BROWNELLS®
BRN-180™
Upper Receiver Assembly Manual

BRN-180 UPPER RECEIVER ASSEMBLY MANUAL

Safety & Basic Operation

Before working on any firearm, ensure it is unloaded, the chamber is empty, and the safety is on!

Congratulations on becoming the new owner of a Brownells BRN-180 Upper Receiver Assembly.

This manual covers safety and basic operation of the BRN-180 Upper Receiver Assembly.

More detailed information on disassembly, cleaning, reassembly, maintenance and upgrades can be found in the following ways:

- Call 1-800-741-0015 and ask to speak with a Gun Tech, a free service
- See the Brownells YouTube Channel at https://www.youtube.com/user/brownellsinc
- Visit the "Learn" section of the Brownells website at www.Brownells.com/learn

READ THE INSTRUCTIONS AND WARNINGS IN THIS MANUAL CAREFULLY BEFORE USING THIS FIREARM; DO NOT DISCARD THIS MANUAL.

BASIC GUN SAFETY

When handling your Brownells BRN-180 Upper Receiver Assembly, or any firearm, always follow the basic rules of gun safety.

- Keep the muzzle pointed in a safe direction
- Keep your finger away from the trigger until your sights are on target
- Keep the gun free of ammunition, until you are ready to use the gun

ADDITIONAL RULES FOR SAFE GUN USE

In addition to the above basic rules of gun safety, here are more rules for safely handling and using guns.

- Assume all guns are loaded, and treat them as such
- Know how to safely use the gun before shooting it. If unsure, consult a qualified expert
- Before use, ensure gun is in working condition. If unsure, consult a qualified expert
- Clearly identify your target before firing
- Know what lies beyond your target before firing
- Use proper eye protection when shooting
- Use proper ear protection when shooting
- Use only correct ammunition in your gun. If unsure, consult a qualified expert first
- Never use guns while under the influence of alcohol or drugs
- Always store guns properly to prevent access by unauthorized people
- Firearms should be stored unloaded, in a secure location, separate from their ammunition.

SAFETY INFORMATION

The safety warnings in this manual are important. By understanding the dangers inherent in the use of any firearm, and by taking the precautions described herein, you can enjoy increased safety in the use of your rifle. Failure to heed any of these warnings may result in serious injury to you or others, as well as severe damage to the firearm or other property.

Brownells Inc. shall not be responsible in any manner whatsoever for malfunctioning of the firearm, physical injury or property damage resulting in whole or in part from:

1) Criminal or negligent discharge;

2) Improper or careless handling;

3) Unauthorized modifications;

4) Defective, improper, hand-loaded, or reloaded ammunition;

5) Corrosion;

6) Neglect; or

7) Other influences beyond our direct and immediate control.

This limitation applies regardless of whether liability is asserted on the basis of contract, negligence, or strict liability (including any failure to warn). Under no circumstance shall Brownells, Inc. be liable for incidental or consequential damages, such as loss of use of property, commercial loss, and loss of earnings or profits.

LEAD EXPOSURE

Discharging firearms in poorly ventilated areas, cleaning firearms, or handling ammunition may result in exposure to lead and other substances known to the state of California to cause birth defects, reproductive harm, and other serious physical injury. Maintain adequate ventilation at all times. Wash hands thoroughly after exposure.

SHOOTING OR CLEANING FIREARMS MAY EXPOSE YOU TO LEAD

Never carry the rifle loaded with the safety lever in the "FIRE" position. If dropped or struck with the safety off ("FIRE"), the rifle may fire. Such a discharge can occur with or without the trigger being directly struck or touched. Never rest a loaded rifle against any object (wall, tree, fence, vehicle, etc.) because there is always the possibility that the rifle will be jarred or slide from its position and fall with sufficient force to discharge. Keep the safety lever on "SAFE" unless actually firing.

CALIFORNIA:

WARNING

"Children are attracted to and can operate firearms that can cause severe injuries or death. Prevent child access by always keeping guns locked away and unloaded when not in use. If you keep a loaded firearm where a child obtains and improperly uses it, you may be fined or sent to prison."

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ADVERTENCIA

"A los niños atraen las amas de fuego y las pueden hacer funcionar. Ellos pueden causarse lesions graves y la muerte. Evite que los niños tengan accesso a las armas de fuego guardándolas siepre con llave y descargadas cuando no las esté utilizando. Si usted tiene una arma de fuego cargada en un lugar en que un niño tiene accesso a ella y la usa indebidamente, le pueden dar una multa o enviarlo a la carcel."

CONNECTICUT:

"UNLAWFUL STORAGE OF A LOADED FIREARM MAY RESULT IN IMPRISONMENT OR FINE."

FLORIDA:

"IT IS UNLAWFUL, AND PUNISHABLE BY IMPRISONMENT AND FINE, FOR ANY ADULT TO STORE OR LEAVE A FIREARM IN ANY PLACE WITHIN THE REACH OR EASY ACCESS OF A MINOR UNDER 18 YEARS OF AGE OR TO KNOWINGLY SELL OR OTHERWISE TRANSFER OWNERSHIP OR POSSESSION OF A FIREARM TO A MINOR OR A PERSON OF UNSOUND MIND."

MAINE:

"ENDANGERING THE WELFARE OF A CHILD IS A CRIME. IF YOU LEAVE A FIREARM AND AMMUNITION WITHIN EASY ACCESS OF A CHILD, YOU MAY BE SUBJECT TO FINE, IMPRISONMENT OR BOTH. KEEP FIREARMS AND AMMUNITION SEPARATE.

KEEP FIREARMS AND AMMUNITION LOCKED UP. USE TRIGGER LOCKS."

MARYLAND:

"WARNING: Children can operate firearms which may cause death or serious injury. It is a crime to store or leave a loaded firearm in any location where an individual knew or should have known that an unsupervised minor would gain access to the firearm. Store your firearm responsibly!"

MASSACHUSETTS:

"IT IS UNLAWFUL TO STORE OR KEEP A FIREARM, RIFLE, SHOTGUN OR MACHINE GUN IN ANY PLACE UNLESS THAT WEAPON IS EQUIPPED WITH A TAMPER RESISTANT SAFETY DEVICE OR IS STORED OR KEPT IN A SECURELY LOCKED CONTAINER."

NEW JERSEY:

"IT IS A CRIMINAL OFFENSE TO LEAVE A LOADED FIREARM WITHIN EASY ACCESS OF A MINOR."

NEW YORK CITY, NY:

"THE USE OF A LOCKING DEVICE OR SAFETY LOCK IS ONLY ONE ASPECT OF RESPONSIBLE FIREARMS STORAGE. FOR INCREASED SAFETY, FIREARMS SHOULD BE STORED UNLOADED AND LOCKED IN A LOCATION THAT IS BOTH SEPARATE FROM THEIR AMMUNITION AND INACCESSIBLE TO CHILDREN AND OTHER UNAUTHORIZED PERSONS."

NORTH CAROLINA:

Any person who resides in the same premises as a minor, owns or possesses a firearm, and stores or leaves the firearm (i) in a condition that the firearm can be discharged and (ii) in a manner that the person knew or should have known that an unsupervised minor would be able to gain access to the firearm, is guilty of a Class 1 misdemeanor if a minor gains access to the firearm without the lawful permission of the minor's parents or a person having charge of the minor and the minor:

(1) Possesses it in violation of G.S. 14-269.2(b)

(2) Exhibits it in a public place in a careless, angry, or threatening manner;

(3) Causes personal injury or death with it not in self-defense; or

(4) Uses it in the commission of a crime.

TEXAS:

"IT IS UNLAWFUL TO STORE, TRANSPORT, OR ABANDON AN UNSECURED FIREARM IN A PLACE WHERE CHILDREN ARE LIKELY TO BE AND CAN OBTAIN ACCESS TO THE FIREARM."

WISCONSIN:

"IF YOU LEAVE A LOADED FIREARM WITHIN THE REACH OR EASY ACCESS OF A CHILD YOU MAY BE FINED OR IMPRISONED OR BOTH IF THE CHILD IMPROPERLY DISCHARGES, POSSESSES, OR EXHIBITS THE FIREARM."

Please check with your licensed retailer, state police, or local police for additional warnings, which may be required by local law or regulation. Such regulations change constantly, and local authorities are in the best position to advise you on such legal matters.

BASIC INSTALLATION

This product was designed to function properly in its original condition. Alterations can make it unsafe. Do not alter any part or add or substitute any parts or accessories not manufactured by Brownells or specifically designed to be compatible for this product.

The BRN-180 Upper Receiver Assembly is designed to function on standard, forged AR-15 style lower receivers. Non-standard and some billet AR-15 style lower receivers may not be compatible. If you have questions about compatibility with your lower receiver, please call Brownells at 1-800-741-0015 and ask to speak with a Gun Tech, a free service.

1. Prior to installation on your AR-15, ensure it is unloaded, the chamber is empty, and the safety is on!
2. Remove the existing upper receiver assembly if present by pushing both the pivot and takedown pins to the magazine release side of the lower receiver. Set aside existing upper receiver.
3. The pre-existing recoil buffer and recoil spring can be removed, as they are not necessary for the operation of the BRN-180 Upper Receiver Assembly.
4. Place BRN-180 Upper Receiver Assembly on lower receiver and reinsert pivot and takedown pins toward the bolt catch side of the lower receiver.
5. If there is resistance, do not force the upper receiver in place. Inspect lower receiver to ensure nothing is obstructing. Ensure the BRN-180 Recoil Guide Rod and Buffer is fully forward.
6. Once the BRN-180 Upper Receiver Assembly is attached to the lower receiver, pull the Charging Handle to the rear and ensure the bolt fully travels to the rear. Release the Charging Handle.
    a. HELPFUL TIP: When charging the BRN-180 Upper Receiver Assembly, ensure your hand does not hold the ejection port cover closed, which might obstruct the charging handle's movement.
7. Pull the Charging Handle to the rear again, operate the Bolt Catch and ensure the Bolt Catch properly engages the Bolt. Depress Bolt Catch to allow bolt forward.
8. The BRN-180 Upper Receiver Assembly is now fully installed and functional.

BASIC OPERATION

Prior to firing the BRN-180 Upper Receiver Assembly, ensure proper ammunition is used. Brownells recommends only factory loaded ammunition. The 223 Wylde Chamber accommodates both 5.56x45mm NATO & 223 Remington ammunition.

BROWNELLS, INC. SPECIFICALLY DISCLAIMS RESPONSIBILITY FOR ANY DAMAGE OR INJURY WHATSOEVER OCCURRING IN CONNECTION WITH, OR AS A RESULT OF, THE USE IN ANY BROWNELLS FIREARM OF FAULTY, NON-STANDARD, "REMANUFACTURED" HAND LOADED (RELOADED) AMMUNITION, OR

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CARTRIDGES OTHER THAN THOSE FOR WHICH THE FIREARM WAS ORIGINALLY CHAMBERED.

FIRING WITH SUPPRESSOR

The BRN-180 Upper Receiver ships with a non-marked Piston Cup installed, which is intended for un-suppressed use. If you wish to fire the BRN-180 with a suppressor, Brownells recommends the Piston Cup be swapped with the included Suppressor or "S" Marked Piston Cup. If the "S" Marked Piston Cup is not used, excessive wear may be seen on the BRN-180 moving parts. To install the "S" Marked Piston Cup, please refer to the Disassembly & Reassembly intsructions.

LOADING THE MAGAZINE

- Load magazines only with clean ammunition of the proper caliber
- To load, position the cartridge above the opening at the top of the magazine
- Make sure the bullet points toward the front of the magazine, and align the cartridge between the feed lips at the top of the magazine opening
- Push down until the cartridge snaps into place
- Do not attempt to load more cartridges than the magazine is designed to accept

MAGAZINE INSERTION

Before manipulating the weapon, ensure the safety lever is in the "SAFE" position. Keep muzzle pointed in a safe direction and finger out of the trigger guard.

- Keep the rifle pointed in a safe direction as you insert a magazine
- Grasp a loaded magazine and hold it beneath the magazine well opening on the bottom of the rifle
- Make sure the bullets are pointing forward, in the same direction of the rifle's muzzle
- Insert the magazine and push it until it snaps or clicks into place

MAGAZINE REMOVAL

Before manipulating the weapon, ensure the safety lever is in the "SAFE" position. Keep muzzle pointed in a safe direction and finger out of the trigger guard.

- Push the magazine release button located on the right side of the magazine well. It is located so the "trigger finger" of the right hand can easily reach it
- The magazine should drop free easily
- If the magazine does not drop free, grasp it with the other hand while pushing the magazine release button, and pull it free

Removing cartridges from the magazine does not prevent the rifle from being fired! When there is a cartridge in the chamber and the safety lever is in the "FIRE" position, the cartridge will discharge if the trigger is pulled. It is absolutely essential for the user to know how to completely unload the rifle. "Completely" means emptying the magazine and removing a chambered cartridge. The safety lever should always be in the "SAFE" position when the rifle is being unloaded.

THE RIFLE WILL FIRE EVEN IF THE MAGAZINE IS EMPTY OR REMOVED!

LOAD WITH MAGAZINE INSERTED

Before manipulating the weapon, ensure the safety lever is in the "SAFE" position. Keep muzzle pointed in a safe direction and finger out of the trigger guard.

- Make sure the safety is on and the gun is pointed in a safe direction
- Insert a loaded magazine into the magazine well, as described above
- Grasp the charging handle located on the magazine release side
- Retract the handle all the way to the rear, and let fly forward under spring tension
- Do not attempt to "ease" the charging handle forward.
- Let it go and allow it to snap into place

FIRING

- Aim the rifle at a clearly-identified target with a safe backstop beyond it
- Push the safety selector from "SAFE" to "FIRE"
- Place your finger on the trigger, and press it to the rear
- The gun will fire, eject the empty cartridge case, and load the next round on its own
- The gun will continue to fire one shot per pull of the trigger until you stop pulling the trigger, or the magazine is empty
- With most modern AR-15 magazines, the bolt will lock back to expose an empty chamber after the last round is fired
- Remove empty magazine as described above

UNLOADING WITH CHAMBERED ROUND

If you decide to unload the rifle after chambering a round, be aware that the gun is loaded, and ready to fire.

- Make sure your finger is off the trigger
- Point the rifle in a safe direction and move the safety selector to "SAFE"
- Push the magazine release button and remove the loaded magazine
- Only after the magazine is removed, operate the charging handle as if you are loading the gun to eject the live round from the chamber
- Always remove the loaded magazine BEFORE operating the charging handle

Operating the charging handle first will load another live round into the chamber, leaving the gun loaded when you remove the magazine.

MAINTENANCE

DISASSEMBLY

Before working on any firearm, ensure it is unloaded, the chamber is empty, and the safety is on!

Use proper eye protection when disassembling the BRN-180 Upper Receiver Assembly.

Once you have ensured the firearm is unloaded, the chamber is empty and the safety is on, proceed with these steps:

1. Separate the BRN-180 Upper Receiver Assembly from the lower receiver by pushing the takedown and pivot pins toward the magazine release side of the lower receiver.
2. Pull Recoil Buffer and Guide Rods to the rear, clear of the upper receiver. The Recoil Springs can be removed from the Recoil Guide Rods at this time.
3. Pull the Charging Handle to the rear. At its rear most position, pull the Charging Handle out the Ejection Port Cover side of the receiver.
4. The Bolt Carrier Assembly can now be pulled out the rear of the receiver.
5. Push the Firing Pin Retaining Pin to the Cam Pin side of the Carrier and remove from the Carrier.
6. The Firing Pin and Firing Pin Spring can be removed from the rear of the Carrier.
7. The Cam Pin can now be pulled from the Carrier.
8. The Bolt can be pulled from the front of the Carrier.
9. Locate the U-Latch on the underside of the Handguard. With a cartridge or punch, insert into the recess below the U-Latch and cam it away from the Handguard. The U-Latch can be removed from the Handguard and set aside.
    a. WARNING: THE RECOIL GUIDE RODS MUST BE REMOVED FROM THE UPPER PRIOR TO THIS STEP, AS THEY ENGAGE THE U-LATCH, PREVENTING IT'S REMOVAL
10. The Handguard can now be pulled forward towards the muzzle and removed from the Upper Receiver.

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a. NOTE: The first few times removing the handguard may require more force. Tapping the flash hider from the direction of the muzzle with a dead blow hammer or against a work bench will ease removal of a tight handguard.

11. Pull the Piston Operating Rod, the rearmost segment of the Piston Assembly, towards the Receiver. While holding the Operating Rod to the rear, remove the center Connecting Rod by pulling forward and slightly camming the Connecting Rod to either side.
12. The Piston Cup can be removed by pulling it rearward off the gas block.
13. The Piston Operating Rod can be pulled forward and out of the receiver. The Operating Rod Spring can also be removed at this time.

ASSEMBLY

Use proper eye protection when assembling the BRN-180 Upper Receiver Assembly.

1. Place the Operating Rod Spring on the Piston Operating Rod and insert Piston Operating Rod into the Receiver Trunnion.
2. Place the Piston Cup on the Piston located on the Gas Block
3. Pull the Piston Operating Rod to the rear and insert the Connecting Rod onto the Piston Operating Rod, then the Piston Cup. Ensure the piston assembly freely moves.
4. Slide Handguard over the barrel and seat it flush against the Receiver.
5. Insert the U-Latch into the Handguard. The U-Latch is properly seated when you hear and feel it click into place.
6. Insert the Bolt into the front of the Carrier, ensuring the Extractor is on the opposite side of the Cam Pin cutout.
7. Insert the Cam Pin into the Carrier and Bolt. Ensure the longer sides of the Cam Pin are on the top and bottom.
8. Insert the Firing Pin with Firing Pin Spring into the rear of the Carrier. Ensure the Firing Pin Spring is placed over the Firing Pin prior to installation.
9. While holding the Firing Pin fully forward, insert the Firing Pin Retaining Pin into the Carrier.
10. Insert the Bolt Carrier Assembly into the Rear of the Receiver. Ensure the Cam Pin and Bolt Carrier Guide Protrusion engage the Cam Pin Path on the left hand side of the Receiver.
11. Hold the Bolt Carrier Assembly in place at the rear, so that the Charging Handle Cut in the Carrier aligns with the circular Charging Handle Cutout in the Receiver.
12. Insert the Charging Handle into the Bolt Carrier and slide the Assembly forward.
13. Place Recoil Springs on the Recoil Guide Rods and insert the Recoil Buffer & Guide Rods into the Receiver. Ensure the Guide Rods properly insert through the cutouts in the Carrier.
14. Place the BRN-180 Upper Receiver on the lower receiver and push the pivot and takedown pins toward the bolt catch side of the lower receiver.
15. If there is resistance, do not force the upper receiver in place. Inspect lower receiver to ensure nothing is obstructing. Ensure the BRN-180 Recoil Guide Rod and Buffer is fully forward.
16. The BRN-180 Upper Receiver Assembly is now fully installed and functional.

CLEANING AND LUBRICATION

Before working on any firearm, ensure it is unloaded, the chamber is empty, and the safety is on!

Wear eye protection while cleaning the BRN-180 Upper Receiver Assembly.

1. Follow the disassembly procedure noted above.
2. With the BRN-180 Upper Receiver Assembly disassembled, wipe oil, carbon and debris from all surfaces with a clean cloth.
3. To remove carbon from Gas System parts, apply CLP or similar cleaning oil to part and scrub with a brass brush. Carbon can also be removed by using a scraping tool. Remove oil once carbon is removed from Gas System components.
4. A standard AR-15 bore brush can be used to clean the chamber. Apply oil to chamber brush and rotate several times. Remove fouling with a cloth or Q-Tip from chamber area after using the Chamber Brush. Ensure chamber is free of oil prior to shooting.
5. Bore should be cleaned regularly, Brownells recommends a one-piece cleaning rod. Scrub first with bore brush & cleaning oil or solvent. Follow bore brush with clean patches, replacing the patch with each pass, until patches come out clean. Ensure bore is free of oil prior to shooting.
6. Lightly apply CLP or similar oil to all moving parts. One or two drops on the guide rods, cam pin and bolt body are recommended.

BORE OBSTRUCTIONS

Firing your gun with the bore obstructed can damage or destroy the gun, and cause injury or even death. Dirt, snow, water, extra oil or grease are just a few of the things that can cause bore obstructions.

Before manipulating the weapon, ensure the safety lever is in the "SAFE" position. Keep muzzle pointed in a safe direction and finger out of the trigger guard.

To check for bore obstructions before shooting, use the following steps.

1. Make sure the gun is unloaded. If there is a magazine inserted, remove it. Pull back the charging handle to retract the bolt, and visually inspect the chamber for ammunition.
2. Pull back the charging handle again and visually inspect the chamber a second time to make absolutely sure there is no ammunition in the gun.
3. Let the bolt go forward on the empty chamber.
4. Push out the rear takedown pin, and lift the upper receiver off the lower, as if for cleaning.
5. Pull the charging handle and bolt carrier assembly out of the rear of the upper receiver.
6. Point the muzzle at a light source in a safe direction, and look up the barrel from the rear of the upper receiver. Or, insert a bore light into the muzzle to illuminate the bore while you look into the bore from the rear of the upper receiver.
7. If you see an obstruction, use a cleaning rod or similar tool to attempt push out the obstruction. If the obstruction cannot be removed, consult a gunsmith.
8. If a bullet is in the bore, do not attempt to shoot it out by using another cartridge or by blowing it out with a blank or one from which the bullet has been removed. Such techniques can generate excessive pressure, damage the firearm, and cause serious personal injury.
9. Once you are sure the bore is clear, insert the charging handle and bolt carrier group back into the upper, and then push the upper receiver back down onto the lower. Finally push the takedown pin back into the lower receiver.

Bullet Lodged Inside The Barrel

Another cause of bore obstructions is a bullet lodged inside the barrel.

This may be caused by a "squib round" that does not have enough power to push a bullet completely through the barrel, or even by a cartridge with a loose crimp that leaves the bullet inside the barrel when the unfired cartridge is extracted from the chamber.

If you notice a round that sounds strange or underpowered when you are shooting, or the rifle extracts only an empty cartridge case when you were expecting a loaded round, stop shooting immediately.

Before manipulating the weapon, ensure the safety lever is in the "SAFE" position. Keep muzzle pointed in a safe direction and finger out of the trigger guard.

Follow the steps listed above for checking for a bore obstruction. If there is a bullet lodged inside the barrel of your gun, do not attempt to fire another round, but consult a gunsmith.

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