OPERATOR'S MANUAL
FOR
LONG RANGE SNIPER RIFLE (LRSR)/
SPECIAL APPLICATION SCOPED RIFLE (SASR) (USMC ONLY)
CALIBER .50, M107
NSN 1005-01-469-2133 (EIC 4HA)

*TM 9-1005-239-10 dated 15 November 2010 supersedes TM 9-1005-239-10 dated 15 May 2004, including all changes.

HEADQUARTERS, DEPARTMENTS OF THE ARMY AND
AIR FORCE AND COMMANDANT OF THE MARINE CORPS

NOVEMBER 2010

PCN: 184 111100 00

"MY RIFLE"

The Creed of a United States Marine
By
Major Gen. W.H. Rupertus, USMC

This is my rifle. There are many like it, but this one is mine.

My rifle is my best friend. It is my life. I must master it as I must master my life.

My rifle without me is useless. Without my rifle, I am useless. I must fire my rifle true. I must shoot straighter than my enemy who is trying to kill me. I must shoot him before he shoots me.
I will...

My rifle is human, even as I, because it is my life. Thus, I will learn it as a brother. I will learn its weaknesses, its strength, its parts, its accessories, its sights and its barrel. I will ever guard it against the ravages of weather and damage. I will keep my rifle clean and ready, even as I am clean and ready. We will become part of each other. We will...

Before God I swear this creed. My rifle and myself are the defenders of my country.

We are the masters of our enemy. We are the saviors of my life.

So be it, until victory is America's and there is no enemy, but peace.

WARNING SUMMARY

This warning summary contains general safety warnings and hazardous material warnings that must be understood and applied during the operation and maintenance of the M107 Long Range Sniper Rifle (LRSR) to ensure personnel against injury, long-term health hazards, or death. Failure to observe these precautions could result in serious injury or death to personnel.

FIRST AID

Refer to FM 4-25.11 for First Aid Information.

Air Force personnel, refer to AFMAN 44-163(I).

Marine Corps personnel, refer to MCRP 3-02G.

GENERAL SAFETY WARNING DESCRIPTION

WARNING

This weapon generates harmful levels of noise when firing! Hearing protection must be worn when firing this weapon. Failure to comply may result in personnel injury.

Treat every firearm as if it were loaded. Never accept or take over a firearm from another until you have checked personally that it is unloaded or in a completely safe condition. Failure to comply may result in personnel injury or death.

Always control the muzzle of the firearm, keeping it pointed in a safe direction. With the M107 rifle, there is some danger in standing to the side of the muzzle due to blowby of hot expanding gasses from the muzzle brake. Never point or aim any firearm at anything you are not willing to shoot! Failure to comply may result in personnel injury or death.

GENERAL SAFETY WARNING DESCRIPTION — Continued

Buffer and buffer spring are under heavy spring tension. Use caution when removing. Failure to comply may result in personnel injury.

The bolt does NOT automatically remain to the rear when the rifle or magazine is empty. After the rifle is unloaded, and with the charging handle to the rear, always physically check the chamber to be certain the rifle is empty. Failure to comply may result in personnel injury or death.

When disassembling spring-loaded parts, point components away from face/eyes to avoid flying parts. Failure to comply may result in personnel injury.

The .50 caliber Saboted Light Armor Penetrator (SLAP) round is specifically prohibited from being fired in the M107. Do NOT force it to chamber and fire. Failure to comply may result in personnel injury or death and weapon damage (USMC and USAF only).

Rifle must NOT be fired without both the midlock and rear lock pins firmly in place. Failure to comply may result in personnel injury or death.

Ensure that the weapon is unloaded and on SAFE before performing any functional procedures. Failure to comply may result in personnel injury or death.

Never try to force a cartridge to chamber. If the bolt does not fully close, remove the magazine, clear the weapon, and check for obstructions, but do not attempt to fire. Failure to comply may result in personnel injury or death and weapon damage.

This rifle must not be fired without the muzzle brake firmly in place on the barrel because the action can thus be overstressed. Critical parts breakage can occur. Failure to comply may result in personnel injury and weapon damage.

If the spring-loaded cam is lifted too far during disassembly, the spring may lose tension. If this occurs, the weapon could malfunction, or fire when unlocked. Failure to comply may result in personnel injury or death.

GENERAL HAZARDOUS MATERIALS WARNING DESCRIPTION

WARNING

Cleaner, Lubricant, and Preservative (CLP) MIL-PRF-63460 may be irritating to the eyes and skin. Use protective gloves and goggles. First aid for skin contact: wash skin thoroughly with soap and water. First aid for eye contact: flush with water for 15 minutes or until irritation subsides. If symptoms persist, seek medical attention. Failure to comply may result in personnel injury. Seek medical attention in event of injury.

Use CLP MIL-PRF-63460 in a well-ventilated area. Breathing in small amounts of this material during normal handling is not likely to cause harmful effects. Accidental ingestion can cause irritation of digestive tract and respiratory tract. Inhalation of high/massive concentrations can cause headache, dizziness, and loss of cognitive functions. First aid for ingestion: DO NOT induce vomiting. Seek medical attention if symptoms appear. First aid for inhalation: Move to fresh air. If not breathing, provide artificial respiration. Loosen tight clothing. If symptoms persist, seek medical attention. Failure to comply may result in personnel injury. Seek medical attention in event of injury.

CLP MIL-PRF-63460 is combustible; DO NOT use or store near heat, sparks, flame, or other ignition sources. Keep container sealed when not in use. Failure to comply may result in personnel injury or death. Seek medical attention in event of injury.

Cloths or rags saturated with CLP MIL-PRF-63460 must be disposed of in accordance with authorized facility procedures. Failure to comply may result in personnel injury. Seek medical attention in event of injury.

GENERAL HAZARDOUS MATERIALS WARNING DESCRIPTION — Continued

Isopropyl alcohol may be irritating to the eyes and skin. Use protective gloves and goggles. First aid for skin contact: wash skin thoroughly with soap and water. First aid for eye contact: flush with water for 15 minutes or until irritation subsides. If symptoms persist, seek medical attention. Failure to comply may result in personnel injury. Seek medical attention in event of injury.

Use isopropyl alcohol in a well-ventilated area. Breathing in small amounts of this material during normal handling is not likely to cause harmful effects. Accidental ingestion can cause irritation of digestive tract and respiratory tract. Inhalation of high/massive concentrations can cause headache, dizziness and loss of cognitive functions. First aid for ingestion: DO NOT induce vomiting. Seek medical attention if symptoms appear. First aid for inhalation: Move to fresh air. If not breathing, provide artificial respiration. Loosen tight clothing. If symptoms persist, seek medical attention. Failure to comply may result in personnel injury. Seek medical attention in event of injury.

Isopropyl alcohol is combustible; DO NOT use or store near heat, sparks, flame, or other ignition sources. Keep container sealed when not in use. Failure to comply may result in personnel injury or death. Seek medical attention in event of injury.

HEADQUARTERS,
DEPARTMENTS OF THE ARMY AND
AIR FORCE AND COMMANDANT OF THE MARINE CORPS
WASHINGTON D.C., 30 NOVEMBER 2010

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REPORTING OF ERRORS AND RECOMMENDING IMPROVEMENTS

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*TM 9-1005-239-10 dated 30 November 2010 supersedes TM 9-1005-239-10 dated 15 May 2004, including all changes.

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CHAPTER 6. SUPPORTING INFORMATION

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HOW TO USE THIS MANUAL

The safest, easiest, and best way to operate and maintain the M107 Sniper Rifle is to use this manual. Learning to use this Technical Manual (TM) is as easy as reading through the next few pages of this section. Knowing what is in this manual and how to use it will save you time and work and will help you avoid exposing yourself to unnecessary hazards while performing your job.

So Where Do You Start?

Right here, if this is the first time you are using this TM. Be sure to completely read this section on how to use this manual first. There's a lot of information here that you need to know.

Organization

This manual covers the operation and maintenance of the M107 Sniper rifle. The manual itself is divided into six chapters, including supporting information. The six chapters and what they contain, are found in the Table of Contents in the front of this manual. For example, to learn about operating the M107 Sniper Rifle, you would look in the Table of Contents and discover that Chapter 2 provides all pertinent information about the operation of the M107 Sniper Rifle. Since Chapter 2 covers a great deal of information, you will have to scan the chapter to find the specific information you will need.

In Chapter 6, you will find the supporting information. Each work package provides specific information that will assist you in performing the various operational and maintenance tasks. The work packages provide such information as additional References (i.e., other TMs or FMs), as in WP 0021, and Expendable and Durable Items List, as in WP 0022. Become familiar with all supporting information work packages and what they contain before beginning any operational or maintenance task.

Am I Ready To Use The TM?

If you've taken the time necessary to read this section, and are sure of the location and arrangement of the different sections of this TM, you are ready to begin. Remember, this TM has been arranged with you, the user, in mind. Your safety and ability to perform the operational and maintenance tasks in the most efficient manner possible hinge on your ability to perform and understand the information contained in this manual. If you fully understand the arrangement and purpose of this TM, and have taken the time to read through this section, you will have no trouble operating and maintaining the rifle in the manner for which it was designed.

CHAPTER 1 GENERAL INFORMATION, EQUIPMENT DESCRIPTION, AND THEORY OF OPERATION

OPERATOR MAINTENANCE

GENERAL INFORMATION

SCOPE

This technical manual contains instructions for operation, checks, and maintenance for the M107 Long Range Sniper Rifle (LRSR)/ Special Application Scoped Rifle (SASR) (USMC only).

Type of Manual

Operator's Manual.

Model Number and Equipment Name

Rifle, M107, Caliber .50, Sniper with Day Optical Sight and Carrying Case.

SCOPE — Continued

Purpose of Equipment

The M107 LRSR/SASR (USMC only) is a man-portable, direct line-of-sight weapon system capable of providing precision fire on targets at a distance of up to 2,000 yd (1,830 m).

MAINTENANCE FORMS, RECORDS, AND REPORTS

Department of the Army forms and procedures used for equipment maintenance will be those prescribed by (as applicable) DA PAM 750-8, The Army Maintenance Management System (TAMMS) Users Manual; or AR 700-138, Army Logistics Readiness and Sustainability.

Air Force personnel will use AFI 36-2226, TO 11W-1-10 and AFTO 105 to record inspections and maintenance.

Marine Corps personnel will use TM 4700-15/1, Equipment Record Procedures.

REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR) AND PRODUCT QUALITY DEFICIENCY REPORTS (PQDR)

If your M107 Sniper Rifle needs improvement, let us know. Send us an EIR. You, the user, are the only one who can tell us what you don't like about your equipment. Let us know why you don't like the design or performance.

REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR) AND PRODUCT QUALITY DEFICIENCY REPORTS (PQDR) — Continued

You may submit your information using an SF Form 368, PQDR. You can send your SF Form 368 via e-mail, regular mail, or facsimile using the addresses/facsimile numbers specified on DA PAM 750-8, The Army Maintenance Management System (TAMMS). We will send you a reply.

Air Force personnel shall submit QDR's IAW Technical Order 00-35D-54, Material Deficiency Reporting and Investigating System and Air Force Joint Manual (AFJMAN) 23-215, Reporting of Supply Discrepancies. We will send you a reply.

Marine Corps personnel shall submit SF Form 368s in accordance with MCO 4855.10B. PQDRs should be submitted via the Product Data Reporting and Evaluation Program (PDREP) at http://www.nslcptsmh.csd.disa.mil/pdrep/pdrep.htm. As an alternative, non-encrypted PQDRs may be submitted via the same site using the On-Line EZ-PQDR feature (when submitted via EZ, a PDREP User ID is not required; however a CAC is required).

CORROSION PREVENTION AND CONTROL (CPC)

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

Corrosion specifically occurs with metals. It is an electrochemical process that causes the degradation of metals. It is commonly caused by exposure to moisture, acids, bases, or salts. An example is the rusting of iron. Corrosion damage in metals can be seen, depending on the metal, as tarnishing, pitting, fogging, surface residue, and/or cracking.

Plastics, composites, and rubbers can also degrade. Degradation is caused by thermal (heat), oxidation (oxygen), solvation (solvents), or photoelectric (light, typically UV) processes. The most common exposures are excessive heat or light. Damage from these processes will appear as cracking, softening, swelling, and/or breaking.

SF Form 368, PQDR should be submitted to the address specified in DA PAM 750-8, The Army Maintenance Management System (TAMMS) Users Manual.

DESTRUCTION OF ARMY MATERIAL TO PREVENT ENEMY USE

Refer to TM 750-244-7.

Destroy by smashing, disassembly, and scattering of parts, or by any manner that will render the weapon useless to the enemy. (USMC and USAF only).

PREPARATION FOR STORAGE OR SHIPMENT

Storage

WARNING

Injury may result if Cleaner, Lubricant, and Preservative (CLP) comes in contact with eyes or unprotected skin. Always wear eye protection when working with this material. CLP can give off flammable and harmful vapors. Avoid long exposure to vapors. Keep away from open fire, and use in a well-ventilated area. Failure to comply may result in personnel injury. Seek medical attention in event of injury.

NOTE

When servicing this weapon, performing maintenance, or disposing of materials such as cleaning fluids, cleaning compounds, lubricants, and sealing compounds as well as items contaminated with these substances (such as cleaning rags) consult your unit/local hazardous waste disposal center or safety office for local regulatory guidance. If further information is needed, please contact The Army Environmental Hotline at 1-800-872-3845 / OCONUS: 410-436-1244 or online at http://aec.army.mil/usaec/contactus.html. Accidental or intentional introduction of contaminants into the environment violates military, state, and federal regulations. Failure to comply may adversely affect the public or environment.

NOTE

Do not store the weapon with live ammunition in either the chamber or magazine.

Disassemble the weapon into its three major assemblies. Apply a coat of CLP (WP 0022, Item 8), and store the weapon in its carrying case.

Shipment

Ship weapons requiring depot level maintenance in accordance with the disposition instructions and pertinent auto-retrograde message.

NOTE

Under no circumstances should the weapon be shipped while it contains live ammunition, either in the shipping box, magazine, or chamber.

1. Ensure that the magazine and chamber are clear of ammunition (WP 0005).
2. Complete forms in accordance with specifications and detail the required maintenance as thoroughly as possible.
3. Clean the weapon (WP 0018).
4. Place the weapon, broken down into its three major groups, in a carrying case and place it in a shipping box.
5. Mark the box in accordance with MIL-STD-129P.

NOMENCLATURE CROSS-REFERENCE LIST

Common Name	Official Nomenclature
Accelerator	Rifle accelerator
Adjustment turret cap	Dust protective cap
Barrel	Rifle barrel
Base plate	Magazine floor plate
Battery bumper	Nonmetallic bumper
Bolt assembly	Bolt
Bolt carrier	Bolt carrier assembly
Bolt latch	Lock-release lever
Cam pin assembly	Machine breechlock cam
Carrying handle	Rifle grip
Extractor	Cartridge extractor
Extractor plunger	Cartridge extractor
Eyepiece lens cover	Lens cap
Impact bumper	Nonmetallic bumper
Knurled lock ring	Knurled plain nut
Magazine follower	Cartridge follower
Midlock pin	Quick release pin
Rear lock pin	Quick release pin
Scope ring screw	Machine screw
Telescope	Optic mount system

LIST OF ABBREVIATIONS/ACRONYMS

Abbreviation/Acronym	Name
AEPS	Army Electronic Product Support
AFI	Air Force Instruction
API	Armor-Piercing Incendiary
APIT	Armor-Piercing Incendiary Tracer
CAGEC	Commercial and Government Entity Code
CLP	Cleaner, Lubricant, and Preservative
CPC	Corrosion Prevention and Control
DODIC	Department of Defense Identification Code
EIR	Equipment Improvement Recommendation
FM	Field Manual
fps	feet per second
IDN	Initial Distribution Number
J	Joules
LAW	Lubricant, Arctic Weather
lb-in.	pound-force inch
LRSR	Long Range Sniper Rifle
LSA	Lubricant, Small Arms
LSAT	Lubricant, Small Arms (with Teflon)
MCO	Marine Corps Order
MOA	Minute(s) of Angle
NAVMC	Navy Marine Corps
NSN	National Stock Number
P/N	Part Number
PMCS	Preventive Maintenance Checks and Services
PQDR	Product Quality Deficiency Report

LIST OF ABBREVIATIONS/ACRONYMS — Continued

Abbreviation/Acronym	Name
SASR	Special Application Scoped Rifle
SLAP	Saboted Light Armor Piercing
TAMMS	The Army Maintenance Management System
TM	Technical Manual
TO	Technical Order
USAF	United States Air Force
USMC	United States Marine Corps
WP	Work Package

QUALITY OF MATERIAL

Material used for replacement, repair, or modification must meet the requirements of this manual. If quality of material requirements are not stated in this manual, the material must meet the requirements of the drawings, standards, specifications, or approved engineering change proposals applicable to the subject equipment.

SAFETY, CARE, AND HANDLING

Refer to WP 0020 for general ammunition safety, care, handling, and preservation.

END OF WORK PACKAGE

OPERATOR MAINTENANCE

EQUIPMENT DESCRIPTION AND DATA

EQUIPMENT CHARACTERISTICS, CAPABILITIES, AND FEATURES

EQUIPMENT DESCRIPTION

Characteristics

The basic M107 rifle is equipped with bipod, muzzle brake, carrying handle, and 10-round removable magazine. The M107 system is composed of the rifle and a sniper scope, plus spare magazines. The rifle is also supplied with fitted carrying case, the requisite cleaning kit, drag bag, cleaning equipment, and the telescope adjustment tools.

The M107 is a semi-automatic, air-cooled, box magazine-fed rifle chambered for .50 caliber ammunition. This rifle operates by means of the short recoil principle, rather than gas.

Capabilities

The M107 is a long-range sniper weapon system which utilizes standard .50 caliber ammunition. It is a man-portable, direct line-of-sight system capable of providing precision fire on targets at distances up to 2,000 yd (1,830 m).

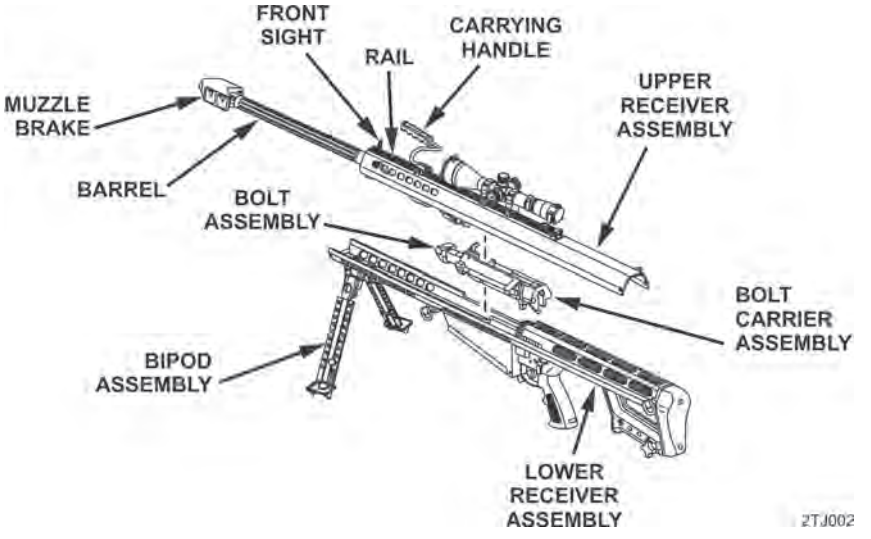

Figure 1. Rifle Assembly.

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS

1. Front Sight. A 0.075 in. (0.19 cm) post.
2. Rail. Used to attach the scope, the carrying handle, and accessory optic sights.
3. Carrying Handle. Steel stock with a hard plastic handle.
4. Upper Receiver Assembly. Includes the front sight, accessory base, carrying handle, muzzle brake, and barrel.
5. Bolt Carrier Assembly. Consists of the bolt, firing pin, all extraction and ejection mechanisms, cocking lever, and sear.
6. Lower Receiver Assembly. Includes detachable bipod assembly, buffer assembly, midlock pin, and trigger mechanism.
7. Bipod Assembly. Detachable forward support system composed of retractable legs and extending foot pads.
8. Bolt Assembly. Houses the firing pin, extractor, and ejector.
9. Barrel. Length is 29 in. (73.7 cm) with eight lands and grooves in a uniform right-hand twist, one turn in 15 in. (38.1 cm). Muzzle end is threaded to accept a muzzle brake; breech end has a barrel extension integral to the locking function.
10. Muzzle Brake. Critical to the functioning of the weapon; absorbs approximately 70 percent of the recoil.

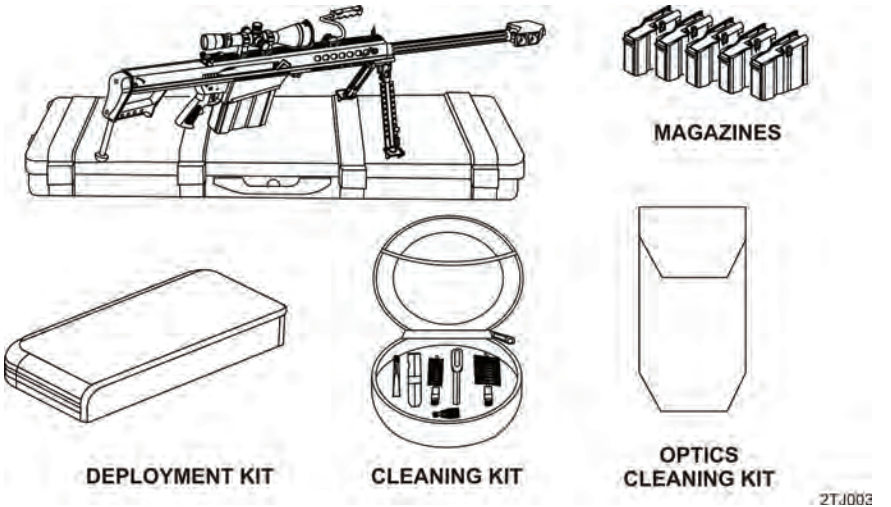

Figure 2. M107 Rifle System.

EQUIPMENT DATA

The M107 Rifle System is comprised of the rifle with a fixed variable 4.5X14 power sniper scope, and 6 magazines. The rifle is also supplied with a fitted dirt-tight and watertight carrying case, cleaning kit, and telescope adjustment tools.

Table 1. Specifications and Capabilities.

SPECIFICATIONS	
Weight (gun and scope)	28.5 lbs (12.9 kilograms) (unloaded)
Overall length assembled	57 in. (144.8 cm)
Length in takedown mode	38 in. (96.5 cm)
Barrel length	29 in. (73.7 cm)
Magazine capacity	10 rounds
Stock	Integral with lower receiver assembly (steel)
Safety	Manual thumb-lever
Muzzle velocity	Approx. 2,800 fps (853 meters/sec) (with standard 660–grain bullet)
Maximum range	Approx 7,450 yd (6,812 m) (with standard 660–grain bullet)
Maximum effective range	2,000 yd (1,830 m) (with standard 660–grain bullet)

Table 1. Specifications and Capabilites — Continued.

SPECIFICATIONS	
Muzzle energy	11,500 lb-ft (15,582 J)
Magazine weight	Ten rounds: 4.12 lb (1.87 kg) Eight rounds: 3.62 lb (1.64 kg)
Sight Type	Leupold 4.5X14 Vary X
Length	12 5/8 in. (32 cm)
Reticle	Mil dot
Lens	50 mm
Elevation	1 Click equals 1/4 MOA at 109 yd (100 m)
Windage	1 Click equals 1/4 MOA at 109 yd (100 m)
Eye Relief	3 in. to 6 in. (7.6 cm to 15.2 cm)

Compatible Ammunition

MK211, Mod 0, Caliber .50 API Cartridge
M33, Caliber .50 Ball Cartridge
M17, Caliber .50 Tracer Cartridge
M8, Caliber .50 API Cartridge
M20, Caliber .50 APIT Cartridge

END OF WORK PACKAGE

OPERATOR MAINTENANCE

THEORY OF OPERATION

CYCLE OF OPERATION

The cycle of operation for the M107 Rifle is broken down into eight basic steps (more than one step may occur at the same time).

1. Feeding: The force of the mainspring pushes the bolt forward toward the barrel extension, stripping a cartridge from the magazine and loading it into the chamber (by hand when first loading, by semiautomatic action afterwards).
2. Chambering: The bolt forces the round fully into the firing chamber, and the extractor snaps over the case rim. Blockages (dirt or debris) can prevent full chambering, as can dirty, bent, dented, or otherwise faulty ammunition.
3. Locking: During chambering, the bolt enters the barrel extension, and the bolt latch engages the bolt latch trip (inside top of the upper receiver assembly, just behind barrel extension). The bolt latch is then depressed, allowing the bolt to retract into the bolt carrier. The bolt, in turn, rotates due to the cam slot and is locked when its three locking lugs rotate into place in the barrel extension, closing the firing chamber.
4. Firing: Pulling the trigger pivots it on the trigger housing pin and presses on the transfer bar, causing the bar to rise. The transfer bar engages the sear (housed in the bolt carrier), forcing it upward and out of engagement with the firing pin extension. The firing pin extension, under spring power, forces the firing pin forward to strike the primer of the cartridge.
5. Unlocking: When the cartridge is fired, gas pressure exerts a thrust on the bolt face via the case head. The bolt carrier carries the bolt and barrel extension to the rear until the accelerator, protruding beneath the bolt carrier, contacts a shoulder in the trigger housing area. The accelerator is then pivoted up, causing the accelerator rod to be pushed out of the bolt carrier. As it protrudes from the front of the bolt carrier, it separates the bolt carrier from the barrel extension. Because of the cam slot in the side of the bolt, the bolt rotates as it is pulled and unlocks from the barrel extension.

CYCLE OF OPERATION — Continued

6. Cocking: As the bolt recoils to the rear, the cocking lever “rides” the transfer bar back and down, causing it to disconnect from the trigger. The transfer bar is then held down in this position by the disconnector and is not released until pressure is released from the trigger. After disconnection, the cocking lever swings on its pin and overrides the transfer bar. The other end of the cocking lever protrudes into the bolt carrier and into the firing pin extension. As the cocking lever pivots, it withdraws the firing pin and compresses the firing pin extension spring. The firing pin extension then catches the sear.
7. Extraction: As the bolt-locking lugs rotate away from the barrel extension, the bolt withdraws from the barrel and the bolt latch locks the bolt in its extended position. The extractor located on the bolt face and hooked over the rim of the fired case, pulls the case from the firing chamber.
8. Ejection: As soon as the fired case has been extracted and has cleared the rear of the barrel extension, it is expelled from the rifle by the spring-powered ejector.

END OF WORK PACKAGE

CHAPTER 2 OPERATOR INSTRUCTIONS

OPERATOR MAINTENANCE

DESCRIPTION AND USE OF OPERATOR CONTROLS

INTRODUCTION

The following table and illustration provide the location of each control for the M107 Sniper Rifle. The numbers on the illustration are keyed to the tabular listing which contains the name and functional description of the controls.

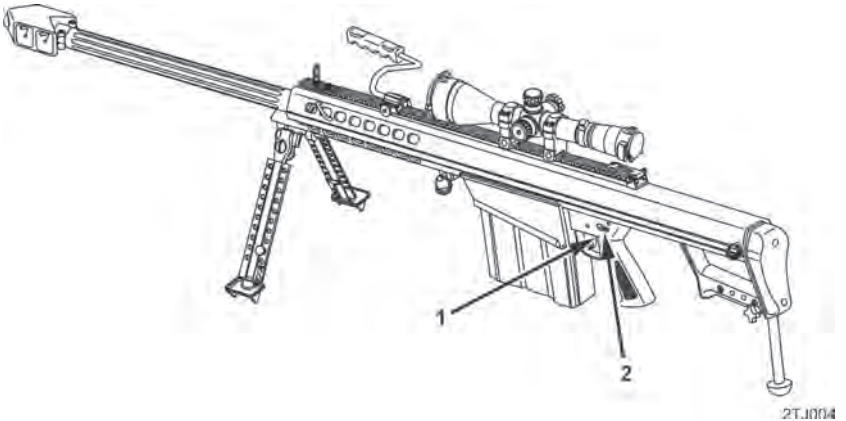

Figure 1. M107 Long Range Sniper Rifle (LRSR)/Special Application Scoped Rifle (SASR) (USMC).

Table 1. M107 Sniper Rifle Controls.

KEY	CONTROL/INDICATOR	FUNCTION
1	Trigger	Fires the weapon by squeezing toward the rear of the rifle.
2	Safety Switch	Prevents and allows firing of the rifle.

END OF WORK PACKAGE

OPERATOR MAINTENANCE

OPERATION UNDER USUAL CONDITIONS

INITIAL SETUP:

Tools and Special Tools

Five-Piece Cleaning Rod (WP 0023, Table 4, Item 10)

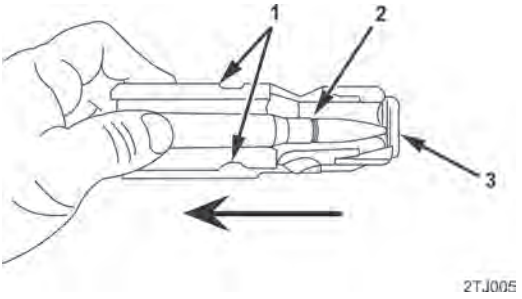

Figure 1. Loading the Magazine.

LOADING THE MAGAZINE

1. Center a cartridge (Figure 1, Item 2) between the feed lips (Figure 1, Item 1) in the magazine (Figure 1, Item 3) and press down until the cartridge snaps under the lips.

NOTE

The magazine has a ten-round capacity. The preferred load is 8 to 9 rounds. Load no more than 9 rounds.

2. Ensure the cartridges are pushed all the way to the rear and that there is no interference between the magazine (Figure 1, Item 3) and the nose of the cartridges.

END OF TASK

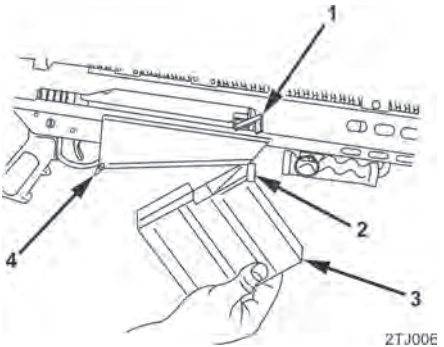

Figure 2. Inserting Magazine Into Weapon.

INSERTING THE MAGAZINE INTO WEAPON

WARNING

Ensure the safety is in the SAFE position and that the chamber is clear of any obstruction.
Failure to comply may result in personnel injury or death.

1. Prior to inserting the magazine (Figure 2, Item 3), grasp the charging handle (Figure 2, Item 1) and dry-cycle the weapon several times (work the bolt all the way back and forth). If any damage has occurred to either the upper or the lower receiver assemblies during shipping, the bolt carrier will not move freely.
2. Insert the magazine (Figure 2, Item 3) into the magazine well of the lower receiver assembly, tilting the magazine so that the bullets point upward. Place the magazine hook (Figure 2, Item 2), located on the front of the magazine, onto the hinge, located in the front of the magazine well. Now rotate the magazine upwards until you hear the click of it locking into the rear magazine catch (Figure 2, Item 4).

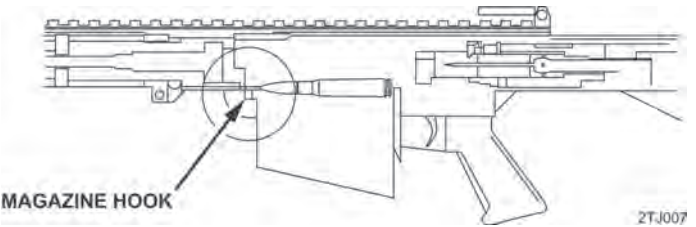

Figure 3. Magazine Hook Placement.

INSERTING THE MAGAZINE INTO WEAPON — Continued

NOTE

Ensure the magazine hook is in the correct space. Tugging on the magazine is a good check for proper seating.

END OF TASK

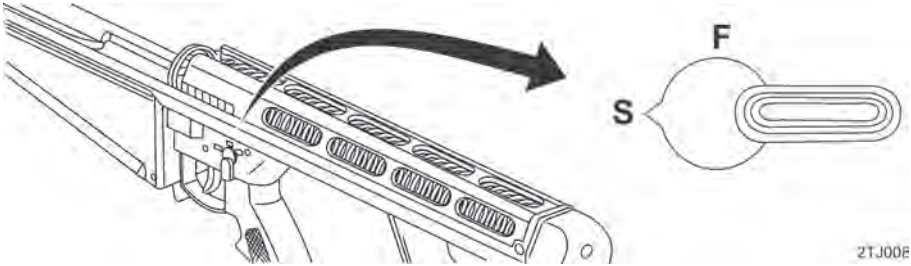

Figure 4. Safety Position.

CHAMBERING A CARTRIDGE

WARNING

Ensure the safety is in the SAFE position and that the chamber is clear of any obstruction. Failure to comply may result in personnel injury or death.

Never try to force a cartridge into the chamber. If the bolt does not fully close, clear any obstructions until a round is successfully chambered. Never attempt to fire a round if the bolt does not fully close. Failure to comply may result in personnel injury or weapon damage.

1. With the muzzle pointed down range and in a safe direction, move the bolt handle up and all the way to the rear. Release the bolt handle chambering the first round from the magazine. Tap the bolt handle to ensure the bolt is fully forward.

WARNING

Because the rifle is recoil-operated, the shooter must be positioned squarely behind the weapon, with the recoil pad firmly against the shoulder. Anything less may result in injury, discomfort, or failure of the action to cycle correctly. Failure to comply may result in personnel injury.

2. Shooter is positioned squarely behind the rifle. Rotate safety selector switch to the FIRE position. Ensure shoulder pad is properly positioned on shoulder before squeezing the trigger. The rifle will fire one round for each squeeze of the trigger until the magazine and chamber are empty.
3. With the safety in the SAFE position and the muzzle pointed in a safe direction, pull the charging handle to the rear until it stops, then release it. The rifle then loads and locks under its own spring power.

CHAMBERING A CARTRIDGE — Continued

Jamming

CAUTION

Whenever it is necessary to insert cleaning rods or other devices through the muzzle end of the barrel, be especially careful not to damage the muzzle's crown, since it could affect the accuracy of the rifle. Failure to comply may result in weapon damage.

If a cartridge or round jams in the chamber, use a cleaning rod to carefully push it out.

END OF TASK

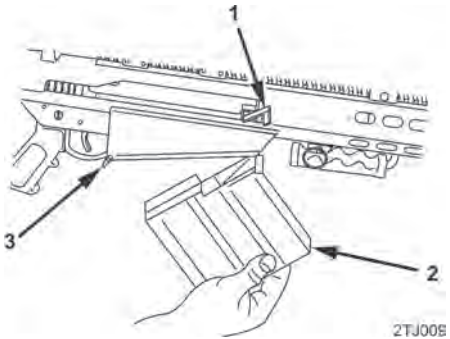

Figure 5. Removing Magazine.

UNLOADING THE RIFLE

WARNING

The bolt does not automatically remain to the rear when the rifle or magazine is empty. After the rifle is unloaded, and with the charging handle to the rear, always physically check the chamber to be certain the rifle is empty. Failure to comply may result in personnel injury or death.

1. Place the weapon safety on SAFE. Press the magazine catch (Figure 5, Item 3) forward towards the magazine (Figure 5, Item 2), and remove the magazine.

NOTE

Remember that the bolt does NOT automatically remain to the rear when the rifle or magazine is empty.

2. Pull the charging handle (Figure 5, Item 1) to the rear, which will eject any cartridge still chambered.
3. After the rifle is unloaded, and with the charging handle (Figure 5, Item 1) to the rear, look into the chamber to make certain the breech area and chamber are empty.

UNLOADING THE RIFLE — Continued

Clearing

CAUTION

Whenever it is necessary to insert cleaning rods or other devices through the muzzle end of the barrel, be especially careful not to damage the muzzle's crown, since it could affect the accuracy of the rifle. Failure to comply may result in weapon damage.

Do not leave cartridges in the magazine for extended periods of time because this will cause the spring to lose tension and may cause a malfunction. Failure to comply may result in equipment damage.

END OF TASK

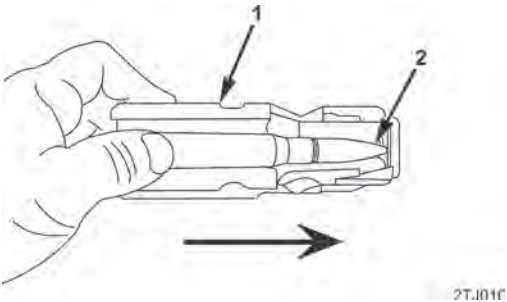

Figure 6. Unloading Magazine.

UNLOADING THE MAGAZINE

CAUTION

Only remove ammunition from the magazine with your hands. Failure to comply may result in equipment damage.

Hold the magazine (Figure 6, Item 1) with one hand with the cartridge tips (Figure 6, Item 2) facing away from you. Push each of the cartridges out of the magazine until all are ejected.

END OF TASK

END OF WORK PACKAGE

OPERATOR MAINTENANCE

SIGHTING SYSTEMS

INITIAL SETUP:

Tools and Special Tools

Deployment Tool Kit (WP 0023, Table 4, Item 6)

Materials/Parts

Target, Bull's-Eye (Zero Target) (NSN 6920-00-900-8205)

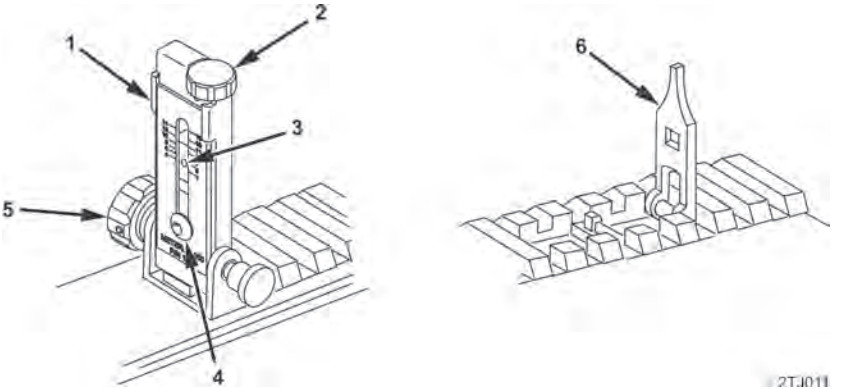

Figure 1. Zeroing the Rear Sight.

ZEROING THE REAR SIGHT

1. Assume a prone-supported firing position 100 meters from the zero target. Align index line with the 100-meter range line on the elevation scale (Figure 1, Item 1).
2. Align windage index line with windage zero index line on base of iron sight. Align the rear peep sight (Figure 1, Item 3) with the front sight post (Figure 1, Item 6).

NOTE

One click of elevation knob (Figure 1, Item 2) moves the strike of the round 1.6 in. (4.06 cm) at 100 meters.

One click of windage knob (Figure 1, Item 5) moves the strike of the round 0.75 in. (1.90 cm) at 100 meters.

3. Obtain the proper sight picture by aligning the rear peep sight (Figure 1, Item 3) with front sight post (Figure 1, Item 6). Fire a three-round shot group at center mass of the zero target, maintaining the same aim point with each shot. Note the strike of the rounds and make windage and elevation adjustments accordingly.
4. Continue firing three-round shot groups, making windage and elevation adjustments as necessary until the shot group is center mass on the zero target.
5. Once the shot group is center mass, loosen the screw (Figure 1, Item 4) on the elevation scale (Figure 1, Item 1). Slide the elevation scale until the 100-meter range index line is aligned with the index line on the rear peep sight (Figure 1, Item 3), tighten the screw.
6. Confirm zero by setting the elevation scale (Figure 1, Item 1) to the 500-meter line and fire a three-round shot group at a 500-meter target.

END OF TASK

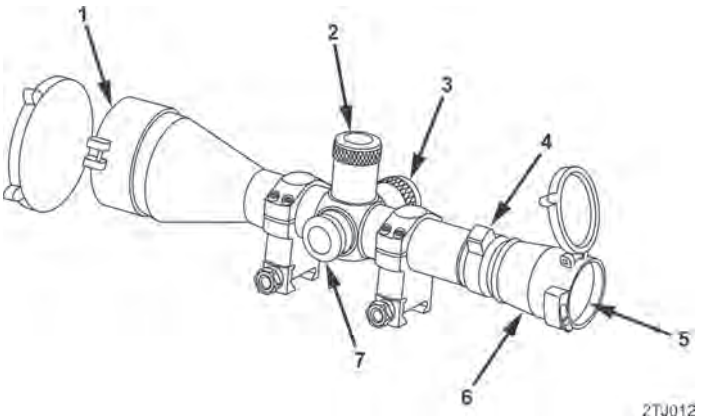

Figure 2. Daylight Scope.

DAYLIGHT SCOPE

There are seven basic parts to the daylight scope, the objective or front lens (Figure 2, Item 1), the elevation adjustment turret (Figure 2, Item 2), the windage adjustment turret (Figure 2, Item 3), the power selector ring (Figure 2, item 4), the eyepiece lock ring (Figure 2, Item 6), parallax adjustment turret (Figure 2, Item 7), and the eyepiece lens (Figure 2, Item 5).

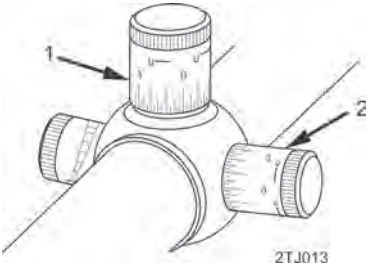

Figure 3. Live Fire Zeroing.

Live Fire Zero

1. Zero the scope on a known distance range on a zero target.
2. Assume a prone-supported firing position 100 meters from the target. Turn the elevation adjustment turret (Figure 3, Item 1) clockwise until it bottoms out. Once at the bottom, turn the elevation adjustment turret counterclockwise 34 minutes or 136 clicks. Turn the windage adjustment turret (Figure 3, Item 2) clockwise until it bottoms out. Once at the bottom, turn the windage adjustment turret counterclockwise 52 minutes or 208 clicks.
3. Fire three rounds at the center of the target, keeping the same aiming point each time and triangulate. Note the strike of the rounds and make windage and elevation adjustments accordingly. Continue firing three-round shot groups making windage and elevation adjustments accordingly. Continue firing three-round shot groups making windage and elevation adjustments as necessary until the shot group is center mass on zero target.

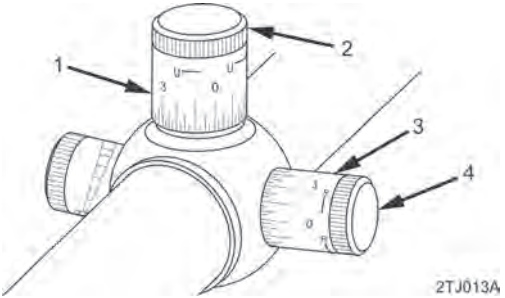

Figure 4. Windage and Elevation Knobs.

NOTE

Each click of windage or elevation equals 1/4 minute of angle (MOA). Therefore at 100 meters, 1 MOA equals approximately 1 inch.

4. Once the shot group is centered, loosen the screws on the elevation (Figure 4, Item 2) and windage adjustment dials (Figure 4, Item 4). Turn the elevation adjustment turret (Figure 4, Item 1) to the index line marked “1” and tighten screws. Turn the windage adjustment turret (Figure 4, Item 3) until the “0” on the windage adjustment turret is lined up with the windage index line and tighten screws.
5. After zeroing at 100 meters, confirm by setting the elevation adjustment turret (Figure 4, Item 1) to 500 meters and firing a three-round shot group at a 500-meter target.

Table 1. Estimates for Zeroing the Scope.

RANGE	CLICKS	MINUTE
100 (Zero)	136*	34*
200	26	6.5
300	7	1.75
400	7	1.75
500	6	1.5
600	9	2.25
700	12	3

DAYLIGHT SCOPE — Continued

Table 1. Estimates for Zeroing the Scope — Continued.

RANGE	CLICKS	MINUTE
800	16	4
900	18	4.5
1000	24	6
*From the bottom		

Table 1. lists estimates which may require individual situation changes.

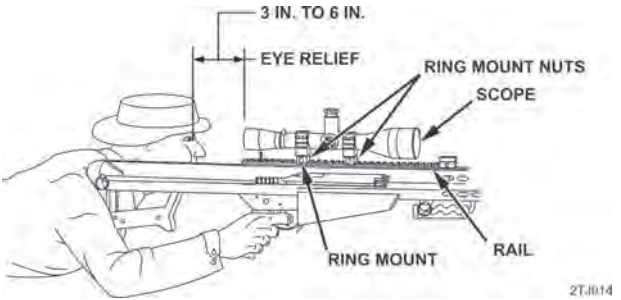

Figure 5. Eye Relief.

Eye Relief

WARNING

If the scope is mounted too far to the rear, the eyepiece can injure the shooter's brow. Shooting at an uphill angle also increases this hazard. Failure to comply may result in personnel injury.

NOTE

The daylight scope is manufacturer-mounted with the rear ring mount on slot 4 of the rail, torqued to 65 lb-in. (7.34 N•m). Always ensure the scope is mounted with a torque value of 65 lb-in. (7.34 N•m). Remove the ring mount from the rail using a 1/2-in. wrench turning counterclockwise. Tighten the ring mount nuts using only the preset 65 lb-in. (7.34 N•m) T-handle torque wrench.

Eye relief is always obtained from the prone position.

1. Mount the scope with the rear ring mount on slot 4 of the rail. Use T-handle torque wrench to torque ring mount nuts to 65 lb-in. (7.34 N•m). Hold the rifle in normal firing position. Set the scope to the highest possible magnification.
2. Move the scope slowly forward or rearward on the rail until a full field of view is seen (if necessary). Position scope here for rough eye relief. To achieve optimum eye relief, loosen the optic rings and slide the telescope tube forward or backward.

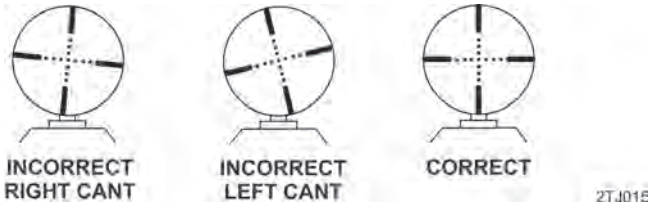

Figure 6. Scope Alignment.

NOTE

Remember that aiming uphill reduces eye relief.

3. Rotate the scope without disturbing the eye relief position, until the elevation adjustment dial is on the top of the scope.
4. From a firing position, check to be sure that the vertical hair of the reticle aligns with the vertical axis of the firearm. Misalignment will not affect the accuracy at short-to-moderate distances but it can diminish long range accuracy.

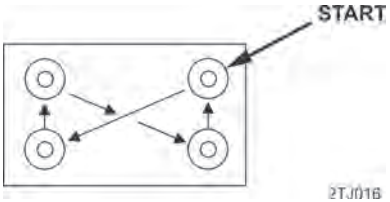

Figure 7. Tightening Sequence.

DAYLIGHT SCOPE — Continued

5. Tighten the ring screws evenly and securely when satisfied with eye relief. Start in one corner and tighten a small amount, then tighten the screw in the opposite corner, then the screw above/below, then across corner. Continue the pattern until all screws are tightened. This ensures an even tightening and prevents twisting of the scope.

Focusing The Reticle

1. Point the scope at a light-colored background object. With established eye relief, the reticle should appear sharp and crisp. If it does not, adjust the focus by means of the eyepiece.
2. Turn the eyepiece until the reticle appears very fuzzy, then turn eyepiece until the reticle appears clear and sharp.
3. When satisfied with the image of the reticle, turn the lock ring so that it rests firmly against the eyepiece.

Parallax

CAUTION

Do NOT lubricate the power selector ring. Failure to comply may result in weapon damage.

NOTE

Reticle should be focused before turning the side focus adjustment dial. If it is NOT, follow instructions for focusing the reticle.

Parallax is the apparent movement of the target relative to the reticle when eye is moved away from the center point of the eyepiece.

No numbers indicating distance appear on the dial as all adjustment is judged by the image itself.

To ensure reliable results, always fire from the prone position.

Look through the scope, concentrating on the center aiming point of the reticle. Move head slightly up and down. The aiming point should remain in exactly the same position against the target. If it moves, turn the focus adjustment dial until it becomes stable.

Windage And Elevation Adjustment

1. Set the scope to the highest power. Acquire the target. Fire one round.
2. Make appropriate adjustments to move center point of aim.

NOTE

Use center of bullet strike as a reference point for the final adjustments to windage and elevation. One click is equal to 1/4 MOA.

3. Fire a second round using the same point of aim, confirm bullet strike is the same as the point of aim. If not, continue adjustment until zeroed.

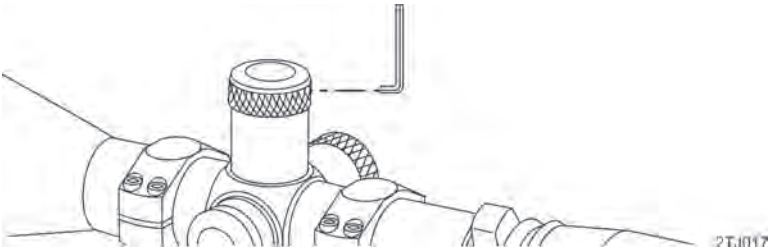

Figure 8. Setscrews.

NOTE

All dials on the scope either numbered or with an indicator can be repositioned to align the marked zero of the dial with the position indicator without changing the adjustment setting of the scope that was achieved when zeroing. This allows the shooter to know the original zero of the rifle in the event that further adjustments are required in the field.

4. To reposition the dials, remove the turret caps.
5. Loosen the setscrews that surround the top of the knob until the cylinder turns freely. Perform this step for elevation and windage adjustment knobs.
6. Loosen allen screws. Zero line on the cylinder and zero line on the cap must be aligned.
7. The power selector ring is located in front of the eyepiece assembly. Turn the ring to align the number indicating the desired magnification with the gold dot on the body of the scope. Tighten setscrews.

DIMENSION	MOA
A TO F	1.0
B	0.1
C	0.7
D	3.6
E	18.0

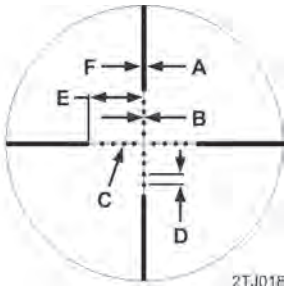

Figure 9. Estimating Range.

Use of Reticle to Estimate Range

1. The reticle for the M107 telescope can be used to estimate range when the size of the target is known. The following dimensions are related to MOA and can be used in range estimation. One mil = 3.438 MOA.
2. As a point of reference, the Mil-Dot “C” will cover a quarter at 100 meters. This means that at 200 meters, the quarter will be the size of 1/2 the dot “C”, at maximum power.

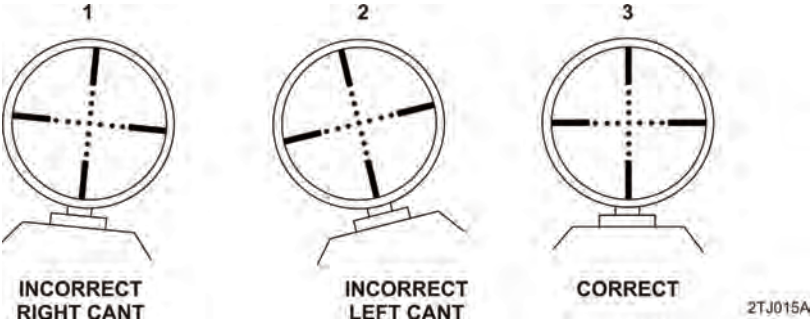

Figure 10. Level Adjustment.

DAYLIGHT SCOPE — Continued

Level Adjustment

1. Each time the rifle is fired, the vertical crosshair should be held in the vertical position. Canting the rifle to the left will cause the rifle to shoot to the right. Conversely, it will shoot left when the rifle is canted to the right. Obtain the correct shooting position.
2. Position 1 indicates the rifle is canted too far to the right, position 2 shows the rifle is canted too far to the left, and position 3 is the correct sight picture for the rifle held vertically.

END OF TASK

END OF WORK PACKAGE

OPERATOR MAINTENANCE

OPERATION UNDER UNUSUAL CONDITIONS

INITIAL SETUP:

References

WP 0011

EMERGENCY PROCEDURES — IMMEDIATE ACTION

NOTE

Unusual conditions are defined as any condition requiring special maintenance of the rifle. Perform the maintenance outlined for the climate that most applies to your operational area. Refer to WP 0011 for lubrication instructions.

An emergency condition exists when the magazine for the rifle has been lost or damaged and is not available.

In an emergency, the weapon may be fired without the magazine. A single cartridge may be inserted directly into the chamber. Insert round through magazine well into chamber. After insertion, close and lock the bolt to fire.

PERFORM SPORTS

CAUTION

If extensive corrosion is found and cleaning does not solve the problem, turn the complete weapon system in to the proper maintenance/supply channel. Failure to comply may result in equipment damage.

Immediate action is the prompt action taken by the user to correct a stoppage. The procedure for applying immediate action should become instinctive to the user, without the user attempting to discover the cause. It is important that the user apply immediate action instinctively to correct a stoppage.

Slap the magazine

Pull charging handle

Observe clear chamber

Release bolt forward

Tap seat the bolt

Squeeze the trigger

END OF WORK PACKAGE

CHAPTER 3 TROUBLESHOOTING PROCEDURES

OPERATOR MAINTENANCE

TROUBLESHOOTING INDEX

GENERAL

The symptom index can be used as a quick guide to troubleshooting. Common symptoms are listed in cycle of function order with a work package reference to the troubleshooting table where malfunctions and corrective actions are provided.

This manual cannot list all symptoms that may occur, nor all malfunctions and corrective actions. If a malfunction is not listed or is not corrected by listed corrective actions, notify organizational maintenance.

END OF WORK PACKAGE

OPERATOR MAINTENANCE

TROUBLESHOOTING PROCEDURES

INITIAL SETUP:

References

WP 0005
WP 0014

GENERAL

1. Check the mount. Ensure the scope is mounted securely to the rifle. Try, with bare hands, to twist the scope in the rings. Retighten the mounting system if there is movement.
2. Ensure that the weapon is properly assembled and the upper and lower receiver assemblies have positive retention of the midlock and rear lock pins.
3. Be sure to use proper ammunition, of the same bullet type, weight, and, preferably, lot number. Use of different types of ammunition may have different results and cause inaccuracy in adjustments.
4. Be sure that both the barrel and chamber are clean. Heavy grease on the rifle and copper fouling can diminish the accuracy of the rifle.

This work package lists common symptoms and malfunctions, which you may find during the operation or maintenance of the rifle, or its components. You should perform the corrective actions in the order listed.

TROUBLESHOOTING PROCEDURE

SYMPTOM

Failure to feed

MALFUNCTION

Sluggish action

CORRECTIVE ACTION

Clean and lubricate or (if cold) check for over lubrication.

MALFUNCTION

Improper seating of magazine

CORRECTIVE ACTION

Reinsert magazine properly (WP 0005).

SYMPTOM

Failure to chamber

MALFUNCTION

Damaged cartridge

CORRECTIVE ACTION

Step 1. Remove damaged cartridge.

Step 2. Recharge/reload (WP 0005).

MALFUNCTION

Dirty chamber

CORRECTIVE ACTION

Clear and clean chamber.

TROUBLESHOOTING PROCEDURE — Continued

SYMPTOM

Failure to lock or unlock

MALFUNCTION

Obstruction between firing pin and bolt

CORRECTIVE ACTION

Step 1. Disassemble and clean firing pin and bolt.

Step 2. Try different ammunition.

MALFUNCTION

Blown primer wedged between firing pin and bolt

CORRECTIVE ACTION

Evacuate weapon to maintainer maintenance.

SYMPTOM

Failure to fire

MALFUNCTION

Faulty ammunition

CORRECTIVE ACTION

Replace ammunition.

MALFUNCTION

Improper installation of firing mechanism

CORRECTIVE ACTION

Assemble firing mechanism properly.

MALFUNCTION

Broken firing pin

CORRECTIVE ACTION

Turn in firing pin for repair.

MALFUNCTION

Broken or weakened firing spring(s)

CORRECTIVE ACTION

Turn in firing spring for repair.

MALFUNCTION

Bent or broken cocking piece

CORRECTIVE ACTION

Turn in cocking piece for repair.

SYMPTOM

Failure to extract

MALFUNCTION

Broken extractor

CORRECTIVE ACTION

Replace extractor (WP 0014).

MALFUNCTION

Extractor does not move freely in slot

CORRECTIVE ACTION

Remove extractor and clean.

MALFUNCTION

Dirty chamber

CORRECTIVE ACTION

Clean Chamber.

SYMPTOM

Failure to eject

MALFUNCTION

Frozen or damaged ejector or ejector spring

CORRECTIVE ACTION

Turn in ejector spring or ejector spring for repair.

SYMPTOM

Very hard recoil

MALFUNCTION

Hot or faulty ammunition

CORRECTIVE ACTION

Step 1. Cool ammunition.

Step 2. Replace ammunition.

MALFUNCTION

Missing, loose, clogged, or damaged muzzle brake

CORRECTIVE ACTION

Turn in muzzle brake for repair.

TROUBLESHOOTING PROCEDURE — Continued

SYMPTOM

Failure to cock

MALFUNCTION

Worn, damaged, or missing parts of firing mechanism

CORRECTIVE ACTION

Evacuate weapon to maintainer maintenance.

END OF WORK PACKAGE

CHAPTER 4 MAINTENANCE INSTRUCTIONS

OPERATOR MAINTENANCE

PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) INTRODUCTION

GENERAL

Always observe the WARNINGS and CAUTIONS appearing in your PMCS table. WARNINGS and CAUTIONS appear before applicable procedures. You must follow these WARNINGS and CAUTIONS to prevent serious injury to yourself and others or to prevent your equipment from being damaged.

EXPLANATION OF COLUMN ENTRIES

ITEM NUMBER column. Numbers in this column are for reference. When completing DA Form 2404 (Equipment Inspection and Maintenance Worksheet), include the item number for the check/service indicating a fault. Item numbers also appear in the order that you must do checks and services for the intervals listed.

INTERVAL column. This column tells you when you must do the procedure in the procedure column. BEFORE procedures must be done before you operate or use the equipment for its intended mission. DURING procedures must be done during the time you are operating or using the equipment for its intended mission. AFTER procedures must be done immediately after you have operated or used the equipment.

ITEM TO BE CHECKED OR SERVICED column. This column lists the items to be checked or serviced.

PROCEDURE column. This column shows the procedure you must do to check or service the item listed in the ITEM TO BE CHECKED OR SERVICED column to know if the equipment is ready or available for its intended mission or for operation. You must do the procedure at the time stated in the interval column.

EQUIPMENT NOT READY/AVAILABLE IF: column. Information in this column tells you what faults will keep your equipment from being capable of performing its primary mission. If you do check/service procedures that show faults listed in this column, do not operate the equipment. Follow standard operating procedures for maintaining the equipment or reporting equipment failure.

END OF WORK PACKAGE

OPERATOR MAINTENANCE

PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS), INCLUDING LUBRICATION INSTRUCTIONS

INITIAL SETUP:

Tools and Special Tools

Five-Piece Cleaning Rod (WP 0023, Table 4, Item 10)

Material/Parts

Cleaner, Lubricant, and Preservative (CLP) (WP 0022, Item 8)

Lubricating Oil, Lubricant Small Arms (LSA) (WP 0022, Item 10)

Lubricating Oil, Lubricant Small Arms (with Teflon) (LSAT) (WP 0022, Item 14)

Materials/Parts — Continued

Lubricating Oil, Lubricant Arctic Weather (LAW) (WP 0022, Item 16)

Rag, Wiping (WP 0022, Item 18)

Swab, Small Arms Cleaning Patches (WP 0022, Item 19)

References

WP 0018

Table 1. Preventive Maintenance Checks and Services for Long Range Sniper Rifle, M107.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1	Before	M107	Hand function the weapon to ensure it is functional and visually check the exterior of the weapon and components for damage. Check components for cracks, breaks, and damage. If any faults are found, notify maintainer maintenance.	Parts missing, damaged, or broken.
2	Before	Muzzle Brake	Check to see that both retaining screws are secure and that muzzle brake is level with the ground.	Muzzle brake is loose or crooked.
3	Before	Barrel Assembly	Check to ensure bore is free of obstruction. Check for excess lubrication in bore area. Swab dry.	Bore is obstructed.
4	Before	Scope Mounting Hardware	Check to see that all hardware is tight and that scope is secured to weapon.	Scope is loose or hardware is missing.
5	Before	Lock Pins	Check to see that the rear and midlock pins are installed so that the retaining bearing is visible on the opposite side of the receiver.	Pin cannot be inserted far enough for bearing to be exposed. Pin missing.
6	Before	Magazine	Ensure that the magazine has free travel of the follower and that the magazine tube is not damaged (bent or cracked).	Free travel of follower is not present or magazine is damaged.

Table 1. Preventive Maintenance Checks and Services for Long Range Sniper Rifle, M107 — Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
7	Before and After	Magazine	Ensure magazine is clean.	Dirty, or has lubricant in it.
8	During	Muzzle Brake	Check to see that both retaining screws are secure and that muzzle brake is level with the ground.	Muzzle brake is loose or crooked.
9	During	Scope Mounting Hardware	Check to see that all hardware is tight and that scope is secured to weapon.	Scope is loose or hardware is missing.
10	During	Lock Pins	Check to see that the rear and midlock pins are installed so that the retaining bearing is visible on the opposite side of the receiver.	Pin cannot be inserted far enough for bearing to be exposed. Pin missing.
11	During	Magazine	Ensure that the magazine has free travel of the follower and that the magazine tube is not damaged (bent or cracked).	Free travel of follower is not present or magazine is damaged.
12	After	M107	Hand function the weapon to ensure it is functional and visually check the exterior of the weapon and components for damage. Check components for cracks, breaks, and damage. If any faults are found, notify maintainer maintenance.	Parts missing, damaged, or broken.

Table 1. Preventive Maintenance Checks and Services for Long Range Sniper Rifle, M107 — Continued.

ITEM NO.	INTERVAL	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
13	After	Muzzle Brake	Check to see that both retaining screws are secure and that muzzle brake is level with the ground.	Muzzle brake is loose or crooked.
14	After	Scope Mounting Hardware	Check to see that all hardware is tight and that scope is secured to weapon.	Scope is loose or hardware is missing.
15	After	Clean Barrel Bore	Clean chamber and barrel bore immediately after firing.	Chamber and/or barrel obstructed.
16	After	Lock Pins	Check to see that the rear and midlock pins are installed so that the retaining bearing is visible on the opposite side of the receiver.	Pin cannot be inserted far enough for bearing to be exposed. Pin missing.
17	After	Magazine	Ensure that the magazine has free travel of the follower and that the magazine tube is not bent or cracked.	Free travel of follower is not present or magazine is damaged.

LUBRICATION INSTRUCTIONS

WARNING

Injury may result if Cleaner, Lubricant, and Preservative (CLP) comes in contact with eyes or unprotected skin. Always wear eye protection when working with this material. CLP can give off flammable and harmful vapors. Avoid long exposure to vapors. Keep away from open fire, and use in a well-ventilated area. Failure to comply may result in personnel injury. Seek medical attention in event of injury.

Never mix lubricants on the weapon, always completely remove one lubricant before using another. Mixing lubricants can cause viscosity change. Failure to comply may result in personnel injury or weapon damage.

NOTE

When servicing this weapon, performing maintenance, or disposing of materials such as cleaning fluids, cleaning compounds, lubricants, and sealing compounds as well as items contaminated with these substances (such as cleaning rags) consult your unit/local hazardous waste disposal center or safety office for local regulatory guidance. If further information is needed, please contact The Army Environmental Hotline at 1-800-872-3845 / OCONUS: 410-436-1244 or online at http://aec.army.mil/usaec/contactus.html. Accidental or intentional introduction of contaminants into the environment violates military, state, and federal regulations. Failure to comply may adversely affect the public or environment.

1. LSAT, LSA, and CLP are the authorized lubricants to use on your rifle at normal temperatures to -10°F (-23°C). At temperatures below -10°F (-23°C) use LAW.

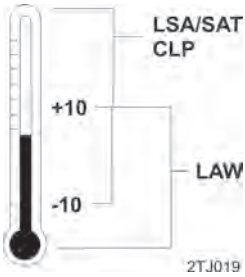

Figure 1. Temperature Range and Oil Type.

NOTE

Remember to remove excessive oil from the bore before firing.

2. Lightly Lube — A film of oil barely visible to the eye.
3. Generously Lube — Heavy enough so that it can be spread with finger.

Climates

CAUTION

When operating rifle in extremely cold climates, clean and lubricate the rifle inside at room temperature, if possible, using LAW. Failure to comply may result in equipment damage.

1. Hot, Dusty, and Sandy Areas.
   a. Clean often. Lightly lube.
   b. Wipe oil from exposed surfaces with clean wiping rag (WP 0022, Item 18).
   c. Keep sand out of parts.
2. Extremely Cold Climate.
   a. Use LAW (WP 0022, Item 16).
   b. Keep dry.
   c. Use LAW (WP 0022, Item 16) lightly.

3. Hot, Wet Climate.
   a. Use CLP, LSA, or LSAT (WP 0022, Item 8, 10, or 14) and inspect often.
   b. Use CLP, LSA, or LSAT (WP 0022, Item 8, 10, or 14) lightly.
   c. Keep rifle dry.

External Surfaces

Put CLP, LSA, or LSAT (WP 0022, Item 8, 10, or 14) on a clean swab (WP 0022, Item 19) and generously lubricate:

- Bolt – locking lugs and cam slot.
- Bolt Carrier – receiver bearing surfaces.
- Barrel – bolt locking surfaces.
- Receiver – rails that bolt carrier rides on.

All Other Areas

NOTE

LSAT, a multipurpose lubricant containing Teflon, has displayed exceptional lubrication performance as well as resistance to collecting sand.

Lightly lubricate — including bore.

Medium-Heavy Lubrication

Generously lubricate (meaning obvious to visual inspection) the following areas:

- Behind the bolt locking lugs.
- Bolt body.
- Bolt cam pin.
- Moving parts of the bolt and carrier assemblies.
- The receiver rails which the bolt and carrier assemblies ride, in the lower receiver assembly.
- The barrel extension where it rides in the weapon.

Before Firing

1. Using a clean wiping rag (WP 0022, Item 18), wipe bore dry.
2. Ensure the weapon is properly lubricated.
3. After exposure to water, make sure the rifle is dry before lubricating. Disassemble, clean, lightly oil and assemble as soon as possible.
4. In extreme cold, perform the following steps:
   a. When operating rifle in extremely cold climate, clean and lubricate rifle inside at room temperature if possible.
   b. Apply a light coat of LAW (WP 0022, Item 16) to all functional parts.
   c. To prevent freezing, keep the rifle covered when moving from a warm to a cold area. This will allow gradual cooling.
   d. Always keep the rifle dry.
   e. Keep ammunition dry; moisture will cause malfunctions. Do not lubricate ammunition.
   f. Always keep snow out of the bore of the barrel. If snow should get into the bore, clean the bore before firing, using a swab (WP 0022, Item 19) and five-piece cleaning rod (WP 0023, Table 4, Item 10).

NOTE

Dust and sand can get into rifle and cause malfunctions and excessive wear on component contact surfaces during firing.

5. In hot, dry climates, perform the following steps:
   a. Keep the rifle covered when possible.
   b. Use CLP, LSA, or LSAT (WP 0022, Item 8, 10, or 14) sparingly.

LUBRICATION INSTRUCTIONS — Continued

6. For heavy rain and fording operations — all climates, perform the following steps:
   a. Perform maintenance in accordance with cleaning procedures in WP 0018 and apply a thin coat of CLP, LSA, or LSAT (WP 0022, Item 8, 10, or 14). Do NOT lubricate ammunition.
   b. Always attempt to keep rifle dry.
   c. Always drain any water from barrel prior to firing. Dry the bore with a swab (WP 0022, Item 19) and five-piece cleaning rod (WP 0023, Table 4, Item 10).
7. For hot, wet climates, perform the following steps:
   a. Perform maintenance more frequently. Inspect hidden surfaces for corrosion. If corrosion is found, clean and lubricate with CLP, LSA, or LSAT (WP 0022, Item 8, 10, or 14).
   b. To help prevent corrosion, remove handprints with wiping rag (WP 0022, Item 18). Dry off and then lubricate the rifle.

END OF WORK PACKAGE

OPERATOR MAINTENANCE

INSPECTION OF INSTALLED ITEMS

INITIAL SETUP:

NOT APPLICABLE

INTRODUCTION

An inspection shall be performed of components, assemblies, or parts installed on the M107 Sniper Rifle. The purpose of this inspection is to determine if the item is damaged or deteriorated to the extent that it should be replaced or repaired. Table 1 lists the required inspections and acceptable/unacceptable conditions for the M107 Sniper Rifle.

Table 1. Inspection of Installed Items on M107 Sniper Rifle.

ASSEMBLY	ITEM INSPECTED	PROCEDURE	CONDITION
Upper Receiver Assembly	Upper Receiver Assembly	Visual inspection (special attention should be paid to the hinge lip at the front of the receiver).	Upper receiver assembly should NOT be cracked, bent, or burred.
	Barrel Springs	Visual inspection.	Barrel springs must NOT be overstretched, and each coil should be tight, with NO spaces between coils when barrel springs are relaxed.
	Barrel	Visual inspection.	Barrel should be clean and free of obstruction.
	Impact Bumpers	Visual inspection.	Impact bumpers should be in good condition, not frayed, cracked, or twisted.
	Front Sight	Traverse through complete range of motion.	Should have fluid motion throughout traverse and have positive retention in the upright position.

Table 1. Inspection of Installed Items on M107 Sniper Rifle — Continued.

ASSEMBLY	ITEM INSPECTED	PROCEDURE	CONDITION
Barrel Assembly	Muzzle Brake	Visual inspection and check for looseness.	Muzzle brake should be tight and fully screwed on, and properly positioned.
	Scope Mountings	Visual inspection and check for looseness.	Scope mountings should be tight and in good condition.
	Rear Sight	Traverse rear sight through complete range and lightly lubricate rear sight to prevent corrosion.	Rear sight should traverse through complete range without binding or stoppage.
Bolt Assembly	Extractor and Ejector	Check spring tension and visually inspect for chips or wear.	Extractor and ejector springs must NOT be overstretched. There should be no chips and wear on the extractor or ejector.
	Firing Pin	Push the bolt into the carrier. Use the midlock pin to de-cock before inspecting firing pin protrusion. Check firing pin hole (on bolt face) for erosion/pitting.	Firing pin should not have erosion/pitting.

Table 1. Inspection of Installed Items on M107 Sniper Rifle — Continued.

ASSEMBLY	ITEM INSPECTED	PROCEDURE	CONDITION
Bolt Assembly — Continued	Bolt Latch	Visual inspection.	Bolt latch should not show any deformation.
	Sear	Swing the cocking lever forward.	The sear should capture the firing pin extension before the cocking lever is fully depressed.
Carrier Assembly	Bolt Assembly	With firing mechanism de-cocked, depress bolt latch and manually work the bolt in and out, feeling for any roughness, which may indicate wear, corrosion, or grit in the carrier.	Bolt assembly should be smooth.
Lower Receiver Assembly	Mainspring	With the bolt and carrier assemblies in position, pull them rearward and check to see that the mainspring moves freely (full travel).	If there is ANY binding, take the weapon to the armorer for further inspection.

Table 1. Inspection of Installed Items on M107 Sniper Rifle — Continued.

ASSEMBLY	ITEM INSPECTED	PROCEDURE	CONDITION
Lower Receiver Assembly — Continued	Mainspring Housing	Hold the bolt and carrier assemblies back and down approximately 1/4 in. inside the receiver. With the thumb safety on FIRE, pull the trigger.	Firing mechanism should function. If the housing is bent, the bolt and carrier assemblies will rise as the trigger is pulled, preventing proper function.
	Lower Receiver Assembly	Visual inspection.	Lower receiver assembly should NOT be cracked, bent, or burred.
	Bipod Assembly	Check bipod assembly and mounting hardware.	Legs should extend and hardware should function properly.

END OF TASK

END OF WORK PACKAGE

OPERATOR MAINTENANCE

FIELDSTRIPPING

INITIAL SETUP:

NOT APPLICABLE

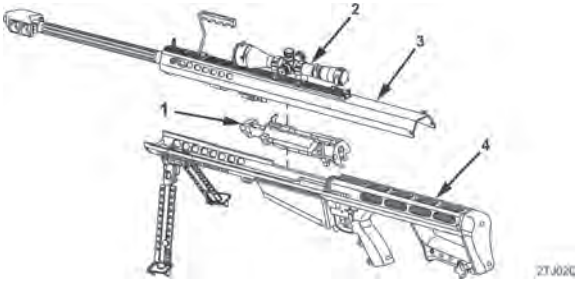

Figure 1. Rifle Components.

INTRODUCTION

NOTE

Unless there is something wrong with the telescope, it will not be removed for normal fieldstripping.

The M107 is fieldstripped into four major components: upper receiver assembly (Figure 1, Item 3), lower receiver assembly (Figure 1, Item 4), bolt and bolt carrier assemblies (Figure 1, Item 1), and the telescope sight assembly (Figure 1, Item 2).

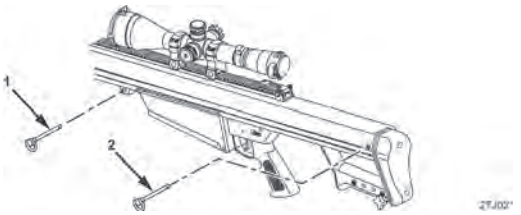

Figure 2. Rear and Midlock Pins.

FIELDSTRIPPING

NOTE

Ensure that the weapon is unloaded and on SAFE before performing these procedures.

1. Remove rear lock (Figure 2, Item 2) and midlock (Figure 2, Item 1) pins.

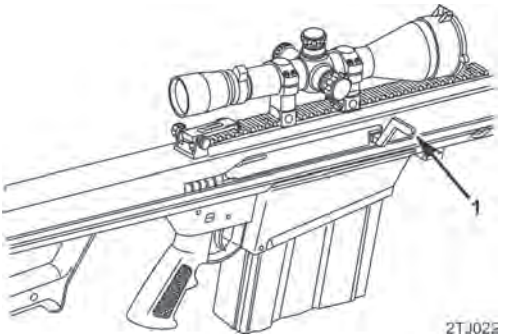

Figure 3. Positioning the Bolt Carrier.

FIELDSTRIPPING — Continued

2. Grasp charging handle (Figure 3, Item 1) on the bolt carrier assembly and pull to the rear until the bolt clears the barrel extension.

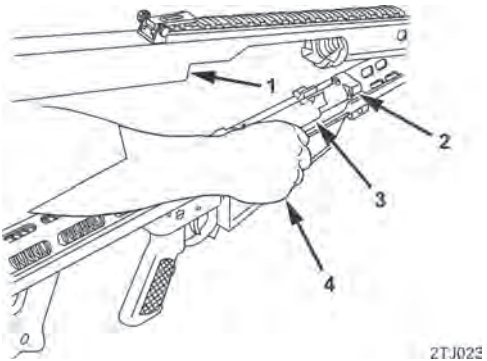

Figure 4. Removing Upper Receiver Assembly.

FIELDSTRIPPING — Continued

3. While holding the charging handle (Figure 4, Item 4) to the rear, lift the back end of the upper receiver assembly (Figure 4, Item 1) until it clears the bolt (Figure 4, Item 2). Allow the bolt carrier assembly (Figure 4, Item 3) to return to its forward position slowly.

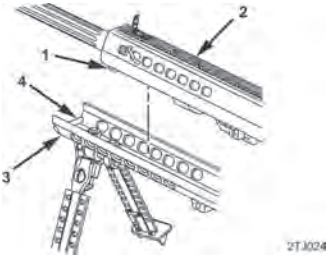

Figure 5. Removing Upper Receiver Assembly from Lower Receiver Assembly.

FIELDSTRIPPING — Continued

4. Disengage front hook (Figure 5, Item 1) from the front hook pin (Figure 5, Item 4) on the lower receiver (Figure 5, Item 3) and lift upper receiver assembly (Figure 5, Item 2) clear of lower receiver assembly.

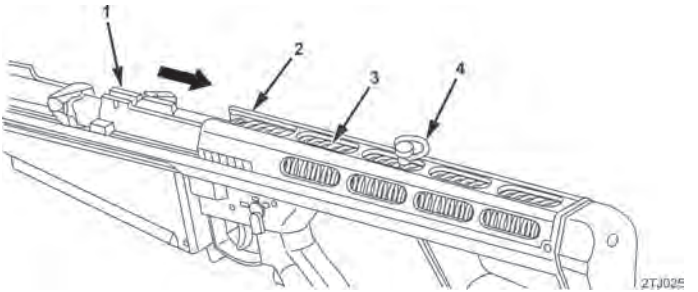

Figure 6. Inserting Rear Lock Pin.

WARNING

Buffer and buffer spring are under heavy spring tension. Do not release springs suddenly. Failure to comply may result in personnel injury.

5. Pull the bolt carrier (Figure 6, Item 1) rearward and insert the rear lock pin (Figure 6, Item 4) through the buffer (Figure 6, Item 2) and buffer spring (Figure 6, Item 3).

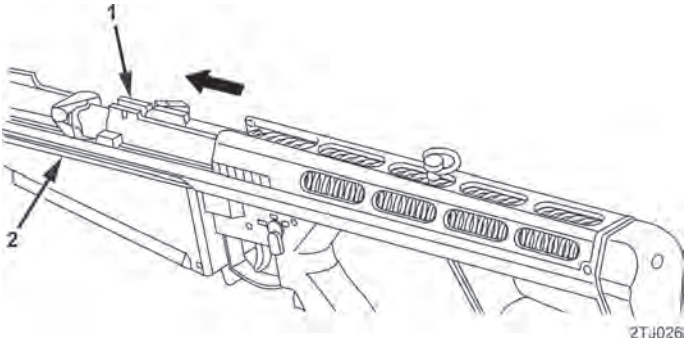

Figure 7. Removing Bolt and Carrier Assembly.

FIELDSTRIPPING — Continued

CAUTION

Remove the bolt carrier from the lower receiver and ensure carrier is completely forward of the housing before lifting bolt. Failure to comply may result in weapon damage.

6. Pull the bolt carrier assembly (Figure 7, Item 1) forward gently and lift out of the lower receiver assembly (Figure 7, Item 2).

END OF TASK

END OF WORK PACKAGE

OPERATOR MAINTENANCE

EXTRACTOR MAINTENANCE

INITIAL SETUP:

Tools and Special Tools

Deployment Tool Kit (WP 0023, Table 4, Item 6)

Equipment Condition

Weapon is fieldstripped (WP 0013)

Bolt assembly removed from bolt and carrier assembly (WP 0017)

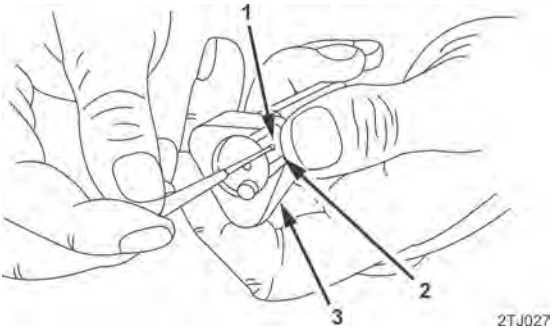

Figure 1. Removing Extractor.

REMOVAL

WARNING

Always point the bolt away from face and eyes to avoid flying parts. Failure to comply may result in personnel injury.

CAUTION

Cover plunger and plunger spring with thumb while sliding extractor out of slot. Failure to comply may result in extractor loss or damage.

NOTE

Perform Removal procedure only on extractor, extractor plunger, or extractor spring failure.

1. To remove the extractor (Figure 1, Item 2) from the bolt (Figure 1, Item 3), depress the extractor plunger by inserting a 1/16-in. punch through the extractor hole (Figure 1, Item 1).

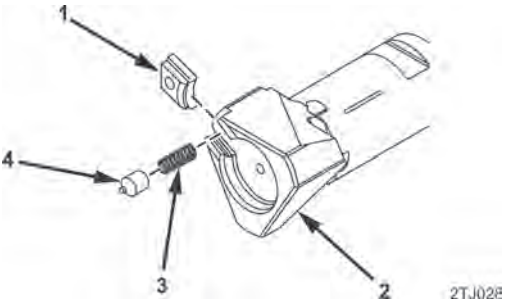

Figure 2. Extractor Assembly.

REMOVAL — Continued

2. Slide the extractor (Figure 2, Item 1) out of the slot. Remove extractor plunger (Figure 2, Item 4) and extractor spring (Figure 2, Item 3). Inspect all components for damage visually.

END OF TASK

INSTALLATION

1. Insert extractor spring (Figure 2, Item 3) and extractor plunger (Figure 2, Item 4) into bolt (Figure 2, Item 2).
2. Slide the extractor (Figure 2, Item 1) into the slot.

END OF TASK

FOLLOW-ON TASKS

1. Bolt assembly installed to bolt and carrier assembly (WP 0017)
2. Assemble the weapon (WP 0019)

END OF WORK PACKAGE

OPERATOR MAINTENANCE

MAINSPRING AND MAINSPRING BUFFER MAINTENANCE

INITIAL SETUP:

Equipment Condition

Weapon is fieldstripped (WP 0013)

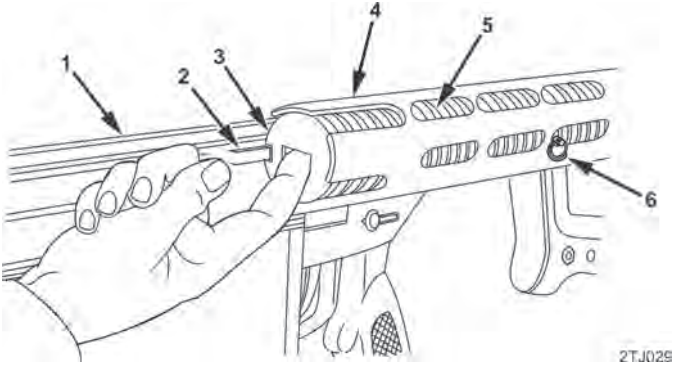

Figure 1. Removing Mainspring Buffer and Mainspring.

REMOVAL

WARNING

Buffer and buffer spring are under heavy spring tension. Use caution when removing. Failure to comply may result in personnel injury.

1. Use your finger to push the mainspring buffer (Figure 1, Item 3) to the rear and place the rear lock pin (Figure 1, Item 6) through the coils of the mainspring (Figure 1, Item 5) and the ports in the mainspring housing (Figure 1, Item 4).
2. Place your finger into the slot on the lower end of mainspring buffer (Figure 1, Item 3), and turn the mainspring buffer so that the groove on the flange lines up with the buffer stop (Figure 1, Item 2) on the lower receiver assembly (Figure 1, Item 1). Remove the rear lock pin (Figure 1, Item 6). Remove the mainspring buffer (Figure 1, Item 3) and mainspring (Figure 1, Item 5) slowly and carefully.

END OF TASK

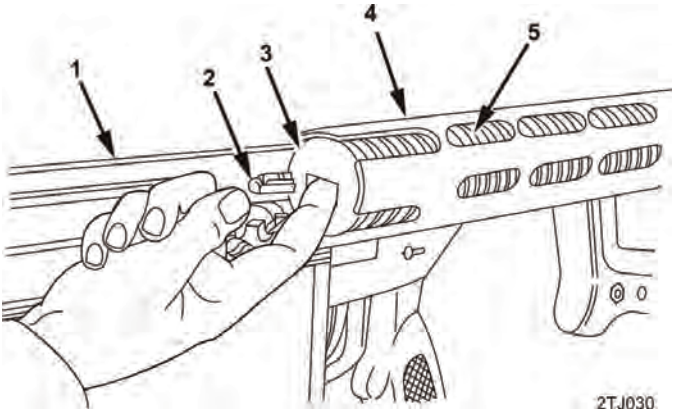

Figure 2. Installing Mainspring Buffer and Mainspring.

INSTALLATION

1. Slide the mainspring (Figure 2, Item 5) into the lower receiver assembly (Figure 2, Item 1). Place the mainspring buffer (Figure 2, Item 3) into the mainspring. Guide the mainspring into the housing (Figure 2, Item 4) until the mainspring buffer is even with the housing. Place your finger into the slot on the mainspring buffer, and turn the mainspring buffer so that the groove in its flange lines up with the buffer stop (Figure 2, Item 2) on the lower receiver assembly.

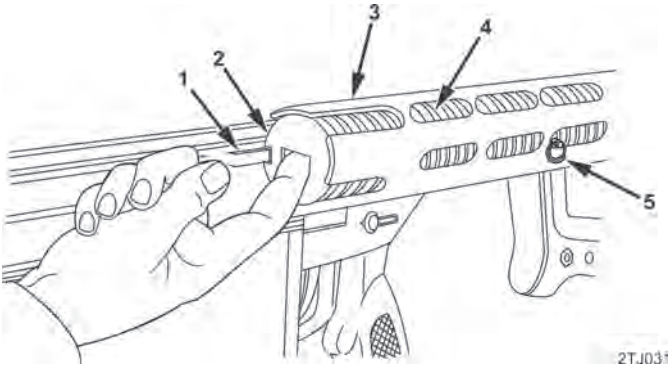

Figure 3. Securing Mainspring Buffer and Mainspring.

INSTALLATION — Continued

2. Push the mainspring buffer (Figure 3, Item 2) to the rear of the housing (Figure 3, Item 3) and secure it by placing the rear lock pin (Figure 3, Item 5) through coils of the mainspring (Figure 3, Item 4) and the ports in the mainspring housing. Use your finger to ensure that the groove and slot are NOT aligned. Remove the rear lock pin. Ease off the pressure until the mainspring buffer stops on the buffer stop (Figure 3, Item 1).

END OF TASK

FOLLOW-ON TASK

Assemble the weapon (WP 0019)

END OF WORK PACKAGE

OPERATOR MAINTENANCE

BARREL MAINTENANCE

INITIAL SETUP:

Equipment Condition

Weapon is fieldstripped (WP 0013)

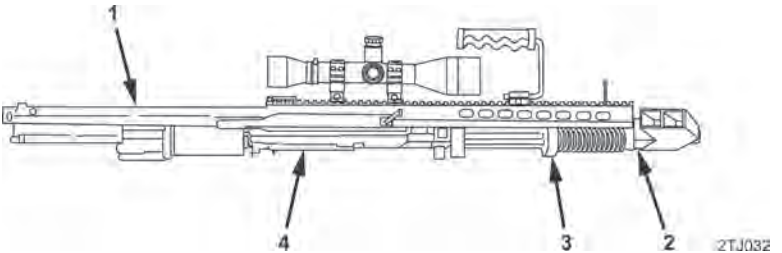

Figure 1. Barrel and Upper Receiver Assembly.

ASSEMBLY

1. Pick up the upper receiver assembly carefully (Figure 1, Item 1). The barrel (Figure 1, Item 4) will be nested inside the receiver for compact storage and transit. Move the impact bumpers (Figure 1, Item 3) into position on either side of the receiver's central barrel bushing, so that they rest snugly against the bushing.
2. Align the barrel (Figure 1, Item 4) so that its feed ramp (slanted entry to the firing chamber) is on the bottom. Keep fingers away from the barrel and hold the upper receiver assembly (Figure 1, Item 1) horizontally, then tilt it in the direction of the muzzle (Figure 1, Item 2). The barrel should fall into place, at its full forward extension, into the upper receiver assembly.

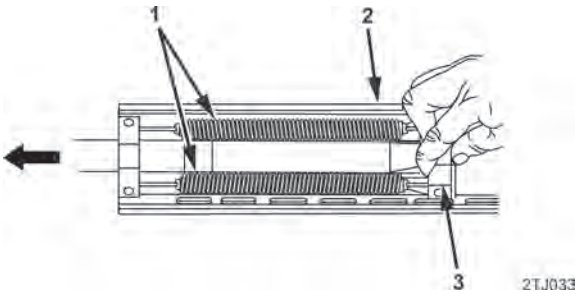

Figure 2. Installing the Barrel Key.

ASSEMBLY — Continued

WARNING

The tension on the barrel springs is about 70 lb (31.8 kg), which may cause the springs to release suddenly. Use care to not release the springs suddenly. Failure to comply may result in personnel injury.

Avoid incomplete or improper assembly. Failure to comply may result in personnel injury.

3. The barrel springs (Figure 2, Item 1) at the front of the upper receiver assembly (Figure 2, Item 2) are held together by the barrel key (Figure 2, Item 3) which acts as a spring yoke. Maintain the downward tilt of the upper receiver assembly (to keep the barrel in place), firmly grasp the barrel key—not the springs—and pull it into place on the forward slot of the barrel. Work the barrel key from side to side until it is firmly seated in the barrel slot. The upper receiver assembly is now fully assembled.

END OF TASK

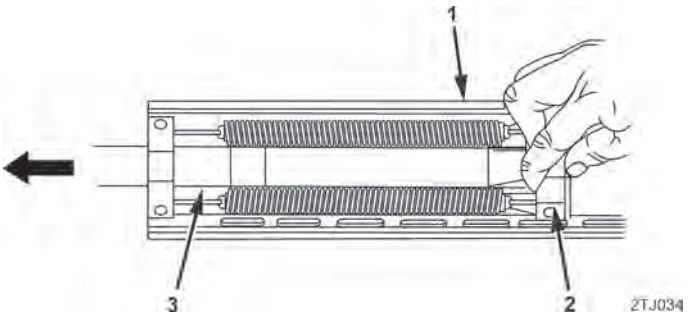

Figure 3. Removing the Barrel Key.

STORAGE

WARNING

Do not pull on the barrel springs to remove the barrel key. Doing so may damage the springs. The barrel spring is under tension. Failure to comply may result in personnel injury and weapon damage.

1. To nest the barrel (Figure 3, Item 3) for storage and transit, it is necessary to remove the barrel key (Figure 3, Item 2) from the barrel key slot.
2. Withdraw the barrel key (Figure 3, Item 2) from the slot in the barrel (Figure 3, Item 3) by slowly working it out. Slide the barrel out the rear of the upper receiver assembly (Figure 3, Item 1).

END OF TASK

FOLLOW-ON TASK

Assemble the weapon (WP 0019)

END OF WORK PACKAGE

OPERATOR MAINTENANCE

BOLT AND CARRIER ASSEMBLIES MAINTENANCE

INITIAL SETUP:

Tools and Special Tools

Deployment Tool Kit (WP 0023, Table 4, Item 6)

Equipment Condition

Weapon is fieldstripped (WP 0013)

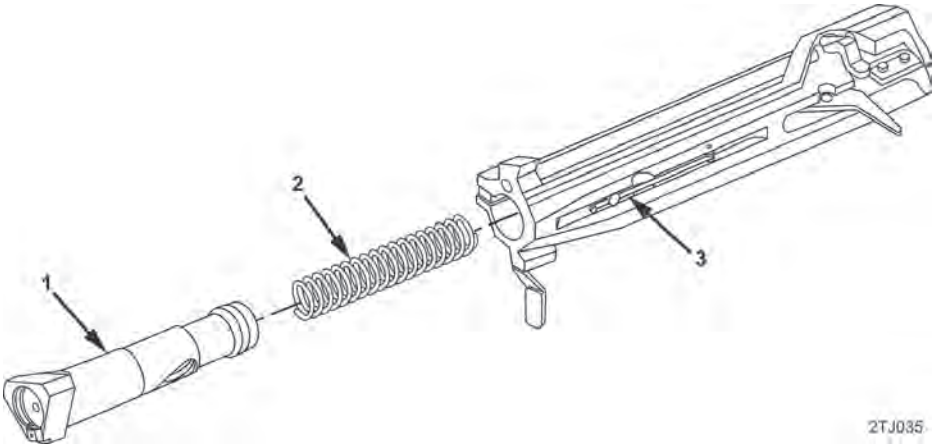

Figure 1. Bolt and Bolt Carrier Assembly.

DISASSEMBLY

WARNING

If the spring-loaded cam is lifted too far during disassembly, the spring may lose tension. If this occurs, the weapon could malfunction, or fire when unlocked. Failure to comply may result in personnel injury or death.

1. If the bolt assembly (Figure 1, Item 1) and bolt spring (Figure 1, Item 2) are being removed separately, begin by using the rear lock pin or a 1/8-inch punch to disengage the cam pin assembly (Figure 1, Item 3).

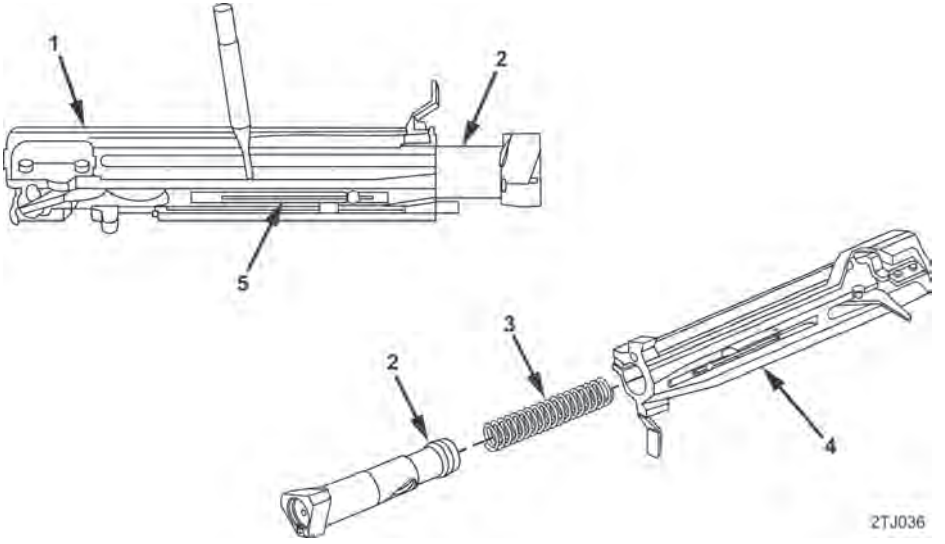

Figure 2. Removing Bolt Assembly.

DISASSEMBLY — Continued

2. Lift or pry the cam pin spring (Figure 2, Item 5) up just far enough to clear the cam groove. Depress the bolt latch (Figure 2, Item 4) on its rearward portion. At this point the bolt assembly (Figure 2, Item 2) should spring forward. Grasp the bolt assembly and remove it from the carrier (Figure 2, Item 1), being careful not to lose or deform the bolt spring (Figure 2, Item 3).

END OF TASK

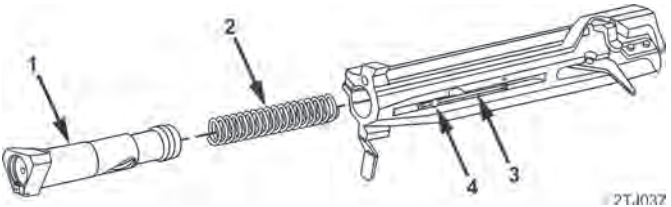

Figure 3. Installing Bolt Assembly.

ASSEMBLY

While lifting cam pin assembly (Figure 3, Item 3), insert the bolt assembly (Figure 3, Item 1) into position. The bolt assembly must be compressed against the bolt spring (Figure 3, Item 2) until the cam (Figure 3, Item 4) slips into the cam groove. Release cam pin assembly.

END OF TASK

FOLLOW-ON TASK

Assemble the weapon (WP 0019)

END OF WORK PACKAGE

OPERATOR MAINTENANCE

CLEANING INSTRUCTIONS

INITIAL SETUP:

Tools and Special Tools

Deployment Tool Kit (WP 0023, Table 4, Item 6)

Deployment Parts Kit (WP 0023, Table 4, Item 7)

Deployment Cleaning Kit (WP 0023, Table 4, Item 8)

Five-Piece Cleaning Rod (WP 0023, Table 4, Item 10)

Optics Cleaning Kit (WP 0023, Table 4, Item 9)

Materials/Parts

Brush, Dusting, Lens and Photographic Negative, Camel Hair (WP 0022, Item 6)

Cleaner, Lubricant, and Preservative (CLP) WP 0022, Item 8)

Isopropyl Alcohol (WP 0022, Item 9)

Lubricating Oil, Lubricant Small Arms (LSA) (WP 0022, Item 10)

Materials/Parts — Continued

Lubricating Oil, Lubricant Small Arms with Teflon (LSAT) (WP 0022, Item 14)

Lubricating Oil, Lubricant Arctic Weather (LAW) (WP 0022, Item 16)

Rag, Wiping (WP 0022, Item 18)

Swab, Small Arms Cleaning Patches (WP 0022, Item 19)

References

WP 0017

Equipment Condition

Weapon is fieldstripped (WP 0013)

CLEANING INSTRUCTIONS

WARNING

Injury may result if isopropyl alcohol or CLP comes in contact with eyes or unprotected skin. Always wear eye protection when working with these materials. These materials can give off flammable and harmful vapors. Avoid long exposure to vapors. Keep away from open fire, and use in a well-ventilated area. Failure to comply may result in personnel injury. Seek medical attention in event of injury.

NOTE

When servicing this weapon, performing maintenance, or disposing of materials such as cleaning fluids, cleaning compounds, lubricants, and sealing compounds as well as items contaminated with these substances (such as cleaning rags) consult your unit/local hazardous waste disposal center or safety office for local regulatory guidance. If further information is needed, please contact The Army Environmental Hotline at 1-800-872-3845 / OCONUS: 410-436-1244 or online at http://aec.army.mil/usaec/contactus.html. Accidental or intentional introduction of contaminants into the environment violates military, state, and federal regulations. Failure to comply may adversely affect the public or environment.
The rifle should be cleaned and lubricated as soon as possible after each shooting session, to prevent the corrosive effects of moisture, buildup of debris, grit, and carbon build up in the action and barrel.

Cleaning the Chamber

Use deployment cleaning kit (WP 0023, Table 4, Item 8) to insert a section of the five-piece cleaning rod (WP 0023, Table 4, Item 10) through the ratchet handle of the chamber brush. Apply cleaning compound to the brush and vigorously scrub the chamber. Turn the cable and brush in a clockwise direction in order to remove residue from the corner of the neck.

CLEANING INSTRUCTIONS — Continued

Cleaning the Optics

CAUTION

Use extreme care to avoid scratching the lenses. Do not allow solvents to touch the lenses. Failure to comply may result in equipment damage.

1. Remove dust, lint, and dirt from the lens and exterior of the scope using a clean camel hair artist brush.
2. Breathe heavily on the lens, to remove smudges. Wipe off moisture with lens paper. If lens paper is not available, use a soft, clean, dry cloth.
3. Keep all hex screw fittings clear of mud and dirt. If they become clogged, use a safety pin or similar item to dig out the debris.
4. Keep lens free of oil and grease. Use isopropyl alcohol with lens paper on the lens to remove fingerprints, oil spots, etc. Pat the lens, do not scrub.
5. Apply a light coat of lubricant to the scope body after cleaning.

Cleaning the Muzzle and Muzzle Brake

1. Attach the T-handle body on one end of the cleaning cable. Insert the rod handle through the hole in the T-handle body. Pass the opposite end of the cable through the muzzle end of the barrel until the end exits the chamber.
2. Attach the cleaning tip with two patches dipped in cleaning compound. Pull the patches out through the muzzle to remove powder residue. Repeat with the bore brush dipped in cleaning compound. Attach two clean patches to the cleaning tip. Pull clean patches out through the muzzle end repeatedly until they come out clean.

3. Clean the muzzle brake with a small brush and CLP. It is best to clean the muzzle brake at the same time the barrel is being cleaned, as the CLP will help in loosening the carbon that builds up on the interior walls.

Cleaning the Bolt Assembly

Clean the bolt face with CLP. Use a brush and scraper to remove carbon and brass shavings from both the extractor and the ejector. Depress the ejector and extractor by hand to test their smooth motion. If they hang up or their motion is not smooth, remove them and clean the parts, springs, and holes (WP 0017). Apply lubrication before assembly, and test their motion by hand.

Cleaning the Magazine

WARNING

Wear eye protection to prevent injury from spring-loaded parts, particularly when removing the magazine base plate. Failure to comply may result in personnel injury.

NOTE

Disassembling the magazine is not recommended as a matter of routine maintenance, but it may become necessary for repairs.

1. Hold magazine tube upside down on a firm surface and place end of 1/8-in. punch in hole located on base plate. Pry upwards gently to clear locking flange on base plate, and slide base plate off magazine tube. (It may be necessary to tap base plate a few times with punch to get it started).

CLEANING INSTRUCTIONS — Continued

2. Control magazine spring as base plate is removed. Withdraw magazine spring and magazine follower from magazine tube.
3. Wipe clean all parts of magazines.

WARNING

Wear eye protection to prevent injury from spring-loaded parts, particularly when removing the magazine base plate. Failure to comply may result in personnel injury.

4. Ensure that loop of magazine spring is around protrusion located on bottom of magazine follower.
5. Install magazine follower and magazine spring into magazine tube. Secure with base plate.
6. After cartridge magazine has been reassembled, check for proper functioning by loading it with five dummy rounds and pushing downward on the dummy rounds. They should move freely without binding.

END OF TASK

FOLLOW-ON TASK

Assemble the weapon (WP 0019)

END OF WORK PACKAGE

OPERATOR MAINTENANCE

ASSEMBLY INSTRUCTIONS

INITIAL SETUP:

NOT APPLICABLE

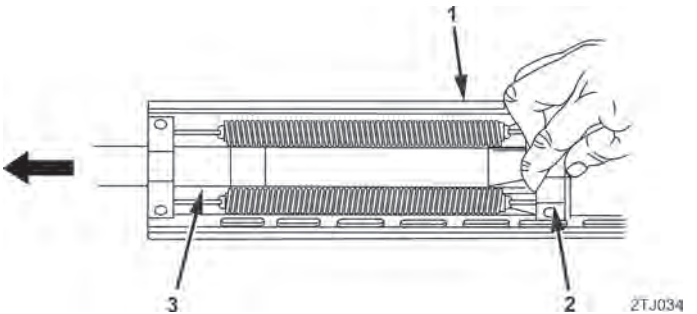

Figure 1. Barrel and Upper Receiver Assembly.

ASSEMBLY

1. Pick up upper receiver carefully. The barrel is nested inside it for compact storage. Slide impact barrel bumper into position on barrel. Align barrel so that its feed ramp (slanted entry to firing chamber) is to the bottom.
2. Hold upper receiver horizontally, then tilt down muzzle end. The barrel should fall into place at its full forward position in upper receiver.

WARNING

Tension on the barrel springs is about 70 lb (31.8 kg), which may cause the springs to release suddenly. Do not release springs suddenly. Failure to comply may result in personnel injury. Incomplete or improper assembly may result in injury. Failure to comply may result in personnel injury.

3. Maintain the downward tilt of upper receiver (Figure 1, Item 1) to keep barrel in place. Grasp barrel key (Figure 1, Item 2) firmly — not springs — and pull into place on slot of barrel (Figure 1, Item 3). Work barrel key from side to side until it is fully seated in barrel slot. Upper receiver is now fully assembled.

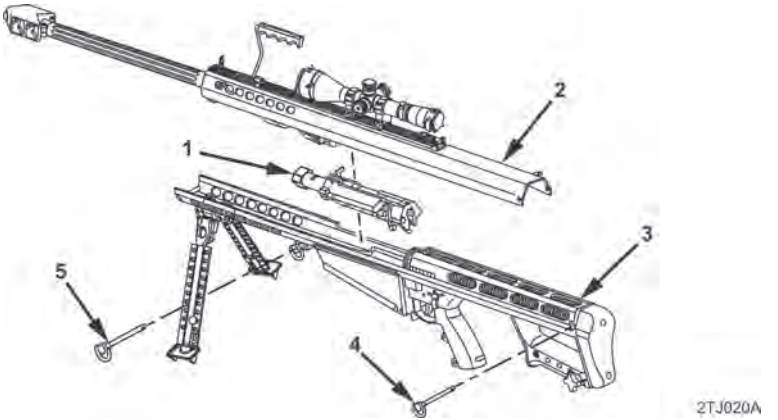

Figure 2. Long Range Sniper Rifle.

ASSEMBLY — Continued

4. Place bolt and carrier assembly (Figure 2, Item 1) into forward part of lower receiver assembly (Figure 2, Item 3).

WARNING

Mainspring buffer and mainspring are under heavy spring tension. Exercise care. Failure to comply may result in personnel injury.

5. Pull bolt and carrier assembly (Figure 2, Item 1) rearward and carefully remove rear lock pin (Figure 2, Item 4) from mainspring and mainspring buffer.
6. Align front hook of upper receiver assembly (Figure 2, Item 2) with front hook pin on lower receiver assembly (Figure 2, Item 3).

WARNING

Do not fire the weapon without the midlock and rear lock pins firmly in place. Failure to comply may result in personnel injury or death and weapon damage.

7. With upper receiver assembly (Figure 2, Item 2) in position on lower receiver assembly (Figure 2, Item 3), secure with rear lock pin (Figure 2, Item 4) and midlock pin (Figure 2, Item 5).

END OF TASK

END OF WORK PACKAGE

CHAPTER 5 AMMUNITION MAINTENANCE INSTRUCTIONS

OPERATOR MAINTENANCE

CARE, HANDLING, AND PRESERVATION OF AMMUNITION

INITIAL SETUP:

NOT APPLICABLE

WARNING

DO NOT FIRE seriously corroded ammunition, dented cartridges, cartridges with loose bullets, cartridges exposed to extreme heat (135°F (57.2°C)) until they have cooled, or cartridges with pushed-in (short) bullets. Failure to comply may result in personnel injury or death, and weapon damage.

Do not use unauthorized ammunition. Failure to comply may result in personnel injury or death and weapon damage.

CAUTION

Check ammunition and magazine frequently for corrosion. If necessary, clean ammunition with a dry cloth. DO NOT lubricate ammunition. Failure to comply may result in weapon damage.

Do not open ammunition containers until the ammunition is to be used. Ammunition removed from the airtight containers, particularly in damp climates, is likely to corrode. Failure to comply may result in weapon damage.

Protect ammunition from mud, dirt, and water. If the ammunition gets wet or dirty, wipe it off prior to use. Wipe off light corrosion as soon as it is discovered. Heavily corroded cartridges or cartridges that have dented cases or loose bullets should not be fired. Failure to comply may result in weapon damage.

Do not expose ammunition to the direct rays of the sun. If the powder is hot, excessive pressure may develop when the gun is fired. Failure to comply may result in weapon damage.

Do not oil or grease the ammunition. Dust and other abrasives collecting on oiled or greased ammunition will damage the operating parts of the gun. Oiled cartridges will produce excessive chamber pressure. Failure to comply may result in weapon damage.

If ammunition is wet or dirty, wipe it off with a dry rag prior to use. Do not lubricate. Failure to comply may result in weapon damage.

Ammunition that predates 1965 should not be fired through this weapon. Failure to comply may result in weapon damage.

AMMUNITION HANDLING

Special Application Scoped Rifle (SASR) (USMC and USAF only)

WARNING

The .50 caliber Saboted Light Armor Penetrator (SLAP) round is specifically prohibited from being fired in the SASR. Do NOT force it to chamber and fire. Failure to comply may result in personnel injury or death, and weapon damage.

The unique mission and tactical requirements of the SASR dictate which ammunition is appropriate. However, under no circumstances are SLAP rounds to be fired since the SASR is not chambered for this round, and the plastic sabot disintegrates as it passes the muzzle brake.

NOTE

Do not fire blank ammunition or tracer rounds in the SASR. (USMC Only)

Recommended Ammunition

1. Primary round. The primary round for the SASR is the Mark 211 Mod 0 cartridge, .50 caliber, Armor Piercing Incendiary (API) round, Department of Defense Identification Code (DODIC) A606. It was developed specifically for the SASR. It contains a high explosive charge as well as a tungsten steel penetrator and is a multipurpose round. It can be readily identified by a green tip or a green tip over a gray band.
2. Training round. The high cost of the DODIC A606 dictates that the round used for routine training is the standard caliber .50 Link Ball M33 round, DODIC A605. This round must be removed from the link for use with the SASR at Ammunition Supply Point (ASP).

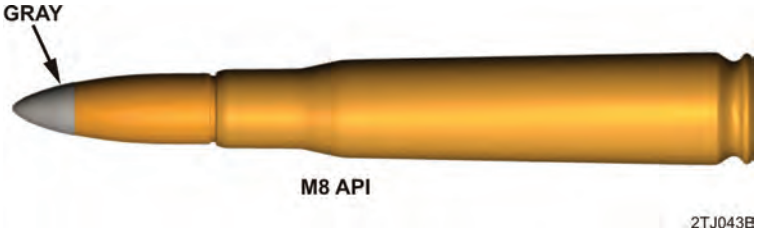

Figure 1. M8, Caliber .50 API Cartridge.

Figure 2. MK211 MOD 0, Caliber .50 API Cartridge.

Long Range Sniper Rifle (LRSR)

WARNING

Do not use unauthorized ammunition in the M107 Sniper Rifle. Tables 1, 2, and 3 list the only ammunition authorized for use in the M107 Sniper Rifle. Failure to comply may result in personnel injury or weapon damage.

Table 1. Authorized Ammunition for M107 Sniper Rifle.

AMMUNITION	DESCRIPTION
M8	Caliber .50 API Cartridge*
MK211 Mod 0	Caliber .50 API Cartridge*

*Armor-Piercing Incendiary (API)

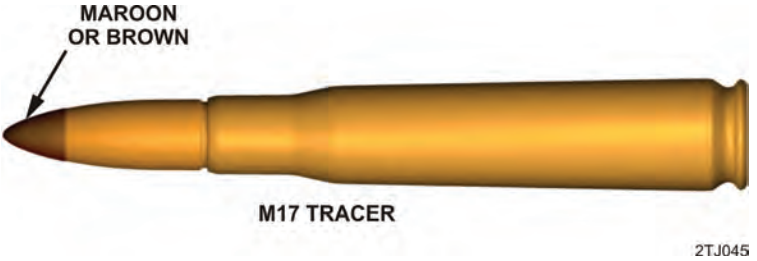

Figure 3. M17, Caliber .50 Tracer Cartridge.

Figure 4. M33, Caliber .50 Ball Cartridge.

Table 2. Authorized Ammunition for M107 Sniper Rifle.

AMMUNITION	DESCRIPTION
M17	Caliber .50 Tracer Cartridge
M33	Caliber .50 Ball Cartridge

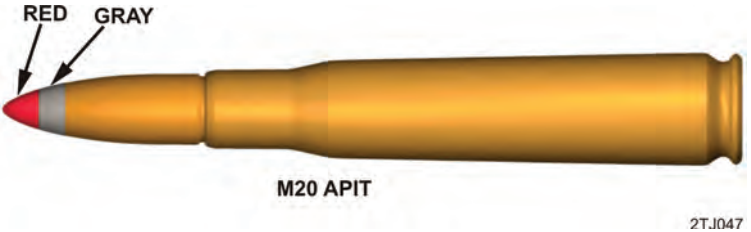

Figure 5. M20, Caliber .50 Armor Piercing Incendiary Tracer (APIT) Cartridge.

Table 3. Authorized Ammunition for M107 Sniper Rifle.

AMMUNITION	DESCRIPTION
M20	Caliber .50 APIT Cartridge

Figure 6. M1, Caliber .50 Blank.

Figure 7. M1A1, Caliber .50 Blank Cartridge.

Table 4. Authorized Ammunition for M107 Sniper Rifle.

AMMUNITION	DESCRIPTION
M1 / M1A1	Caliber .50 Blank Cartridge

END OF WORK PACKAGE

CHAPTER 6 SUPPORTING INFORMATION

OPERATOR MAINTENANCE

REFERENCES

SCOPE

This work package lists all field manuals, forms, technical manuals, and miscellaneous publications referenced in this manual.

FIELD MANUALS

FM 4-25.11	First Aid, Army
AFJMAN 23-215	Air Force Joint Manual
AFMAN 44-163(I)	First Aid, Air Force
MCRP 3-02G	First Aid, Marine Corps

FORMS

AFTO Form 22	Technical Manual (TM) Change Recommendation and Reply
AFTO Form 105	Inspection, Maintenance, and Firing Data for Ground Weapons
DA Form 2404	Equipment Inspection and Maintenance Worksheet
DA Form 2028	Recommended Changes to Publications and Blank Forms
DA PAM 750-8	Functional Users Manual for the Army Maintenance Management Systems (TAMMS)
NAVMC 10558A	weapon Record Book, Part B
SF Form 368	Product Quality Deficiency Report (PQDR)
TO 11W-1-10	Historical Data, Recording of Inspection, Maintenance, and Firing Data for Ground Weapons

MARINE CORPS PUBLICATIONS

MCO 4855.10B	Quality Deficiency Report

MISCELLANEOUS PUBLICATIONS

AFI 36-2226	Combat Arms Program
AR 700-138	Army Logistics Readiness And Sustainability
CTA 50-970	Expendable/Durable Items (Except Medical, Class V, Repair Parts, and Heraldic Items)
CTA 50-909	Field and Garrison Furnishings and Equipment
CTA 8-100	Army Medical Department Expendable/Durable Items
MCO 4855.10B	Product Quality Deficiency Report
MIL-STD-129P	Military Marking for Shipment and Storage
NAVMC 10772	Recommended Changes to Technical Publications

TECHNICAL MANUALS

TM 38-750	The Army Maintenance Management System (TAMMS) Users Manual
TM 750-244-7	Procedures for Destruction of Equipment in Federal Supply Classifications 1000, 1005, 1010, 1015, 1020, 1025, 1030, 1055, 1090 and 1095 to Prevent Enemy Use
TM 4700-15/1	Equipment Record Procedures
TO 00-35D-54	Material Deficiency Reporting and Investigating System

END OF WORK PACKAGE

OPERATOR MAINTENANCE

EXPENDABLE AND DURABLE ITEMS LIST

INTRODUCTION

Scope

This work package lists expendable and durable items that you will need to operate and maintain the M107 Sniper Rifle. This list is for information only and is not authority to requisition the listed items. These items are authorized to you by CTA 50-970, Expendable/Durable Items (Except Medical, Class V Repair Parts, and Heraldic Items), CTA 50-909, Field and Garrison Furnishings and Equipment, or CTA 8-100, Army Medical Department Expendable/Durable Items.

Explanation of Columns in the Expendable/Durable Items List

Column (1) Item Number. This number is assigned to the entry in the list and is referenced in the narrative instructions to identify the item (e.g., Use Isopropyl Alcohol, Technical (WP 0022, Item 9)).

Column (2) Level. This column identifies the lowest level of maintenance that requires the listed item (C = Crew, F = Maintainer, H = Below Depot, D = Depot).

Column (3) National Stock Number (NSN). This is the NSN assigned to the item which you can use to requisition it.

Column (4) Item Name, Description, Part Number/Commercial and Government Entity Code (CAGEC). This column provides the other information you need to identify the item. The last line below the description is the part number and the CAGEC (in parentheses).

Column (5) U/I. Unit of Issue (U/I) code shows the physical measurement or count of an item, such as gallon, dozen, gross, etc.

Table 1. Expendable and Durable Items List.

(1) ITEM NUMBER	(2) LEVEL	(3) NATIONAL STOCK NUMBER	(4) ITEM NAME, DESCRIPTION, CAGEC, AND PART NUMBER	(5) U/I
1	C	6515-01-234-6838	Applicator, Disposable (Q-tips) 100 per package 3Y857 6515012346838	PG
2	C	8125-00-824-9058	Bottle, Screw Cap for containing isopropyl alcohol 81348 A-A-685	EA
3	C	8020-00-619-8929	Brush, Artist 58536 A-A-3191	EA
4	C	1005-00-550-4037	Brush, Cleaning, Small Arms Bore 19204 5504037	EA
5	C	1005-00-766-0915	Brush, Cleaning, Small Arms Chamber 19024 7790737	EA
6	C	7920-00-205-0565	Brush, Dusting, Lens and Photographic Negative, Camel Hair 80244	EA
7	C	6850-00-392-9751	Cleaning Compound, Optical Lens 2 oz 58536 AA59199-1	BT
8	C	9150-01-102-1473	Cleaner, Lubricant, and Preservative (CLP) 1/2 oz bottle 83149 MIL-PRF-63460	BT

Table 1. Expendable and Durable Items List — Continued.

(1) ITEM NUMBER	(2) LEVEL	(3) NATIONAL STOCK NUMBER	(4) ITEM NAME, DESCRIPTION, CAGEC, AND PART NUMBER	(5) U/I
9	C	6810-00-983-8551	Isopropyl Alcohol, Technical, Cleaning Fluid 1 qt can 81348 TTI735	QT
10	C	9150-00-935-6597	Lubricating Oil, Semifluid (LSA) 2 oz plastic bottle 81349 MIL-L-46000	BT
11	C	9140-00-889-3522	Lubricating Oil, Semifluid (LSA) 4 oz plastic bottle 19204 8436793	BT
12	C	9150-00-687-4241	Lubricating Oil, Semifluid (LSA) 32 oz plastic bottle 81349 MIL-L-46000	QT
13	C	9150-00-753-4686	Lubricating Oil, Semifluid (LSA) 1 gallon 81349 MIL-L-46000	GL
14	C	9150-00-949-0323	Lubricating Oil, Semifluid (LSAT) 8 oz tube 81349 MIL-L-46150	TU
15	C	9150-01-109-7793	Lubricating Oil, Semifluid (LSAT) 1 pound can 81349 MIL-L-46150	LB
16	C	9150-00-292-9689	Lubricating Oil, Weapons (LAW) 1 qt can 81349 MIL-PRF-14107	QT

Table 1. Expendable and Durable Items List — Continued.

(1) ITEM NUMBER	(2) LEVEL	(3) NATIONAL STOCK NUMBER	(4) ITEM NAME, DESCRIPTION, CAGEC, AND PART NUMBER	(5) U/I
17	C	6640-00-663-0832	Paper, Lens 50 each sheet 25518 65-4900	BK
18	C	7920-00-205-1711	Rag, Wiping 64067 7920-00-205-1711	BE
19	C	1005-00-288-3565	Swab, Small Arms Cleaning Patches 19204 5019316	PG

END OF WORK PACKAGE

OPERATOR MAINTENANCE

SNIPER WEAPONS SYSTEM PARTS LIST

INTRODUCTION

Explanation of Columns in the Sniper Weapons System Parts List

Column (1) Illus Number. Gives you the number of the item illustrated.

Column (2) SMR Code. The Source, Maintenance, and Recoverability (SMR) code contains supply/requisitioning information, maintenance level authorization criteria, and disposition instructions.

Column (3) National Stock Number (NSN). Identifies the stock number of the items to be used for requisitioning purposes.

Column (4) Description, Commerce, and Government Entity Code (CAGEC), and Part Number. Identifies the Federal item name (in all capital letters) followed by a minimum description when needed. The last line below the description is the CAGEC (in parentheses) and the part number.

Column (5) Qty. Indicates the quantity required.

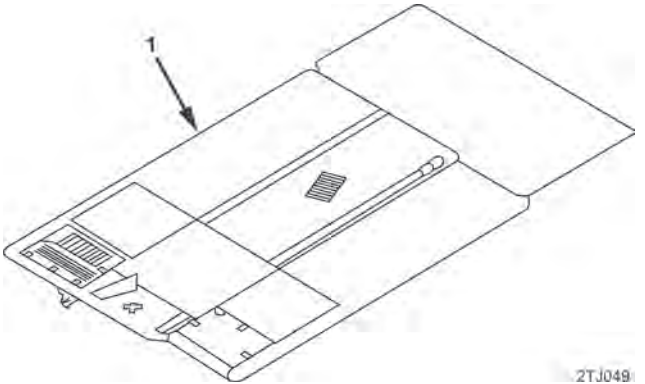

Figure 1. Bag, Ordnance, Weapon, 82143-3.

Table 1. Bag, Ordnance, Weapon, 82143-3.

(1) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) DESCRIPTION, CAGEC, PART NUMBER	(5) QTY
1	PACZZ	1005-01-534-4534	FIG. 1 BAG, ORDNANCE, WEAPON (0BT64) 82143-3	1

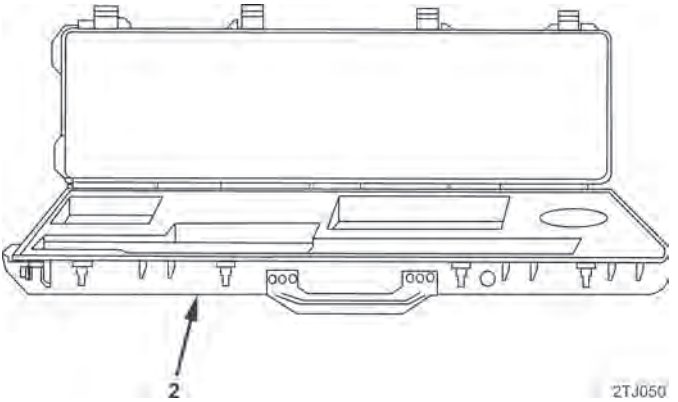

Figure 2. Hard Case, 82133-1.

Table 2. Hard Case, 82133-1.

(1) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) DESCRIPTION, CAGEC, PART NUMBER	(5) QTY
2	PACZZ	1005-01-415-0154	FIG. 2 HARD CASE (0BT64) 82133-1	1

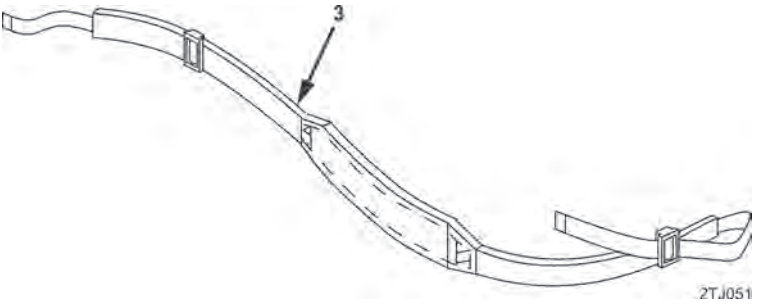

Figure 3. Sling, Small Arms, 12002983.

Table 3. Sling, Small Arms, 12002983.

(1) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) DESCRIPTION, CAGEC, PART NUMBER	(5) QTY
3	PACZZ	1005-00-312-7177	FIG. 3 SLING, SMALL ARMS (19204) 12002983	1

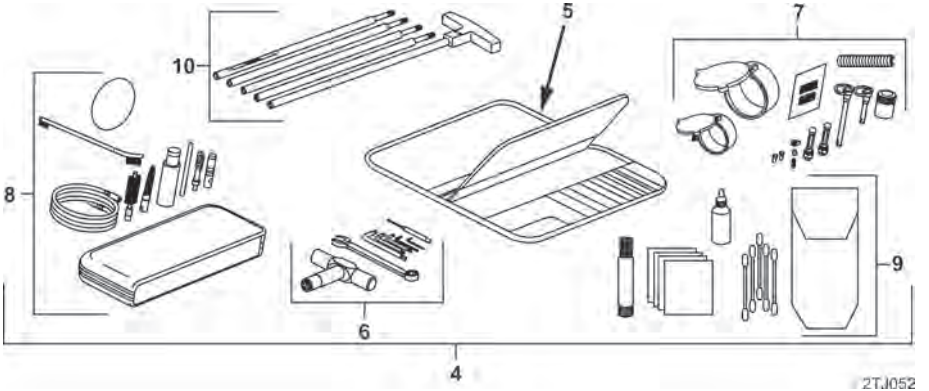

Figure 4. Deployment Kit, DK-1.

Table 4. Deployment Kit, DK-1.

(1) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) DESCRIPTION, CAGEC, PART NUMBER	(5) QTY
4	AFCZZ		FIG. 4 DEPLOYMENT KIT (INCLUDES ITEMS 5–10), (19204) DK-1	
5	PACZZ	5140-01-512-8449	DEPLOYMENT KIT BAG (0BT64) DK-B-1	1
6	AFCZZ		DEPLOYMENT TOOL KIT (SEE FIG. 7 AND FIG. 8 FOR KIT BREAKDOWN) TK-1	1
7	AFCZZ		DEPLOYMENT PARTS KIT (SEE FIG. 5 AND FIG. 6 FOR KIT BREAKDOWN) PK-1	1
8	AFCZZ		DEPLOYMENT CLEANING KIT (SEE FIG. 9 AND FIG. 10 FOR KIT BREAKDOWN) CK-1	1
9	AFCZZ		OPTICS CLEANING KIT (SEE FIG. 11 FOR KIT BREAKDOWN) OCK-1	1
10	PACZZ	1005-00-653-5441	FIVE-PIECE CLEANING ROD (SEE FIG. 12 FOR KIT BREAKDOWN) 6535441	1

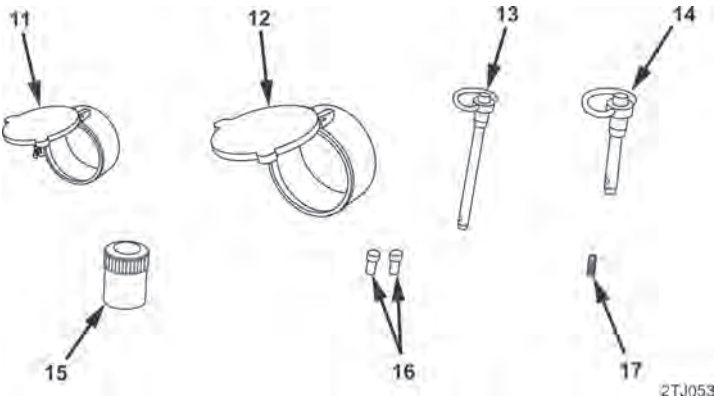

Figure 5. Deployment Parts Kit, PK-1 (Sheet 1 of 2).

Table 5. Deployment Parts Kit, PK-1 (Sheet 1 of 2).

(1) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) DESCRIPTION, CAGEC, PART NUMBER	(5) QTY
			FIG. 5 DEPLOYMENT PARTS KIT PK-1	
11	PACZZ	6650-01-502-1874	COVER, EYEPIECE LENS (66575) 13EYE	1
12	PACZZ	6650-01-502-1871	COVER, OBJECTIVE LENS (66575) 34344	1
13	PACZZ	5315-01-300-2640	PIN, QUICK RELEASE (0BT64) 82114-1A	2
14	PACZZ	5315-01-210-0923	PIN, QUICK RELEASE (0BT64) 82115-1A	1
15	PACZZ	5340-01-502-6888	CAP, PROTECTIVE, DUST (35848) 51503	1
16	PACZZ	5305-01-502-4412	SCOPE RING SCREW (35848) 53073	2
17	PACZZ	1005-01-357-4805	PLUNGER, EXTRACTOR (0BT64) 82108	1

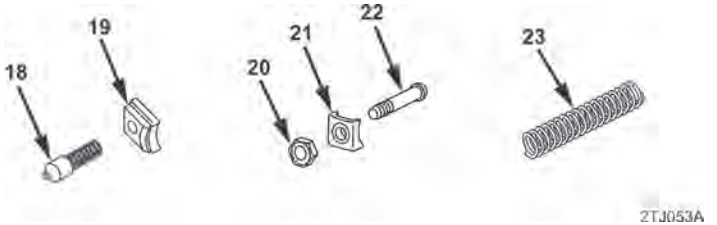

Figure 6. Deployment Parts Kit, PK-1 (Sheet 2 of 2).

Table 6. Deployment Parts Kit, PK-1 (Sheet 2 of 2).

(1) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) DESCRIPTION, CAGEC, PART NUMBER	(5) QTY
			FIG. 6 DEPLOYMENT PARTS KIT PK-1 (CONT)	
18	PACZZ	5360-01-358-3036	SPRING, EXTRACTOR (0BT64) 82107	1
19	PACZZ	1005-01-415-3868	EXTRACTOR (0BT64) 82106	1
20	PACZZ	5310-01-502-1527	BOLT NUT (35848) 42037	2
21	PACZZ	5310-01-502-1525	BOLT KEEPER (35848) 53076	2
22	PACZZ	5306-01-502-4414	SCOPE RING BOLT (35848) 42048	2
23	PACZZ	5360-01-358-3039	BOLT SPRING (0BT64) 82102	1

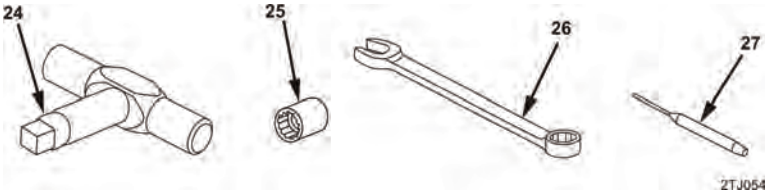

Figure 7. Deployment Tool Kit, TK-1 (Sheet 1 of 2).

Table 7. Deployment Tool Kit, TK-1 (Sheet 1 of 2).

(1) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) DESCRIPTION, CAGEC, PART NUMBER	(5) QTY
			FIG. 7 DEPLOYMENT TOOL KIT TK-1	
24	PACZZ	5220-01-260-2645	65 LB-IN. TORQUE WRENCH (3/8-DRIVE) (3A703) 96059	1
25	PACZZ	5120-00-237-0977	1/2-IN. SOCKET (3/8 DRIVE) (For use with torque wrench) (78525) 86-264	1
26	PACZZ	5120-00-228-9506	1/2-IN. SHORT HANDLE COMBINATION WRENCH (96508) 1162	1
27	PACZZ	520-01-335-1435	1/16-IN. ROLL PIN PUNCH (0BT64) T-33	1

Figure 8. Deployment Tool Kit, TK-1 (Sheet 2 of 2).

Table 8. Deployment Tool Kit, TK-1 (Sheet 2 of 2).

(1) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) DESCRIPTION, CAGEC, PART NUMBER	(5) QTY
			FIG. 8 DEPLOYMENT TOOL KIT TK-1 (CONT)	
28	PACZZ	5120-01-518-0363	T30 L-SHAPED TORX WRENCH (0BT64) T-30	1
29	PACZZ	5120-01-521-4531	T15 L-SHAPED TORX WRENCH (0BT64) T-20	1
30	PACZZ	5120-01-518-0360	T10 L-SHAPED TORX WRENCH (0BT64) T-10	1
31	PACZZ	5120-00-198-5401	0.050 L-SHAPED ALLEN WRENCH (94033) P37B30-2	1
32	PACZZ	5120-00-242-7410	3/32-IN. L-SHAPED ALLEN WRENCH (92674) BA27077-4	1

Figure 9. Deployment Cleaning Kit, CK-1 (Sheet 1 of 2).

Table 9. Deployment Cleaning Kit, CK-1 (Sheet 1 of 2).

(1) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) DESCRIPTION, CAGEC, PART NUMBER	(5) QTY
			FIG. 9 DEPLOYMENT CLEANING KIT, CK-1	
33	PACZZ	1005-01-502-5675	PANOPLY PATCHES (10 each) (0BT64) RW-970	1
34	PACZZ	9150-01-509-0426	2/3-OZ. BREAKFREE (0BT64) RW-CLP-16	1
35	PACZZ	1005-01-502-5842	EXTENSION ROD (0BT64) IP-9098-5	1
36	PACZZ	1005-01-502-5844	CLEANING EYE PATCH ROD END (0BT64) IP-557-S-SCRW	1
37	PACZZ	1005-01-512-4361	T-HANDLE OBSTRUCTION REMOVER (01VS3) IP-555-5	1

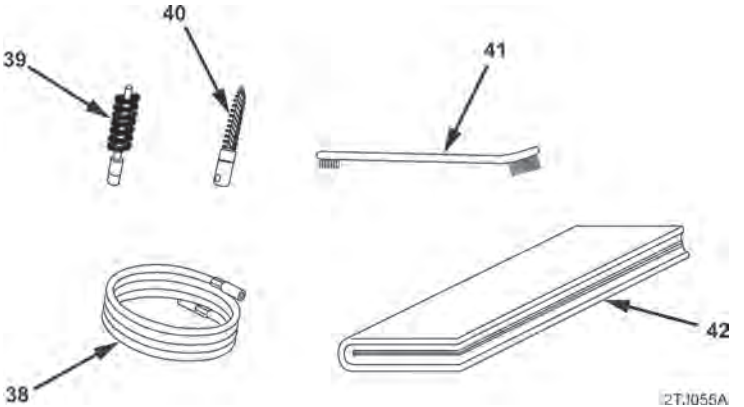

Figure 10. Deployment Cleaning Kit, CK-1 (Sheet 2 of 2).

Table 10. Deployment Cleaning Kit, CK-1 (Sheet 2 of 2).

(1) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) DESCRIPTION, CAGEC, PART NUMBER	(5) QTY
			FIG. 10 DEPLOYMENT CLEANING KIT, CK-1 (CONT)	
38	PACZZ	1005-01-502-5673	CLEANING CABLE (0BT64) IP-C-40-50-2	1
39	PACZZ	1005-01-513-4991	BRONZE BORE BRUSH (0BT64) 558-B-3-132	1
40	PACZZ	1005-00-766-0915	BRONZE CHAMBER BRUSH (19204) 7790737	1
41	PACZZ	1005-01-502-5815	CLEANING BRUSH (0BT64) RW-316	1
42	PACZZ	5140-01-516-7147	CASE, MAINTENANCE EQUIPMENT (0BT64) 82135-B	1

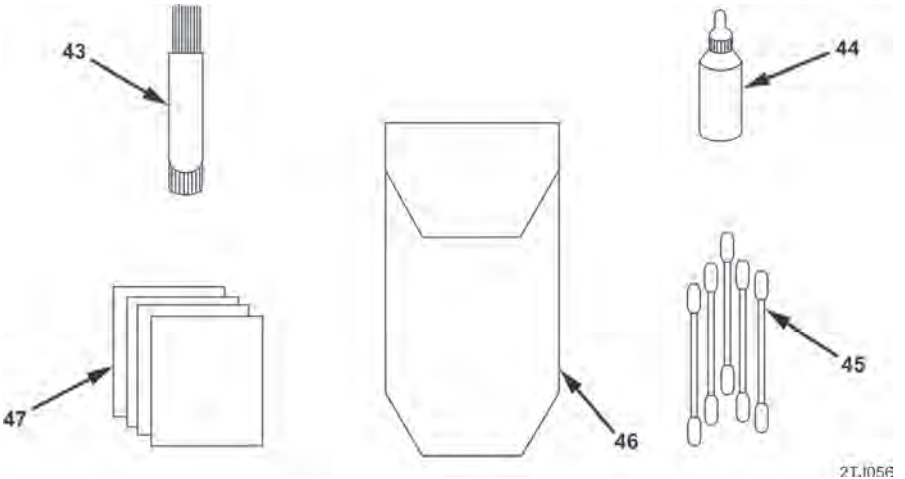

Figure 11. Optics Cleaning Kit, OCK-1.

Table 11. Optics Cleaning Kit, OCK-1

(1) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) DESCRIPTION, CAGEC, PART NUMBER	(5) QTY
			FIG. 11 OPTICS CLEANING KIT, OCK-1	
43	PACZZ	8020-00-619-8929	BRUSH, ARTIST (cleaning brush) (58536) A-A-3191	1
44	PACZZ	8125-00-824-9058	BOTTLE (for containing isopropyl alcohol) (81348) A-A-685	1
45	PACZZ	6515-01-234-6838	APPLICATOR (Q-tips) (5L934) 362	1
46	PACZZ	1005-01-260-2661	CASE, LENS CLEANING: (3A703) 96041	1
47	PACZZ	6640-00-663-0832	PAPER, LENS (cleaning tissue) (25518) 65-4900	1

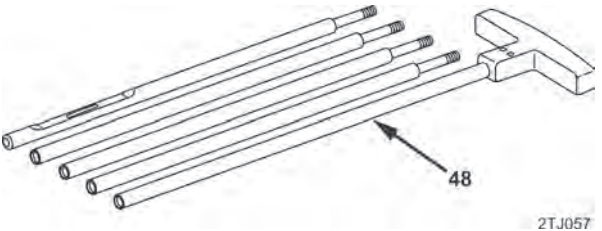

Figure 12. Five-Piece Cleaning Rod, 6535441.

Table 12. Five-Piece Cleaning Rod, 6535441.

(1) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) DESCRIPTION, CAGEC, PART NUMBER	(5) QTY
48	PACZZ	1005-00-653-5441	FIG.12 FIVE-PIECE CLEANING ROD (19204) 6535441	1

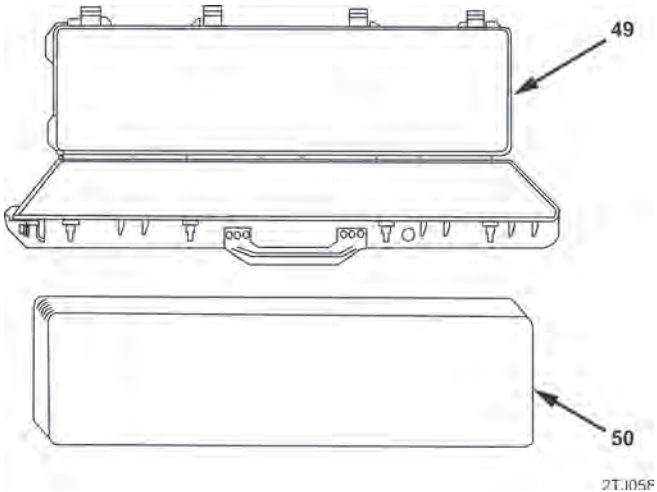

Figure 13. Auxiliary Case, 82133-1 and Auxiliary Case Insert, 82134-1.

Table 13. Auxiliary Case 82133-1 and Auxiliary Case Insert, 82134-1.

(1) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) DESCRIPTION, CAGEC, PART NUMBER	(5) QTY
			FIG. 13 AUXILIARY CASE, 82133-1 AND AUXILIARY CASE INSERT, 82134-1	
49	PACZZ	1005-01-415-0154	AUXILIARY CASE (0BT64) 82133-1	1
50	PACZZ	8145-01-519-4441	AUXILIARY CASE INSERT, (0BT64) 82134-1	1

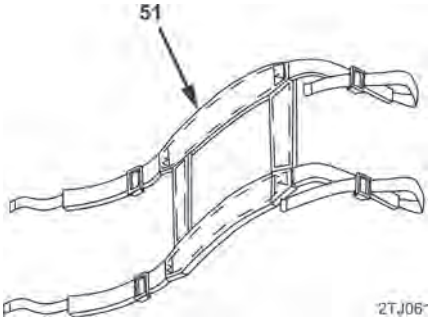

Figure 14. Shoulder Straps, 82143-3-3.

Table 14. Shoulder Straps, 82143-3-3.

(1) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) DESCRIPTION, CAGEC, PART NUMBER	(5) QTY
			FIG. 14 SHOULDER STRAPS, 82143-3-3	
51	PACZZ	8465-01-514-8504	SHOULDER STRAPS (0BT64) 82143-3-3	1

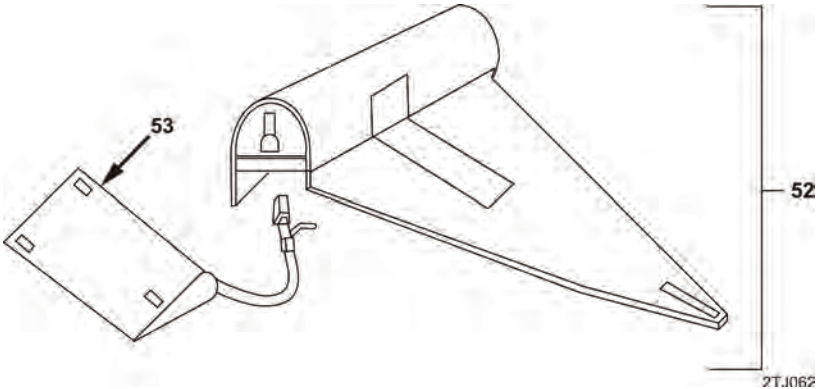

Figure 15. Scope/Muzzle Cover Assembly.

Table 15. Scope/Muzzle Cover Assembly.

(1) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) DESCRIPTION, CAGEC, PART NUMBER	(5) QTY
			FIG. 15 SCOPE/MUZZLE COVER ASSEMBLY	
52	PACZZ	1005-01-505-9110	SCOPE/MUZZLE COVER ASSEMBLY (0BT64) CVRA	1
53	PACZZ	1005-01-504-3429	MUZZLE COVER (0BT64) 82159CVRA	1

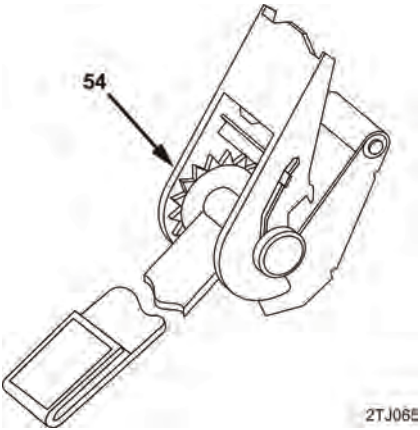

Figure 16. Carrying Case Strap, 82133-ST.

Table 16. Carrying Case Strap, 82133-ST.

(1) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) DESCRIPTION, CAGEC, PART NUMBER	(5) QTY
			FIG. 16 CARRYING CASE STRAP, 82133-ST	
54	PACZZ	5340-01-504-8516	CARRYING CASE STRAP (0BT64) 82133-ST	1

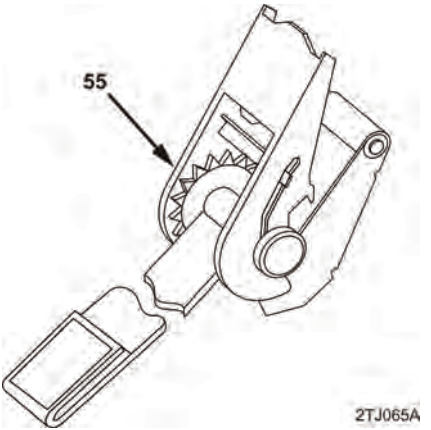

Figure 17. Carrying Case Strap, 82133-ST1.

Table 17. Carrying Case Strap, 82133-ST1.

(1) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) DESCRIPTION, CAGEC, PART NUMBER	(5) QTY
			FIG.17 CARRYING CASE STRAP, 82133-ST1	
55	PACZZ	5340-01-504-8513	CARRYING CASE STRAP (0BT64) 82133-ST1	1

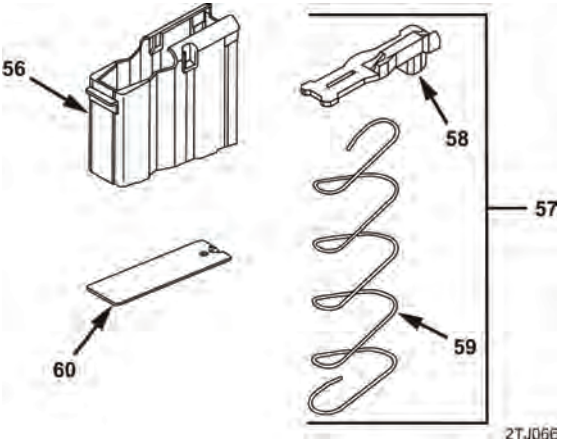

Figure 18. Cartridge Magazine, 82116-A.

Table 18. Cartridge Magazine, 82116-A.

(1) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) DESCRIPTION, CAGEC, PART NUMBER	(5) QTY
			FIG. 18 CARTRIDGE MAGAZINE	
56	XACZZ	1005-01-358-2805	MAGAZINE TUBE (0BT64) 82116C	1
57	PACZZ	1005-01-358-1342	MAGAZINE, CARTRIDGE (0BT64) 82116-A	1
58	PACZZ	1005-01-358-9718	MAGAZINE FOLLOWER (0BT64) 82120	1
59	PACZZ	5630-01-358-7910	MAGAZINE SPRING (0BT64) 82121	1
60	PACZZ	1005-01-358-9712	MAGAZINE FLOOR PLATE (0BT64) 82122	1

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