



WRK Recoil Kit User Guide

GLOCK 17/22



Revision 2.0

MILO Range Training Systems

Introduction

The purpose of the Glock 17/22 recoil kit is to quickly convert a live pistol into an effective training weapon that is both realistic and safe. No live ammunition can be loaded into, or fired from, the weapon when the recoil kit is installed.

When the weapon is fired with the recoil kit installed, an infrared (non-visible) laser at the front of the barrel is fired, allowing interaction with the MILO Range simulator.

ALL FIREARMS SAFETY RULES AND GUIDELINES SHOULD BE FOLLOWED AT ALL TIMES!



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Parts & Components of the Weapon & Kit

There are several parts of the original weapon needed, in addition to the recoil kit components, in order for proper operation.



The following original weapon components are used:

- Slide
- Receiver (and all sub components)
- Guide Rod & Spring: some recoil kit models may include an alternate/optional guide rod & spring

The following recoil kit components are provided as part of the recoil kit:

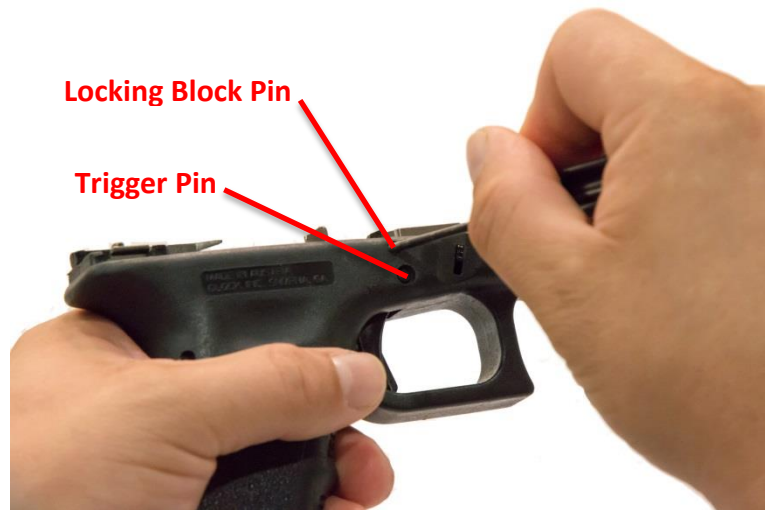
- Recoil Barrel: Takes the place of the weapon's original barrel.
- Recoil Magazine (2): Takes the place of the weapon's original magazine.
- Recoil Piston & Housing: Reacts to firing pin to release CO2 and moves to cause slide to cycle.
- Transfer Tube: Connects CO2 from tail piece to barrel.
- Recoil Locking Block: Replaces factory locking block and allows CO2 to pass into the recoil barrel.
- Recoil Laser: Installed at the front of the recoil barrel to provide indication of shots fired on an MILO Range simulator. Note the laser is infrared and is not normally visible. The laser is eye safe, but should never be pointed or fired at another person.
 - Glock 17 requires a #56 Recoil Laser
 - Glock 22 requires a #59 Recoil Laser
- Spare Parts & Tools:
 - Magazine top port gasket (2)
 - Magazine piercing nozzle gasket
 - Laser installation wrench (1/2" or 13mm)
 - Barrel Oil & Magazine Grease

Recoil Kit Installation

- 1) Remove the original magazine from the weapon and ensure that then weapon is clear and safe.
- 2) Remove the slide from the receiver following the normal Glock handgun disassembly method.
- 3) Remove the original weapon barrel from the slide.

NOTE: Before proceeding, ensure that the weapon is properly cleaned to avoid live ammunition residue and excess weapon oil from entering the recoil kit components and causing degraded performance.

- 4) Remove the locking block pin, the locking block pin must be the first pin reinstalled during reassembly.
- 5) Next remove the trigger pin
 - Using the punch, remove the pin, this pin does not come out as easily as the others
 - To facilitate trigger pin removal, move the slide stop lever forwards or backwards while applying pressure on the trigger pin. In order to get the trigger pin out, you must move the slide stop lever out of the trigger pin groove.
 - IT IS NOT NECESSARY TO USE EXCESSIVE FORCE TO REMOVE THIS PIN!
 - When the slide stop lever is moved forwards and backwards, it can be "unhooked" from the trigger pin groove and the pin may be removed from the right side of the receiver.



6) Remove the Slide Stop Lever

- When the trigger and locking block pins are removed the slide stop lever will simply lift out



7) Remove the factory locking block

- Lay the shaft of the punch across the left or right side of the magazine well with the tip under the locking block. Apply downward pressure on the punch handle, the tip will pry the back end of the locking block.
- DO NOT SUPPORT THE PUNCH ON THE VERTICAL EXTENSION OF THE TRIGGER BAR
- Use your fingers to remove the locking block



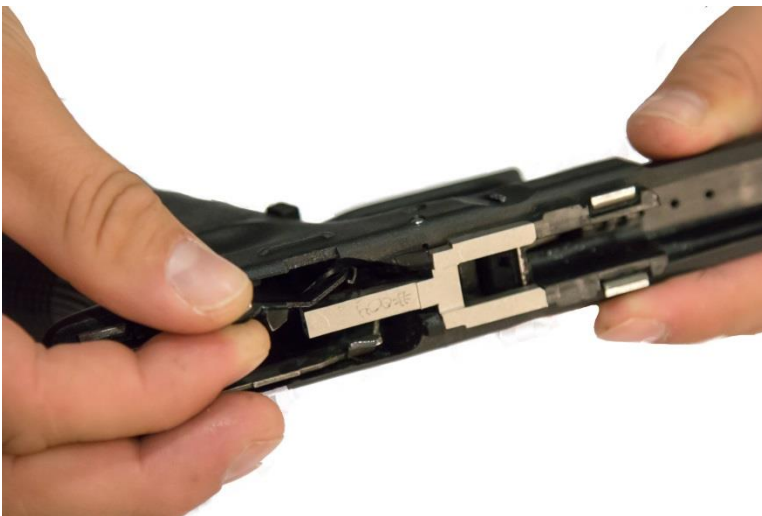
- 8) Install the supplied recoil locking block



- 9) Install the locking block pin from the right side of the frame, this must be the first pin installed

- 10) Now install the slide stop lever

- Insert the slide stop lever with the spring up and towards the front. Hold the lever horizontally and slide it into the recess just left of the trigger bar. The locking block pin must be in position before the slide stop lever is installed. If not, you will not have proper tension on the lever and this may lead to the slide locking back prematurely when firing



11) Replace the trigger pin

- While holding the slide stop lever in position, insert the trigger pin from the right. When centered, the left groove on this pin will help keep the slide stop lever in its proper position.



12) Install metal tube to the recoil barrel CO2 inlet. If this is the first time the kit is being assembled, place a small amount of the magazine grease on each of the O-rings on the tube, to help them insert more smoothly.



13) Install the recoil barrel to the slide and secure it with the guide rod and spring.



14) Install the slide to the lower receiver.



15) To install the CO2 cartridge to the magazine, place the smaller diameter portion of the cartridge into the magazine first and align it with the piercing nozzle at the top of the magazine. Then, firmly tighten the thumb screw at the bottom of the magazine to secure the CO2 cartridge in place and pierce it for use.



16) Insert the magazine into the receiver and ensure that it is seated firmly in place.

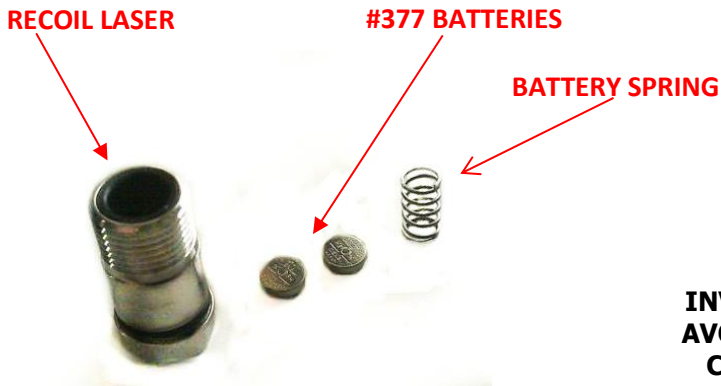


17) If charging of the slide is required for this weapon, do so.

18) Test fire the recoil weapon.

Recoil Laser Information

An infrared (IR) laser module is provided with each recoil kit. The IR laser emits a pulse of light each time the weapon is fired. The pulse is not visible to the human eye, but is detected by the MILO Range simulator.

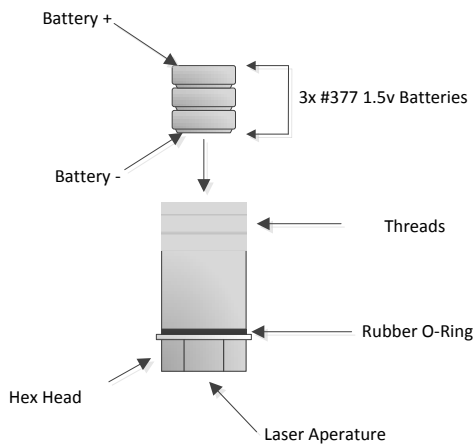


**INVISIBLE LASER RADIATION
AVOID DIRECT EYE EXPOSURE
CLASS 3R LASER PRODUCT**

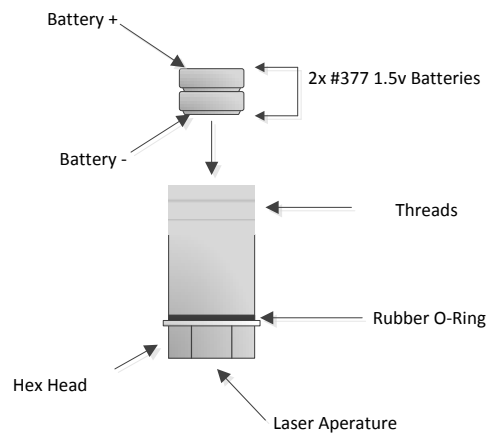
Laser Batteries

There are two models of recoil lasers; one model requires 2 batteries and the other requires 3 batteries. Both models use #377 batteries. Batteries must be installed with negative (-) side facing into the laser.

GEN1 thru GEN4 – Requires 3x #377 Battery



GEN5 – Requires 2x #377 Battery



Laser Installation & Removal

Battery Spring

For proper functioning, the laser requires that a battery spring be installed in the barrel. This spring completes the battery circuit, in order to energize the laser. Before installing a laser, and after removing a laser, check the recoil barrel to ensure that the battery spring is present and positioned correctly in the barrel. Typically this spring is installed at the factory for you, but in some cases you may need to install it. Note that the battery spring should be fully seated in a recessed area of the barrel and therefore should stay in place when the barrel is pointed at the ground. If not, press the spring into the recess using a flat tool such as a pen cap.



Laser Installation

- 1) Verify that the recoil kit is installed in the weapon.
- 2) Verify the battery spring is in place in the recoil barrel according to the pictures above.
- 3) Verify that you have the proper quantity of batteries (either 2 or 3) properly installed in the laser.
- 4) Remove the magazine from the recoil weapon and fire the weapon once to ensure the recoil barrel is not charged.
- 5) Hold the recoil weapon pointing at the ground.
- 6) Insert the laser into the barrel, battery end first.
- 7) While continuing to hold the recoil weapon pointed at the ground, so that the batteries do not fall out of the laser, screw the laser into the barrel using clockwise motion.
- 8) Once the laser is tightened by hand, use the wrench (1/2" or 13mm) with light torque to tighten the laser until it is completely mated to the barrel. **DO NOT OVERTIGHTEN THE LASER!**

Laser Removal

- 1) Remove the magazine from the recoil weapon and fire the weapon once to ensure the recoil barrel is not charged.
- 2) Aim the recoil weapon at the ground to prevent batteries from falling out during removal.
- 3) Unscrew the laser from the barrel using the supplied wrench (1/2" or 13mm) turning in a counter-clockwise motion.
- 4) Ensure that the battery recoil spring did not come out. If it did, place it back in the recoil barrel and use a screw driver or other tool to press it firmly into position.

Maintenance

As needed, you should perform the following maintenance on the recoil kit:

Lubrication of weapon

If your weapon normally requires lubrication on slide rails or elsewhere, be sure to apply it.

Lubrication of recoil barrel

Place a single drop of oil on the underside of the recoil barrel



Lubrication of magazine port:

Place a small amount of grease in the top port of the magazine



Troubleshooting



Air leak on top port of magazine when not in weapon

An air leak from the top port of a magazine that is not installed in a recoil weapon is an indication that the magazine itself has a loose coupler or a worn gasket. Tighten the coupler with the provided tool and if the leak persists, follow the repair guide for magazine gasket replacement. If the magazine continues to leak afterwards, contact Customer Service.



Air leak at top of CO2 cartridge in magazine when not in weapon

An air leak from the top of the CO2 cartridge is an indication that the gasket around the piercing nozzle of the magazine is worn or missing. Follow the repair guide for piercing nozzle gasket replacement. If the magazine continues to leak afterwards, contact Customer Service.

Air leak in gun when magazine is installed in weapon

Depending upon the model of the weapon, there are several places that can leak due to worn O-rings or post-production tolerances being exceeded. In many cases, it is difficult to tell where the leak may be coming from, so the following list is provided in the order of most-likely. If you are unsure of where the leak is coming from, follow this list in order to resolve the leak.



Leak from barrel-to-tail piece tube (white plastic tube models): The small white tube that passes CO2 from the tail piece to the barrel can wear over time and/or become damaged during installation/removal. When this occurs, the CO2 can escape through a tear or hole in the white tube. Simply replace this tube according to the repair guide.



Leak from barrel-to-tail piece unit tube (metal tube with O-rings): The small metal tube that passes CO2 from the tail piece to the barrel has several small O-rings on it which can wear over time and/or become damaged during installation/removal. When this occurs, the CO2 can escape around the side of the tube. Simply replace this tube according to the repair guide.

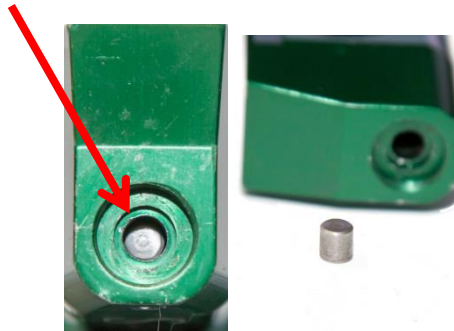
Repair Guide

Magazine CO2 Port Gasket

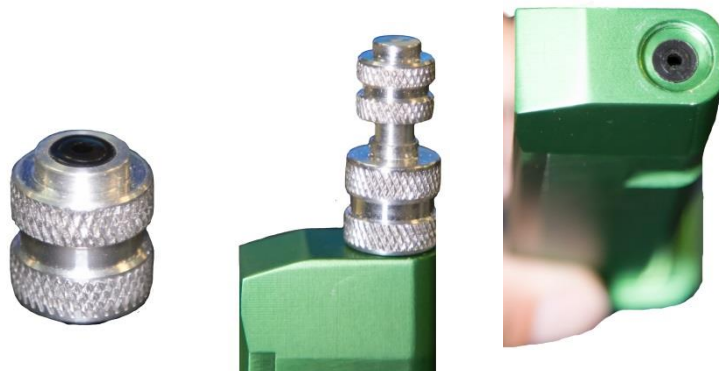
- 1) Remove any CO2 cartridge in the magazine.
- 2) Hold the magazine and remove the coupler from the top of the magazine using the provided tool.



- 3) Pull the black gasket out of the magazine and discard it. Do not lose the poppet valve.
- 4) Verify that the poppet valve is still in the magazine.



- 5) Place a new gasket into the supplied jig, insert the wider end of the jig into the top port of the magazine, then take the plunger tool and press the gasket firmly in place. Make sure that it is seated fully in the recessed area.



- Secure the coupler back onto the magazine. The plunger, shown below, should insert into the seal easily, if there is resistance, then the seal is being pinched and this will cause a leak. **DO NOT OVERTIGHTEN THE COUPLER, DOING SO WILL CAUSE THE MAGAZINE TO LEAK AND YOU WILL HAVE TO REPEAT THE PROCESS**



- 6) Grease the opening at the top of the magazine.



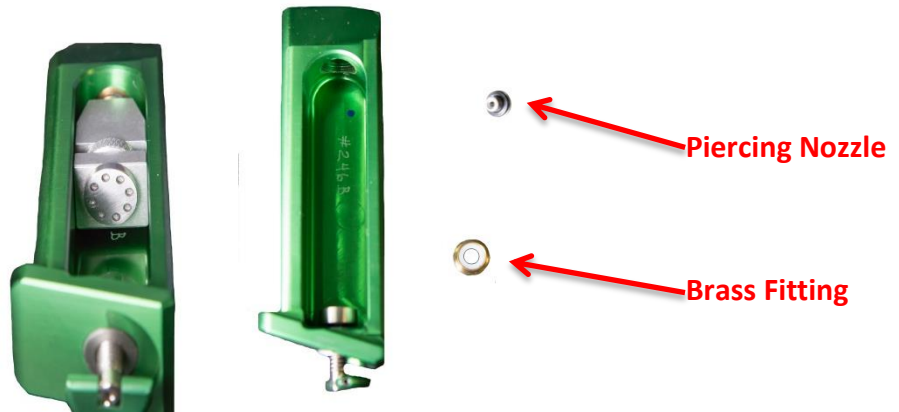
Transfer Tube O-Rings

White Plastic Tube Models: Simply replace this tube using one of the spare tubes provided with the recoil kit. Note that for installation, the tube should be placed in the barrel first. The tail piece should mate to the barrel which has the tube already installed in it.

Metal Tube w/ O-Ring Models: Simply replace the small O-rings on the metal tube using the spare O-rings provided with the recoil kit. Place a small amount of the magazine grease on each of the O-rings on the tube, to help them insert more smoothly. Note that for installation, the metal tube (with O-rings installed) should be placed in the barrel first. The tail piece unit should mate to the barrel which has the tube already installed in it.

Magazine Piercing Nozzle Gasket

- 1) Remove any CO2 cartridge in the magazine.
- 2) Use the piercing nozzle removal tool with the recoil kit wrench that is supplied in the recoil armorer's kit. Align the "ears" of the nozzle removal tool with the brass fitting, once lined up, use the armorers wrench to turn the nozzle tool. The brass fitting will spin out. If needed there is a black o-ring on the back of the piercing nozzle itself, simply pull old one off with your fingers, and replace.



- 3) Place a new gasket on the back of the piercing nozzle and ensure that it is fully seated.



- 4) Place the piercing nozzle in first, then the brass fitting. Ensure the brass fitting is straight while screwing it back in place. Use the piercing nozzle removal tool to accomplish this.



Recoil Kit Plunger and Firing Pin

- 1) Field strip the firearm and remove the recoil barrel.



- 2) To remove the plunger from the recoil kit, you will have to remove the two retaining springs shown below.



- 3) Pull the plunger, firing piston, and plunger out.



- 4) Replace the broken or damaged firing piston.



- 5) Reinsert the plunger, firing piston, and collar, secure with the two retaining clips into the recoil barrel



- 6) Place the barrel into the slide of the firearm, replace the guide rod.



- 7) Reassemble the pistol and test

