



FNH USA
BALLISTA™

BOLT-ACTION RIFLE

OWNER'S MANUAL

Important operating instructions for:

FNH USA BALLISTA™ BOLT-ACTION RIFLE

If you have any questions or comments regarding your new firearm, please contact us.

FN America, LLC, (855)-536-4872 or visit www.fnhusa.com

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

Model _____

Rifle Serial Number _____

Bolt Identification Number _____

Barrel Identification Number _____

Chassis Identification Number _____

Purchased From _____

Date of Purchase _____

CONTENTS

1. Foreword.....	4	15.3. Failure to Fire - Hot Barrel Immediate Action Procedure.....	36	18.14. Installing the Barrel Assembly....	57	20. Troubleshooting the Ballista™ Rifle.....	82
2. Contents of the Storage Box.....	4	15.4. Fired Case Stuck in Chamber - Immediate Action Procedure.....	37	18.15. Bolt Reinstallation	59	20.1. Malfunctions and Corrective Actions	83
3. Safety and Warranty Notes	5	15.5. Failure to Feed Cartridge from Magazine - Immediate Action Procedure	37	18.16. Installing the Bolt Head on the Bolt Body.....	59	20.2. Failure to Feed or Chamber a Cartridge or to Lock Bolt	84
4. Firearm Safety Information	6	16. Stock Adjustment.....	39	18.17. Installing the Striker Assembly... 60		20.3. Failure to Fire a Cartridge.....	84
5. Description and Basic Operation.....	14	16.1. Adjusting Length of Pull	39	18.18. Installing the Bolt Into the Receiver	60	20.4. Failure to Extract a Cartridge	85
5.1. Description	14	16.2. Adjusting Comb Height.....	40	18.19. Installing the Buttstock Module onto the Chassis	61	20.5. Failure to Eject a Cartridge.....	86
5.2. Operation	16	16.3. Adjusting Buttplate Height	40	18.20. Installing the Forearm Assembly onto the Chassis	62	20.6. Other Possible Malfunctions.....	86
6. Nomenclature.....	17	16.4. Adjusting Buttplate Cast.....	41	18.21. Safety Systems Function Check... 63		21. Taking Care of the Rifle	87
7. Serial Number.....	17	16.5. Folding and Unfolding the Buttstock Assembly.....	42	18.22. Relocating the Forward Accessory Mounting Rails.....	64	22. Warranty, Service and Technical Questions.....	88
8. Initial Cleaning and Oiling	18	16.6. Attaching the Optional Buttstock Grip Assembly.....	43	18.23. General Rifle Cleaning Information	65	23. Service Policy	88
9. Operation of the “Safety”	21	16.7. Optional Rear Monopod Attachment and Adjustment.....	44	18.24. Cleaning the Barrel Bore	66	24. Technical Specifications	90
10. Installing and Removing the Bolt.....	24	17. Mounting a Scope or Other Sighting Device.....	45	18.25. Cleaning the Bore with the One-Piece Rod	67		
10.1. First Installation of the Bolt.....	24	18. Cleaning and Maintenance Suggestions for the Ballista™ Rifle and Magazines.....	46	18.26. Cleaning the Bore with the Bore Snake®.....	70		
10.2. Bolt Removal.....	25	18.1. Cleaning Procedures	47	18.27. Cleaning the Chamber and Locking Lug Recesses.....	71		
11. Ammunition	26	18.2. General Disassembly	49	18.28. Cleaning the Muzzle Brake	72		
12. Magazine Capacity	27	18.3. Optional Buttstock Grip Extension and Monopod Removal.....	50	18.29. Cleaning the Receiver	73		
13. Loading	27	18.4. Optional Forearm Assembly Removal	50	18.30. Cleaning the Bolt Assembly.....	74		
13.1. Loading the Detachable Box Magazine.....	28	18.5. Buttstock Module Removal	51	18.31. Cleaning the Buttstock Module... 75			
13.2. Inserting the Magazine into the Rifle	29	18.6. Bolt Maintenance.....	51	18.32. General Magazine Cleaning Information	76		
13.3. Loading the Chamber	30	18.7. Bolt Removal.....	52	18.33. Disassembly of the Magazine.... 77			
13.4. Loading the Rifle to Full Capacity	30	18.8. Checking Bolt Cocked/Uncocked Status	52	18.34. Reassembling the Magazine.....	78		
13.5. Loading the Rifle Directly into the Chamber with a Single Cartridge.....	31	18.9. Bolt Disassembly	53	19. Lubrication Guidelines.....	79		
14. Firing	32	18.10. Removing the Striker Assembly .. 53		19.1. CLP (Cleaner, Lubricant and Preservative).....	80		
15. Unloading	33	18.11. Removing the Bolt Head	54	19.2. Lubricating the Receiver Assembly	80		
15.1. Unloading and Clearing the Rifle and Magazine.....	34	18.12. Removing the Barrel	54	19.3. Lubricating the Bolt Assembly.... 81			
15.2. Failure to Fire - Immediate Action Procedure	34	18.13. Reassembly.....	56	19.4. Lubricating the Buttstock Module.....	82		

1. FOREWORD

We are pleased that you have chosen an FNH USA Ballista™ bolt-action rifle. Based on sound firearm design, FNH USA bolt-action rifles represent the highest level of reliability, consistent accuracy, functional design and provides the operating precision and safety expected from an FNH USA firearm.

This owner's manual covers the operating procedures and features of the FNH USA Ballista™ bolt-action rifle. Please ensure the owner's manual and gun record book remain with the rifle if it is sold or transferred.

Durable and advanced in design, the FNH USA Ballista™ is modular, highly adaptable and very easy to maintain. With a reasonable amount of care, your rifle should give you many years of dependable service. In order to take maximum advantage of the many features of your rifle, regularly review this owner's manual.

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

2. CONTENTS OF THE STORAGE CASE

The rifle is shipped in a hard carry case. The contents of the case include:

- FNH USA Ballista™ firearm
- Locking device and two keys (Use the locking device to safely store and transport the rifle. Always keep the keys at a safe place.)
- Two detachable box magazines - (low capacity, high capacity)
- Information Packet: Owner's Manual, gun record book, assembly check list and Ballista™ Owner's card
- Two "L" wrenches - one Torx® T-25 and one Torx® T-20
- Tube of synthetic multipurpose lubricant

3. SAFETY AND WARRANTY NOTES

▲ 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 OWNER'S MANUAL COULD RESULT IN SERIOUS INJURY OR DEATH.

For that reason, this firearm has been sold under the express understanding that FNH USA declines any responsibility and invalidates any guarantee and 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 "arms 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! FNH USA 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.

4. 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 owner'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 9 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 owner'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 15. After assuring yourself that the firearm is completely unloaded, open the breech or action 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 18.1 and 18.23 through 18.28 of this owner’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 15. 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 11 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 owner's manual and on ammunition boxes. See Section 11 for more information on the correct ammunition for your firearm.

13 USE ONLY SAAMI, NATO OR CIP APPROVED AMMUNITION.

The barrel and action of this rifle have been made with substantial safety margins over the pressures developed by established American 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 Sporting Arms and Ammunition Manufacturers' Institute (SAAMI). Ammunition that meets the standards of the North Atlantic Treaty Organization (NATO) or the Commission Internationale Permanente pour l'Epreuve des Armes à Feu Portatives - Permanent International Commission for Firearms Testing (CIP) may also be safely used.

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 OWNER'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 FNH USA 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. FNH USA firearms should be serviced by the FNH USA Product Service Center in Arnold, Missouri.

We cannot assume any responsibility for injuries suffered or caused by unauthorized servicing, alterations or modifications of FNH USA firearms.

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

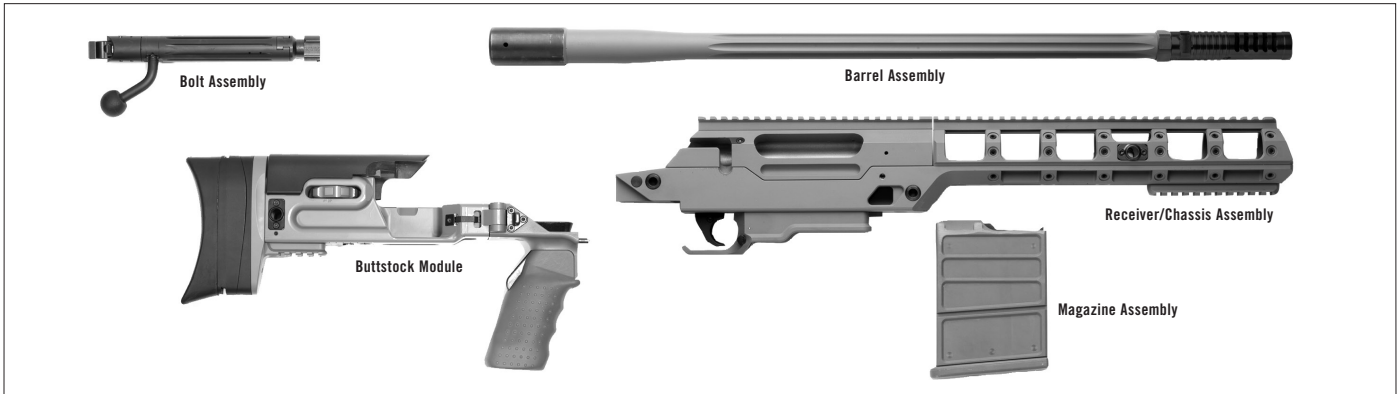
Removal of metal from the barrel or modifications of the firing mechanism and/or operating parts may lead to a refusal of service on such firearms. We will charge the owner for parts and labor to return the firearm to original FNH USA specifications.

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!

PLEASE NOTE THAT ADDITIONAL SAFETY AND OPERATIONAL ITEMS SPECIFIC TO THE FNH USA BALLISTA™ RIFLE ARE FOUND THROUGHOUT THIS OWNER'S MANUAL.

FIGURE 1 - MAJOR BALLISTA COMPONENTS



5. DESCRIPTION AND BASIC OPERATION

5.1. DESCRIPTION

The Ballista™ is a modular, shoulder-fired, air-cooled, magazine-fed, multi-caliber capable, manually-operated, bolt-action rifle system. It is designed to utilize magnified optics and provides a level of accuracy capable of engaging targets at ranges out to 1,500 meters (1,650 yards) in 338 Lapua Magnum.

The Ballista™ is equipped with multiple MIL-STD 1913 rails at the 6 and 12 o'clock positions to facilitate mounting various accessories in order to tailor the rifle to meet the needs of the operator. Additional mounting rails are available as optional accessories. The Ballista™ is suppressor-ready and features a fully-adjustable, side-folding buttstock assembly

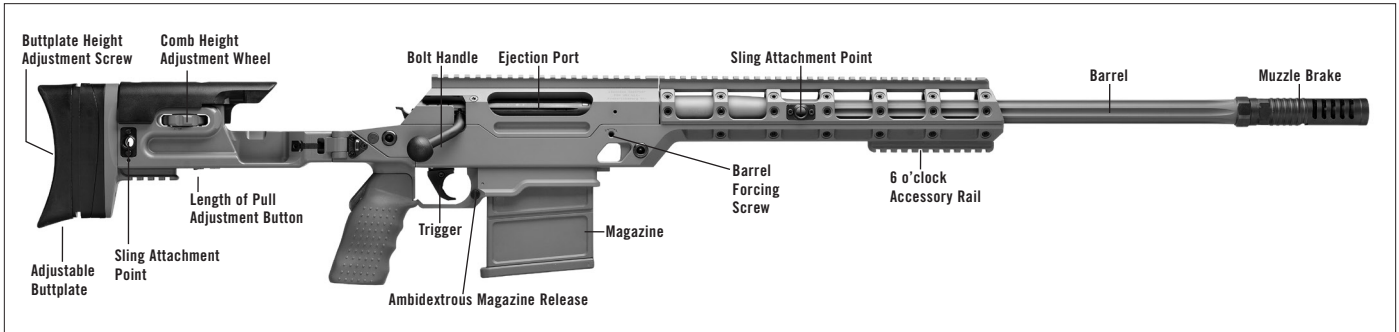
The major components of the Ballista™ are shown in Figure 1. These major components consist of:

1. The Magazine Assembly which is of modern, high strength polymer construction. Magazines are available in both low-capacity and high-

capacity configurations. In .338 Lapua Magnum, the low-capacity magazine holds 5 rounds and the high-capacity magazine holds 8 rounds.

2. The Buttstock Module which consists of the buttpad assembly with length of pull and cast adjustments, the comb assembly and the pistol grip assembly with grip safety. The Buttstock Module has the ability to adjust for comb height, length of pull (LOP), buttpate cast on/off and buttpad height. The optional accessory monopod also allows for a modular ground spike or hand hold.
3. The Bolt Assembly which consists of the bolt body, the bolt head assembly, and the firing pin/striker assembly with manual safety.
4. The Barrel Assembly with muzzle brake/sound suppressor interface.
5. The Receiver/Chassis Assembly which consists of the serialized receiver, the chassis, the magazine block assembly, the trigger assembly, the accessory forearm/grip and the accessory rail mounting kits. A quick-detach forearm assembly is an optional accessory.

FIGURE 2 - BALLISTA, RIGHT SIDE VIEW



5.2. BASIC OPERATION

The FNH USA Ballista™ bolt-action rifle operates by lifting the bolt handle, drawing the bolt rearward and then sliding the bolt forward and rotating the bolt handle downward until it stops. This process takes a cartridge from the magazine and loads it into the chamber for firing. When the trigger is pulled, the firing pin strikes the primer of the cartridge, resulting in the rifle firing. During the rearward movement of the bolt, the empty cartridge case is ejected out of the ejection port.

Prior to using live ammunition, familiarize yourself thoroughly with the operating instructions in this owner's manual. Get accustomed to the feel of your new firearm and know the forces required to operate the action. Learn how to pull the trigger and, above all, know the location and operation of the "safety." Read the owner's manual and all associated safety instructions and warnings.

Procedures for disassembly and operation of various components are outlined later in this owner's manual. Please read and study them thoroughly.

6. NOMENCLATURE

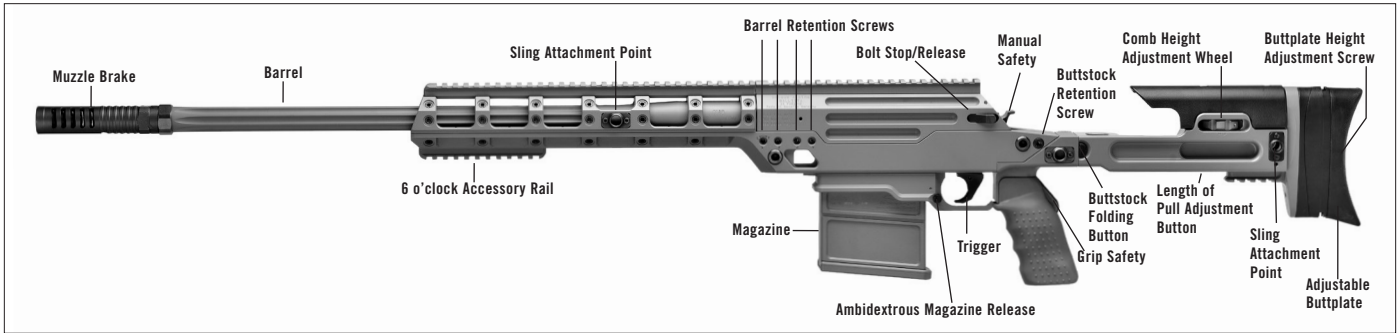
In conventional firearm terminology the position and movement of firearm parts are described as they occur with the firearm horizontal and in the normal firing position: i.e., the muzzle is forward or in front; the buttstock is rearward or to the rear; the trigger is downward or underneath; the sight is upward or on top.

For general parts nomenclature, please refer to Figures 1, 2 and 3. Throughout this owner's manual the "action" refers to the mechanism of this rifle which loads and secures the cartridges in the chamber.

7. SERIAL NUMBER

The serial number is located forward on the left side of the receiver. Record the serial number at the front of this owner's manual for future reference.

FIGURE 3 - BALLISTA, LEFT SIDE VIEW



8. INITIAL CLEANING AND OILING

⚠️ WARNING

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

The Ballista™ is protected from corrosion through advanced permanent coatings. There has been a light film of lubricant applied to the bolt, which should not be removed initially. It is lubricated and ready to go as it comes out of the case.

Clean the chamber and barrel using a cleaning rod and patch as explained under “Cleaning and Maintenance Suggestions” found in Section 18. Apply a few drops of a synthetic lubricant such as CLP on the following surfaces:

- Lightly lubricate the inside of receiver, bolt riding surfaces, and barrel extension (Figure 4). The bolt’s special coating eliminates a need for

additional lubrication on the bolt body. A small bit of synthetic lubrication on each of the bolt lugs is helpful.

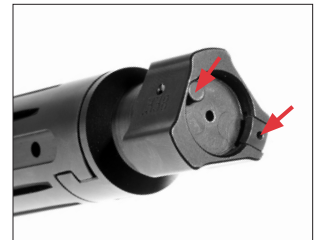
- Lightly lubricate exterior surfaces to include barrel and receiver screws.
- Lightly lubricate the extractor and ejector as shown in Figure 5. Manipulate each part to work the lubricant into the mechanism. Wipe away any excess lubricant.

FIGURE 4



Lightly lubricate the receiver interior.

FIGURE 5



Lightly lubricate the extractor and ejector.

FIGURE 6



Lightly lubricate the bolt cocking surface.

FIGURE 7



Lightly lubricate the bolt's three locking lugs and the rear locking surface.

- Apply one drop of lubricant on the bolt cocking surface (Figure 6).
- Apply one drop of lubricant to each of the bolt's three locking lugs. Wipe off all excess (Figure 7).
- Apply a light film of lubrication on the buttstock's metal components. Wipe off all excess.

Avoid applying too much oil. Only a light film is necessary. Excessive oil should be wiped off, especially in cold weather. Refer to Sections 18 and 19 for additional information on routine maintenance, cleaning and lubrication of the Ballista™.

9. OPERATION OF THE “SAFETY”

⚠️WARNING

ALWAYS KEEP THE “SAFETY” IN THE ON SAFE POSITION UNLESS SHOOTING IS IMMINENT. ALWAYS KEEP THE MUZZLE POINTED IN A SAFE DIRECTION. FAILURE TO FOLLOW THESE WARNINGS COULD RESULT IN SERIOUS INJURY OR DEATH.

The Ballista™ features both a manual “safety” and a back-up grip “safety”. The manual “safety” lever is located on the rear of the bolt assembly. The “safety” can be operated only when the striker is cocked. To cock the striker, lift up on the bolt handle and then return it to the locked (fully down) position. When the striker is cocked it is visible at the rear of the bolt in the safety lever’s opening. Again, if the “safety lever will not move, the striker is not cocked. The manual “safety” lever has three positions:

- On “Safe” and Locked
- Intermediate Safe
- Fire
- Located on the pistol grip is the Back-up grip Safety

FIGURE 8.1



The manual "Safety" in the safe and locked position.

FIGURE 9



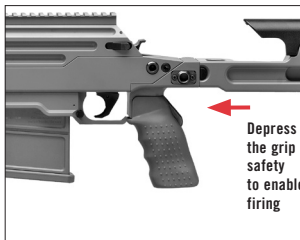
The manual "Safety" in the off-safe position.

FIGURE 8.2



The manual "Safety" in the intermediate safe position.

FIGURE 10



The grip "Safety" is located on the rear of the pistol grip and is engaged with the firing hand.

- On "Safe" and Locked: This is when the "safety" lever is pressed all the way down two clicks from the top, Fire Position. In the "Safe" and Locked position, the striker assembly is blocked and the bolt is locked in the closed position. Always maintain the "safety" in this position as shown in Figure 8.1 when a cartridge is chambered and until shooting is imminent. The "safety" lever can only be placed in the "Safe" and Locked position when the bolt is closed in the rifle.

- Intermediate "Safe" Position: This is when the "safety" lever is in the middle position and the lever aligns with the "S" on the rear of the receiver as shown in Figure 8.2. The bolt will operate in the intermediate "safe" position, but the striker will remain blocked allowing you to open the bolt and unload an unfired cartridge from the chamber.
- Fire Position: To place the "safety" in the fire position, raise the "safety" lever until it is aligned with the "F" on the rear of the receiver as seen in Figure 9. This will unblock the striker and the rifle will be ready to fire by pulling the trigger.

The manual "safety" mechanism, when engaged in either the "Safe" and Locked or the Intermediate "Safe" position, is designed to block the striker and prevent firing. However, this mechanism will not necessarily prevent the accidental discharge of this firearm as a result of jarring or abuse such as occurs when a firearm is dropped.

There is also a grip "safety" located on the rear of the pistol grip. The trigger cannot be pulled without first engaging the grip "safety." To engage the grip "safety," depress the grip "safety" lever forward and into the pistol grip with the palm or web of the firing hand when in the firing position as shown in Figure 10.

Never rely totally on your firearm's "safety." It is merely an aid to safe gun handling. Like any mechanical device the "safety" can possibly fail; it can be bumped off or inadvertently manipulated into an unsafe condition. Always keep your rifle pointed in a safe direction.

At all times, keep the manual "safety" in the on safe position and the barrel pointed in a safe direction. It is advisable to never load your rifle until you are in the field, at the location you intend to begin shooting or you are at your bench on a range and it is clear to shoot. For extra safety on a range, and as a courtesy to others, fully unload the rifle and keep the action in the open position at all times other than when it is clear to shoot.

It is essential that you become familiar with the feel, look and operation of the "safety" on this rifle before attempting to load and shoot it.

10. INSTALLING AND REMOVING THE BOLT

▲WARNING

ALWAYS KEEP THE MUZZLE POINTED IN A SAFE DIRECTION. BEFORE STARTING ASSEMBLY OR DISASSEMBLY PROCEDURES, VISUALLY INSPECT THE CHAMBER TO BE ABSOLUTELY CERTAIN THE FIREARM IS COMPLETELY UNLOADED. PLACE THE MANUAL "SAFETY" IN THE ON SAFE POSITION. FAILURE TO FOLLOW THIS WARNING COULD RESULT IN SERIOUS INJURY OR DEATH.

The bolt of your rifle may have been packed separately in the carton in which your rifle is shipped. You will need to insert the bolt into the action.

In addition, it is always advisable to remove the bolt before cleaning. Consequently, becoming familiar with removing and inserting the bolt assembly quickly and easily is absolutely essential.

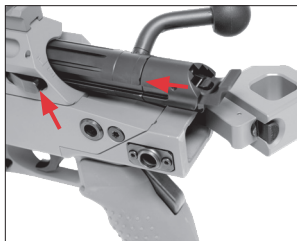
10.1. FIRST INSTALLATION OF THE BOLT

Before inserting the bolt into the rifle, make sure it is properly assembled and that the correct caliber bolt head is installed on the bolt body, as described in Section 18.16.

1. With a complete bolt assembly as detailed in Section 18.16., press the bolt release and hold it in.
2. Insert the cocked bolt assembly into the receiver, aligning the bolt handle with the relief cut for the handle and the bolt stop raceway with the bolt lock. Once the bolt is partially in the receiver, release the bolt release. It will align with the bolt stop raceway. Refer to Figure 11.
3. Install the bolt completely by pushing it fully forward and rotating the handle down into the locked position.

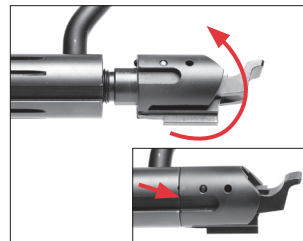
The bolt must be in the cocked position before it is inserted into the receiver. To cock the bolt, turn the rear section as shown in Figure 12. If the striker is uncocked as it is screwed into the bolt body, the striker will need

FIGURE 11



Press down on the bolt release and insert the cocked bolt assembly into the receiver.

FIGURE 12



Turn the bolt clockwise until the bolt sleeve lock engages the notch in the bolt.

to be forced past the cam notch on each revolution as the striker gets further into the bolt body. This camming action on each revolution is normal if the striker is uncocked. Turn the bolt clockwise (when viewed from the cocking indicator end) until the bolt sleeve lock engages the notch in the bolt. Refer to Figure 12.

On a new rifle where surfaces are not yet burnished from use, it may be difficult to rotate the bolt sleeve by hand.

10.2. BOLT REMOVAL

1. First ensure the safety lever is in the intermediate "safe" position.
2. Remove the bolt by rotating its handle up and pulling it to the rear.
3. Push the bolt release and continue to pull the bolt out of the receiver. The stock must be folded out of the way to remove the bolt or completely folded.

The Ballista's bolt has been carefully selected and fitted at the factory to assure correct headspace. The bolt is etched with an identifying number. This bolt identification number may not match your rifle's serial number. Record the bolt identification number at the front of this owner's manual.

Never interchange bolts, as they may not have the proper head space. If the bolt is lost or damaged, return the rifle to the FNH USA Service Center in Arnold, Missouri, for replacement with a properly fitted bolt.

Additional information on bolt disassembly and reassembly may be found in Sections 18.9. through 18.18.

11. AMMUNITION

⚠WARNING

DO NOT USE AMMUNITION OTHER THAN WHAT IS INSCRIBED ON THE LEFT SIDE OF THE BARREL. EXAMINE EVERY CARTRIDGE YOU PUT IN YOUR FIREARM.

DISCHARGING FIREARMS IN POORLY VENTILATED AREAS, CLEANING FIREARMS OR HANDLING AMMUNITION MAY RESULT IN EXPOSURE TO LEAD AND OTHER SUBSTANCES KNOWN TO CAUSE BIRTH DEFECTS, REPRODUCTIVE HARM AND OTHER SERIOUS PHYSICAL INJURY. HAVE ADEQUATE VENTILATION AT ALL TIMES. WASH HANDS THOROUGHLY AFTER HANDLING AMMUNITION.

Because the FNH USA Ballista™ rifle is multi-caliber capable, it is critical that you have the correct caliber and type of ammunition for which the rifle is currently configured. Do not attempt to load or fire ammunition for which the rifle is not currently configured. See Section 18 for information on how to properly configure the rifle for a specific caliber.

The barrel and action of this rifle have been made with substantial safety margins over the pressures developed by established American loads. However, we assume no responsibility for incidents which occur through the use of cartridges of nonstandard dimension or those developing pressures in excess of the Sporting Arms and Ammunition Manufacturers' Institute (SAAMI) established standards. Ammunition that meets the standards of

the North Atlantic Treaty Organization (NATO) or Commission Internationale Permanente pour l'Epreuve des Armes à Feu Portatives - Permanent International Commission for Firearms Testing (CIP) may also be safely used.

12. MAGAZINE CAPACITY

The magazine capacities of the FNH USA Ballista™ rifle in each caliber are listed below.

308 Winchester

Limited Capacity	8	Large Capacity	15
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300 Winchester Magnum

Limited Capacity	6	Large Capacity	10
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338 Lapua Magnum

Limited Capacity	5	Large Capacity	8
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It is extremely important that you know the magazine capacity of your rifle. Under appropriate circumstances, at a range or other suitable shooting location, load your magazine to full capacity and confirm the number of cartridges. Remember, "total" capacity includes an additional round which can be loaded in the chamber in addition to a full magazine.

13. LOADING

⚠WARNING

WHEN LOADING YOUR RIFLE ALWAYS KEEP THE MUZZLE POINTED IN A SAFE DIRECTION, ALWAYS PLACE THE "SAFETY" IN THE INTERMEDIATE SAFE POSITION AND KEEP YOUR FINGERS AWAY FROM THE TRIGGER. FAILURE TO FOLLOW THESE WARNINGS COULD RESULT IN SERIOUS INJURY OR DEATH.

DO NOT CARRY YOUR RIFLE WITH A CARTRIDGE IN THE CHAMBER TO AVOID ACCIDENTAL DISCHARGE. WHEN FIRING IS NO LONGER IMMINENT, PLACE THE MANUAL "SAFETY" IN THE INTERMEDIATE SAFE POSITION AND UNLOAD THE CHAMBER. FAILURE TO FOLLOW THESE WARNINGS COULD RESULT IN SERIOUS INJURY OR DEATH.

FNH USA Ballista™ rifles utilize a detachable box magazine system. Extra box magazines are available from your FNH USA dealer or may be purchased online at www.fnhusaestore.com.

The total magazine capacity of your FNH USA Ballista™ rifle will vary with caliber and magazine type.

13.1. LOADING THE DETACHABLE BOX MAGAZINE

1. With the manual "safety" in the intermediate safe position, lift the bolt handle and pull the bolt completely rearward.
2. Remove the magazine from the rifle by pressing the magazine release located on both sides at the front of the trigger guard (Figure 13). Let the magazine drop into your hand (Figure 14).
3. Place the base of the cartridge on the magazine follower between the lips on the magazine body and the lips on the magazine follower. Press the cartridge down with your thumb until it can be pushed rearward under the lips and push the cartridge fully to the rear of the magazine so there is maximum clearance between the bullet tip and the front of the magazine body (Figure 15).

It may help to push the rear of the follower down a bit with the thumb of your other hand to facilitate sliding the cartridge back under the magazine body

FIGURE 13



Press the magazine release.

FIGURE 14



Catch the magazine in your hand.

FIGURE 15



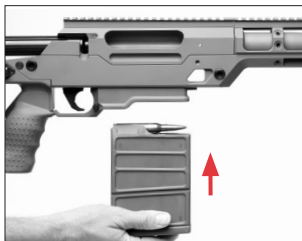
Insert cartridges base first into the magazine. Make sure they are fully to the rear.

- lips. Take care that the bullet tips are pointing to the front of the magazine.
4. Repeat by pressing the base of another cartridge down on the previous cartridge, just forward of the magazine lips, sliding the cartridge under the lips and fully rearward. Use your other hand to push down slightly on the rear of the cartridge already in the magazine. Do this until the magazine is fully loaded.

13.2. INSERTING THE MAGAZINE INTO THE RIFLE

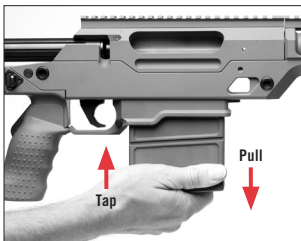
1. Place the manual "safety" in the intermediate safe position. Ensure the muzzle stays pointed in a safe direction.
2. Open the bolt and pull the bolt handle to rear. Visually and physically check the chamber and ensure it is clear. Close the bolt before inserting a loaded magazine.
3. With the projectiles pointed toward the muzzle, insert a loaded magazine up into the magazine well until it stops and the magazine catch engages and holds the magazine into position. Refer to Figure 16.

FIGURE 16



Insert a loaded magazine into the magazine well until it engages the magazine catch.

FIGURE 17



Tap upward on the base of the magazine and then pull downward to ensure the magazine is fully seated.

4. Tap upward on the bottom of the magazine and then pull downward to ensure it is properly seated and locked into position. Refer to Figure 17.

13.3. LOADING THE CHAMBER

1. With the manual “safety” in the intermediate safe position, lift the bolt handle and pull the bolt completely rearward.
2. Load the magazine to capacity as explained previously.
3. Close the bolt. This picks up a cartridge from the magazine and moves it into the chamber.
4. Immediately place the manual “safety” in the on safe position.

▲WARNING

THE RIFLE IS NOW READY TO FIRE BY SIMPLY MOVING THE MANUAL “SAFETY” TO THE OFF SAFE POSITION AND PULLING THE TRIGGER.

13.4. LOADING THE RIFLE TO FULL CAPACITY

1. With the manual “safety” in the intermediate safe position, lift the bolt handle and pull the bolt completely rearward.

2. Load the magazine to capacity as explained previously.
3. When shooting is imminent, insert the magazine into the rifle.
4. Close the bolt. This loads a cartridge directly into the chamber. Immediately place the “safety” in the on safe position.

▲WARNING

THE RIFLE IS NOW READY TO FIRE BY SIMPLY MOVING THE “SAFETY” TO THE OFF SAFE POSITION AND PULLING THE TRIGGER.

5. Remove the magazine from the rifle.
6. Load a single cartridge into the magazine.
7. Reinsert the magazine into the rifle.

13.5. LOADING THE RIFLE DIRECTLY TO THE CHAMBER WITH A SINGLE CARTRIDGE

1. With the manual “safety” in the intermediate safe position, lift the bolt handle and pull the bolt completely rearward.
2. Insert an empty magazine as explained previously.
3. Insert a single cartridge through the ejection port and lay it on top of empty magazine's follower as shown in Figure 18.
4. Close the bolt. This loads a cartridge directly into the chamber. Immediately place the “safety” in the on safe position.

▲WARNING

THE RIFLE IS NOW READY TO FIRE BY SIMPLY MOVING THE “SAFETY” TO THE OFF SAFE POSITION AND PULLING THE TRIGGER.

14. FIRING

⚠️WARNING

NEVER CHAMBER A CARTRIDGE OR MOVE THE “SAFETY” FROM THE ON SAFE POSITION UNLESS SHOOTING IS IMMINENT. ALWAYS KEEP THE MUZZLE POINTED IN A SAFE DIRECTION. FAILURE TO FOLLOW THESE WARNINGS COULD RESULT IN SERIOUS INJURY OR DEATH.

1. With the “safety” in the intermediate safe position, lift the bolt handle and pull the bolt completely rearward.
2. Load a cartridge into the chamber (as explained previously) by loading a cartridge from the magazine or directly to the chamber.
3. Ensure the grip safety is fully depressed by the firing hand.

⚠️WARNING

THE RIFLE IS NOW READY TO FIRE BY SIMPLY MOVING THE “SAFETY” TO THE OFF SAFE POSITION AND PULLING THE TRIGGER.

4. When ready to fire, move the manual “safety” into the off safe position, take aim and squeeze the trigger.
5. After a cartridge is fired, cycle the bolt rearward to eject the empty case. If you wish to continue shooting, push the bolt fully forward. This picks up a loaded cartridge from the magazine and chambers it. You may continue to fire the rifle in this manner until the magazine is empty by pulling the trigger to fire each cartridge.

FIGURE 18



Load the rifle directly to the chamber by placing a single cartridge on top of the empty magazine's follower and closing the action.

6. If you are done shooting, leave the bolt to the rear, with the breech in the open position so that you may visually inspect the chamber, barrel and magazine to be sure they contain no cartridges.

⚠️WARNING

AFTER FIRING, OR WHEN SHOOTING IS NO LONGER IMMINENT, IMMEDIATELY PLACE THE “SAFETY” IN THE ON SAFE POSITION. FAILURE TO FOLLOW THESE WARNINGS COULD RESULT IN SERIOUS INJURY OR DEATH.

EVEN WITH THE BOLT OPEN AFTER SHOOTING, DO NOT ASSUME THE RIFLE IS UNLOADED. ALWAYS INSPECT THE CHAMBER, BARREL, FEED MECHANISM AND MAGAZINE TO BE CERTAIN THE RIFLE IS COMPLETELY UNLOADED. FAILURE TO FOLLOW THESE WARNINGS COULD RESULT IN SERIOUS INJURY OR DEATH.

15. UNLOADING

⚠️WARNING

WHEN UNLOADING YOUR RIFLE ALWAYS PLACE THE “SAFETY” IN THE ON SAFE POSITION. KEEP THE MUZZLE POINTED IN A SAFE DIRECTION AND YOUR FINGERS AWAY FROM THE TRIGGER. FAILURE TO FOLLOW THESE WARNINGS COULD RESULT IN SERIOUS INJURY OR DEATH.

ALWAYS INSPECT THE CHAMBER, BARREL AND MAGAZINE CAREFULLY AFTER UNLOADING TO BE SURE ALL LIVE CARTRIDGES ARE CLEARED FROM THE FIREARM.

15.1. UNLOADING AND CLEARING THE RIFLE AND MAGAZINE

1. Place the “safety” in the intermediate safe position.
2. Open the bolt by lifting the bolt handle. Pull the bolt fully to the rear, extracting the cartridge in the chamber. Leave the bolt open.
3. Depress the magazine release and remove the magazine from the rifle.
4. Inspect the chamber and action areas to verify they contain no ammunition or fired cases. Remove any that remain. Close the bolt on an empty chamber.
5. Unload the magazine by sliding the cartridges forward and out of the magazine one at a time as shown in Figure 19.

15.2. FAILURE TO FIRE - IMMEDIATE ACTION PROCEDURE

▲WARNING

IF ANY NOTICEABLE DIFFERENCE IN THE FIRING SOUND OR RECOIL OF THE RIFLE IS EXPERIENCED, STOP FIRING IMMEDIATELY. EITHER CONDITION COULD INDICATE A DEFECTIVE CARTRIDGE, AN INCOMPLETE POWDER BURN AND / OR A BULLET STUCK IN THE BORE. KEEP THE MUZZLE POINTED IN A SAFE DIRECTION FOR AT LEAST 30 SECONDS. CAREFULLY OPEN THE BOLT, AVOIDING EXPOSURE TO THE EJECTION PORT.

After any potential misfire, perform the following immediate actions to verify there is no projectile stuck in the barrel.

FIGURE 19



Remove cartridges from the magazine one at a time by pushing them forward from under the feed lips.

1. Place the manual “safety” in the intermediate safe position.
2. Remove the magazine.
3. Cycle the bolt by pulling the bolt handle all the way to the rear. Watch for the ejection of a case or cartridge from the ejection port.
4. If no cartridge is ejected, verify there is no live cartridge or empty case in the chamber or action. Leave the bolt open.
5. Remove the bolt as described in Section 10.2.
6. From the receiver end, look through the barrel to see if there is a projectile stuck in the chamber or barrel, or if there are any foreign objects or unburned powder remaining in the barrel.

▲WARNING

DO NOT ATTEMPT TO CLEAR ANY POTENTIAL BARREL OBSTRUCTION BY FIRING ANOTHER CARTRIDGE. IF YOU HAVE ANY REASON TO THINK THAT A BULLET IS STUCK IN THE BARREL OF THE RIFLE, DO NOT ATTEMPT TO REMOVE IT. NOTIFY A CERTIFIED ARMORER OR CONTACT THE FNH USA SERVICE CENTER IN ARNOLD, MISSOURI.

7. If there is a bullet stuck in the barrel, return the rifle for repair to your armorer or to the FNH USA Service Center in Arnold, Missouri. DO NOT attempt to clear any potential barrel obstruction by firing a cartridge.
8. Remove any other barrel obstructions by following the cleaning procedures in Sections 18.23 through 18.25.
9. If there are no barrel obstructions, replace the bolt in the receiver and insert a loaded magazine.
10. Close the bolt fully, chambering a fresh cartridge from the magazine.

▲WARNING

THE RIFLE IS NOW READY TO FIRE BY SIMPLY MOVING THE "SAFETY" TO THE OFF SAFE POSITION AND PULLING THE TRIGGER.

11. Ensure the manual safety is in the "fire" position and the grip safety is fully depressed as you attempt to fire the rifle as described in Section 14.

After any misfire, carefully eject and examine the cartridge.

If the primer of the unfired ejected cartridge case shows evidence of a firing pin strike, safely dispose of the cartridge. Discontinue use of this lot of ammunition and switch to a different lot of ammunition if it is available. Report the incident to a certified armorer or to the FNH USA Service Center in Arnold, Missouri.

If the primer of the unfired ejected casings does not show evidence of a firing pin strike the striker or firing pin spring may be broken. Discontinue firing, completely unload the rifle and return the rifle to a certified armorer or to the FNH USA Service Center in Arnold, Missouri.

15.3. FAILURE TO FIRE - HOT BARREL IMMEDIATE ACTION PROCEDURE

▲WARNING

IF THE RIFLE FAILS TO FIRE WITH A LIVE CARTRIDGE IN THE CHAMBER OF A HOT BARREL, REMOVE THE CARTRIDGE IMMEDIATELY. IF THE LIVE CARTRIDGE CANNOT BE REMOVED WITHIN 10 SECONDS, REMOVE THE MAGAZINE AND WAIT 15 MINUTES WITH THE RIFLE POINTING IN A SAFE DIRECTION. THIS PREVENTS THE CARTRIDGE FROM "COOKING OFF" AND AVOIDS POSSIBLE INJURY. AVOID EXPOSURE TO THE EJECTION PORT WHILE CLEARING A LIVE CARTRIDGE FROM A HOT CHAMBER.

15.4. FIRED CASE STUCK IN CHAMBER - IMMEDIATE ACTION PROCEDURE

If a fired cartridge case is stuck in the chamber, follow the steps below to remove it.

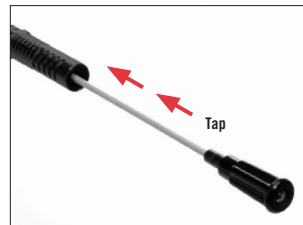
1. Place the manual "safety" in the intermediate safe position.
2. Remove the magazine.
3. Pull the bolt handle to the rear and place the rifle on 'safe' using the manual safety, if not already done.
4. Insert a cleaning rod into the muzzle and tap out the stuck cartridge case as shown in Figure 20.

15.5. FAILURE TO FEED CARTRIDGES FROM MAGAZINE - IMMEDIATE ACTION PROCEDURE

If the cartridges are not feeding properly from a loaded magazine, follow the steps below to correct the problem. Ensure the caliber of the ammunition you are using matches both the bolt head and barrel installed on the rifle.

1. Make sure the rifle is pointed in a safe direction and the manual "Safety" is in the intermediate safe position.

FIGURE 20



Insert a cleaning rod into the muzzle and gently tap out the stuck fired cartridge case.

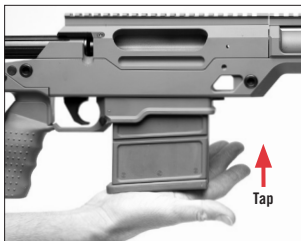
2. Tap firmly on the base of the magazine to make sure it is properly seated in the magazine well as shown in Figure 21.
3. Grasp the sides of the magazine body and pull downward to make sure the magazine is firmly latched in the magazine well as shown in Figure 22.
4. Cycle the bolt to load a cartridge from the magazine.

▲WARNING

THE RIFLE IS NOW READY TO FIRE BY SIMPLY MOVING THE "SAFETY" TO THE OFF SAFE POSITION AND PULLING THE TRIGGER.

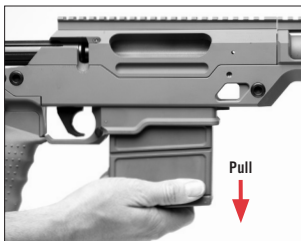
5. Make sure the rifle is pointed at the target with a safe backstop, the grip safety is fully depressed and the manual "Safety" is in the off-safe position. Attempt to fire the rifle.
6. If following Steps 1 through 5 above does not correct the ammunition feeding problem, remove the non-functioning magazine and insert a different loaded magazine. Repeat Steps 1 through 5 with the second magazine.
7. If the second loaded magazine does not feed properly, place the

FIGURE 21



Tap firmly on the base of the magazine to make sure it's fully seated in the rifle's magazine well.

FIGURE 22



Grasp the magazine body and pull downward to ensure the magazine is properly latched in the rifle's magazine well.

manual "Safety" in the intermediate safe position, remove the magazine, open the bolt and completely unload the rifle. Verify the chamber and action are clear of all ammunition.

8. Report the ammunition feeding malfunction to a certified armorer or to the FNH USA Service Center in Arnold, Missouri.

16. STOCK ADJUSTMENTS

▲WARNING

BEFORE PERFORMING ANY STOCK ADJUSTMENT PROCEDURES OPEN THE ACTION AND MAKE CERTAIN YOUR RIFLE IS COMPLETELY UNLOADED. KEEP THE MUZZLE POINTED IN A SAFE DIRECTION. FAILURE TO FOLLOW THESE WARNINGS COULD RESULT IN SERIOUS INJURY OR DEATH.

The FNH USA Ballista™ rifle features a highly-adjustable modular buttstock. It is designed to readily adapt to the needs of the individual shooter.

16.1. ADJUSTING LENGTH OF PULL

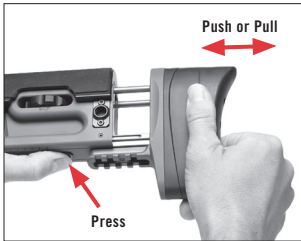
Length of Pull (LOP) is measured from the center of the trigger to the back of the buttplate. Remember that different shooting positions and the type of clothing or equipment worn may affect optimum LOP.

FNH USA Ballista™ has six positions of LOP adjustment to quickly tailor the rifle to the individual shooter.

1. To adjust the LOP, press the LOP adjustment button up and pull or push on the buttplate to change LOP as desired as shown in Figure 23.
2. To lock the LOP, release the button. Note the index lines on the bottom of the buttstock module, near the button, will aid you in returning the length of pull to pre-recorded lengths as shown in Figure 24.

Multiple users can quickly adjust the stock in the same manner, making it easy for the rifle to be comfortably and accurately fired by more than one shooter.

FIGURE 23



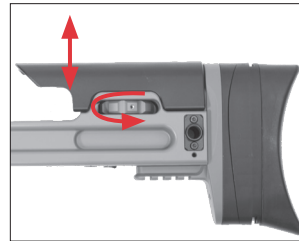
Press the LOP adjustment button and push or pull on the buttplate.

FIGURE 24



Index lines on the buttstock module allow you to easily repeat LOP adjustments.

FIGURE 25



Adjust the comb height to the desired position using the comb adjustment wheel.

FIGURE 26



Adjust the buttplate height to the desired position using the center adjustment screw.

16.2. ADJUSTING COMB HEIGHT

The Comb Adjustment Wheel has 75 clicks of adjustment to tailor the height of the comb to match the optical sight height to the operator.

1. To adjust the height of the comb, rotate the comb adjustment wheel clockwise (as viewed from above) to raise the cheek rest height and counter clockwise to drop the cheek rest height. Adjust the comb to the desired position as shown in Figure 25.

Multiple users can quickly adjust the stock comb in the same manner, making it easy for the rifle to be comfortably and accurately fired by more than one shooter.

16.3. ADJUSTING BUTTPLATE HEIGHT

To make adjustments to the height of the buttplate use the T-25 Torx® wrench.

1. Use the T-25 Torx® wrench to loosen the center adjustment screw on the buttplate counter clockwise as shown in Figure 26.
2. Once loosened, slide the buttplate up or down to the desired position and tighten the adjustment screw by turning it clockwise. Hand-tight is sufficient.

3. There are index reference marks on the back of the buttstock mount to help in recording the preferred buttplate setting as shown in Figure 27.

Multiple users can quickly adjust the stock buttplate in the same manner, making it easy for the rifle to be comfortably and accurately fired by more than one shooter.

16.4. ADJUSTING BUTTPLATE CAST

To adjust the cast of the buttplate, use the T-25 Torx® wrench. Note that the sliding buttplate will need to be in the neutral position or removed to access the cast locking screws.

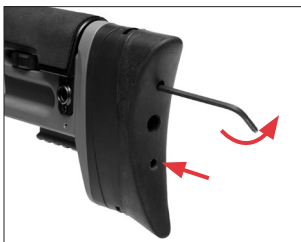
1. Turn the buttplate cast adjustment screws counterclockwise to loosen the buttplate as shown in Figure 28.
2. Once loosened, pivot the

FIGURE 27



Index lines on the back of the buttstock module allow you to easily repeat buttplate height adjustments.

FIGURE 28



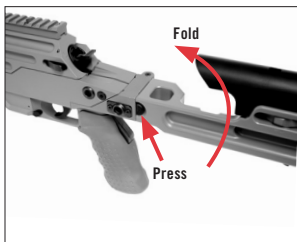
Turn the cast adjustment screws counterclockwise to loosen the buttplate.

FIGURE 29



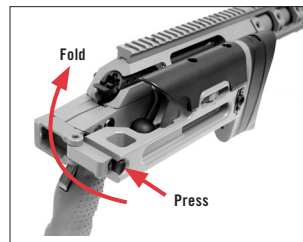
Index lines on the back of the buttstock module allow you to easily repeat buttplate cast adjustments.

FIGURE 30



Press the buttstock locking button and swivel the buttstock to the right to fold.

FIGURE 31



Press the buttstock locking button and swivel the buttstock to the rear to unfold.

buttplate to either to the left (cast left) or right (cast right) to the desired position and tighten the adjustment screws by turning them clockwise. Hand-tight is sufficient.

- Record the angle of cast from the top of the buttplate cast reference marks for future reference as shown in Figure 29.

Multiple users can quickly adjust the stock buttplate cast in the same manner, making it easy for the rifle to be comfortably and accurately fired by more than one shooter.

16.5. FOLDING AND UNFOLDING THE BUTTSTOCK ASSEMBLY

The FNH USA Ballista™ is equipped with a side-folding buttstock that allows the length of the rifle to be reduced for ease of transportation and storage.

- To fold the buttstock, first ensure the bolt is forward and closed, or that the bolt is removed completely from the receiver.
- Press the buttstock locking button and swivel the buttstock to the right side of the rifle as shown in Figure 30. The buttstock will lock in place on the right side of the rifle in the stowed position.

- To unfold the buttstock, ensure the bolt is forward and closed or removed from the receiver.
- Press the buttstock locking button and swivel the stock back to the rear and in alignment with the rifle as shown in Figure 31.
- When aligned with the chassis the buttstock will lock into the deployed position.

16.6. ATTACHING THE OPTIONAL BUTTSTOCK GRIP EXTENSION ASSEMBLY

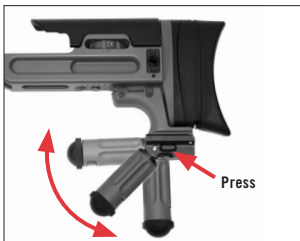
- Unload the rifle as described in Section 15.
- To attach the optional buttstock grip extension to the rear underside of the buttstock, remove the two attaching screws using the T-20 Torx® wrench.
- Slide the grip extension onto the MIL-STD 1913 rail at the rear underside of the buttstock assembly until it comes to a stop.
- Insert the two screws and tighten them using the T-20 wrench. Do not overtighten.

FIGURE 32



Attach the monopod to the buttstock MIL-STD 1913 rail or buttstock grip extension and lock it into place with the locking lever.

FIGURE 33



Press the monopod release button and pull the monopod downward to unfold. It may be folded, partially deployed and fully deployed.

16.7. OPTIONAL REAR MONOPOD ATTACHMENT AND ADJUSTMENTS

The FNH USA Ballista™ has an optional accessory folding monopod that mounts on the rear underside of the buttstock. It allows the user to fine-tune the vertical angle of the rifle relative to the supporting surface it is resting upon.

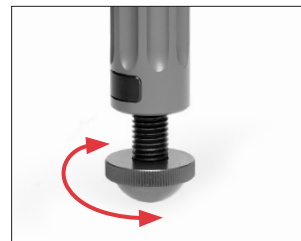
1. Unload the rifle as described in Section 15.
2. You may attach the optional monopod either directly to the buttstock or to the underside of the buttstock grip extension. Disengage the monopod locking lug with the quick disconnect lever. Slide the monopod onto the MIL-STD 1913 rail of the buttstock or the buttstock grip extension with the locking lever toward the rear of the buttstock until it is in the desired location as shown in Figure 32. Flip the locking lever so the locking lug engages the MIL-STD 1913 rail and locks the monopod into place.
3. To unfold the rear monopod, press the monopod release button and pull the monopod downward into the deployed position as shown in Figure 33. Release the monopod release button and the monopod will lock into position. The monopod has three positions; Folded (stowed), 45° (partially deployed), and 90° (fully deployed).

FIGURE 34



Press the monopod locking button and pull the monopod foot downward to achieve the desired height.

FIGURE 35



To make fine-tuning adjustments to the height of the monopod, turn the foot of the monopod clockwise or counterclockwise.

4. To adjust the height of the monopod, press the monopod locking button and pull the monopod foot downward to achieve the desired height as shown in Figure 34.
5. To make fine tuning adjustments to the height of the monopod, turn the foot of the monopod clockwise or counterclockwise. The foot will screw in and out of the monopod assembly giving the operator fine adjustments to height as shown in Figure 35. Continue to turn the monopod foot until desired height is reached.
6. To collapse the monopod to its shortest length, press the monopod locking button and push the foot into the monopod assembly.

17. MOUNTING A SCOPE OR OTHER SIGHTING DEVICES

▲WARNING

BEFORE MOUNTING A SCOPE, ELECTRONIC SIGHT OR ANY OTHER ACCESSORIES TO YOUR RIFLE, PLACE THE MANUAL "SAFETY" IN THE INTERMEDIATE SAFE POSITION. OPEN THE ACTION AND MAKE CERTAIN YOUR RIFLE IS COMPLETELY UNLOADED. KEEP THE MUZZLE POINTED IN A SAFE DIRECTION. FAILURE TO FOLLOW THESE WARNINGS COULD RESULT IN SERIOUS INJURY OR DEATH.

The FNH USA Ballista™ is equipped with multiple MIL-STD 1913 rails to provide stable mounting interfaces for a variety of user-supplied optical, electronic, thermal and/or night vision devices. The slots in the MIL-STD 1913 rails are numbered to allow the user to find the ideal mounting point for each device and to provide a reference for reinstalling each device in the correct location if they have been removed.

The upper or 12 o'clock receiver mounting rail is replaceable and has an additional 20 MOA of elevation built-in to help when zeroing a scope at extended ranges. A matching rail is part of the aluminum alloy handguard. These two rails align with one another and allow the user to stack a series of optical, electronic, thermal and/or night vision devices as the situation requires.

FNH USA recommends using a high-quality scope of adequate magnification that will allow you to fully exploit the accuracy potential of your Ballista™ rifle. Be sure the scope rings you select are dimensionally correct for MIL-STD 1913 rails. Be sure the rings you select are strong enough to properly secure your scope to prevent any movement that could result in the loss or shift of a reliable zero.

Carefully follow the instructions included with your scope and scope rings when performing any scope installation. If you are not comfortable with mounting a scope yourself, contact your armorer or a competent gunsmith.

Always make sure you have the proper eye relief when mounting and using a scope. Always make sure that the saddle crossbolts and cap bolts are fully tightened before using your scoped firearm.

18. CLEANING AND MAINTENANCE SUGGESTIONS FOR THE BALLISTA™ RIFLE AND MAGAZINES

Section 18 includes information on cleaning and maintenance, disassembly, reassembly and inspection procedures, lubrication and preventive maintenance checks and services (PMCS).

▲WARNING

BEFORE PERFORMING ANY CLEANING OR SERVICE PROCEDURES, PLACE THE MANUAL “SAFETY” IN THE INTERMEDIATE SAFE POSITION. OPEN THE ACTION AND MAKE CERTAIN YOUR RIFLE IS COMPLETELY UNLOADED. KEEP THE MUZZLE POINTED IN A SAFE DIRECTION. FAILURE TO FOLLOW THESE WARNINGS COULD RESULT IN SERIOUS INJURY OR DEATH.

▲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

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.

18.1. CLEANING PROCEDURES

Your firearm will function better and more reliably 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. A minimum cleaning includes wiping down the firearm and lubricating key parts. Regular maintenance will also include cleaning the barrel.

If you encounter a function problem be sure to give your firearm a thorough cleaning to see if it solves the problem before seeking the services of a certified armorer, a qualified gunsmith or the FNH USA Service Facility in Arnold, Missouri.

1. Unload the rifle as described in Section 15.

2. Remove the bolt as explained previously.
3. Inspect the chamber and bore for powder fouling. A normal amount of powder residue can be expected and is not serious. It can usually be removed with a patch saturated with nitro solvent.
4. FNH USA recommends always inserting a suitable, commercially available bore guide in place of the bolt in the receiver when cleaning the barrel. Use a cleaning rod with a tip and patch large enough for a snug fit in the bore. Insert the rod and patch through the bore guide and into the breech end of the barrel, running it back and forth several times. Care should be exercised to ensure that the cleaning rod does not strike the crown of the muzzle, as damage to this area can affect the accuracy of your rifle. It is recommended that careful attention should be given to cleaning the muzzle brake whenever cleaning the barrel. More detailed instructions for cleaning the muzzle brake are found in Section 18.28.

If, or when, fouling should become heavy, it can be removed with a brass bore brush. Dip or spray the brush with nitro solvent and scrub the chamber and bore until the fouling is removed. To prevent brass bristles from breaking off, the brush should be pushed completely through the barrel before being withdrawn.

To maintain the utmost accuracy of your rifle it is recommended you clean the bore with a copper solvent. Modern bullet jackets are made mainly of copper. Residues from copper bullet jackets stick to the barrel and require more frequent cleaning. Magnum calibers will require more frequent inspection and cleaning. Swab the bore of your rifle with a good copper solvent using the manufacturer's recommended procedure.

5. After all fouling has been removed, the chamber and bore should be wiped dry. When the bore is dry, pass a patch lightly saturated with CLP through it for preservation.
6. Inspect the barrel and chamber to be certain no patches have inadvertently been left in them. Remove any that remain.

7. The approved lubricant can be applied to the three bolt locking lugs, extractor, ejector and the bolt body. Any excess should be wiped off.
8. Use a small non-metallic brush or rag to remove dirt or other foreign matter from inside the receiver and other parts of the action. Because of the advanced coatings on the receiver and bolt, they do not require further lubrication. If you choose to lubricate these parts, do so very sparingly as a light film of lubrication is sufficient. CLP synthetic lubricants are ideally suited for this purpose.
9. DO NOT LUBRICATE THE TRIGGER OR SEAR MECHANISMS. They are designed to operate properly without any additional lubrication.
10. Wipe down all exposed metal surfaces, making certain that all finger marks are removed as they provide a place where moisture can accumulate. The metal surfaces of the gun should be wiped clean any time the rifle has been exposed to weather or handling.

18.2. GENERAL DISASSEMBLY

▲WARNING

BEFORE PERFORMING ANY DISASSEMBLY PROCEDURES, PLACE THE MANUAL "SAFETY" IN THE INTERMEDIATE SAFE POSITION. OPEN THE ACTION AND MAKE CERTAIN YOUR RIFLE IS COMPLETELY UNLOADED. KEEP THE MUZZLE POINTED IN A SAFE DIRECTION. FAILURE TO FOLLOW THESE WARNINGS COULD RESULT IN SERIOUS INJURY OR DEATH.

▲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

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.

18.3. OPTIONAL BUTTSTOCK GRIP EXTENSION AND MONOPOD REMOVAL

To remove the optional buttstock grip extension from the rear underside of the buttstock, perform the following steps.

1. Unload the rifle as described in Section 15.
2. Loosen and remove the two screws using the T-20 wrench.
3. Slide the grip extension off the MIL-STD 1913 rail at the rear underside of the buttstock assembly.
4. Reinsert the two screws into the buttstock grip extension to prevent their loss.

To remove the monopod on the FNH USA Ballista™, perform the following steps.

5. Unload the rifle as described in Section 15.
6. Flip the locking lever until the locking lug disengages from the MIL-STD 1913 rail and releases the monopod.
7. Slide the monopod off the MIL-STD 1913 rail of the buttstock or the buttstock grip extension.
8. You may leave the monopod locking lug in the lowered position.

18.4. OPTIONAL FOREARM ASSEMBLY REMOVAL

To remove the optional forearm assembly on the FNH USA Ballista™, follow these steps.

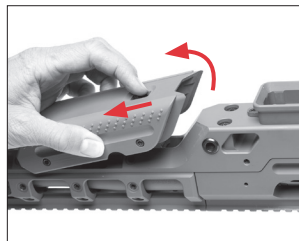
1. Unload the rifle as described in Section 15.
2. Push the forearm latch forward and pull the forearm off of the chassis assembly as shown in Figure 36.

18.5. BUTTSTOCK MODULE REMOVAL

To remove the buttstock module on the FNH USA Ballista™, follow these steps.

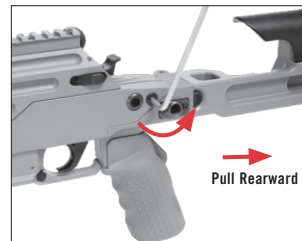
1. Unload the rifle as described in Section 15.
2. Using the T-25 Torx® wrench, unscrew the clamp screw of the buttstock by turning it counterclockwise. It is not necessary to completely remove the screw. Pull the buttstock rearward and off of the chassis assembly as shown in Figure 37.

FIGURE 36



Push the forearm latch forward and pull the forearm off of the chassis assembly.

FIGURE 37



Unscrew the clamp screw of the stock by turning it counterclockwise. Pull the buttstock rearward and off of the chassis assembly.

18.6. BOLT MAINTENANCE

⚠WARNING

BEFORE PERFORMING BOLT DISASSEMBLY PROCEDURES, PLACE THE MANUAL “SAFETY” IN THE INTERMEDIATE SAFE POSITION. OPEN THE ACTION AND MAKE CERTAIN YOUR RIFLE IS COMPLETELY UNLOADED. KEEP THE MUZZLE POINTED IN A SAFE DIRECTION. FAILURE TO FOLLOW THESE WARNINGS COULD RESULT IN SERIOUS INJURY OR DEATH.

▲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

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.

18.7. BOLT REMOVAL

To remove the bolt on the FNH USA Ballista, follow these steps.

1. Unload the rifle as described in Section 15.
2. Remove or fold the Buttstock Assembly. Place the manual "Safety" lever in the intermediate safe position.
3. Remove the bolt by rotating its handle up and pulling it to the rear as shown in Figure 38.
4. Push the bolt release button, continue to draw the bolt to the rear and out of the receiver as shown in Figure 39.

NOTE! UNLESS CONDUCTING A DETAILED CLEANING, NO FURTHER DISASSEMBLY OF THE BOLT/ACTION ASSEMBLY IS REQUIRED. PROCEED WITH THE FOLLOWING STEPS ONLY IF A DETAILED CLEANING IS REQUIRED.

18.8. CHECKING BOLT COCKED/UNCOCKED STATUS

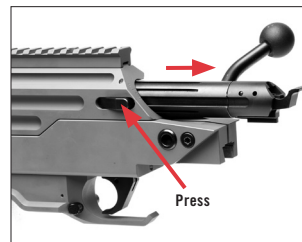
The status of the bolt depends on the cocked/uncocked condition of the firing pin. The cocked/uncocked status of the bolt can be changed by

FIGURE 38



Rotate the bolt handle up and pull it to the rear.

FIGURE 39



Push the bolt release button and draw the bolt out of the rear of the receiver.

turning the rear portion/striker assembly of the bolt. If the striker is forward in the cam notch on the bolt body and the firing pin protrudes from the face of the bolt as shown in Figure 40, it is in the fired position.

If the striker is not in the cam notch and the firing pin does not protrude through the bolt face as shown in Figure 41 it is in the cocked position.

18.9. BOLT DISASSEMBLY

The FNH USA Ballista's bolt assembly is easy to fieldstrip for cleaning the firing pin mechanism. Make sure you have a clean place to work and put the bolt components in order as they are disassembled. Disassembling the bolt can be done in the field, however, there are small parts involved, some of which are under spring tension.

18.10. REMOVING THE STRIKER ASSEMBLY

1. If not already done, cock the firing pin by holding the bolt body in one hand and twist the striker assembly clockwise as shown in Figure 42 (as viewed from the rear) until the striker cams out of the notch. Place the manual safety in the intermediate safe position. This will lock the striker in the cocked position.
2. With the striker cocked and the manual safety in the intermediate position, the striker assembly (the rear part of the bolt) can be screwed

FIGURE 40



The striker in the uncocked, forward or fired position with the firing pin protruding from the bolt face.

FIGURE 41



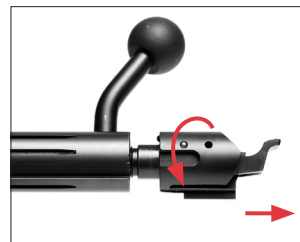
The striker in the cocked, rearward or unfired position with the firing pin not protruding from the bolt face.

FIGURE 42



Cock the firing pin by holding the bolt body in one hand and twist the striker assembly counterclockwise with the other hand turning clockwise until the striker cams out of the notch.

FIGURE 43



With the striker cocked and the safety engaged, the striker assembly (the rear part of the bolt) can be screwed out of the bolt body by turning it counterclockwise.

out of the bolt body by turning it counterclockwise (when viewed from the rear) as shown in Figure 43.

18.11. REMOVING THE BOLT HEAD

1. Beginning with the striker removed as detailed above, the bolt head can be removed from the bolt body. Push the bolt head off of the bolt body and out of its slot as shown in Figure 44.
2. It is not necessary or recommended that you disassemble the bolt assembly beyond this point.

18.12. REMOVING THE BARREL

NOTE! REMOVAL OF THE BARREL IS NOT NECESSARY FOR NORMAL CLEANING AND MAINTENANCE. THE BARREL SHOULD ONLY BE REMOVED IF WORN OR DAMAGED, FOR DETAILED CLEANING OR IF A CALIBER CHANGE IS NECESSARY.

1. Remove the bolt assembly from the receiver as detailed previously.
2. Using a T-25 Torx® wrench, loosen the four barrel retention screws by

FIGURE 44



Push the bolt head off of the bolt body and out of its slot.

FIGURE 45



Use a T-25 Torx® wrench to loosen the four barrel retention screws by turning them counterclockwise.

FIGURE 46



Use a T-20® Torx wrench to turn the forcing screw clockwise to release the barrel.

turning them counterclockwise as shown in Figure 45. Note that these screws are captive and will not come out of the receiver.

- Using a T-20® Torx wrench, turn the forcing screw clockwise to release the barrel as engraved on the receiver and as shown in Figure 46. Stop when the screw becomes snug. Do not overtighten.
- Slide the barrel forward and out of the receiver and chassis assembly as shown in Figure 47. Do not allow the barrel to drop out of the rifle as damage to the barrel may result.

18.13. REASSEMBLY

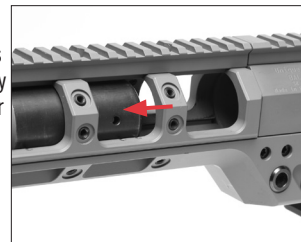
CAUTION! IN ORDER TO AVOID DAMAGE TO THE BARREL EXTENSION SCREWS AND RECEIVER ASSEMBLY, IT IS RECOMMENDED THAT THE TORQUE WRENCH, SET TO THE REQUIRED TORQUE, BE UTILIZED DURING INSTALLATION OF THE BARREL ASSEMBLY.

18.14. INSTALLING THE BARREL ASSEMBLY

The optional Ballista Operator Tool Kit is shown in Figure 48. Additional tools may be available from FNH USA or from other precision tool sources.

- Set the torque screwdriver to the appropriate torque setting of 70 in-lbs.
- Ensure the bolt assembly is removed from the receiver.
- Insert the barrel into the front of the chassis assembly, taking care to align the groove in the barrel extension with the key in the bottom of the front of the receiver as shown in Figure 49. Insert the barrel extension fully into the receiver.
- Ensure the bolt head installed on the bolt body is the same caliber as the barrel that is being installed. Insert a fully assembled bolt into the receiver and close and lock the bolt.

FIGURE 47



Slide the barrel forward and out of the receiver and chassis assembly.

FIGURE 48



The optional Ballista Operator Tool Kit contains the following items: (1) 1/4" drive inch-pound torque wrench (2) T-20 Torx® L-shaped wrench (3) T-25 Torx® L-shaped wrench (4) T-20 Torx® bit (5) T-20 Torx® bit (6) Nylon storage case. Other items are available from automotive or gunsmithing sources.

FIGURE 49



Insert the barrel into the front of the chassis assembly, taking care to align the groove in the barrel extension with the key in the bottom of the front of the receiver.

FIGURE 50



Tighten each of the four barrel retention screws (located on the left side of rifle) in order as engraved on the receiver, turning them clockwise until the screws reach their end of travel.

FIGURE 51



Align the tail end of the bolt head with the corresponding groove in the bolt body. The curved part of the bolt head will lead into the bolt body groove.

FIGURE 52



Once installed, the bolt head will snap into place and will be in line with the bolt body.

NOTE! WHEN CLOSING THE BOLT ON THE LOOSE BARREL, THE MANUAL "SAFETY" MUST BE IN THE FIRE POSITION SO THE STRIKER POSITIVELY ENGAGES THE SEAR BEFORE TIGHTENING THE BARREL RETENTION SCREWS.

5. Using the T-20 Torx® L-shaped wrench, turn the forcing screw counterclockwise until it stops, as indicated on the receiver. Do not overtighten the screw.
6. Set the torque wrench to 70 in-lbs. Using the T-25 Torx® bit, initially snug down each of the four barrel retention screws (located on the left side of rifle). Start with the front screw marked number 1. Tighten the screws in the sequence of 1, 2, 3, 4 as marked on the receiver, turning them clockwise until the screws reach their end of travel as shown in Figure 50. Do not overtighten the screws.
7. Once all four barrel retention screws have been initially snugged down, use the torque wrench to torque them in the same 1, 2, 3, 4 sequence as noted in Step 6. Turn the screws clockwise using the torque wrench until the wrench "clicks" indicating the desired torque has been reached.

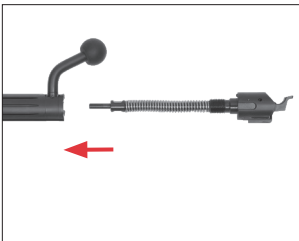
18.15. BOLT REINSTALLATION

In order to reinstall the bolt assembly, it must first be reassembled as configured to the correct caliber.

18.16. INSTALLING THE BOLT HEAD ON THE BOLT BODY

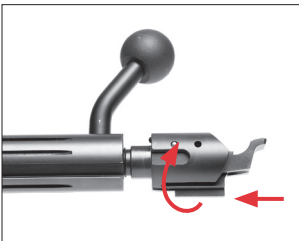
1. Align the tail end of the bolt head with the corresponding groove in the bolt body. The curved part of the bolt head will lead into the bolt body groove as shown in Figure 51. Excess force is not required to install the bolt head.
2. Once installed, the bolt head will snap into place and will be in line with the bolt body as shown in Figure 52.

FIGURE 53



Insert the striker assembly into the bolt.

FIGURE 54



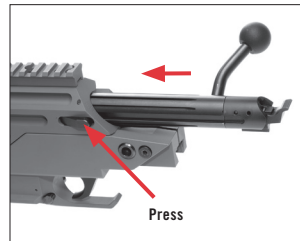
Screwing the striker assembly clockwise into the bolt body. Continue until the striker is fully on the bolt. Ensure the bolt stop raceway on the striker and the raceway on the bolt body align and there is no gap between the two parts.

FIGURE 55



If the striker is uncocked as it is screwed into the bolt body, the striker will need to be forced past the cam notch during each revolution as the striker gets further into the bolt body.

FIGURE 56



Align the bolt handle with the relief cut for the handle and the bolt stop raceway with the bolt lock.

18.17. INSTALLING THE STRIKER ASSEMBLY

1. Ensure the correct caliber of bolt head is installed as outlined in 18.16.
2. Insert the striker assembly into the bolt as shown in Figure 53.
3. Begin screwing the striker assembly clockwise into the bolt body. Continue until the striker is fully on the bolt. Ensure the bolt stop raceway on the striker and the raceway on the bolt body align and there is no gap between the two parts as shown in Figure 54.

If the striker is uncocked as it is screwed into the bolt body, the striker will need to be forced past the cam notch during each revolution as the striker gets further into the bolt body as shown in Figure 55. This camming action on each revolution is normal if the striker is uncocked.

18.18. INSTALLING THE BOLT INTO THE RECEIVER

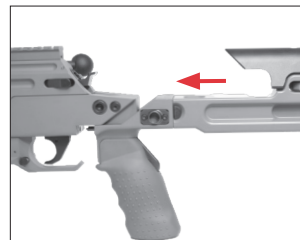
1. With a complete bolt assembly as detailed above, press the bolt release on the left side of the receiver and hold it in.

2. Insert the complete bolt assembly into the receiver, aligning the bolt handle with the relief cut for the handle and the bolt stop raceway with the bolt lock as shown in Figure 56.
3. Once the bolt is partially in the receiver, release the bolt release. It will align with the bolt stop raceway.
4. Push the bolt fully forward and rotate the handle down into the locked position.

18.19. INSTALLING THE BUTTSTOCK MODULE ONTO THE CHASSIS

1. Ensure the buttstock retention screw is loose. Align the dovetail of the buttstock module with the groove in the rear of the chassis assembly as shown in Figure 57. Push the buttstock module forward until it stops and is flush with the chassis.

FIGURE 57



Align the dovetail of the buttstock module with the groove in the rear of the chassis assembly.

FIGURE 58



Using a T-25 Torx® wrench, tighten the buttstock retention screw. Do not overtighten.

FIGURE 59



Hook the forearm assembly catch into the slot on the underside of the chassis.

- Using a T-25 Torx® wrench, tighten the buttstock retention screw as shown in Figure 58. It needs only be snug, so do not overtighten.

18.20. INSTALLING THE FOREARM ASSEMBLY ONTO THE CHASSIS

- To install the forearm assembly, hook the catch into the slot on the underside of the chassis as shown in Figure 59.
- Rotate the forearm against the chassis until it locks into place as shown in Figure 60.

FIGURE 60



Rotate the forearm assembly against the chassis until it locks into place.

Your Ballista™ firearm is now fully assembled. Immediately place the manual “safety” in the on safe position. Take time to wipe down and clean all external surfaces as explained under “Cleaning and Maintenance Suggestions.”

NOTICE! THIS IS A SPECIALIZED, FINELY FITTED MECHANISM. DO NOT TAKE YOUR FIREARM’S ACTION APART BEYOND WHAT

IS EXPLAINED IN THIS OWNER’S MANUAL. IT IS UNNECESSARY, AND MAY PERMANENTLY DAMAGE THE INNER MECHANISM OR RENDER THE FIREARM UNSAFE TO DISASSEMBLE IT FOR ROUTINE CLEANING AND OILING. OF COURSE, MISFORTUNES (SUCH AS DROPPING YOUR GUN IN WATER)

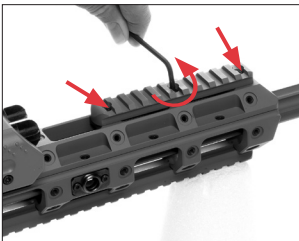
REQUIRE APPROPRIATE ATTENTION, AND IN SUCH CIRCUMSTANCES WE RECOMMEND YOU IMMEDIATELY TAKE YOUR FIREARM TO A QUALIFIED GUNSMITH OR ARMORER.

18.21. SAFETY SYSTEMS FUNCTION CHECK

After every reassembly and prior to use, conduct a safety systems function check on the Ballista™ rifle.

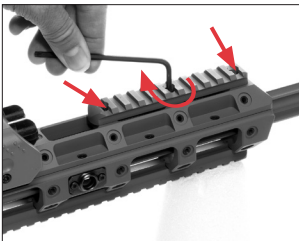
- Ensure the rifle is unloaded and contains no ammunition and the manual “safety” is in the intermediate safe position. Point the rifle in a safe direction.
- Cycle the bolt handle and verify the intermediate safe position.
- Fully depress the grip “safety” and attempt to pull the trigger. The striker should not fall while the manual “safety” is on safe.
- Move the manual “safety” to the safe and locked position. Bolt should now be locked and striker should not fall when the trigger is pulled.
- Move the manual “safety” to the off safe (fire) position.
- Without engaging the grip “safety,” attempt to pull the trigger. The striker should not fall because the grip “safety” is not fully depressed.
- With the manual “safety” in the off safe (fire) position, fully depress the grip “safety” and pull the trigger to the rear. The striker should fall.
- Cycle the bolt one time. Place the manual “safety” lever in the intermediate safe position.

FIGURE 61



Use the T-20 Torx® wrench to remove the mounting screws that hold the accessory rail in place.

FIGURE 62



Use the T-20 Torx® wrench to hand-tighten the mounting screws until they are snug.

18.22. RELOCATING THE FORWARD ACCESSORY MOUNTING RAILS

The Ballista is equipped with one 4" accessory rail located forward on the chassis at the 6 o'clock position. Additional rail segments in lengths of 2", 4", 6", 8", and 10" are available from FNH USA. You can relocate these rails at various positions along the chassis of the rifle which gives you added flexibility when mounting different accessories like tactical lights, laser target designators, slings, handstops and bipods.

These individual rails can also be positioned forward and aft, as well as moved to intermediate positions at the 2, 5, 7, and 10 o'clock positions.

1. To move the 6 o'clock rail segment, use the T-20 Torx® wrench to remove the mounting screws that hold each individual accessory rail by turning the screws counterclockwise as shown in Figure 61.
2. Move the accessory rail to the desired position.
3. When the desired rail position is reached use the T-20 Torx® wrench to hand-tighten the mounting screws as shown in Figure 62 until they are snug. Do not overtighten the screws.
4. Always verify before firing the rifle that any accessories mounted on

these rails will not obstruct the muzzle or ejection port or interfere with the sights or operating controls.

18.23. GENERAL RIFLE CLEANING INFORMATION

⚠WARNING

BEFORE PERFORMING ANY CLEANING PROCEDURES, PLACE THE MANUAL "SAFETY" IN THE INTERMEDIATE SAFE POSITION. OPEN THE ACTION AND MAKE CERTAIN YOUR RIFLE IS COMPLETELY UNLOADED. KEEP THE MUZZLE POINTED IN A SAFE DIRECTION. FAILURE TO FOLLOW THESE WARNINGS COULD RESULT IN SERIOUS INJURY OR DEATH.

⚠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

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.

The Ballista™ is a precision tactical rifle that requires regular cleaning to achieve maximum accuracy and ensure absolute reliability, especially after use in adverse conditions. Make it your regular practice to inspect and, as necessary, clean your Ballista™ rifle after each use.

CAUTION! DO NOT MIX LUBRICANTS ON THE SAME RIFLE DURING CLEANING. THE RIFLE MUST BE THOROUGHLY CLEANED WHEN CHANGING FROM ONE LUBRICANT TO ANOTHER. A HIGH-QUALITY COMMERCIAL GUN CLEANING

AND DEGREASING SOLVENT IS RECOMMENDED FOR CLEANING WHEN CHANGING FROM ONE LUBRICANT TO ANOTHER.

NOTE! WHEN THE TERM "CLP" IS USED OR CITED IN THIS MANUAL, IT REFERS TO A SYNTHETIC, MULTIPURPOSE LUBRICANT. SUITABLE LUBRICANTS MUST HAVE PERFORMANCE CAPABILITY AT -75° TO 140° FAHRENHEIT. COMMERCIAL PRODUCTS LIKE BREAK-FREE® AND MILITARY CLP MEET OR EXCEED THESE REQUIREMENTS.

1. With the rifle disassembled as described previously, thoroughly clean, inspect and lubricate it. Use lubricants very sparingly.
2. Always shake CLP or any lubricant/cleaner well before use.
3. After firing, clean the rifle with CLP. Wipe the rifle dry and lubricate it according to the lubricant manufacturer's instructions.

18.24. CLEANING THE BARREL BORE

The barrel bore of the Ballista has a polygonal land and groove rifling form and a constant rate twist.

To maximize the accuracy and longevity of the bore, regular and proper cleaning of the bore is essential.

There are two methods for cleaning the bore of the Ballista™ rifle.

The first method is by using a rigid, one-piece nylon-clad cleaning rod as shown in Figure 63. This method is intended to be used in administrative environments (such as in a shop, armory or gun room) where a detailed and complete bore cleaning can be conducted.

The second method is by using a flexible, pull-through Bore Snake® as shown in Figure 64, that can be quickly and easily used in a field environment or at the range to keep the bore in a serviceable condition until a more thorough cleaning can be conducted. Each of these cleaning methods is outlined below.

FIGURE 63



Use the rigid, one-piece cleaning rod for cleaning in an administrative environment.

FIGURE 64

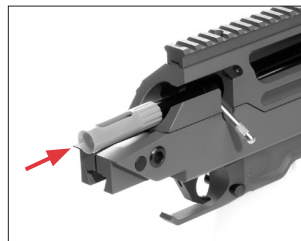


Use the flexible Bore Snake® for cleaning in the field or at the range.

18.25. CLEANING THE BORE WITH THE ONE-PIECE ROD

1. Remove the bolt as described in Section 18.7. Insert a suitable commercially available bore guide into the receiver in place of the bolt as shown in Figure 65. The bore guide helps properly align the cleaning rod to protect the chamber and throat of the barrel from unnecessary wear when the cleaning rod is passed back and forth in the barrel.

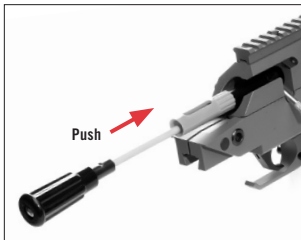
FIGURE 65



Remove the bolt assembly and insert the bore guide into the receiver.

2. Attach the bore brush to the one-piece fixed cleaning rod. Apply a few drops of non-abrasive nitro or copper solvent to the bore brush.
3. Insert the cleaning rod, brush end first, into the back of the bore guide as shown in Figure 66. Working from breech to muzzle, carefully push

FIGURE 66



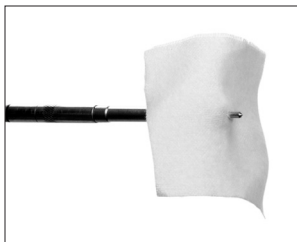
Insert the cleaning rod and brush into the rear of the bore guide. Push the brush and rod down the bore toward the muzzle.

FIGURE 67



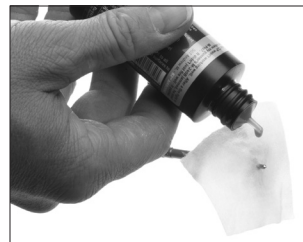
When the cleaning rod and brush have emerged from the muzzle, unscrew the brush and withdraw the cleaning rod from the barrel.

FIGURE 68



Install the cleaning jag on the cleaning rod. Center a dry patch on the end of the jag, then run it through the bore from breech to muzzle.

FIGURE 69



Place the patch moistened with non-abrasive nitro or copper solvent on the jag and push it through the bore from breech to muzzle.

the brush down the bore in one firm, smooth stroke. Do not reverse the direction of the brush or cleaning rod while it is in the bore to avoid getting the brush stuck or breaking off bristles inside the barrel.

4. When the rod has been pushed all the way through the barrel and emerges from the muzzle, remove the brush from the rod as shown in Figure 67.
5. Withdraw the rod, reinstall the brush and reinsert it into the bore guide and repeat Step 3 several times. Again, be careful not to reverse the direction of the brush while it is in the bore.
6. Remove the bore brush from the cleaning rod. Install the brass cleaning jag to the end of the rod.
7. Place a dry cleaning patch centered on the tip of the cleaning jag as shown in Figure 68 and push it through the bore from breech to muzzle.
8. Allow the used patch to fall off of the jag as it emerges from the muzzle and withdraw the cleaning rod back through the bore. Repeat this step several times with dry patches to ensure that all fouling released by the previous brushing has been removed.
9. Place a few drops of non-abrasive nitro or copper solvent on a

clean patch, place the moistened patch on the brass jag as shown in Figure 69 and push it through the bore. Repeat this step several times to ensure the bore is thoroughly coated with a film of non-abrasive nitro or copper solvent. Examine these patches as they are removed from the barrel. Continue until they show no evidence of metal or powder fouling.

10. Dry the bore with two or three clean, dry patches as described in Steps 7 and 8.
11. If the dry patches continue to show evidence of metal or powder fouling, repeat the cleaning process using the brush, lubricated patches and dry patches as necessary or until the dry patches come out clean as shown in Figure 70.

FIGURE 70



Continue the cleaning process until the dry patches show no evidence of metal or powder fouling.

After every cleaning always verify that no patches have been left in the bore.

FIGURE 71



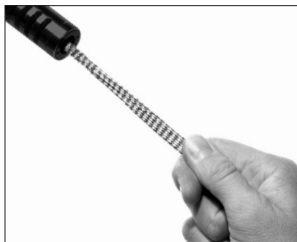
Insert the brass weighted end of the Bore Snake® into the chamber.

FIGURE 72



Allow the brass weight to carry the Bore Snake cord down the bore until it emerges from the muzzle.

FIGURE 73



Firmly grasp the weighted end of the Bore Snake® and pull the entire cord through the bore and out the muzzle end in one continuous motion.

FIGURE 74



Install the chamber cleaning brush onto the chamber cleaning rod.

18.26. CLEANING THE BORE WITH THE BORE SNAKE®

The flexible Bore Snake® has an imbedded brass bore brush. The woven nylon tail end acts as a cleaning patch. CLP or other solvents are not needed with the Bore Snake® for field cleaning procedures.

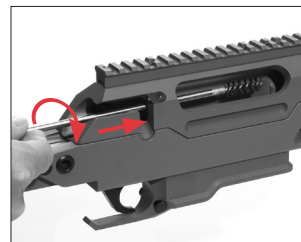
1. Remove the bolt as described in Section 18.7.
2. Ensure the flexible Bore Snake® is not knotted or tangled. Remove any lint or foreign matter from the cord and brush.
3. Lower the muzzle of the rifle and insert the brass weighted end of the Bore Snake® into the chamber as shown in Figure 71.
4. Allow the brass weight to carry the cord of the Bore Snake® down the bore until it emerges from the muzzle as shown in Figure 72.
5. Firmly grasp the brass weighted end of the Bore Snake® and pull the entire cord through the bore and out the muzzle end in one continuous motion as shown in Figure 73. Repeat Steps 3 and 4 as needed until the bore is clean.
6. When it becomes dirty, the Bore Snake® may be hand-washed with detergent and line dried. Make sure the Bore Snake® is completely dry

before using it to clean the rifle's barrel or before storage.

18.27. CLEANING THE CHAMBER AND LOCKING LUG RECESSES

1. Remove the bolt as described in Section 18.7. Ensure the bore guide has been removed.
2. Install the chamber cleaning brush onto the chamber cleaning rod as shown in Figure 74.
3. Apply a few drops of non-abrasive nitro or copper solvent to the chamber brush and insert it into the chamber. Rotate the chamber brush in a clockwise direction as shown in Figure 75. Do not scrub the chamber using an in-and-out motion, as this can scratch or scar the chamber area and may make fired case extraction more difficult.
4. Wrap a dry patch around the chamber brush. Insert into the

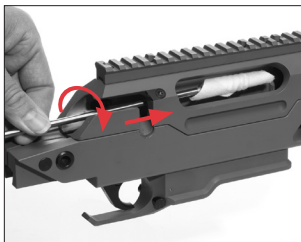
FIGURE 75



Insert the chamber brush into the chamber and rotate it in a clockwise direction.

chamber and rotate in a clockwise direction to dry the chamber. Repeat as necessary. The chamber should be left dry. Always ensure that the chamber is dry and has no lubrication present before firing the rifle to prevent excessive back-thrust pressure against the bolt.

FIGURE 76



Use dry cleaning patches and the all purpose brush to dry the locking lug and barrel extension area.

- Using the all purpose brush, apply a few drops of non-abrasive nitro or copper solvent to the brush and carefully scrub the locking lug recesses.
- Use dry patches and the all purpose brush to dry the locking lug and barrel extension area as shown in Figure 76.
- Inspect the chamber and locking lug area for any unusual wear, cracked lugs and/or chamber scars. If unusual wear, cracked lugs and/or chamber scars are found, report them to your armorer or the FNH USA Service Center in Arnold, Missouri, for inspection before firing the rifle.

18.28. CLEANING THE MUZZLE BRAKE

The muzzle brake should receive regular and careful attention when cleaning, especially when used with a sound suppressor.

- Use the all purpose brush with a few drops of non-abrasive nitro or copper solvent to remove any loose debris on the exterior and the inside the baffles of the muzzle brake.
- Ensure the locating pin recess, found on the bottom of the muzzle brake, is clean and free of any debris as shown in Figure 77.

FIGURE 77



Ensure the locating pin recess, found on the bottom of the muzzle brake, is clean and free of any debris.

FIGURE 78



Use a wet patch and carefully scrub the interior surfaces of the muzzle brake.

- Wrap a cleaning patch soaked with non-abrasive nitro or copper solvent around the small nylon brush portion of the all purpose brush and carefully scrub all interior surfaces of the muzzle brake as shown in Figure 78. Wipe away all excess non-abrasive nitro or copper solvent with dry patches or a soft rag.
- Carefully inspect the muzzle brake for any unusual wear or cracks. If unusual wear or cracks are noted report them to your armorer or the FNH USA Service Center in Arnold, Missouri, for inspection before firing the rifle.

18.29. CLEANING THE RECEIVER

CAUTION! DO NOT USE A WIRE BRUSH OR ANY TYPE OF ABRASIVE MATERIAL TO CLEAN ANY OF THE ALUMINUM OR COMPOSITE SURFACES OF THE RIFLE. SERIOUS SCRATCHING AND/OR DAMAGE TO THE ANODIZED FINISH OR COMPOSITE SURFACES MAY RESULT.

- Use the all purpose brush and dry patches to carefully remove any loose debris from the surface of the receiver as shown in Figure 79.

FIGURE 79



Use the all purpose brush and dry patches to carefully remove any loose debris from the surface of the receiver.

FIGURE 80



Use CLP on the all purpose brush to carefully scrub all interior and exterior surfaces of the receiver.

2. Add CLP to the all purpose brush and carefully scrub all interior and exterior surfaces of the receiver as shown in Figure 80.
3. Wipe away all excess CLP with dry patches or a soft rag.
4. Inspect the receiver assembly for any unusual wear, cracks, burrs, dents or missing components. If any unusual wear, cracks, burrs, dents or missing components are noted, report them to your armorer or the FNH USA Service Center in Arnold, Missouri, for inspection before firing the rifle.

18.30. CLEANING THE BOLT ASSEMBLY

NOTE! IT IS NOT NECESSARY TO COMPLETELY DISASSEMBLE THE BOLT ASSEMBLY FOR A FIELD CLEANING OR LUBRICATION. IF A MORE DETAILED CLEANING OF THE BOLT ASSEMBLY IS REQUIRED, REFER TO SECTIONS 18.9. THROUGH 18.11. FOR COMPLETE BOLT DISASSEMBLY PROCEDURES.

1. Use the all purpose brush and dry patches to remove any loose debris from the bolt assembly as shown in Figure 81. Special attention should be paid to cleaning the bolt face and the striker area.

FIGURE 81



Use the all purpose brush and dry patches to carefully remove any loose debris from the surface of the bolt assembly, bolt face and striker area.

2. Soak a cleaning patch or rag with CLP and wipe down all exterior bolt surfaces.
3. Add CLP to the all purpose brush and carefully scrub all exterior surfaces of the bolt assembly. Give special attention to cleaning the bolt face, extractor and the ejector as shown in Figure 82.
4. Wipe away all excess CLP with dry patches or a soft rag.
5. Inspect the bolt assembly for any unusual wear, cracks, burrs, dents or missing components. Ensure that all components move freely without obstruction. If any unusual wear, cracks, burrs, dents or missing components are noted, report findings to certified armorer or the FNH USA Service Center in Arnold, Missouri, for inspection before firing the rifle.

FIGURE 82



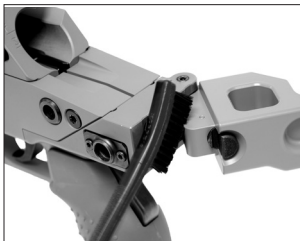
Use CLP on the all purpose brush to carefully scrub all exterior surfaces of the bolt, with special attention to cleaning the bolt face, extractor and ejector.

18.31. CLEANING THE BUTTSTOCK MODULE

CAUTION! DO NOT USE A WIRE BRUSH OR ANY TYPE OF ABRASIVE MATERIAL TO CLEAN ANY OF THE ALUMINUM OR COMPOSITE SURFACES OF THE RIFLE. SERIOUS SCRATCHING AND/OR DAMAGE TO THE ANODIZED FINISH OR COMPOSITE SURFACES MAY RESULT.

1. Use the all purpose brush and dry patches, soft rags or cotton swabs to remove any loose debris from the exterior of the buttstock module as shown in Figure 83.
2. Add CLP to the all purpose brush and gently scrub all metal surfaces of the buttstock module.
3. Wipe away all excess CLP with clean dry patches, soft rags or cotton swabs.

FIGURE 83



Use the all purpose brush and dry patches to carefully scrub the exterior surfaces of the buttstock module.

4. Inspect the buttstock module for any unusual wear, cracks, burrs, dents or missing components. Ensure that all spring loaded components move freely and without obstruction. If any unusual wear, cracks, burrs, dents or missing components are noted, report findings to a certified armorer or the FNH USA Service Center in Arnold, Missouri, for inspection before firing the rifle.

18.32 GENERAL MAGAZINE CLEANING INFORMATION

The Ballista is equipped a multi-caliber capable detachable box magazine that utilizes a polymer magazine body, cartridge follower and bottom plate. Refer to the following instructions when cleaning and servicing magazines

▲WARNING

WEAR EYE PROTECTION TO PREVENT SPRINGS, SPRING-LOADED PARTS, SOAPY WATER, SOLVENTS OR OTHER AGENTS FROM CONTACTING YOUR EYES, RESULTING IN INJURY.

Frequently inspect each magazine to determine the need for cleaning, as lubricants, cartridge combustion residue and dirt will gradually collect inside the magazine body, follower spring and cartridge follower mechanism.

FIGURE 84



Wash the polymer magazine both inside and out with warm, soapy water to loosen any debris. Rinse with clean water and air dry.

FIGURE 85



Remove any loose debris from the exterior of the magazine body with the all purpose brush, patches, damp rags or cotton swabs.

1. Disassemble the magazine as described below. Clean the polymer magazine body, follower and bottom plate by washing them with warm, soapy water as shown in Figure 84, to loosen any debris.
2. Rinse the remaining soapy water and any debris or residue from inside the magazine with clean water.
3. Use an all purpose brush and dry patches, soft rags or cotton swabs to remove any loose debris from the exterior of the magazine body as shown in Figure 85.
4. Use compressed air to completely dry the magazine both inside and out, or allow it to air dry. Do not lubricate the magazine's polymer components.

18.33. DISASSEMBLY OF THE MAGAZINE

1. Remove the magazine from the rifle and completely unload it as previously described.
2. Using a tool such as a small screwdriver, press on the protruding part of the magazine floorplate retainer through the hole in the magazine bottom plate as shown in Figure 86. Hold the retainer in that position and slide the bottom plate slightly rearward.

FIGURE 86



Use a small tool to press on the protruding part of the magazine floorplate retainer through the hole in the magazine's bottom plate.

FIGURE 87



Slowly slide the magazine's bottom plate off the magazine body and carefully release the magazine spring, remembering this spring is under pressure.

3. While holding the magazine bottom retainer (which is under tension by the magazine spring) in position, slide the magazine bottom plate off the magazine body and then carefully release the magazine spring which is under pressure, as shown in Figure 87.
4. Remove the magazine spring, follower and retainer.

This level of disassembly is generally sufficient to perform a thorough cleaning as described previously.

18.34. REASSEMBLING THE MAGAZINE

1. With the components of the magazine clean, ensure that the magazine follower and the magazine bottom catch fit correctly onto the follower spring and that the assembly is oriented correctly.
2. Insert the spring, together with the follower and retainer, into the magazine body follower first.
3. While holding the magazine spring in the magazine body, slide the magazine bottom plate onto the magazine body. The magazine bottom plate can only be moved into position when the magazine bottom retainer is pushed far enough into the magazine body.
4. Ensure the magazine bottom plate locks into position. A slight tap

on the rear of the magazine may be required to seat the retainer. The raised portion of the retainer will be visible in the hole in the magazine bottom plate when it is locked into place.

If any at any time you do not feel completely comfortable or competent to perform any of the specified service procedures on your Ballista™ rifle, please consult a certified armorer, a competent gunsmith or the FNH USA Service Center in Arnold, Missouri.

19. LUBRICATION GUIDELINES

⚠WARNING

BEFORE PERFORMING ANY CLEANING OR SERVICE PROCEDURES, PLACE THE MANUAL "SAFETY" IN THE INTERMEDIATE SAFE POSITION. OPEN THE ACTION AND MAKE CERTAIN YOUR RIFLE IS COMPLETELY UNLOADED. KEEP THE MUZZLE POINTED IN A SAFE DIRECTION. FAILURE TO FOLLOW THESE WARNINGS COULD RESULT IN SERIOUS INJURY OR DEATH.

⚠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

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.

NOTE! WHEN LUBRICATING YOUR BALLISTA RIFLE, DO NOT MIX DIFFERENT TYPES OF LUBRICANTS OR APPLY A SECOND TYPE OF LUBRICANT WITHOUT THOROUGHLY

REMOVING ANY EXISTING LUBRICANT. SOME LUBRICANTS ARE NOT COMPATIBLE AND MAY FORM A GUMMY RESIDUE THAT CAN DEGRADE THE ACCURACY OR RELIABILITY OF YOUR RIFLE. ALWAYS READ AND FOLLOW THE MANUFACTURER'S INSTRUCTIONS WHEN APPLYING LUBRICANTS.

For the purpose of lubrication guidelines in this owner's manual, "light lubrication" describes wiping away any excess lubricant, leaving only a very thin, barely visible surface film of lubrication.

19.1. CLP (CLEANER, LUBRICANT AND PRESERVATIVE)

CLP refers to a type of synthetic lubricant that is widely available from both military and commercial sources.

1. It dissolves firing residue and carbon in barrels and actions.
2. It provides a thin layer of protection as it dries to give additional surface lubrication.
3. It prevents rust from forming on metal surfaces.

NOTE! A HIGH QUALITY COMMERCIAL GUN CLEANING AND DEGREASING SOLVENT MAY BE USED TO COMPLETELY REMOVE LUBRICANTS. WHEN USING THE BALLISTA IN EXTREMELY COLD WEATHER, REMOVE ALL TRACES OF CLP BEFORE APPLYING ANOTHER LUBRICANT.

19.2. LUBRICATING THE RECEIVER ASSEMBLY

The Ballista's receiver does not require any special lubrication beyond that described in Section 18.29.

FIGURE 88



Apply one drop of lubrication on the extractor and one drop on the ejector.

FIGURE 89



Apply one drop of lubricant on the bolt cocking surface.

19.3. LUBRICATING THE BOLT ASSEMBLY

NOTE! IT IS NOT NECESSARY TO COMPLETELY DISASSEMBLE THE BOLT ASSEMBLY FOR A NORMAL APPLICATION OF LUBRICANT. IF MORE DETAILED CLEANING OR LUBRICATION OF THE BOLT IS REQUIRED REFER TO SECTIONS 18.9 THROUGH 18.11. FOR BOLT DISASSEMBLY INSTRUCTIONS.

Follow these lubrication instructions to properly lubricate bolt assembly.

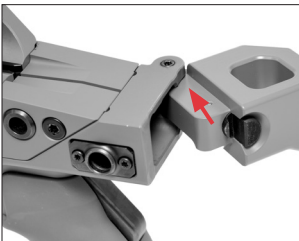
1. Apply one drop of lubrication on the extractor and one drop on the ejector as shown in Figure 88. Manipulate each part several times to work in the lubricant. Wipe away any excess lubricant with a patch or soft cloth.
2. If desired, apply a light lubrication on the bolt body by wiping it with a patch or cloth moistened with lubricant. Wipe away any excess lubricant with a patch or soft cloth.
3. Apply one drop of lubrication on the bolt cocking surface as shown in Figure 89. Wipe away any excess lubricant with a patch or soft cloth.

FIGURE 90



Apply one drop of lubricant to each of the bolt's three locking lugs.

FIGURE 91



Apply a light film of lubrication on the folding joint of the buttstock module.

4. Apply one drop of lubricant or light grease to each of the bolt's three locking lugs as shown in Figure 90. Wipe away any excess lubricant with a patch or soft cloth.

19.4. LUBRICATING THE BUTTSTOCK MODULE

1. Apply a light film of lubrication on the folding joint of the buttstock module as shown in Figure 91. Wipe away any excess lubricant with a patch or soft cloth.

20. TROUBLESHOOTING THE BALLISTA™ RIFLE

▲WARNING

BEFORE PERFORMING ANY TROUBLESHOOTING PROCEDURES, PLACE THE MANUAL "SAFETY" IN THE INTERMEDIATE SAFE POSITION. OPEN THE ACTION AND MAKE CERTAIN YOUR RIFLE IS COMPLETELY UNLOADED. KEEP THE MUZZLE POINTED IN A SAFE DIRECTION. FAILURE TO FOLLOW THESE WARNINGS COULD RESULT IN SERIOUS INJURY OR DEATH.

▲WARNING

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

▲WARNING

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

20.1. MALFUNCTIONS AND CORRECTIVE ACTIONS

The following are malfunctions that may occur during the operation or maintenance of the Ballista™ or its components. Perform these function checks and corrective actions in the order listed.

If an observed malfunction is not listed or the corrective actions listed do not correct the fault, notify a certified armorer, a competent gunsmith or the FNH USA Service Center in Arnold, Missouri, for inspection before firing the rifle.

Should malfunctions occur during the operation or maintenance of the rifle, use the following guidelines to identify the source of the problem and the necessary corrective action(s). Using the following information will help you save time by diagnosing the possible causes of the malfunction.

1. Ammunition issues can cause problems with the rifle. If ammunition-related problems are encountered with multiple rifles, the ammunition should be inspected first as a possible source of the problem.
2. For functional issues with the rifle, first identify where the problem originates during the rifle's cycle of operation. By isolating when and

where the problem occurs you can narrow down the possible options and apply corrective action(s).

3. Many ammunition feeding problems originate with a faulty magazine. Regularly inspect all your magazines and inserts for general cleanliness, large dents to the magazine body, cracks, cartridge follower spring tension and any damage to the magazine's feed lips. If any problems are found, use a new or different magazine.

20.2. FAILURE TO FEED OR CHAMBER A CARTRIDGE OR TO LOCK BOLT

This malfunction can occur when loading the rifle's chamber during the cycle of operation.

1. With a loaded magazine inserted into the magazine well, the forward movement of the bolt assembly could lack enough force (generated by manually pushing the bolt handle forward) to feed, chamber, and lock the first cartridge. While firing, the cycle of operation is interrupted by the failure to strip a fresh cartridge from the magazine, to chamber the cartridge and to rotate the bolt downward into the locked position.

20.3. FAILURE TO FIRE A CARTRIDGE

This malfunction can occur when firing the rifle during the cycle of operation.

1. This malfunction is defined as the failure of a cartridge to fire despite the fact that the cartridge has been chambered properly, the trigger has been pulled and the sear has released the striker. This malfunction occurs when the firing pin fails to strike the cartridge's primer with enough force to ignite the propellant or when the ammunition is faulty.

20.4. FAILURE TO EXTRACT A CARTRIDGE

This malfunction can occur when operating the bolt during the cycle of operation.

1. Failure to extract results when a cartridge case remains in the chamber of the rifle. A live cartridge from the magazine is then forced into base of the first cartridge case as the bolt returns forward in next feed cycle.

▲WARNING

FAILURE TO EXTRACT IS CONSIDERED TO BE AN EXTREMELY SERIOUS MALFUNCTION, OFTEN REQUIRING USE OF TOOLS TO CLEAR. A LIVE CARTRIDGE COULD BE LEFT IN THE CHAMBER AND BE ACCIDENTALLY DISCHARGED. IF A SECOND LIVE CARTRIDGE IS FED INTO THE PRIMER OF A CHAMBERED LIVE ROUND, THE RIFLE COULD EXPLODE AND CAUSE PERSONAL INJURY. THIS MALFUNCTION MUST BE PROPERLY IDENTIFIED AND REPORTED. FAILURE TO EJECT SHOULD NOT BE REPORTED AS EXTRACTION FAILURE. IF A FAILURE TO EXTRACT IS OBSERVED AND THE CORRECTIVE ACTIONS LISTED DO NOT CORRECT THE FAULT, NOTIFY A CERTIFIED ARMORER, A COMPETENT GUNSMITH OR THE FNH USA SERVICE CENTER IN ARNOLD, MISSOURI, FOR INSPECTION BEFORE FIRING THE RIFLE.

▲WARNING

IF A CARTRIDGE CASE IS RUPTURED DURING FIRING, IT MAY BE SEIZED WITHIN THE CHAMBER. WHEN THIS OCCURS, A RIGID CLEANING ROD CAN BE INSERTED INTO THE CHAMBER FROM MUZZLE END TO DISLodge THE FIRED CARTRIDGE CASE.

TAPPING THE CLEANING ROD AGAINST THE INSIDE OF THE FIRED CARTRIDGE MAY CLEAR CARTRIDGE FROM THE CHAMBER. WHEN CLEANING AND VISUALLY INSPECTING THE EXTRACTOR AND CHAMBER AFTER CLEARING THE

RUPTURED CARTRIDGE CASE REVEAL NO OBVIOUS DAMAGE, BUT THE FAILURE TO EXTRACT MALFUNCTION PERSISTS, IT IS POSSIBLE THAT THE CHAMBER SURFACE IS DAMAGED AND THE BARREL MUST BE REPLACED.

NOTE! A CARTRIDGE MUST BE SUCCESSFULLY EXTRACTED FROM THE RIFLE'S CHAMBER BEFORE IT CAN BE EJECTED FROM THE EJECTION PORT.

20.5. FAILURE TO EJECT A CARTRIDGE

This malfunction can occur when operating the rifle's bolt during the cycle of operation.

1. A failure to eject results when a cartridge is not fully ejected through the ejection port and either remains partly in chamber or becomes jammed in the receiver assembly as the bolt closes. When a user initially clears the rifle chamber by operating the bolt, a cartridge could strike the inside surface of the receiver and bounce back into path of the bolt.

20.6. OTHER POSSIBLE MALFUNCTIONS

Listed below are some other malfunctions that can occur with your Ballista™ rifle and suggested corrective actions.

1. Failure of the magazine to lock into magazine well. Check the magazine and magazine catch for any obvious damage. If any problems are found, use a new or different magazine. If the problem persists, notify a certified armorer, a competent gunsmith or the FNH USA Service Center in Arnold, Missouri, for inspection before firing the rifle.
2. Failure of any part of the bolt assembly to function properly. Check for incorrect assembly of the bolt's components. Correctly clean and reassemble the bolt/action assembly, and/or replace any obviously damaged parts. If the problem persists, notify a certified armorer, a competent gunsmith or the FNH USA Service Center in Arnold, Missouri, for inspection before firing the rifle.

3. Failure of ammunition to feed from the magazine. Check the caliber marking on the magazine to make sure the correct ammunition is loaded into the magazine. Check for obvious damage to the magazine. A damaged magazine could cause repeated feeding failures and should be replaced. If the problem persists, notify a certified armorer, a competent gunsmith or the FNH USA Service Center in Arnold, Missouri, for inspection before firing the rifle.

21. TAKING CARE OF THE RIFLE

NOTICE! YOUR RIFLE SHOULD BE INSPECTED EVERY 2000 ROUNDS AND/OR ONCE A YEAR BY A QUALIFIED GUNSMITH OR THE FNH USA PRODUCT SERVICE CENTER BECAUSE DAMAGE, WEAR AND CORROSION ARE NOT ALWAYS VISIBLE FROM THE OUTSIDE. LAW ENFORCEMENT AND MILITARY PERSONNEL SHOULD CONTACT THEIR DEPARTMENTAL ARMORER WHO WILL INSPECT THE RIFLE ON A YEARLY BASIS.

NOTICE! IF THE OPERATION OF THE RIFLE SEEMS ABNORMAL, REPORT IT TO YOUR DEALER OR DEPARTMENTAL ARMORER IMMEDIATELY.

- After extended periods of heavy use, return the rifle to the FNH USA Product Service Center to have the barreled action removed from the stock for a detailed cleaning and lubrication.
- Always keep the rifle in immaculate condition and good working order.
- Always clean and lubricate the rifle after use.
- Regularly inspect the rifle, its parts and accessories.

22. WARRANTY, SERVICE AND TECHNICAL QUESTIONS

For technical questions about service or your firearm contact:

FNH USA Customer Support
Phone 1-855-536-4872

If your FNH USA product should require service or repair contact the FNH USA Product Service Center in Arnold, Missouri. Law enforcement and military users should contact their department or unit armorer.

FNH USA Product Service Center
3005 Arnold Tenbrook Road
Arnold, MO 63010-4728
Phone 1-855-536-4872

When returning your FNH USA 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.fnhusa.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.

23. SERVICE POLICY

If you have any questions about this owner's manual or other FNH USA products, contact:

FN America, LLC
Commercial and Law Enforcement Sales
Phone 1-855-536-4872
Or visit us online at www.fnhusa.com

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

This owner's manual should always accompany this rifle and be transferred with it upon any change of ownership.

FNH USA products are serviced by the FNH USA Product Service Center in Arnold, Missouri.

Please call 1-855-536-4872 to discuss any product repair requirements.

Shipping Address:
FNH USA Product Service Center
3005 Arnold Tenbrook Road
Arnold, MO 63010-4728

24. TECHNICAL SPECIFICATIONS

Caliber(s) : 338 Lapua Magnum

Optional caliber conversion kits (barrel, bolt head and magazine) in 300 Winchester Magnum and 308 Winchester are available from FNH USA

Type of operation : Manually operated bolt-action

Trigger pull : 4.0 lbs. (+/- 1 lb.) adjustable single-stage and two-stage

Weight : 14.3 lbs. (unloaded)

15.1 lbs. (with one 8-round magazine of 338 Lapua Magnum ammunition)

Length (w/26" barrel) : 50.75" (with stock fully extended)

49.5" (with stock fully collapsed)

39" (with stock folded)

Height : 7.80" (with no optics or magazine)

Barrel length : 26" (338 Lapua Magnum)

Rifling : 338 Lapua Magnum, polygonal land and groove profile, 1:9" right-hand, constant twist rate

300 Winchester Magnum, polygonal land and groove profile, 1:10" right-hand, constant twist rate

308 Winchester, polygonal land and groove profile, 1:11" right-hand, constant twist rate

Upper sight rail : MIL-STD 1913, 20 MOA additional elevation built into top rail

Magazine capacity : 338 Lapua Magnum (5-round or 8-round detachable box magazines available)

300 Winchester Magnum (6-round or 10-round detachable box magazines available)

308 Winchester (8-round or 15-round detachable box magazines available)

Length of pull : 14.0" to 15.25" (six positions in .25" steps)

Comb adjustment : 1.25" (75 positions in .015" steps)

Barrel extension torque : 70 inch/pounds

Maximum effective range : 1500 meters (1650 yards) with suitable optics when configured in 338 Lapua Magnum

All specifications subject to changes without notice.

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