



## IES WRK Recoil Kit User Guide

# HK MP5



Revision 1.0

**IES Interactive Training**

## Introduction

The purpose of the HK MP5 recoil kit is to quickly convert a live rifle 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 clamped to the front of the barrel is fired, allowing interaction with the IES simulator.

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

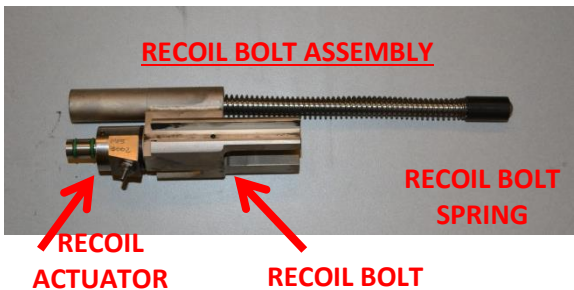
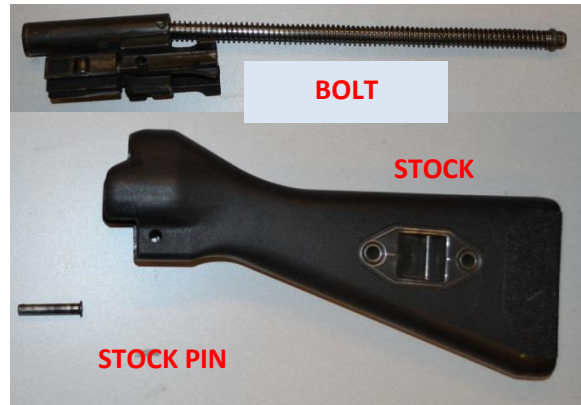


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## Parts & Components of the Weapon & Kit

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



RECOIL  
MAGAZINE



BARREL MOUNT  
CLAMP

The following original weapon components are used:

- Frame, trigger group and stock.

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

- Recoil Actuator: Mounts in the breach of the barrel and rests in the front of the bolt.
- Recoil Bolt Assembly:
  - Recoil Bolt: Takes the place of the weapons' original bolt and spring.
  - Recoil Actuator: Mounts in breach of barrel and rests in the front of recoil bolt.
- Recoil Magazine (2): Takes the place of the weapon's original magazine.
- Barrel Mount Clamp: Attaches the laser to the forward end of the outside of the barrel.
- Laser: Installed using the barrel mount clamp. Mount on the outside of the front of the barrel. Note the laser is infrared and eye safe, but should never be pointed or fired at another person.
- Spare Parts & Tools:
  - Magazine top port gasket (2)
  - Magazine piercing nozzle gasket
  - Recoil Actuator recoil pad
  - Wrench, Bolt 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 stock following the normal MP5 disassembly method.

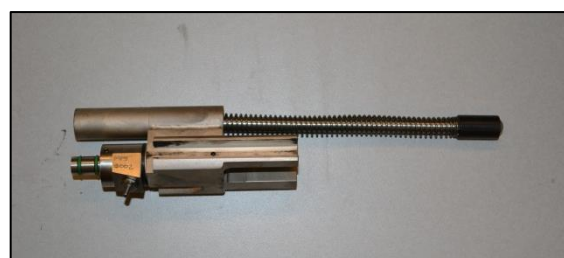


- 3) Remove the original weapon bolt assembly from the upper receiver.

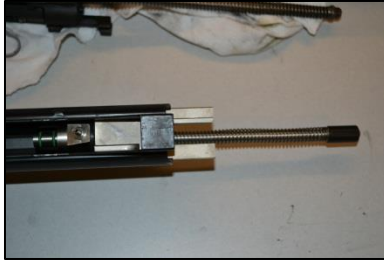
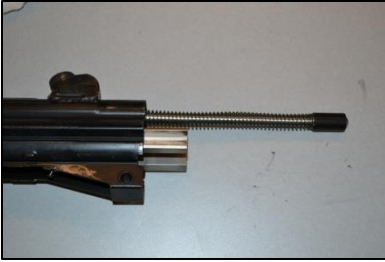


**NOTE:** Before proceeding, ensure that the weapon is properly cleaned to avoid live ammunition residue and excess weapon oil from entering the recoil kit components and causing degraded performance.

- 4) Place the Recoil Actuator in the Recoil Bolt as shown below.



- 5) Install the recoil bolt assembly as shown in the pictures below.
  - a. Note that the small nipple on the recoil actuator must point into the magazine well once in place
  - b. We have removed the trigger group in order to provide pictures. However, you do NOT need to remove the trigger group for installation. You need only hold/swing the trigger group away from the weapon frame in order to get the recoil bolt assembly past the trigger group. Once the recoil bolt assembly is in place, the trigger group can be allowed to rest normally.



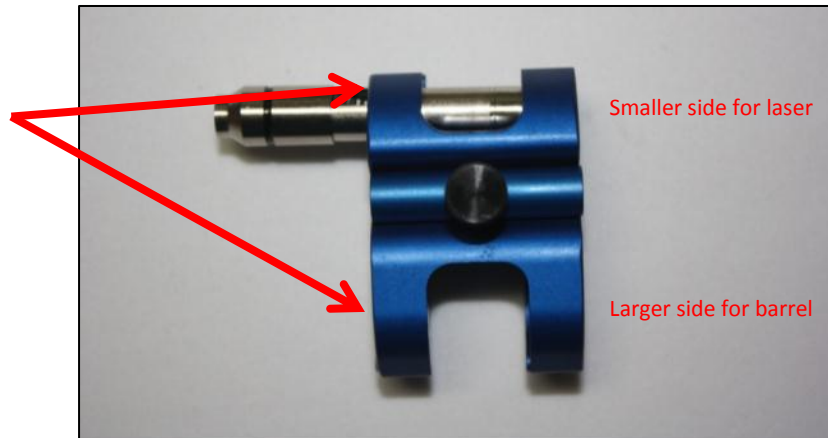
- 6) The recoil actuator must be fully inserted to the barrel and the nipple must be facing down as shown below. You can use the supplied wrench or the bolt and spring to insert the actuator fully.



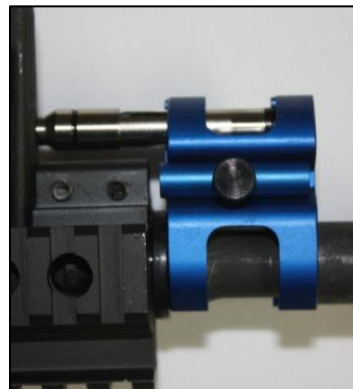
- 7) Reattach the weapon stock.



- 8) To install the laser to the weapon barrel you must attach it using the supplied barrel mount clamp. There is a clearly visible size difference on opposite ends of barrel mount clamp. Make sure that the laser is installed on the side with the smaller opening, and that the clamp is attached to the rifle barrel using the larger opening.



- 9) The image below shows how the barrel mount clamp should look installed on the barrel with the laser also installed. Note that it is recommended to mount it as shown, with the laser butted against the front sight post.



- 10) 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.



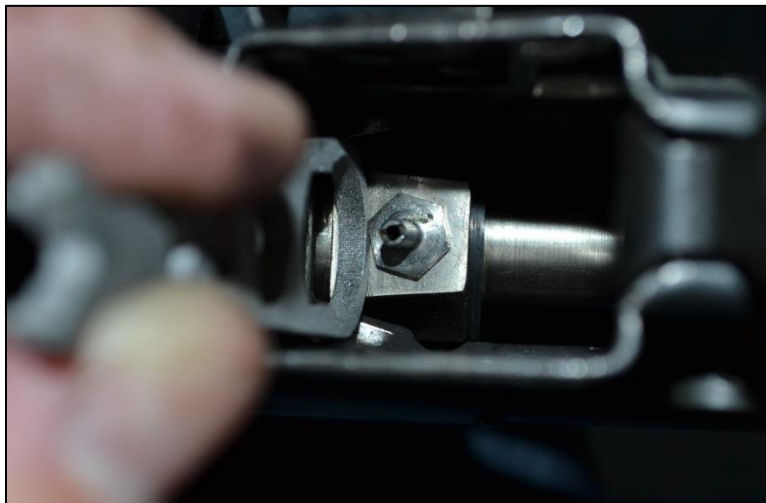
11) If charging of the slide is required for this weapon, do so. Test fire the recoil weapon.



### Recoil Kit Removal

To remove the recoil kit, take out the magazine and fire the weapon once to ensure the recoil bolt is not charged. Note that some recoil kits may require you to release the magazine and manually pull on the magazine to release it.

- 1) Remove the barrel mount clamp with laser by unscrewing the tension screw.
- 2) Remove the weapon stock.
- 3) Swing the trigger group away from the frame and tilt the weapon frame so the recoil bolt and spring slide out.
- 4) Using the supplied wrench against the hex of the base of the recoil actuator nipple, gently pry the recoil actuator out of the barrel and tile the weapon to allow the actuator to fall out of the frame.



## Laser Information

An infrared (IR) laser insert 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. The laser pulse is detected by the IES simulator and is used to indicate the shot location.

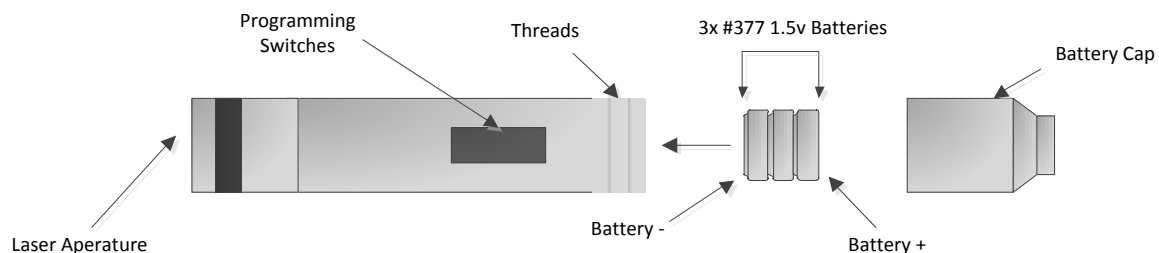
Recoil Rifles use standard IES Laser Insert.



**NOTE:** If you are setting up a laser for use with a recoil rifle for the first time, or need to change the ID of the laser, please see the IES Laser Programming Guide for proper dip switch settings.

## Laser Batteries

To power the laser, 3x #377 batteries are used. A set of batteries should last 100,000 shots or 6 months, whichever occurs first. The batteries should be installed with the negative (-) side facing into the laser.



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



## Maintenance

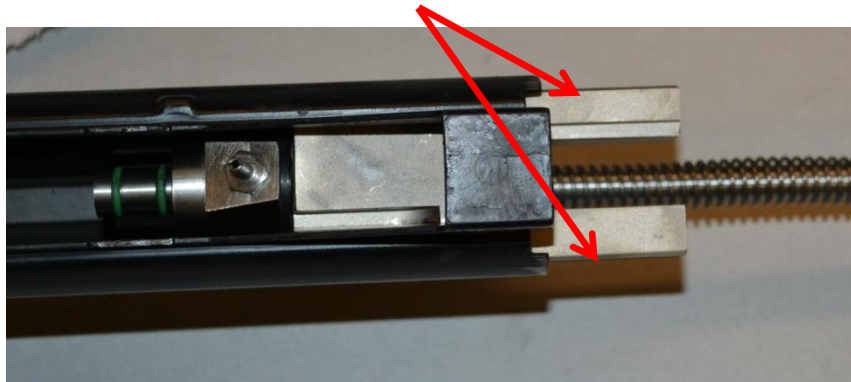
Every 500 shots, or as needed, you should perform the following maintenance on the recoil kit:

### Lubrication of weapon

If your weapon normally requires lubrication, be sure to apply it.

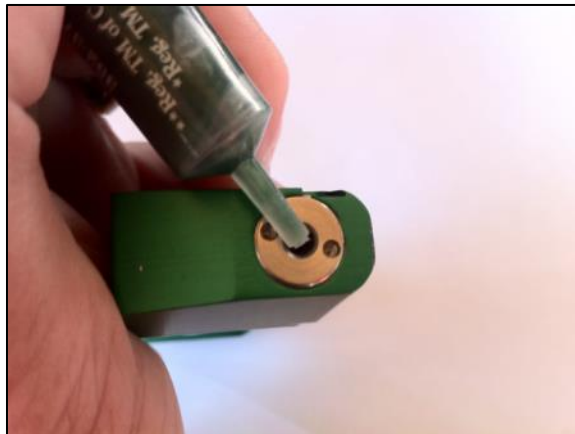
### Lubrication of recoil barrel

Place a few drops of oil on the SIDES (not bottom) of the recoil bolt assembly.

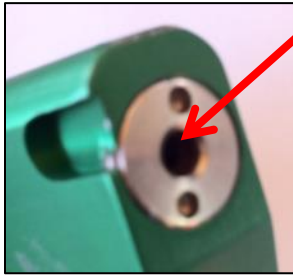


### Lubrication of magazine port:

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 IES 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 IES Customer Service.

### Weapon cycles multiple times from a single trigger pull

Depending upon the frequency of use of the weapon, the recoil pad on the recoil actuator can become worn, allowing the firing pin located in the recoil bolt to repeatedly actuate the recoil cycle of the kit. To resolve this, replace the recoil pad on the recoil actuator.



## 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 ball bearing.



- 4) Verify that the ball bearing is still in the magazine.



- 5) Place a new gasket into the magazine and secure it firmly in place using the provided gasket installation tool. Make sure that it is seated fully in the recessed area.

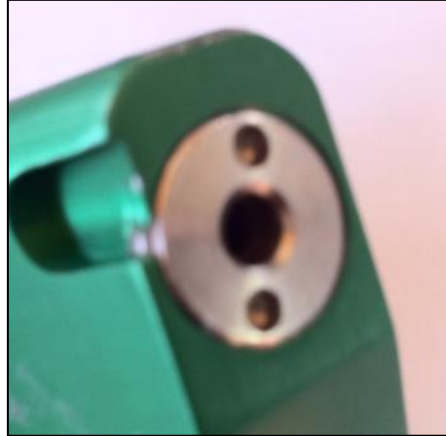


**CORRECT**



**WRONG**

- 6) Secure the coupler back onto the magazine.



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



#### Magazine Piercing Nozzle Gasket

- 1) Remove any CO2 cartridge in the magazine.
- 2) Hold the magazine upside down and pry out the piercing nozzle gasket.
- 3) Place a new gasket on the piercing nozzle and ensure that it is fully seated.

