

# CONGRATULATIONS ON THE PURCHASE OF YOUR YHM-15 RIFLE

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# BEFORE USING THIS FIREARM READ AND FOLLOW THESE INSTRUCTIONS

A copy of your original proof of purchase and a record of your firearm's serial number should be kept in a fireproof safe. These items will be necessary if the firearm is damaged, stolen, or is returned to YHM for repair/warranty.

# THIS INSTRUCTION MANUAL SHOULD ALWAYS ACCOMPANY THIS FIREARM AND BE TRANSFERRED WITH IT UPON CHANGE OF OWNERSHIP.

Should you have any questions pertaining to this manual, contact the YHM service center at 1-877-892-6533 between the hours of 7:30 am - 4:00 pm EST Monday through Friday.

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## **NOTICE:**

YHM shall not be responsible for personal injury, death, or damage to property resulting from either intentional or unintentional discharge of this firearm, or from its function when used for purposes for which it was not designed. YHM will not honor claims involving this firearm that are the result of improper or careless handling, unauthorized adjustment or replacement of parts, corrosion, neglect, use of the wrong caliber ammunition, use of ammunition other than original high quality commercially manufactured ammunition in good condition, or any combination thereof. YHM will not honor claims involving this firearm for any reason or cause when the second or subsequent owner makes such claims.

Before the rifle left the factory it was thoroughly tested, carefully inspected, and packaged. YHM cannot control product handling after it leaves the factory; therefore please examine this firearm carefully at the time of purchase to ensure that it is unloaded and undamaged.

# **WARNING:**

If this firearm is carelessly or improperly handled, unintentional discharge could result and could cause damage to property, personal injury, or death.

FOR YOUR SAFETY AND THE SAFETY OF OTHERS, this Operator's Manual contains important instructions, warnings, and safety procedures that must be understood BEFORE using your YHM firearm. It is imperative that you read and understand THE ENTIRE MANUAL. If you still have questions or concerns about the safe operation of your YHM firearm, you should seek professional firearms instruction.

# **SAFETY FIRST:**

# THE 10 BASIC RULES OF SAFE FIREARMS HANDLING

We believe that Americans have a right to purchase and use firearms for lawful purposes, but that right imposes the responsibility on the gun owner to use their firearms in a way which will ensure his or her own safety and that of others. When firearms are used in a safe and responsible manner, they are a great source of pleasure and satisfaction, and represent a fundamental part of our personal liberty.

Firearms do not cause accidents! Firearms accidents are almost always found to have been the result of carelessness or ignorance on the part of the shooter of the basic rules of safe gun handling. The following rules must be observed by gun users at all times. Safe gun handling is not just desirable, it is absolutely essential to your safety, the safety of others, and the continuation of gun ownership as we know it today.

# 1. LEARN THE MECHANICAL AND HANDLING CHARACTERISTICS OF THE FIREARM YOU ARE USING.

Not all firearms are the same. The method of carrying and handling firearms varies in accordance with the mechanical provisions for avoiding accidental discharge and the various proper procedures for loading and unloading. No person should handle any firearm without first having thoroughly familiarized themselves with the particular type of firearm they are using, and with safe gun handling in general.

#### 2. ALWAYS KEEP THE MUZZLE POINTED IN A SAFE DIRECTION.

Be sure of the bullet stop behind your target, even when dry-firing. Never let the muzzle of a firearm point at any part of your body or at another person. This is particularly important when loading or unloading a firearm. In the event of an accidental discharge, no injury can occur as long as the muzzle is pointing in a safe direction. A safe direction means a direction which will not permit a discharged bullet to strike a person, or to strike an object from which the bullet may ricochet. A safe direction must take into account the fact that a bullet may penetrate a wall, ceiling, floor, window, etc., and strike a person or damage property. Make it a habit to know exactly where the muzzle of your gun is pointing whenever you handle it, and be sure that you are always in control of the direction in which the muzzle is pointing, even if you fall or stumble. Keep your finger off the trigger until you are ready to shoot.

**3. FIREARMS SHOULD BE UNLOADED WHEN NOT IN USE.** Firearms should be loaded only when you are in the field or on the target range or shooting area, ready to shoot. Firearms and ammunition should be securely locked in safes, racks or cabinets, or by using the locking device supplied with the firearm, when not in use. Ammunition should be safely stored separate from firearms. Store your firearms out of sight of visitors and children. It is the gun owner's responsibility to be certain that children and persons unfamiliar with firearms cannot gain access to firearms, ammunition, or components.

#### 4. BE SURE THE BARREL IS CLEAR OF OBSTRUCTIONS BEFORE SHOOTING.

Even a bit of mud, snow or excess lubricating oil or grease in the bore may cause the barrel to bulge, or even burst upon firing, and can cause serious injury to the shooter and bystanders. Be sure that you are using ammunition of the proper caliber and loading for the gun you are using. If the recoil, or "report on firing" seems weak, or doesn't seem quite right, CEASE FIRING IMMEDIATELY, unload your firearm, and check to be sure that no obstruction has become lodged in the barrel.

#### 5. BE SURE OF YOUR TARGET BEFORE YOU SHOOT.

Don't shoot unless you know exactly where your bullet is going to strike. Be sure of the bullet stop behind your target, even when dry-firing with an unloaded gun. If you are in the field hunting, do not fire at a movement or noise. Take the time to be absolutely certain of your target before you pull the trigger.

# **6. WEAR SHOOTING GLASSES AND HEARING PROTECTION WHEN YOU SHOOT.** All shooters should wear protective shooting glasses and adequate hearing protectors when shooting. Exposure to shooting noise can damage hearing, and adequate eye protection when shooting is essential.

**7. NEVER CLIMB A TREE OR FENCE WITH A LOADED FIREARM.** Put the firearm down carefully before climbing a fence, and unload it before climbing or descending a tree or jumping over a ditch or other obstruction. Never pull or push a loaded firearm toward yourself or another person. When in doubt, or whenever you are about to do anything awkward, unload your gun!

#### 8. DON'T SHOOT AT A HARD SURFACE, OR AT WATER.

Bullets can glance off many surfaces like rocks or the surface of water and travel in unpredictable directions with considerable velocity.

#### 9. NEVER TRANSPORT A LOADED FIREARM.

Firearms should always be unloaded before being placed in a vehicle. A suitable carrying case or scabbard should by used to carry an unloaded firearm to and from the shooting area.

#### 10. AVOID ALCOHOLIC BEVERAGES WHEN SHOOTING.

Don't drink until the day's shooting is over. Handling firearms while under the influence of alcohol in any form, or medications that could affect your judgment or coordination, constitutes a criminal disregard for the safety of others

Note: Remove the magazine and make sure your rifle is unloaded and there is no ammunition in the chamber. *See Picture*.

**Empty Chamber** 

**Loaded Chamber** 



# **SAFETY FIRST**

## **RANGE CAUTIONS**

- **1. ALWAYS BE SURE YOUR BACKSTOP IS ADEQUATE** to stop and contain bullets before you begin shooting so that you do not hit anything outside the shooting area.
- 2. ALWAYS PUT A KNOWLEDGEABLE AND RESPONSIBLE PERSON IN CHARGE TO MAINTAIN SAFETY CONTROL WHEN A GROUP IS FIRING ON A RANGE. Obey their commands so that discipline is maintained to reduce the likelihood of an accident.
- **3. ALWAYS CARRY YOUR FIREARM EMPTY WITH THE BOLT LATCHED OPEN WHILE ON THE RANGE** until preparing to fire. Keep it pointing towards the backstop when loading, firing, and unloading, to eliminate the risk of injury, death, or damage to property from premature discharge.

#### **HANDLING CAUTIONS**

- \* Always handle the firearm as if loaded.
- \* Always make sure your firearm is unloaded and the bolt is locked to the rear before laying it down or handing it to someone else.
- \* Never leave a loaded firearm unattended.
- \* Always check that ammunition is clean and undamaged.
- \* Always keep the selector switch set to "SAFE" when the firearm is loaded and a round is chambered until ready to fire.
- \* Always act in a mature manner and never indulge in "horseplay" when handling your firearm.
- \* Do not alter or modify your YHM firearm.
- \* Never rely on mechanical features alone. No matter how many safety features a firearm has, nothing is better than an educated safety conscience.
- \* Firearm security is your responsibility.
- \* Appropriate use for your firearm means using your firearm for legal purposes. It is your responsibility to ensure that you are in compliance with all appicable laws and ordinances regarding the use of your firearm.
- \*Never manupulate, adjust or change any of the internal components of your firearm unless specifically instructed to do so in this manual.
- \*Never allow any alteration or replacement of parts in your YHM firearm unless performed by a qualified gunsmith.
- \* Never dissasemble your firearm farther than directed in the field stripping section of this manual.

EVERY FIREARM, AT ALL TIMES, SHOULD ALWAYS BE TREATED AS IF IT IS LOADED. Even if you are positive the firearm is unloaded you always need to treat it as a loaded firearm. PERIOD.

# **SAFETY FIRST**

#### **DANGEROUS PROCEDURES:**

- 1. Be sure the cam pin is installed in the bolt group. If it isn't and you fire your rifle it may explode, causing personal injury, death, or damage to property. See Page 18 to find out where the Cam Pin Is
- 2. Do not exchange or switch the bolt or bolt assembly from one firearm to another. It could cause damage and/or personal injury.
- 3. If your firearm fails to fire, hold it with the muzzle pointed downrange towards the target for 30 seconds. If hangfire has occurred the round will fire within 30 seconds. If the round does not fire, remove the magazine, eject the round and examine the primer. If the firing pin detent on the primer is light or nonexistent, or misaligned, have your firearm examined by a competent gunsmith. If the firing pin detent on the primer appears normal (when compared to fired brass) assume faulty ammunition. Dispose of properly, and continue firing.



# DO NOT ALTER FIREARM

# **SAFETY FEATURES**

This is a semi-automatic firearm. After each round is fired the next round in the magazine is chambered and the rifle is ready to fire. Each squeeze of the trigger will result in discharge until the magazine is empty or the selector is set to "SAFE".

# **SAFETY FEATURES:**

#### **SAFETY SELECTOR SWITCH**

A selector lever, located on the left side of the lower receiver, has two positions, "FIRE" and "SAFE". When set to "FIRE" the firearm will fire a single shot each time the trigger is squeezed. When set to "SAFE" the trigger becomes blocked, preventing movement and preventing the hammer from releasing.



#### **SAFETY FUNCTION CHECK**

SAFE - Note: Remove the magazine and make sure your rifle is unloaded and there is no ammunition in the chamber. Keeping the rifle pointed in a safe direction, pull the charging handle all the way to the rear and release. Place the selector switch to "SAFE". Squeeze the trigger. The hammer should not fall. FIRE - Keeping the rifle unloaded and pointed in a safe direction, place the selector switch on "FIRE". Squeeze the trigger and hold to the rear. The hammer should fall. Keeping the trigger held to the rear, pull the charging handle all the way to the rear and release. Release the trigger, you should hear and feel a click as the disconnector releases. When you squeeze the trigger for a second time the hammer should fall.

#### **FIRING PIN COLLAR**

The YHM bolt carrier combination, located within the upper receiver, is designed to prevent the firing pin from striking a cartridge until the bolt is locked to the barrel. If the firing pin should be struck by the hammer before the bolt is locked to the barrel, the firing pin could not move forward through the face of the bolt, because the firing pin is held positively rearward by the collar on the firing pin which bears against the surface of the carrier. It is the final forward movement of the carrier which causes the bolt to rotate and lock into the barrel; this final movement also creates a space in front of the firing pin collar after the bolt and barrel are locked to permit the firing pin to move forward when struck by the hammer.

#### **DISCONNECTOR**

The disconnector, a part in the firing mechanism, prevents the firearm from firing in full-automatic. As the hammer is cocked after each shot the disconnector holds it until the trigger is released. When the trigger is released hammer retention is passed from the disconnector to the trigger.

1. CAUTION: READ SAFETY INSTRUCTIONS

**LOADING A MAGAZINE** 

2. Use only high quality factory ammunition that is the correct caliber for your fiream. See picture





3. With the short end of the magazine facing forward, place a round between the lips of the magazine with the bullet forward. Press the round down until it is held by the magazine lips. Place next round on top of previous round. Repeat until desired number of rounds is loaded.

## - CAUTION -

TO MINIMIZE THE RISK OF UNINTENTIONAL DISCHARGE, LOAD LIVE AMMUNITION INTO YOUR RIFLE ONLY WHEN YOU ARE READY TO FIRE.

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# **Loading The Firearm**

- 1. CAUTION: READ SAFETY INSTRUCTIONS KEEP YOUR FIREARM POINTING IN A SAFE DIRECTION, DO NOT TOUCH THE TRIGGER, AND KEEP THE SELECTOR ON "SAFE".
- 2. If applicable, remove the empty magazine by depressing the magazine release button which is located on the lower right of the receiver, and extracting the magazine from the magazine well. For location of the magazine release button, see picture on page 11
- 3. Press in on the bottom of the bolt catch while grasping and pulling back on the charging handle, to cock the hammer and leave the bolt and carrier latched open to the rear (See illustration). This step only has to be performed when you first start shooting. When a magazine empties it performs this step for you.

#### **CAUTION:**

THE BOLT AND CARRIER BEING LATCHED OPEN IS

NOT A SAFE CONDITION

WHEN A LOADED MAGAZINE IS INSTALLED.



# **Loading The Firearm (Cont.)**

- 4. Return the charging handle fully forward, until it locks, and remove your finger from the bolt latch.
- 5. Set the selector switch to "SAFE" if not already in position.
- 6. With bullet points forward, insert the loaded magazine into the magazine well and push it upward until it stops and is locked in place by the magazine catch.
- 7. Keeping your fingers away from the ejection port and the muzzle pointing in a safe direction, press in on the top thumb piece of the bolt catch. This will release the bolt and carrier to move forward and feed a round from the magazine into the chamber. THE FIREARM IS NOW LOADED WITH A ROUND IN THE CHAMBER AND THE HAMMER COCKED.
- 8. You may now close the ejection port dust cover if you wish; it is located on the right of the upper receiver and will open automatically when the first round is fired. CAUTION: NEVER LEAVE YOUR FIREARM COCKED AND LOCKED READY TO FIRE WITHOUT THE SELECTOR SWITCH SET TO "SAFE", as this is the fire condition and is extremely dangerous; the firearm could easily be accidentally discharged, causing injury, death, or damage to property.

## **WARNING:**

THIS FIREARM MAY DISCHARGE ACCIDENTALLY WHEN A ROUND IS FED INTO THE CHAMBER, IF IT IS DROPPED, OR RECEIVES A BLOW TO THE MUZZLE OR FRONT OF THE FIREARM. (THIS CAN OCCUR REGARDLESS OF THE POSITION OF THE HAMMER OR ANY OF THE VARIOUS SAFETY DEVICES.) THEREFORE, EXTRA CARE AND STRICT ADHERENCE TO THESE INSTRUCTIONS BY THE USER IS MANDATORY FOR MINIMIZING THE RISK OF ACCIDENTS.

# Loading The Firearm (Cont.)

#### **FORWARD ASSIST**

The forward assist allows you to ensure the bolt has locked into the barrel, but it will only be useful on rare occasions when the bolt fails to lock automatically. When you must use the forward assist, it is usually time to clean your rifle paying particular attention to the cleanliness of the chamber and bolt.



CAUTION: ALWAYS CHECK THAT AMMUNITION IS CLEAN AND UNDAMAGED BEFORE USING THE FORWARD ASSIST. Forcing damaged ammunition into the chamber could damage your rifle and could result in injury, death, or damage to property.

## UNLOADING

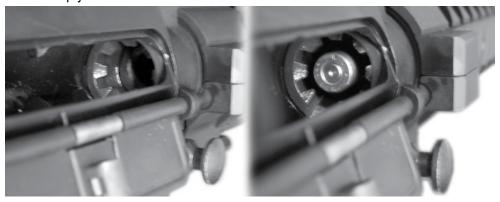
- 1. CAUTION: ALWAYS UNLOAD YOUR FIREARM IMMEDIATELY AFTER USE AND PRIOR TO CLEANING AND STORAGE TO MINIMIZE THE RISK OF ACCIDENTAL DISCHARGE.
- 2. Set the selector switch to "SAFE".
- 3. Press the magazine release button and remove the magazine. See picture above

# **UNLOADING (CONT.)**

- 4. Pull the charging handle fully to the rear and push in the lower portion of the bolt catch. If a round had been in the chamber it should have been ejected. If the last round had been fired, the bolt and carrier should already be held to the rear, provided the magazine is in place.
- 5. Keeping your finger on the bolt catch, push the charging handle forward until it locks.
- 6. Look into the chamber through the ejection port to ensure the chamber is empty. See picture below
- 7. When the magazine is removed and the chamber is empty, push the top portion of the bolt catch to allow the bolt and carrier to return forward.
- 8. Remove any remaining live rounds from the magazine by sliding them forward out of the front of the magazine.
- 9. Collect all live ammunition for safe storage and spent cartridge cases for disposal

**Empty Chamber** 

**Loaded Chamber** 



Visually inspect the chamber to ensure it is empty.

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# **FIRING**

Before firing, practice your stance, aim, rhythm, and breathing for steady aim with your firearm UNLOADED. Practice firing on a range before going hunting or using your firearm for any type of shooting.

#### **BARREL BREAK-IN PROCEDURE**

To achieve the best accuracy factory new barrels should be broken in using the following procedure. For the first 25 rounds the bore and chamber should be cleaned after each round. For the next 100 rounds the bore and chamber should be cleaned after every 10 rounds. YHM barrels are factory production barrels, not custom barrels. Accuracy will vary from barrel to barrel. Accuracy will also vary with the type of ammunition, bullet weight, powder load, rifling twist, rifling lands, operator technique, etc. Our production barrels have achieved anywhere from 1/4" to 2" M.O.A. Due to variances in production we cannot guarantee a specific group size.

#### **CAUTIONS:**

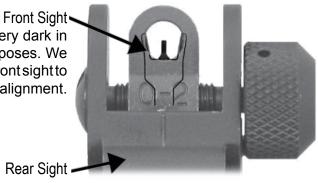
- 1. ALWAYS USE AND ENCOURAGE OTHERS TO USE HEARING PROTECTION WHEN SHOOTING. Without ear protection, the noise from your firearm and the others around you may leave a ringing in your ears for a while after a round is fired. The long term result may be permanent loss of hearing.
- 2. ALWAYS WEAR AND ENCOURAGE OTHERS TO WEAR EYE PROTECTION. Flying particles could damage your eyes or cause blindness. Wearing eye protection will prevent particles from entering your eyes.

# **To Fire:**

- 1. CAUTION: READ SAFETY INSTRUCTIONS. KEEP YOUR FIREARM POINTING IN A SAFE DIRECTION WITH THE SAFETY SELECTOR ON "SAFE", DO NOT TOUCH THE TRIGGER, AND KEEP YOUR HANDS AWAY FROM EJECTION PORT.
- 2. Load the firearm as previously described.
- 3. Grasp the firearm with one hand on the hand guard and other hand on the pistol grip with your index finger resting along the <a href="OUTSIDE">OUTSIDE</a> of the trigger guard. Raise the firearm and pull the buttstock firmly into your shoulder.
- 4. Aim by aligning the target with the front and rear sight. Page 13

# Firing (Continued)

Note: The front sight is very dark in this picture for visibility purposes. We provided an outline of the front sight to help you visualize correct alignment.



5. Move selector to "FIRE".

8. Keeping steady aim, place your index finger on the trigger and squeeze gently until the trigger releases the hammer. Don't jerk the trigger as you will disturb your aim and accuracy. To fire the second and subsequent rounds, all that is necessary is to release the trigger and squeeze it again after every shot until you have completed firing or emptied the magazine.

- 7. THIS IS A SEMIAUTOMATIC FIREARM AND IS IMMEDIATELY LOADED AND READY TO FIRE AGAIN AFTER EACH SHOT UNTIL THE MAGAZINE IS EMPTY.
- 8. Release the trigger, remove your finger from the trigger, and set the selector switch to "SAFE". If you have fired the last round from the magazine, the bolt will be held to the rear so that the firearm can quickly be reloaded by replacing the magazine, or the chamber can be inspected to ensure it is empty.
- 9. CAUTION: KEEP YOUR FIREARM POINTING IN A SAFE DIRECTION. UNLOAD as previously described.

CAUTION: NEVER LEAVE YOUR FIREARM COCKED AND READY TO FIRE WITHOUT SELECTOR LEVER SET TO "SAFE"! If you load your firearm but do not fire it, keep the selector set to "SAFE" until ready to fire. If you lose the opportunity to fire, unload as previously described.

The fire condition mentioned above is extremely dangerous. Your firearm could easily be accidentally discharged, causing injury, death, or damage to property.

# SEE THE FOLLOWING PAGES TO LEARN HOW TO PROPERLY ZERO YOUR SIGHTS

# ZEROING SIGHTS

# Rear Sight

1. The YHM rear sight can be adjusted for windage and has a dual aperture peep, one for close range and one for long range.

wINDAGE knOB

- 2. When the peep is flipped forward the aperture is marked 0-2, meaning zero to two-hundred meters.
- 3. When the aperture is flipped back, it is set for long range (beyond 200 meters).
- 4. The windage knob is located on the right side of the sight. Turn the knob clockwise to move the bullet impact right, and counterclockwise for left. Each click



Rear Sight

will move the bullet impact one half inch at 100 yards.

# Front Sight Front Sight tOOL Spring Loaded Detent

# Front Sight

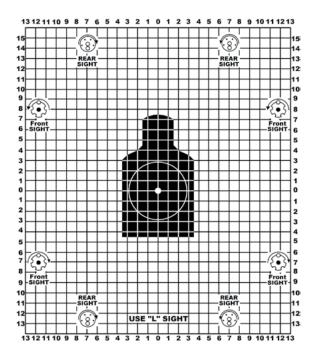
1. The front sight is adjustable for elevation zeroing. To adjust the elevation of the front sight, depress the spring loaded detent and rotate the post. To raise the bullet impact point turn the post clockwise. To lower the bullet impact point turn the post counter clockwise

#### **General Rules to Follow:**

- 1. Your Rear Sight (Sight above charging handle) controls windage (left and right)
- 2. Your Front Sight (Sight above barrel) controls elevation (up and down).
- 3. If you move your front sight DOWN, you raise your point of impact UP (Opposite of what most people naturally think).
- 4. If you move your rear sight to the right, your point of impact will shift to the right (What most people naturally think).
- 5. If you turn your windage knob clockwise, you move your sight to the right. If you turn it counterclockwise, it moves to the left (rear sight).
- 6. If you depress the spring loaded detent and turn clockwise you move your front sight down which MOVES YOUR POINT OF IMPACT UP. Counterclock wise moves your front sight up, MOVING YOUR POINT OF IMACT DOWN.

NOTE: Each YHM rifle is laser bore-sighted before it leaves the factory. Only minor adjustments should be necessary.

- 1. Flip rear peep to the small, long range, aperture.
- 2. Set the rear sight to mechanical zero. This is accomplished by lining up the mark on the rear peep with the line in the body of the sight. (This step is only necessary when attaching a new sight, as the YHM sight is factory laser bore-sighted)
- 3. Carefully aim and fire at a bull's eye target 25 yards away. Fire ten rounds to establish a group.
- 4. If the point of impact does not match the point of aim, measure the vertical and horizontal distance between the point of aim and the point of impact.
- 5. Adjust the windage of the rear sight and elevation of the front sight to move the bullet impact point to the point of aim.
- 6. Repeat steps 3 through 5 until the point of impact matches the point of aim. Your rifle is now zeroed.

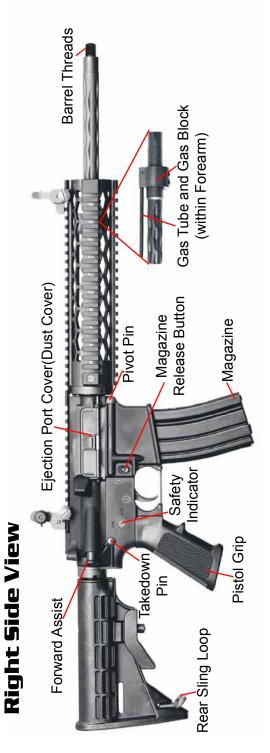


A Quarter inch "Zeroing Reference" Target should be used from a distance of 25 yards.

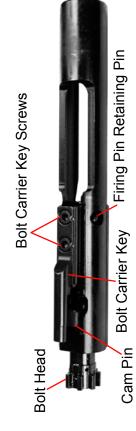
Space between gridlines represents a quarter inch. Rotate one click per quarter inch.

A Target with quarter inch Gridlines is available free for download from the "Product Support" section of our website, YHM.net.



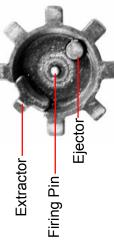






View of Bolt Head
(Front)

Extractor



# FIELD STRIPPING:

# FIELD STRIPPING (CONT):

#### **MAINTENANCE:**

Although your YHM rifle has been developed from a line of rugged, reliable military firearms, it, like any other precision mechanism, will perform better, last longer, and remain safer when it is properly maintained. Follow the instructions in this section to keep your firearm in good working condition.

NOTE: Do not strip your firearm further than described. If additional maintenance is required consult a competent gunsmith.

#### - CAUTIONS -

1. ENSURE THAT THE MAGAZINE IS REMOVED AND THE FIREARM IS NOT LOADED SO THAT IT CANNOT FIRE 2. WEAR SAFETY GLASSES AS SOME SPRING LOADED COMPONENTS COULD INJURE YOUR EYES.

# Separating the Upper and Lower Receiver

**IMPORTANT:** To prevent loss of small parts during stripping and cleaning, lay them out in an orderly fashion

- 1. Read safety instructions and cautions above.
- 2. Be certain to leave the bolt forward in the battery position.
- 3. Press the take down pin at the rear of the lower receiver from the left side. Pull it from the right side until it stops. (White Arrow)
- 4. Pivot the lower receiver down and away from the upper receiver.
- 5. Press the pivot pin at the front of the lower receiver from the left side and pull it from the right until it stops. (Black Arrow)

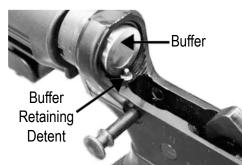


6. You can now separate the upper and lower receivers.

CAUTION! Do not pull the trigger while the upper and lower halves are separated and the selector lever is set to "FIRE". This can damage your lower receiver and will not be covered by warranty.

#### **Dissasembling the Lower Receiver**

1. Depress the buffer in the lower receiver and press down on the buffer retaining detent. Remove the buffer and spring. (It maybe necessary to press the hammer down to fully remove the buffer). Your lower receiver is now field stripped for cleaning. (See page 19)



## **Upper Receiver and Bolt Carrier Assembly**

- 1. Pull the charging handle to the rear and remove the bolt/carrier assembly.
- 2. Remove the charging handle by aligning it with the keyway in the receiver and pulling it down and out of the receiver.
- 3. On the bolt carrier, push the firing pin retaining pin from right to left out of the bolt carrier.
- 4. Point the bolt face upwards and remove the firing pin from the bottom.
- 5. Push the bolt into the carrier until it rotates and comes to a stop. Turn the cam pin 90 degrees and remove.
- 6. Pull the bolt forward out of the carrier.

Rotate Cam Pin 90 degrees Push from other side

7. Using a 5/64" punch, drive out the extractor pin and remove the extractor from the bolt. Do not remove the spring from the extractor.



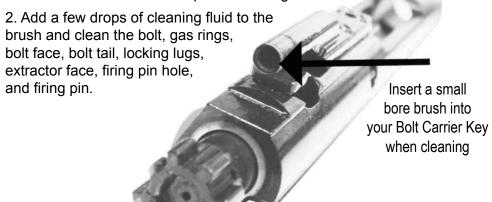
# **LUBRICATION**

# **Upper Receiver:**

- 1. Clean the outside surfaces of dirt, rust, or other contaminates.
- 2. Using a bore brush and a good rifle bore cleaning solvent, push the bore brush from the receiver all the way through the bore. Pull the brush back from the muzzle to the receiver. DO NOT REVERSE DIRECTION WHILE THE BRUSH IS IN THE BORE. Repeat 3 times.
- 3. Using a patch holder, attach a clean patch and pass from the receiver through the bore. Pull the patch back from the muzzle to the receiver. Repeat with clean patches until a patch comes out clean.
- 4. Using a bore brush, clean around the gas tube inside the upper receiver.
- 5. Using a chamber brush and a good rifle bore cleaning solvent, insert the brush into the chamber and rotate several times to clean the chamber and locking lugs.
- 6. Plunge the brush straight in and out of chamber to clean the locking lugs.

## **Bolt Carrier Group:**

1. Using a clean, dry bore brush, insert the brush into the carrier key and rotate to remove carbon and powder fouling.



# **Lower Receiver Group:**

- 1. Using a lightly oiled patch, clean the buffer, spring, and inside of the buffer tube.
- 2. Using a brush, remove any dirt or fouling around the trigger parts and inside of the lower receiver.

Please note the following terms:
Lightly Lubricate: A film of oil barely visible to the eye.

Generously Lube: Heavy enough to be spread with a finger.

## **Upper Receiver:**

- 1. Lightly lube the outer surfaces of the barrel and the sights.
- 2. Depress the front sight detent to ensure oil reaches the spring.
- 3. To lubricate the bore, put a lightly oiled patch through the bore from the receiver to the muzzle. Pull back from the muzzle to the receiver.
- 4. Look down the bore to ensure no oil or pieces of the patch have accumulated. If oil has accumulated send a clean patch down the bore and back. Small threads of a patch can be blown out with compressed air.
- 5. Use a lightly oiled patch the lube the chamber and locking lugs.

# **Bolt Carrier Group:**

- 1. Generously lube the outside of the bolt, cam pin, cam pin track in the bolt carrier, and piston rings.
- 2. Lightly lube the firing pin and firing pin recess in the bolt.
- 3. Lightly lube the inside areas of the bolt carrier and the bolt carrier tracks.
- 4. Apply a single drop of oil in the bolt carrier key.

Oil here

5. Lightly lube the charging handle.

# **Lower Receiver Group:**

- 1. Generously lube the take down pin and pivot pin.
- 2. Lightly lube the inside of the buffer tube and the buffer.

# **PRE-ASSEMBLY INSPECTION:**

WARNING: Do not interchange bolts between rifles.

#### **Bolt:**

- Check for cracks or fractures, especially in the cam pin area.
- Check for pitting on the bolt face. Bolts with pits intersecting with the firing pin hole must be replaced.

## **Firing Pin:**

- Replace if bent, cracked, or if the striking end is blunted.

# Firing Pin Retaining Pin:

- Replace if bent, broken, or badly worn.

#### **Cam Pin:**

- Replace if cracked, chipped, or badly worn.

# **Extractor and Spring:**

-Check for chipped or broken edges where it engages with the cartridge rim.

# Contact YHM if parts are missing, worn or damaged and need replacing.

## **RE-ASSEMBLY:**

- 1. Insert the buffer and spring into the buffer tube.
- 2. Check to ensure the extractor spring and rubber insert are still installed on the extractor. If they have become separated seat the large end of the spring into the extractor.
- 3. Reinstall the extractor onto the bolt using the previously removed pin.
- 4. Check the gas rings to ensure the gaps do not line up with each other. If they do, simply spin the rings with a small screwdriver or similar tool.
- 5. Slide the bolt into the carrier
- 6. Reinsert the bolt cam pin. Spin 90 degrees. (NOTE: If the cam pin will not install the bolt is probably in upside down. Simply spin the bolt 180 degrees. The extractor should be on the right side.)

WARNING: If you do not install the cam pin, the rifle will still fire and may explode, causing personal injury, death, or damage to property.

- 7. Install the firing pin from the rear of the bolt carrier. (NOTE: If the firing pin cannot be fully inserted check to make sure the cam pin has not spun.)
- 8. Install the firing pin retaining pin. The firing pin should not fall out when the bolt face is pointed upward.
- 9. Pull the bolt forward until it stops. Your bolt carrier assembly is now complete. Page  $23\,$

# **MID-ASSEMBLY INSPECTION:**

# "Gas Ring Test"

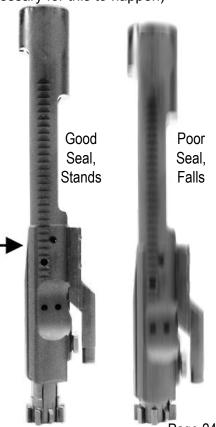
Your gas rings are located within your bolt. If these rings do not create a tight enough seal, your rifle may not function properly. Here is a simple test to verify that your gas seal will suffice.

Gas Rings-

Note: The three gaps in the gas rings should not touch each other or it will break the seal

- 1. Perform reasembly of your entire bolt carrier assembly as seen in re-assembly steps 1-9 on the previous page. Once your bolt carrier is completely assembled you need to verify that the gas rings still provide a strong enough seal for your firearm to function.
- 2. Notice that you can pull the bolt in and out of the carrier assembly about 1/2" (a rotation of about 90 degrees is necessary for this to happen)
- 3. Pull the bolt out as far as it will go.
- 4. Stand the bolt carrier assembly up on end, with the bolt facing downward.
- 5. If your gas rings are creating a good seal, the bolt carrier assembly will not move. If the gas rings ARE NOT creating a strong enough seal within the bolt assembly, gravity will pull the bolt carrier down the bolt. If this happens you need to contact your local gunsmith to have the gas rings replaced. See Diagram
- 6. The gas ring test is complete, continue reassembly of the rest of your firearm on the following page.

If your gas rings are sufficient, your bolt carrier assembly will stand on end as show on the left. If you need need to replace your gas rings, the bolt carrier assembly will fall down as shown on the right



# **RE-ASSEMBLY** (Continued):

# **UNUSUAL CONDITIONS:**

- 10. Engage the charging handle in the keyway of the upper receiver and push it in part way.
- 11. Slide in the bolt carrier group. (NOTE: If the bolt carrier group cannot be inserted the bolt has most likely moved backwards into the carrier. Simply pull the bolt back out and reinsert.)
- 12. Push the bolt carrier and charging handle all the way into the upper receiver.
- 13. Align the front lug on the upper receiver with the front pivot pin on the lower receiver. Engage the front pivot pin.
- 14. Repeat with the rear take down pin. (Verify selector switch is set to safe.)
- 15. Perform the safety function check (Pg.4) to check the function of the safety selector.

# **UNUSUAL CONDITIONS:**

#### **Extreme Cold:**

- Clean and lubricate the rifle with quality gun lubricant. Keep the firearm moisture free.
- Operate controls through their entire range to keep them from freezing up.
- Protect your rifle with a cover when not being used and kept outside.

#### **Extreme Heat:**

- Inspect the rifle more frequently, especially the hidden surfaces of the bolt carrier group, forward assist, and lower receiver components. Make certain they are lubricated using quality gun lubricant.
- Be sure to wipe dry and lightly oil after handling.

## **Hot, Dry Climates:**

- Clean and lubricate the rifle more frequently with quality gun lubricant.

# **Dusty and Sandy Environments:**

- -Clean and lubricate the rifle more frequently with quality gun lubricant.
- Keep sand out of parts when cleaning, inspecting, lubricating and assembling. Apply only light oil to the outside of the rifle.
- Use a magazine bag and a muzzle cap to prevent dust from entering the rifle. Always close the ejection port dust cover. Remove muzzle cap for storage.

# **PROJECTILE LODGED IN BORE**

If an audible "Pop" or reduced recoil is experienced when firing, IMMEDIATELY CEASE FIRE, remove the magazine, lock the bolt to the rear, and set the selector switch to "SAFE". Visually inspect the bore and/ or insert a cleaning rod into the bore to ensure there is no obstruction. If a projectile is lodged in the bore do not attempt to remove it. Contact YHM.

# **AMMUNITION WARNING**

Due to the number of calls and concerns with AR type rifles we have compiled a list of problematic ammunition.

1) Israeli Ammunition and Korean Ammunition:

The problems with these ammunition types is the bullet contour and the overall length of the cartridge. These two issues cause the bullet to contact the rifling before firing. This leads to overpressuring of the chamber and creates an unsafe situation. Feeding and extraction are negatively affected due to the increased bolt carrier velocity. Internal parts will also wear faster due to the increased velocity of moving parts.

2) PMP Ammo and South African Produced Surplus

These ammunition types use extremely soft brass which can flow into microscopic pits and grooves in the chamber. This ultimately results in a "sticky" chamber causing failure to extract.

3) Lacquer Coated Ammunition or Steel-Cased, Lacquer Coated Ammunition:

The main problem here is the lacquer coating on the case. As the barrel and chamber heat up during firing, the lacquer becomes soft and sticks into the chamber. Upon cooling it re-hardens in the chamber. This effectively creates an undersized chamber resulting in poor feeding, poor extraction, as well as creating an unsafe condition (overpressuring).

YHM reccomends the use of new, high quality, domestically produced ammunition for the best results and highest accuracy. For practice and plinking YHM reccomends the use of domestic, commercially available ammunition or surplus NATO specification ammunition. Please note that the use of reloaded ammunition voids the warranty as well as the use of the above mentioned ammunition types. Your YHM rifle is a precision quality investment and it only makes sense that your ammunition choice should reflect that.

# **SERVICE AND REPAIR**

#### SHIPPING FIREARMS FOR REPAIR

YHM MODEL 15 returned to the factory for services or repair should be sent to:

Yankee Hill Machine Co., Inc., Repair Department, 20 Ladd Ave, Suite 1, Florence, MA 01062 Telephone: (877)892-6533

Guns should be sent prepaid. We will not accept collect shipments. The Federal Gun Control Act, as well as the laws of most states and localities, do not prohibit an individual (who is not otherwise barred from purchasing or possessing a firearm) from shipping a firearm directly to the manufacturer for repair. However, before you ship your firearm to us, be certain that your state or locality does not have a law or regulation which will prohibit you from receiving it from us after it has been repaired. If such receiving is prohibited, then please have a Federally Licensed firearms dealer ship the gun to us. If it is sent to us by a dealer, it will be returned to them after being repaired. If a rifle is shipped by an individual who does not hold a Federal Firearms License, it must be shipped for overnight delivery via U.P.S., Federal Express, or other similar private overnight service. NOTE: Firearms may not be shipped via U.S. Mail. Persons who do not hold a Federal Firearms License are prohibited by Federal law from shipping a firearm by Mail. Handguns mailed in violation of the law are impounded by the Post Office.

Please do not include custom accessories with a firearm being shipped to the factory for service.

DO NOT SEND GUN BOXES OR LITERATURE THAT YOU CONSIDER TO BE COLLECTOR'S ITEMS THESE ARE INVARIABLY DAMAGED OR DESTROYED IN SHIPMENT.

- 1. CAUTION: MAKE SURE THE MAGAZINE IS EMPTY AND THE FIREARM IS NOT LOADED.
- 2. Write a letter explaining the problem and your requirements in as much detail as possible. Include the model name and serial number of your firearm together with your return address, then enclose the letter with the firearm in a well padded package.
- 3. Please enclose copies of any previous correspondence.
- 4. Do not send presentation boxes, accessories, or explosive components.
- 5. Do not indicate the contents, but include YHM in the address on the package, so that an inquisitive thief is not attracted to it by such information.
- 6. Insure the package and its contents against loss or theft.

#### WARRANTY

This YHM firearm is warranted to the ORIGINAL RETAIL PURCHASER for the lifetime of the firearm against defects in material and workmanship. All parts and labor will be warranted at YHM's discretion.

Transportation to and from our facility, government fees, damage caused by failure to perform normal maintenance, normal wear and tear, sales outside of the United States, damage due to high pressure, high velocity, reloaded, or other nonstandard ammunition, or any unauthorized repair, modification, misuse, abuse, or alteration of the product is not covered by this warranty.

#### - WARNING -

#### Alterations & Modifications

Altering or modifying parts is dangerous and will void your warranty. Your YHM rifle was designed to function properly with the original parts. It is ultimately your responsibility to make sure any parts you buy are made for this rifle and are installed properly. Your YHM rifle is a complex, precision tool that requires all parts to work correctly with each other in order to assure proper and safe function. Using a rifle put together incorrectly or assembled using incorrect or modified parts can result in a damaged rifle, personal injury, death, or damage to property. Always have a competent gunsmith perform service to your rifle.

#### **WARNING-ALTERATIONS**



#### **DO NOT ALTER FIREARM**

Any Attempt at altering the firearm will void the warranty

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# **NOTES**

# **SERVICE RECORD**

	u have completed reading the manual, take the time to record number of your firearm which can be found on the left side of lower receiver located on the magwell.
 #	
 Always keep  Date:	o detailed records of any service performed on your rifle  Service Performed:
 / /	
 / /	

THE AR-15 IS ONE OF THE MOST VERSATILE AND CUSTOMIAZABLE FIREARM PLATFORMS IN EXISTANCE.

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PHONE: 1-877-892-6533 FAX: 1-413-586-1326 MONDAY-FRIDAY 7:30 A.M.-4:00 P.M. E.S.T.