

YOU MUST READ THE INSTRUCTIONS AND WARNINGS IN THIS MANUAL CAREFULLY BEFORE ATTEMPTING TO OPERATE OR USE THIS FIREARM.
THE FN M249S™ RIFLE OPERATES DIFFERENTLY THAN ANY OTHER RIFLE. DO NOT DISCARD THIS MANUAL.

OPERATOR'S MANUAL FOR



FN M249S™ SEMI-AUTOMATIC BELT-FED RIFLE

Patent Pending

This operator's manual must always accompany this firearm and must be transferred with it upon change of ownership or when this firearm is loaned or presented to another person.

OM 56433-01 1512

Important operating instructions for:

FN M249S™ SEMI-AUTOMATIC BELT-FED RIFLE

This operator's manual is designed to assist you in learning how to use and maintain for your FN M249S™ rifle properly. Only when you are certain that you fully understand this manual and can properly carry out its instructions, should you practice loading and firing your firearm with live ammunition. You must know how to use your firearm safely.

If you have any doubts about your ability to handle or use this firearm safely, you should seek professional, supervised instruction. If can not find help, contact FN America, LLC at:

FN America, LLC (855)-536-4872 or visit WWW.FNAMERICA.COM

Please use the space below to record information about your new firearm.

Model _____

Serial Number _____

Purchased From _____

Date of Purchase _____

OM 56433-01 1512

CONTENTS

1. General Parts Nomenclature	4	14.1 Disintegrating Linked Belt and Ammunition Pack	18.3 Zeroing Procedures	24.6 Remove the Buttstock	25.10.3 Hot and Humid Conditions	28.1 Headspace Gauge Use
1.1 Left Side View		14.2 30 Round Magazine	18.3.1. Rear Sight	24.7 Remove the Trigger Assembly	26. Assembly	28.2 Breech Bore Gauge Use
1.2 Right Side View		15. Loading	18.3.2 Front Sight	24.8 Remove Barrel Assembly	51	28.3 Tubular Socket Wrench Use
2. Forward	6	15.1 Linking Ammunition and Filling the Ammunition Pack	19. Barrel Change Procedures	24.8.1 Remove Heat Shield	26.1 Install Handguard	29. Service Policy and
3. Contents of Storage Box	6	15.2 Filling the Magazine	20. Dust Cover Operation	24.9 Remove Gas Cylinder	26.2 Install Bipod	Technical Questions
4. Firearm Safety and Warnings	7	15.3 Loading the M249S™ from the Ammo Pack/Belt	21. Bipod Operation	24.10 Remove Bipod Assembly	26.3 Install Gas Cylinder	61
5. General Firearms Safety Information	14	15.4 Loading the M249S™ from the Magazine	22. Buttstock / Shoulder Rest Operation	24.11 Remove Handguard Assembly	26.4 Install Barrel Assembly	30. Contact Us
6. Description and Operation	14	16. Firing	23. Optional Sling Operation	25. Cleaning and Lubrication	26.4.1 Install Heat Shield	62
6.1 Description		26	24. Disassembly / Field Stripping Procedures	45	26.5 Install Moving Parts Assembly	31. Technical Specifications
6.2 Operation		16.1 Firing Procedures	39	25.1 Receiver and Feed Tray Cover Assembly	26.5.1 Reassemble Bolt	63
7. Nomenclature	15	16.2 Malfunctions	24.1 Subassembly Identification	25.2 Drive Springs and Guide Rod	26.5.2 Reassemble Moving Parts Assembly	32. ATF Approval Letter
8. Serial Number	15	17. Unloading/Clearing	24.2 Raise Feed Tray Cover	25.3 Moving Parts Assembly	26.5.3 Install Moving Parts Assembly	64
9. Initial Cleaning	15	28	24.3 Rotate Buttstock Open	25.4 Barrel	26.6 Install Slide Hammer	
10. Operation of the Safety Selector	16	17.1 Unloading/Clearing from Belted Ammo	24.4 Remove Drive Spring, Hammer Spring and Guide Rod	25.5 Gas Cylinder	26.7 Assemble Drive Springs and Guide Rod Assembly	
11. Cocking the Slide Hammer and Charging Handle Operation	16	17.2 Unloading/Clearing from a Magazine	24.5 Remove the Moving Parts Assemblies	25.6 Trigger Assembly	26.7.1 Install Drive Springs and Guide Rod	
12. Manual Bolt Lock Device	17	18. Sights and Zeroing	24.5.1 Slide Hammer	25.7 Bipod Assembly	26.8 Install Trigger Assembly	
13. Ammunition	19	30	24.5.2 Bolt and Bolt Carrier Assemblies	25.8 Rear Sight Assembly	26.9 Install Buttstock Assembly	
14. Feeding Methods and Capacities	20	18.1 Rear Sight Assembly	2.1 Bolt Carrier Assembly	25.9 Lubrication in Normal Conditions	26.10 Close Top Cover Assembly	
		18.2 Front Sight Assembly	2.2 Bolt Assembly	25.10 Lubrication in Adverse Conditions	27. Function Check	
				25.10.1 Dry and Dusty Conditions	56	
				25.10.2 Extreme Cold Conditions	28. Optional Tools and Gauges	
					57	

1. GENERAL PARTS NOMENCLATURE

Figure 1. Left Side View

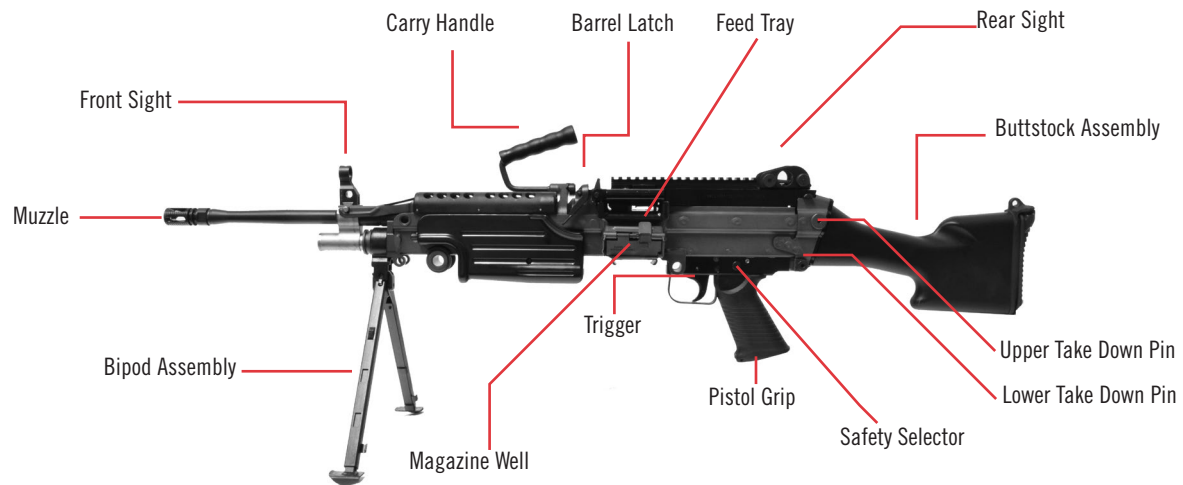
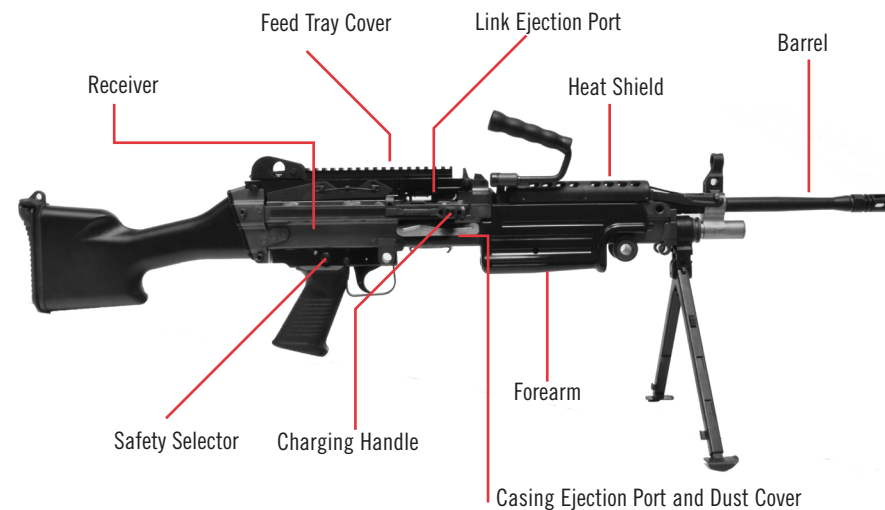


Figure 2. Right Side View



2. FORWARD

We are pleased that you have chosen an FN M249S™ autoloading rifle. The FN M249S™ represents FN's commitment to build innovative and high quality rifles that exceed industry standards for testing, function, reliability and accuracy.

Based on a proven design and bearing FN's stamp of quality, the FN M249S™ is one of the most unique firearms you will ever own. FN has painstakingly developed a semi-automatic version of the venerable M-249 Squad Automatic Weapon (SAW) for civilian use. The FN M249S™ shares many of the same features of the M-249 SAW such as quick change barrels, belt or magazine feed, and integral optical rail mounted to the feed tray cover. The U.S. Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF) has approved the FN M249S™ for civilian use where individual state and local laws allow. We have included a copy of the ATF approval in Section 32 of this manual.

Before handling or firing your new FN M249S™, please read and understand this operator's manual completely. Your safety and the safety of those around you depend upon your safe operation of any firearm. Also, in order to take maximum advantage of many of the features of your FN M249S™, regularly review this manual.

This operator's manual must always accompany this firearm and must be transferred with it upon change of ownership or when this firearm is loaned or presented to another person.

Please contact us if you have any questions or observations regarding the performance or the operation of your rifle.

3. CONTENTS OF STORAGE BOX

1. FN M249S™ Rifle with bipod, barrel and heat shield
2. Operator's Manual
3. Lock
4. Plastic Ammunition Pack/Box, 200-round
5. M27 Links (quantity 200)
6. Magazine, 30-round
7. Manual Bolt Lock Device

Additional Accessories included with the Limited Edition FN M249S™

8. Hard Case with molded insert
9. Spare Barrel with Heat Shield
10. Additional (300) M27 Links (500 total)
11. Sling Assembly
12. Cleaning Kit with Scraper Tool
13. Tubular Wrench
14. Breech Bore Gauge
15. Headspace Gauge
16. Sight Adjustment Tool
17. Serialized ID Tags
18. Certificate of Authenticity

4. SAFETY AND WARNINGS

⚠DANGER

DANGER! LIKE ALL FIREARMS, IF HANDLED IN A CARELESS OR RECKLESS MANNER, THIS RIFLE CAN BE VERY DANGEROUS. FAILURE TO FOLLOW THE INFORMATION IN THIS OPERATOR'S MANUAL COULD RESULT IN SERIOUS INJURY OR DEATH.

DANGER! ALWAYS WEAR SAFETY GLASSES AND HEARING PROTECTION WHENEVER YOU ARE SHOOTING. ALWAYS MAKE CERTAIN THAT PERSONS CLOSE TO YOU ARE SIMILARLY PROTECTED. UNPROTECTED EYES MAY BE INJURED BY POWDER, GAS, CARBON RESIDUE, LUBRICANT, METALLIC PARTICLES, OR SIMILAR DEBRIS WHICH MAY EMANATE OCCASIONALLY FROM ANY FIREARM IN NORMAL USE. WITHOUT ADEQUATE HEARING PROTECTION, EXPOSURE TO SHOOTING NOISE CAN PERMANENTLY DAMAGE YOUR HEARING.

For that reason, this firearm has been sold under the express understanding that FN America declines any responsibility and disclaim all liability claims for incidental or consequential damages, injuries, loss of use of property, commercial loss, loss of earnings and profits, resulting in whole or partly from:

- The use of reloaded ammunition
- A discharge with criminal intent or through negligence

- Improper or careless handling
- Unauthorized servicing
- The modification or alteration of the basic firearm design
- The use of non-original parts
- The modification or alteration of the safety devices
- The use of incorrect firearm and ammunition combinations
- The use of non-conforming or unsafe ammunition
- Inadequate care of the firearm (e.g. corrosion, damage.)
- Disregard of malfunctions
- Resale in contradiction to legislation
- Other circumstances beyond our direct and immediate control

NOTICE! FN AMERICA RESERVES THE RIGHT TO REFUSE SERVICING A FIREARM WHICH HAS BEEN MODIFIED BY REMOVAL OF METAL FROM THE BARREL, MODIFICATIONS OF THE FIRING MECHANISM AND/OR OTHER PARTS, AND WILL, IN SUCH A CASE, ALWAYS RECOMMEND RESTORING THE FIREARM TO ITS ORIGINAL SPECIFICATIONS. PARTS AND LABOR REQUIRED FOR SUCH A RESTORATION ARE PAYABLE BY THE OWNER OF THE FIREARM.

FIREARM SAFETY INFORMATION

▲WARNING

FAILURE TO FOLLOW ANY OF THE FOLLOWING WARNINGS COULD RESULT IN SERIOUS INJURY OR DEATH.

As a firearm owner, you accept a set of demanding responsibilities. How seriously you take these responsibilities can be the difference between life and death.

There is no excuse for careless or abusive handling of any firearm. At all times handle this firearm and all other firearms with intense respect for their power and potential danger.

Please read and understand all of the cautions, warnings, notices, proper handling procedures and instructions outlined in this operator's manual before using your new firearm.

1 ALWAYS KEEP THE MUZZLE OF YOUR FIREARM POINTED IN A SAFE DIRECTION EVEN THOUGH YOU ARE CERTAIN IT IS UNLOADED.

Never point any firearm at anything you do not intend to shoot. Be extremely alert and aware of all persons and property within the range of your ammunition.

2 NEVER RELY TOTALLY ON YOUR FIREARM'S MECHANICAL SAFETY DEVICES. LIKE ANY MECHANICAL DEVICE, A SAFETY CAN SOMETIMES FAIL; IT CAN BE JARRED OR INADVERTENTLY MANIPULATED INTO AN UNSAFE CONDITION.

The word safety describes a firearm's trigger block mechanism,

sear block mechanism, hammer block mechanism or firing pin block mechanism. Mechanical safeties are designed to place your firearm in a safer status, and no guarantee can be made that the firearm will not fire even if the safety is in the on safe position. Mechanical safeties merely aid safe gun handling and are no excuse for pointing your firearm's muzzle in an unsafe direction. See Section 10 for instructions on the operation of this firearm's safety.

Remember, safe gun handling does not stop with your firearm's mechanical safety devices, it starts there. Always treat this firearm with the respect due a loaded, ready-to-fire firearm.

Some firearms do not have a mechanical safety. Many target firearms, lever-action firearms and rifles do not have manual safety mechanisms. Therefore it is critical to read and understand the operator's manual for every firearm which explains the safe operation of the firearm.

While it is a good idea to test your firearm's mechanical safety periodically for proper function, never test the safety while your firearm is loaded or pointed in an unsafe direction.

3 WHENEVER YOU HANDLE ANY FIREARM, OR HAND IT TO SOMEONE, ALWAYS OPEN THE ACTION IMMEDIATELY AND VISUALLY CHECK THE FIREARM'S CHAMBER AND MAGAZINE TO MAKE CERTAIN THAT THE FIREARM IS COMPLETELY UNLOADED.

Make certain the firearm does not inadvertently contain any ammunition. Always keep the chamber empty and the safety in

the on safe position unless shooting is imminent.

If your firearm is equipped with a detachable magazine, be aware that removing the magazine does not mean your firearm is completely unloaded, a cartridge could be in the chamber. Always remove the magazine, open the action and visually inspect the chamber to make certain the firearm is completely unloaded.

4 ALWAYS WEAR EYE AND HEARING PROTECTION WHEN SHOOTING.

Unprotected, repeated exposure to gunfire can cause hearing damage. Wear ear protectors (shooting earplugs or muffs) to guard against such damage.

Wear shooting glasses to protect your eyes from flying particles. Allow proper distance (eye relief) between a scope and your eye when firing a scoped rifle or shotgun. Do not use unorthodox shooting methods that could cause the rearward travel of the slide or bolt of a firearm to contact your eyes, face or hands. Always keep a safe distance between the muzzle of your firearm and any persons nearby, as muzzle blast, debris and ejecting shells could inflict serious injury.

Always wear eye protection when disassembling and cleaning your rifle to prevent the possibility of springs, spring-tensioned parts, solvents or other agents from contacting your eyes.

5 KEEP ALL FIREARMS UNLOADED DURING TRANSPORT, EVEN WHEN STORED IN A HOLSTER, GUN CASE, SCABBARD OR OTHER CONTAINER.

For law enforcement and military personnel, refer to the procedures of your department on carrying a loaded firearm.

6 DROPPING OR JARRING A LOADED FIREARM CAN CAUSE AN ACCIDENTAL DISCHARGE.

This can occur even with the safety in the on safe position or the hammer in the decocked position. Be extremely careful while hunting or during any shooting activity, to avoid dropping any firearm.

7 SHOOTING FROM ELEVATED SURFACES IS DANGEROUS.

Doing so may increase the risk of mishandling a firearm. The following rules should always be observed. Always make certain that the surface being used is safe and stable. Always make certain that your firearm is unloaded when it is being taken up and down from the surface. Always make certain that your firearm is not dropped from the surface, or dropped while it is being taken up or down from the surface. Remember, a loaded firearm may discharge when dropped, even with the safety in the on safe position.

8 STORE YOUR FIREARM AND AMMUNITION SEPARATELY, WELL BEYOND THE REACH OF CHILDREN.

Take prudent safeguards to ensure your firearm does not become available to untrained, inexperienced or unwelcome hands. Store all firearms in secure, locked cases or a gun safe. Keep your firearm unloaded when not in use. At all times, comply with local and state laws.

For law enforcement and military personnel, refer to the procedures of your department on storing your firearm.

9 BEWARE OF BARREL OBSTRUCTIONS.

Mud, snow and an infinite variety of other objects may inadvertently lodge in a barrel. It only takes a small obstruction to cause dangerously increased pressures that can damage your firearm and cause serious injury to yourself and others.

BEFORE CHECKING FOR A BARREL OBSTRUCTION, BE CERTAIN YOUR FIREARM IS COMPLETELY UNLOADED, THERE IS NOT A LIVE CARTRIDGE IN THE CHAMBER AND THE SAFETY IS IN THE ON SAFE POSITION.

Completely unload the firearm as described in Section 17. After assuring yourself that the firearm is completely unloaded, remove the barrel and look through the barrel to be sure it is clear of obstructions. If an obstruction is seen, no matter how small it may be, clean the bore with a cleaning rod and patch as described in Sections 25 of this operator's manual.

10 BE ALERT TO THE SIGNS OF AMMUNITION MALFUNCTION. IF YOU DETECT AN OFF SOUND OR LIGHT RECOIL WHEN A CARTRIDGE IS FIRED, DO NOT LOAD ANOTHER CARTRIDGE INTO THE CHAMBER.

If your firearm fails to fire, keep the muzzle pointed in a safe direction for a minimum of 30 seconds. Carefully open the action and remove the cartridge from the chamber, and completely unload the firearm as described in Section 17.

If the primer is indented, the defective cartridge should be disposed of in a way that cannot cause harm. If the primer is not indented, your firearm should be examined by a qualified gunsmith and the cause of the malfunction corrected before further use. Glance down the barrel to make sure that there are no obstructions in the barrel. If there is an obstruction, completely clear the barrel before loading and firing again. Failure to follow these instructions can cause extensive damage to your firearm and possible serious injury to yourself and others.

11 NEVER INSERT A CARTRIDGE OF THE INCORRECT CALIBER INTO ANY FIREARM.

The caliber of your firearm is marked on the barrel. Store all cartridges of different calibers in completely separate and well-marked containers. Never store cartridges of mixed calibers in a common container or in your pockets. See Section 13 for more information on the correct ammunition for your firearm.

12 EXAMINE EVERY CARTRIDGE YOU PUT IN YOUR FIREARM.

We assume no responsibility for the use of unsafe or improper firearm and ammunition combinations or damage or injury caused by damaged ammunition. It is your responsibility to read and heed all warnings in this operator's manual and on ammunition boxes. See Section 13 for more information on the correct ammunition for your firearm.

13 USE ONLY AMMUNITION MADE TO NATO

STANDARDS. DO NOT USE HANDLOADED, RELOADED OR STEEL-CASED AMMUNITION.

The barrel and action of this rifle have been made with substantial safety margins over the pressures developed by established U.S. commercial loads. Nevertheless, we can assume no liability for incidents which occur through the use of cartridges of nonstandard dimensions or which develop pressures in excess of commercially available ammunition which has been loaded in accordance with standards established by the North Atlantic Treaty Organization (NATO).

14 MAKE SURE OF ADEQUATE VENTILATION IN THE AREA THAT YOU DISCHARGE A FIREARM. LEAD EXPOSURE CAN OCCUR FROM DISCHARGING FIREARMS IN POORLY VENTILATED AREAS, CLEANING FIREARMS OR HANDLING AMMUNITION.

Lead is a substance that has been known to cause birth defects, reproductive harm and other serious injury. Wash hands thoroughly after exposure to ammunition or after cleaning a firearm.

15 DO NOT SNAP THE FIRING PIN ON AN EMPTY CHAMBER: THE CHAMBER MAY NOT BE EMPTY! Treat every firearm with the respect due to a loaded firearm, even though you are certain the firearm is unloaded.

16 KEEP YOUR FINGERS AWAY FROM THE TRIGGER AT ALL TIMES UNTIL SHOOTING IS IMMINENT.

17 BE SURE OF YOUR TARGET AND BACKSTOP,

PARTICULARLY DURING LOW LIGHT PERIODS.

Know the range of your ammunition. Never shoot at water or hard objects.

18 ALWAYS UNLOAD YOUR FIREARM'S CHAMBER BEFORE CROSSING A FENCE, CLIMBING A TREE, JUMPING A DITCH OR NEGOTIATING OTHER OBSTACLES.

Never place your firearm on or against a fence, tree, car or other similar object.

For law enforcement and military personnel, refer to the procedures of your department.

19 BE DEFENSIVE AND ON GUARD AGAINST UNSAFE GUN HANDLING AROUND YOU AND OTHERS.

Don't be timid when it comes to gun safety. If you observe other shooters violating any of these safety precautions, politely suggest safer handling practices.

20 BE CERTAIN YOUR FIREARM IS UNLOADED BEFORE CLEANING.

Because so many gun accidents occur when a firearm is being cleaned, special and extreme care should be taken to be sure your firearm is unloaded before disassembly, cleaning and reassembly. Keep ammunition away from the cleaning location. Never test the mechanical function of any firearm with live ammunition.

21 TEACH AND SUPERVISE FIREARMS SAFETY TO ALL MEMBERS OF YOUR FAMILY, ESPECIALLY TO

CHILDREN AND NON-SHOOTERS.

Closely supervise newcomers to the shooting sports. Encourage enrollment in hunting and shooting safety courses.

22 NEVER DRINK ALCOHOLIC BEVERAGES OR TAKE ANY TYPE OF DRUGS BEFORE OR DURING SHOOTING.

Your vision, motor skills and judgment could be dangerously impaired, making your gun handling unsafe to you and to others.

23 READ AND HEED ALL WARNINGS IN THIS OPERATOR'S MANUAL, ON AMMUNITION BOXES AND WITH ALL ACCESSORIES THAT YOU INSTALL ON YOUR FIREARM.

It is your responsibility to secure the most up-to-date information on the safe handling procedures for your FN firearm. We assume no liability for incidents which occur when unsafe or improper rifle accessories or ammunition combinations are used.

24 PRACTICE PERIODIC MAINTENANCE, AVOID UNAUTHORIZED SERVICING.

Your firearm is a mechanical device which will not last forever, and as such, is subject to wear and requires periodic inspection, adjustment and service. FN firearms should be serviced by FN America Product Service.

We cannot and do not assume any responsibility for injuries suffered or caused by unauthorized servicing, alterations or modifications of FN firearms.

25 WE RESERVE THE RIGHT TO REFUSE SERVICE ON FIREARMS THAT HAVE BEEN ALTERED, ADDED TO OR SUBSTANTIALLY CHANGED.

Removal of metal from the barrel or modifications of the firing mechanism and/or operating parts may lead to a refusal of service on such firearms. We will charge the owner for parts and labor to return the firearm to original FN specifications.

DO NOT, UNDER ANY CIRCUMSTANCES, ALTER THE TRIGGER, SAFETY OR OTHER PARTS OF THE FIRING MECHANISM OF THIS OR ANY OTHER FIREARM. FAILURE TO OBEY THIS WARNING MAY RESULT IN INJURY OR DEATH TO YOURSELF OR OTHERS.

BE CAREFUL!

THE FN M249S™ OPERATES DIFFERENTLY THAN MOST OTHER SEMI-AUTOMATIC RIFLES, YOU MUST FOLLOW THESE SPECIFIC INSTRUCTIONS WHEN USING THE FN M249S™.

PLEASE NOTE THAT ADDITIONAL SAFETY AND OPERATIONAL ITEMS SPECIFIC TO THE FN M249S™ RIFLE ARE FOUND THROUGHOUT THIS OPERATOR'S MANUAL.

1. Before firing, make sure the barrel is tightly locked.
2. Never remove the trigger mechanism before the rifle is cleared. Removal of the trigger mechanism from a loaded rifle will

cause the rifle to fire.

3. When firing left-handed, hot fired cartridge cases may strike your right arm as they are ejected from the rifle. Operators firing left-handed should protect their right arm from ejected brass and links.
4. Always visually inspect the chamber when clearing the rifle.
5. Never attempt to fire a damaged, severely rusted, corroded or misused firearm until it has been inspected and repaired by an authorized FN America technician or gunsmith.
6. Do not interchange barrel assemblies (including spare barrels and bolt assemblies) from one rifle to another without first having checked the headspace. FAILURE TO FOLLOW THESE INSTRUCTIONS MAY RESULT IN INJURY TO PERSON OR DAMAGE TO THE RIFLE.
7. Do not modify, repair, or replace this rifle's components without express authorization from FN America.
8. THE FIRING OF LONG SUSTAINED STRINGS OF FIRE (SUCH AS 200 ROUNDS IN 2 MINUTES) WILL CREATE A "COOK OFF" HAZARD. A "cook off" is when excessive heat of the barrel will cause the cartridge in the chamber to ignite and fire without pulling the trigger. To avoid this dangerous condition, IMMEDIATELY CLEAR THE RIFLE after you have finished firing. Then allow the barrel to cool for 15 minutes or change barrels before resuming firing. Failure to follow these instructions can result in death or serious injury.

If the rifle cannot be immediately cleared and the barrel is excessively hot (200 rounds fired in 2 minutes), DO NOT OPEN the feed tray cover or remove the barrel. Place the safety in the safe position and ensure the rifle is pointed in a safe direction. Remove the magazine if it is the source of ammunition. Wait 15 minutes for the barrel to cool before clearing the rifle as explained in section 16.2.

9. Exposing the rifle and ammunition to direct sunlight on a hot day will create a "cook off" hazard in as few as 50 rounds of rapid firing.
10. The rifle's barrel will heat up as it is fired. Never touch a hot barrel: severe injury may result. Only use the barrel carry handle to manipulate a hot barrel.
11. Never remove a hot barrel to clear a malfunction. Wait 15 minutes for the barrel to cool.
12. Never use reloaded/handloaded ammunition with this rifle. Use only NATO spec 5.56x45mm ammunition or as described on the barrel. DO NOT USE STEEL-CASED AMMUNITION.
13. If the lower take down pin is not positively retained, it can work loose during firing. If this condition occurs, immediately stop firing your rifle. If it comes completely out, the trigger assembly can separate from the rifle creating a hazardous condition. If this condition occurs, immediately stop firing.
14. Ensure that the barrel is not obstructed by anything, such as water or mud.

15. Alternate usage of barrel assemblies to minimize wear (if available).
16. To avoid damage to equipment, DO NOT use dry cleaning solvent on plastic components.
17. DO NOT use abrasives to clean the bore, piston, gas cylinder, or gas block.
18. DO NOT lubricate chrome-plated areas of piston, gas cylinder, or gas block.
19. BE SURE TO CLEAR RIFLE AND ALLOW IT TO COOL BEFORE DISASSEMBLY, CLEANING, INSPECTING, TRANSPORTING OR STORING.
20. Do not allow ammunition to hit any hard surface or it may fire. Dispose of live rounds appropriately.
21. If ammunition is wet or dirty, wipe it off with a dry rag prior to use. Do not lubricate ammunition. Dust and other abrasives that collect on oily ammunition are damaging to operating parts of the rifle. Lubricated cartridges produce excessive chamber pressure.
22. ENSURE THE SAFETY IS IN THE FIRE POSITION WHEN COCKING THE SLIDE HAMMER. COCKING THE SLIDE HAMMER WITH THE SAFETY IN THE SAFE POSITION MAY CAUSE DAMAGE TO THE SEAR OR SLIDE HAMMER. ONCE THE SLIDE HAMMER IS COCKED, IMMEDIATELY PLACE THE SAFETY SELECTOR IN THE SAFE POSITION AS EXPLAINED IN SECTIONS 10 AND 11.

5. GENERAL FIREARMS SAFETY INFORMATION

1. Treat every firearm as if it is loaded, even if you have verified it is unloaded.
2. Keep the firearm pointed in a safe direction at all times.
3. Keep your finger off the trigger until you are ready to fire.
4. When possible, keep the safety selector in the SAFE position until you are ready to fire.
5. Only load the firearm when you are ready to fire and firing is imminent.

6. DESCRIPTION AND OPERATION

6.1. Description

The FN M249S™ is a semi-automatic only version of the legendary M-249 Squad Automatic Weapon(SAW). The FN M249S™ is a piston-driven, gas operated, air cooled, belt or magazine fed, semi-automatic rifle that fires from a closed rotary bolt. It is based on proven designs successfully used for decades in rigorous military service and benefits from advanced manufacturing techniques to deliver extreme reliability and durability expected by the most demanding operators.

The FN M249S™ features the ability to change barrels quickly to extend barrel life when firing long sustained strings of fire by keeping the barrel from overheating. Also unique to the FN M249S™ is the ability to feed from either a disintegrating link belt out of a

200 round box/ammunition pack or from M-16 style GI pattern magazines.

When properly used and maintained, the FN M249S™ will deliver years of dependable and enjoyable service.

This information applies to basic operation of the FN M249S™ rifle, regardless of the specific model you may have purchased. Instructions for option accessories available after initial purchase or included on some models are covered here. Where applicable, these differences are explained or are included in a separate addendum included with your FN M249S™ rifle.

6.2 Operation

When the trigger is pulled, the slide hammer is released, striking the firing pin resulting in the rifle firing the cartridge in the chamber. Gas from the fired cartridge travels down the barrel with some diverted into the gas block below the front sight assembly and onto the piston face. This gas imparts some of its energy to the piston and carrier assembly, forcing it to move to the rear. During the rearward movement of the piston, carrier and bolt, the bolt unlocks from the barrel extension and the empty case is extracted from the chamber. As the bolt clears the ejection port, the empty casing is ejected out of the ejection port. If fed from the belt, a single link will be ejected from the link ejection port. During this time, the slide hammer is re-cocked by the carrier assembly. If the rifle is fed from the belt, the feed tray cover assembly advances a new cartridge into the loading position of the feed tray. The bolt and carrier assembly begin to travel forward under the spring tension of the drive spring and strips another cartridge from the

feed tray or magazine and loads it into the chamber, ready to be fired. If there is no more ammunition present, the bolt will close on an empty chamber.

With cartridges in the magazine or on the feed tray and in the chamber, and the safety selector in the FIRE position, the rifle will fire a single round with each successive pull of the trigger until the magazine, feed tray and chamber are empty. When the last round is fired, the bolt will not lock to the rear.

7. NOMENCLATURE

In normal firearm terminology the position and movement of the part are described as they occur with the firearm horizontal and in the normal firing position, i.e., the muzzle is forward or in the front; the buttstock is rearward or to the rear; the trigger is downward or underneath; and the sights are upward or on top. For general part nomenclature, refer to Figures 1 and 2.

8. SERIAL NUMBER

Serial number location marked on right rear side of receiver. See Figure 3. Record this serial number at the front of this Operator's Manual and in another secure location for future reference.

FIGURE 3



9. INITIAL CLEANING

Various exposed metal parts of this rifle have been coated

at the factory with a rust preventative compound. This compound is not an ideal lubricant. Before using the rifle, clean the anti-rust compound from the inside of the barrel and chamber area, receiver, bolt and piston assembly, and the feed tray and feed tray cover with military-grade cleaner/lubricant as explained in Section 25.

If your rifle is to be stored, it is acceptable to leave the rust preventative compound on the rifle and keep it in its original packaging. NEVER FIRE THE RIFLE UPON PURCHASE WITHOUT CLEANING IT FIRST. If the rifle contains hardened grease or other substances that you cannot remove, have the rifle checked by your dealer or authorized FN technician or gunsmith. For law enforcement and military, refer to the procedures of your agency or unit.

10. OPERATION OF THE SAFETY SELECTOR

▲WARNING

WARNING! DO NOT PUT THE SAFETY ON SAFE AS THE SLIDE HAMMER IS BEING COCKED AS EXPLAINED IN SECTION 11. DAMAGE TO THE RIFLE CAN OCCUR IF THE SAFETY SELECTOR IS IN THE SAFE POSITION AS THE SLIDE HAMMER IS COCKED.

The FN M249S™ rifle utilizes a safety selector button located on both sides of the receiver, just above and behind the trigger.

To place the safety selector in the SAFE position, first ensure the slide hammer is cocked into the rearward position as explained in Section 11, then press the safety selector button from left to right until the red band on the button is not visible on the left side. See

Figure 4.A.

With the safety selector in the SAFE position, the rifle is on safe and movement of the sear is blocked.

To place the safety selector in the FIRE position, press the safety selector button from the right to the left until the red band is visible on the left side of the button as it protrudes from the trigger module. See Figure 4.B.

With the safety selector in the FIRE position, the rifle is off safe and ready to fire.

FIGURE 4.A (SAFE)



FIGURE 4.B (FIRE)



11. COCKING THE SLIDE HAMMER AND CHARGING HANDLE OPERATION

▲WARNING

WARNING! THE FN M249S™ OPERATES DIFFERENTLY THAN MOST OTHER SEMI-AUTOMATIC RIFLES. THE SAFETY SELECTOR MUST BE IN THE FIRE POSITION AS THE SLIDE HAMMER IS COCKED. IF IT IS NOT, IT MAY CAUSE DAMAGE TO THE SEAR AND OR SLIDE HAMMER. YOU MUST FOLLOW

THESE INSTRUCTIONS FOR COCKING THE SLIDE HAMMER. WARNING! WHEN COCKING THE SLIDE HAMMER ENSURE NO AMMUNITION IS PRESENT AS EXPLAINED IN SECTION 17.

1. Cocking the Slide Hammer

Before cocking the slide hammer, first place the safety selector button in the FIRE position as explained in Section 10.

Then, with the right hand, palm up, pull the cocking handle fully to rear to lock the slide hammer to the rear and cock rifle. Be mindful of the ejection port cover below the charging handle as it may interfere with a palm-down grip of the charging handle. See Figure 5.

Release the charging handle to allow the bolt and bolt carrier assembly to move forward under the drive spring. Push the charging handle forward until you hear it click into the forward, locked position.

To check that the slide hammer is cocked as shown in Figure 6, open the feed tray cover by squeezing in on the cover latches on the rear of the feed tray cover as shown in Figure 7.A.

FIGURE 5



FIGURE 6



Immediately place the safety selector button in the SAFE position as explained in Section 10.

Once the slide hammer is cocked in the rearward position, the safety must stay in the safe position until firing is imminent.

Loading and charging the FN M249S™ rifle is covered in detail in Section 15 Loading.

12. MANUAL BOLT LOCK DEVICE

The FN M249S™ is a closed-bolt rifle that does not feature an integral bolt lock or bolt stop. In order to “lock” or hold the bolt to the rear, open position a manual bolt lock device is included.

To use the manual bolt lock device to hold/lock the bolt in the open position:

1. Make sure the slide hammer is cocked and the safety selector is in the SAFE position as explained in Sections 10 and 11 and the muzzle is pointed in a safe direction.
2. Clear the rifle as explained in Section 17 and ensure that no ammunition is present in the rifle.
3. Open the feed tray cover by squeezing in on the cover latches on the rear of the feed tray cover. See Figure 7.A. Leave the feed tray cover open in the 45° or 90° position.
4. Pull the charging handle fully to the rear with the right hand

as explained in Section 11. Note-Bracing the buttstock against your shoulder or hip will aid in holding the charging handle to the rear.

FIGURE 7.A

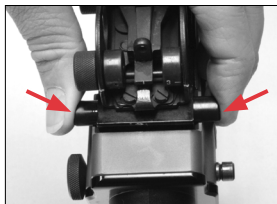
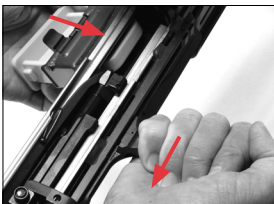


FIGURE 7.B



5. While holding the charging handle to the rear, insert the manual bolt lock device into the magazine well until it locks into place. The manual bolt lock device will open the magazine well dust cover when inserted into the magazine well. Be careful to not over insert the bolt lock device. Only insert far enough for the magazine latch to lock the device into place. See Figure 7.B
6. Ease the charging handle forward, allowing the bolt rest on the rear portion of the manual bolt lock device. Push the charging handle fully forward into the locked position.
7. Close the feed tray cover if the rifle is to be stored or transported.

▲WARNING

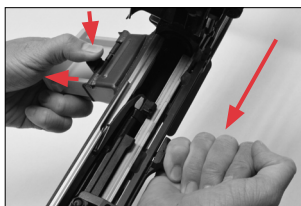
WARNING! THE PRESENCE OF THE MANUAL BOLT LOCK

DEVICE DOES NOT GUARANTEE THAT THERE IS NO CARTRIDGE IN THE CHAMBER. DO NOT RELY ON THE PRESENCE OF THE MANUAL BOLT LOCK DEVICE TO VISUALLY INDICATE A COMPLETELY UNLOADED AND SAFE RIFLE. THE MANUAL BOLT LOCK DEVICE IS NOT THE SAME AS A FLAG SAFETY WHICH IS INSERTED INTO A RIFLE'S CHAMBER.

To remove the manual bolt lock device:

1. Make sure the slide hammer is cocked and the safety selector is in the SAFE position as explained in Sections 10 and 11, and the muzzle is pointed in a safe direction.
2. Open the feed tray cover by squeezing in on the cover latches on the rear of the feed tray cover. See Figure 7.A. Leave the feed tray cover open in the 45° or 90° position.
3. Pull the charging handle fully to the rear with the right hand.
4. While holding the charging handle to the rear with the right hand, use the left hand to press the magazine release button and remove the manual bolt lock device from the magazine well. See Figure 8.
5. Lift the feed tray and inspect the chamber to ensure there are no cartridges present. Remove any that may exist.

FIGURE 8



6. Ease the charging handle forward, allowing the bolt to close on an empty chamber. Push the charging handle fully forward into the locked position.
7. Close the feed tray cover.

13. AMMUNITION

USE ONLY AMMUNITION MADE TO NATO STANDARDS. DO NOT USE HANDLOADED, RELOADED OR STEEL-CASED AMMUNITION.

The barrel and action of this rifle have been made with substantial safety margins over the pressures developed by established U.S. commercial loads. Nevertheless, WE CAN ASSUME NO LIABILITY FOR INCIDENTS WHICH OCCUR THROUGH THE USE OF CARTRIDGES OF NONSTANDARD DIMENSIONS OR WHICH DEVELOP PRESSURES IN EXCESS OF COMMERCIALY AVAILABLE AMMUNITION WHICH HAS BEEN LOADED IN ACCORDANCE WITH STANDARDS ESTABLISHED BY THE NORTH ATLANTIC TREATY ORGANIZATION (NATO).

Only use 5.56x45mm NATO ammo made to NATO standards. The use of open or soft tipped projectiles may lead to increased malfunctions due to inconsistent feeding, particularly when feeding from a magazine. Do not use steel-cased ammunition.

Brass ejected from the FN M249S™ may be damaged by robust ejection. This is normal and does not indicate a malfunctioning rifle.

Additionally, DO NOT FIRE:

- Seriously corroded ammunition
- Dented cartridges
- Cartridges with loose bullets
- Cartridges exposed to extreme heat (direct sunlight on a hot day) until they have cooled
- Cartridges with pushed in (short) bullets
- Belted ammunition that has rusted, corroded or damaged links.
- Any ammunition NOT meeting NATO specifications for 5.56x45mm.

▲WARNING

WARNING! DO NOT LUBRICATE AMMUNITION UNDER ANY CIRCUMSTANCES! CARTRIDGES WITH LUBRICANT CAN LEAD TO EXCESSIVE CHAMBER PRESSURES.

14. FEEDING METHODS AND CAPACITIES

The FN M249S™ is designed to feed from either a belt of ammunition or from a standard M-16 style GI pattern magazine.

1. Disintegrating Linked Belt and Ammunition Pack

The FN M249S™ is shipped with a plastic 200-rd box used to store the belted ammunition. See Figure 9. This ammunition pack clips to the bottom of the receiver and the belt feeds from

the box. This may not be allowed in all jurisdictions. Be sure of local firearm laws and regulations before using. Additionally, 200 M27 steel disintegrating links are provided to link 5.56x45mm NATO ammunition for use with the ammunition box. See Section 15.1 for linking ammunition and feeding from the box. Make sure you have verified the capacity of your ammunition belt and box before loading it in your rifle.

The plastic ammunition box and links are reusable if they are not damaged during use or are cracked, bent or rusted. Do not lubricate the M27 links. Additional M27 links and unloaded ammunition packs are available through your FN Dealer.

FIGURE 9

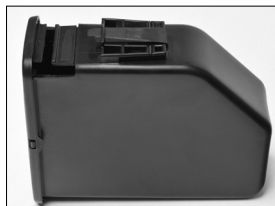


FIGURE 10



2. M-16 Style GI pattern 30 round Magazine

The FN M249S™ will also feed from a standard M-16 style GI pattern 30 round magazine. The supplied magazine can hold as many as 30 rounds. This may not be allowed in all jurisdictions. Be sure of local firearm laws and regulations

before using. Make sure you have verified the capacity of your magazine before loading it in your rifle. See Figure 10.

15. LOADING

15.1 Linking Ammunition and Filling the Ammunition Pack

Disintegrating linked 5.56x45mm NATO ammunition may be available through various ammunition suppliers. Linked ammunition can be assembled by hand if pre-linked ammunition is not available. The M27 links may be reused if they are not rusted, damaged, or bent during firing. Do not lubricate the M27 links. Only use disintegrating belted ammunition designed for the M-249 SAW, MK46 or other U.S. 5.56mm belt fed firearms.

1. Manually Linking M27 Disintegrating Links into a Belt

- a. With a clean and level surface away from the rifle, begin by placing a single link, open side down on the surface with the locating leg pointing toward you.
- b. Place a second link to the right and next to it so that its single left loop sits between the right loops of the left link. Ensure the open sides of the loops are facing down. See Figure 11.

FIGURE 11

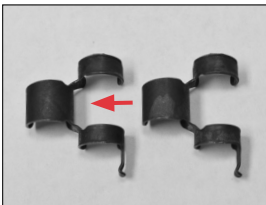
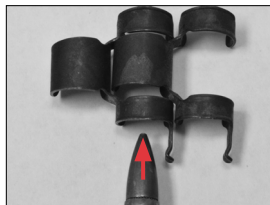


FIGURE 12.A



- c. Take a single cartridge and insert it, bullet first, into the overlapping loops of the two links. See Figure 12.A. This will join the two links together. Push the cartridge into the links until the notch of the locating leg locks into the extraction rim of the cartridge. See Figure 12.B.

FIGURE 12.B

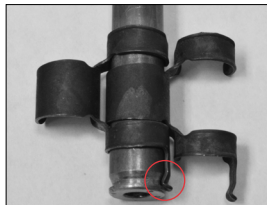
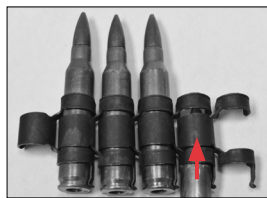
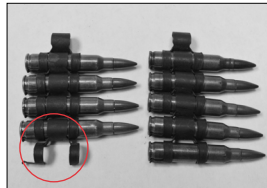


FIGURE 13



- d. Repeat steps “b” and “c” always assembling the belt to the right, into the double loop side of the links with the locating leg. See Figure 13.

FIGURE 14



- e. Continue to assemble until the desired length belt is complete. Do not link more than 200 cartridges into a single

belt. Do not put a cartridge in the left most single loop as it does not have a locating leg to secure the cartridge. A final cartridge may be inserted into the double loop side, but is not required. See Figure 14.

FIGURE 15



FIGURE 16



- f. Inspect the completed belt to ensure all cartridges are locked by the locating leg of each link and the belt is not bent, kinked or uneven. Note that there will be different sides to the belt: an open side exposing the cartridges between the links (See Figure 15) and a closed side encircling the cartridges (See Figure 16).

- g. Belts can be disassembled by pushing the cartridges manually out of the links in a reverse manner. Separate the loose links from cartridges and store them separately for future use.

2. Filling the Plastic Ammunition Pack with a Belt of Ammunition

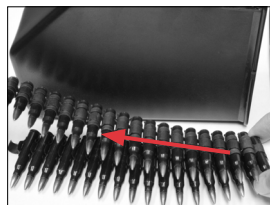
It is recommended that the FN M249S™ be fed with belted ammunition only if it is fed from the supplied plastic ammunition pack. Loose belted ammunition may snag or be damaged if not

protected by the plastic ammunition pack. Malfunctions may result. Remove the plastic ammunition pack from rifle before filling as explained in Section 17.1.

FIGURE 17



FIGURE 18



- Once a belt of no more than 200 rounds is assembled as explained above, open the plastic ammunition pack by removing its side cover. It is locked into place by two tabs, one on each side.
- Place the open ammunition pack upright on a level surface. Then place the belt next to ammunition pack. See Figure 17. Position the belt with the open side of the links facing up (Refer to Figure 15).
- Count approximately 15-16 cartridges from the end near the closed end of the ammunition pack and fold the belt on top of itself as shown in Figure 18 back toward the end of the belt.
- Continue to layer the ammo belt across itself until the entire belt is stacked. See Figures 19 and 20 (depicts a partial belt).

FIGURE 19



- Once the entire belt is layered and stacked, place the layered belt into the open ammunition pack ensuring the belt stays oriented as it was stacked. Placing the ammunition box on a 45 degree angle will aid in sliding the stacked belt into the box. See Figure 21.

FIGURE 21

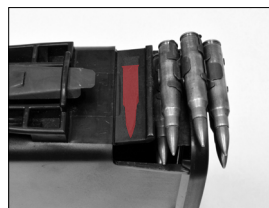


- Place the "top end" of the belt through the feed opening of the plastic ammunition box from the inside so that one or two cartridges pass through the opening. Ensure the cartridge indicating tab remains outside the ammunition box and is not folded in. The cartridge indicating flap should

FIGURE 20



FIGURE 22



hold the belt in place. See Figure 22.

- Snap the ammunition box cover into place ensuring both locking tabs are engaged and secure.

15.2 Filling the Magazine

- Make sure the slide hammer is cocked and the safety selector is in the SAFE position as explained in Sections 10&11 and the muzzle is pointed in a safe direction.
- If the magazine is inserted into the rifle, press the magazine release located on the top of the magazine well. See Figure 23. Remove the magazine from the rifle with your free hand.
- Pull the bolt completely rearward using the charging handle as explained in Section 17.2 and inspect the chamber to ensure that it is empty. Return the bolt to the forward, closed position.
- Load the cartridges into the magazine by placing the cartridge on the top of the retaining lips and, with your thumb, pushing it straight down against the spring force of the follower until it

FIGURE 23



FIGURE 24



locks into position under the retaining lips. Ensure the base of the cartridge is seated flush with rear of the magazine and the projectiles are pointed toward the front of the magazine. See Figure 24. Continue to fill the magazine in this manner until full or the desired number of cartridges is loaded.

Care should be exercised in positioning each cartridge so that its base is flush with the rear of the magazine. If the nose of the cartridge protrudes beyond the front of the magazine, it could cause feeding problems or interfere with the insertion the magazine into the rifle.

WARNING

WARNING! ONLY USE ONE SOURCE OF AMMUNITION WHEN FIRING THE FN M249S™. ATTEMPTING TO USE THE BELT/ AMMUNITION PACK AND THE 30 ROUND MAGAZINE AT THE SAME TIME WILL CAUSE THE RIFLE TO MALFUNCTION AND FAIL TO RELIABLY FEED. PERSONAL INJURY AND DAMAGE TO THE RIFLE AND AMMUNITION MAY RESULT.

NOTICE! IT IS RECOMMENDED THAT THE FN M249S™ BE FED WITH BELTED AMMUNITION ONLY IF IT IS FED FROM THE SUPPLIED PLASTIC AMMUNITION PACK. LOOSE BELTED AMMUNITION MAY SNAG OR BE DAMAGED IF NOT PROTECTED BY THE PLASTIC AMMUNITION PACK. MALFUNCTIONS MAY RESULTS.

15.3 Loading the FN M249S™ from the Belt / Ammo Pack

- Make sure the slide hammer is cocked and the safety selector is in the SAFE position as explained in Sections 10 and 11, and

the muzzle is pointed in a safe direction.

2. If not already done, remove the magazine from the magazine well as explained in Section 15.2.

FIGURE 25

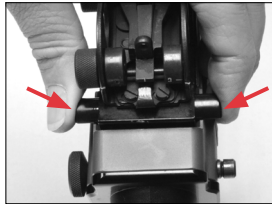
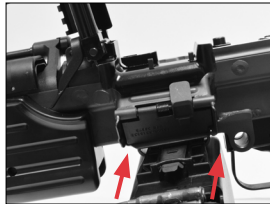


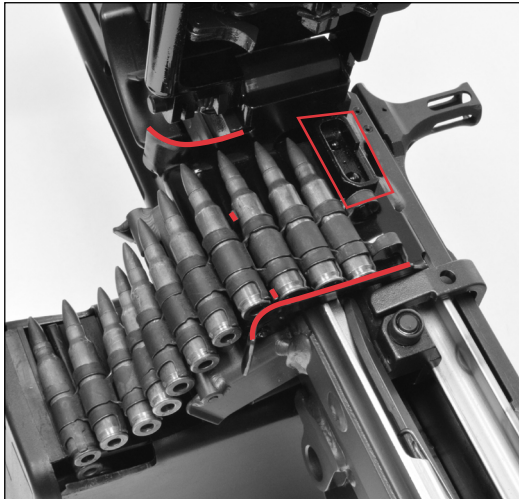
FIGURE 26



3. Open the feed tray cover by squeezing in on the cover latches on the rear of the feed tray cover. See Figure 25. Leave the feed tray cover open in the 45° or 90° position.
4. Pull the charging handle to the rear as explained in Section 11 and visually inspect the chamber to ensure that it is empty. Return the bolt to the forward, closed position.
5. Attach a filled box/ammunition pack to underside of receiver by aligning the dovetail on top of the box with the bracket on the bottom of the receiver from the left side. Slide the dovetail to the right into the bracket until the catch locks into place. Pull outward on ammunition pack to ensure that the latch is engaged. See Figure 26.
6. Pull about 10-12 rounds of the belt out of the ammunition

pack. Place the linked belt on feed tray assembly with first round fully against cartridge stop. Ensure the closed sides of the links are facing up and the open sides of the links are facing down against the feed tray. In this manner, the belt will be placed on the feed tray “brass to the grass”, where the open part of the links expose the brass of the cartridges to the ground instead of to the sky. Two feed pawls will hold the belt in place. Ensure the belt is not twisted. See Figure 27. Note feed tray with cartridge stop and feed pawls highlighted.

FIGURE 27



7. Firmly close the feed tray cover assembly; ensure it is locked closed.
8. If shooting is imminent, a cartridge can now be moved from the feed tray to the chamber by pulling back fully on the charging handle and releasing it. Allow the bolt to move forward into battery under its full spring pressure, do not “ride” the charging handle and bolt forward. If the bolt is not allowed to close in this manner, there is a possibility that it will not close completely, preventing the rifle from firing. Ensure the charging handle is in the forward, locked position.

▲WARNING

WARNING! THE RIFLE IS NOW READY TO FIRE BY MOVING THE SAFETY SELECTOR TO THE FIRE POSITION AND PULLING THE TRIGGER.

WARNING! ONLY USE ONE SOURCE OF AMMUNITION WHEN FIRING THE FN M249S™. ATTEMPTING TO USE THE BELT/ AMMUNITION PACK AND THE 30 ROUND MAGAZINE AT THE SAME TIME WILL CAUSE THE RIFLE TO MALFUNCTION AND FAIL TO RELIABLY FEED. PERSONAL INJURY AND DAMAGE TO THE RIFLE AND AMMUNITION MAY RESULT.

15.4 Loading the FN M249S™ from the Magazine

1. Make sure the slide hammer is cocked and the safety selector is in the SAFE position as explained in Sections 10 and 11, and the muzzle is pointed in a safe direction.
2. Open the feed tray cover by squeezing in on the cover latches

on the rear of the feed tray cover. See Figure 25. Ensure the feed tray is clear of ammunition and links. Refer to Section 17.1 for clearing the feed tray.

Leave the feed tray cover open in the 45° or 90° position.

3. Pull the charging handle to the rear as explained in Section 11 and visually inspect the chamber to ensure that it is empty. Return the bolt to the forward, closed position.
4. Insert a filled magazine into the magazine well until it locks in place and pull to ensure magazine is secured. The magazine will open the magazine well dust cover when pressed against it. See Figure 28. Ensure the projectiles in the magazine point toward the muzzle of the rifle when doing so. Firmly close the feed tray cover and ensure it is locked closed.

FIGURE 28



5. If shooting is imminent, a cartridge can now be moved from the magazine to the chamber by pulling back fully on the charging handle and releasing it. Allow the bolt to move forward into battery under its full spring pressure, do not “ride” the charging handle and bolt forward. If the bolt is not allowed to close in this manner, there is a possibility that it will not close completely, preventing the rifle from firing. Ensure the charging handle is in the forward, locked position.

▲WARNING

WARNING! THE RIFLE IS NOW READY TO FIRE BY MOVING THE SAFETY SELECTOR TO THE FIRE POSITION AND PULLING THE TRIGGER.

16. FIRING

16.1 Firing Procedures

1. Make sure the slide hammer is cocked and the safety selector is in the SAFE position as explained in Sections 10 and 11, and the muzzle is pointed in a safe direction.
2. Load a cartridge into the chamber as explained previously in Section 15. With a cartridge in the chamber, you need only to move the safety selector to the FIRE position to make the rifle ready for firing. Do not move the safety selector to the FIRE position unless shooting is imminent.
3. When ready to fire, move the safety selector into the FIRE position, take aim and squeeze the trigger.

▲WARNING

WARNING! THE FIRING OF LONG SUSTAINED STRINGS OF FIRE WILL CREATE A “COOK OFF” HAZARD. A “COOK OFF” IS WHEN EXCESSIVE HEAT OF THE BARREL WILL CAUSE THE CARTRIDGE IN THE CHAMBER TO IGNITE AND FIRE WITHOUT PULLING THE TRIGGER. THE FIRING OF 200 ROUNDS IN 2 MINUTES WILL RESULT IN THIS POTENTIAL. TO AVOID THIS DANGEROUS CONDITION, IMMEDIATELY CLEAR THE RIFLE

AFTER FIRING IS COMPLETED. THEN ALLOW THE BARREL TO COOL FOR 15 MINUTES OR CHANGE BARRELS BEFORE RESUMING FIRING. FAILURE TO FOLLOW THESE INSTRUCTIONS CAN RESULT IN DEATH OR SERIOUS INJURY.

IF THE RIFLE CANNOT BE IMMEDIATELY CLEARED AND THE BARREL IS EXCESSIVELY HOT (200 ROUNDS FIRED IN 2 MINUTES), DO NOT OPEN THE FEED TRAY COVER OR REMOVE THE BARREL. PLACE THE SAFETY IN THE “SAFE” POSITION AND ENSURE THE RIFLE IS POINTED IN A SAFE DIRECTION. REMOVE THE MAGAZINE IF IT IS THE SOURCE OF AMMUNITION. WAIT 15 MINUTES FOR THE BARREL TO COOL BEFORE CLEARING THE RIFLE AS EXPLAINED IN SECTION 16.2.

▲WARNING

WARNING! THE BARREL ASSEMBLY AND FRONT SIGHT ASSEMBLY WILL BECOME EXTREMELY HOT DURING EXTENDED FIRING SESSIONS OR DURING RAPID FIRING. AVOID CONTACT WITH THESE PARTS DURING SHOOTING OR WEAR GLOVES TO PREVENT BURNS TO YOUR HANDS. DO NOT FIRE THE FN M249S™ WITHOUT HANDGUARDS IN PLACE. WHEN REMOVING THE BARREL, HANDLE THE BARREL WITH CARE AND ONLY USE THE CARRY HANDLE TO REMOVE A HOT BARREL. FAILURE TO FOLLOW THIS WARNING COULD RESULT IN SERIOUS INJURY.

4. After a cartridge has fired, the bolt and bolt carrier assembly automatically move rearward, ejecting the empty case and a single link, then return forward, chambering a loaded cartridge

from the magazine or belt. Note: the charging handle does not move during the firing sequence.

Because fired casings and links are ejected to the right side, bystanders should not stand to the right of the shooter. Left-handed shooters should protect their right arm from ejected casings and links.

5. This operation is repeated each time you pull the trigger until the last cartridge from the belt or magazine has been fired. If shooting is no longer imminent, immediately place the safety selector in the SAFE position.
6. After the last cartridge of the belt or magazine is fired, the bolt will not lock in the rearward position. If you wish to continue shooting, you can reload the rifle by removing the empty box / ammo pack and reloading a filled box / ammo pack or by removing the empty magazine and inserting a loaded magazine as described previously in Section 15.
7. If your rifle is to be put away and stored, do not reload the rifle, ammunition pack or magazine. The chamber, feed tray and magazine must remain empty when storing your rifle.

CAUTION! FIRING LONG SUSTAINED STRINGS OF FIRE (SUCH AS THE FIRING OF 200 ROUNDS IN 2 MINUTES) WILL ACCELERATE WEAR TO THE BORE OF THE RIFLE. TO AVOID THIS CONDITION, ALLOW THE BARREL TO COOL FOR AT LEAST 15 MINUTES BETWEEN EXTENDED STRINGS OF FIRE OR CHANGE BARRELS IF A SPARE BARREL IS AVAILABLE.

16.2 Malfunctions

If your rifle suffers a malfunction, such as the failure to fire or fully eject a fired cartridge case, perform the following operation to clear the rifle.

IF THE BARREL IS EXCESSIVELY HOT (SUCH AS AFTER FIRING 200 ROUNDS IN 2 MINUTES), USE HOT BARREL MALFUNCTION PROCEDURES

Malfunction Procedures Under Normal Conditions

1. Immediately place the safety selector in the SAFE position as explained in Section 10 and keep the muzzle pointed in a safe direction.
2. Eject the magazine from the rifle or clear the belt of ammunition from the feed tray as explained in Section 17.
3. Place the safety selector into the FIRE position.
4. Pull rearward on the charging handle to completely eject the cartridge case. Immediately place the safety selector back into the SAFE position.
5. Inspect, and if necessary, clean the rifle as outlined in Section 25.

Hot Barrel Malfunction Procedures

If your rifle is excessively hot (200 rounds fired in 2 minutes) and you experience a malfunction,

1. Immediately place the safety selector in the SAFE position as

explained in Section 10 and keep the muzzle pointed in a safe direction. DO NOT open the feed tray cover.

2. Ensure the muzzle stays pointed in a safe direction and the feed tray cover remains closed in the event of a “cook off”.
3. Eject the magazine from the rifle as explained in Section 17 if it is the source of the ammunition.
4. Allow the barrel to cool for 15 minutes.
5. Once the barrel has cooled, raise the feed tray cover and clear the belt of ammunition from the feed tray as explained in Section 17.
6. Place the safety selector into the FIRE position.
7. Pull rearward on the charging handle to completely eject the cartridge case. Immediately place the safety selector back into the SAFE position. DO NOT remove a hot barrel to clear the malfunction.
8. Inspect, and if necessary, clean the rifle as outlined in section 25.

17. UNLOADING/CLEARING

▲WARNING

WARNING! THE FIRING OF LONG SUSTAINED STRINGS OF FIRE WILL CREATE A “COOK OFF” HAZARD. A “COOK OFF” IS WHEN EXCESSIVE HEAT OF THE BARREL WILL CAUSE THE

CARTRIDGE IN THE CHAMBER TO IGNITE AND FIRE WITHOUT PULLING THE TRIGGER. THE FIRING OF 200 ROUNDS IN 2 MINUTES WILL RESULT IN THIS POTENTIAL. TO AVOID THIS DANGEROUS CONDITION, IMMEDIATELY CLEAR THE RIFLE AFTER FIRING IS COMPLETED. THEN ALLOW THE BARREL TO COOL FOR 15 MINUTES OR CHANGE BARRELS BEFORE RESUMING FIRING. FAILURE TO FOLLOW THESE INSTRUCTIONS CAN RESULT IN DEATH OR SERIOUS INJURY.

IF THE RIFLE CANNOT BE IMMEDIATELY CLEARED AND THE BARREL IS EXCESSIVELY HOT (200 ROUNDS FIRED IN 2 MINUTES), DO NOT OPEN THE FEED TRAY COVER OR REMOVE THE BARREL. PLACE THE SAFETY IN THE “SAFE” POSITION AND ENSURE THE RIFLE IS POINTED IN A SAFE DIRECTION. REMOVE THE MAGAZINE IF IT IS THE SOURCE OF AMMUNITION. WAIT 15 MINUTES FOR THE BARREL TO COOL BEFORE CLEARING THE RIFLE AS EXPLAINED IN SECTION 16.2.

17.1 Unloading/Clearing from Belted Ammo

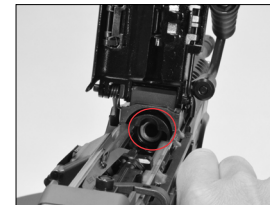
1. If the slide hammer is to the rear and cocked, place the safety selector in the SAFE position as explained in Section 10 and keep the muzzle pointed in a safe direction. If the slide hammer is forward (in fired position) leave the safety selector in the FIRE position for the time being.
2. Open the feed tray cover by squeezing in on the cover latches on the rear of the feed tray cover. Leave the feed tray cover open in the 45° or 90° position.

3. Remove the belt from the feed tray and remove any loose cartridges or links from the feed tray. See Figure 29.

FIGURE 29



FIGURE 30

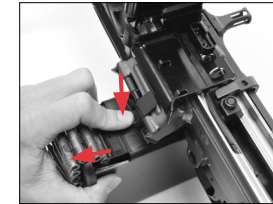


4. Pull the charging handle to the rear to cock the slide hammer. The safety selector should now be placed in the SAFE position as explained in Section 10, if not already done so.
5. Hold the charging handle to the rear with the right hand while lifting the feed tray with the left hand to inspect the chamber for the presence of cartridges. Remove any that remain. See Figure 30. Verify there are no loose cartridges in the magazine well.
6. Allow the charging handle to move forward, closing the bolt on and empty chamber. Please note that the bolt will not automatically lock in the rearward position. As a good safety practice, hold the bolt open and visually inspect the chamber to be absolutely certain a live cartridge is not present in the chamber or anywhere in the rifle. The manual bolt lock device may be used to manually “lock” or hold the bolt in the open

position as explained in Section 12 once the ammunition pack is removed.

7. Remove the ammunition pack by pressing down on the locking tab and pulling the ammunition pack off of the receiver to the left. See Figure 31.
8. Close the feed tray cover.

FIGURE 31



17.2 Unloading/Clearing from a Magazine

1. If the slide hammer is to the rear and cocked, place the safety selector in the SAFE position as explained in Section 10 and keep the muzzle pointed in a safe direction. If the slide hammer is forward (in fired position) leave the safety selector in the FIRE position for the time being.
2. Press the magazine release and REMOVE the magazine. See Figure 32.
3. Open the feed tray cover by squeezing in on the cover latches on the rear of the

FIGURE 32



feed tray cover. See Figure 33. Leave the feed tray cover open in the 45° or 90° position.

4. Pull the charging handle to the rear to cock the slide hammer. The safety selector should now be placed in the SAFE position as explained in Section 10, if not already done so.

5. Hold the charging handle to the rear with the right hand while lifting the feed tray with the left hand to inspect the chamber for the presence of cartridges. Remove any that remain. See Figure 34.

6. Verify there are no loose cartridges in the magazine well.

7. Allow the charging handle to move forward, closing the bolt and empty chamber. Please note that the bolt will not automatically lock in the rearward position. As a good safety practice, hold the bolt open and visually inspect the chamber to be absolutely certain a live cartridge is not present in the chamber or anywhere in the rifle. The manual bolt lock device may be used to manually “lock” or hold the bolt in

FIGURE 33

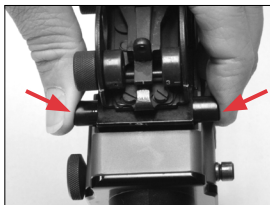


FIGURE 34



the open position as explained in Section 12.

8. Close the feed tray cover.

18. SIGHTS AND ZEROING

⚠WARNING

WARNING! BEFORE ADJUSTING THE SIGHTS, MAKE SURE THE SLIDE HAMMER IS COCKED AND THE SAFETY SELECTOR IS IN THE SAFE POSITION AS EXPLAINED IN SECTIONS 10 AND 11, THE RIFLE IS CLEARED AS DESCRIBED IN SECTION 17 AND THE MUZZLE IS POINTED IN A SAFE DIRECTION. FAILURE TO FOLLOW THESE WARNINGS COULD RESULT IN SERIOUS UNINJURY OR DEATH.

Description of Sights

The FN M249S™ rifle includes front and rear sights that are adjustable for elevation and windage. It also includes an integral MIL-STD-1913 pattern rail on the top of the feed tray cover. See Figure 35.

FIGURE 35



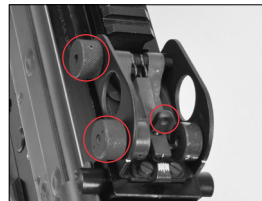
18.1 Sight Assembly

1. Rear Sight Assembly

The rear sight assembly is attached to the top of the feed tray cover. It consists of a rear sight aperture mounted to the sight leaf, an elevation knob, and a windage knob. See Figure 36.

The rear sight assembly is adjusted by hand. The rear sight elevation knob is graduated for the FN M249S™ firing 5.56 mm NATO 62 grain M-855 or equivalent from 300 to 1000 meters.

FIGURE 36



2. Front Sight Assembly

The front sight assembly consists of a protected front sight post mounted in an adjustable front sight assembly attached to the gas block on the barrel. When the FN M249S™ is zeroed on the front sight assembly, the zero stays on the barrel if/when spare barrels are used. Optional tools are used to adjust the front sight assembly.

18.2 Zeroing Procedures

Your sights are pre-set to a mechanical zero from the factory. With the rear sights set at “3” for 300 meters, a field expedient zero can be obtained at 25 meters. Once zeroed at 25 meters, you should confirm and adjust your zero at 300 meters. With the rifle zeroed at

300 meters, the rear sight elevation adjustments are graduated in 100 meter increments from 300 to 1000 meters using NATO Standard M-855 ball ammunition. In order to ensure your rifle is zeroed for you and your ammunition, follow these instructions:

1. Before making any adjustments, make sure the slide hammer is cocked and the safety selector is in the SAFE position as explained in Sections 10 and 11, the rifle is cleared as described in Section 17 and the muzzle is pointed in a safe direction.
2. To mechanically zero your rifle's sights for windage, you must first center your rear sight aperture. Each sight may vary as to how many clicks are needed to center the sight. To check your sight, start with the sight leaf all the way to the left; counting the clicks, rotate the windage knob (front knob) until the sight leaf stops on the right side. See Figure 37.

Divide the number of clicks by two and move the leaf sight left to center - *Example: 24 clicks=12 to center; Example: 23 clicks = 12 to center (11+12=23, Use the larger number).*

With the rear sight aperture mechanically centered, note its location on the graduated windage scale on the rear of the sight. Record its setting for future reference.

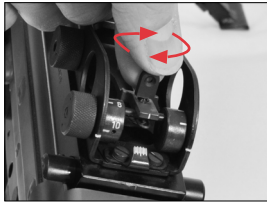
3. The rear sight aperture is adjustable independent of the elevation knob for zeroing purposes. If you have only a single barrel, it is recommended that the elevation be zeroed on the rear sight aperture. Although it may be zeroed on the front sight as explained in Step 6.

To center the rear sight aperture for elevation, turn the rear sight aperture clockwise on the rear sight leaf until it stops. Turn the rear sight aperture counterclockwise, counting the number of clicks (there will be two clicks per complete rotation), rotate the rear sight aperture until it stops in its highest position. See Figure 38.

FIGURE 37



FIGURE 38



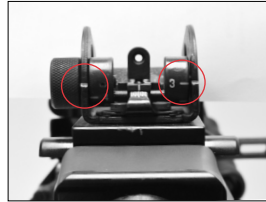
Divide the number of clicks by two and move the rear sight aperture down to center – Example: 13 clicks = 7 to center (6 + 7 = 13, Use the larger figure). Record this setting for future reference.

NOTE! TO MAKE THE REAR SIGHT APERTURE EASIER TO GRASP WITH FINGERS, ROTATE THE ELEVATION KNOB (REAR KNOB) TO THE “10” (1000 METER) MARK. AFTER THE REAR SIGHT APERTURE IS CENTERED AS EXPLAINED ABOVE, MOVE THE ELEVATION KNOB BACK TO ORIGINAL, LOWER POSITION.

4. With the rear sight mechanically zeroed as described above, zeroing may be conducted at 25 or 300 meters with the rear sight elevation knob (rear knob) set at “3”. The rear sight

elevation knob is graduated from 3 to 10 in 100 meter increments. The elevation drums are marked on the right drum for odd hundreds of meters and the left drum is marked for the even hundreds. See Figure 39. For each distance, align the mark on the drum to the mark on the rear sight housing.

FIGURE 39



5. To make adjustments for zeroing, first fire a 3-5 round group onto a target. Adjust the rear sight to align the point of impact with your intended point of aim:

For windage adjustments, use the windage knob (front knob) on the rear sight assembly.

- To move group right: Turn windage knob (front knob) counterclockwise (CCW).
- To move group to left: Turn windage knob (front knob) clockwise (CW)
- Each “click” on the rear sight windage knob is equal to ½ MIL or approximately 1.7 MOA so that one “click” is approximately:
 - 6 inches (15.24 cm) at 300 meters

- 2 inches (5.08 cm) at 100 meters
- .5 inches (1.27 cm) at 25 meters

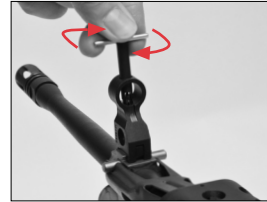
For elevation adjustments, use the rear sight aperture.

- To raise the group: Turn rear sight aperture counterclockwise (CCW).
 - To lower the group: Turn rear sight aperture clockwise (CW).
 - Each “click” (half turn) on the rear sight aperture is equal to 1 MIL or approximately 3.4 MOA so that one “click” is approximately:
 - 12 inches (30.48 cm) at 300 meters
 - 4 inches (10.16 cm) at 100 meters
 - 1 inch (2.54 cm) at 25 meters
6. If you have the optional front sight adjustment tool and a spare barrel, it is recommended that you zero for elevation on the front sight post for each barrel and leave the rear sight set at mechanical zero as explained in Steps 1-4 above. To adjust the front sight post for elevation:

Use the optional front sight adjustment tool by placing it into the opening on top of the front sight assembly. The wrench will fit over the top of the front sight post and engage the flats on the sight’s base. See Figure 40.

- To raise the group: Turn front sight post/wrench clockwise (CW).
- To lower the group: Turn front sight post/wrench counterclockwise (CCW).
- Each half turn on the front sight is equal to 1 MIL or approximately 3.4 MOA so that 1/2 rotation is approximately:
 - 12 inches (30.48 cm) at 300 meters
 - 4 inches (10.16 cm) at 100 meters
 - 1 inch (2.54 cm) at 25 meters

FIGURE 40



7. Repeat Steps 5-6 until the appropriate zero is obtained. Before making any adjustments, Make sure the slide hammer is cocked and the safety selector is in the SAFE position as explained in Sections 10 and 11, the rifle is cleared as described in Section 17 and the muzzle is pointed in a safe direction.

18.3 Mounting Optical Sights

WARNING

WARNING! BEFORE MOUNTING A SCOPE, SIGHT OR OTHER ACCESSORY ON YOUR RIFLE, PLACE THE SAFETY SELECTOR

IN THE SAFE AS EXPLAINED IN SECTION 10 AND ENSURE THAT THE RIFLE IS COMPLETELY CLEARED AS EXPLAINED IN SECTION 17. KEEP THE MUZZLE POINTED IN A SAFE DIRECTION. FAILURE TO FOLLOW THESE WARNINGS COULD RESULT IN SERIOUS INJURY OR DEATH.

The FN M249S™ feed tray cover is equipped with an integral MIL-STD 1913 rail for optics mounting on top. Use care when mounting optics to the feed tray cover. Be mindful of the location of the optic when the feed tray cover is opened. Damage to the optic may result when the feed tray cover is opened if it is allowed to impact the barrel when opening.

Follow the instructions included with your sight for mounting and zeroing procedures. Ensure the sight or optic does not interfere with the safe, normal operation of the FN M249S™ rifle.

19. BARREL CHANGE PROCEDURES

▲WARNING

WARNING! DO NOT TOUCH A HOT BARREL EXCEPT BY THE CARRY HANDLE. THE BARREL ASSEMBLY AND FRONT SIGHT ASSEMBLY WILL BECOME EXTREMELY HOT DURING EXTENDED FIRING SESSIONS OR DURING RAPID FIRING. AVOID CONTACT WITH THESE PARTS DURING SHOOTING OR WEAR GLOVES TO PREVENT BURNS TO YOUR HANDS. DO NOT FIRE THE FN M249S™ WITHOUT HANDGUARDS IN PLACE. WHEN REMOVING THE BARREL, HANDLE THE BARREL WITH CARE AND ONLY USE THE CARRY HANDLE TO REMOVE A HOT BARREL. FAILURE TO FOLLOW THIS WARNING COULD RESULT

IN SERIOUS INJURY.

The FN M249S™ has the ability for the operator to quickly remove and change the barrel. It is recommend that the barrel be allowed to cool after extended sequences of fire of 200 rounds in a short time. If a spare barrel is available, the barrel can be allowed to cool off of the rifle while firing is resumed with the spare barrel.

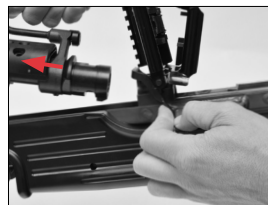
To remove the barrel:

1. Make sure the slide hammer is cocked and the safety selector is in the SAFE position as explained in Sections 10 and 11, and the muzzle is pointed in a safe direction.
2. Clear the rifle as explained in Section 17.
3. Pull the charging handle to the rear and insert the manual bolt lock device as explained in Section 12.

FIGURE 41



FIGURE 42



4. Being careful not to touch the barrel, with the left hand, press the barrel latch lever to the rear. See Figure 41.

5. While holding the barrel latch depressed with the left hand, grab the carry handle with the right hand and remove the barrel from the receiver by lifting the barrel assembly forward then up, away from the receiver. See Figure 42.
6. Carefully set the barrel aside in a safe location that is resistant to melting or burning. Warn others nearby that the barrel is very hot.

After the barrel has cooled or a spare barrel is available, to replace the barrel:

1. Make sure the slide hammer is cocked and the safety selector is in the SAFE position as explained in Sections 10 and 11.
2. With the barrel removed as explained above and with the bolt held to the rear, before inserting the barrel, ensure the muzzle will be pointed in a safe direction once it is installed on the rifle.
3. Using the carry handle to lift the barrel, align the barrel extension with the opening on the receiver just forward of the

FIGURE 43



FIGURE 44



barrel latch and the gas plug with the open gas cylinder above the bipod. See Figure 43.

4. Depress the barrel latch and insert the barrel into receiver opening and the gas plug into the gas cylinder. See Figure 44.
5. Once the barrel is in place, release the latch and ensure barrel is positively locked in place by tugging on the carry handle.
6. If firing is imminent, remove the manual bolt locking device as explained in Section 12. While keeping the rifle pointed in a safe direction, load the rifle as described in Section 15.

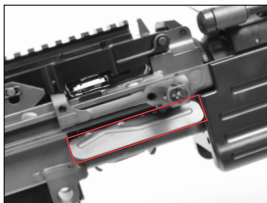
20. DUST COVER OPERATION

The FN M249S™ is equipped with a spring loaded dust cover which can be closed over the casing ejection port when the bolt is manually locked to the rear as explained in Section 12. It is useful for preventing debris from entering the rifle when not in use. It is located on the lower right side of the receiver. To close the dust cover:

1. Make sure the slide hammer is cocked and the safety selector is in the SAFE position as explained in Sections 10 and 11, the rifle is cleared as described in Section 17 and the muzzle is pointed in a safe direction.
2. Lock the bolt to the rear using the manual bolt locking device as explained in Section 12.

- Simply rotate the dust cover down and closed over the ejection port until it locks closed. See Figure 45.
- To open the dust cover, remove the manual bolt locking device and close the bolt as explained in Section 12. Movement of the bolt and bolt carrier will open the dust cover automatically.

FIGURE 45



21. BIPOD OPERATION

The FN M249S™ is equipped with a folding adjustable bipod which can be stowed for carry and deployed to support and stabilize firing positions. When deployed, the bipod can be adjusted for height and will tilt to allow for firing from uneven ground. Before firing, ensure the rifle is in a stable, supported position.

CAUTION! BE CAREFUL WHEN MANIPULATING THE BIPOD. WHEN THE BIPOD LEGS ARE SQUEEZED SHUT, ENSURE YOUR HANDS ARE CLEAR OF THE BIPOD HINGE. A PINCH HAZARD EXISTS AT THE HINGE JOINT OF THE BIPOD. WHEN COLLAPSING THE BIPOD LEGS, A SLIGHT PINCH HAZARD IS PRESENT WHERE THE LEGS TELESCOPE INTO THEMSELVES. INJURY TO YOUR HAND MAY RESULT IF CARE IS NOT TAKEN WHEN MANIPULATING THE BIPOD.

To deploy the bipod:

- Make sure the slide hammer is cocked and the safety selector is in the SAFE position as explained in Sections 10 and 11, the rifle is cleared as described in Section 17 and the muzzle is pointed in a safe direction.
- Ensuring the rifle stays pointed in a safe direction and while supporting the rifle, grab the two legs of the bipod and press them together.
- Press the legs together near their feet and rotate the bipod legs down and forward 90°. See Figure 46.

FIGURE 46



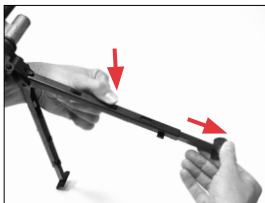
- Release the bipod legs, they will open under spring tension and lock into the deployed position.
- If desired, adjust the legs independently for height as described below.

To adjust the bipod legs:

- Make sure the slide hammer is cocked and the safety selector is in the SAFE position as explained in Sections 10 and 11, the rifle is cleared as described in Section 17 and the muzzle is pointed in a safe direction.
- Open and deploy the bipod as explained above.

- Adjust each leg independently by pulling the bottom end of each leg down away from the rifle. The bipod leg will extend. To assist in lengthening the bipod leg, press in on the bipod latch while pulling down. See Figure 47.

FIGURE 47



- There are three positions on each bipod leg. Adjust the legs so that the firing position is stable and level.
- To shorten each bipod leg, press in on the bipod leg latch and push the bottom section of the leg in. The bipod leg will collapse into the upper section. Use care when collapsing each leg as a slight pinch hazard exists as the legs telescope into themselves.

To fold and store the bipod:

Before folding and stowing the bipod, collapse the bipod legs completely to their shortest length.

- Make sure the slide hammer is cocked and the safety selector is in the SAFE position as explained in Sections 10 and 11, the rifle is cleared as described in Section 17 and the muzzle is pointed in a safe direction.
- While ensuring the rifle stays pointed in a safe direction and

while supporting the rifle, collapse the bipod legs to their shortest length as explained above before folding and stowing the bipod.

- Keeping the rifle pointed in safe direction, grab the two legs of the bipod and press them together. Be careful when doing so to avoid pinching your hand between the bipod legs.
- While holding the legs together, rotate the bipod legs back and up 90° into the recessed pocket in the bottom of the forearm. See Figure 48.
- Release the bipod legs. Two tabs on the bipod legs will engage and lock the bipod into the stowed position.

FIGURE 48



22. BUTTSTOCK / SHOULDER REST OPERATION

The FN M249S™ is equipped with a shoulder rest on the buttstock. This shoulder rest can be raised to rest on top of the shooter's shoulder when firing to help stabilize the rifle in the shooter's shoulder. Use of the shoulder rest is optional. To use the shoulder rest:

- Make sure the slide hammer is cocked and the safety selector is in the SAFE position as explained in Sections 10 and 11, the rifle is cleared as described in Section 17 and the muzzle is

pointed in a safe direction.

2. With the rifle pointed in a safe direction, pull the bottom of the shoulder rest back and up. See Figure 49.
3. When in the firing position, place the buttplate against the shooting shoulder and allow the shoulder rest to sit on top of the shoulder. The shooting position will be more stable and it will be easier to stay in a shooting position for longer.
4. To close/fold the shoulder rest, first make sure the slide hammer is cocked and the safety selector is in the SAFE position as explained in Sections 10 and 11, the rifle is cleared as described in Section 17 and the muzzle is pointed in a safe direction.
5. Rotate the shoulder rest down and forward until it snaps into its stowed position.

FIGURE 49



1. Before attaching or removing the sling, make sure the slide hammer is cocked and the safety selector is in the SAFE position as explained in Sections 10 and 11, the rifle is cleared as described in Section 17 and the muzzle is pointed in a safe direction.
2. To use the Quick Detach (QD) stud assembly, install the QD stud assembly into either the left or right hole in the forward end of the receiver. Ensure the stud protrudes to the outside of the receiver. Attach the QD sling swivel and sling to this QD stud. See Figure 50. Removing the barrel as explained in Section 19 will make installing the QD stud easier.

To use the sling hook to attach the sling at the front, simply hook the sling hook through either the left or right hole at the forward end of the receiver.

FIGURE 50



3. To attach the sling at the rear, press the rear sling hook into the loop on the top, rear of the buttstock assembly and ensure the hook latches securely. See Figure 51.

FIGURE 51



23. OPTIONAL SLING OPERATION

The optional sling assembly is attached to the front of the receiver and to the rear of the buttstock. There are two ways of attaching to the front of the rifle (via quick detach stud or sling hook).

4. Standard “M” buckles allow for adjustment of the sling’s length. Ensure sling is secure and properly adjusted before using.

24. DISASSEMBLY / FIELD STRIPPING PROCEDURES

⚠WARNING

WARNING! BEFORE PERFORMING ANY CLEANING OR SERVICE PROCEDURES, MAKE SURE THE SLIDE HAMMER IS COCKED AND THE SAFETY SELECTOR IS IN THE SAFE POSITION AS EXPLAINED IN SECTIONS 10 AND 11. OPEN THE ACTION AND MAKE CERTAIN YOUR RIFLE IS COMPLETELY UNLOADED. ALLOW THE RIFLE TO COOL. KEEP THE MUZZLE POINTED IN A SAFE DIRECTION. FAILURE TO FOLLOW THESE WARNINGS COULD RESULT IN SERIOUS INJURY OR DEATH.

⚠WARNING

WARNING! WEAR EYE PROTECTION WHEN DISASSEMBLING AND CLEANING YOUR RIFLE TO PREVENT SPRINGS, SPRING-LOADED PARTS, SOLVENTS OR OTHER AGENTS FROM CONTACTING YOUR EYES, RESULTING IN INJURY.

⚠WARNING

WARNING! KEEP ALL AMMUNITION AWAY FROM THE CLEANING AREA. NEVER TEST THE MECHANICAL FUNCTION OF YOUR RIFLE WITH LIVE AMMUNITION.

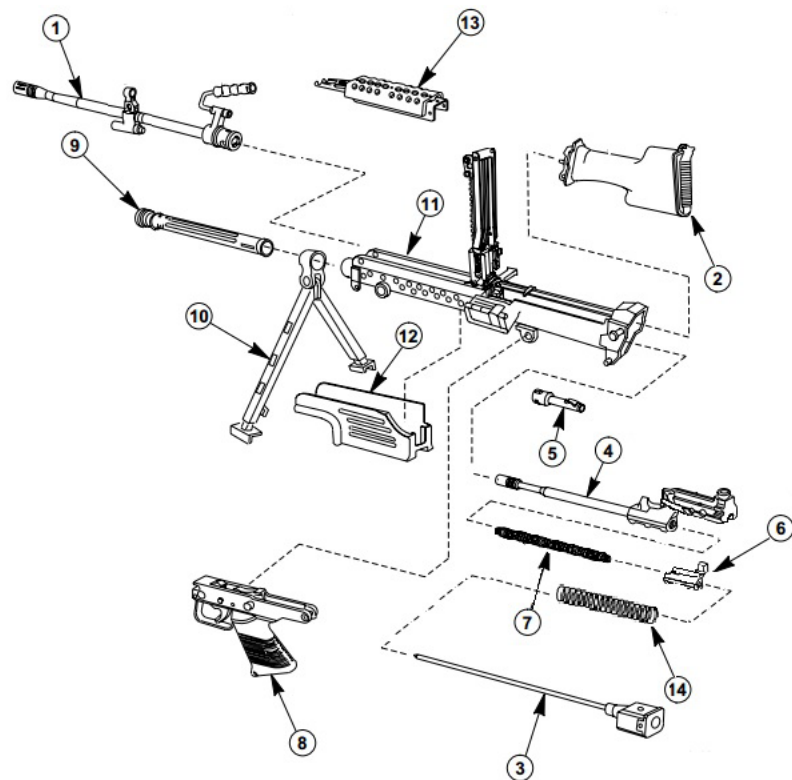
FAILURE TO FOLLOW THESE WARNINGS COULD RESULT IN SERIOUS INJURY OR DEATH.

NOTICE! THIS RIFLE IS A SPECIALIZED, FINELY FITTED MECHANISM. YOU MAY DAMAGE IT BEYOND REPAIR OR LOSE SMALL PARTS BY ATTEMPTING TO DISASSEMBLE THE INNER MECHANICAL ASSEMBLIES. IF FURTHER DISASSEMBLY FOR SERVICE OR CLEANING BEYOND WHAT IS DESCRIBED HERE IS REQUIRED, CONTACT FN AMERICA PRODUCT SERVICE.

NOTICE! THE FOLLOWING DISASSEMBLY PROCEDURES ARE DESIGNED TO BE PERFORMED WITH FINGER PRESSURE ONLY AND NO TOOLS ARE TO BE USED EXCEPT WHERE NOTED. IF YOU CANNOT COMPLETE THE DISASSEMBLY PROCEDURES DESCRIBED WITHOUT THE USE OF TOOLS, STOP AND CONTACT FN AMERICA PRODUCT SERVICE.

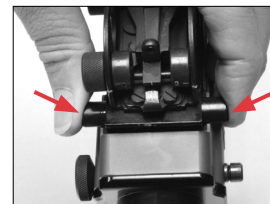
1. FN M249S™ Subassemblies Identification

1. Barrel Assembly
2. Buttstock Assembly
3. Guide Rod
4. Bolt Carrier / Piston Assembly
5. Bolt
6. Slide Hammer
7. Drive Spring
8. Trigger Assembly
9. Gas Cylinder
10. Bipod Assembly
11. Receiver Assembly
12. Forearm
13. Heatshield
14. Slide Hammer Spring



2. Before disassembling the FN M249S™, make sure the slide hammer is cocked and the safety selector is in the SAFE position as explained in Sections 10 and 11, the rifle is cleared as described in Section 17 and the muzzle is pointed in a safe direction.

FIGURE 52



3. Open the feed tray cover by squeezing in on the cover latches on the rear of the feed tray cover. See Figure 52. Leave the feed tray cover open in the 90° position.
4. Pull the charging handle to the rear and place the safety selector in the FIRE position. While holding the charging handle, repeatedly pull the trigger and slowly let the charging handle move forward until the bolt carrier and slide hammer move forward and can be closed fully forward. The slide hammer must be released by the sear and be in the forward position.

⚠WARNING

WARNING! FAILURE TO PLACE THE BOLT CARRIER ASSEMBLY AND SLIDE HAMMER IN THE FORWARD, FIRED POSITION WILL RESULT IN A DANGEROUSLY HIGH AMOUNT OF SPRING TENSION ON THE GUIDE ROD. SERIOUS BODILY INJURY MAY RESULT. DO NOT ATTEMPT TO REMOVE THE BUTTSTOCK ASSEMBLY OR GUIDE ROD ASSEMBLY WITHOUT ENSURING

THE BOLT CARRIER AND SLIDE HAMMER ARE FULLY FORWARD.

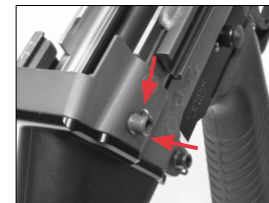
5. Rotate the buttstock open

Rotate the buttstock open by first pulling the upper take down pin to the left. It is a captive pin and will not come completely out of the receiver. Once withdrawn, rotate the buttstock assembly down and out of the way of the rear of the receiver. See Figure 53.

FIGURE 53



FIGURE 54



Withdrawing the take down pins is made easier by first pressing in on the retention springs on the right end of each of the pins as the pins are removed as shown in Figure 54.

6. Remove Drive Springs and Guide Rod

With the buttstock opened and rotated out of the way as described above, press in and up on the exposed drive rod and

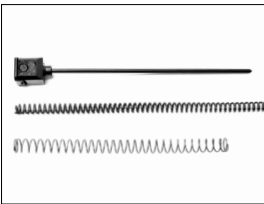
spring assembly. Then withdraw the guide rod and the two springs on the guide rod assembly from the receiver. See Figure 55.

Once removed, separate the guide rod and the two drive springs. See Figure 56.

FIGURE 55



FIGURE 56



7. Remove the Moving Parts Assembly

Remove the guide rod and drive springs as described above. Pull the charging handle to the rear and pull the moving parts assembly (slide hammer and bolt carrier / piston assembly) out of the back of the receiver. The slide hammer will be the first part to come out. See Figure 57.

FIGURE 57



7.1 Disassemble Moving Parts Assembly

1. With the moving parts assembly out of the rifle, the slide hammer will be separate. See Figure 58.

FIGURE 58



2. To separate the bolt from the bolt carrier, press in on the bolt and rotate it so the cam lug disengages from its cam path and can be withdrawn from the bolt carrier. See Figure 59.

FIGURE 59



FIGURE 60

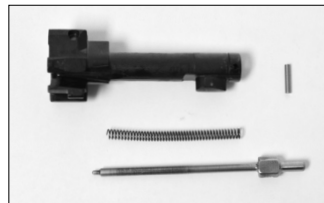


3. DO NOT DISASSEMBLE the bolt carrier from the piston assembly.
4. To disassemble the bolt, remove the bolt from the bolt carrier as explained above. Use a small 1/16" punch, or similar, to

push the firing pin retaining pin out of the rear of the bolt. See Figure 60.

The firing pin can be withdrawn from the bolt along with the firing pin spring. The firing pin spring can be removed from the front of the firing pin. Do not disassemble the bolt assembly beyond this stage. See Figure 61.

FIGURE 61



8. Remove the Buttstock

To remove the buttstock, first remove the moving parts assembly as explained above. With the upper take down pin withdrawn, support the buttstock assembly and withdraw the lower take down pin in the same manner. The lower take down pin is captive and will not come completely out of the receiver. See Figure 62.

FIGURE 62



9. Remove the Trigger Assembly

To remove the trigger assembly, first remove the buttstock

assembly as explained above. With the lower take down pin fully withdrawn, the trigger assembly can be removed from the receiver by rotating it down and to the rear, off of the receiver. See Figure 63.

FIGURE 63



10. Remove Barrel Assembly

To remove the barrel assembly, first remove the moving parts assembly, buttstock assembly and the trigger assembly as described above.

Close the feed tray cover.

With the bolt unlocked from the barrel or the bolt and moving parts assembly out of the rifle, the barrel can now be removed.

Press the barrel latch lever to the rear. While holding the lever depressed, grab the carry handle and remove the barrel forward and out of the receiver. See Figure 64.

FIGURE 64



11. Remove Heat Shield

Remove the barrel as described above. Rotate the heat shield up and off the barrel assembly. See Figure 65. **DO NOT DISASSEMBLE THE BARREL ASSEMBLY BEYOND THIS.**

FIGURE 65



12. Remove Gas Cylinder

Remove the barrel assembly as described above.

Grab the knurled end of the gas cylinder and rotate it while pulling out on it until it unlocks and can be withdrawn completely from the receiver. See Figure 66.

FIGURE 66

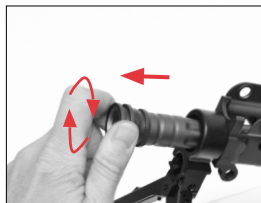
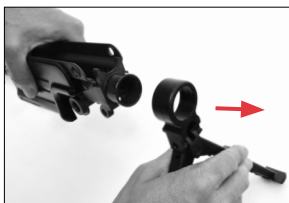


FIGURE 67



13. Remove Bipod Assembly

Remove the gas cylinder as described above.

Open the bipod as described in Section 21. It can now be simply removed from the front of the receiver. Do not attempt to disassemble the bipod beyond this. See Figure 67.

14. Remove Forearm / Handguard Assembly

To remove the forearm/handguard assembly, first disassemble the rifle as described above.

Use a cleaning rod section or the guide rod to push the forearm retaining pin from right to left. This pin is captive and will be retained in the forearm. See Figure 68.

With the pin unlocked, rotate the forearm / handguard down and forward, off of the receiver. See Figure 69.

STOP! DO NOT DISASSEMBLE THE RIFLE BEYOND THIS LEVEL.

FIGURE 68



FIGURE 69



25. CLEANING AND LUBRICATION

▲WARNING

WARNING! BEFORE PERFORMING ANY CLEANING OR SERVICE PROCEDURES, MAKE SURE THE SLIDE HAMMER IS COCKED AND THE SAFETY SELECTOR IS IN THE SAFE POSITION AS EXPLAINED IN SECTIONS 10 AND 11. OPEN THE ACTION AND MAKE CERTAIN YOUR RIFLE IS COMPLETELY UNLOADED. ALLOW THE RIFLE TO COOL. KEEP THE MUZZLE POINTED IN A SAFE DIRECTION. FAILURE TO FOLLOW THESE WARNINGS COULD RESULT IN SERIOUS INJURY OR DEATH.

▲WARNING

WARNING! WEAR EYE PROTECTION WHEN DISASSEMBLING AND CLEANING YOUR RIFLE TO PREVENT SPRINGS, SPRING-LOADED PARTS, SOLVENTS OR OTHER AGENTS FROM CONTACTING YOUR EYES, RESULTING IN INJURY.

▲WARNING

WARNING! KEEP ALL AMMUNITION AWAY FROM THE CLEANING AREA. NEVER TEST THE MECHANICAL FUNCTION OF YOUR RIFLE WITH LIVE AMMUNITION. FAILURE TO FOLLOW THESE WARNINGS COULD RESULT IN SERIOUS INJURY OR DEATH.

Your FN M249S™ will function better, more reliably and be more accurate over a longer period of time if it is properly maintained

and kept clean. Clean your firearm after every day of shooting, and more often if it becomes excessively dirty during your shooting session.

A minimum cleaning includes wiping down the firearm and lubricating key parts. Regular maintenance will also include cleaning the barrel and the bolt, bolt carrier and gas piston.

As you clean and lubricate your FN M249S™ rifle, inspect the parts for abnormal wear, cracks, corrosion, and rust. Contact FN America Product Service if any are found. Moving parts not removed during normal maintenance should be inspected for ease of movement and proper spring tension, if applicable. Do not remove components from the rifle except for where explained in this manual. Use compressed air or aerosol gun cleaners to clean under, around or behind these components.

If you encounter a function problem be sure to give your firearm a thorough cleaning to see if it resolves the problem before seeking the services of FN America Product Service, your departmental armorer, or a qualified gunsmith.

Before performing cleaning and lubrication:

1. Make sure the slide hammer is cocked and the safety selector is in the SAFE position as explained in Sections 10 and 11, the rifle is cleared as described in Section 17 and the muzzle is pointed in a safe direction.
2. Disassemble the FN M249S™ rifle as described in Section 24.

25.1 Receiver and Feed Tray Cover Assembly

With the receiver and feed tray cover disassembled, use an all purpose brush or compressed air to remove loose debris from the feed tray cover mechanism. Use a plastic bristled cleaning brush and military-grade cleaner/lubricant to clean debris and excess lubricant from the feed tray and cover, paying close attention to not dislodge captive springs in the cover mechanism. Aerosol gun cleaners and compressed air will aid on removing debris and excess lubricants from around these parts.

Use a plastic bristled cleaning brush and military-grade cleaner/lubricant to clean debris and excess lubricant from the interior of the receiver, paying close attention to the interior rails. Aerosol gun cleaners and compressed air will aid on removing debris and excess lubricants from inside the receiver. Dry, clean cloths can be used to wipe out the interior of the receiver.

Use a plastic bristled cleaning brush and military-grade cleaner/lubricant to clean debris and excess lubricant from the exterior of the receiver and the moving parts such as the charging handle, dust cover and magazine well cover. Aerosol gun cleaners and compressed air will aid in removing debris and excess lubricants from these parts. Dry, clean cloths can be used to wipe off the exterior of the receiver.

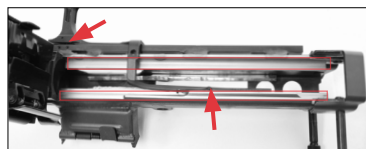
Use a plastic bristled cleaning brush and military-grade cleaner/lubricant to clean debris and excess lubricant from the rear sight assembly.

When clean, apply military-grade cleaner/lubricant to the following parts. See Figures 70.A-B. Apply a thin film of CLP to all external metal parts.

FIGURE 70.A



FIGURE 70.B



25.2 Drive Springs and Guide Rod

With the guide rod and springs removed and separated, use an all purpose brush and military-grade cleaner/lubricant to remove debris and excess lubricant from the springs and guide rod. Compressed air or aerosol gun cleaners can be used to assist in cleaning these parts. Dry, clean cloths should be used to wipe off any excess lubricants and fouling.

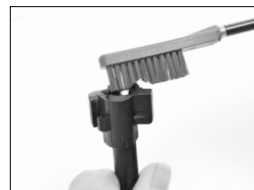
When clean, apply thin film of military-grade cleaner/lubricant to the exterior of all parts.

25.3 Moving Parts Assembly

With the moving parts assembly removed from the receiver and separated as explained in Section 24, clean away debris and fouling using an all purpose brush and military-grade cleaner/lubricant. Compressed air or aerosol gun cleaners can be used to assist in cleaning these parts. Dry, clean cloths should be used to wipe off any excess lubricants and fouling.

The bolt face and extractor should be cleaned with an all purpose brush or pipe-cleaner, ensuring the extractor is free of debris. See Figure 71.

FIGURE 71



Use an all purpose brush and military-grade cleaner/lubricant to remove debris, fouling and excess lubricant from the slide hammer. The bolt carrier and piston body can be cleaned in the same way.

Use the optional scraper tool to clean fouling and carbon from the piston grooves. See Figure 72. Use the flat end of the scraper tool to clean carbon and fouling from the interior of the piston face. See Figure 73. If this scraper is not available, use universal scrapers or bronze bristled brushes to clean the piston. Do not use abrasives.

FIGURE 72

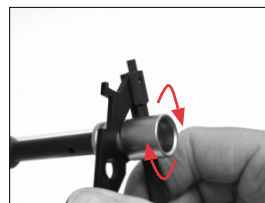
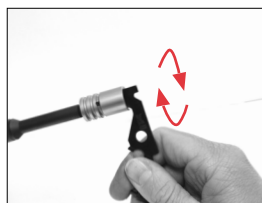


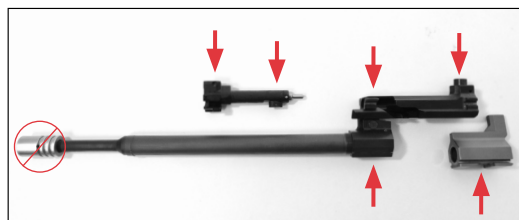
FIGURE 73



When clean, apply military-grade cleaner/lubricant to the

following parts. See Figure 74. Apply a thin film of lubricant to all external metal parts. Do not lubricate the chrome-plated piston head.

FIGURE 74



25.4 Barrel

With the barrel removed from the receiver and the heat shield removed from the barrel, use an all purpose brush and military-grade cleaner/lubricant to remove debris and excess lubricant from the exterior of the barrel. Use an all purpose brush to clean inside the barrel extension and locking lug area. See Figure 75.

Use a cleaning rod and bore brush soaked with military-grade cleaner/lubricant or bore solvent to clean the interior of the bore. Use a cleaning rod and chamber brush soaked with military-

FIGURE 75



grade cleaner/lubricant or bore solvent to clean the chamber. Use clean bore patches with the cleaning rod and an eyelet to swab the interior of the bore and chamber clean. Leave the interior of the chamber and bore dry by swabbing it with a dry, clean patch.

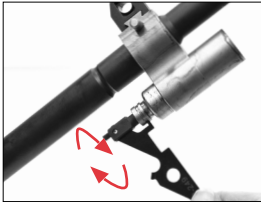
NOTICE! DO NOT USE A STAINLESS STEEL BORE BRUSH TO CLEAN THE BORE OR CHAMBER. IT WILL DAMAGE THE CHROME PLATING.

Use the optional scraper tool to clean the gas block and gas plug. See Figures 76 and 77. If this scraper is not available, use universal scrapers or bronze bristled brushes to clean the gas block and gas plug. Do not use abrasives.

FIGURE 76



FIGURE 77



When clean, apply military-grade cleaner/lubricant to the locking lug areas of the barrel extension. Apply a thin film of lubricant to all external metal parts. Do not lubricate the chrome plated gas plug or the interior of the bore and chamber.

25.5 Gas Cylinder

With the gas cylinder removed from the receiver, use an all purpose brush and military-grade cleaner/lubricant to remove debris and excess lubricant from the exterior of the gas cylinder.

Use the optional scraper tool's flat end to clean inside the knurled end of the gas cylinder. Rotate the tool inside the cylinder's opening scraping the fouling loose from the interior grooves. See Figures 78 and 79. If this scraper is not available, use universal scrapers or bronze bristled brushes to clean the gas cylinder. Do not use abrasives.

FIGURE 78

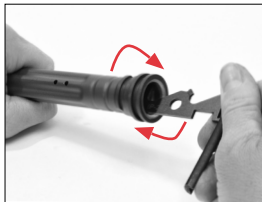


FIGURE 79



Use a cleaning rod with a 12 gauge bore brush and military-grade cleaner/lubricant to scrub the interior of the gas cylinder. Use a dry cleaning cloth to wipe the interior of the cylinder dry.

When clean, apply a thin film of lubricant to all external metal surfaces. Do not lubricate the interior of the gas cylinder.

25.6 Trigger Assembly

CAUTION! USE CARE WHEN CLEANING THE TRIGGER ASSEMBLY SO THAT THE SEAR PIN DOES NOT FALL OUT. DO NOT REMOVE THE SEAR PIN, SEAR, SAFETY OR OTHER TRIGGER PARTS FROM THEIR HOUSING. INCORRECT REASSEMBLY CAN CAUSE A MALFUNCTIONING FIRE CONTROL MECHANISM AND CAN LEAD TO AN UNSAFE CONDITION. SERIOUS INJURY OR DEATH CAN OCCUR IF THE TRIGGER MODULE IS NOT ASSEMBLED CORRECTLY. IF YOU ARE IN DOUBT, CONTACT THE FN AMERICA PRODUCT SERVICE FOR CORRECTIVE ACTION.

With the trigger assembly removed from the receiver, use an all purpose brush and military-grade cleaner/lubricant to remove debris and excess lubricant from the exterior of the trigger assembly.

Compressed air or aerosol gun cleaners can be used to assist in cleaning under the interior trigger components. Dry, clean cloths should be used to wipe off any excess lubricants and fouling. See Figure 80.

When clean, apply military-grade cleaner/lubricant to the

FIGURE 80



FIGURE 81



following parts. See Figure 81.

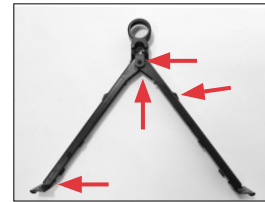
25.7 Bipod Assembly

With the bipod assembly removed from the receiver, use an all purpose brush and military-grade cleaner/lubricant to remove debris and excess lubricant from the exterior of the bipod. Extend the legs and clean the telescoping parts with an all purpose brush.

FIGURE 82



FIGURE 83



Compressed air or aerosol gun cleaners can be used to assist in cleaning the bipod and their moving parts. Dry, clean cloths should be used to wipe off any excess lubricants and debris. See Figure 82.

When clean, apply military-grade cleaner/lubricant to the following parts, including the hinged joint, telescoping legs and the locking buttons. See Figure 83. Apply a thin film of lubricant to all external metal parts.

25.8 Handguard, Heat Shield and Buttstock Assembly

With the handguard, heat shield and buttstock assemblies removed from the receiver, use an all purpose brush and military-grade cleaner/lubricant to remove debris and excess lubricant from their exteriors.

Warm soapy water and an all purpose brush can be used to clean the polymer components if they become excessively dirty. All to air dry or wipe dry with a clean cloth. Compressed air can be used to assist in cleaning the interior locations. Dry, clean cloths should be used to wipe off any excess lubricants and debris. See Figure 84.

When clean, apply a thin film of military-grade cleaner/lubricant to all exposed metal parts.

FIGURE 84



or corrode the metal components. Spray the magazine with this solvent, both inside and out to loosen debris.

Drain the solvent and residue from inside the magazine.

Use compressed air to dry the magazine or allow it to air dry and lightly oil the exterior. Do not apply lubricant to the interior of the magazine.

Cleaning the plastic ammunition box

Disassemble the plastic box by removing its cover.

Use warm soapy water and an all purpose brush to clean away debris, lubricants and fouling.

Allow to air dry or dry with clean cloths.

Reassemble by installing the cover. Do not lubricate the plastic ammunition pack.

25.10 Lubrication in Adverse Conditions

In most adverse conditions, increased and more frequent maintenance will ensure your FN M249S™ continues to operate effectively and safely. Once you have left such an environment, perform a more detailed cleaning of your FN M249S™. Follow the below guidelines for specific conditions:

1. Dry and Dusty Conditions

- More frequent cleaning may be required where dust and blowing sand can enter the rifle. Use a brush and

compressed air to remove.

- Keep dust cover closed when possible to limit the debris that can enter the receiver.
- Keep magazines, ammunition packs and ammunition protected and inspect them frequently for sand and dust. Do not lubricate magazines, ammunition packs or ammunition, including links.
- Corrosion will be less likely in dry conditions, so less protectant is required on external parts. These protectants will only attract more dust and sand.
- Use only minimal lubricant on internal parts.

2. Hot and Humid Conditions

- Increased inspection of all steel parts for corrosion and rust, including under the handguards. Apply military-grade cleaner/lubricant as needed to prevent rust from forming.
- Corrosion will be more likely in a hot and humid environment, so additional protectant may be required on external parts. Wipe them frequently with a cloth to remove fingerprints and moisture. Reapply military-grade cleaner/lubricant as needed.
- Keep magazines, ammunition packs and ammunition protected and dry. Inspect frequently for the presence of moisture. Avoid placing ammunition in direct sunlight.

- Normal lubrication of internal parts will suffice.

3. Extreme Cold Conditions

- Keep the dust cover closed when possible to limit any frozen or freezing precipitation from entering the rifle.
- Keep magazines, ammunition packs and ammunition protected and dry. Inspect frequently for the formation of ice.
- Avoid taking the rifle from warm, moist indoor environments to the cold outside environment and back as condensation (moisture) will form and freeze on and inside the rifle.
- Wipe the exterior of the rifle frequently to remove any moisture and reapply protectant to exposed steel parts.
- Avoid excess liquid lubrication on internal parts as these lubricants may stiffen at lower temperatures and cause malfunctions. Use minimal lubrication.
- Use a lubricant specifically formulated for low temperatures.

26. ASSEMBLY

1. Install Forearm / Handguard Assembly

To install the forearm / handguard, ensure the retaining pin is to the left as explained in Section 24.14.

Hook the front end of the forearm behind the round bosses on the receiver and rotate the forearm up and onto the receiver. See Figure 85.

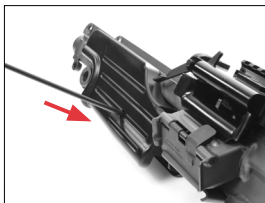
FIGURE 85



Once against the receiver, slide the forearm to the rear.

Using a cleaning rod or the guide rod to press the retaining pin from left to right, securing the forearm to the receiver. See Figure 86.

FIGURE 86



2. Install Bipod

To install the bipod, ensure it is open. Place the bipod yoke over the front receiver boss. See Figure 87.

FIGURE 87



3. Install Gas Cylinder

With the bipod in place, insert the gas cylinder into the opening in the front of the receiver. The lead end of the gas cylinder is shown in Figure 88. Note the spring detent on this end of the cylinder.

FIGURE 88



Center the lead end of the gas cylinder in the opening below the barrel block. A detent/locking spring will need to be pushed out of the way by the gas cylinder. See Figure 89. The guide rod can be used to push the gas cylinder against the detent spring so the gas cylinder can drop into the opening in the barrel block. See Figure 90.

Once the gas cylinder is started into the barrel block, press in on the gas cylinder while turning the gas cylinder until it drops further into place.

Continue to rotate the gas cylinder until the detent spring locks the gas cylinder.

4. Install Barrel Assembly

FIGURE 89



FIGURE 90



Install Heat Shield

FIGURE 91



Before installing the barrel, first install the heat shield to the barrel.

Hook the front of the heat shield under the barrel cross pin and rotate the heat shield down and onto the barrel. The heat shield clips will snap into place, securing the heat shield to the barrel. See Figure 91.

Install the Barrel Assembly

Align the barrel extension with the opening in the barrel block

FIGURE 92



on the middle of the receiver, just forward of the barrel latch lever. At the same time, align the gas plug to the open end of the gas cylinder. See Figure 92.

Press back on the barrel latch lever and install the barrel into receiver. Ensure the barrel is locked into place.

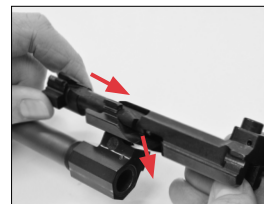
5. Install Moving Parts Assembly

Reassembly Moving Parts Assembly

FIGURE 93



FIGURE 94



Assemble the bolt assembly by first placing the firing pin spring over the firing pin. Insert the firing pin and spring into the end of the bolt. Insert the firing pin retaining pin into the cross hole at the rear of the bolt so that it passes through the slot in the firing pin. See Figure 93.

Install the assembled bolt into the bolt carrier by inserting the tail of the bolt into the carrier. Rotate the bolt so the cam lug clears the bolt carrier then falls into the cam slot. Move the bolt to its forward position on the carrier. See Figure 94.

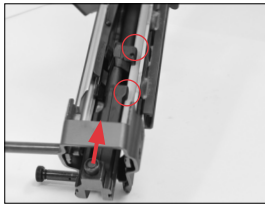
Install Bolt Carrier/Slide Assembly

Assemble the bolt and bolt carrier as described above. Insert the piston /bolt carrier and bolt assembly into the rear of the receiver. Guide the piston into the gas cylinder in the interior of the receiver.

As the bolt and bolt carrier assembly enter the receiver, align and guide the bolt and carrier guide slots onto the UPPER interior rails. See Figure 95.

Slide the bolt carrier assembly all the way forward into the locked position.

FIGURE 95



Install Slide Hammer

FIGURE 96.A

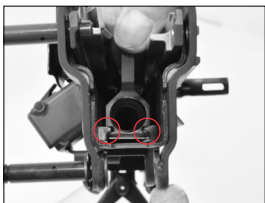


FIGURE 96.B



Install the piston/bolt carrier and bolt assembly as described above.

Guide the slide hammer into the rear of the receiver aligning the guides onto the LOWER internal rails. See Figure 96.A. To avoid installing the slide hammer incorrectly refer to Figure 96.B for correct orientation.

6. Install Drive Springs and Guide Rod Assembly

Install the moving parts (bolt, piston/bolt carrier and slide hammer) as described above. Ensure the moving parts assembly is completely forward before installing the guide rod and springs.

Assemble Drive Springs and Guide Rod

Insert the guide rod completely into the main drive spring. Slide the larger slide hammer spring over the guide rod and spring. See Figure 97.

FIGURE 97



⚠WARNING

WARNING! FAILURE TO PLACE THE BOLT CARRIER ASSEMBLY AND SLIDE HAMMER IN THE FORWARD, FIRED POSITION WILL RESULT IN A DANGEROUSLY HIGH AMOUNT

OF SPRING TENSION ON THE GUIDE ROD. SERIOUS BODILY INJURY MAY RESULT. DO NOT ATTEMPT TO INSTALL THE GUIDE ROD AND DRIVE SPRING ASSEMBLY WITHOUT ENSURING THE BOLT CARRIER AND SLIDE HAMMER ARE FULLY FORWARD.

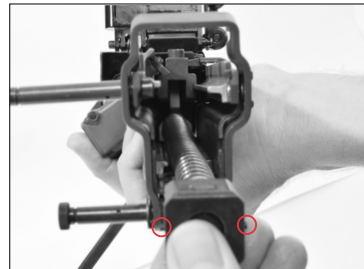
⚠WARNING

CAUTION! IMPROPER ASSEMBLY OF THE GUIDE ROD CAN CAUSE DAMAGE TO THE RECEIVER AND/OR THE ASSEMBLY ITSELF. IF THE HORIZONTAL PINS OF THE GUIDE ROD ARE NOT PLACED ON THE CUT-OUTS INSIDE THE RECEIVER, WHEN THE BUTTSTOCK IS PIVOTED INTO THE ASSEMBLED POSITION, THE RECEIVER HOOKS CAN BE BENT. IF THE HORIZONTAL POSITION AND THE BOTTOM PIN IS HOOKED INTO THE BOTTOM OF THE RECEIVER, THE PIN CAN BE SHEARED, DAMAGED OR LOST WHEN RIFLE IS FIRED.

Insert the guide rod and spring assembly into the rear of the receiver. Guide the main spring into the opening in the slide hammer.

Push the guide rod and springs completely into

FIGURE 98



the receiver. The locating pins on the head of the guide rod should be positioned to the left and right as the guide rod enters the receiver. Press in and down on the rear of the assembly until its two locating pins are positioned in the receiver grooves on both right and left sides. See Figure 98.

7. Install Trigger Assembly

Install the moving parts assembly, guide rod and drive springs as described above.

Ensure the safety selector is in the SAFE position.

To install the trigger assembly to the receiver, hook the front groove of the trigger housing onto the front of the bottom opening in the receiver and rotate upward. The bottom take-down pin may be inserted partially to hold the trigger assembly in place until the buttstock assembly is installed. See Figure 99.

8. Install Buttstock Assembly

Install the trigger assembly as described above.

With the bottom take-down pin partially inserted and holding the trigger assembly in place, insert the tab of the buttstock assembly into the slot in the rear of the trigger assembly.

Press the lower take down pin completely left to right until it

FIGURE 99



locks the trigger assembly and buttstock onto the receiver. See Figure 100.

Rotate the buttstock up into position and press the upper take-down pin left to right until it locks the buttstock into position. See Figure 101.

Verify the ends of the both take-down pins and the spring tips are visible on the right side of the rifle. See Figure 102.

FIGURE 101



FIGURE 102



⚠WARNING

WARNING! WHEN THE LOWER PIN RETENTION IS NOT POSITIVELY RETAINED IT COULD WORK LOOSE DURING FIRING. IF IT WORKS COMPLETELY OUT, THE TRIGGER MODULE CAN SEPARATE FROM RIFLE. SEPARATION OF THE TRIGGER MODULE WILL CREATE AN UNSAFE CONDITION AND THE RIFLE MAY FIRE UNEXPECTEDLY.

FIGURE 100



9. Close Feed Tray Cover

Assemble the rifle as described above. Ensure the safety selector is in the SAFE position. Firmly close the feed tray cover. Ensure it is locked closed.

27. FUNCTION CHECK

After disassembly and re-assembly, perform a non-firing function check to ensure proper re-assembly.

1. Before performing the function check, make sure the slide hammer is cocked and the safety selector is in the SAFE position as explained in Sections 10 and 11, the rifle is cleared as described in Section 17 and the muzzle is pointed in a safe direction.
2. Place the safety selector in the FIRE position.
3. Operate the charging handle, making sure the moving parts assembly moves freely. Allow the bolt to close on an empty chamber.
4. Place the safety selector in the SAFE position. Pull the trigger, nothing should happen.
5. Place the safety selector in the FIRE position, pull the trigger, the slide hammer should “fall” forward.
6. Pull the charging handle to the rear and release to re-cock the slide hammer.

7. Place the safety selector in the SAFE position and properly store the rifle.

28. OPTIONAL TOOLS AND GAUGES

28.1 Headspace Gauge Use

The optional Headspace Gauge included with some FN M249S™ models allows for the operator to regularly check headspace on the barrels. If you are unsure of headspace operations, seek assistance from an FN technician or qualified gunsmith. Law enforcement and military users should contact their department or unit armorer. See Figure 103.

FIGURE 103



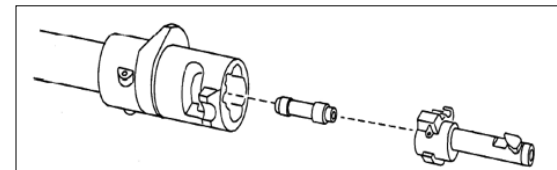
To check headspace on the barrel:

1. Before performing the check, make sure the slide hammer is cocked and the safety selector is in the SAFE position as explained in Sections 10 and 11, the rifle is cleared as described in Section 17 and the muzzle is pointed in a safe direction.
2. Disassemble the rifle as explained in Section 24. Ensure the bolt assembly and barrel are clean and free of debris as explained in Section 25.
3. Insert the bolt into the barrel extension and rotate it clockwise into the locked position without the Headspace Gauge to get a feel for the natural force required to lock the bolt. Note the

location of the cam lug when locked closed.

4. Remove the bolt and insert the Headspace Gauge into the chamber (tapered end first). See Figure 104.

FIGURE 104



5. Insert the bolt into the barrel extension and with slight pressure attempt to rotate clockwise and lock the bolt closed. DO NOT FORCE THE BOLT TO CLOSE ON THE HEADSPACE GAUGE; damage to the gauge, bolt and barrel extension may result.
6. The bolt should not easily rotate into the locked position.
 - If it does not close completely, the barrel is considered to have correct headspace.
 - If it does close completely on the Headspace Gauge, it is considered to not have correct headspace. Contact FN America Product Service for service. Law enforcement and military users should contact their department or unit armorer.
7. Reassemble the rifle as explained in Section 26.

NOTE! WHEN NOT IN USE, THE HEADSPACE GAUGE SHOULD BE STORED IN A PROTECTIVE CASE THAT PROTECTS IT FROM CORROSION AND DAMAGE. A DAMAGED GAUGE WILL GIVE FALSE READINGS.

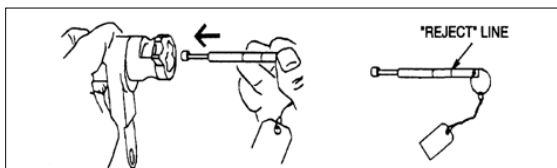
28.2 Breech Bore Gauge Use

The optional Breech Bore Gauge included with some FN M249S™ models allows for the operator to regularly check throat erosion on the barrels. If you are unsure of throat erosion check operations, seek assistance from an FN technician or qualified gunsmith. Law enforcement and military users should contact their department or unit armorer.

Breech Bore Gauge is shipped with a protective wax coating that must be removed before use.

To check the throat erosion using the Breech Bore Gauge on the barrel:

FIGURE 105

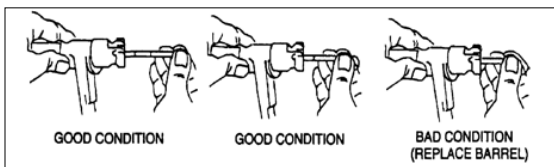


1. Before performing the check, make sure the slide hammer is cocked and the safety selector is in the SAFE position as explained in Sections 10 and 11, the rifle is cleared as

described in Section 17 and the muzzle is pointed in a safe direction.

2. Disassembly the rifle as explained in Section 24. Ensure barrel is clean and free of debris as explained in Section 25.
3. Carefully insert the breech bore gauge into the chamber until it is seated. Do not use excessive force. See Figure 105.
4. There are two gauge lines on the gauge. Read the gauge by looking across the rear of the barrel extension. See Figure 106.

FIGURE 106



The line farthest from the front of the gauge is the "REJECT" line.

- If the gauge stops at the end of the barrel extension between the two lines, the barrel is serviceable.
 - If the gauge enters the barrel extension beyond the "REJECT" line, the barrel should be replaced. Contact your FN Dealer for a new barrel.
5. If the barrel passes, reassemble the rifle as explained in Section 26.

NOTE! WHEN NOT IN USE, THE BREECH BORE GAUGE SHOULD BE STORED IN A PROTECTIVE CASE THAT PROTECTS IT FROM CORROSION AND DAMAGE. A DAMAGED GAUGE WILL GIVE FALSE READINGS.

28.3 Tubular Socket Wrench Use

The optional Tubular Socket Wrench included with some FN M249S™ models allows for the operator to tighten or remove the carry handle and pistol grip. If you are unsure of these operations, seek assistance from an FN technician or qualified gunsmith. Law enforcement and military users should contact their department or unit armorer.

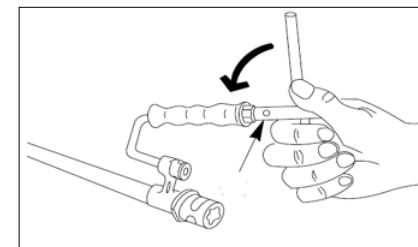
CAUTION! DO NOT OPERATE THE FN M249S™ WITHOUT THE CARRY HANDLE OR PISTOL GRIP FIRMLY IN PLACE.

To remove the barrel carry handle:

1. Before performing any adjustments, make sure the slide hammer is cocked and the safety selector is in the SAFE position as explained in Sections 10 and 11, the rifle is cleared as described in Section 17 and the muzzle is pointed in a safe direction.
2. Remove the barrel as explained in Section 19 or 24.
3. Insert a section of steel cleaning rod into the hole on either end of the wrench to act as a "T" handle.
4. Insert the open end of the wrench into the open end of the carry handle to engage the 10mm nut. Turn the wrench

counterclockwise to loosen and clockwise to tighten. See Figure 107.

FIGURE 107



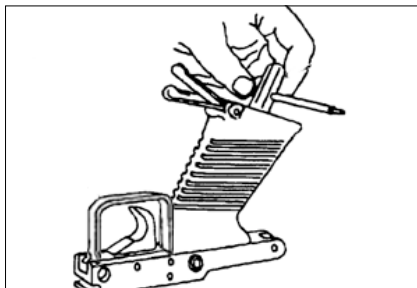
CAUTION! DO NOT OPERATE THE FN M249S™ WITHOUT THE CARRY HANDLE OR PISTOL GRIP FIRMLY IN PLACE.

To remove the pistol grip:

1. Before performing any adjustments, make sure the slide hammer is cocked and the safety selector is in the SAFE position as explained in Sections 10 and 11, the rifle is cleared as described in Section 17 and the muzzle is pointed in a safe direction.
2. Remove the trigger module as explained in Section 24.
3. Insert a section of steel cleaning rod into the hole on either end of the wrench to act as a "T" handle.
4. Insert the open end of the wrench into the open end of the

pistol grip to engage the 10mm nut. Turn the wrench counterclockwise to loosen and clockwise to tighten. See Figure 108.

FIGURE 108



5. DO NOT REMOVE THE TRIGGER GUARD OR OPERATE THE FN M249S™ WITHOUT THE TRIGGERGUARD IN PLACE.

29. SERVICE POLICY AND TECHNICAL QUESTIONS

If your FN product should require service, repair or for technical questions about your firearm contact:

FN America Customer Support
Phone 1-855-536-4872

OR VISIT US ONLINE AT
WWW.FNAMERICA.COM

Law enforcement and military users should contact their department or unit armorer.

When returning your FN firearm for servicing you must do the following:

1. Be sure it is completely unloaded.
2. Remove the scope, optics or accessories.
3. Package it securely in a cardboard container.
4. Enclose the service/repair form (available for download at www.fnamerica.com) or a letter that clearly describes the trouble experienced, the ammunition used and the repairs desired. Also include your name and a daytime phone number where you can be reached.
5. If convenient, send a copy of the service/repair form or letter to us separately.
6. Never return ammunition with your firearm. It is against postal and most commerce regulations.

30. CONTACT US

If you have any questions about this operator's manual or other FN products, contact:

FN America, LLC
Phone 1-855-536-4872
info@fnamerica.com

**OR VISIT US ONLINE AT
WWW.FNAMERICA.COM**

IF YOU DO NOT UNDERSTAND THE INSTRUCTIONS FOR OPERATING YOUR FN FIREARM, IT IS YOUR RESPONSIBILITY TO CONTACT THE FN AMERICA CUSTOMER SUPPORT AT 1-855-536-4872 BEFORE USING THE FIREARM.

This operator's manual must always accompany this firearm and must be transferred with it upon change of ownership or when this firearm is loaned or presented to another person.

31. TECHNICAL SPECIFICATIONS

- Caliber: 5.56x45mm NATO
- Type of fire: Semi-Automatic, belt or magazine fed
- Trigger Pull: 4.0-6.5 lbs
- Weight:
 - o Empty: 17.2 lbs (7.78 kg)
 - o Loaded with 200rd belt: 24.1 lbs (10.92 kg)
 - o Loaded with 30rd magazine: 19.1 lbs (8.66 kg)
- Length: 41 inches (104.1 cm)
- Width: 5.3 inches (13.5 cm)
- Height: 11.2 inches (28.5 cm)
- Barrel Length: 18.5 inches (47 cm)
- Twist Rate and Direction: 1:7" right hand
- Magazine Capacity:
 - o Disintegrating linked belt from 200 rd ammo pack
 - o 30 round GI pattern M-16/AR15 style magazine

All specifications subject to changes without notice.

Redaction of four-page ATF M249S Classification Letter indicating that the M249S is NOT a machinegun.



U.S. Department of Justice

Bureau of Alcohol, Tobacco,
Firearms and Explosives

Firearms Technology Industry Services Branch

Martinsburg, WV

www.atf.gov

FNH USA

[Redacted]
Columbia, South Carolina 29229

JUN 10 2015

907010:MCP
3311/303417

This refers to your correspondence to the Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF), Firearms Technology Industry Services Branch (FTISB), which accompanied your submitted prototype of a semiautomatic version of an M249 Squad Automatic Weapon (SAW)-type, 5.56x45mm caliber machinegun.

Specifically, you requested an examination and classification of this sample, whose full identity and physical characteristics are provided below, along with a description of the markings (see enclosures for photos):

FNH USA, Model M249S, 5.56x45mm caliber rifle [Redacted] ...

The FTISB examination confirmed that fire-control components in an original machinegun arrangement cannot be installed in your submitted sample. Additionally, the receiver, in its present configuration, cannot be readily restored to a machinegun configuration. Therefore, your semiautomatic M249 SAW-type firearm, in the configuration submitted, is not a "firearm" as defined in the NFA. It is a "firearm" as defined in the GCA, § 921(a)(3). ...

We thank you for your inquiry and trust the foregoing has been responsive.

mt Sincerely yours,

[Redacted Signature]

[Redacted Title]

Acting Chief, Firearms Technology Industry Services Branch

