

# **AR-15 CERTIFICATION CLASS LECTURE PORTION**

Notes for this outline obtained by observing Officer Robert Nobbs conduct this class. Outline and additions typed out by Officer Michael Alberts. Course outline reviewed by Officer Bob Nobbs and Tyler Bigbie for accuracy. (11-6-2018) Approved by Sgt. Sarot (11-7-2018)

## **1- Introduction to Class**

Have instructors confirm no ammo in classroom and have instructors confirm each student's rifles are in fact clear and empty before starting lecture.

## **2- Cover Basic Rifle features:**

Safety/Fire selector lever, Trigger, Bolt catch/release, Magazine catch/release, charging handle and forward assist.

## **3- Have Students Clear and confirm empty.** Allow bolt to go forward on empty chamber then SAFE the weapon.

## **4-Take Down**

- Cover 2 take down pins.
- Pull rear pin first and lift up on the rear portion of the upper receiver.
- Pull charging handle out far enough to remove bolt. Then remove charging handle (This can also be done in step 7 below.)
- Pull front pin and separate the upper and lower receiver.

Note: Advise students to never pull trigger when lower receiver separated from upper receiver. Tell them to leave weapon on SAFE while cleaning. If necessary to allow hammer to go forward, discuss and show how to use hand to slowly release hammer forward.

## **5- Cleaning- Lower Receiver**

Again caution students to not pull trigger and allow the hammer to strike the receiver.

- Use dry rags and Q-tips, do not pour solvent into, or on any parts.
- Wipe out the magazine well.
- Wipe off hammer.
- If debris seen down near the hammer and sear then use a dry Q-tip and gently clean it out.

If rifle gets submerged in water, unload, then spray the entire rifle down with “WD-40” “WD-water dispersing.” Then bring rifle down to the Range Staff for a complete take down and inspection.

Remind students there is nothing in the lower receiver that requires oil. Oil will only attract dirt and unburnt powder which could cause the weapon to malfunction.

Cover removal of the buffer and buffer spring. Separate buffer from buffer spring.

Discuss that it is a good time to replace the buffer spring when it is 1.5 inches shorter than a new spring.

Have students place buffer and buffer spring back together, then put back in buffer tube.

**6- Show students how to remove the stock.** Explain other than extreme circumstances of the rifle being dropped in mud or water, there really isn't a reason to remove the stock.

\*Caution students about not doing their own armorer work. Tell them to bring rifles to Range for any needed work to be done by certified Colt Armorers.

## **7-Upper Receiver**

- Hold upper receiver upside down.
- Pull charging handle partially out.
- Remove bolt carrier/bolt and set aside. (This can also be done in step 4 above.)
- Remove charging handle by pulling to the rear and lifting up and out. At this time, wipe down charging handle with dry towel. Inspect spring and latch, ensure roll pin is in proper place and check for cracks or bends.

Pick up the upper receiver and point out the gas tube. Discuss alignment and importance of not bending this tube. Discuss not using anything to clean around it other than gently using a Q-tip if needed.

Discuss and show how to clean the chamber area with proper chamber brush. Show turning clockwise only to avoid unscrewing the brush.

Discuss using a nylon-coated cleaning rod, and .22 caliber rifle barrel brush to clean the barrel. Discuss using a brush dipped in cleaning solvent to clean the barrel. Advise students to push the brush into the barrel from the chamber area not the front of the barrel. Push the cleaning brush all the way in and through the barrel.

If barrel is excessively dirty you can push a patch with solvent on it through the barrel prior to using the brush.

## **8-Bolt Carrier and Bolt take down**

Discuss the fact that 60,000 lbs. per square inch of pressure goes through the gas key. There is no reason to ever put anything inside the gas key or gas tube to clean it.

Advise students to take apart the bolt on a light surface and suggest using some type of tray to keep track of all the parts.

Demo and show students how to remove firing pin retaining pin. Wipe down and inspect for dings or cracks. Do not spread ends.

Demo and show students how to remove firing pin. Wipe down and inspect for dings and damage.

Remove cam pin. Inspect cam pin hole for cracks. Remove bolt from bolt carrier. It should have 7 locking lugs. Look for cracks and damaged lugs.

Check ejector. Should have positive spring back when pushed in.

Check extractor. Should have no cracks and have positive spring back when pressure applied.

Check the three gas rings (also known as bolt rings) for damage. Discuss there is no need to offset ring gaps.

Show students the quick way to check if gas rings are worn out. Set bolt down on table, then set bolt carrier down on top of bolt. If bolt carrier drops down on to bolt, then rings need replaced. Advise students to bring rifle to Range and Range Staff will swap out gas rings.

*Discuss not using a tool to scrape carbon off of the end of the bolt. If necessary, use plastic brush and solvent then wipe off. The sheer pressures that the bolt neck passes through the bolt carrier will break away any carbon as weapon is fired.*

Demo and discuss removal of the extractor. Black with copper spring is the most current one. Discuss addition of the rubber O-ring for additional reliability.

Demo and discuss the cam pin only going into the bolt with the bolt facing to the right. Point out the smooth circle side vs the circle with the wings on the sides. This prevents the cam pin from going in the wrong way. The extractor should always face the right side.

Put bolt back together. Place bolt in bolt carrier, place cam pin back in, pull forward and turn cam pin so firing pin can be put back in. Show students how to hold the back of the firing pin into bolt until firing pin retaining pin is put back in bolt carrier. Check to make sure firing pin was put back in correctly by gently shaking bolt and bolt carrier up and down.

**9-Discuss proper oiling of the weapon, bolt, bolt carrier and charging handle.** No oil down in the lower receiver, no oil on buffer spring or buffer.

*Discuss not using Frog Lube or Seal 1. Discuss how they start out as a solid, then liquefy when heated then return to a solid once cooled down causing weapons failures.*

## **10-Function Check**

Point muzzle in a safe direction (for classroom purposes muzzle will be pointed up). Again make sure no magazine is in, or near the rifle. Visibly and physically check the chamber area of the rifle to ensure it is unloaded. Watch as the bolt closes on the empty chamber.

1<sup>st</sup>- place selector lever on SAFE and attempt to pull trigger. Trigger should not drop hammer.

2<sup>nd</sup>-Charge the rifle then place selector lever in a FIRE position and pull trigger, the hammer should drop.

3<sup>rd</sup>-Charge the rifle pull the trigger and hold trigger to the rear. Charge rifle again, then slowly release the trigger until you hear the sear reset. Pull the trigger again and the hammer should drop again.

## **11-Safe weapons handling.**

Discuss muzzle discipline. Do not allow your muzzle to cross anything you do not intend to shoot. This includes not allowing your muzzle to sweep any portion of your own body.

Discuss the fact that the safety lever is always in the “SAFE” position and it is not to be placed in the “FIRE” position until actively shooting a threat.

Stress that while the weapon is on SAFE their thumb should be resting on top of the safety. This provides two safe actions for the officer. One, you are always ready to switch the weapon to a FIRE position in the event of an immediate threat. Two, this allows you to move with the weapon more safely. By controlling the safety at all times with your thumb it will prevent an accidental discharge in the event the trigger gets caught on a piece of equipment, or a foreign object like a tree branch.

## **12- Discuss and demo “Ready Position” and “High Port.”**

## **13- Again, discuss the approved weapons parts list and not doing their own armorer work.**

Magazines-30 Round magazines only, Either Magpul or GI Aluminum mags made by “Center Industries” or “O-Kays.”

Encourage them to have a duty set of magazines and a training set. Advise them to use Sharpie pen to mark their magazines with at least their ID numbers.

While loading, advise officers to inspect each round to ensure they are in fact loading duty ammo, NOT training ammo.

**CAUTION** them about not shooting reloaded ammunition or steel cased ammunition. Remind them to shoot ONLY quality factory ammunition.

#### **14-Cover Patrol Ready.**

**At this time have instructors pass out the “Rifle loading and unloading Procedures/Patrol Ready” handouts to students.** Stress having no ammo or magazines in their hand while making the rifle Patrol Ready. Remind students that after making their rifle “patrol ready” they should open optic covers, turn optic on, close dust cover then place in gun rack.

#### **15-Cover how to zero red dot and back up sights.**

**16-Cover Controlling the Safety selector and Stress the Safety is **NOT** to be placed in a FIRE position until the officer has made a conscious decision to fire on a suspect/threat.**

*Course materials to hand out to students:*

- AR-15 rifle parts illustration and list handout, source Colt Safety and Instruction Manual.
- Sight picture illustration handout.
- Have a bullseye target to demo how to make sight adjustments with the red dot system and back up sights. Students will receive a copy of bullseye target for reference.
- Loading and Unloading Procedures/Patrol Ready handout.

**In Class hands on drills:**

Using 8 tan “range” magazines, load each magazine with one orange tipped “Dummy” round. These magazines are to be inspected by a minimum of 2 Range Instructors.

- Have officers line up at end of the classroom and walk them through patrol ready. Stress muzzle discipline and safe weapons handling. Run them through the drill as many times as you deem necessary for your particular group of officers.
- Have your officers load and safe the weapon.
- Talk them through the proper unloading procedures.
- Remind them after unloading they are to Patrol Ready the rifle once it is safe and appropriate to.



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