

# Armorer's Course – Glock Pistol

---



## Contents

I.	Introduction .....	3
	A. General .....	3
	B. Technical Specifications .....	4
II.	Components .....	5
	A. General .....	5
	B. Slide .....	5
	C. Frame .....	6
	D. Magazine .....	6
III.	Handling .....	7
	A. Unloading .....	7
IV.	Cycle of Operation .....	8
V.	General Disassembly and Assembly .....	9
	A. Disassembly Procedure .....	9
	B. Assembly Procedure .....	10
VI.	Functions .....	12
	A. Locking .....	12
	B. Unlocking .....	12
	C. Safeties .....	13
	D. Trigger .....	14
VII.	Care and Cleaning .....	16
	A. General .....	16
	B. Procedure .....	17
VIII.	Inspections .....	20
	A. General .....	20
	B. Function Check (Mechanical) .....	20
	C. Parts Inspection .....	21
	D. Static Inspection .....	22
IX.	Disassembly and Assembly of the Frame .....	26
	A. Disassembly Steps for the Frame .....	26
	B. Assembly Steps for the Frame .....	28
X.	Disassembly and Assembly of the Slide .....	33

A.	Disassembly of the Slide.....	33
B.	Assembly of the Slide.....	36
XI.	Disassembly and Assembly of the Magazine.....	39
A.	Disassembly of the Magazine (Old-Style).....	40
B.	Assembly of the Magazine (Old-Style).....	40
C.	Disassembly of the Magazine (New-Style).....	41
D.	Assembly of the Magazine (New-Style).....	42
XII.	Troubleshooting.....	43
A.	General.....	43
B.	Stoppages, Possible Causes, and Their Remedy.....	43
XIII.	Tools Required for Armorers.....	46
A.	Tools Required for Disassembly and Assembly.....	46
B.	Tools Required for Armorer Work.....	46
XIV.	Miscellaneous.....	47
A.	Glock Connectors.....	47
B.	Glock Extractors.....	48
C.	Glock Upgrade Parts.....	49
D.	Glock Recoil Springs.....	50
E.	Glock Slide Rails.....	51

## **I. Introduction**

### **A. General**

Glock pistols were the first handguns to have successfully combined polymer and steel in the manufacture of a pistol frame. The expert incorporation of polymer and steel provides a platform that is reliable, easy to maintain, rugged, and lightweight. Add to this polymer and steel frame a steel slide and barrel and you have minimized weight without compromising strength. The grip frame is angled for a more ergonomic hold. The trigger guard is squared for a comfortable two-hand hold. All metal parts are treated in a process that hardens them to enhance durability and to resist corrosion. This surface hardening technique leaves a tough skin on the steel yet allows the underlying steel to remain pliable enough to resist cracking.

In addition to revolutionary manufacturing techniques, all Glock pistols have a “Safe Action”® System that has three automatic independently operating mechanical safeties. All three safeties disengage sequentially as the trigger is pulled and automatically reengage when the trigger is released. There are no external levers needing manipulation to make the pistol ready to fire or safe. All safeties on the Glock operate off trigger movement. The first safety is automatically deactivated when the shooter starts to press the trigger. This safety prevents the trigger from moving rearward inadvertently. A second safety, an active firing pin block, prevents the firing pin from contacting the primer until the trigger is pressed further rearward. A third safety, the drop safety, is only disengaged when the trigger is pressed fully to the rear. The three safeties automatically reengage when the trigger is released. Upon subsequent presses of the trigger, the mechanism works the same, giving the user a consistent trigger press.

This manual contains maintenance and technical information for Glock armorers. The knowledgeable use of the material within this manual provides the armorer with the information necessary to maintain Glock pistols in a condition that exceeds the requirements concerning reliability and ease of maintenance by today’s law enforcement agencies or military.

## B. Technical Specifications

Action	Locked breech, short recoil	
Trigger	Safe Action® Trigger System	
Caliber	.380 Auto, 9mm, .357 SIG, .40 S&W, 10mm Auto, .45 GAP, .45 Auto	
Length of Slide	Varies between 6.41" on the subcompact models to 8.74" on the G34	
Barrel Length	Varies between 3.42" on subcompact models to 5.31" on the G34	
Height (including magazine)	Varies between 4.17" on subcompact models to 5.43" on the G34	
Width	Varies between 1.18" to 1.27" depending on the model	
Sight Radius	Varies between 5.39" on subcompact models to 7.55" on the G34	
Barrel Rifling	Right hand twist; 1:10 (9.84) with a hexagonal or octagonal profile	
Magazine Capacity	From six to 33 rounds depending on the model	
Weight (with empty magazine)	Varies between 13.76 oz. for the G42 to 30.71 oz. for the G20	
Trigger Pull Weight	5.5 lbs. standard; 4.5 lbs. in some Competition models	
Number of Safeties	Three	
Current Models	.380 Auto	G25 (LE only), G28 (LE only), and G42
	9mm	G17, G18 (full auto), G19, G26, G34
	.357 SIG	G31, G32, G33
	.40 S&W	G22, G23, G27, G35
	10mm	G20, G29
	.45 GAP	G37, G38, G39
	.45 Auto	G21, G30, G36, G41

## II. Components

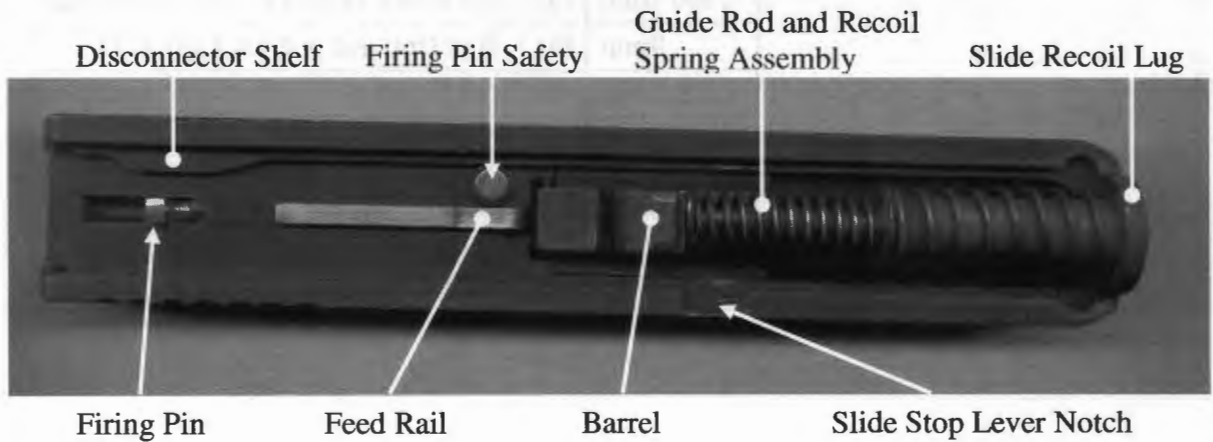
### A. General



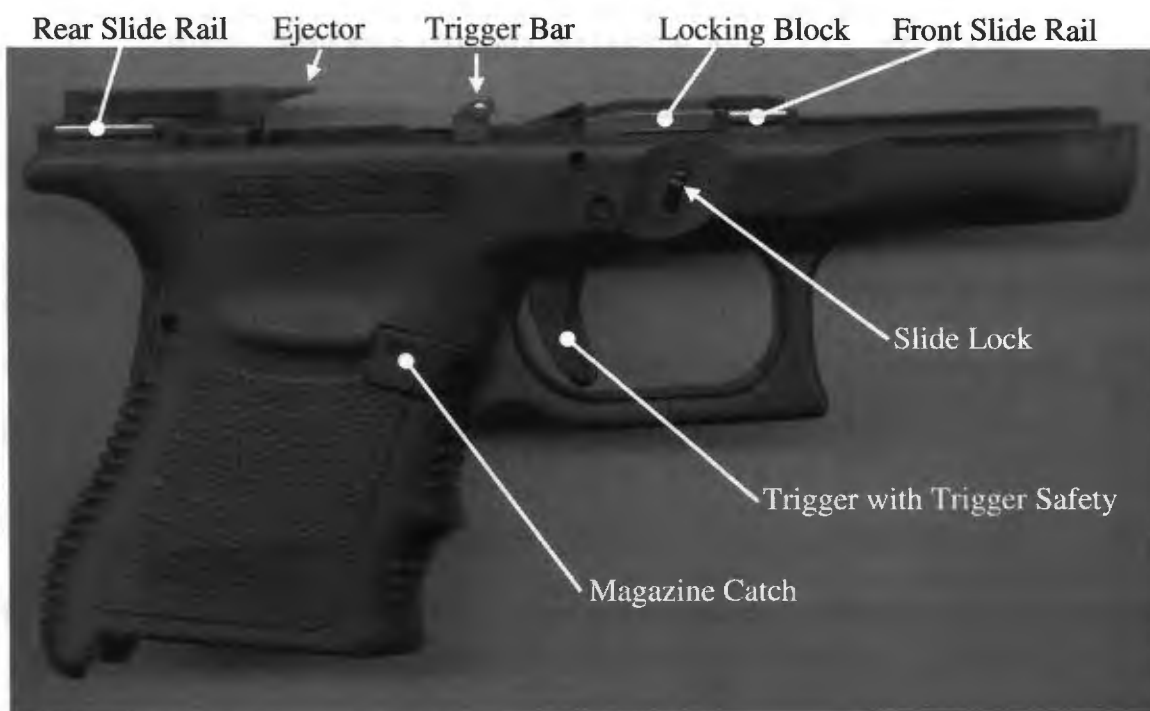
Three main components of the Glock pistol:

- 1. Slide
- 2. Frame
- 3. Magazine

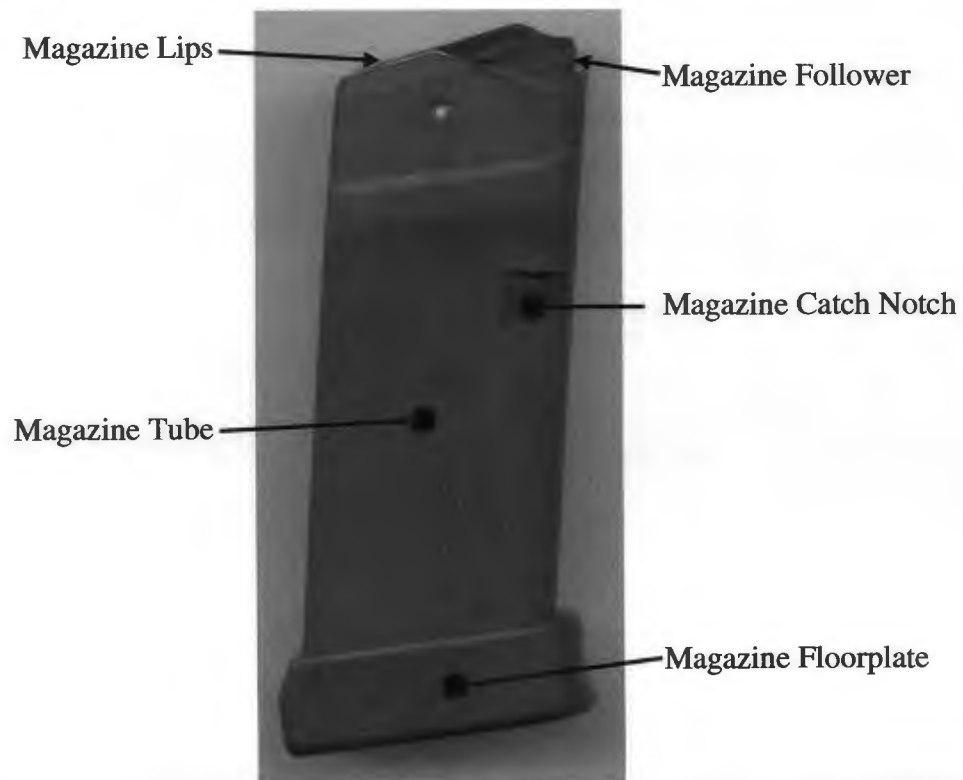
### B. Slide



### C. Frame



### D. Magazine



### III. Handling

**WARNING: BEFORE WORKING ON OR CLEANING YOUR WEAPON, ENSURE IT IS UNLOADED!**

#### A. Unloading

1. Point the weapon in a safe direction (which should be at something that will stop a round)
2. Keep your trigger finger straight and off the trigger
3. Place your support hand underneath the frame with your thumb and four fingers on each side of the slide. At no time should any part of your hand be in front of the muzzle!
4. Drift your trigger finger away from the frame and pull the slide back with the support hand just enough to see the chamber and NO BRASS
5. Seat the slide
6. Check the magazine well to make sure it is empty and that no magazine is inserted
  - a. Place your support hand underneath the magazine well and use the tip of your firing side thumb to press the magazine release button
  - b. If nothing is ejected from the magazine well, run a finger up into the magazine well to ensure it is empty



## IV. Cycle of Operation

In order to understand the sequence of events that occur when firing, you must be familiar with the cycle of operation.

Feeding: Placing the round in the path of the slide

Chambering: Moving the round from the magazine to the chamber

Locking: The precise mating between the barrel lugs and the slide lugs

Firing: Firing pin strikes the primer which ignites the propellant

Unlocking: Unlocking the slide from the barrel

Disconnecting: Disengaging sear from pressed trigger

Extracting: Pulling either a spent case or live round from the chamber

Ejecting: Pushing a case or a live round around the extractor and out of the ejection port

Cocking: Returning firing mechanism to the cocked position

Reconnecting: Reestablish the trigger to sear relationship

## V. General Disassembly and Assembly

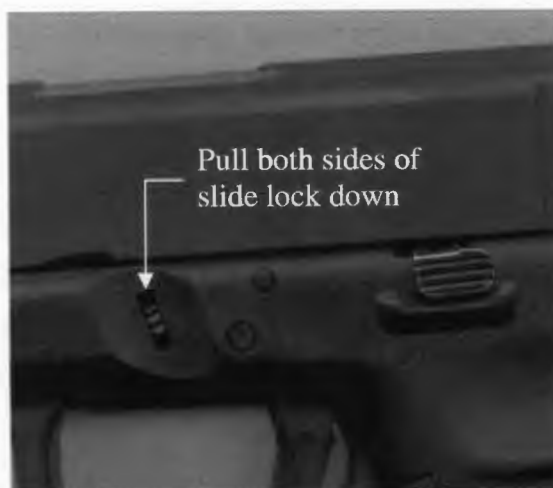
**WARNING: BEFORE WORKING ON OR CLEANING YOUR WEAPON, ENSURE IT IS UNLOADED!**

### A. Disassembly Procedure

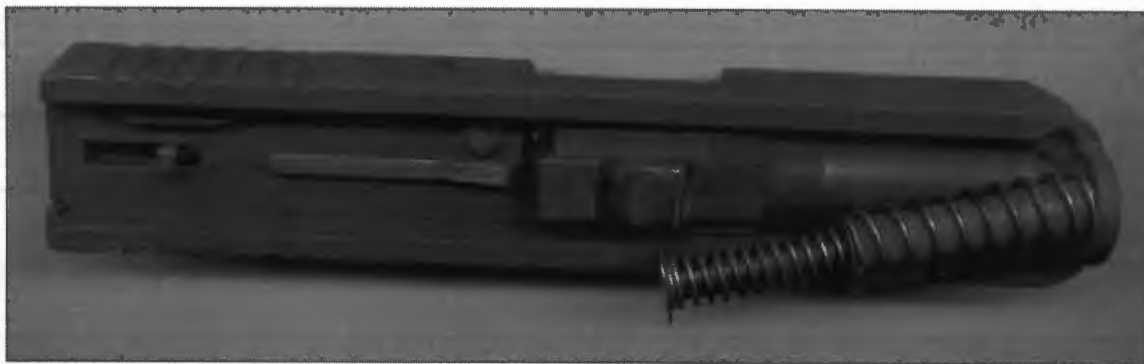
1. Check again to ensure the chamber and magazine well are empty and the weapon is UNLOADED
2. Point the pistol in a safe direction and press the trigger
3. Pull the slide rearward 1/10"



4. Pull down the slide lock and hold both sides down



5. Push slide assembly forward off of the frame
6. Remove recoil spring and guide rod assembly by grasping the end of the guide rod and pulling it away from the barrel lug, gradually releasing the remaining spring tension



7. Remove the barrel by gripping the barrel lug and lifting it up and away from the slide



## **B. Assembly Procedure**

1. Hold slide upside down and insert barrel muzzle end first; ensure barrel is seated into the slide
2. Install the recoil spring and guide rod assembly

**Note:** Check to make sure the guide rod assembly is inserted in the correct direction

3. Install slide to frame and pull the slide fully to the rear and release
4. Perform a mechanical function check – See Section VI-B Function Check

Notes:

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

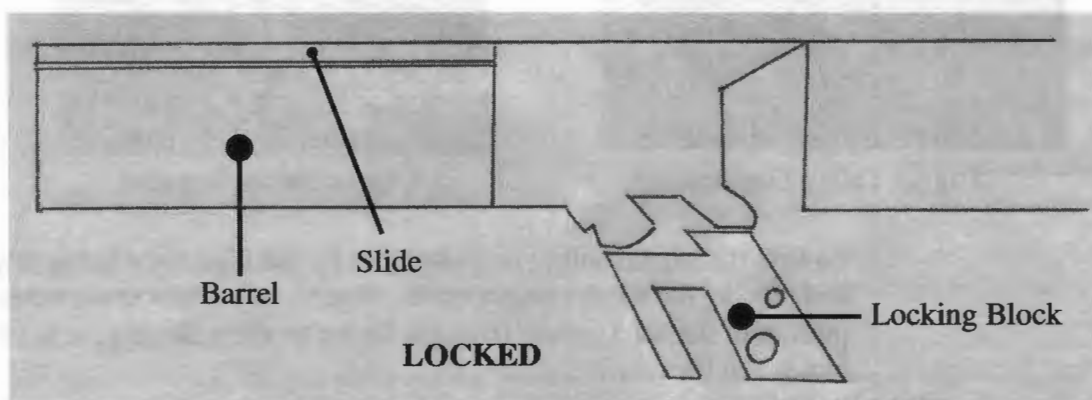
---

---

## VI. Functions

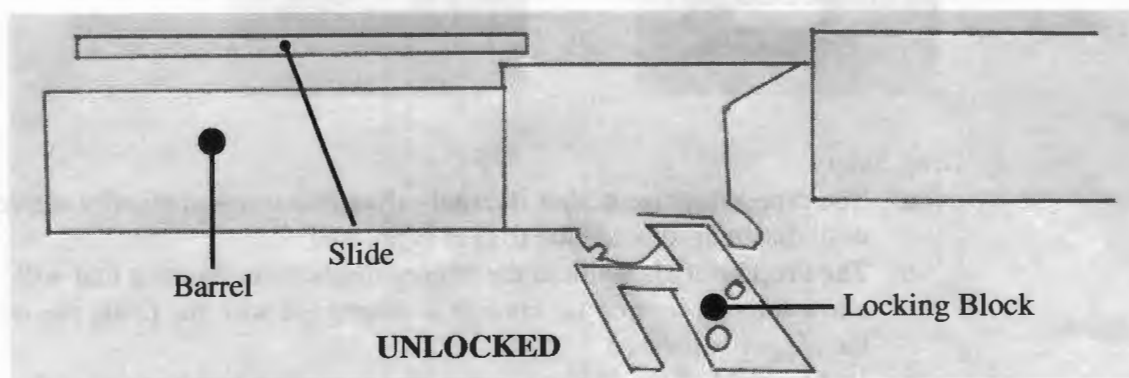
### A. Locking

Lockup is achieved by the decompression of the recoil spring assembly, which pushes the slide forward away from the frame. The barrel is pushed forward by the slide. With the barrel pushed forward, it contacts a camming surface on the upper side of the locking block which cams the rear of the barrel up, engaging the barrel's upper lug with the slide lug. The barrel is arrested from further forward movement by the slide lock contacting the front of the larger lower lug on the barrel.



### B. Unlocking

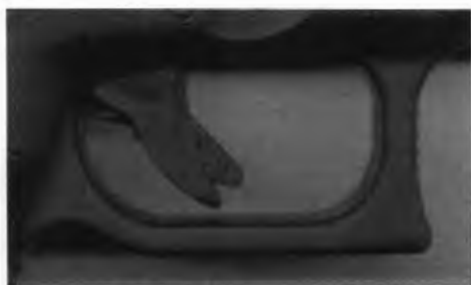
Unlocking occurs when the round is ignited. The expanding gases push rearward against the cartridge case, which in turn pushes the slide rearward. Because the barrel is locked to the slide, they move rearward as a unit. The barrel and slide remain locked for about 1/8" rearward travel. At this time, the projectile has exited the barrel and pressures have dropped to a safe level. A camming surface on the locking block engages a like surface on the barrel's lower lug and cams the barrel down and out of engagement with the slide. The barrel's rearward travel is arrested by the locking block at this time. The pistol is now out of battery.



## C. Safeties

### 1. Trigger Safety

- The trigger safety is a spring loaded lever that is part of the trigger
- At rest, the upper portion of the trigger safety is pivoted rearward and lowers to engage a surface on the frame, blocking the trigger's rearward movement.



Trigger Safety Engaged



Trigger Safety Engaged

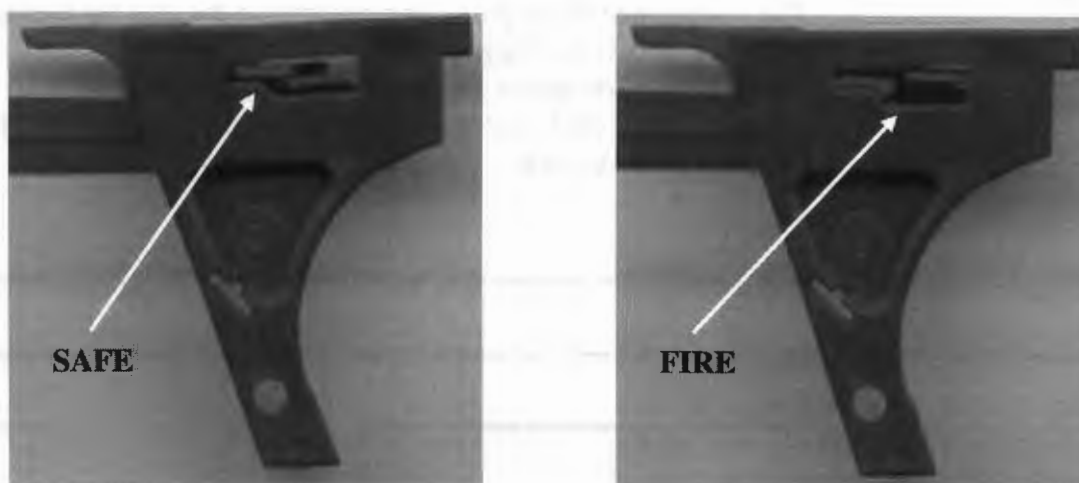
- To fire, the trigger safety is disengaged by establishing a firing grip and placing the trigger finger on the trigger, which pivots the upper portion of the safety away from the frame to allow the trigger to be pressed to the rear
- ### 2. Firing Pin Safety
- The firing pin is held in its non-protruding state by the firing pin safety
  - The firing pin safety is spring loaded, so it is active at all times unless the trigger is pressed
  - The vertical arm on the trigger bar moves upward and rearward as the trigger is pressed
  - Just prior to firing, the firing pin safety has been pushed fully up, allowing the firing pin freedom of movement in the firing pin channel



### 3. Drop Safety

- The drop safety is another internal safety that is automatically active until disengaged when the trigger is pressed
- The drop safety is a slot in the trigger mechanism housing that will allow the sear to drop far enough to disengage with the firing pin when the trigger is pressed
- Just forward of the fire slot in the trigger mechanism housing is the safe slot, which will not allow the sear to drop low enough to release the firing pin

- d. The trigger must be pressed for the drop safety to disengage



#### D. Trigger

1. Starting with the pistol cocked, three safeties need to be disengaged in order for the gun to fire
2. Once a firing grip is established and the trigger finger is placed on the trigger with light pressure, the trigger safety is pressed flush with the trigger and deactivated
3. As the trigger finger presses the trigger to the rear, the trigger bar moves up and back contacting the firing pin safety causing the safety to cam up and clear of the firing pin
4. As the trigger bar moves rearward it is pushing on the protrusion on the firing pin, compressing the firing pin spring
5. As the firing pin safety is fully deactivated, the right wing of the sear contacts the connector, caming the sear down and out of engagement with the firing pin; this stretches the trigger spring
6. The compressed firing pin spring forcefully drives the firing pin forward to strike the primer and ignite the round
7. As the slide and barrel begin to unlock and move rearward, a raised area on the slide's inside rear edge, above the right slide rail, contacts the connector and cams the connector to the left disengaging the connector from the trigger bar
8. The tension from the trigger spring pulls the sear up
9. As the firing pin safety clears the trigger bar the safety's spring pushes the safety down ready to reengage the firing pin
10. Upon forward movement of the slide, the leg on the firing pin will engage the sear
11. As the slide continues to move forward, the firing pin spring is compressed
12. At about 1/4" from the slide being fully forward, the firing pin is held far enough back to allow the firing pin safety spring to push the firing pin safety down and in front of the firing pin

- 13. With the slide fully forward, the trigger finger relaxes enough for the trigger to reset
  - a. The compressed firing pin spring pushing on the sear via the tail on the firing pin pushes the trigger forward
  - b. As the trigger bar moves forward it will allow the connector to snap over the rear of the trigger bar, enabling the shooter to press the trigger again for the next shot

**Notes:** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



## VII. Care and Cleaning

**WARNING: BEFORE WORKING ON OR CLEANING YOUR WEAPON, ENSURE IT IS UNLOADED!**

### A. General

1. Normal cleaning can be performed when the pistol is field stripped



2. Use a high quality solvent and follow the manufacturer's directions
3. Wipe all surfaces dry and use a good quality lubricant such as Break-Free
4. Do not over-lubricate
5. The copper colored grease on the inside of the slide is an anti-seize lubricant made by Fel Pro Inc. and should not be cleaned off
6. The use of a nylon or bronze bore brush of the correct caliber is recommended
  - a. Never use a stainless steel bore brush on any Glock pistol
  - b. The use of stainless steel brushes of any kind is not recommended
7. Use a solid bronze jag of the correct caliber and clean the barrel until a dry patch comes out clean
8. If pistols are to be stored for long periods of time or if the pistols are used in a highly corrosive environment, the armorer needs to determine if lubricant inside the magazine tube or firing pin channel will pose a problem
9. The armorer then needs to be aware of the pistol's use to determine how often to perform maintenance
10. If corrosion is to be avoided, it may be necessary to inspect and clean these pistols more frequently
11. It is mandatory that a mechanical function check be performed after cleaning; see Section VIII-B

**B. Procedure**

**WARNING: BEFORE WORKING ON OR CLEANING YOUR WEAPON, ENSURE IT IS UNLOADED!**

1. Check again to ensure the chamber and magazine well are empty and the weapon is UNLOADED
2. Field strip the pistol and disassemble the magazine
3. Clean all areas with a lightly treated cloth of high quality solvent

***Caution: Do NOT allow excess oil or solvent to enter the firing pin channel or the magazine body***

4. Cleaning the barrel
  - a. Scrub the barrel using a saturated nylon or bronze bore brush inserted from the breech end
  - b. Repeat at least 10 times, re-soaking the bore brush once or twice
  - c. Use a jag and patches until a dry patch comes out clean
5. Wipe away any traces of solvent with a soft clean cloth
6. Apply a light coat of lubricant to the following areas:
  - a. All four frame rails
  - b. Trigger connector
  - c. Locking and unlocking cams on the barrel
  - d. Hood and locking lug on barrel and around the muzzle
  - e. A light coat of lubricant is such that after lubrication you can rub your finger over the part and your finger might be damp with oil, but not dripping



**Caution:** *Do NOT over-lubricate*

7. Reassemble the pistol
8. Perform a mechanical function check; see Section VIII-B



## VIII. Inspections

### A. General

A function check is to be carried out after any work is done to the pistol. A parts inspection is to be carried out whenever the pistol is disassembled. A static inspection of subassemblies is to be performed to aid in malfunction diagnosis and to ensure the gun is within specifications.

### B. Function Check (Mechanical)

The pistol is fully assembled

**WARNING: BEFORE WORKING ON OR CLEANING YOUR WEAPON, ENSURE IT IS UNLOADED!**

1. Insert an **EMPTY** magazine into the magazine well and ensure the magazine catch has engaged with the magazine
2. Run the slide fully to the rear to engage the slide stop lever into the slide stop lever notch in the slide, locking the slide to the rear
3. Verify that the slide stop is pushed up fully into the slide stop notch by the magazine follower
4. Remove the empty magazine
5. Retract the slide slightly to the rear and seat the slide fully forward
6. Perform an additional chamber check
7. Press the trigger, releasing the firing pin (you should hear a 'click' or 'snap'); keep the trigger pressed to the rear
8. Rack the slide
9. Slowly relax your finger on the trigger until it resets (you hear or feel a 'click'); re-press the trigger until the firing pin is released again as above
10. Rack the slide and reset the trigger, then release trigger fully
11. Pull the slide back ¼" to ½"
12. Trigger Safety must touch the frame

***Caution: Do not pull the trigger as damage to the trigger safety could occur***

13. Release the slide
14. Try to press the trigger without engaging the trigger safety; trigger should be locked
15. Place your trigger finger on the trigger as normal, press and hold the trigger to the rear
16. Shake the pistol – you must hear the firing pin rattle in the slide
17. Check the magazine tubes for dents, cracks, damaged or deformed lips. Ensure the magazine floorplate is secure on each magazine.
18. Insert **EMPTY** magazines into the magazine well and ensure the magazine catch engages the magazine
19. Verify empty magazine falls free when the magazine catch is pressed
20. Fill the magazine with **DUMMY** (inert) rounds
21. Insert the magazine filled with **DUMMY** (inert) rounds into the magazine

- well and ensure the magazine catch engages the magazine
22. Ensure the magazine drops free as the magazine catch is depressed
  23. Reinsert the magazine containing the **DUMMY** (inert) rounds
  24. Rack the slide
  25. Slide should close forcefully and fully (do NOT ride the slide forward!)
  26. Rack the slide
  27. **DUMMY** round should fly out of ejection port and the next **DUMMY** round in the magazine should go freely into the chamber
  28. Continue racking the slide until the magazine is empty and the slide locks back on an empty magazine
  29. Repeat this process (with **DUMMY** rounds) for each magazine used with this pistol
  30. With the slide locked back, push forward on the firing pin tail and look at the breech face through the ejection port – the firing pin must not be protruding
  31. **Finally, test fire the weapon**

### C. Parts Inspection

This inspection is to be performed with the gun completely disassembled and cleaned.

**WARNING: BEFORE WORKING ON OR CLEANING YOUR WEAPON, ENSURE IT IS UNLOADED!**

Conduct a very careful examination of all parts for cracks, deformities, or any unusual wear. All parts and springs need to be inspected for proper function and condition.

Areas of inspection:

1. Slide Assembly
  - a. Barrel – bore and chamber, feed ramp, locking lugs, and crown
  - b. Recoil spring assembly
  - c. Slide – loose, damaged or missing sights, rails, locking surface, breech face, extractor, ejection port, slide recoil lug, slide stop lever notch, disconnecter shelf, slide cover plate, spring-loaded bearing, extractor depressor plunger spring, extractor depressor plunger, firing pin, spacer sleeve, firing pin spring, spring cups, firing pin safety, firing pin safety spring
2. Frame Assembly
  - a. Frame – rails, pin holes, magazine catch window, trigger guard
  - b. Parts – locking block pin, trigger pin, trigger housing pin, locking block, trigger with trigger bar, trigger spring, trigger mechanism housing, ejector, connector, slide stop lever and spring, slide lock, slide lock spring, magazine catch, magazine catch spring, trigger safety and spring
3. Magazine
  - a. Magazine tube, magazine floorplate, magazine insert (if applicable), magazine spring, and follower

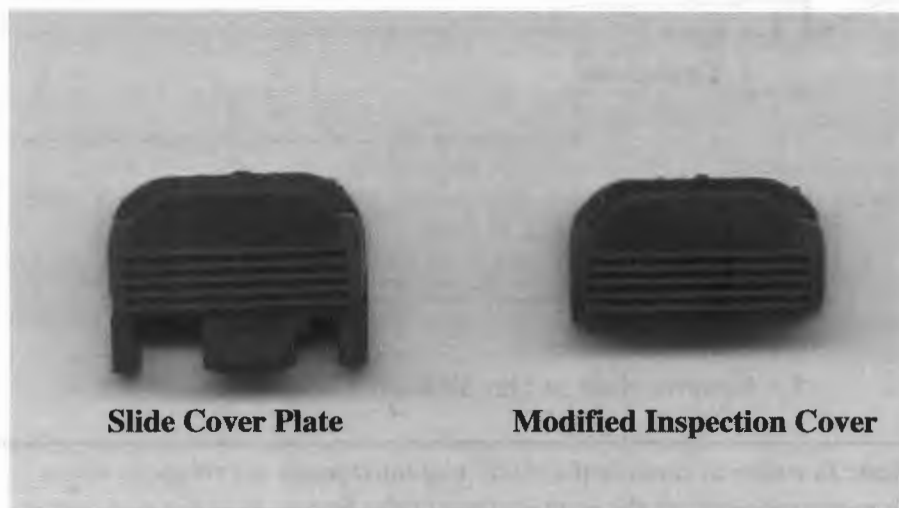
#### D. Static Inspection

To aid in malfunction diagnosis and to ensure the gun is within specifications, a static inspection should be carried out. The gun needs to be field stripped for this inspection

Areas of Inspection:

##### 1. Slide

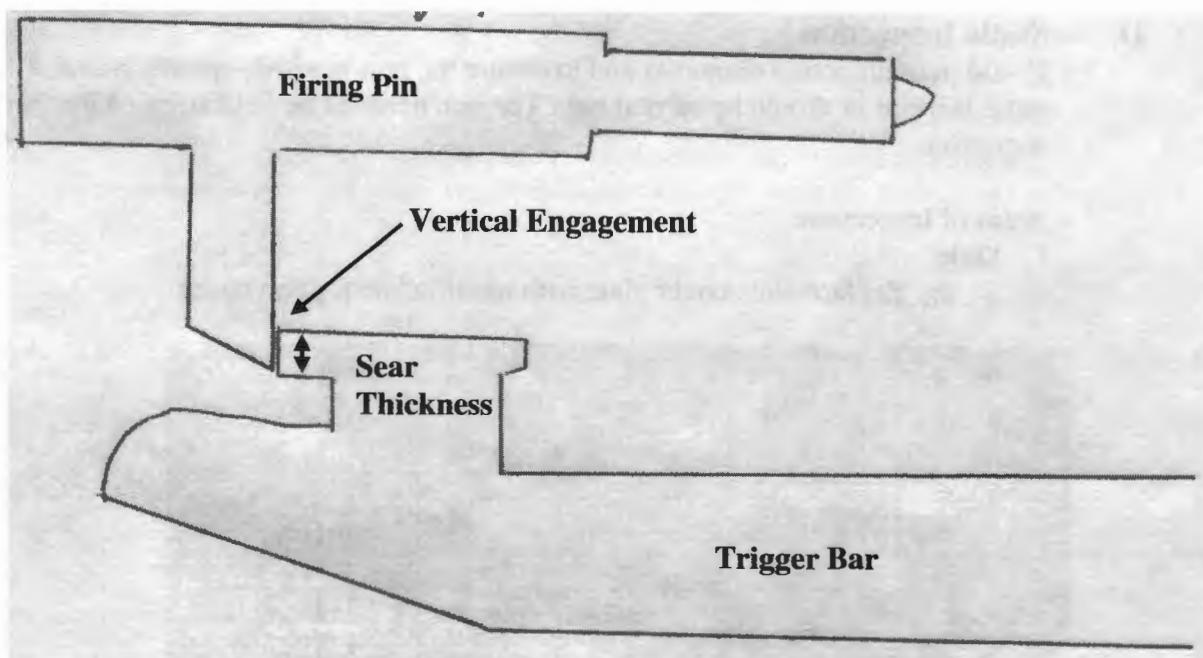
- a. Replace slide cover plate with modified inspection cover



- b. Insert a **DUMMY** round under the extractor hook and hold slide horizontally; the extractor must hold the round in place. You must have between .005" and .020" extractor cam-out
- c. Place slide with **DUMMY** round only onto the frame and rack the slide to the rear; the **DUMMY** round should fly out of the ejection port

**Caution:** *Prior to installing slide, ensure the trigger is in the 'fired' position or damage to the sear, trigger mechanism housing or the trigger safety may occur*

- d. Push the slide forward until the rear portion of the slide aligns with the rear of the frame, as if the gun were in battery
- e. The sear must have a minimum of 2/3 engagement with the firing pin tail – view through the modified slide cover plate



- f. Remove slide and lay slide on its sights

**Caution:** *In order to remove the slide, you must press the trigger. Align slide's rear surface with the rear surface of the frame, as if the gun was in battery and press the trigger.*

- g. Depress firing pin safety and push forward on the tail of the firing pin  
 h. Firing pin must protrude through the breech face and be free to rattle  
 i. Release the firing pin safety and pull back on the firing pin tail until the firing pin safety pops up  
 j. Push forward on the firing pin tail and the firing pin must not protrude through the firing pin hole

**Caution:** *Do NOT pull tail of firing pin rearward and let it snap forward as this will damage the firing pin and firing pin safety!*

- k. Remove modified slide cover plate  
 l. Ensure spring-loaded bearing is the correct caliber:

9mm	Black
.357, .40, 10mm	White
.45	Green

- m. Reinstall the slide cover plate  
 2. Frame  
 a. Push forward on the vertical arm of the trigger bar and ensure the trigger safety engages as the trigger moves forward



- b. Release trigger bar and trigger safety must hold the trigger in a partially forward position

**Caution:** Do NOT press trigger after the trigger safety is activated as this may damage the frame or the trigger

- c. Push forward on the vertical arm of the trigger bar until the trigger is fully forward
- d. Keep forward pressure on the vertical arm and press the trigger
- e. Slowly release pressure on the vertical arm and continue to press the trigger to the rear
- f. Pull up on the slide stop lock and release; slide lock must snap down
- g. Pull down on the slide lock and release; slide lock must snap fully up
- h. Depress the magazine catch and ensure the magazine catch clears the magazine well so the magazine will drop free

### 3. Magazine

- a. Lips are to be parallel with each other
- b. Lip width must be within these dimensions:

9mm	.333" to .343"
.357, .40, 10mm	.375" to .380"
.45	.415" to .425"

- c. Free magazine spring protrudes from the magazine tube a minimum of 1.0"
- ### 4. With the pistol assembled
- a. Measure loose breech by inserting feeler gauges behind the barrel hood and allowing slide to close – .004" maximum
- b. Measure lock-up – minimum of .030"
- c. Verify gun will unlock by inserting pencil, eraser first, diagonally into the barrel and pushing rearward – there must be no hesitation in unlocking

**Notes:** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## IX. Disassembly and Assembly of the Frame



### A. Disassembly Steps for the Frame

**Note:** ALL pins disassemble from the left pushing to the right and reassemble from the right pushing to the left

If pistol is equipped with a locking block pin, that is the **first** pin to be pushed out, then the trigger pin, and the **first** pin to be pushed back in, then the trigger pin

1. Push locking block pin out from left to right (if present)
2. Push the trigger pin out next from left to right

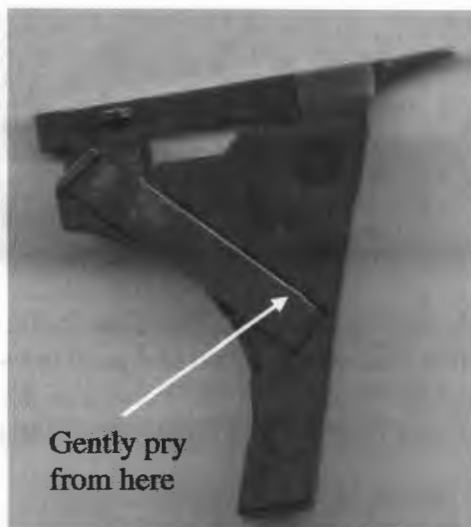
**Caution:** *The slide stop lever fits into a notch cut into the trigger pin. You must align the pivot hole on the slide stop lever with the trigger pin in order to remove the trigger pin. To assist in removing the trigger pin, very gently push the slide stop lever slightly forward while putting pressure on the trigger pin. **DO NOT FORCE THE TRIGGER PIN!***

3. Pull the slide stop lever to the rear and remove
4. Gently pry up the locking block using the frame's left rear side
  - a. Do not damage the rails
  - b. Do not damage the trigger bar
5. Push the trigger housing pin out from left to right
6. Grasp the ejector and pull the trigger mechanism housing, trigger bar and trigger assembly out of the top of the frame



7. Hold the trigger mechanism housing in your left hand with the trigger in your right hand and gently pull the trigger to your right while rotating the trigger and trigger bar counterclockwise until the sear clears the trigger mechanism housing. (Do NOT force it!)
8. Work the hooked end of the trigger spring off the trigger bar
9. Work the hooked end of the trigger spring off of the trigger mechanism housing

10. **Gently** pry the connector's lower end from the right side of the trigger mechanism housing



11. Pull the ejector forward out of the trigger mechanism housing
12. Push down on the slide lock spring and allow the slide lock to fall out either side of the frame
13. Gently pry the slide lock spring straight up

**Caution:** *The pry point should be as close to the bend of the spring as possible so as not to damage the spring*

14. To remove the magazine catch assembly:
  - a. Hold the magazine catch to the left
  - b. From the top of the magazine well, use a screwdriver to push the magazine spring to the right until it aligns with the cut out in the magazine catch and then pry the magazine catch spring rearward out of the magazine catch
  - c. Push the magazine catch to the right and remove
  - d. Using needle nose pliers, pull the magazine catch spring up and out

#### **B. Assembly Steps for the Frame**

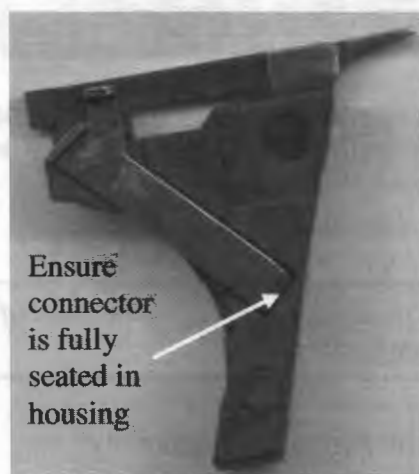
1. Insert the magazine catch spring fully into its hole in the frame
2. Begin to insert the magazine catch from the right
3. Gently pry rearward on the top portion of the magazine catch spring to clear the magazine catch and push the magazine catch fully into the frame
4. Hold the magazine catch to the left and from the top of the magazine well gently pry the magazine catch spring to the right until it engages the cut out in the magazine catch
5. Insert the slide lock spring into the frame
  - a. Small end of the spring down into the frame and the long end pointed

to the rear

6. Align the slide lock with notch down and step to the rear

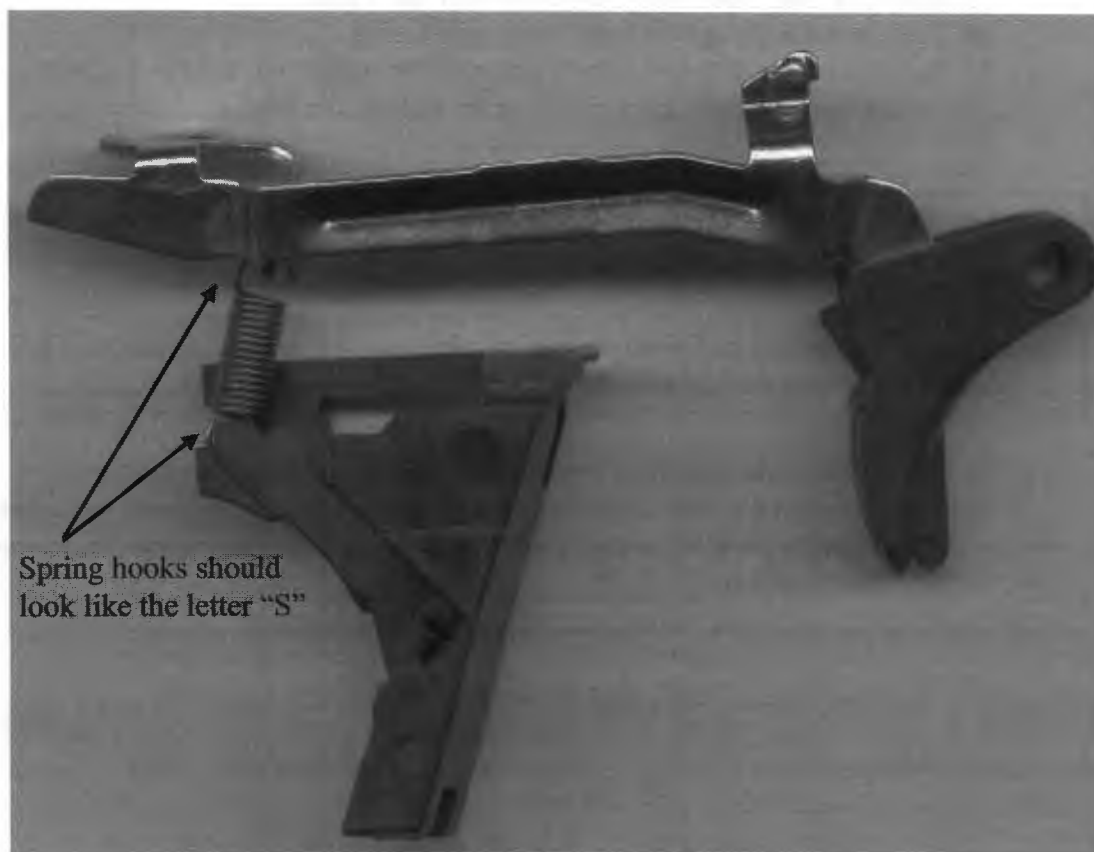


7. Insert the slide lock from either side of the frame
8. Push leg of slide lock spring down and push the slide lock in until the leg of the spring engages the notch on the bottom of the slide lock
9. Seat the connector fully into the right side of the trigger mechanism housing



10. Push the ejector in from the front into the trigger mechanism housing until it is fully seated
11. Connect the trigger spring to the trigger mechanism housing and to the trigger bar

**Note:** The trigger spring hooks should look like the letter 'S' when it is correctly installed



12. Holding the trigger mechanism housing in the left hand and the trigger in the right, introduce the bottom leg of the sear into the trigger mechanism housing so the drop safety arm of the sear clears and then rotate the trigger bar clockwise to engage the drop safety arm of the sear into its slot in the trigger mechanism housing



13. Push the trigger bar assembly into the frame
14. Align the trigger mechanism housing pin (polymer pin) with the trigger mechanism housing and push pin from right to left
15. Insert locking block fully into its slot in the frame
16. Push in the locking block pin from right to left
17. Insert the slide stop lever and align with the trigger pin hole in the frame
18. Gently push in the trigger pin from the right to the left

**Caution:** Do NOT install the slide stop lever before the locking block pin has been inserted or you will damage the slide stop lever spring

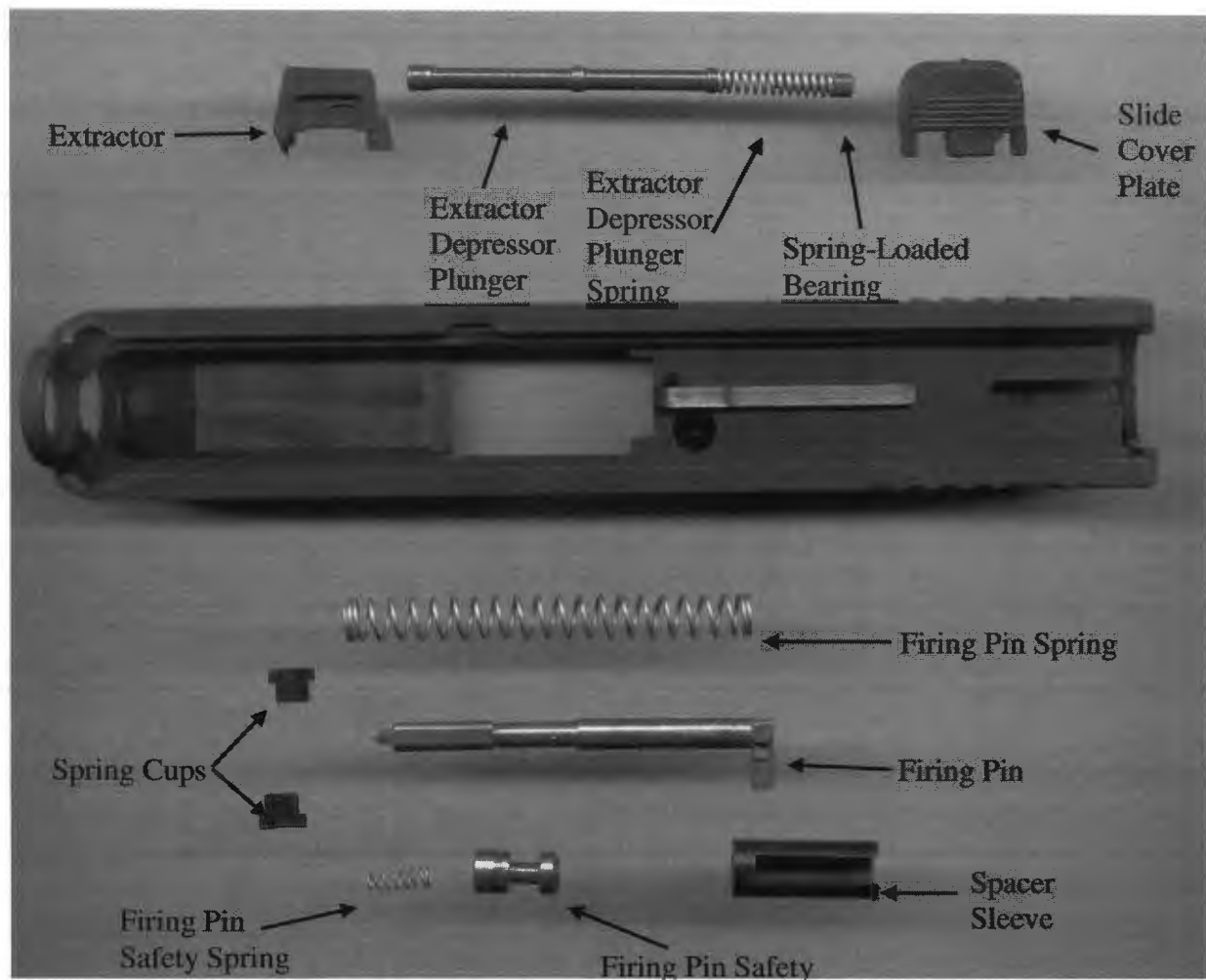
**Note:** It may be necessary to gently move the slide stop lever in a circular motion to align the pin with the hole. **DO NOT FORCE THE PIN!**

19. Ensure the slide stop lever has engaged the notch in the trigger pin by checking that the slide stop lever moves freely and snaps down when raised. If not, gently push the trigger pin to the right or left until it correctly engages the slide stop lever.





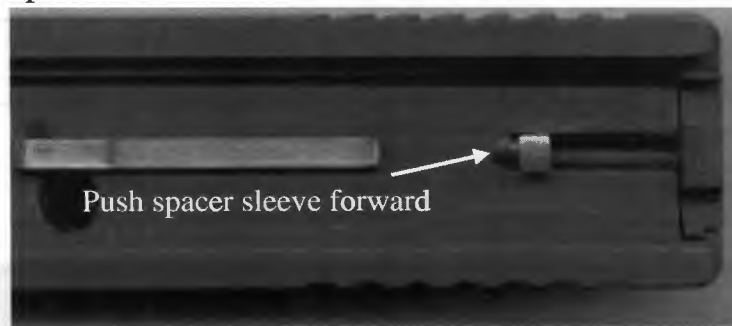
## X. Disassembly and Assembly of the Slide



### A. Disassembly of the Slide

**WARNING: BEFORE WORKING ON OR CLEANING YOUR WEAPON, ENSURE IT IS UNLOADED!**

1. Rest the slide muzzle down on a flat surface
2. Using a punch, push the spacer sleeve forward (towards the muzzle) and hold in place



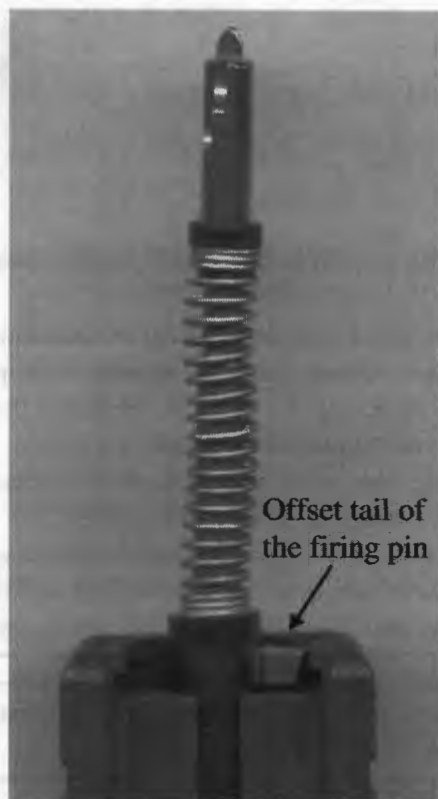
Copyright © 2015, Front Sight Firearms Training Institute.

All Rights Reserved. No reproduction or distribution permitted without the express written consent of Front Sight Firearms Training Institute.

3. Slide cover plate down and clear of slide

**Caution:** *The spacer sleeve and spring loaded bearing are under spring tension. Allow the spring loaded bearing to decompress into your thumb or they could be lost!*

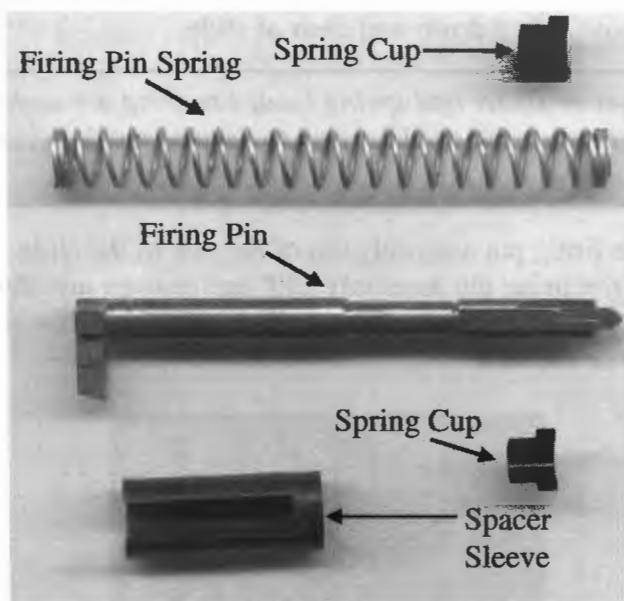
4. Pull the firing pin assembly out of the rear of the slide
5. Rotate the firing pin assembly 180° and reinsert into the slide
6. Orient the tail of the firing pin so it does not align itself with the cutout in the bottom of the slide



7. Pull down the firing pin spring and remove both spring cups

**Caution:** *Do NOT lose control of the firing pin spring or lose the spring cups*

8. Allow the firing pin spring to slowly decompress in your fingers
9. Remove the firing pin spring
10. Remove the firing pin spacer sleeve
11. A polymer firing pin channel liner is inside the firing pin channel and should not be removed
  - a. If the liner should fall out, reinsert it with the beveled end first
  - b. If the channel liner needs removal, use a 5/16" bolt and thread bolt fully into the channel liner and use it to pull the liner out



12. Grasp the spring loaded bearing and pull the assembly out of the rear of the slide
13. To remove the spring loaded bearing or extractor depressor plunger from the extractor plunger spring, twist the spring while pulling apart
14. With the slide on its sights, depress the firing pin safety and hold
15. The extractor can be pulled out now
16. Allow the firing pin safety spring to slowly decompress and invert the slide and tip out the firing pin safety and spring

**Note:** The firing pin safety spring should be locked into the safety. If it is not locked, then press and turn spring counterclockwise.

**Note:** The following steps are not performed during normal maintenance, but are included here

17. To remove the front sight, place the slide sights down and using a sharp pick, nudge the fixing pin up out of the front sight. The front sight can now be pushed out the top of the slide.

**Note:** You cannot reuse polymer front sights once they are removed

18. The rear sight drifts to the right to remove

**Note:** The use of a rear sight pushing tool makes this job easy and lessens the chance of damage to the slide or sight

19.

## B. Assembly of the Slide

1. With the slide on its sights, drop in the firing pin safety and spring



2. Push down on safety and insert extractor, then release the firing pin safety
3. Pre-assemble the firing pin assembly:
  - a. Slide spacer sleeve over the firing pin



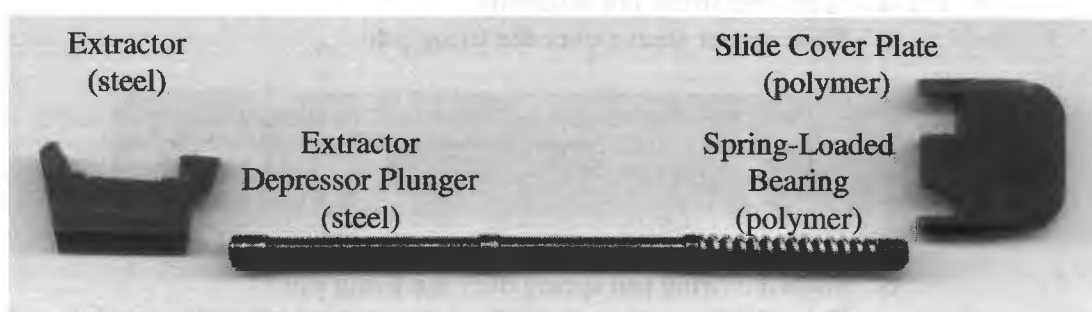
- b. Slide the firing pin spring over the firing pin
  - c. Place the firing pin into slide as was done during disassembly, with the tail off-set from the cut-out
  - d. Compress the firing pin spring and insert both spring cups
    - i. Ensure the small end of the spring cups fit into the firing pin spring
    - ii. Ensure they are fully seated and do not align with the last coil of the spring



4. Insert the firing pin assembly into the slide



5. Insert the extractor depressor plunger assembly into the depressor channel in the slide



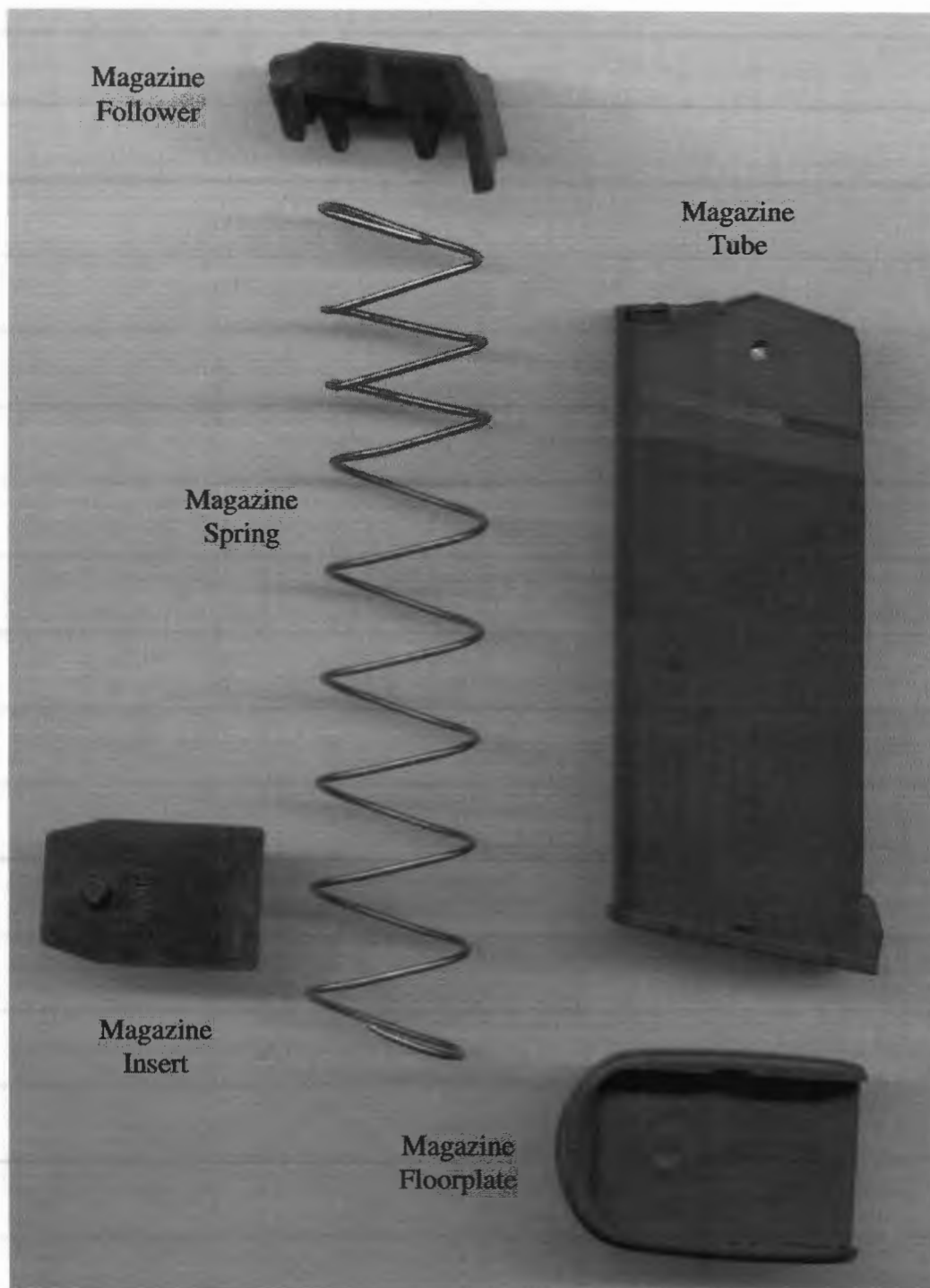
**Caution:** *Steel extractor depressor plunger must bear on the steel extractor and the polymer spring-loaded bearing must bear against the slide cover plate*

6. Place the slide muzzle down and align the slide cover plate with the channels in the slide
7. Using a punch, push the spacer down while sliding the cover plate on to the slide
8. Push down on the spring-loaded bearing with the punch and push the slide cover plate fully into place
  - a. You will hear a 'snap' as the spring-loaded bearing engages the slide cover plate
9. If installing a new front sight:
  - a. Insert the sight from the top of the slide and place slide and sight, sight down, on a hard surface
  - b. Using needle nose pliers, insert the fixing pin into the notch in the front sight's body
  - c. With a 1/16" punch, drive the fixing pin slightly below flush with the legs on the front sight
10. To install a new rear sight, drift onto the slide from right to left

**Note:** The use of a rear sight pushing tool makes this job easy and lessens the chance of damage to the slide or sight



## XI. Disassembly and Assembly of the Magazine

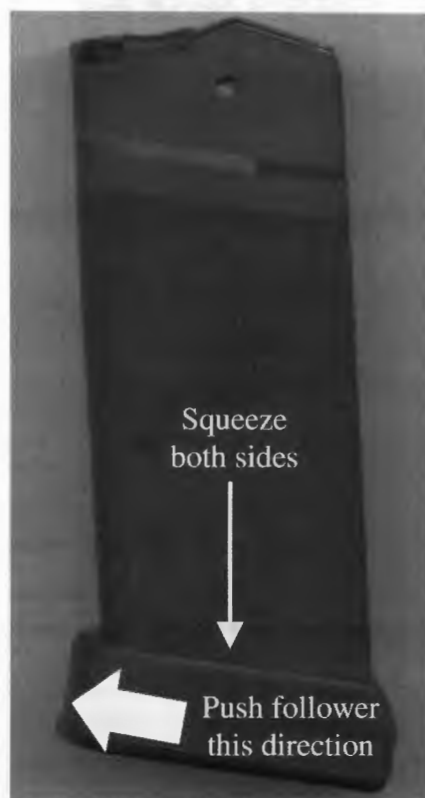


**Note:** Glock has produced two different methods to secure the magazine floorplate. They will be identified as 'old-style' (without a magazine insert) and 'new-style' (with a magazine insert).



**A. Disassembly of the Magazine (Old-Style)**

1. Grasp the magazine tube sides just above the floorplate between your finger and thumb



2. Place back end of the floorplate on a hard surface and nudge the floorplate forward about 1/4"

**Caution:** *The magazine spring is compressed slightly in the magazine tube; slowly release tension on the spring by controlling it with your fingers as you remove the floorplate*

3. Controlling the magazine spring, slide the floorplate forward off the magazine
4. Allow the magazine spring to decompress and pull the spring and follower from the bottom of the magazine

**B. Assembly of the Magazine (Old-Style)**

1. Correctly orient the magazine follower with the tube and insert follower and spring into the magazine tube
2. Compress the spring into the magazine tube and hold
3. Slide the magazine floorplate along the rails on the magazine tube and push the floorplate fully to the rear



### C. Disassembly of the Magazine (New-Style)

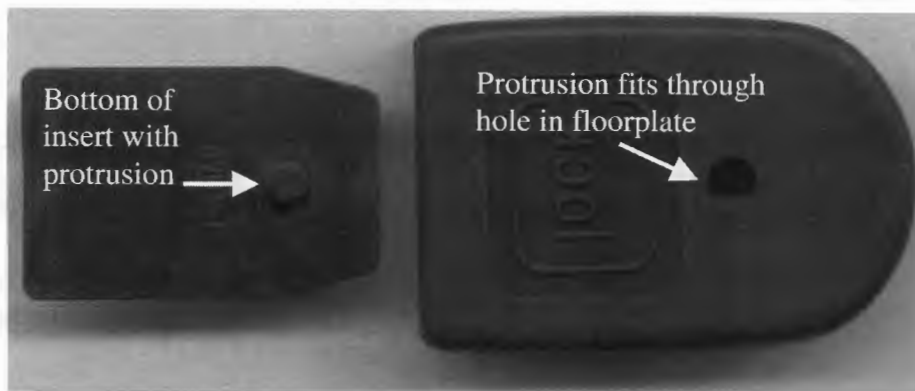
1. Insert punch into opening in the floorplate and push the magazine insert in about  $\frac{1}{4}$ "
2. With the punch still in place, push the floorplate forward just far enough to clear the protrusion on the insert

**Caution:** *The magazine spring is compressed slightly in the magazine tube; slowly release tension on the spring by controlling it with your fingers as you remove the floorplate*

3. Controlling the spring, slide the floorplate forward off the magazine
4. Allow spring to decompress
5. The magazine insert will fall off the spring
6. Pull the spring and follower from the bottom of the magazine

**D. Assembly of the Magazine (New-Style)**

1. Correctly orient the follower with the magazine tube and insert the follower and spring into the tube
2. Place insert on the bottom of the spring with the protrusion facing down and away from the spring

**Notes:**


---



---



---



---



---



---



---



---



---



---



---



---



---



---



---



---



---



---



---



---



---



---

## XII. Troubleshooting

### A. General

In a properly maintained firearm, malfunctions rarely occur. However, when they do, malfunction diagnosis can be a problem for the armorer. The following is a guide for the armorer in malfunction diagnosis. In some cases the correction may include more than one cause or correction.

### B. Stoppages, Possible Causes, and Their Remedy

Stoppage	Possible Cause	Remedy
Failure to fire – slide out of battery	Deformed ammunition	Inspect and replace ammunition
	Chamber not aligned to breech face	Open breech face, verify by removing extractor and closing the slide on a chambered DUMMY round
	Damaged or weak recoil spring assembly	Replace recoil spring assembly; slide should snap closed with the slide retracted ½” and released
	Excessive dirt or lubrication	Clean
	Wrong spring-loaded bearing	Install correct bearing
	Extractor	Replace extractor
Failure to fire – slide in full battery	Bad magazine	Check using known good magazine
	Broken firing pin	Replace firing pin
	Firing pin channel obstructed	Clean
	Sear or weak sear spring	Replace trigger with trigger bar and/or trigger spring
	Broken firing pin safety	Replace firing pin safety
	Weak firing pin spring	Replace
	Loose connector	Replace trigger mechanism housing
Spring cups installed incorrectly or broken	Verify correct assembly and condition of the spring cups	

### B. Stoppages, Possible Causes, and Their Remedy (Continued)

Stoppage	Possible Cause	Remedy
Failure to extract	Broken extractor	Replace extractor
	Incorrectly assembled extractor depressor assembly	Assemble correctly – polymer to polymer; steel to steel
	Excessive dirt around extractor	Clean
	Bad chamber	Replace barrel
Failure to eject	Broken ejector	Replace trigger mechanism housing
	Broken extractor	Replace extractor
	Incorrectly assembled extractor depressor assembly	Assemble correctly – polymer to polymer; steel to steel
	Under-powered ammunition	Verify ammunition has enough power to lock the slide to the rear when the last round in the magazine is fired
	Dirty chamber	Clean
Failure to feed	Magazine not seated	Reinsert magazine
	Tight extractor	Ensure .010" clearance between extractor hook and seated rim and that the correct bearing is installed
	Under-powered ammunition	Verify ammunition has enough power to lock the slide to the rear when the last round in the magazine is fired
	Dirty magazine	Clean
	Weak magazine spring	Replace magazine spring
	Deformed magazine tube	Replace magazine
	Magazine catch and spring	Replace magazine catch and/or spring
	Dirty chamber	Clean
	Weak recoil spring assembly	Replace recoil spring assembly

### B. Stoppages, Possible Causes, and Their Remedy (Continued)

Stoppage	Possible Cause	Remedy
<i>Failure to feed (Continued)</i>	Chamber not chamfered	Chamfer chamber mouth
	Chamber and breech face not aligned	Open breech face, verify by removing extractor and closing the slide on a chambered DUMMY round
Failure of slide to lock back when magazine is empty	Damaged slide stop lever	Replace slide stop lever
	Slide stop lever binding on trigger pin	Verify condition of notch in trigger pin and pivot hole in slide stop lever
	Weak magazine spring	Replace spring or magazine
	Damaged magazine tube	Replace magazine
	Damaged magazine follower	Replace follower
	Worn slide stop lever notch in slide	Replace slide or re-cut notch
	Under-lubricated	Clean and correctly lubricate
Slide locks back with ammunition in magazine	Under-powered ammunition	Change ammunition
	Slide stop lever spring weak	Replace slide stop lever spring
	Slide stop lever spring damaged	Slide stop must snap down when pulled up and released – replace if it does not
	Deformed magazine lips	Replace magazine

Notes: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

### **XIII. Tools Required for Armorerers**

#### **A. Tools Required for Disassembly and Assembly**

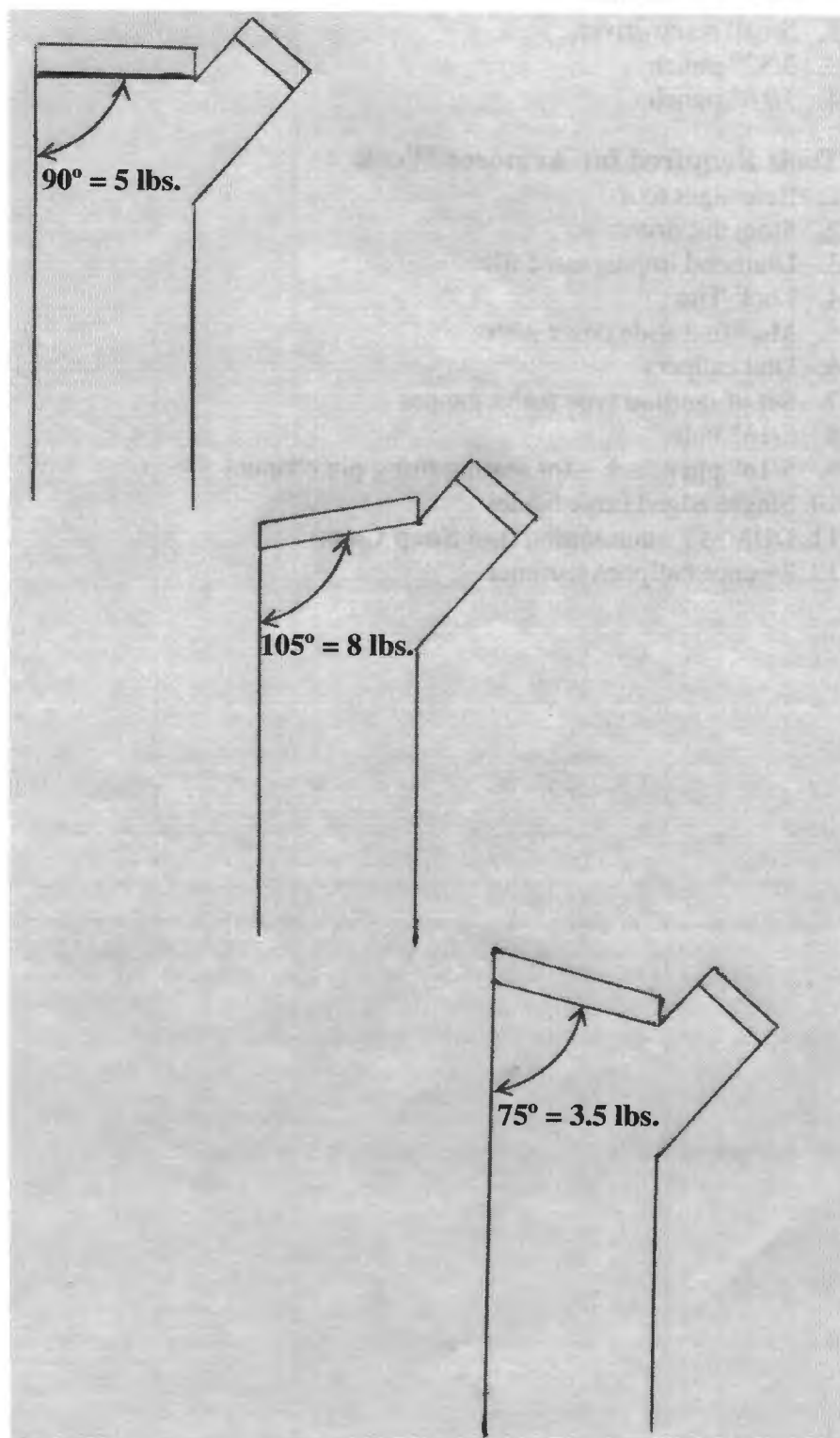
1. Needle nose pliers
2. Small screwdriver
3. 3/32" punch
4. 1/16" punch

#### **B. Tools Required for Armorer Work**

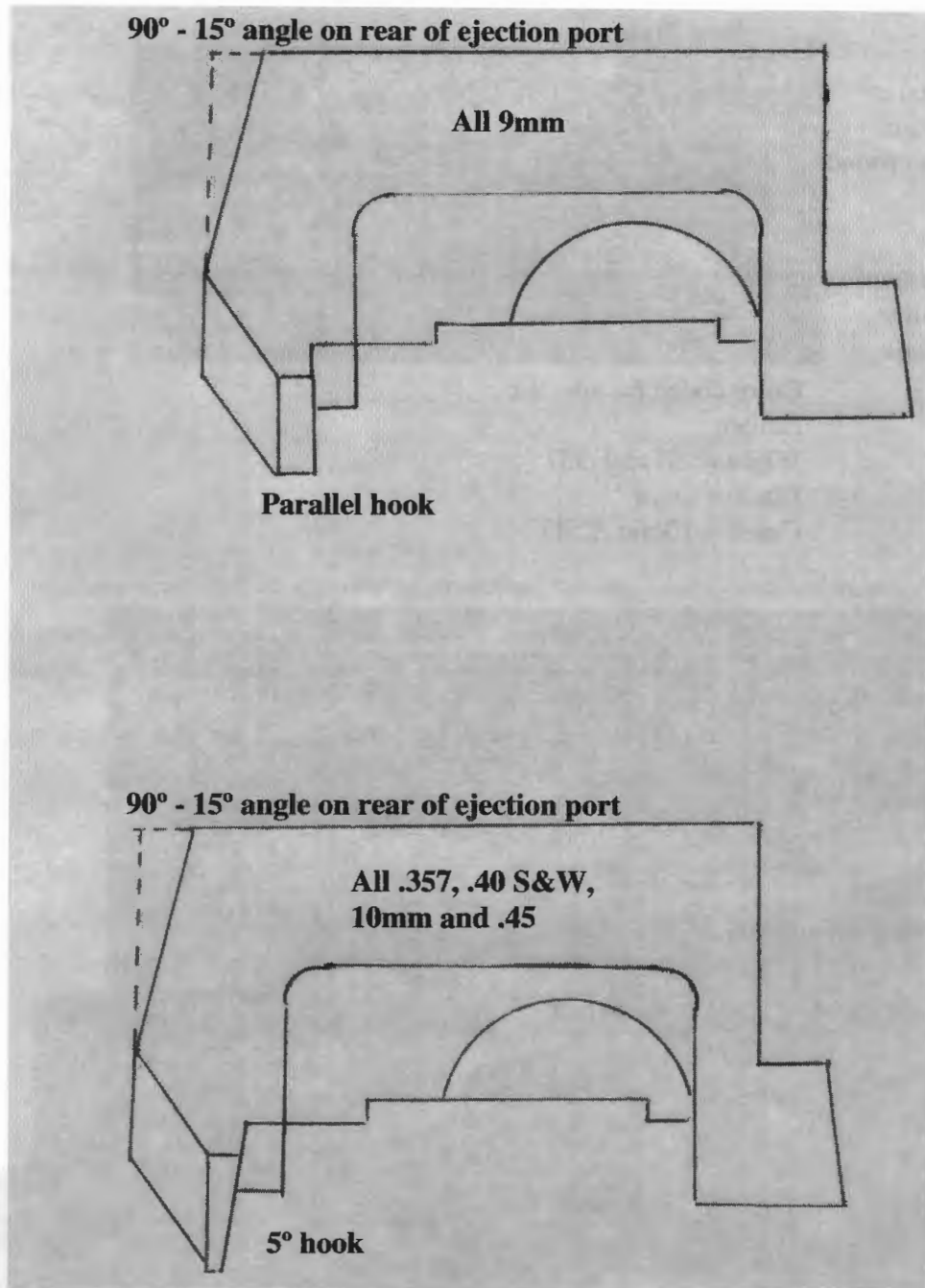
1. Rear sight tool
2. 5mm nut driver
3. Diamond impregnated file
4. Lock-Tite
5. Modified slide cover plate
6. Dial calipers
7. Set of ignition type feeler gauges
8. 5/16" bolt
9. 5/16" pin punch – for seating firing pin channel
10. Single-edged razor blades
11. DUMMY ammunition (**not Snap Caps**)
12. 2 ounce ballpeen hammer

## XIV. Miscellaneous

### A. Glock Connectors



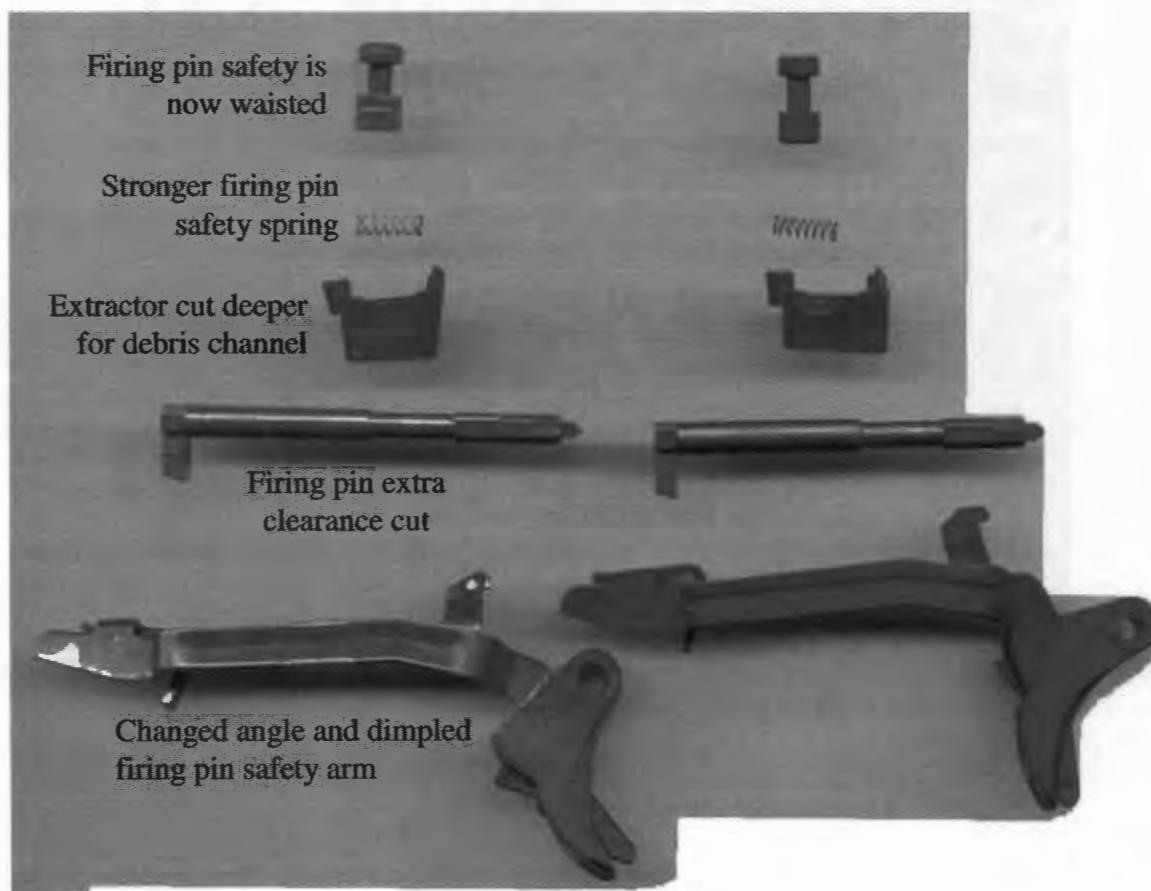


**B. Glock Extractors**

## C. Glock Upgrade Parts



Color coded for specific caliber:  
 White = .40 and .357  
 Black = 9mm  
 Green = 10mm & .45



**D. Glock Recoil Springs****Single, Non-Captive****Single, Captive****Dual Captive**

**E. Glock Slide Rails**

