all authorized components.
2. Additional maintenance procedures for subassemblies are contained in the following work packages:

Barrel and carrying handle assembly _____	12	pg. 68
Breech bolt assembly _____	09	pg. 56
Cocking handle assembly _____	33	pg. 139
Cover assembly _____	13	pg. 74
Operating rod assembly _____	10	pg. 63
Gun receiver assembly _____	34	pg. 140

TEST/INSPECTION

WARNING

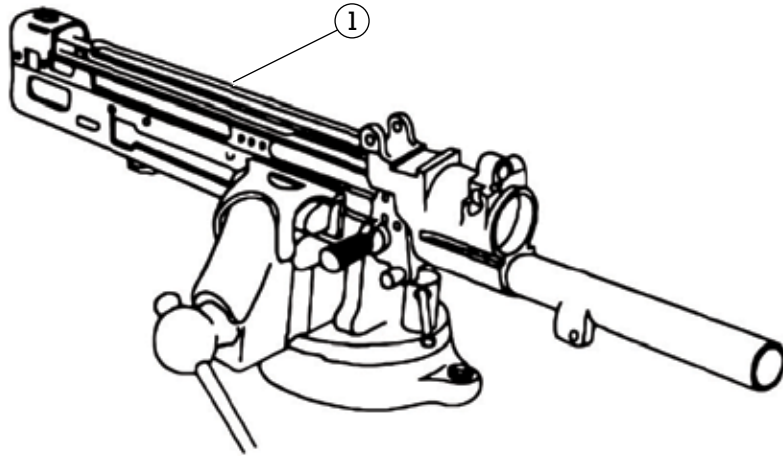
Make sure weapon is cleared and that there are no obstructions in the barrel.

LOOSE RECEIVER TEST

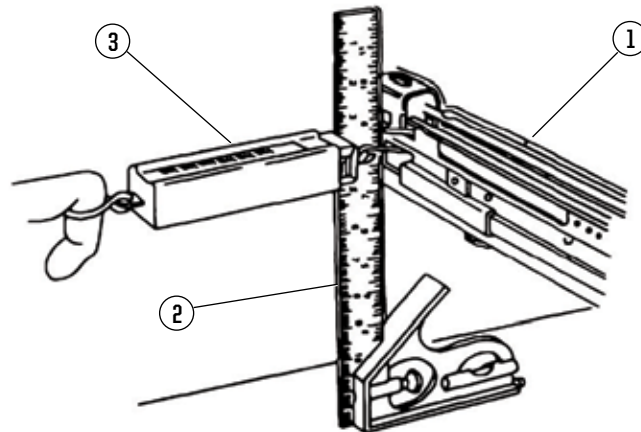
1. a. Check for loose receiver. Remove all major assemblies and internal components.

MAINTENANCE: M60D MACHINE GUN**20****TEST/INSPECTION (cont)****LOOSE RECEIVER TEST (cont)**

- b. Clamp receiver assembly (1) securely in machinist's vise equipped with jaw caps.



2. Place combination square (2) against receiver assembly (1). Combination square (2) should be parallel to receiver assembly (1) with the edge of its blade touching the side of receiver assembly (1).



3. Attach dial indicating scale (3) to rear of receiver assembly (1).

WARNING

In the following step, after obtaining 10 pounds of pressure on dial indicating scale, release pressure and do not move combination square.

4. Pull dial indicating scale (3) to 10 pounds of pressure and allow combination square (2) to move with receiver assembly (1).

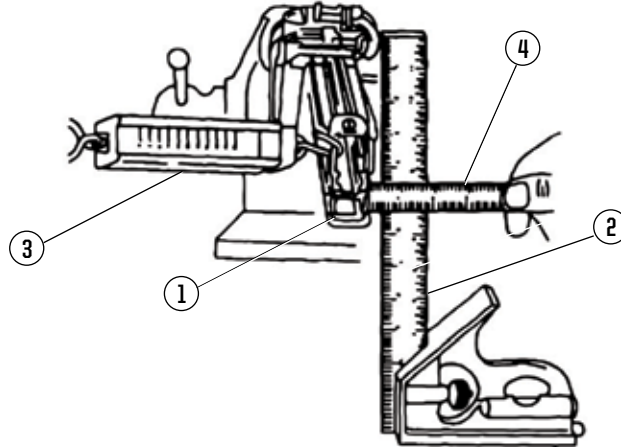
MAINTENANCE: M60D MACHINE GUN

20

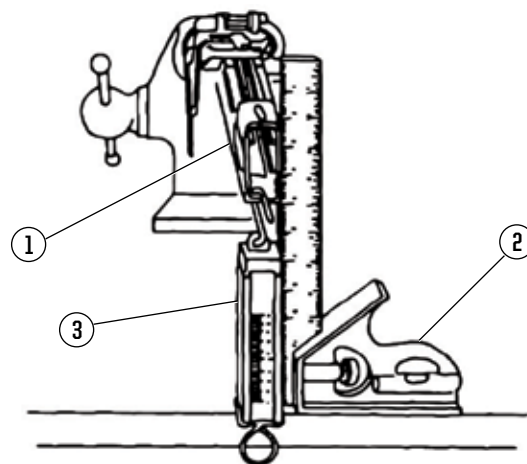
TEST/INSPECTION (cont)

LOOSE RECEIVER TEST (cont)

- Attach dial indicating scale (3) on other side of receiver assembly (1) and pull to 10 pounds of pressure. Butt machinist's steel rule (4) against receiver assembly (1) while holding pressure.

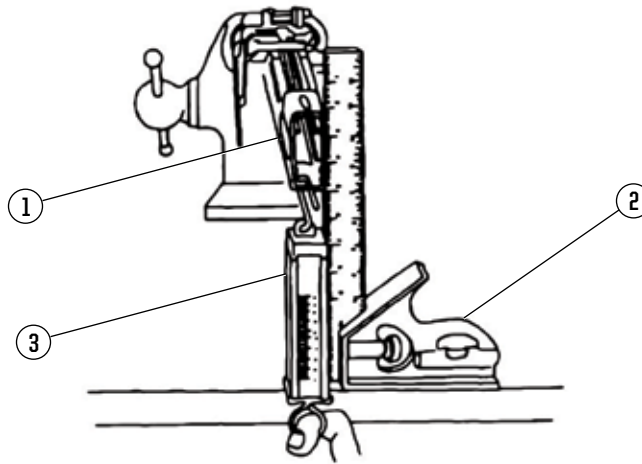


- Read distance between receiver assembly (1) and blade of combination square (2). Total horizontal movement should not exceed $\frac{3}{32}$ (0.094) of an inch.
- Remove dial indicating scale (3).
- Move combination square (2) against receiver assembly (1), and attach dial indicating scale (3) to bottom of receiver assembly (1).

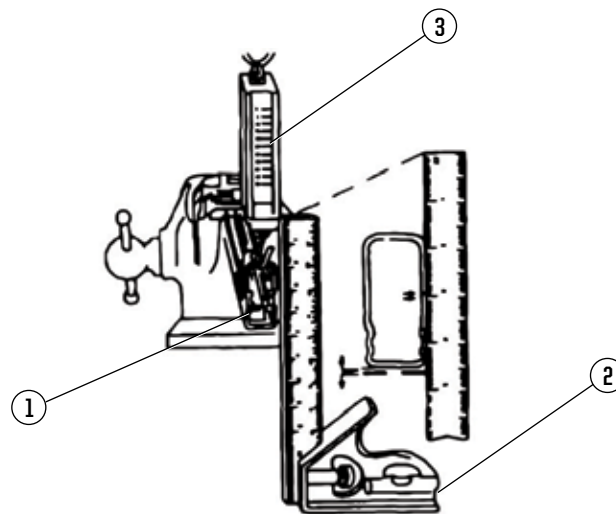


MAINTENANCE: M60D MACHINE GUN**20****TEST/INSPECTION (cont)****LOOSE RECEIVER TEST (cont)**

9. Mark receiver assembly (1) at whole number increments for reference point.
10. Pull dial indicating scale (3) to 10 pounds of pressure and hold it. Mark a line on the blade of combination square (2), or on the rear of receiver assembly (1), with pencil.



11. Remove dial indicating scale (3).
12. Attach dial indicating scale (3) to upper side of receiver assembly (1), pull dial indicating scale (3) to 10 pounds of pressure, and hold it.

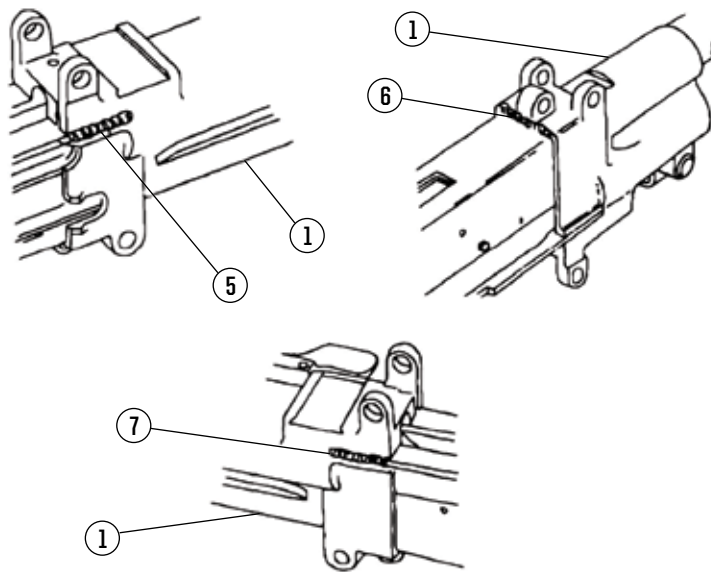


13. Measure vertical movement by using scribe line as a reference and reading against combination square (2). Total vertical movement should not exceed $\frac{3}{32}$ (0.094) of an inch.
14. Remove dial indicating scale (3) from receiver assembly (1).

MAINTENANCE: M60D MACHINE GUN**20****TEST/INSPECTION (cont)****LOOSE RECEIVER TEST (cont)****NOTE**

Receiver assemblies exceeding the maximum looseness tolerance of $3/32$ (0.094) of an inch vertically or horizontally will be judged unserviceable. Receiver assemblies having tolerances of less than $3/32$ (0.094) of an inch in either direction will be judged serviceable.

15. Inspect receiver assembly (1) and weld areas (5, 6, and 7). Minute or full length cracks in welds are considered serviceable providing they pass the looseness check of $3/32$ (0.094) of an inch. Cracks in the base metal of the receiver assembly (1) are a reason to consider it unserviceable.



16. Raise barrel muzzle up to about 30 to 45 degree angle so locking surface can be seen clearly.
17. Moderate to severe mutilation or chipping on either surface shall be cause for removing barrel from service.

MAINTENANCE: M60D MACHINE GUN

20

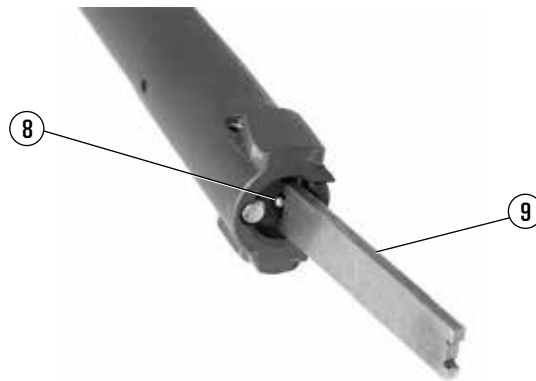
TEST/INSPECTION (cont)

LOOSE RECEIVER TEST (cont)

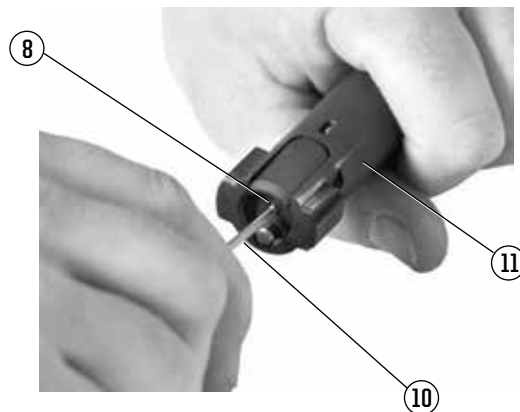
18. Lower barrel muzzle to about 30 to 45 degree angle so cam curved surfaces can be seen clearly.
19. Raised burr on cam cover shall be removed with a smooth half round file and crocus cloth.
20. Return back to service if headspace check is within tolerance.

BREECH BOLT TEST

1. Disassemble bolt assembly.
2. Using a firing pin protrusion gauge and plain cylindrical plug gauge test breech bolt assembly.
3. Push forward firing pin (8) and measure the exposed length with firing pin protrusion gauge (9). Firing pin (8) should protrude a minimum of 0.035 inches to a maximum of 0.043 inches.



4. Push firing pin (8) rearward using plain cylindrical plug gauge (10). The gauge shall not enter the firing pin hole. The body of breech bolt assembly (11) will be replaced if the hole is oversized.



MAINTENANCE: M60D MACHINE GUN

20

TEST/INSPECTION (cont)

BREECH BOLT TEST (cont)

NOTE

The breech bolt assembly used with the weapon will be the only one used when checking headspace. New breech bolt assemblies or test bolt gauges will not be used as a standard.

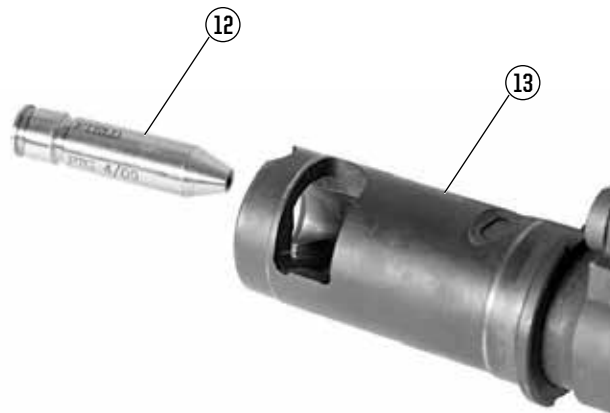
Do not intermix breech bolt assembly or barrel assembly without checking headspace requirements.

NOTE

If headspace is faulty, a test bolt gauge is required to determine if the barrel or breech bolt is defective. Use of a new breech bolt assembly is authorized only in a contingency situation, where it becomes imperative for deployment of the weapon or to put the weapon on-line, until a test bolt gauge is available.

For annually verified headspace, both barrels (issue and spare) will be checked.

5. Check breech bolt assembly and barrel for proper headspace using a headspace gauge, a test bolt gauge, or a new breech bolt assembly.
6. Insert headspace gauge (12) in chamber of barrel assembly (13).



NOTE

Leading edge of breech bolt assembly locking lugs must not touch the locking recess edge of barrel socket when rotated.

If breech bolt assembly locks in chamber of barrel assembly with headspace gauge installed, headspace is incorrect. The following procedures can be used to determine fault.

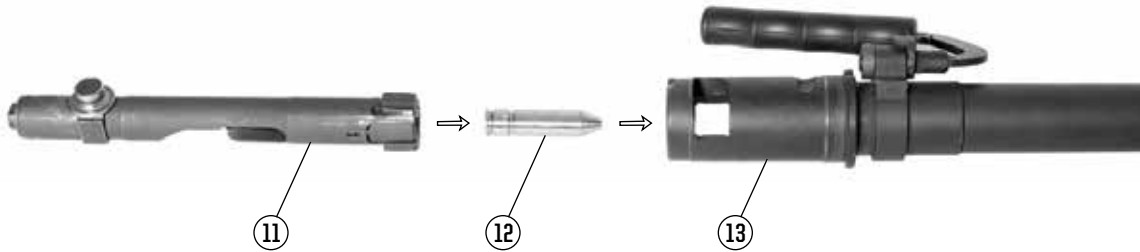
MAINTENANCE: M60D MACHINE GUN

20

TEST/INSPECTION (cont)

BREECH BOLT TEST (cont)

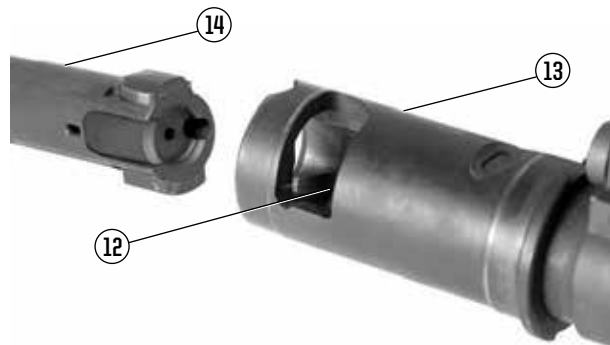
7. Insert breech bolt assembly (11) in socket of barrel assembly (13), and turn breech bolt assembly (11) with light finger pressure. Breech bolt assembly (11) should not close.



NOTE

A new breech bolt assembly may be used if test bolt gauge is not available.

8. Remove breech bolt assembly from socket of barrel assembly (13), and insert test bolt gauge (14) in chamber.

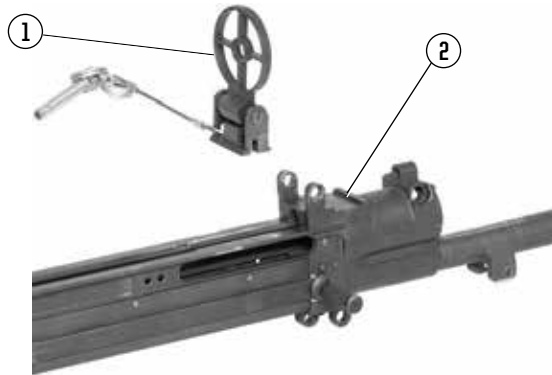


9. If test bolt gauge (14) does not close, breech bolt assembly (11) is defective. If test bolt gauge closes, barrel assembly (13) is defective.
10. Remove test bolt gauge (14) and headspace gauge (12) from barrel assembly (13).

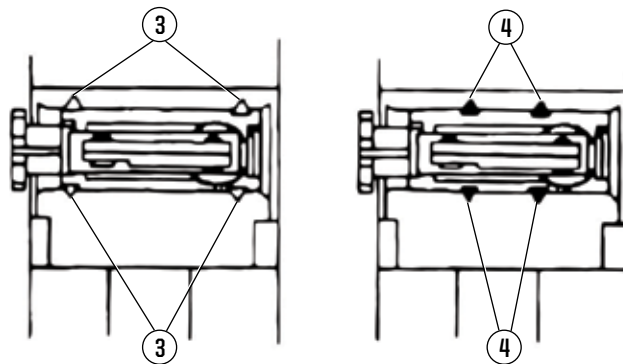
MAINTENANCE: M60D MACHINE GUN

REASSEMBLY

1. Install and center rear sight (1) in grooved space on receiver assembly (2).



2. Locate original stake marks (3) on receiver assembly (2) used to secure rear sight (1).



3. Stake new stake marks (4) in four different locations.

MAINTENANCE OF M60D MACHINE GUN

SECTION 2 of 2

THIS TASK COVERS: Disassembly, Repair, Test/Inspection, Reassembly

INITIAL SETUP

Maintenance Level

Depot level maintenance

Tools and Special Tools

Anvil assembly
 Combination square (GGG-S-656 or equivalent)
 Dial indicating scale (AAA-S-133 or equivalent)
 Firing pin protrusion gauge (7274754)
 Headspace gauge (7274790)

Tools and Special Tools (cont)

Machinist's steel rule (GGG-R-791 or equivalent)
 Plain cylindrical plug gauge (7458598)
 Small Arms Gauge Kit M8 (5910297)
 Echelon Tool Kit
 Test bolt gauge (7799699)

Materials/Parts

Lubricant (as required)

General Safety Instructions

CAUTION

Do not allow breech bolt to slam closed when the weapon is empty, as this will cause damage to the locking surfaces on the barrel socket and breech bolt.

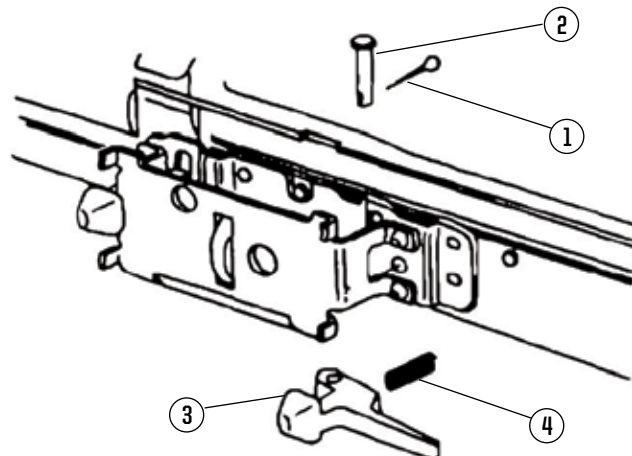
NOTE

The disassembly/reassembly procedures in this paragraph are in addition to those described in organizational maintenance (07, pg. 42).

Before doing the trigger pull test for both M60D the weapon must be reassembled.

DISASSEMBLY

1. Remove cotter pin (1), headed straight pin (2), lock-release lever (3), and helical compression spring (4).

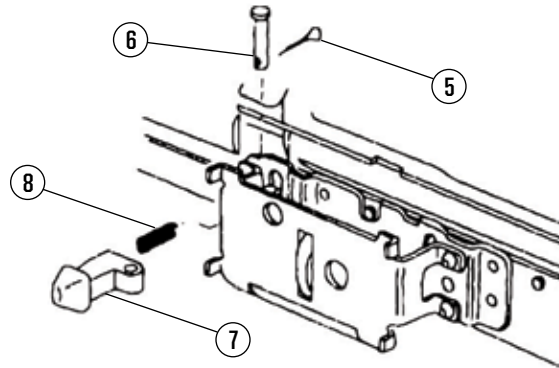


MAINTENANCE: M60D MACHINE GUN

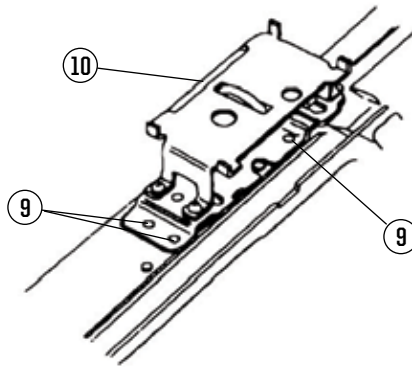
21

DISASSEMBLY (cont)

- Remove cotter pin (5), headed straight pin (6), pawl (7), and helical compression spring (8).



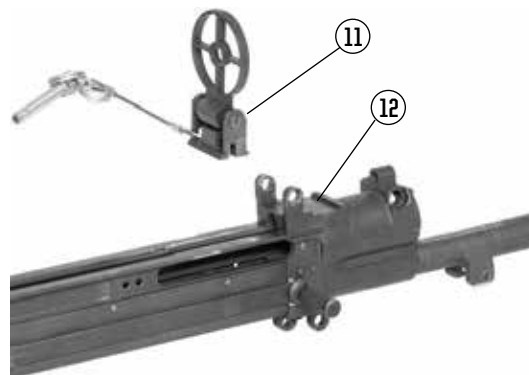
- Remove solid rivets (9) from magazine bracket (10) only if replacement is necessary.



NOTE

Do not remove rear sight unless rear sight base is damaged.

- Using 1/2-inch brass punch and hammer, drive rear sight (11) out of grooved area on receiver assembly (12).



MAINTENANCE: M60D MACHINE GUN

21

REPAIR

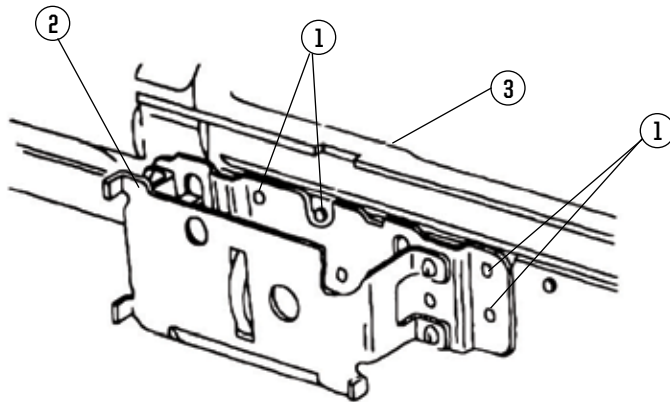
Repair by replacing all authorized components.

Additional maintenance procedures for subassemblies are contained in the following work packages:

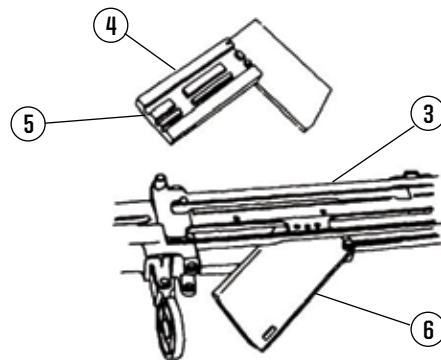
Barrel and carrying handle assembly _____	12	pg. 68
Breech bolt assembly _____	22	pg. 110
Cocking handle assembly _____	33	pg. 139
Cover assembly _____	13	pg. 74
Gun receiver assembly _____	34	pg. 140
Operating rod assembly _____	10	pg. 63
Rear sight _____	32	pg. 137

REASSEMBLY

1. Insert solid rivets (1) in magazine bracket (2) and through receiver assembly (3).



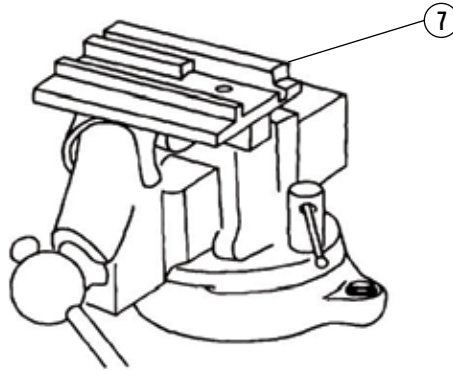
2. Insert fabricated anvil assembly (4) in receiver assembly (3) by placing grooved plate (5) in left side rails of receiver assembly (3). Once anvil assembly (4) is properly fitted in receiver assembly (3), push smooth surfaced plate (6) in receiver assembly (3).



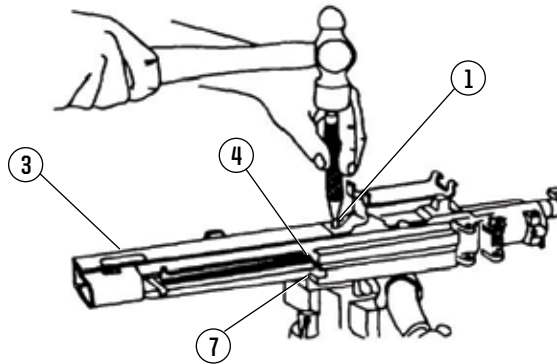
MAINTENANCE: M60D MACHINE GUN

REASSEMBLY (cont)

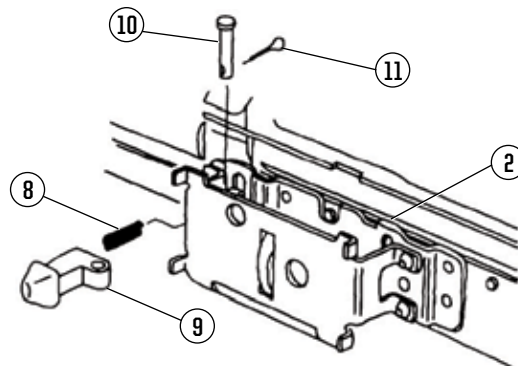
3. Insert and secure back plate (7) in machinist's vise equipped with jaw caps.



4. Position receiver assembly (3) atop back plate (7). Using a drive pin punch and hammer, tighten solid rivets (1). Pull out smooth surfaced plate (6) and remove anvil assembly (4).



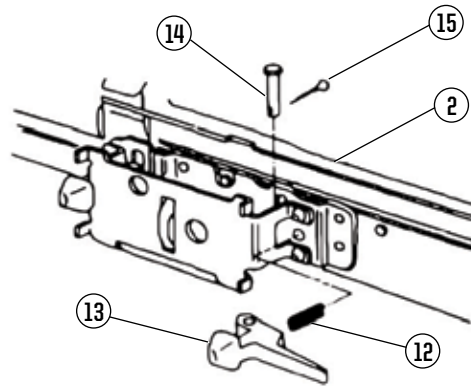
5. Position helical compression spring (8) and pawl (9) in magazine bracket (2). Insert headed straight pin (10) and secure with cotter pin (11).



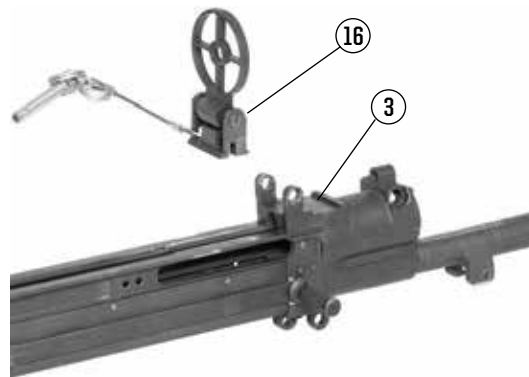
MAINTENANCE: M60D MACHINE GUN

REASSEMBLY (cont)

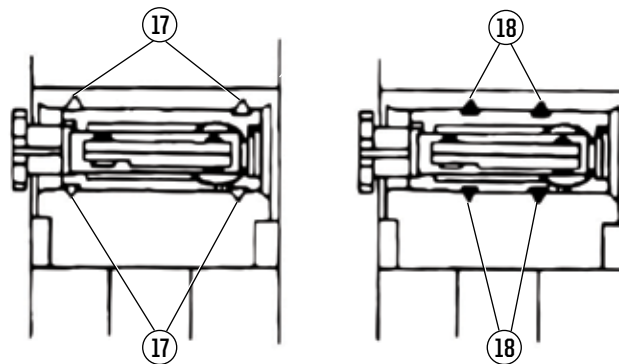
- Position helical compression spring (12) and lock-release lever (13) in magazine bracket (2). Insert headed straight pin (14) and secure with cotter pin (15).



- Install and center rear sight (16) in grooved space on receiver assembly (3).



- Look for old stake marks (17) and restake new stake marks (18) in a different location. Using a center punch and hammer, stake receiver assembly to base of rear sight (16) in four places.



MAINTENANCE: M60D MACHINE GUN

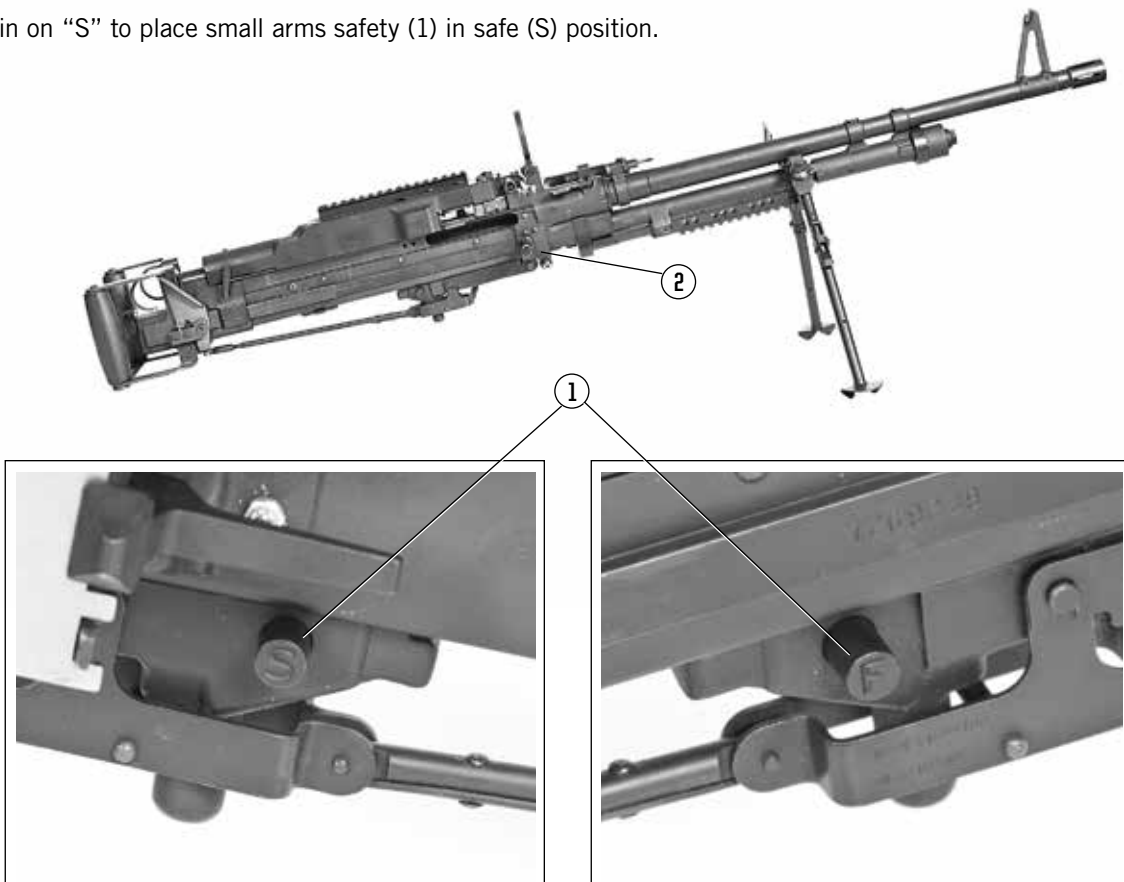
21

TRIGGER PULL TEST

NOTE

The weapon must be reassembled before doing trigger pull test.

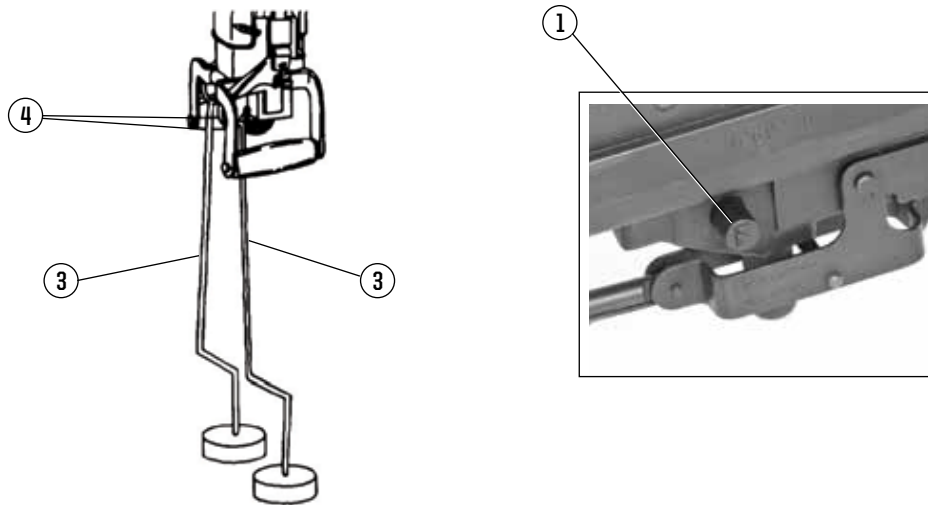
1. Check trigger pull using two trigger pull fixtures and a dummy round.
2. Press in on "F" to place small arms safety (1) in fire (F) position.
3. Pull cocking handle assembly (2) to the rear, and then push it forward.
4. Press in on "S" to place small arms safety (1) in safe (S) position.



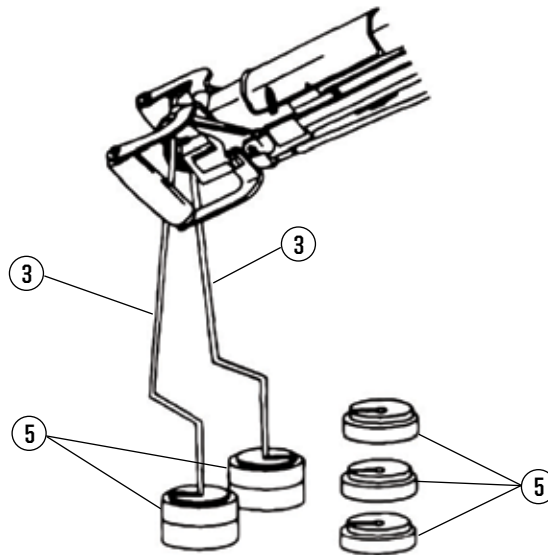
5. Load dummy rounds on cartridge feed tray.

MAINTENANCE: M60D MACHINE GUN**21****TRIGGER PULL TEST (cont)**

6. Attach one trigger pull fixture (3) to each of the triggers (4), position. Place small arms safety (1) in fire (F).



7. Tilt the weapon about 35 to 40 degrees and carefully add weights (5) until sear releases breech bolt assembly. The sear should not release with less than 10 pounds of weight, but should release with less than 20 pounds of weight.



8. Remove weights (5), trigger pull fixtures (3), and the dummy rounds.

END OF TASK



U.S. ORDNANCE

M600

PROVEN UNDER FIRE

MAINTENANCE: BREECH BOLT ASSEMBLY

22

THIS TASK COVERS: Repair, Test

INITIAL SETUP

Maintenance Level

Direct Support

Tools and Special Tools

Firing pin protrusion gauge (7274754)

Plain cylindrical plug gauge (7458598)

Echelon Tool Kit

General Safety Instructions

WARNING

The breech bolt assembly used in the weapon will be the only one used to check the headspace.

Do not intermix the breech bolt assembly or barrel assembly without checking headspace requirements.

CAUTION

Do not allow breech bolt to slam closed when the weapon is empty, as this will cause damage to the locking surfaces or the barrel socket and breech bolt.

NOTE

If headspace is faulty, a new breech bolt or test bolt gauge is required to determine whether the barrel or breech bolt is defective.

REPAIR

Repair by replacing all authorized components or by stoning (see 09, pg. 56).

WARNING

Burrs or raised surfaces may be removed or smoothed using a fine grit sharpening stone. DO NOT change the dimensions of any components by stoning. Cracks, chips, dents, or gouges on components shall be reported to the appropriate maintenance level for repair or replacement.

Cracks, chips, dents, or gouges on breech bolt locking surfaces can damage the barrel socket. Damage to barrel socket locking surfaces can damage the breech bolt.

MAINTENANCE: BREECH BOLT ASSEMBLY

22

TEST

NOTE

Small arms gauges will be inspected and certified annually. The gauges will not be used unless they are accompanied with the appropriate gauge record.

Perform BREECH BOLT TEST (see 23, pg. 139).

END OF TASK

MAINTENANCE: OPERATING ROD ASSEMBLY

23

THIS TASK COVERS: Disassembly, Repair, Reassembly

INITIAL SETUP

Maintenance Level

Direct Support

Tools and Special Tools

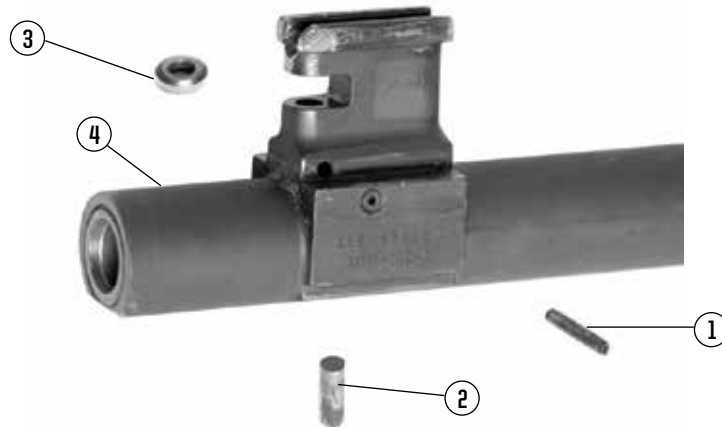
Echelon Tool Kit

NOTE

Disassembly, reassembly, and stoning procedures are covered in 09, pg. 56.

DISASSEMBLY

Remove spring pin (1), headless straight pin (2), and yoke roller (3) from operating rod assembly (4).



REPAIR

Repair by replacing all authorized components.

REASSEMBLY

Insert yoke roller (3) in slot of operating rod (4). Insert headless straight pin (2) and spring pin (1).

END OF TASK



U.S. ORDNANCE

M60D

PROVEN UNDER FIRE

MAINTENANCE: BARREL

24

THIS TASK COVERS: Disassembly, Repair, Reassembly

INITIAL SETUP

Maintenance Level

Direct Support

Tools and Special Tools

Headspace gauge (7274790)

Small Arms Gauge Kit M8 (5910297)

Echelon Tool Kit

Test bolt gauge (7799699)

Materials/Parts

Cloth, abrasive (crocus)

Dry cleaning solvent

Gloves, rubber)

Lubricant (as required)

Lubricant, solid film

Rag, wiping

Troubleshooting References

Refer to 06, pg. 27

WARNING

The breech bolt assembly used in the weapon will be the only one used to check headspace.

Do not intermix the breech bolt assembly or barrel assembly without checking headspace requirements.

NOTE

Headspace will be gauged annually using appropriate gauges.

If headspace is faulty, a new breech bolt or test bolt gauge is required to determine whether the barrel or breech bolt is defective.

DISASSEMBLY

1. Turn barrel (1) upside down, and place it in a machinist's vise equipped with vise jaw caps. Tighten vise just enough to hold barrel securely.

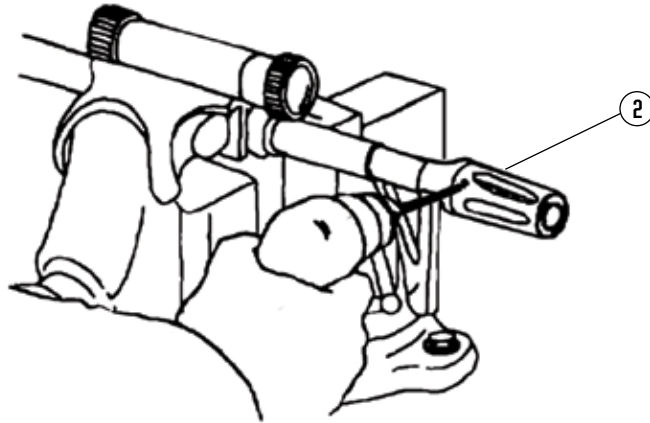


MAINTENANCE: BARREL

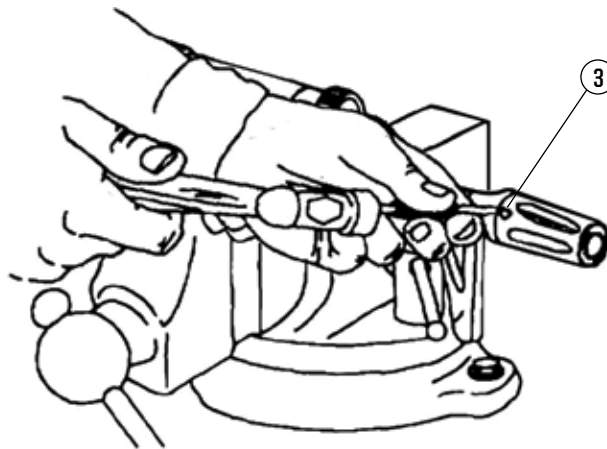
24

DISASSEMBLY (cont)

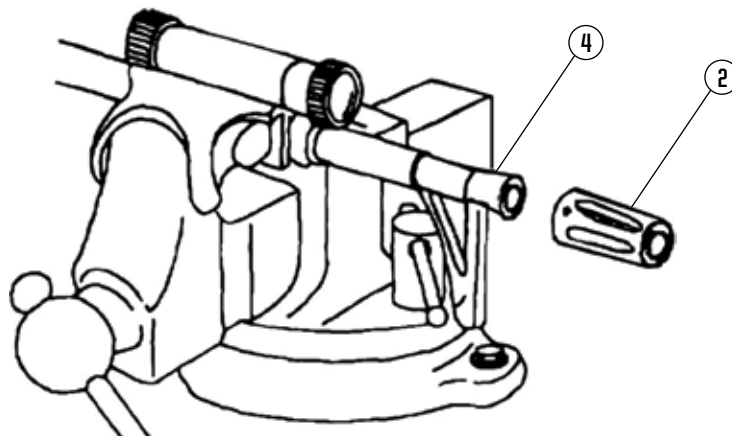
- Using a portable electric drill and 7/64-inch twist drill, drill off stake marks from both sides of flash suppressor (2).



- Using a drive pin punch, drive out headless straight pin (3) and discard.



- Unscrew and remove flash suppressor (2) from barrel (4). Remove barrel (4) from machinist's vise.



MAINTENANCE: BARREL

24

REPAIR

WARNING

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.

NOTE

No abrasive materials will be used to clean the gas piston or the inside of the gas cylinder (i.e., green pads, steel wool, or crocus cloth). The receiver brush will not be used to clean inside of gas cylinder.

1. Repair by replacing all authorized components.
2. The use of crocus cloth is restricted to external surfaces only.
3. Following manufacturer's instructions for use, apply solid film lubricant to all external surfaces showing wear and allow weapon to dry 12 hours before being used.
4. Clean and lubricate.
5. Additional maintenance procedures for subassemblies of the barrel assembly are listed in the following work packages:

Maintenance: Bipod _____ 25 pg. 120
Maintenance: Bipod Leg _____ 26 pg. 124

MAINTENANCE: BARREL

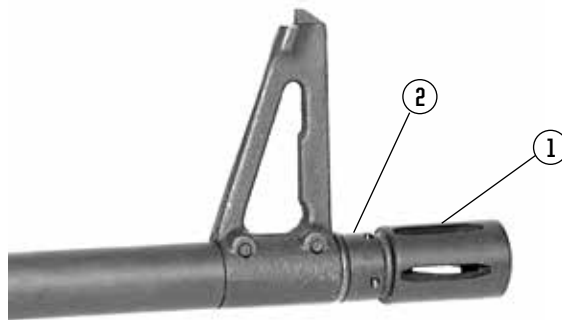
24

NOTE

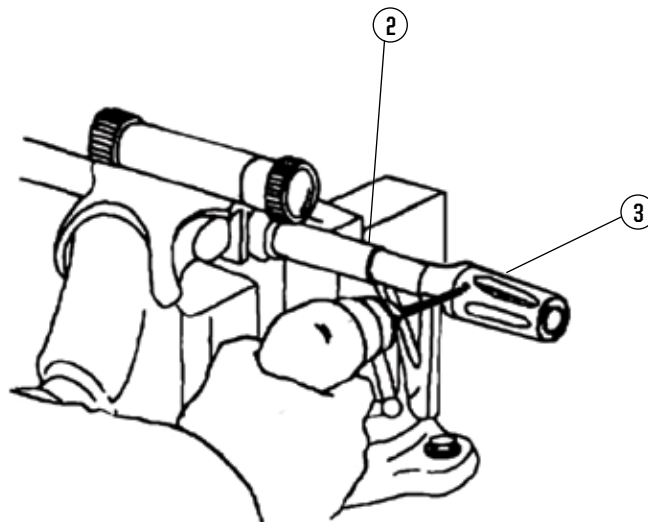
When a new flash suppressor or barrel is used, it must be drilled for a headless straight pin. Re-drilling may be required on originally installed equipment if tolerances changed.

REASSEMBLY

1. Screw flash suppressor (1) on end of barrel (2). Tighten and position flash suppressor (1) so one prong will align with gas cylinder.



2. Clamp barrel (2) in a machinist's vise equipped with vise jaw caps. Using flash suppressor (3) as a guide, drill #31 drill (0.120) for the new headless straight pin.

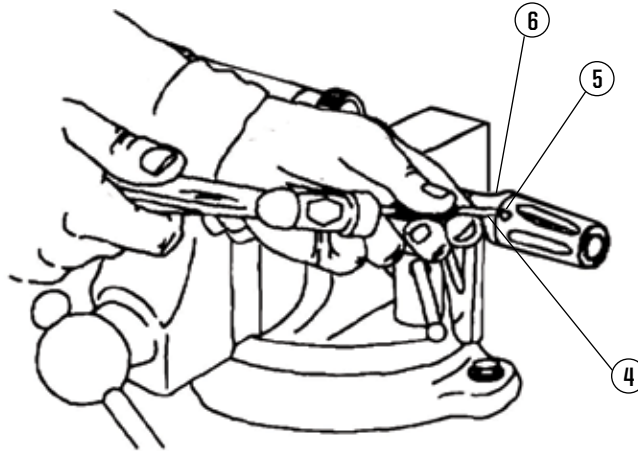


MAINTENANCE: BARREL

24

REASSEMBLY (cont)

3. Drive headless straight pin (4) in hole (5), center the pin in the flash suppressor and stake to secure both ends of headless straight pin (4). Loosen machinist's vise and remove barrel assembly (6).



4. Clean rusted metal surfaces with crocus cloth. Wash thoroughly with dry cleaning solvent (SD).

CAUTION

Make sure solid film lubricant does not enter into the gas cylinder.

5. Following manufacturer's instructions for use, apply solid film lubricant to all external surfaces showing wear and allow weapon to dry 12 hours before being used.
6. Refer to 15, pg. 86 for reassembly procedures for the gas cylinder assembly.

MAINTENANCE: BARREL

24

TEST

WARNING

The breech bolt assembly used in the weapon will be the only one used to check headspace.

Do not intermix the breech bolt assembly or barrel and barrel assembly without checking headspace requirements.

NOTE

Headspace will be gauged annually using appropriate gauges.

If headspace is faulty, a new breech bolt or test bolt gauge is required to determine whether the barrel or breech bolt is defective.

The test procedure below is in addition to those performed in BARREL TEST (see 20, pg. 92).

1. Visually check the barrel extension locking surfaces for cracks.



NOTE

If barrel is replaced, remove ID tag, and attach to new barrel.

END OF TASK

MAINTENANCE: BIPOD

25

THIS TASK COVERS: Disassembly, Repair, Reassembly

INITIAL SETUP

Maintenance Level

Direct Support

Materials/Parts

Lubricant, solid film

Tools and Special Tools

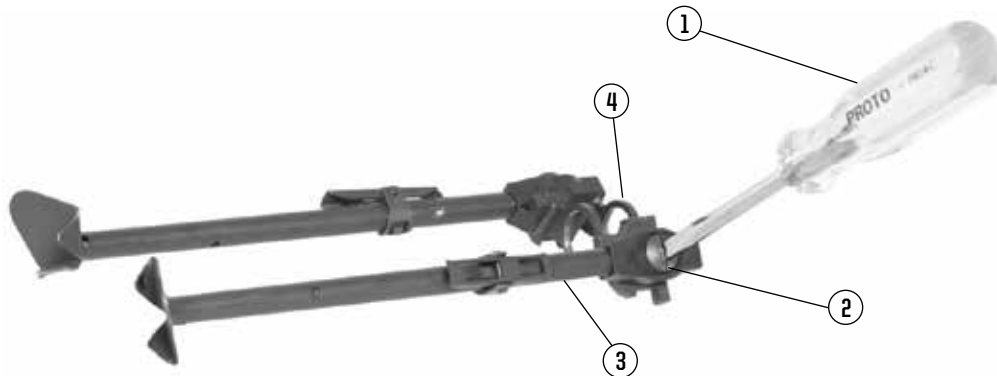
Echelon Tool Kit

NOTE

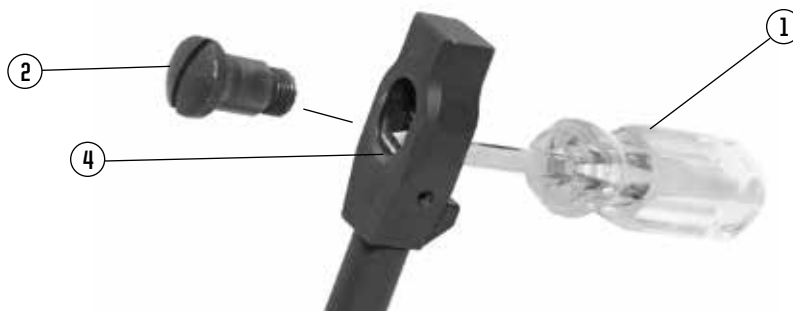
The following procedures are performed when disassembling and reassembling both bipod legs.

DISASSEMBLY

- Using a standard screwdriver (1) unscrew pivot leg screw (2) and separate bipod leg assembly (3) from bipod pivot assembly (4).



- Slide screwdriver (1) between pivot leg screw (2) and leg spring plunger (4) and push pivot leg screw free.

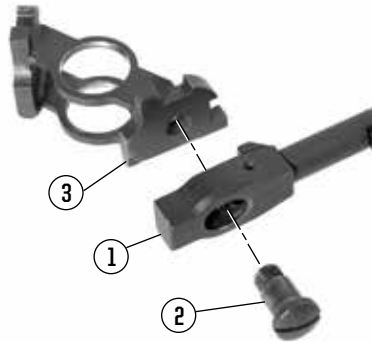


MAINTENANCE: BIPOD

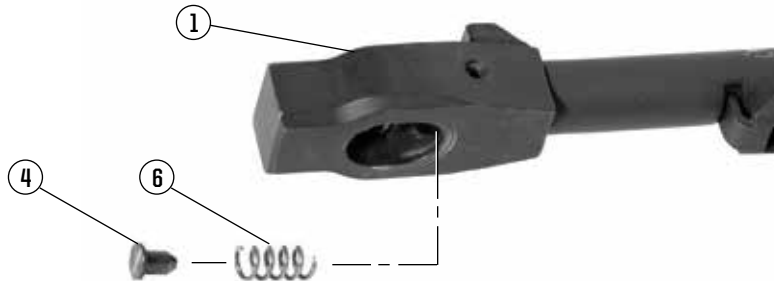
25

REASSEMBLY (cont)

3. Separate bipod leg (1) from bipod assembly pivot (3) pivot leg screw (2).



4. Remove leg spring plunger (4) and helical compression spring (6) from bipod leg (1).



REASSEMBLY (cont)

1. Repair by replacing all authorized components.

WARNING

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.

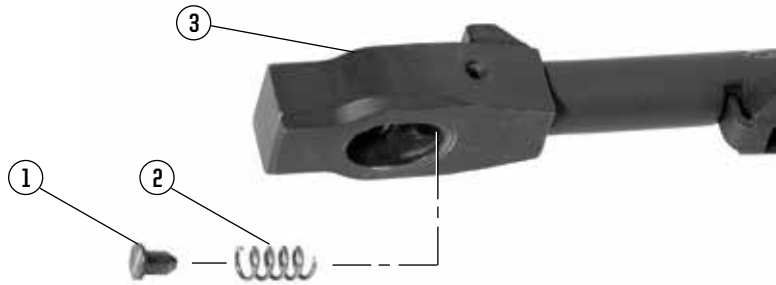
2. Clean rusted metal surfaces with crocus cloth. Wash thoroughly with dry cleaning solvent (SD).
3. Following manufacturer's instructions for use, apply solid film lubricant to all external surfaces showing wear and allow weapon to dry 12 hours before being used.

MAINTENANCE: BIPOD

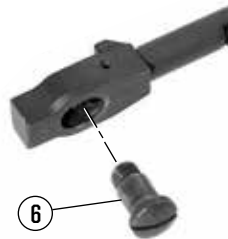
25

REASSEMBLY (cont)

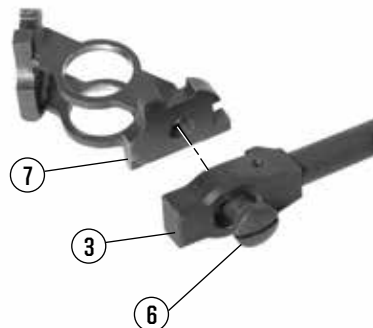
1. Insert headed straight pin (1) and helical compression spring (2) in bipod leg (3).



2. Use standard screwdriver to compress leg spring plunger and helical spring while sliding pivot leg screw (6) back into position.



3. Position bipod leg (3) against bipod pivot assembly pivot (7) and tighten pivot leg screw (6).

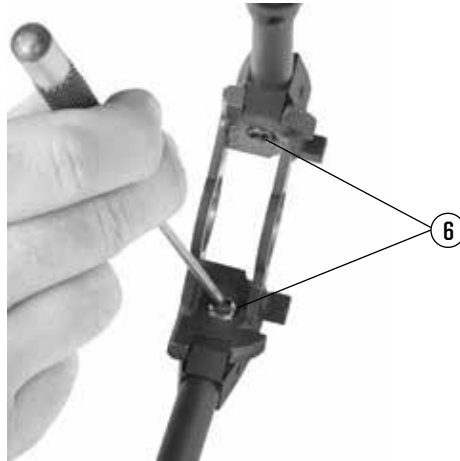


MAINTENANCE: BIPOD

25

REASSEMBLY (cont)

4. Using a hammer and punch, stake pivot leg screw (6) in two places.



END OF TASK

MAINTENANCE: BIPOD LEGS

26

THIS TASK COVERS: Disassembly, Repair, Reassembly

INITIAL SETUP

Maintenance Level

Direct Support

Tools and Special Tools

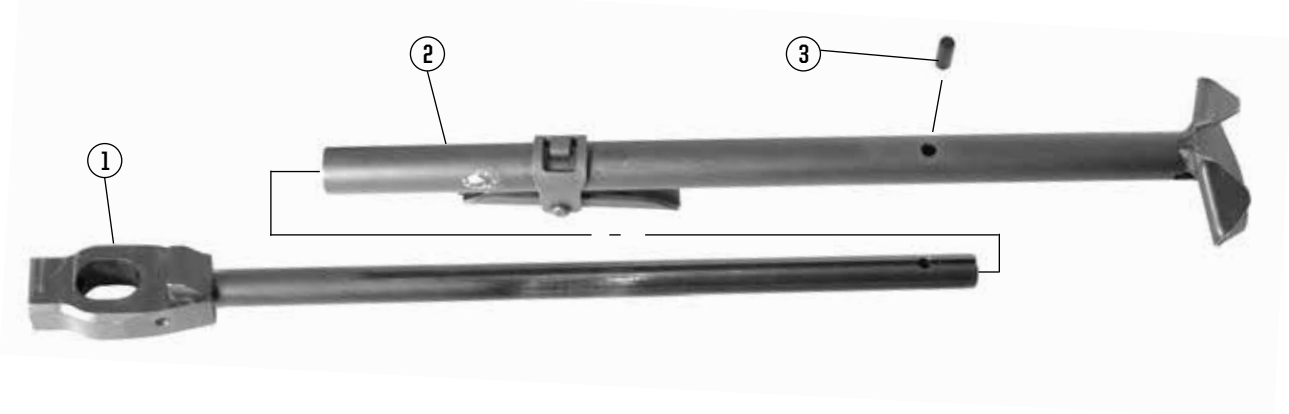
Echelon Tool Kit

DISASSEMBLY

NOTE

If foot of bipod leg rotates replace the entire leg assembly.

1. Slide inner (1) and outer (2) leg assemblies until inside and outside holes line up.
2. Use punch to remove dowel pin (3) from inner and outer leg assemblies.
3. Slide inner and outer leg assemblies free.



REPAIR

Replace parts as needed. Reassemble.

REASSEMBLY

1. Slide inner and outer leg assemblies together.
2. Slide inner and outer leg assemblies until inside and outside holes line up.
3. Replace dowel pin.

END OF TASK

MAINTENANCE: COVER ASSEMBLY

27

THIS TASK COVERS: Disassembly, Repair, Reassembly

INITIAL SETUP

Maintenance Level

Direct Support

Tools and Special Tools

Echelon Tool Kit

DISASSEMBLY

Refer to 16, pg. 87 for disassembly of cover assembly.

REPAIR

1. Repair by replacing all authorized components.
2. Additional maintenance procedures for subassemblies of the cover assembly are contained in the following work packages:

Cover housing assembly _____	32	pg. 137
Feed cam assembly _____	28	pg. 126
Feed lever assembly _____	29	pg. 128
Feed pawl assembly _____	31	pg. 132

REASSEMBLY

Refer to 13, pg. 74 for reassembly of cover assembly.

END OF TASK

MAINTENANCE: FEED CAM ASSEMBLY

28

THIS TASK COVERS: Disassembly, Repair, Reassembly

INITIAL SETUP

Maintenance Level

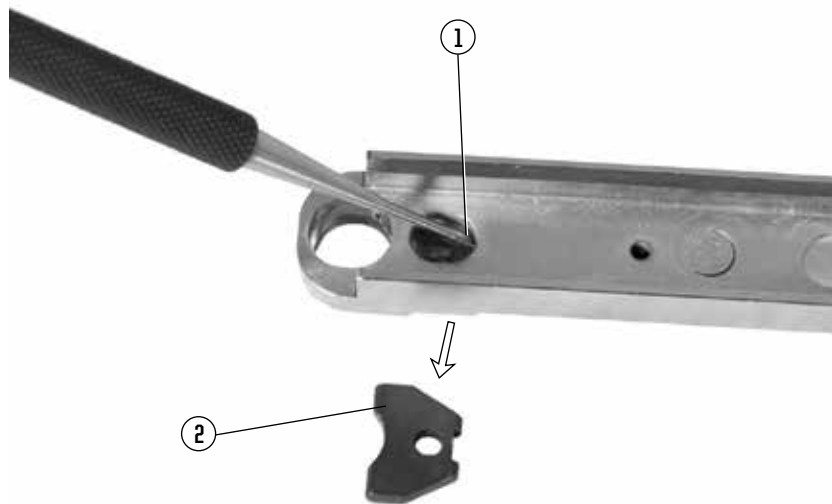
Direct Support

Tools and Special Tools

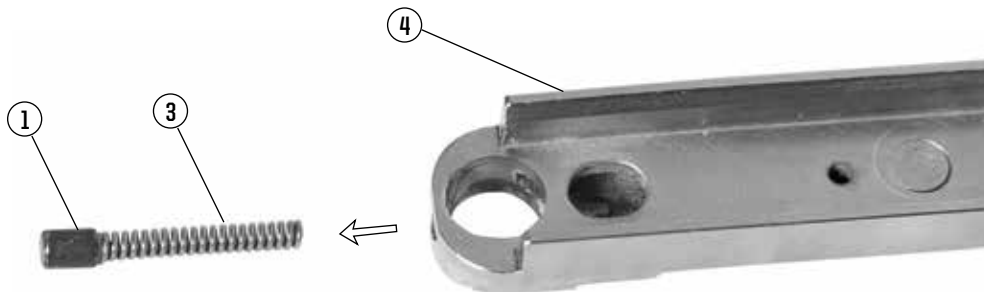
Echelon Tool Kit

DISASSEMBLY

1. Push retainer plunger (1) back and hold it while feed cam retainer (2) is pushed out. Slowly release pressure on retainer plunger (1).



2. Shake retainer plunger (1) and helical compression spring (3) from cam assembly (4).



MAINTENANCE: FEED CAM ASSEMBLY

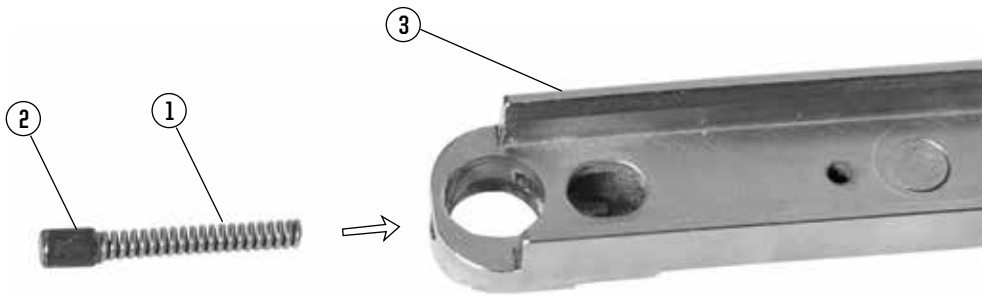
28

REPAIR

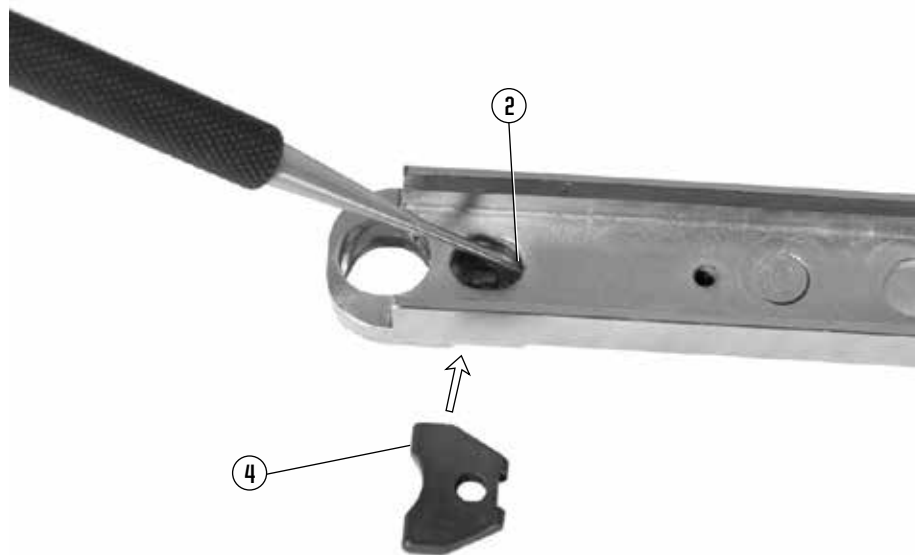
Repair by replacing all authorized components.

REASSEMBLY (cont)

1. Install helical compression spring (1) and retainer plunger (2) in cam assembly (3).



2. Press against retainer plunger (2) with a drive pin punch, and install feed cam retainer (4) in slot. Release pressure and withdraw drive pin punch.

**END OF TASK**

MAINTENANCE: FEED LEVER ASSEMBLY

29

THIS TASK COVERS: Disassembly, Repair, Reassembly

INITIAL SETUP

MAINTENANCE LEVEL

Direct Support

TOOLS AND SPECIAL TOOLS

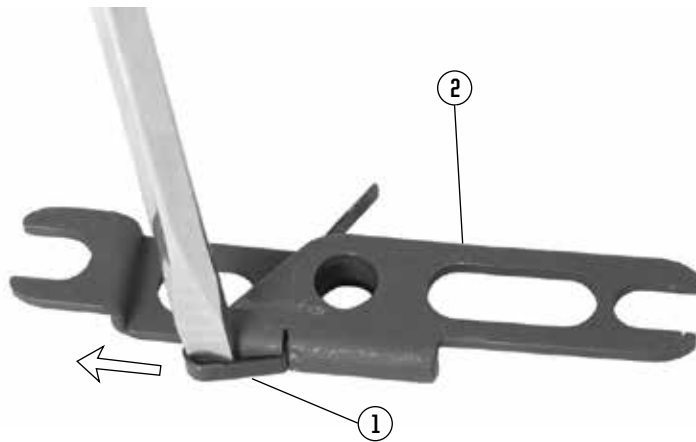
Echelon Tool Kit

NOTE

The following pages show disassembly/reassembly of the Feed lever Assembly, but the manufacturer suggests replacement of entire assembly if necessary.

DISASSEMBLY

Carefully use a screwdriver to free and separate end of spring lever clip (1) from feed lever (2).



REPAIR

Repair by replacing all authorized components.

MAINTENANCE: FEED LEVER ASSEMBLY

29

REASSEMBLY

Attach spring lever clip (1) to feed lever (2), and slide them together until end of spring lever clip (1) enters slot in rear of feed lever (2).



END OF TASK

MAINTENANCE: FEED PAWL ASSEMBLY

30

THIS TASK COVERS: Disassembly, Repair, Reassembly

INITIAL SETUP

Maintenance Level

Direct Support

Tools and Special Tools

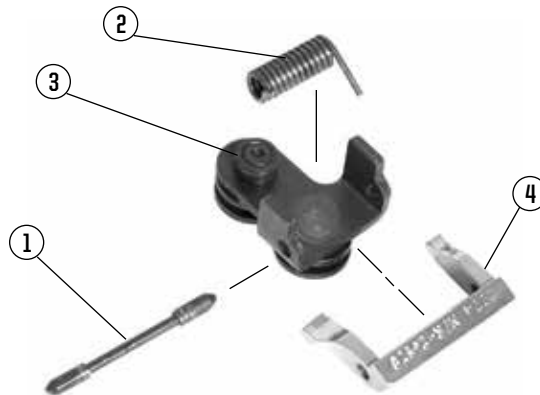
Echelon Tool Kit

NOTE

The following pages show disassembly/reassembly of the Feed Pawl Assembly, but the manufacturer suggests replacement of entire assembly if necessary.

DISASSEMBLY

1. Push out shouldered shaft (1) and remove helical torsion spring (2). Separate chassis assembly (3) from pawl (4).

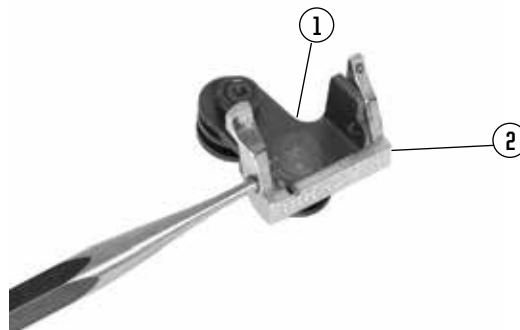


REPAIR

Repair by replacing all authorized components.

REASSEMBLY

1. Assemble chassis assembly (1) into center of pawl (2). Insert 1/16-inch drive pin punch into left side of pawl (2) and through chassis assembly (1) slightly.

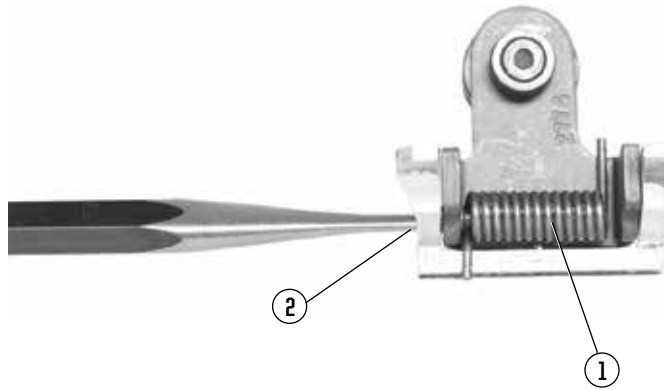


MAINTENANCE: FEED PAWL ASSEMBLY

30

REASSEMBLY (cont)

2. Position torsion spring (1) and insert shouldered shaft (2).



END OF TASK

MAINTENANCE: COVER HOUSING ASSEMBLY

31

THIS TASK COVERS: Disassembly, Repair, Reassembly

INITIAL SETUP

Maintenance Level

Direct Support

Tools and Special Tools

Echelon Tool Kit

Materials/Parts

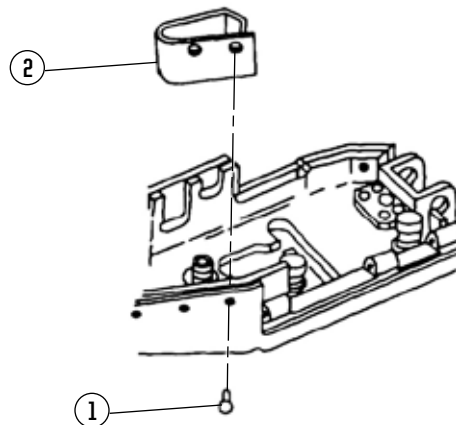
Lever Assembly, Latch (7269137)

Rivet bucking tool

Rivet heading tool

DISASSEMBLY

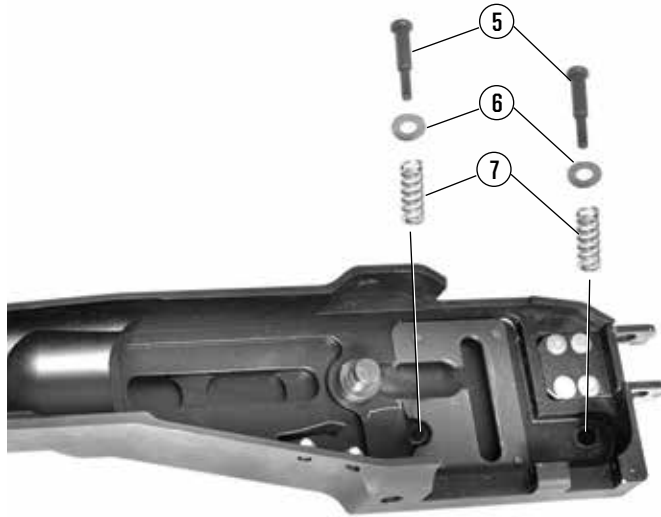
1. Remove solid rivets (1), and cam bumper assembly (2).



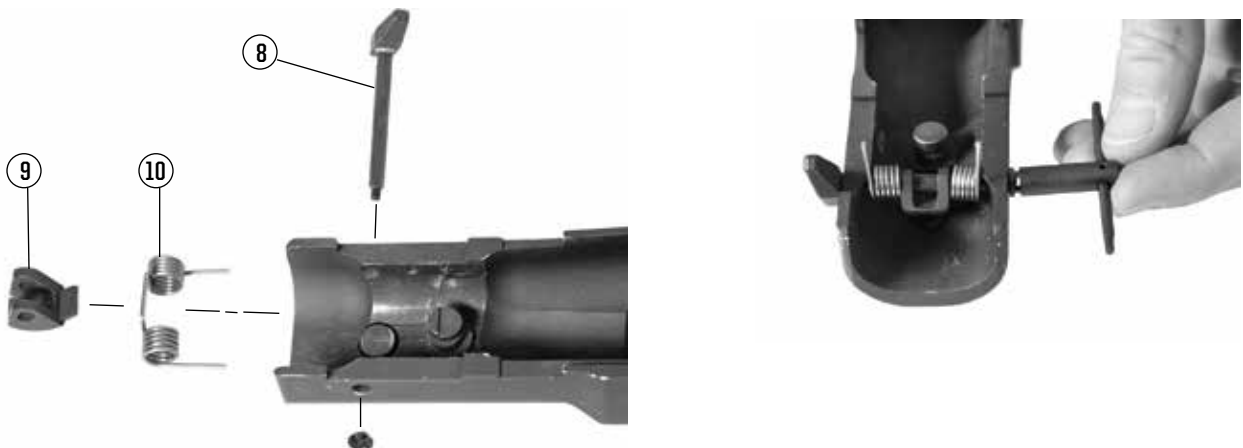
MAINTENANCE: COVER HOUSING ASSEMBLY

DISASSEMBLY (cont)

- Using a 1/8-inch twist drill and electric drill, drive punch end off of headed shoulder pins (5). Remove and discard headed shoulder pins (5). Lift out flat washers (6) and helical compression springs (7).



- Using a 3/16-inch twist drill and an electric drill, drill end of latch lever assembly (8) to remove peened area. Remove latch lever assembly (8). Remove cover latch (9) and helical torsion spring (10).



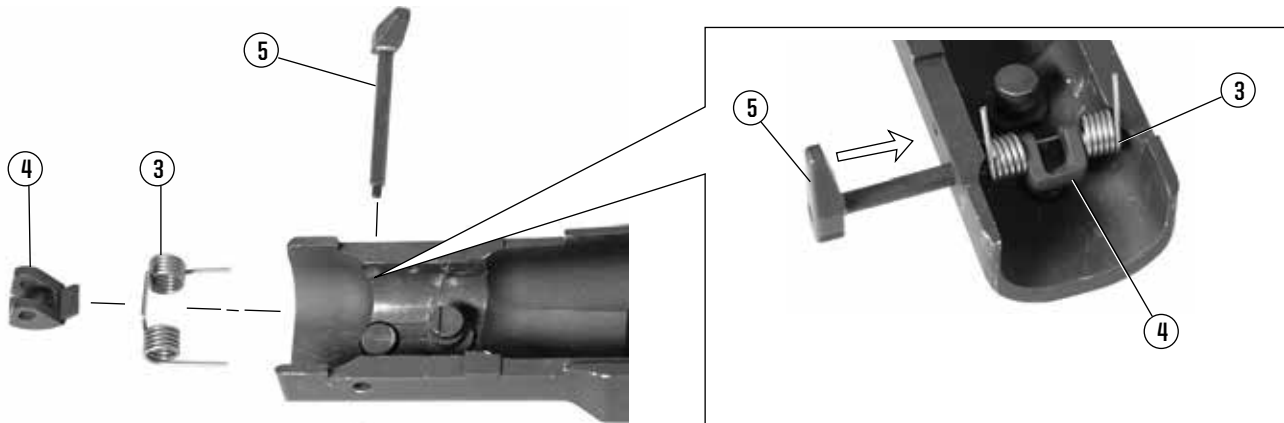
MAINTENANCE: COVER HOUSING ASSEMBLY

REPAIR

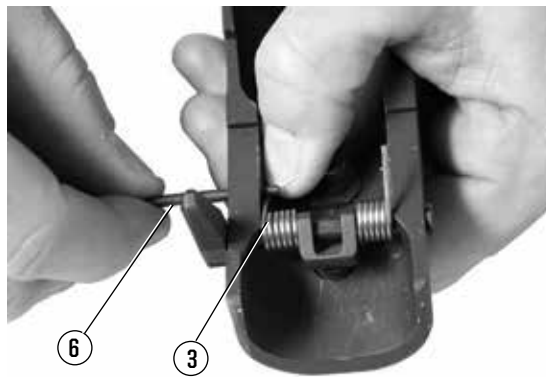
1. Repair by replacing all authorized components.

REASSEMBLY

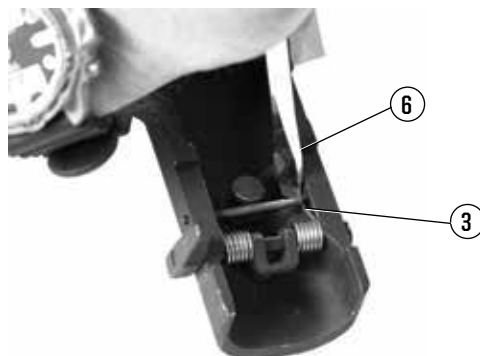
1. Insert torsion spring (3) and cover latch (4). Insert new latch lever assembly (5) from the straight side of the cover. Slowly guide the latch lever assembly (5) through spring.



2. Insert headless straight pin (6) while holding down torsion spring leg (3) so it is underneath headless straight pin.



3. Use screwdriver to hold down torsion spring leg (3) then insert headless straight pin (6).

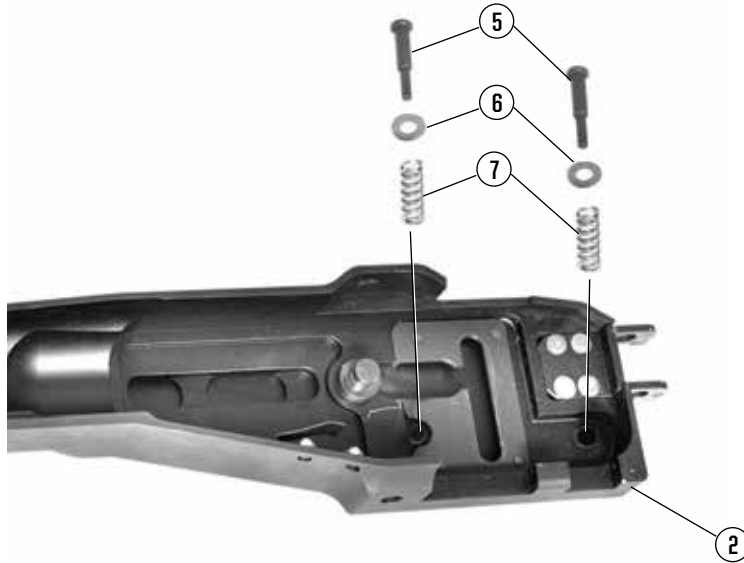


MAINTENANCE: COVER HOUSING ASSEMBLY

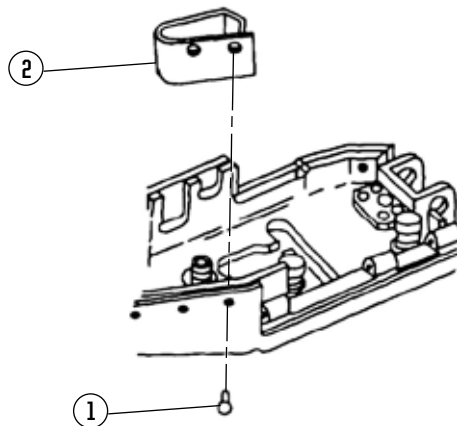
31

REASSEMBLY (cont)

4. Assemble shoulder pins (5), flat washers (6), and helical compression springs (7) and install in cover frame assembly (2). Using ballpeen end of hammer, peen ends of headed shoulder pins (5). Ensure that shoulder pins are tight (no movement). Repeat procedures for other pin.



5. Install cam bumper assembly (2) and align holes. Install and secure solid rivets (1).

**END OF TASK**



U.S. ORDNANCE

M60D

PROVEN UNDER FIRE

MAINTENANCE: REAR SIGHT

32

THIS TASK COVERS: Inspection, Disassembly, Repair, Reassembly

INITIAL SETUP

Maintenance Level

Direct Support

Tools and Special Tools

Echelon Tool Kit

Materials/Parts

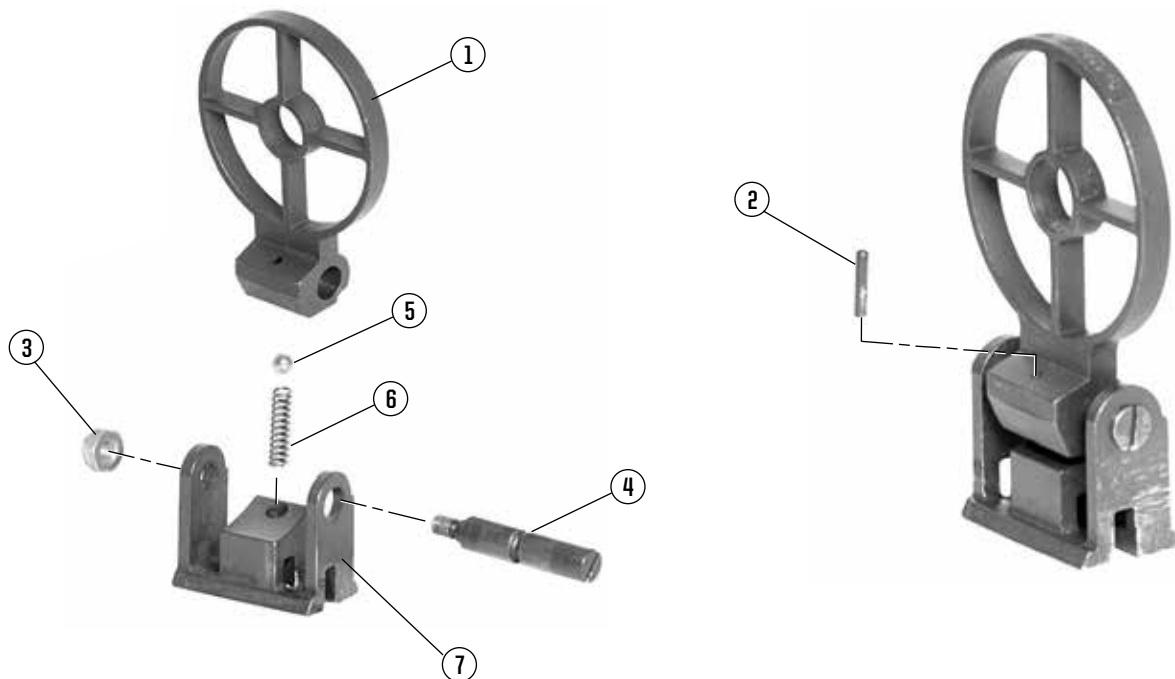
Cloth, abrasive (crocus)
 Dry cleaning solvent (SD)
 Gloves, rubber
 Lubricant, solid film

INSPECTION

1. Inspect sight ring for breaks, bends, or cracks.
2. Check to see if sight ring remains in both upright and folded positions when under spring tension.

DISASSEMBLY

Using a 3/32-inch drive pin punch and hammer, fold sight ring (1) down flat and remove spring pin (2). Using an open end adjustable wrench and flat tip screwdriver, remove hexagon self-locking nut (3). Apply slight pressure on sight ring (1) and remove rear sight retainer (4), bearing ball (5), and helical compression spring (6) from rear sight base (7).



MAINTENANCE: REAR SIGHT

32

REPAIR

WARNING

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.

1. Repair by replacing all authorized parts.
2. Clean rusted metal surfaces with crocus cloth. Wash thoroughly with dry cleaning solvent.

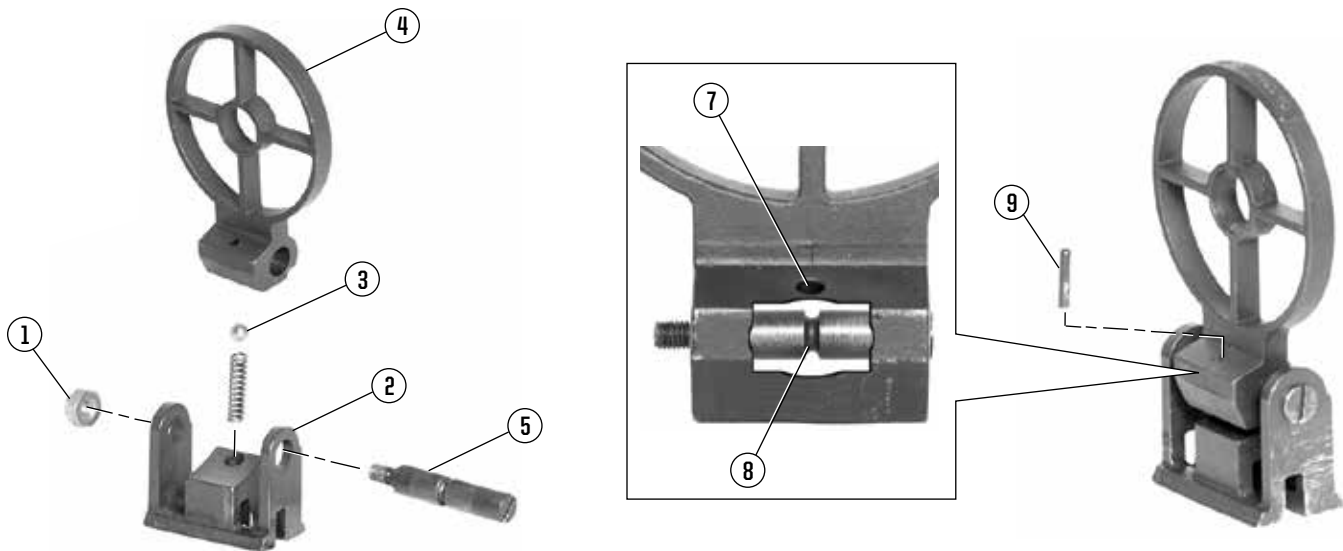
WARNING

If solid film lubricant comes in contact with any moving or internal part, clean part with dry cleaning solvent.

3. Following manufacturer's instructions for use, apply solid film lubricant to all external metal surfaces showing wear and allow weapon to dry 12 hours before being used.

REASSEMBLY

1. Following manufacturer's instructions for use, apply solid film lubricant to all external metal surfaces showing wear and allow weapon to dry 12 hours before being used.



2. Position sight ring (4) on top of bearing ball (3) and rear sight base (2). Press down on rear sight and insert rear sight retainer (5) from the right side (largest hole).
3. Install hexagon self-locking nut (1) on end of rear sight retainer (5).
4. Using an open end adjustable wrench and flat tip screwdriver, center sight ring (4) so pin hole (7) aligns with groove (8) of rear sight retainer (5).
5. Using 1/8-inch drive pin punch and hammer, install spring pin (9).

END OF TASK

MAINTENANCE: COCKING HANDLE ASSEMBLY

33**THIS TASK COVERS: Inspection, Disassembly, Repair, Reassembly**

INITIAL SETUP

Maintenance Level

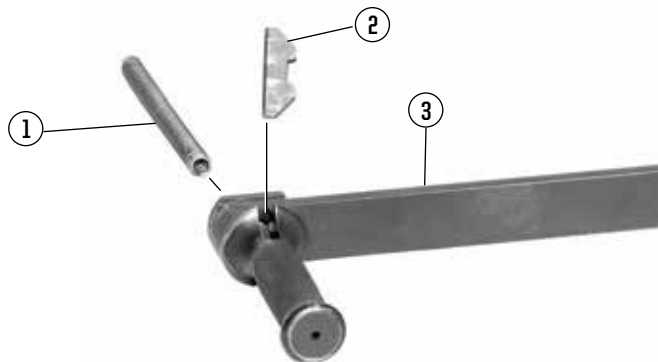
Direct Support

Tools and Special Tools

Echelon Tool Kit

DISASSEMBLY

Compress and hold helical compression spring (1). Remove cocking handle retainer (2) and helical compression spring (1) from cocking handle slide assembly (3).



REPAIR

Repair by replacing all authorized components.

REASSEMBLY

Insert helical compression spring (1) in cocking handle slide assembly (3). Press helical compression spring (1) and slide cocking handle retainer (2) in cocking handle slide assembly (3). Release pressure on helical compression spring (1).

END OF TASK

MAINTENANCE: GUN RECEIVER ASSEMBLY

THIS TASK COVERS: Inspection, Disassembly, Repair, Reassembly

INITIAL SETUP

Maintenance Level

Depot Level Support

Tools and Special Tools

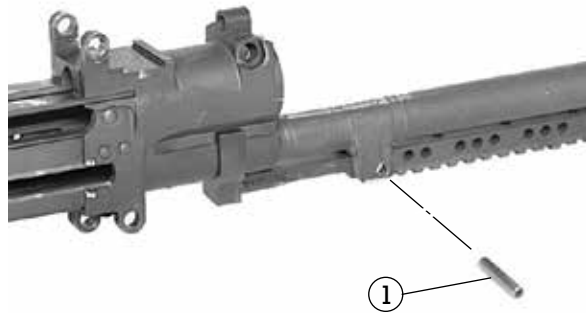
Anvil bucking bar
Combination square (GGG-S-656
or equivalent)

Tools and Special Tools (CONT)

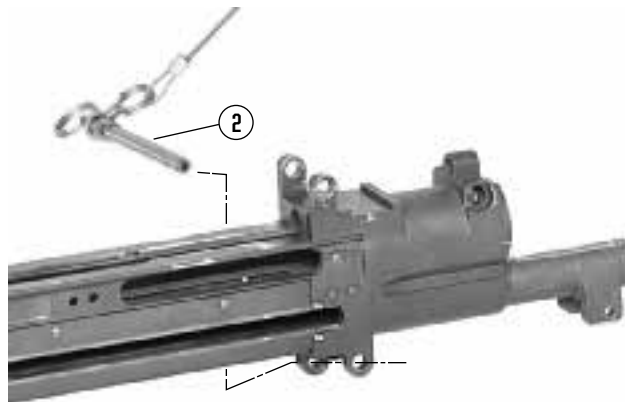
Dial indicating scale (AAA-S-133 or equivalent)
Machinist's steel rule (GGG-R-791 or equivalent)
Small Arms Tool Kit (SC 4933-95-CL-A11)

DISASSEMBLY

1. Remove headless straight pin (1).



2. Remove safety pin (2).

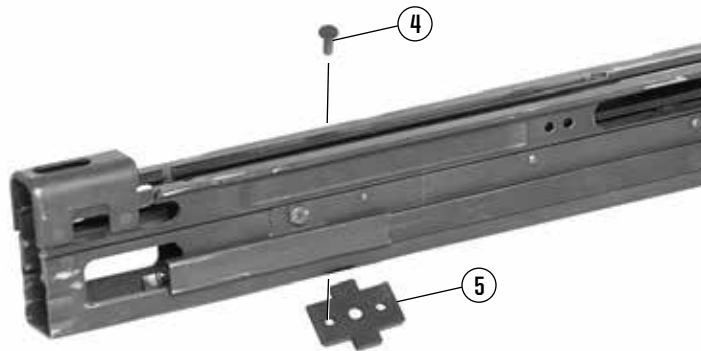


MAINTENANCE: GUN RECEIVER ASSEMBLY

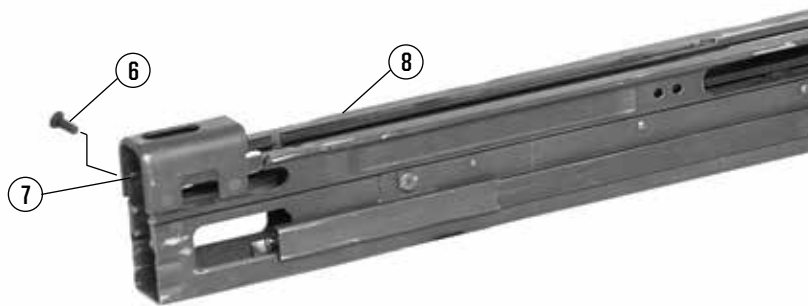
34

DISASSEMBLY (cont)

- Carefully drill out and discard solid rivets (4). Remove mounting plate (5).



- Drill out and discard countersunk solid rivets (6). Do not remove bridge (7) from receiver assembly (8).



REPAIR

Repair by replacing all authorized components.

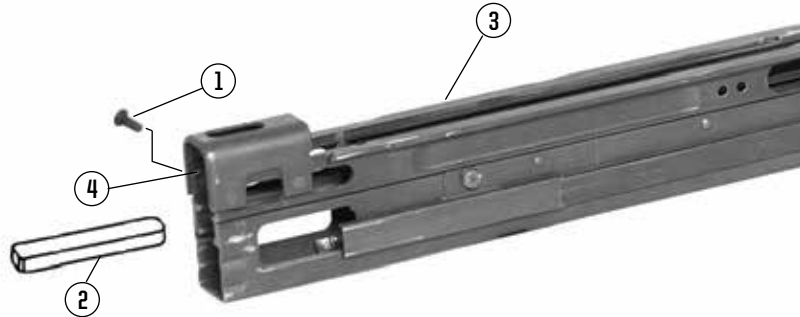
MAINTENANCE: GUN RECEIVER ASSEMBLY

34

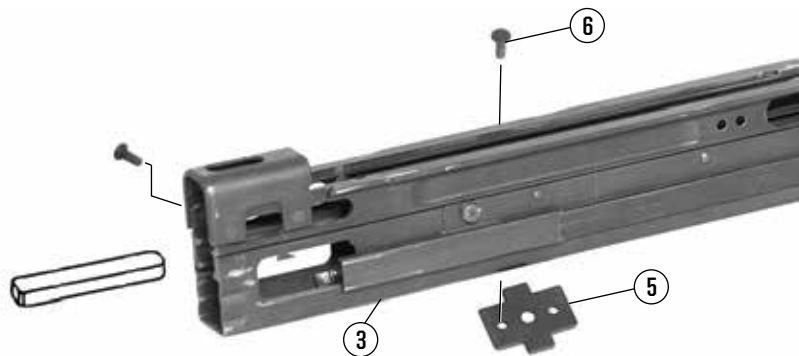
REASSEMBLY

Repair by replacing all authorized components.

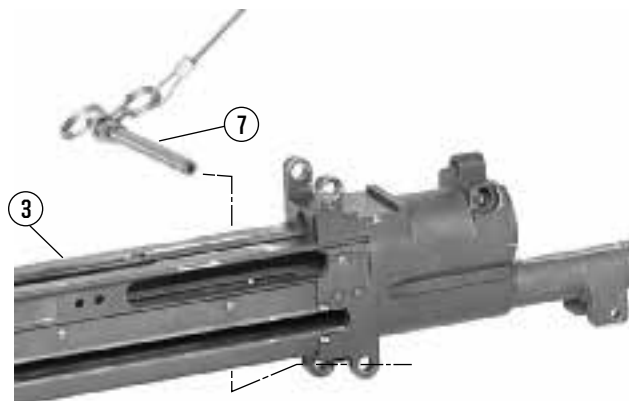
1. Insert and tighten countersunk solid rivets (1) with a anvil bucking bar (2) by sliding the anvil bucking bar in rear of receiver assembly (3) near bridge (4). Make sure countersunk solid rivets do not protrude more than 0.010 of an inch inside or 0.005 of an inch outside, and peen countersunk solid rivets.



2. Position mounting plate (5) on bottom of receiver assembly (3) and align holes. Install solid rivets (6) and rivet securely. Rivets must not protrude more than 0.005 of an inch inside and must be flush outside.



3. Slide safety pin (7) in holes of receiver assembly (3).

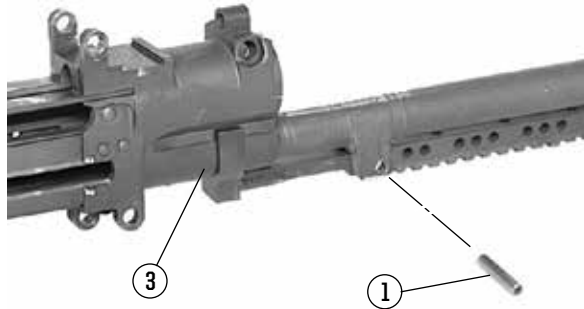


MAINTENANCE: GUN RECEIVER ASSEMBLY

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REASSEMBLY (cont)

4. Drive headless straight pin (1) into hole in receiver assembly (3) and center it.



TEST/INSPECTION

NOTE

Small arms gauges will be inspected and certified annually. The gauges will not be used unless they are accompanied with the appropriate gauge record.

Perform LOOSE RECEIVER TEST (see 20, pg. 92).

END OF TASK

PREEMBARKATION INSPECTION OF MATERIEL UNITS ALERTED FOR OVERSEAS MOVEMENT

35

GENERAL

This section provides special instructions for direct support personnel inspecting materiel in alerted units scheduled for overseas duty. Inspection is for:

- a) Determining serviceability.
- b) Recognizing conditions that would cause failure.
- c) Assuring proper maintenance at prescribed level.
- d) Determining the ability of a unit to accomplish its maintenance and supply mission.

INSPECTION PROCEDURES

- a. Exercise judgment regarding degree of inspection of integral parts within assemblies. Refer to PMCS procedures.
 - (1) Check headspace.
 - (2) Check firing pin protrusion using firing pin protrusion gauge.
 - (3) Check firing pin hole using plain cylindrical plug gauge 7458598 (20, pg 92).
 - (4) Measure operating rod helical compression spring. Spring must be a minimum of 23 1/4 inches long.
 - (5) Check sear cocking surface for roundness. Cocking surface must not be rounded more than 3/64 of an inch on top rear corner.
 - (6) Test receiver for looseness 20, pg. 92.

PREPARATION FOR STORAGE OR SHIPMENT

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SECURITY

Weapons will be stored in suitable containers to prevent theft, and as stated by the above security regulations. The storage area must be covered and as moisture-free as possible.

CAUTION

Avoid contaminating the gas cylinder with lubricants.

NOTE

Manufacturer recommends the use of CLP/Break Free or other military grade cleaning, lubrication, protection product for cleaning and preservation of M60 D machine guns.

CLEANING AND PRESERVATION

1. Disassemble the M60D machine gun as necessary to accomplish cleaning and lubrication.
2. Clean all metallic surfaces of the M60D machine gun and all items with lubricating oil and dry with clean, dry wiping rags. Clean nonmetallic surfaces with clean, dry wiping rags.
3. Preserve all metallic surfaces with lubricating.
4. Reassemble weapon except for barrel assembly.

APPENDIX A | **MAINTENANCE
ALLOCATION CHART**

MAINTENANCE ALLOCATION CHART

37

INTRODUCTION

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

The Maintenance Allocation Chart (MAC) immediately following the introduction 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 shall be consistent with the capacities and capabilities of the designated maintenance levels, which are shown on 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 a H subcolumn
- Depot** _____ Includes a D subcolumn

The tools and test equipment requirements (immediately following the MAC) list the tools and test equipment (both special tools and common tool sets) required for each maintenance function as referenced from the MAC.

The remarks (immediately following the tools and test equipment requirements) contain supplemental instructions and explanatory notes for a particular maintenance function.

MAINTENANCE FUNCTIONS

Maintenance functions will be limited to and defined as follows:

1. **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). This includes scheduled inspection and gaugings and evaluation of cannon tubes.
2. **Test.** To verify serviceability by measuring the mechanical pneumatic, hydraulic, or electrical characteristics of an item and comparing those characteristics with prescribed standards on a scheduled basis, e. g., load testing of lift devices and hydrostatic testing of pressure hoses.
3. **Service.** Operations required periodically to keep an item in proper operating condition, e.g., to clean (includes decontaminate, when required), to preserve, to drain, to paint, or to replenish fuel, lubricates, chemical fluids, or gases. This includes scheduled exercising and purging of recoil mechanisms.
4. **Adjust.** To maintain or regulate, within prescribed limits, by bringing in proper position, or by setting the operating characteristics to specified parameters.
5. **Align.** To adjust specified variable elements of an item to bring about optimum or desired performance.

MAINTENANCE ALLOCATION CHART

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MAINTENANCE FUNCTIONS (cont)

6. **Calibrate.** To determine and cause corrections to be made or to be adjusted on instruments of test, measuring and diagnostic equipment used in precision measurement. Consist 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.
7. **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.
8. **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 third position code of the Source, Maintenance and Recoverability (SMR) code.
9. **Repair.** The application of maintenance services, including fault location/troubleshooting, removal/installation, disassembly/assembly procedures and maintenance actions 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.

CAUTION

The following definitions are applicable to the "repair" maintenance function:

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

Fault 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 (ET).

Disassembly/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).

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

10. **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. Overhaul does not normally return an item to like new condition.
11. **Rebuild.** Consists of those services/actions necessary for the restoration of unserviceable equipment to a like new condition in accordance with original manufacturing standards.

MAINTENANCE ALLOCATION CHART

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EXPLANATION OF COLUMNS IN THE MAC

- Column (1). **Group Number.** Column (1) lists functional group code (FGC) numbers, the purpose of which is to identify maintenance significant components, assemblies, subassemblies, and modules with the next higher assembly (NHA).
- Column (2). **Component/Assembly.** Column (2) contains the item names of components, assemblies, sub-assemblies, and modules for which maintenance is authorized.
- 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, refer to "Maintenance Functions" outlined above).
- Column (4). **Maintenance Level.** Column (4) specifies each level of maintenance authorized to perform the function listed in column (3), by indicating work time required. 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 varies at different maintenance levels, appropriate work time figures will 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 MAC. The symbol designations for the various maintenance levels are as follows:
- C - Operator or Crew Maintenance
 - O - Unit Maintenance
 - F - Direct Support Maintenance
 - L - Specialized Repair Activity (SRA)
 - H - General Support Maintenance
 - D - Depot Maintenance

NOTE

The 'L' maintenance level is not included in column (4) of the MAC. Functions to this level of maintenance are identified by a work time figure in the "H" column of column (4), and an associated reference code is used in the REMARKS column (6). The code is keyed to the remarks and the SRA complete repair application is explained there.

- Column (5). **Tools and Equipment Reference Code.** Column (5) specifies, by code, those common tool sets (not individual tools), common Test, Measurement and Diagnostic Equipment (TMDE), and special tools, special TMDE and special support equipment required to perform the designated function. Codes are keyed to the entries in the tools and test equipment table.
- Column (6). **Remarks Code.** When applicable, this column contains a letter code, in alphabetic order, which is keyed to the remarks table entries.

MAINTENANCE ALLOCATION CHART

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EXPLANATION OF COLUMNS IN TOOL AND TEST EQUIPMENT REQUIREMENTS

- Column (1). **Tool or Test Equipment Reference Code.** The tool or test equipment reference code correlates with a code used in Column (5) of the MAC.
- Column (2). **Maintenance Level.** The lowest level of maintenance authorized to use the tool or test equipment.
- Column (3). **Nomenclature.** Name or identification of the tool or test equipment.
- Column (4). **National Stock Number (NSN).** The NSN of the tool or test equipment.
- Column (5). **Tool Number.** The manufacturer's part number, model number, or type number.

EXPLANATION OF COLUMNS IN REMARKS

- Column (1). **Reference Code.** The code recorded in column (6) of the MAC.
- Column (2). **Remarks.** Remarks. This column lists information pertinent to the maintenance function being performed as indicated in the MAC.

MAINTENANCE ALLOCATION CHART

Table 1. PREVENTIVE MAINTENANCE CHECKS AND SERVICES

(1) GROUP NUMBER	(2) COMPONENT ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQPT REF CODE	(6) REMARKS
			UNIT		DS	GS	DEPOT		
			C	O	F	H	D		
00	MACHINE GUN, 7.62-MM, M60D (11699750)	Inspect, Test	0.1	0.2	0.2 0.5		15.0	1 thru 8, 10 9 and 13	C and N A, D, F & G C, E, F, G, J
01	GRIP AND TRIGGER ASSEMBLY (11699751)	Inspect Service Remove/ Install Replace Repair	0.1 0.1 0.1	0.1 0.1 0.3	0.1			9 and 13 9	N
02	BREECH BOLT ASSEMBLY (11010357)	Inspect Test Service Remove/ Install Replace Repair	0.1 0.1 0.1	0.1 0.2	0.1 0.1 0.1 0.2			1 and 4 9 and 13	N A, F and G I and
03	OPERATING ROD ASSEMBLY (9362510)	Inspect Service Remove/ Install Replace Repair	0.1 0.1 0.1	0.1 0.1	0.1 0.1 0.1			9 and 13	H and
04	SEAR AND SAFETY HOUSING ASSEMBLY (11699773)	Inspect Service Remove/ Install Replace Repair	0.1 0.1 0.1	0.1 0.1 0.1	0.1			13	N
05	BARREL ASSEMBLY (7269027)	Inspect Test Service Remove/ Install Replace Repair	0.1 0.1 0.1	0.1 0.1	0.1 0.3 0.1 0.2			2, 3, 5, & 6	N A, E, F & G
070101	Machine Gun Leg (Right)A (7269047)	Replace Repair			0.1 0.1			9	

MAINTENANCE ALLOCATION CHART**37**

Table 1. PREVENTIVE MAINTENANCE CHECKS AND SERVICES (cont)

(1) GROUP NUMBER	(2) COMPONENT ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQPT REF CODE	(6) REMARKS
			UNIT		DS	GS	DEPOT		
			C	O	F	H	D		
070102	Machine Gun Leg (Left) (7269046)	Replace Repair			0.1 0.1			9	
06	COVER ASSEMBLY (7269114)	Inspect Service Replace Repair	0.1 0.1	0.1 0.1	0.1 0.3			9 and 13	
0801	Feed Cam Assembly (11699814)	Replace Repair			0.1 0.1			9 and 13	
0802	Lever Assembly (7269119)	Replace Repair			0.1 0.1			9	
0803	Feed Pawl Assembly (7269120)	Replace Repair			0.1 0.1			9	
0804	Cover Housing Assembly (7269118)	Replace Repair			0.5 0.2		0.5	9	
07	CARTRIDGE FEED TRAY ASSEMBLY (7792096)	Inspect Service Replace Repair	0.1 0.1	0.1 0.1 0.2				13	N
08	REAR SIGHT (11699796)	Inspect Service Replace Repair	0.1 0.1	0.1	0.1 0.2 0.2			13	
09	COCKING HANDLE ASSEMBLY (7791621)	Inspect Service Replace Repair	0.1 0.1	0.1	0.1 0.2 0.2	0.2		9	N
10	GUN RECEIVER ASSEMBLY (11699805)	Inspect Test Service Repair	0.1 0.1	0.1	0.1 0.3		0.2	7 and 8 9,10&13	N A and D B, C, J, K

MAINTENANCE ALLOCATION CHART**37****Table 2. PREVENTIVE MAINTENANCE CHECKS AND SERVICES**

TOOL OR TEST EQUIPMENT REF CODE	MAINTENANCE LEVEL	NOMENCLATURE	NATIONAL STOCK NUMBER	TOOL NUMBER
1	F	GAUGE, FIRING PIN PROTRUSION	4933-00-653-3373	7274754
2	F	GAUGE, HEADSPACE: 1.6455 in.	4933-00-647-3698	7274790
3	F	GAUGE, PLUG PLAIN CYLINDRICAL	5220-00-745-8598	7458598
4	F	GAUGE, TEST BOLT	4933-00-653-9550	7799699
5	F	RULE, STEEL, MACHINIST'S	5210-00-234-5223	5910297
6	F	SCALE, DIAL INDICATING	5210-00-254-4634	GGG-R-791 or equivalent
7	F	TOOL KIT, SMALL ARMS: FIELD MAINTENANCE, POST, CAMP, AND STATION	4933-00-754-0664	AAA-S-133 or equivalent
8	F	SQUARE, COMBINATION	5120-00-078-8949	SC 4933-95-CL-A11
9	F	STOP, TOOL, SCREW	5120-00-077-2081	GGG-S-656 or equivalent
10	F	TOOL BOX, PORTABLE	5140-00-473-6260	8436748
11	O	TOOL KIT, SMALL ARMS REPAIRMAN	5180-00-357-7770	D5-15-2119
12	F	DRILL, TWIST: 1/8 in. dia., 5 1/8 in. long	5133-00-262-2180	GGG-D-751

MAINTENANCE ALLOCATION CHART**37****Table 3. Remarks for Machine Gun M60D**

REFERENCE CODE	REMARKS
A	Gauge annually using appropriate gauges.
B	Receiver is a serialized item and not replaceable below depot level maintenance.
C	Restamping or altering the serial number is prohibited.
D	Receiver looseness check will be accomplished at time of repair and/or annual gauging cycle.
E	Barrel and carry handle assembly will not be interchanged between weapons due to headspace requirements.
F	Barrel and carry handle assembly will be issued only when complete weapon is checked for headspace requirements using the bolt that will be used in barrel.
G	Breech bolt assembly will not be interchanged between weapons, and new breech bolt assembly will be checked for proper headspace requirements before returning to service.
H	Burrs on the operating rod tower and yoke area is an inherent condition of the weapon. Organizational maintenance will remove small burrs and upset metal. Operating rod will not be rejected for this condition.
I	Breech bolt assembly feed lug is prone to chipping and is an inherent condition of the weapon. Organizational maintenance will smooth surfaces by stoning. Breech bolt will not be rejected for this condition until the bottom camming lug begins to wear.
J	Fabricated bucking bar anvil will be used to tighten rivets in receiver bridge.
K	Riveting fixture will be used to tighten rivets in the magazine bracket to receiver surface.
L	When a weapon is received by direct support with a maintenance request, all gaging requirements must be checked as a standard maintenance procedure. In addition, the weapon must be inspected and any other deficiencies found will be repaired, or noted for repair, at the appropriate maintenance level. As a minimum requirement, the M60D headspace must be verified annually by direct support personnel. This requirement could be increased to four times a year or after each training cycle depending on usage factors.



U.S. ORDNANCE

M60D

PROVEN UNDER FIRE



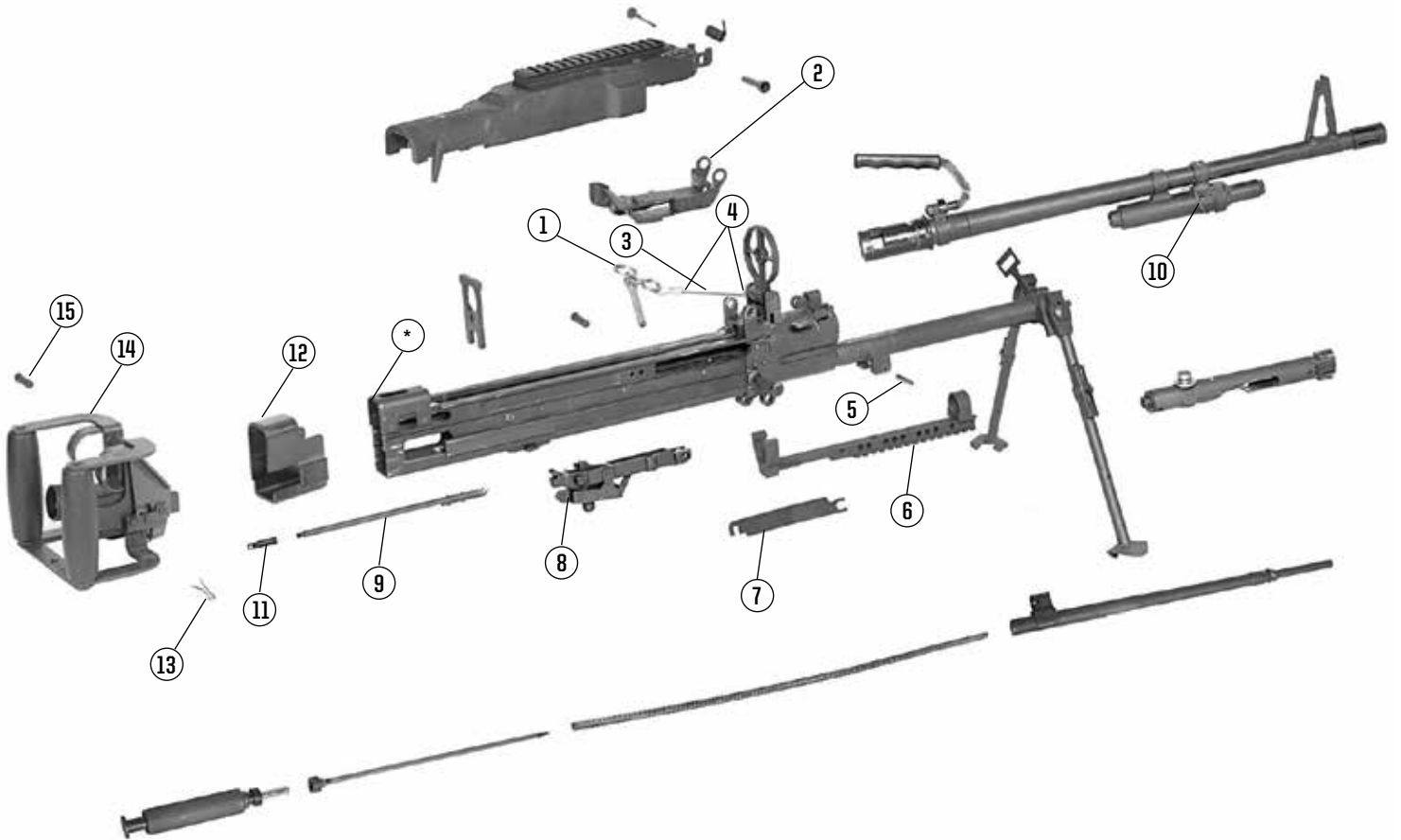
U.S. ORDNANCE

M600

PROVEN UNDER FIRE

**APPENDIX B | REPAIR PARTS AND
SPECIAL TOOLS LIST**

GROUP 00: MACHINE GUN, 7.62MM, M60D REPAIR PARTS (1 OF 2)



*SEE FIGURE 2 FOR FURTHER DISASSEMBLY

Figure 1. Group 00 Machine Gun, 7.62-MM, M60D

Table 1. PREVENTIVE MAINTENANCE CHECKS AND SERVICES

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) US ORD PART NO	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
					GROUP 00: MACHINE GUN, 7.62-MM, M60D (1 of 2) FIG. 1: MACHINE GUN,7.62-MM	
1	PAOZZ	96906	MS17990C519	550	PIN, QUICK RELEASE	1
2	A0000	19205	7792096	445	TRAY ASSEMBLY, CARTRIDGE FEED (SEE FIG. 21 FOR BREAKDOWN)	1
3	PAOZZ	19205	8427869-7	551	WIRE ROPE ASSEMBLY	2
4	PAOZZ	19204	8427871	552	SLEEVE, SWAGING	1
5	PAOZZ	96906	MS16562-151	546	PIN, SPRING	1
6	PAOZZ	19205	11699793	548	ADAPTER, GUN	1
7	PAOZZ	19204	11699785	549	SPRING, FLAT	1
8	A0000	19205	11699773	566	SEAR AND SAFETY HOUSING (SEE FIG. 10 FOR BREAKDOWN)	1
9	PAFZZ	19200	11699790	553	LINK AND SPRING, SEAR ASSEMBLY	1
10	MOOZZ	19204	MS20995C32	434	WIRE, SAFETY 0.032 IN. (MAKE FROM NSN 9505-00-293-4208)	1
11	PAOZZ	19205	11699789	544	NUT, SEAR LINK	1
12	PAOZZ	19204	11699787	545	BOOT, DUST AND MOISTURE	1
13	PAOZZ	96906	MS24665-18	892	PIN, COTTER	2
14	PA000	19200	11699751	497	GRIP AND TRIGGER ASSEMBLY (SEE FIG. 6 FOR BREAKDOWN)	1
15	PAOZZ	19205	11699788	542	PIN, GROOVED, HEADED	1

END OF FIGURE

GROUP 00: MACHINE GUN, 7.62MM, M60D REPAIR PARTS LIST (2 OF 2)

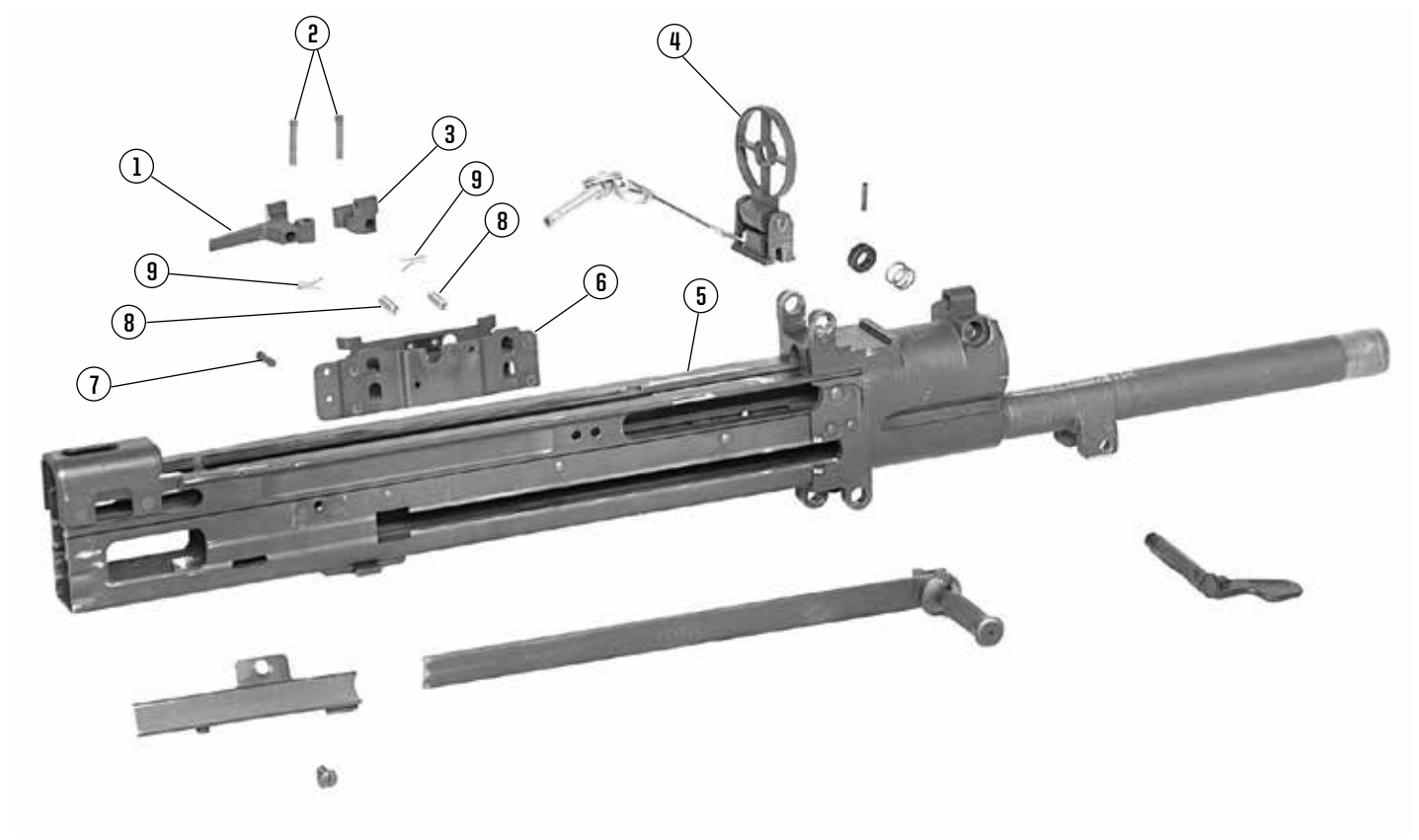


Figure 2. Group 00 Machine Gun, 7.62-MM, M60D

Table 1. PREVENTIVE MAINTENANCE CHECKS AND SERVICES

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) US ORD PART NO	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
					GROUP 00: MACHINE GUN, 7.62-MM, M60D (2 of 2) FIG. 2: MACHINE GUN,7.62-MM	
1	PAFZZ	19204	7790554	380	LEVER, LOCK-RELEASE	1
2	PAFZZ	19204	7792069	479	PIN, STRAIGHT, HEADED	2
3	PAFZZ	19204	7790553	381	PAWL	1
4	PAOOO	19205	11699796	550	SIGHT, REAR (SEE FIG. 25 FOR BREAKDOWN)	1
5	XAFDD	19205	11699805	877	RECEIVER ASSEMBLY, GUN (SEE FIG. 28 FOR BREAKDOWN)	1
6	PAFZZ	19204	11686976	663	BRACKET, MAGAZINE	1
7	PAFZZ	19204	7792086	486	RIVET, SOLID	4
8	PAFZZ	19204	7790551	892	SPRING, HELICAL	2
9	PAFZZ	96906	MS24665-18	382	PIN, COTTER	2

END OF FIGURE

GROUP 01: GRIP AND TRIGGER ASSEMBLY REPAIR PARTS LIST

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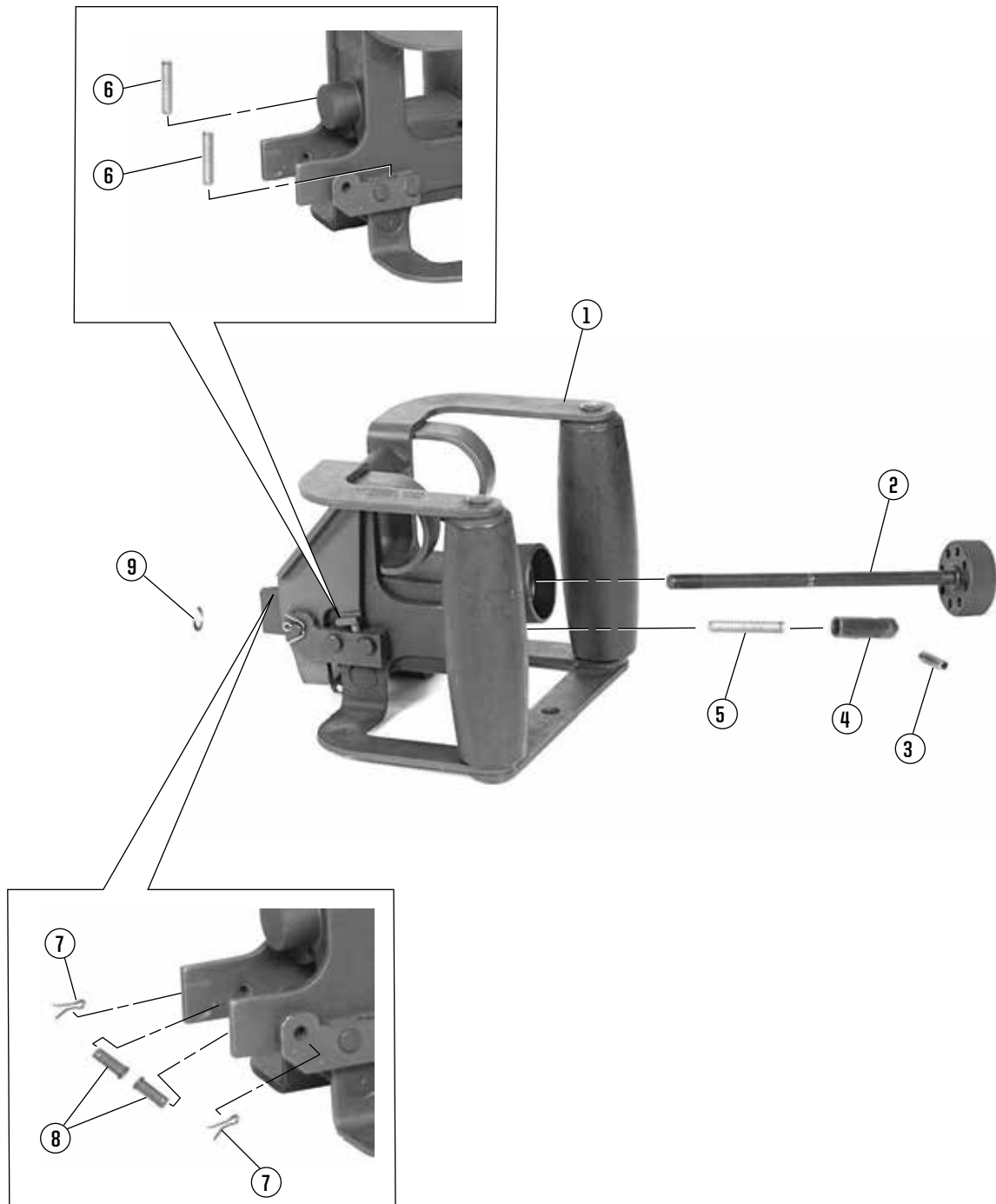


Figure 3. Group 01 Grip and Trigger Assembly.

Table 1. PREVENTIVE MAINTENANCE CHECKS AND SERVICES

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) US ORD PART NO	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
					GROUP 01: GRIP AND TRIGGER ASSEMBLY FIG. 3: M60D GRIP AND TRIGGER ASSEMBLY	
1	XAOZZ	19200	11699752	498	SPADE GRIP TRIGGER AND FRAME ASSEMBLY	1
2	PAOZZ	19205	11699769	539	KNOB AND PIN ASSEMBLY	1
3	PAOZZ	96906	MS16562-127	1952	PIN. SPRING	1
4	PAOZZ	19205	11699768	534	PIN, SHOULDER	1
5	PAOZZ	19204	11699767	535	SPRING, HELICAL COMPRESSION	1
6	PAOZZ	19204	11699756	524	SPRING, HELICAL	2
7	PAOZZ	96906	MS24665-86	522	PIN, COTTER	2
8	PAOZZ	19205	11699757	523	PIN, GROOVED, HEADED	2
9	PAOZZ	19205	11699772	538	RING, RETAINING	1

END OF FIGURE

GROUP 02: BREECH BOLT ASSEMBLY. REPAIR PARTS LIST

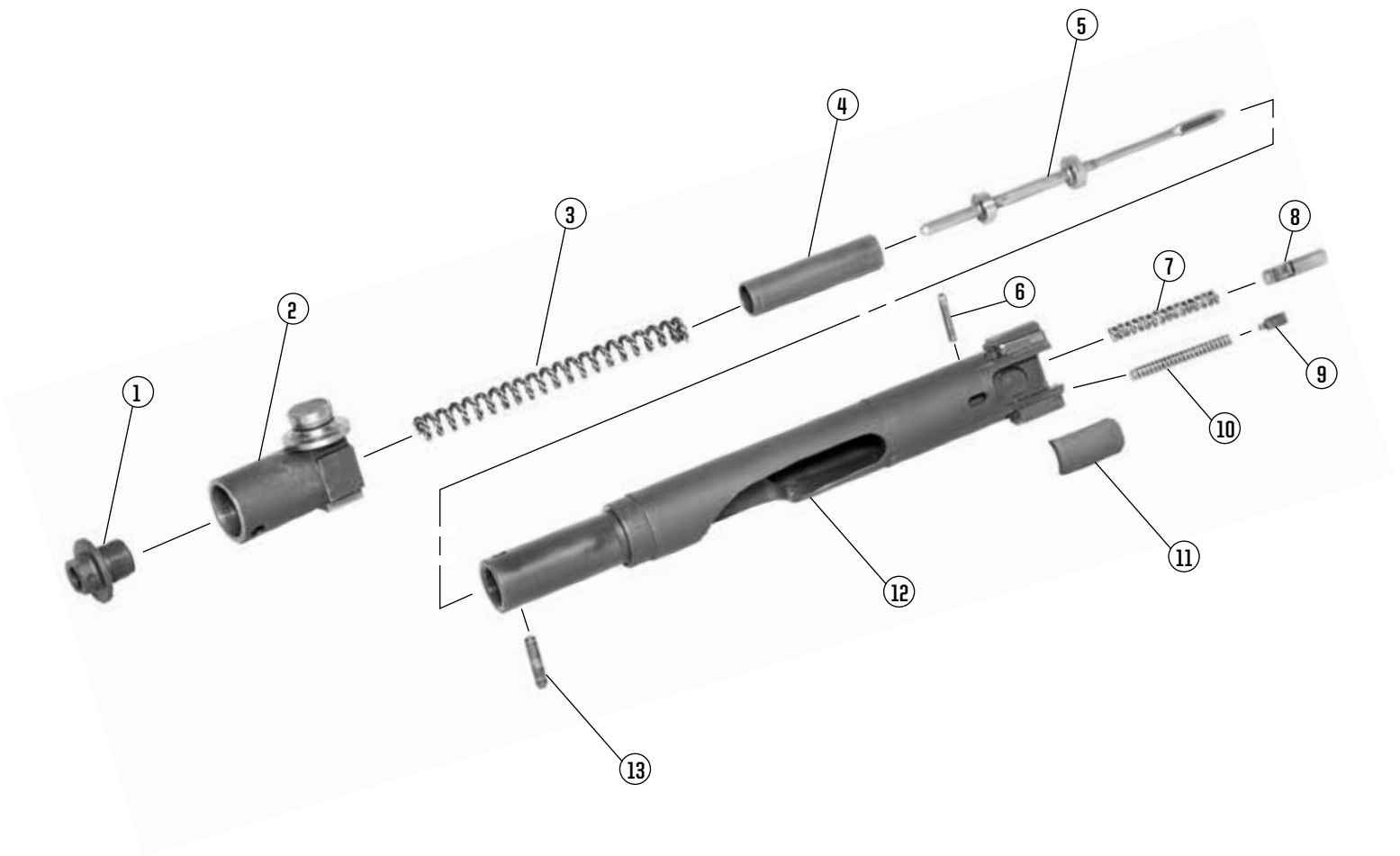


Figure 4. Group 02 Breech Bolt Assembly.

Table 1. PREVENTIVE MAINTENANCE CHECKS AND SERVICES

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) US ORD PART NO	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
					GROUP 02: BREECH BOLT ASSEMBLY 11010357 FIG. 4: BREECH BOLT ASSEMBLY	
1	PAOZZ	19200	9362505	889	PLUG ASSEMBLY, BOLT	1
2	PAOZZ	19204	7269063	70	ACTUATOR ASSEMBLY, CAM	1
3	PAOZZ	19204	7269087	67	SPRING, HELICAL	1
4	PAOZZ	19204	7269065	59	GUIDE, FIRING PIN	1
5	PAOZZ	19204	11010376	2548	PIN, FIRING	1
6	PAOZZ	96906	MS39086-81	581	PIN, SPRING	1
7	PAOZZ	19204	7269085	903	SPRING, HELICAL	1
8	PAOZZ	19204	11010375	627	EJECTOR, CARTRIDGE	1
9	PAOZZ	19204	7269083	65	PLUNGER, EXTRACTOR	1
10	PAOZZ	19204	7269086	69	SPRING, HELICAL	1
11	PAOZZ	19204	7790907	2551	EXTRACTOR, CARTRIDGE	1
12	PAOZZ	19204	11010358	626	BOLT, BREECH	1
13	PAOZZ	19204	7792920	417	PIN, STRAIGHT, HEADLESS	1

END OF FIGURE

GROUP 03: OPERATING ROD ASSEMBLY REPAIR PARTS LIST

42

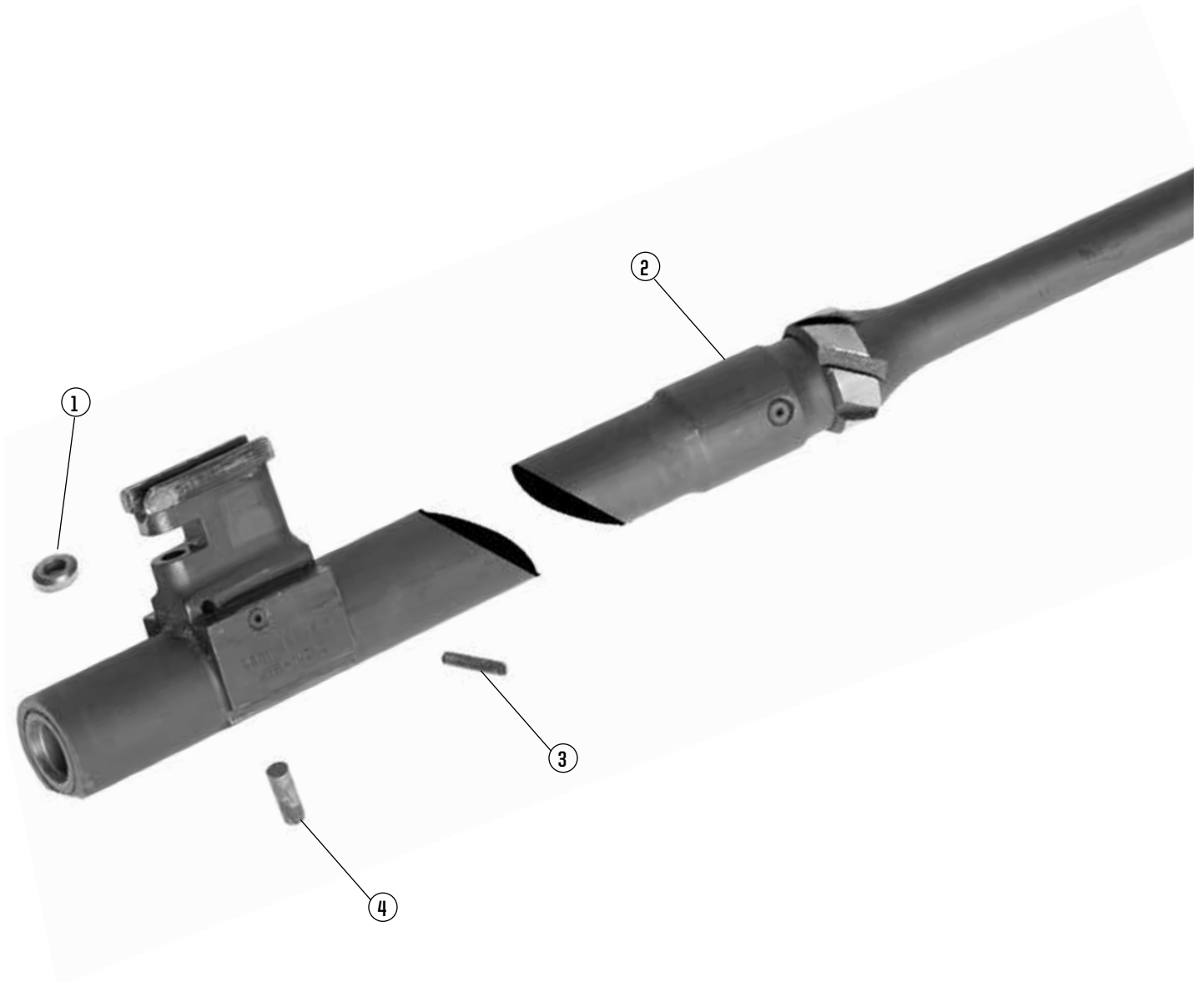


Figure 5. Group 03 Operating Rod Assembly.

Table 1. PREVENTIVE MAINTENANCE CHECKS AND SERVICES

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) US ORD PART NO	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
					GROUP 03: OPERATING ROD ASSEMBLY FIG. 5: OPERATING ROD ASSEMBLY	
1	PAFZZ	19200	9362506	2555	ROLLER, YOKE	1
2	XAFZZ	19200	9362509	2558	YOKE AND TUBE ASSEMBLY	1
3	PAFZZ	96906	MS51923-105	636	PIN, SPRING	1
4	PAFZZ	19200	9362507	2556	PIN, STRAIGHT, HEADLESS	1

END OF FIGURE

GROUP 04: SEAR AND SAFETY HOUSING ASSEMBLY REPAIR PARTS LIST

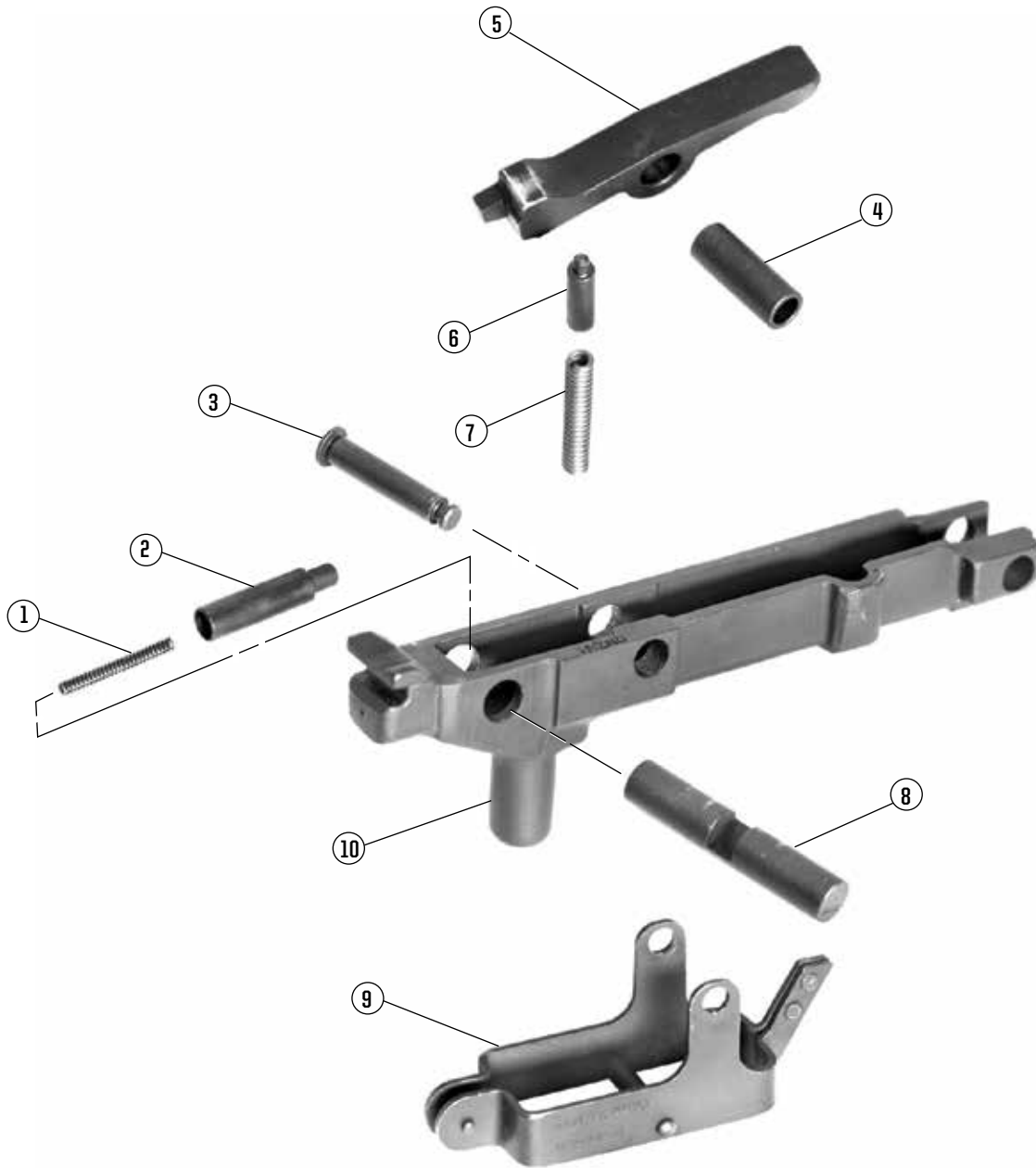


Figure 6. Group 04 Sear and Safety Housing Assembly.

Table 1. PREVENTIVE MAINTENANCE CHECKS AND SERVICES

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) US ORD PART NO	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
					GROUP 04: SEAR AND SAFETY HOUSING ASSEMBLY FIG. 6: M60D SEAR AND SAFETY HOUSING ASSY	
1	PAOZZ	19204	11699775	578	SPRING, HELICAL	1
2	PAOZZ	19205	11699776	577	PLUNGER, SAFETY	1
3	PAOZZ	19204	11699779	574	PIN, GROOVED, HEADED	1
4	PAOZZ	19204	11699778	576	BUSHING, SLEEVE	1
5	PAOZZ	19204	7269209	201	SEAR	1
6	PAOZZ	19204	7269207	199	PLUNGER, SEAR	1
7	PAOZZ	19204	7269211	203	SPRING, HELICAL	1
8	PAOZZ	19204	11699777	575	SAFETY, SMALL ARMS	1
9	PAOZZ	19205	11699780	568	ACTIVATOR, SEAR	1
10	XAOZZ	19205	11699774	567	HOUSING, SEAR	1

END OF FIGURE

Table 1. PREVENTIVE MAINTENANCE CHECKS AND SERVICES

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) US ORD PART NO	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
					GROUP 05: BARREL ASSEMBLY FIG. 7: BARREL ASSEMBLY	
1	PAFZZ	19204	7269028	2402	BARREL AND CARRY HANDLE ASSEMBLY	1
2	PAFZZ	19204	7269031	758	LOCKNUT, GAS, CYLINDER	1
3	PAFZZ	19204	7269035	762	PLUG, VENT	2
4	PAFZZ	19204	7791247	2413	PISTON, GAS	1
5	NPNLW	19204	MS2099SC32	434	WIRE, SAFETY 0.032 IN. CUT FROM NSN 9505-00-293-4208	1
6	PAFZZ	19204	7269030	2531	EXTENSION, GAS CYLINDER	1
7	PAFZZ	19204	7269034	761	SUPPRESSOR, FLASH	1
8	PAFZZ	96906	12599983	913	PIN, STRAIGHT	1
9	PAOZZ	19205	7269213		CARRY HANDLE ASSEMBLY	1
10	PAOZZ	19205	7269302		HELICAL COMPRESSION SPRING	2
11	PAOZZ	19204	7269250		DETENT PLUNGER	2
12	PAOZZ	19205	11010377		BARREL LOCK RING	1
13	PAOZZ	96906	MS30986-81		SPRING PIN	1

END OF FIGURE

GROUP 0701: MACHINE GUN BIPOD REPAIR PARTS LIST

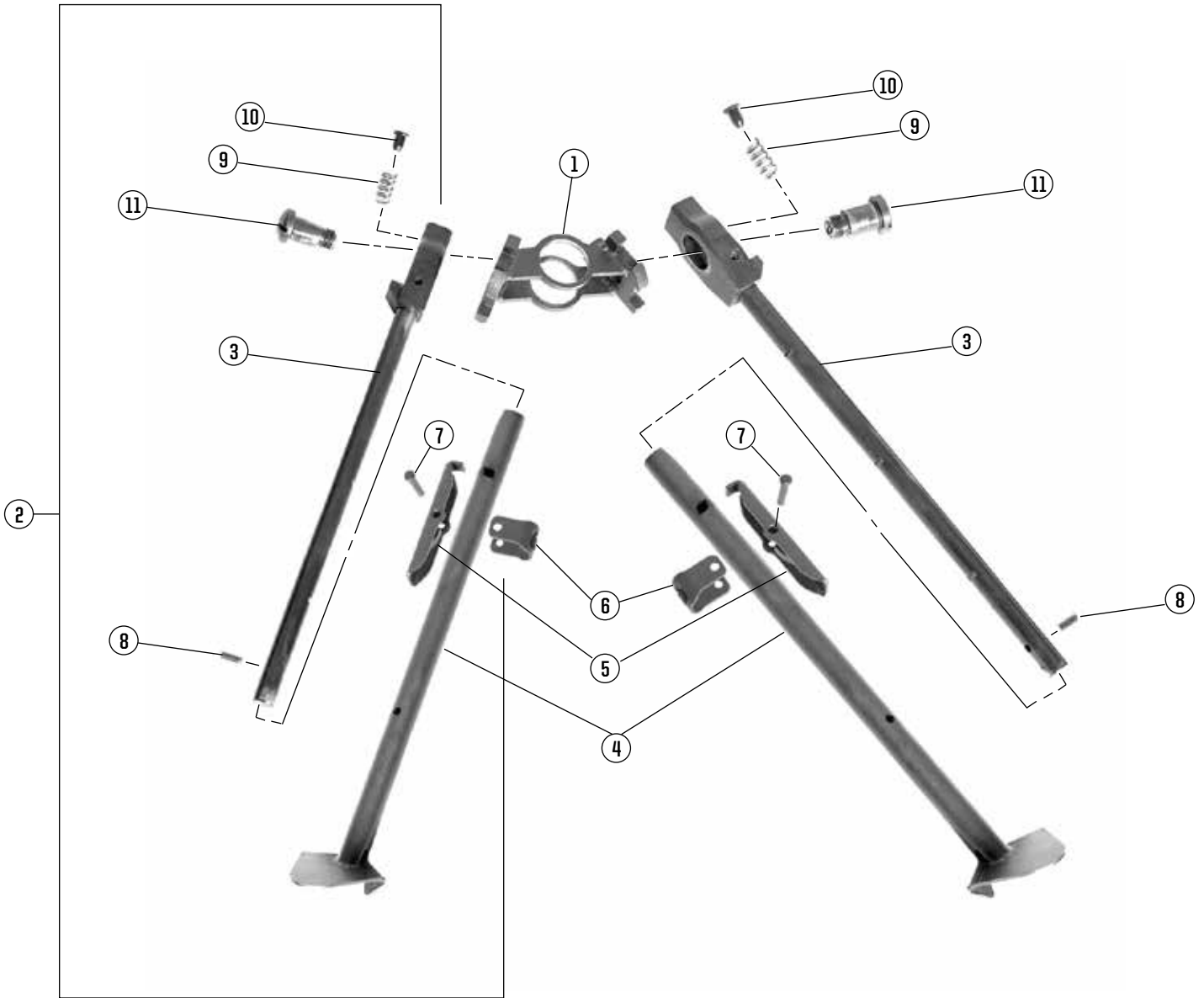


Figure 8. Group 0701 Machine Gun Bipod.

Table 1. PREVENTIVE MAINTENANCE CHECKS AND SERVICES

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) US ORD PART NO	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
					GROUP 0701: BIPOD ASSEMBLY FIG. 8: MACHINE GUN BIPOD	
1			SB2804	2804	PIVOT ASSEMBLY, BIPOD	1
2			SC2807	2807	LEG ASSEMBLY, BIPOD	1
3			SB2808	2808	LEG ASSEMBLY INNER	2
4			SB2811	2811	LEG ASSEMBLY, OUTER	2
5			SB2814	2814	LOCK, LEG, BIPOD	2
6			SB2815	2815	RING, LOCK, BIPOD	2
7			SB2816	2816	PIN, LOCK, BIPOD	2
8			2843	2843	PIN, DOWEL	2
9			SB25064	2666	SPRING, HELICAL COMPRESSION	2
10			7269050	753	PLUNGER, SPRING, LEG	2
11			SC2817	2817	SCREW, PIVOT, LEG	2

END OF FIGURE

GROUP 07: COVER AND FEED LEVER ASSEMBLY, REPAIR PARTS LIST

46

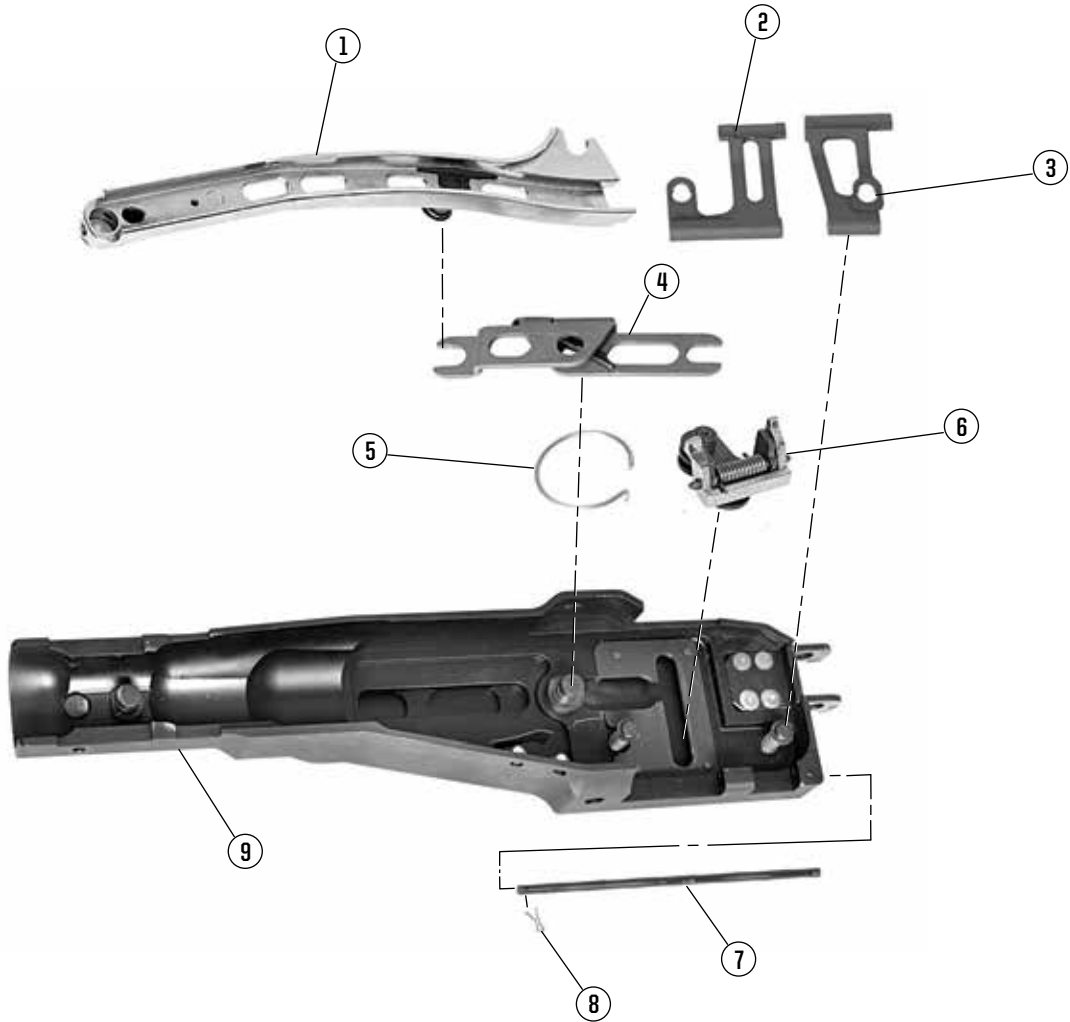


Figure 9. Group 07 Cover and Lever Assembly.

Table 1. PREVENTIVE MAINTENANCE CHECKS AND SERVICES

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) US ORD PART NO	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
					GROUP 07: COVER AND FEED LEVER ASSEMBLY FIG. 9: COVER AND FEED LEVER ASSEMBLY	
1	PAFFF	19204	11699814	653	CAM ASSEMBLY, FEED (SEE FIG.16 FOR ASSEMBLY BREAKDOWN)	1
2	PAFZZ	19204	7269117	100	GUIDE, CARTRIDGE REAR	1
3	PAFZZ	19204	7269116	99	GUIDE, CARTRIDGE FRONT	1
4	AFFFF	19204	7269119	147	LEVER ASSEMBLY, FEED (SEE FIG.16 FOR ASSEMBLY BREAKDOWN)	1
5	PAOZZ	19204	11686315	599	SPRING, HELICAL	1
6	PAFFF	19204	7269120	150	PAWL ASSEMBLY, CAM FEED (SEE FIG.17 FOR ASSEMBLY BREAKDOWN)	1
7	PAFZZ	19204	11010152	593	SHAFT, STRAIGHT	1
8	PAOZZ	96906	MS24665-18	892	PIN, COTTER	1
9	PAFHH	19204	7269118	29056	HOUSING ASSEMBLY, COVER (SEE FIG. 18 FOR ASSEMBLY BREAKDOWN)	1

END OF FIGURE

**GROUP 0801: FEED CAM ASSEMBLY,
GROUP 0802: FEED LEVER ASSEMBLY,
REPAIR PARTS LIST**

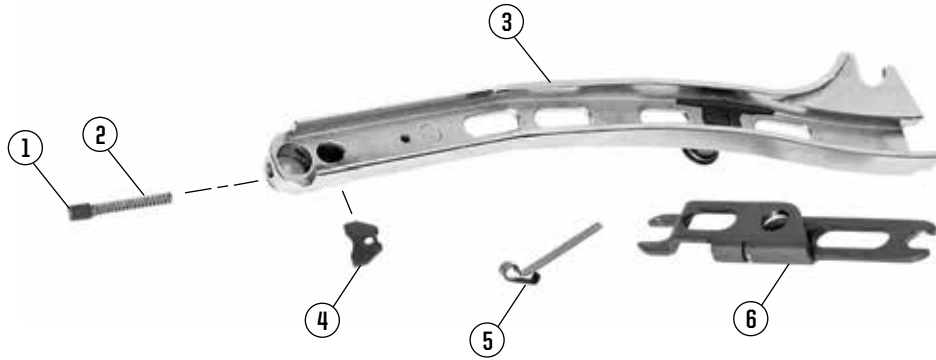


Figure 10. Group 0801 and 0802 Feed Cam Assembly and Feed Lever Assembly

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) US ORD PART NO	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
					GROUP 0801: FEED CAM ASSEMBLY GROUP 0802: FEED LEVEL ASSEMBLY FIG. 10: FEED CAM ASSEMBLY AND FEED LEVER ASSEMBLY	
1	PAFZZ	19204	7269123	132	PLUNGER, RETAINER	1
2	PAFZZ	19204	7269125	134	SPRING, HELICAL	1
3	XAFZZ	19204	11699817	654	CAM ASSEMBLY	1
4	PAFZZ	19204	7269124	133	RETAINER, FEED CAM	1
5	PAFZZ	19204	7269146	148	CLIP, SPRING LEVER	1
6	PAFZZ	19204	7269145	149	LEVER, FEED	1

END OF FIGURE

GROUP 0803: FEED PAWL ASSEMBLY, REPAIR PARTS LIST



Figure 11. Group 0803 Feed Pawl Assembly.

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) US ORD PART NO	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
					GROUP 0803: FEED PAWL ASSEMBLY	
					FIG. 11: FEED PAWL ASSEMBLY	
1			7269120		FEED PAWL	1

END OF FIGURE

GROUP 0804: COVER HOUSING ASSEMBLY, REPAIR PARTS LIST

49

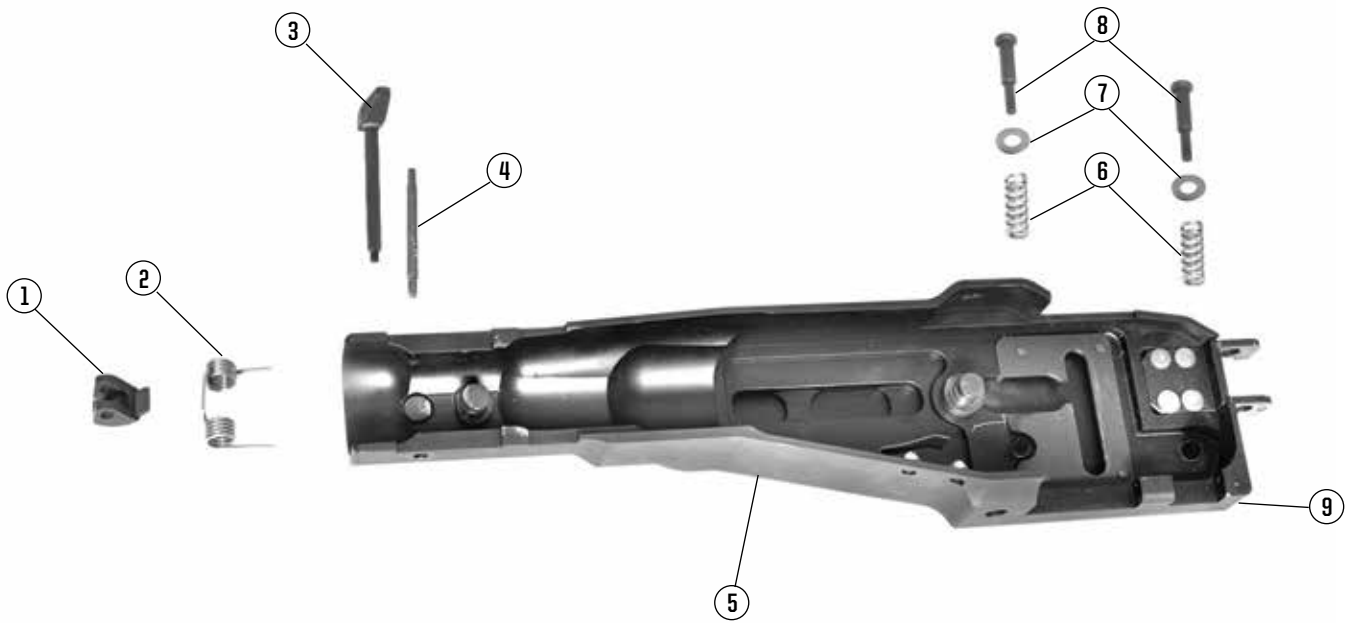


Figure 12. Group 0804 Cover Housing Assembly

Table 1. PREVENTIVE MAINTENANCE CHECKS AND SERVICES

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) US ORD PART NO	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
					GROUP 0804: COVER HOUSING ASSEMBLY FIG. 12: COVER HOUSING ASSEMBLY	
1	PAFZZ	19204	7269136	104	LATCH, COVER	1
2	PAFZZ	19204	7791271	109	SPRING, HELICAL	1
3	PAHZZ	19205	7791270	413	LATCH LEVER ASSEMBLY	1
4	PAFZZ	19204	7269137	126	PIN, LATCH LEVER	1
5	PAFZZ	19200	9362520	888	SPRING BUMPER CAM	1
6	PAHZZ	19204	7269141	108	SPRING, HELICAL	2
7	PAHZZ	19204	7269144	111	WASHER, FLAT	2
8	PAHZZ	19205	7269143	110	PIN, SHOULDER, HEADED	2
9	XAHZZ	19204	7269128	641	FRAME ASSEMBLY, COVER	1

END OF FIGURE

GROUP 9: CARTRIDGE FEED TRAY ASSEMBLY REPAIR PARTS LIST

50

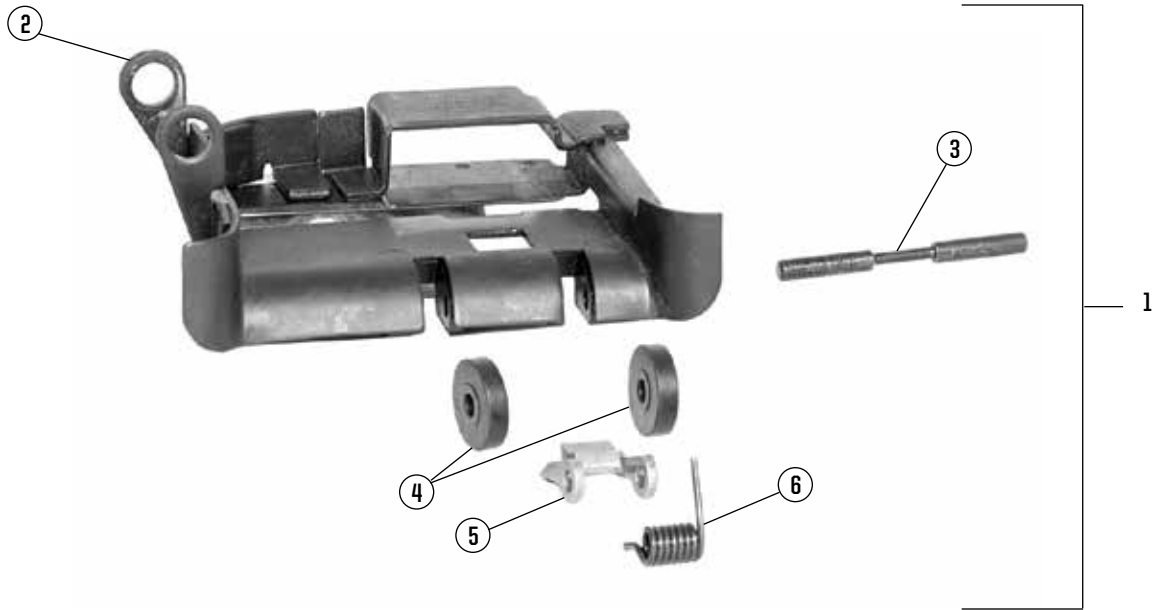


Figure 13. Group 9 Cartridge Feed Tray Assembly.

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) US ORD PART NO	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
					GROUP 9: CARTRIDGE FEED TRAY ASSY	
					FIG. 13: CARTRIDGE FEED TRAY ASSY	
1			7792096	445	CARTRIDGE FEED TRAY ASSEMBLY	1
2	XAOZZ	19204	7792097	446	FRAME ASSEMBLY, CARTRIDGE TRAY	1
3	PAOZZ	19204	7790724	320	SHAFT, CARTRIDGE	1
4	PAOZZ	19204	7269333	319	ROLLER, LINEAR-ROTARY	2
5	PAOZZ	19204	7269332	317	PAWL, CARTRIDGE RETAINER	1
6	PAOZZ	19204	7269335	321	SPRING, HELICAL	1

END OF FIGURE

GROUP 10: REAR SIGHT REPAIR PARTS LIST

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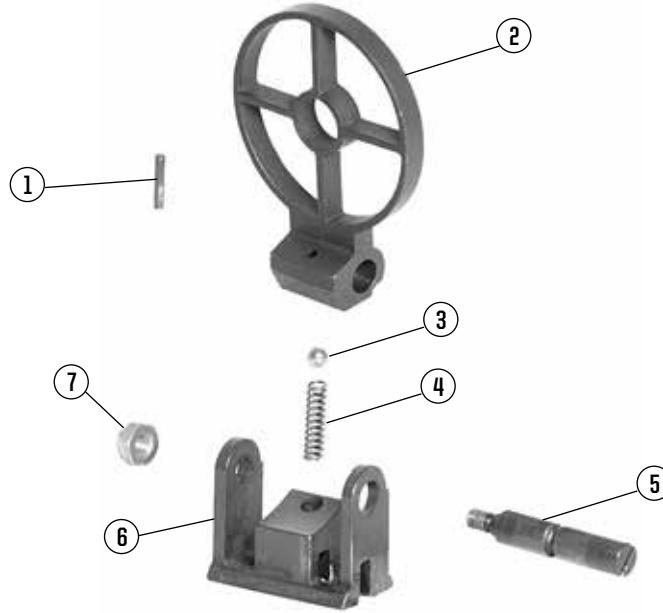


Figure 14. Group 10 Rear Sight.

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) US ORD PART NO	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
					GROUP 10: REAR SIGHT	
					FIG. 14: M60D REAR SIGHT	
1	PAFZZ	96906	MS16562-119	563	PIN, SPRING	1
2	PAFZZ	19204	11699799	565	RING, SIGHT	1
3	PAFZZ	96906	MS19059-2412	561	BALL, BEARING	1
4	PAFZZ	96906	MS24585-75	560	SPRING, HELICAL	1
5	PAFZZ	19205	11699798	562	RETAINER, REAR SIGHT	1
6	PAFZZ	19205	11699797	559	BASE, REAR SIGHT	1
7	PAFZZ	19205	11699763	564	NUT, SELF-LOCKING	1

END OF FIGURE

GROUP 11: COCKING HANDLE ASSEMBLY, REPAIR PARTS LIST

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Figure 15. Group 11 Cocking Handle Assembly.

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) US ORD PART NO	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
					GROUP 11: COCKING HANDLE ASSEMBLY	
					FIG. 15: COCKING HANDLE ASSEMBLY	
1	PAFZZ	19205	7269237	222	RETAINER, COCKING HANDLE	1
2	PAFZZ	19205	7791522	487	SPRING, HELICAL	1
3	PAFZZ	19205	7269239	225	SLIDE ASSEMBLY	1

END OF FIGURE

GROUP 12: GUN RECEIVER ASSEMBLY REPAIR PARTS LIST

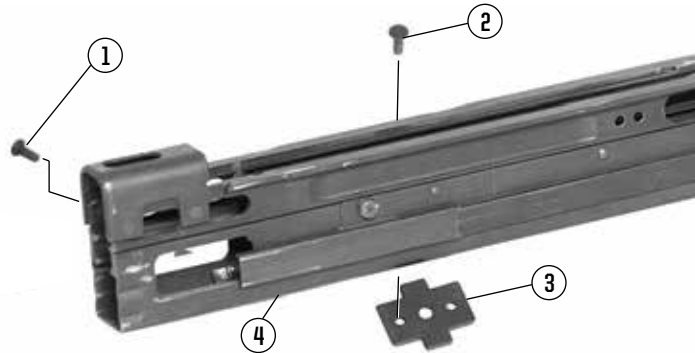


Figure 16. Group 12 Gun Receiver Assembly.

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) US ORD PART NO	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
					GROUP 12: GUN RECEIVER ASSEMBLY	
					FIG. 16: M60D GUN RECEIVER ASSEMBLY	
1	PAFZZ	19205	7269411	364	RIVET, SOLID	4
2	PAFZZ	19204	7792972	881	RIVET, SOLID	2
3	PAFZZ	19204	7792974	401	PLATE, MOUNTING	1
4	XADDA	19200	11686307	877	RECEIVER ASSEMBLY	1

END OF FIGURE

GROUP 9500: ECHELON TOOL KIT

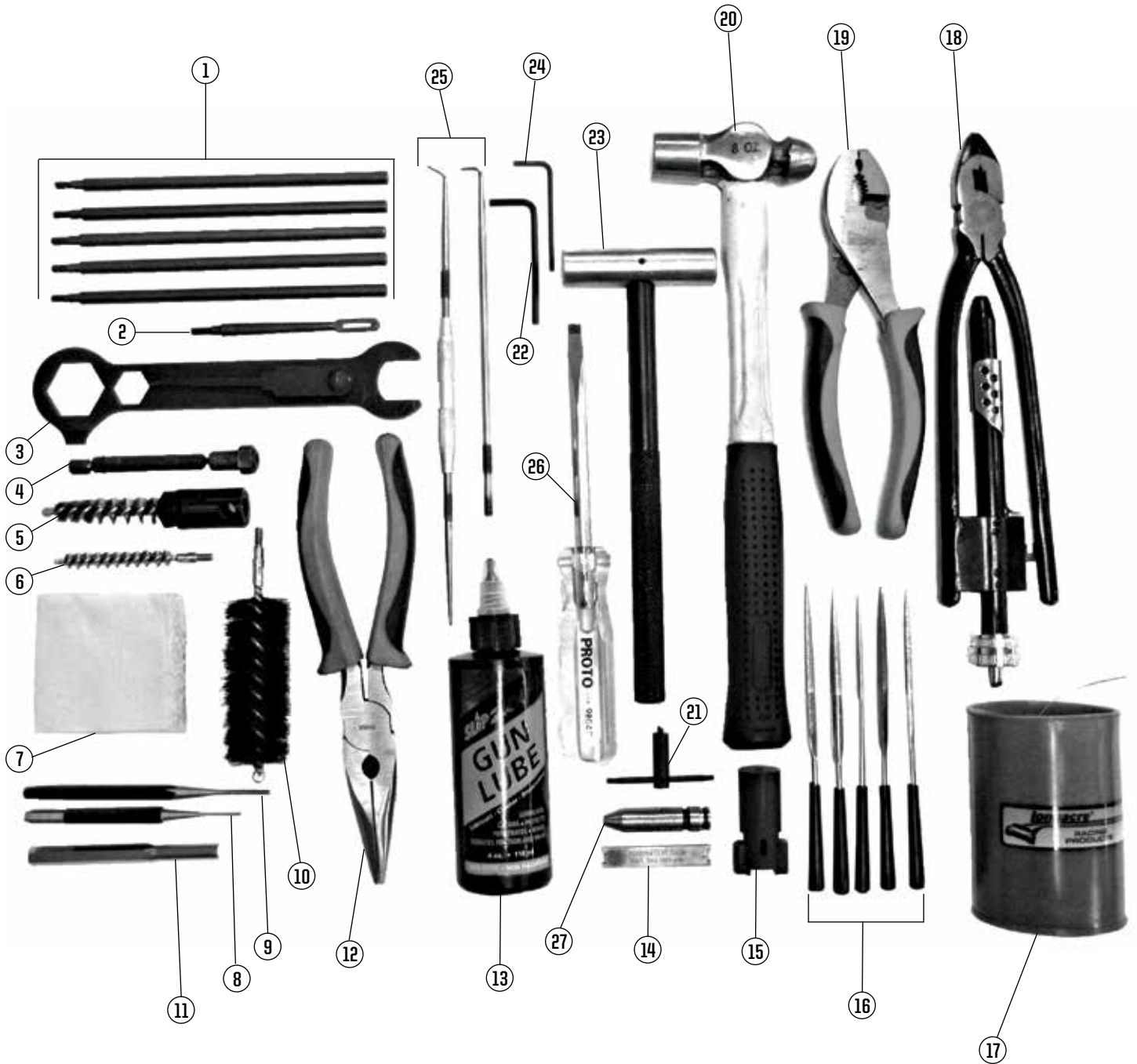


Figure 17. Group 9500 Echelon Tool Kit.

Table 1. PREVENTIVE MAINTENANCE CHECKS AND SERVICES

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) US ORD PART NO	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
					GROUP 9500: ECHELON TOOL KIT FIG. 17: ECHELON TOO KIT	
1				B123	Section, Cleaning Rod	
2				B55	Holder, Cleaning Patch	
3				2505	Wrench, Screwdriver and Reamer	
4				B42	Extractor, Ruptured CTG	
5				29026	M60 Brush, Chamber	
6				29028	M60 Brush, Bore	
7				29021	M60/M2 Patch, Cleaning	
8				29019	Punch, Starrett 3/32"	
9				29018	Punch, Starrett 1/16"	
10				29025	Brush, Receiver	
11				29011	Brass Punch 5/16" x 1/2"	
12				29013	Long Nose Pliers	
13				29024	M2/M60 Slip 2000 Lubrication	
14				29159	Firing Pin Protrusion Gauge	
15				7799699	Bolt Gauge	
16				29881	Diamond Needle Files	
17				29148	Spool, Safety Wire	
18				29160	Safety Wire Pliers	
19				29033	Pliers, 6"	
20				29010	Steel Hammer	
21				2537	Wrench, Cover Latch	
22				29048	3/32" Allen Wrench	
23				29009	Brass Hammer	
24				29015	1/8" Allen Wrench	
25				29016	Scribe	
26				29014	Screwdriver	
27				29003	Field Headspace Gauge	



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