

RULES OF CONDUCT FOR POLICE ARMOURERS

1. Never allow a gun to leave your control until you are sure certain that it is adjusted to the Manufacturer's specifications.
2. Ensure that all repairs are performed only by qualified armourers/gunsmiths.
3. Maintain accurate records of all repairs.
4. Perform all work carefully, accurately, and conscientiously. Work as though YOUR life depends upon your efforts.
5. Test fire all weapons after repair.

FOUR RULES OF FIREARMS SAFETY

1. Never allow your muzzle to cover anything you are not willing to destroy — Laser Rule.
2. Keep your finger off the trigger until ready to fire.
3. Be aware of your target, backstop, and beyond.
4. Treat every weapon as if it were loaded.

!! WARNING !!

BEWARE OF LEAD CONTAMINATION.

BEWARE OF LEAD POISONING

LEAD IS A TOXIC COMPONENT OF SMALL ARMS AMMUNITION. IT IS CONTAINED IN PROJECTILES AND PRIMING COMPOUNDS.

When firearms are discharged, lead is deposited upon those firearms. This lead can be transferred to your hands when you handle the firearm, and can be ingested into your body. It is also discharged into the atmosphere when firearms are discharged and can be ingested into the lungs.

Lead is a heavy metallic element known to accumulate in the human body. It is very difficult to eliminate from the body and is very toxic.

Its effects can be extremely severe and debilitating to the point of fatality. Firearms should only be discharged in open or well-ventilated areas. Wash your hands thoroughly and frequently when handling firearms. It is especially important to wash before eating.



REMINGTON 870

REMINGTON 870



ARMORERS COURSE – AR15 RIFLE

COLT ARMORER'S NOTES AR-15 TYPE RIFLES

Types of operating systems:

- 1) Blowback
- 2) Recoil
- 3) Gas
 - a) Impingement—heavy but clean (semi-auto shotguns)
 - b) Direct—light but dirty (AR-15 type)

Bolt Configurations

- 1) Open bolt—cocked bolt, bolt stays back and chamber stays open
- 2) Closed bolt—cocked bolt, bolt stays closed and is independent of the operating systems

AR-15 Bolt Test

- 1) Using the bolt and carrier only, insert the bolt in the carrier and hold the bolt by the locking lugs with the carrier hanging down, carrier should not fall off
- 2) Do not insert the bolt back in the weapon without the firing pin (I.E. for training purposes), this will bind the weapon

Cycle of operation

- 1) Feeding
- 2) Chambering
- 3) Locking
- 4) Firing –Counter Recoil
- 5) Unlocking
- 6) Extracting
- 7) Ejecting
- 8) Cocking –Recoil

Cyclic rate of fire--M-16's –700 to 1000 rounds per minute for a short period of time, 100 to 150 rounds full auto in a short period of time can cause "cook offs"

Sustained rate of fire—12 to 15 rounds per minute indefinitely (heat dissipation)

Bolt—turns 22 ½' to lock to the barrel, has 7 locking lugs in an eight lug pattern (8th lug is the extractor)

Charging handle pulls on the bolt carrier—the only way to unlock the bolt is to move the carrier to the rear; the only way to move the carrier to the rear is to fire the weapon causing gas to push the carrier to the rear or to pull on the charging handle

Gas System Components

- 1) Barrel
- 2) Front sight base
- 3) Gas tube
- 4) Key, bolt carrier
- 5) Bolt Carrier
- 6) Bolt
- 7) Gas rings (3)

Gas Port Dimensions

- 1) 20" Rifle --.092"
- 2) 16" Carbine --.062"
- 3) 14" M4 --.062"
- 4) 11" Commando --.074"

A2 sights—peeps at different planes (different zeros)

The purpose of the independent counter weights in the buffer is to ensure the bolt group remains in battery when fired

9mm SMG has a fixed ejector in the lower receiver

Hammer spring—holds in the trigger pin

J spring—holds in the hammer pin

Sear spring—holds in the sear pin

Buffer retainer—held in by the buffer tube

To convert a full to semi-auto—Install semi-auto selector, semi-auto disconnecter, and spring

If a semi-auto fires full auto or fires when it should reset, check the disconnecter, disconnecter spring, trigger, and hammer

Malfunctions

- 1) Induced—Ammo, Mags, maintenance
- 2) Parts related—incorrect, broken, poor quality

Most Common Malfunctions

- 1) Failure to Extract
 - a) spent casing present in ejection port area
 - b) weak or no extractor spring
 - c) extractor spring buffers—blue (rifle), black (M4)
 - d) the shorter the barrel, the more important the extractor becomes

- 2) Failure to Feed
 - a) Magazine (9 times out of 10), bolt override (2 dents on top cartridges)
 - b) 20 and 30 round magazine parts do not interchange
 - c) Good magazine companies: O-Kay, Adventure, Parsons, Center, La Belle, FN (Mil Spec)
 - d) Bad magazine companies: Sanchez, Cooper (Mil Spec)
 - e) Very Bad magazine companies: USA, Thermold, Orlite, Ramline (not Mil Spec)
- 3) Failure to Cycle
 - a) Ammo
 - b) Test—put one round in magazine, load and fire, if bolt locks back, then it is not a gas problem
 - c) If gas, check the rings then change the gas tube
 - 1) Ring check—hold the bolt and let the carrier hang, the bolt should hold tight (done with firing pin, cam, and retainer pin removed).
- 4) Weapon fires multiple shots on semi-auto
 - a) Cause—disconnecter, disconnecter spring, trigger, and/or hammer

Malfunction Clearing—S.P.O.R.T.S. (military)

- S—Slap the magazine to jar the rounds loose in the chamber (not to seat the magazine)
- P—Pull back the charging handle
- O—Observe inside the chamber, shake rounds out
- R—Release the charging handle
- T—Tap or push on the forward assist
- S—Squeeze the trigger

Forward Assist—Designed primarily due to use in water environment in stealth environment. Need to pull bolt to rear just slightly to release the vacuum holding the water in the barrel. Then ease the bolt forward slightly and use the forward assist to seat and lock the bolt.



Armorer's Course – 1911 Pistol



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GLOCK PISTOL MAINTENANCE

Like all mechanical devices, the Glock semiautomatic pistol must be properly maintained to ensure reliable functioning. The following service information is taken from the Glock service manual and should help you develop a regularly scheduled maintenance program.

Frequency of Servicing

Glock recommends that the pistol be field stripped, cleaned and lubricated as follows:

1. At least once a month.
2. After each time it has been fired.
3. As required (determined by the pistol's exposure to adverse elements).

Field Stripping

1. UNLOAD - The pistol **MUST BE UNLOADED** prior to field stripping
(The weapon should be pointed in a safe direction **AT ALL TIMES**)

- A. With your finger off the trigger, remove the magazine.
- B. Lock the slide to the rear.
- C. Visually and physically inspect the chamber to verify that the weapon is empty.
- D. Visually and physically inspect the chamber a second time to verify that the weapon is empty.

2. SLIDE REMOVAL

- A. Release the slide, allowing it to go forward, closing the action.
- B. Point the weapon in a safe direction and pull the trigger. (A bullet resistant vest, a loading/unloading tube or barrel, a bullet impact area, etc. should be used).
- C. Hold the pistol in either hand and pull the slide back approximately 1/10".
- D. Pull down and hold the slide lock, then push the slide forward until it separates from the receiver. (The slide lock is the two serrated buttons on either side of the frame just forward and above the trigger guard)
- E. Remove the recoil spring and spring tube.
- F. Lift the barrel from the slide.

Further disassembly is not allowed unless performed by a Glock armorer.

3. REASSEMBLY

- A. Reassembling the Glock is done by reversing the disassembly procedure.
- B. Insert the barrel into the slide.



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- C. Insert the recoil spring and spring tube into the slide.
- D. Replace the slide assembly onto the lower receiver assembly lining up the rails.
- E. Cycle the action several times to assure it is moving freely.
- F. Complete a function check.

FUNCTION CHECK

- A. Verify weapon is safe and empty
- B. Point in a safe direction, cycle the action and press and hold the trigger to the rear.
- C. Cycle the action.
- D. Release the trigger forward verifying the trigger resets.
- E. Press the trigger to the rear.

Cleaning the Field Stripped Pistol

(CAUTION: DO NOT USE EXCESSIVE AMOUNTS OF CLEANING SOLVENT)

- A. Barrel - Use a bore brush and a quality solvent to clean the barrel and chamber. Clean the barrel from the chamber end only. Once cleaned, wipe completely dry.
- B. Slide - CAUTION: When cleaning the slide, extractor claw and the breech, the muzzle end should be pointed DOWN so as to prevent debris and solvent from entering the FIRING PIN CHANNEL. The slide rail cuts should be cleaned thoroughly. All other exposed areas of the slide should be checked for cleanliness.
- C. Frame and Receiver - Check the frame/receiver for cleanliness. Exposed parts should be wiped with a soft, clean cloth that has been slightly dampened with a quality cleaning solvent. Wipe completely dry.

ONCE CLEANED, THE PISTOL WILL NEED TO BE LUBRICATED PRIOR TO REASSEMBLING.

Lubrication

1. The most important lubrication point is where the rear end of the trigger bar touches the connector at the right rear corner of the receiver. ONE drop on any quality gun oil is all that is required.
2. One drop of gun oil should be spread along the entire length of each slide rail cut (both sides of the slide).
3. Using a clean patch that is SLIGHTLY dampened with gun oil, wipe the outside of the barrel, the inside top of the slide forward of the ejection port and the opening that the barrel slides through in front of the slide.



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Glock pistols are designed to operate properly with only small amounts of lubrication. PLEASE DO NOT OVER-LUBRICATE AND DO NOT PUT LUBE INSIDE THE FIRING PIN CHANNEL. Over lubrication will only collect dirt and cause malfunctions.

If you have any questions regarding the operation or maintenance of your Department issued Glock pistol, please contact any member of the Firearms Training Unit or the Training Manager directly.



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SIG SAUER PISTOL MAINTENANCE

Like all mechanical devices, the Sig Sauer semiautomatic pistol must be properly maintained to ensure reliable functioning. The following service information is taken from the Sig Sauer Pistol Owners manual and should help you develop a regularly scheduled maintenance program.

IMPORTANT: Always use the decocking lever to decock your Sig Sauer pistol. This is the only way to safely lower the hammer from the cocked position and prevent a negligent discharge. Never lower the hammer by pulling the trigger and attempting to ease the hammer forward manually.

Frequency of Servicing

It is recommended that the pistol be field stripped, cleaned and lubricated as follows:

1. At least once a month.
2. After each time it has been fired.
3. As required (determined by the pistol's exposure to adverse elements).

Field Stripping

1. **UNLOAD** - The pistol **MUST BE UNLOADED** prior to field stripping
(The weapon should be pointed in a safe direction **AT ALL TIMES**)

- A. With your finger off the trigger, remove the magazine.
- B. Lock the slide to the rear.
- C. Visually and physically inspect the chamber to verify that the weapon is empty.
- D. Visually and physically inspect the chamber a second time to verify that the weapon is empty.

2. SLIDE REMOVAL

- A. With the slide locked to the rear, turn the take-down lever to a vertical (6 o'clock) position.
- B. Pull back the slide slightly to disengage the slide catch lever. Hold the slide firmly and allow it to glide forward gently. Now slip the complete assembly, comprising the slide, barrel, recoil spring and guide, forward and off the frame.
- C. Remove the recoil spring and guide, taking care to control the release of spring tension while pointing the assembly away from your body and in a safe direction.
- D. Remove the barrel from the slide.

Further disassembly is not allowed unless performed by a Sig Sauer armorer.



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3. REASSEMBLY

- A. Reassembling the Sig is done by reversing the disassembly procedure.
- B. Insert the barrel into the slide; fit the recoil spring and guide into place.
- C. If the recoil spring and guide were separated during cleaning, ensure that the narrower end of the spring is slipped over the guide first.
- D. During spring compression, point the assembly away from your body. Slip the assembled slide system onto the frame until it contacts the end stop, and hold it in place with the slide catch lever
- E. Push up the take-down lever.
- F. Release the slide and complete a function check.

FUNCTION CHECK

- A. Verify weapon is safe and empty
- B. Point in a safe direction, press and hold the trigger to the rear verifying the hammer cocks and falls (Double Action).
- C. Cycle the slide, verifying that the hammer is in the rearward position.
- D. Release the trigger forward verifying the trigger resets.
- E. Press the trigger to the rear, verifying the hammer falls (Single Action)
- F. Cycle the slide then utilize the decocking lever to drop the hammer.

Cleaning the Field Stripped Sig Sauer Pistol

(CAUTION: DO NOT USE EXCESSIVE AMOUNTS OF CLEANING SOLVENT)

- A. Barrel and Chamber—Clean the barrel and chamber from the rear with a quality cleaning solvent, using a cleaning rod and brush of the correct caliber. Never clean the barrel from the muzzle end. Wipe the interior and exterior of the barrel free of all residue. Lightly lubricate the barrel, inside and out, with a quality lubricant designed for firearms.
- B. Breech face and locking insert—Use a small nylon bristle to thoroughly clean these areas.
- C. External metal surfaces—After each use, wipe all metal surfaces with a cloth lightly soaked with a lubricant preservative. This will remove any foreign material and preserve the finish of the pistol. Lightly lubricate the recoil spring, recoils spring guide and frame rails before reassembling the pistol. **DO NOT POUR LUBE DIRECTLY INTO THE FIRING PIN CHANNEL.**

If you have any questions regarding the operation or maintenance of your Department issued Sig Sauer pistol, please contact any member of the Firearms Training Unit or the Training Manager directly.



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REMINGTON 870 SHOTGUN MAINTENANCE

Like all mechanical devices, the Remington 870 Shotgun must be properly maintained to ensure reliable functioning. The following service information is taken from the 'Cleaning Procedures for the Remington Model 870 Police' and should help you develop a regularly scheduled maintenance program.

IMPORTANT: Always use the slide release lever to decock or unload your Remington Shotgun. This is a proven safe way to disengage/unload the cocked/loaded weapon and prevent a negligent discharge.

FREQUENCY OF SERVICING

It is recommended that the Shotgun be field stripped, cleaned and lubricated as follows:

- At least once a month.
- After each time it has been fired.
- As required (determined by the Shotgun's exposure to adverse elements).

1. UNLOADING/SAFETY VERIFICATION

- UNLOAD - The Shotgun **MUST BE UNLOADED** prior to field stripping
- (The weapon should be pointed in a safe direction **AT ALL TIMES**)
- Make sure the safety is on...No **RED** showing!
- Depress slide release to lower slide
- If the Shotgun is loaded, a round will be introduced into the receiver, physically remove this round
- Push up the loading ramp and depress the left side shell latch to remove remaining rounds
- Visually and physically inspect the chamber to verify that the weapon is empty.
- Visually and physically inspect the chamber a second time to verify that the weapon is empty.

2. 5-POINT SAFETY CHECK

- The 5-point safety check is the only function type check that can be performed on the shotgun. This 5-point safety check will determine the functionality and safety of the shotgun.



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- With an unloaded shotgun;
 1. Check #1, Inspect barrel for obstructions,
 2. Check #2, Inspect barrel lugs for cracks and rounding edges
 3. Check #3, Check spring tension on ejector, located on bolt face
 4. Check #4, With safety **ON**, depress trigger, make sure trigger does not go off
 5. Check #5, Take safety off, put finger over firing pin hole in bolt face, depress trigger. You should feel firing pin hitting your finger
- If you find any problems while performing this shotgun function check, please notify a Range Master.

3. DISASSEMBLY

- Unscrew magazine cap, partially open (pull forward) the forearm to relieve interference and remove barrel.
- With action open and safety on (forearm pulled all the way to the rear) gently tap out trigger pins that hold trigger assembly into the receiver. Use small taps or screwdriver for this procedure. Slide the trigger assembly out of receiver.
- Locate and depress left shell latch and slide fore end, action bars, slide and breech bolt assembly out of receiver.

Further disassembly is not allowed unless performed by a Remington armorer.

4. CLEANING

- Use a cleaning rod or a Bore Snake to clean barrel. Clean the barrel and chamber from the rear with a quality cleaning solvent, using a cleaning rod and brush of the correct caliber. Never clean the barrel from the muzzle end. Lightly lubricate the barrel, inside and out, with a quality lubricant designed for firearms.
- Use Solvent on a patch or the Bore Snake. When barrel is clean, run a patch soaked in a quality oil/lubricant preservative through the barrel. Place a drop of oil on the magazine cap detent bearing and manipulate oil into bearing.
- The trigger assembly can usually be brushed off with a small brush, blown clean with air or cleaned with Q-tips. A light coat of oil should be put on the metal parts and a drop of oil on the hinged/moving parts.
- The action bars, slide and breech bolt can be cleaned with solvent and a brush if needed, and then put a light coat of oil on them.
- All metal parts of the Shotgun should be wiped down with a good quality lubricant preservative to prevent rust. Do not pour lube directly into the firing pin channel.

5. REASSEMBLY

- Place slide in correct position on action bars, place bolt on slide, reinstall forearm over magazine tub. Move action bars gently into the receiver until contact is made with the



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right shell latch. Depress the right shell latch while gently pushing rearward on forearm until contact is made with left shell latch. Depress left shell latch until action bars engage back into their locking position.

- Close the action, (forearm forward)
- Insert trigger assembly into the receiver, CARRIER FIRST. Adjust and align holes in receiver and trigger assembly then tap trigger pins back into position.
- Open action half-way and re-insert barrel, screw cap onto magazine cap.
- FUNCTION CHECK
 1. Verify weapon is unloaded
 2. Close the action on an empty chamber
 3. With safety on press the trigger (hammer should not fall)
 4. Take the safety off – press and hold the trigger (hammer should fall)
 5. While holding trigger to the rear, cycle the action
 6. Press the trigger again (hammer should fall)

If you have any questions regarding the operation or maintenance of your Department issued Remington 870 Shotgun, please contact any member of the Firearms Training Unit or the Range Sergeant directly at 760-644-1097.