

**BL-22  
FIELD  
SERVICE  
MANUAL**



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## BROWNING LEVER ACTION .22 BL-22 FIELD SERVICE MANUAL

This manual is written to assist trained gunsmiths in the repair and servicing of Browning products. It should never be used by an untrained person to repair any firearm. Read the entire manual carefully and pay special attention to the portions dealing with safety.

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# BROWNING FIELD SERVICE MANUAL

## IMPORTANT SAFETY WARNINGS

Before performing any instructions given throughout this manual, be certain to read the **NOTES** and **CAUTION** notes given in regard to those instructions. Generally, these precautionary notes follow the related instructions. In any case, read all of the instructions and cautions on any step involving assembly or re-assembly before proceeding with that step.

**SAFETY WARNING**

Failure to obey a Safety Warning **CAUTION** may result in injuries to you or to others.

Failure to obey a **NOTE** regarding the repair process may result in incorrect procedure which could cause malfunctions and/or damage to the firearm.

## CAUTIONS

1. Be certain the firearm is unloaded before proceeding with any service work.
2. Appropriate safety glasses should be worn by service personnel and bystanders when removing or re-installing any springs or spring-loaded components.
3. As noted in the attached parts list on Page 3, some of the Browning supplied spare parts must be fitted by Browning Service Dept. in Arnold, Mo., or qualified gunsmiths. No other persons should attempt to fit these specific parts.
4. If for any reason it becomes necessary to load and discharge this firearm, it is recommended that reference be made to the Owners Manual for proper loading, handling and safety procedures. These Owners Manuals are supplied with each new rifle and extra copies may be obtained by contacting Browning, Route # 1, Morgan, Utah 84050.
5. Read all of the instructions and cautions on any step involving assembly or disassembly before proceeding with that step.
6. Section VI provides lists of special tools which may be required and the recommended points of lubrication.

## SECTION I

### DESCRIPTION AND FUNCTIONAL OPERATION

#### DESCRIPTION

The BL-22 is a manually operated lever action rifle with tubular magazine handling short, long, and long rifle ammunition.

#### FUNCTIONAL OPERATION

For the purpose of this functional operation explanation, it is assumed that the Chamber is empty, Magazine loaded and the Action closed. The base of the first round

is forced against the face of the Bolt in the bottom of the Cartridge Guide Slot by pressure from the Magazine Spring. As the Cocking Lever is opened, the Cocking Lever Link is rotated about its pin. In rotating, it cams the Locking Block downward in its guide on the right side of the Bolt underneath the Bolt Cover Plate. This action releases the top rear edge of the Locking Block from the Lock Insert located in top of the Receiver.

As the Cocking Lever is opened further, the Cocking Lever Link pushes the Bolt to the rear by its connection with the Locking Block. As the Bolt retracts, the Carrier is allowed to partially lift by pressure from the Carrier Spring which partially raises the first cartridge in the face of the Bolt toward its positioning for chambering. Simultaneously, the forward end of the Carrier interferes with the second cartridge and retains it in the Magazine.

When the Bolt reaches its maximum rearward position, a pin through its center lower edge (Bolt Actuating Pin) strikes the Dog on the top rear end of the Carrier. This action forcefully rotates the forward end of the Carrier to its maximum upward position seating the rim of cartridge to be chambered under the Extractor and in alignment with the Chamber. Additionally, the Bolt in its travel to the rear has overridden and cocked the Hammer.

Extraction occurs when the action of the Bolt's retraction. Ejection occurs as the Bolt retracts and the base of the extracted cartridge strikes the Ejector. The Ejector rides in a slot in the left side of the Bolt and is attached to the Receiver by a pin located in the top left side of the Receiver.

As the Bolt is brought forward by closing the Cocking Lever, it depresses the Carrier which releases the second round from the Magazine where it stops against the lower edge of the Bolt Face. When the Bolt reaches its completely closed position, it chambers the first round and the Locking Block is cammed upward into locking position in the Receiver by the Cocking Lever Link. Additionally, when the Cocking Lever is completely closed, the Sear Link, attached to the Trigger Assembly, is rotated into position to engage the Sear when the Trigger is pulled for the next shot.



## SECTION II

### BL-22 Lever Action 22 Caliber Rifle—Grade I and Grade II Models

#### PART NO. PART NAME

\*PO64506 Bolt  
 PO64508 Bolt Actuating Pin  
 \*PO64510 Bolt Assembly  
 PO64512 Bolt Cover Plate  
 PO64515 Bolt Cover Pin  
 PO64520 Butt Plate  
 PO64524 Butt Plate Screws  
 PO64528 Butt Stock Grade I  
 PO64529 Butt Stock Grade II  
 PO64532 Carrier  
 PO64533 Carrier Guide Pin  
 PO64535 Carrier Pin  
 \*PO64538 Carrier Spacer  
 PO64540 Carrier Spring  
 \*PO64545 Cocking Lever Grade I  
 \*PO64546 Cocking Lever Grade II  
 PO64548 Cocking Lever Pin  
 PO64551 Cocking Lever Stop Screw  
 PO64555 Cocking Lever Link  
 PO64558 Cocking Lever Link Pin  
 PO64562 Ejector  
 PO64565 Ejector Pin  
 PO64568 Ejector Spring  
 PO64570 Extractor  
 PO64573 Extractor Plunger  
 PO64576 Extractor Spring  
 PO64580 Firing Pin  
 PO64583 Firing Pin Retaining Pin  
 PO64586 Firing Pin Spring  
 PO64590 Forearm Grade I  
 PO64591 Forearm Grade II  
 PO64594 Forearm Band  
 PO64597 Forearm Band Pin  
 \*PO64600 Frame  
 PO64602 Frame Insert Pin  
 \*PO64610 Hammer Assembly with Guide and Pin  
 PO64612 Hammer Pin  
 PO64615 Locking Block  
 PO64618 Lock Insert  
 PO64624 Magazine Assembly  
 PO64628 Magazine Tube Outer

*\*Indicates part must be fitted by Browning Service Department or qualified gunsmith.*

*\*\*Part may be purchased only by holders of current valid Federal Firearms Licenses.*

*NOTE: Unless otherwise indicated part is interchangeable between gauges / calibers.*

#### PART NO. PART NAME

PO64630 Magazine Tube Retaining Screw  
 \*PO64634 Mainspring  
 \*PO64638 Mainspring Follower  
 \*PO64642 Mainspring Guide  
 PO64645 Mainspring Guide Pin  
 PO64650 Muzzle Clamp  
 PO64653 Muzzle Clamp Screw  
 \*PO64658 Receiver with Fitted Barrel, Grade I  
 \*PO64659 Receiver with Fitted Barrel, Grade II  
 \*PO64660 Sear  
 \*PO64663 Sear Link  
 PO64664 Sear Link Pin  
 PO64665 Sear Link Spring  
 PO64667 Sear Pin  
 PO64675 Sight Front  
 PO64679 Rear Sight Tension Spring  
 PO64680 Sight Assembly Rear  
 PO64682 Stock Bolt  
 PO64684 Stock Bolt Lock Washer  
 PO64686 Stock Bolt Washer  
 PO64690 Take Down Screw Grade I  
 PO64691 Take Down Screw Grade II  
 \*PO64692 Trigger Grade I  
 \*PO64693 Trigger Grade II  
 PO64695 Trigger Pin  
 PO64696 Trigger and Sear Spring

*\*Indicates part must be fitted by Browning Service Department or qualified gunsmith.*

*\*\*Part may be purchased only by holders of current valid Federal Firearms Licenses.*

*NOTE: Unless otherwise indicated part is interchangeable between gauges / calibers.*

*NOTE: Trigger/Sear Spring is same spring used interchangeably for Trigger Spring and Sear Spring.*

## SECTION III

### INSPECTION AND DISASSEMBLY INTO SUB-ASSEMBLIES

**CAUTION:** Make sure rifle is unloaded before any inspection or disassembly operations are performed.

#### 1. PRE-DISASSEMBLY INSPECTION

- Place the Hammer in the half cock position and determine that it will not fall from that position when the Trigger is pulled.
- With the Hammer fully cocked, only partially disengage the Sear by only slightly pulling the Trigger. Slowly release the Trigger and feel the searing surfaces regain to full engagement.
- Check the Trigger pull to BACO Specification #80-01-1-"A" for a Trigger pull of 5.5 to 7.0 lbs.



**CAUTION:** If the rifle fails any of the above inspection criteria, necessary repairs must be performed to correct those discrepancies.

#### 2. DISASSEMBLY

##### A. STOCK

With the rifle completely assembled, place it inverted in a padded vise and grip in the area of the Forearm.

Remove the Butt Plate and Stock Bolt using the special screwdriver shown in Section VI.

**NOTE:** Don't use a regular blade screwdriver as it can easily be positioned along side of the Stock Bolt and when turned may break out the side of the Stock.

After removal of the Stock Bolt, remove the Butt Stock by pulling rearward from the Receiver.

##### B. RECEIVER

Remove the Take Down Screw from the right side of the Receiver.

**NOTE:** If the screw is difficult to withdraw, gently tap forward at the rear end of the Frame.

Place the Hammer in the half cock position and cycle the Bolt back to stop at the Hammer. This assures that the Locking Block has disengaged from the Receiver.

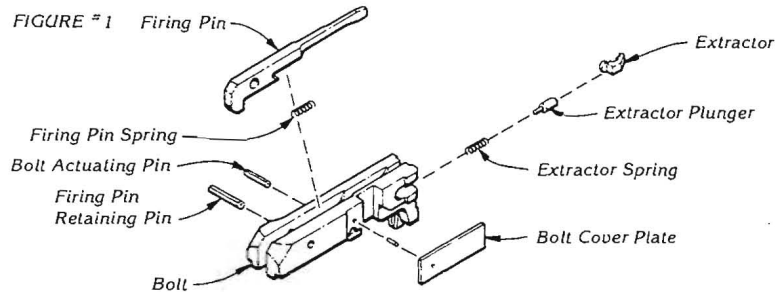
The Frame Assembly may now be removed by pulling it straight to the rear and out of the Receiver. In removing the Frame Assembly, the Ejector and Ejector Spring may fall out of the Receiver. If they do not, remove them at this time.

Separate the Bolt and Frame Assemblies by pushing the Bolt Assembly forward and lifting off. The Locking Block will slide out of the Bolt Assembly.

## SECTION IV

### DISASSEMBLY OF SUB-ASSEMBLIES INTO COMPONENT PARTS, INSPECTION AND REASSEMBLY OF SUB-ASSEMBLIES

#### 1. DISASSEMBLY OF THE BOLT ASSEMBLY (Figure #1)



**NOTE:** Throughout the disassembly process, it is recommended that the small springs be tagged so positive identification can be made during reassembly.

##### A. BOLT COVER PLATE

If service is required to the Bolt Cover Plate or Extractor, the plate may be removed by gently prying upwards with a screwdriver at the Locking Block slot.

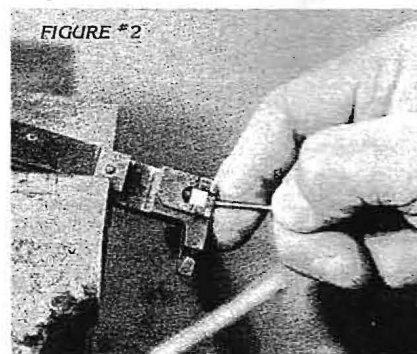
##### B. EXTRACTOR, SPRING AND PLUNGER

Remove the Extractor by engaging a small blade screwdriver under the Extractor and prying outward as shown in Figure #2.



**CAUTION:** Do not let the Extractor Spring and Plunger fly out of the Bolt Assembly.

Remove the Extractor Spring and Plunger.



##### C. FIRING PIN

Remove the Firing Pin Retaining Pin with a 3/32" punch and remove the Firing Pin and Firing Pin Spring.

##### D. BOLT ACTUATING PIN

Check the Bolt Actuating Pin and the lower, center edge of the Bolt. If it is not broken or worn, its removal is not necessary.

#### 2. INSPECTION OF THE BOLT ASSEMBLY COMPONENTS

##### A. FIRING PIN

If replacement of the Firing Pin is required, a determination must be made as to whether an old or new style is required. The old style Firing Pins and Bolts are no longer avail-

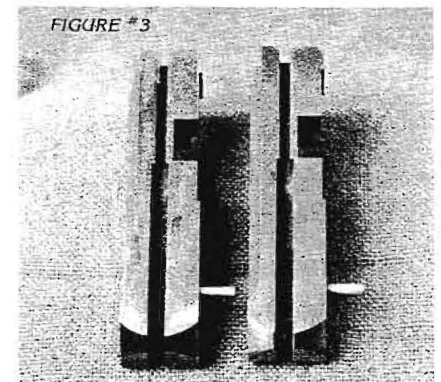
able. Therefore, both must be replaced if replacement to one or the other is required since they are not interchangeable with the new style.

Old and new style Bolts are shown in Figure #3 from left to right.

The new style Bolt has a narrower Firing Pin slot at the face.

- On the new style Bolt the slot measures approximately .070" and on the old style it measures approximately .100".

Check the cartridge head slot on the face of the Bolt for burrs; remove and polish if required.



##### B. LOCKING BLOCK

Check the Locking Block for wear, especially in its elongated hole, and replace if any signs of wear are present.

#### 3. REASSEMBLY OF THE BOLT ASSEMBLY

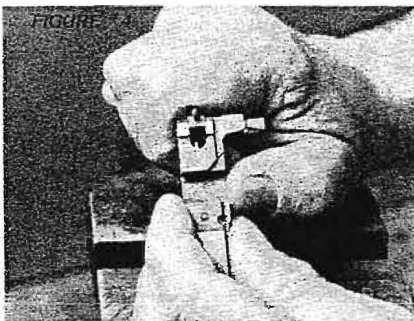
##### A. FIRING PIN

Place the Firing Pin Spring *horizontally* in the Bolt, and install the Firing Pin and Firing Pin Retaining Pin in the Bolt.

Check to see that the Firing Pin has free movement and returns to the rear by pressure from the Spring.

## B. EXTRACTOR

Position the Extractor Spring, Plunger and Extractor in the Bolt. With the thumb, hold the Extractor to the Bolt and then push the Extractor down into its recess with a  $\frac{1}{8}$ " punch as shown in Figure #4.

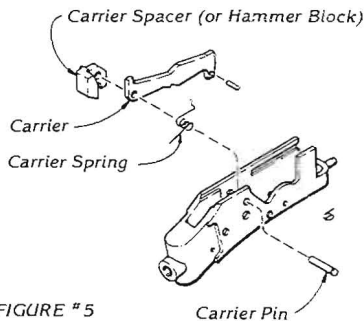


**CAUTION:** Use care not to let the spring-loaded components fly out of the Bolt.

**NOTE:** The Bolt Cover Plate is not installed at this time.

## 4. DISASSEMBLY OF THE FRAME ASSEMBLY AND SEPARATION OF THE COCKING LEVER ASSEMBLY.

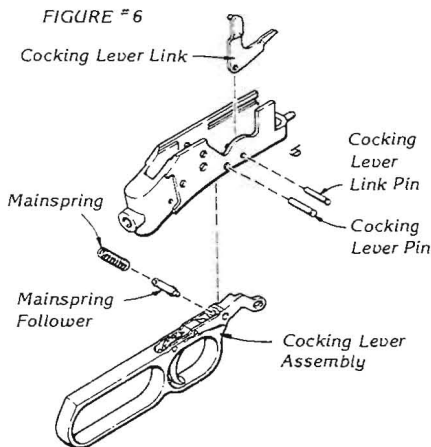
### A. CARRIER & HAMMER BLOCK (OR SPACER) (Figure #5)



Remove the Carrier Pin from left to right with a  $\frac{1}{8}$ " punch and remove the Carrier, Carrier Spring and Hammer Block.

**NOTE:** Early production rifles contained a Carrier Spacer instead of a Hammer Block. (See Figure #10 and Paragraph 7-B on Page 6.)

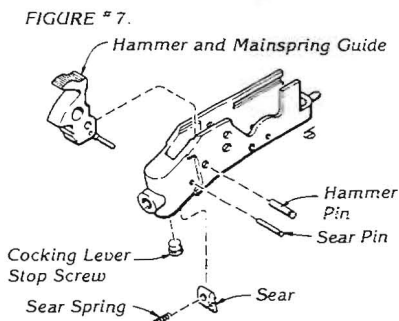
## B. COCKING LEVER ASSEMBLY, COCKING LEVER LINK, MAINSPRING & MAINSPRING FOLLOWER (Figure #6)



Lower the Hammer fully and drive out the Cocking Lever Link Pin from left to right.

Drive out the Cocking Lever pin from left to right and remove the Cocking Lever Link, Cocking Lever Assembly, Mainspring and Mainspring Follower.

## C. HAMMER & SEAR (Figure #7)

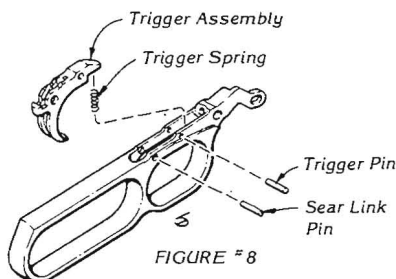


Remove the Hammer and Sear Pins from left to right and remove the Hammer, with the Mainspring Guide attached, Sear and Trigger/Sear Spring.

The only part remaining in the Frame now is the Cocking Lever Stop Screw. Do not remove unless replacement is required.

## 5. DISASSEMBLY OF THE COCKING LEVER ASSEMBLY

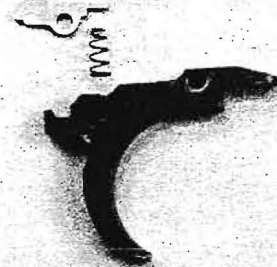
### A. TRIGGER ASSEMBLY (Figure #8)



Remove the Trigger and Sear Link Pins from left to right with a  $\frac{3}{32}$ " punch and remove the Trigger Assembly and Trigger Spring.

## B. SEAR LINK (Figure #9)

The Sear Link and Sear Link Spring may now be lifted out of the Trigger.



## 6. INSPECTION AND REASSEMBLY OF THE COCKING LEVER ASSEMBLY

Check all parts for wear, deformation and alteration. Close attention should be paid to the Cocking Lever to see that it is not bent, especially if the rifle exhibits a problem of not locking up properly.

It is difficult to determine if the Cocking Lever is bent without comparing it to a new one. If it is found bent, do not attempt to straighten. Replace with a new part.

### A. TRIGGER AND TRIGGER SPRING

Position the Trigger/Sear Spring into its hole in the top of the Trigger slot cut-out in the Cocking Lever.

Install the Trigger and Trigger pin in the Cocking Lever making sure the pin is staked properly to prevent loosening.

**CAUTION:** Use care in the installation of the Trigger Pin not to deform the thin sections containing the Trigger Pin holes. Make sure of pin alignment before driving the pin into position.

### B. SEAR LINK AND SEAR LINK SPRING

Insert the Sear Link Spring (conical spring with its small end upward) into its hole in the top of the Trigger.

Position the Sear Link for installation in the Trigger with orientation as shown in Figure #9 and install the Sear Link Pin (roll pin).

## 7. INSPECTION OF THE FRAME ASSEMBLY COMPONENTS

### A. COCKING LEVER LINK

Inspect the Cocking Lever Link to see that both of its studs are intact and tight. Replace the Link if they are loose or missing or if the Link is

bent. If the Link is to be replaced, the new one may require adjustment. Its fitting will be explained in Para. 8E of this Section.

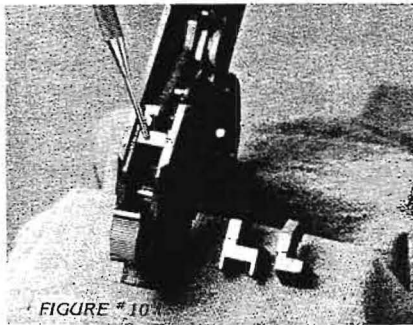
## B. FRAME

Inspect the Frame for cracks at the Stock Bolt hole and for any other deformations. Also check to see the Alignment Pin at the forward end is intact.



**CAUTION:** Rifles containing a Carrier Spacer should be updated by the installation of a Hammer Block. There are two styles of Frames requiring different style Hammer Blocks, old and new.

Figure # 10 depicts from left to right, a Spacer, old style Hammer Block, a new style Hammer Block and a new style Frame.



Also shown in Figure # 10 is the installation orientation of the Hammer Block to the Frame and the shoulder against which the Hammer Block abuts.

The dimensions from the back of the Frame cut-out (just back of the Hammer) to the shoulder is approximately  $\frac{3}{4}$ " on the old style Frame and  $1\frac{1}{4}$ " on the new style.

All parts, excepting the Hammer Blocks are interchangeable between the two style Frames.

Inspect the Cocking Lever Stop Screw (plastic button at the lower rear end of the frame) for deformation and replace if necessary.

## 8. REASSEMBLY OF THE FRAME ASSEMBLY

### A. HAMMER AND SEAR

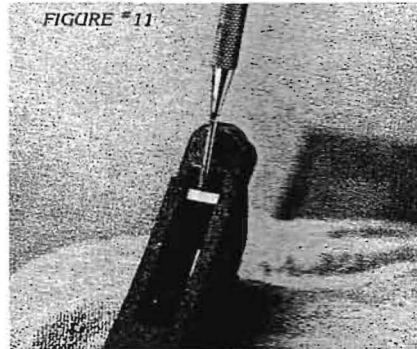
**NOTE:** To aid in the installation of the Mainspring later in the reassembly procedure, check the end of the Mainspring Guide, attached to the Hammer, and make sure its end is chamfered fully. If not, accomplish this before proceeding.

Position the Sear in the Frame with the Trigger/Sear Spring Hole to the rear and with the rounded edge upward.

Align the holes with a  $\frac{3}{32}$ " punch and install the Sear Pin from right to left.

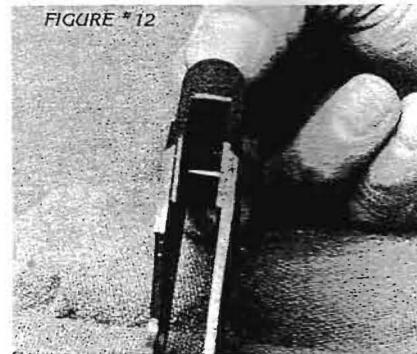
Grasp the Frame with the left hand as shown in Figure # 11. Using the tip of the middle finger, hold the Sear horizontally with the spring hole upward.

Place a small amount of Vaseline on the end of the Trigger/Sear Spring and guide the Sear Spring into its hole in the Sear with a  $\frac{3}{32}$ " punch.

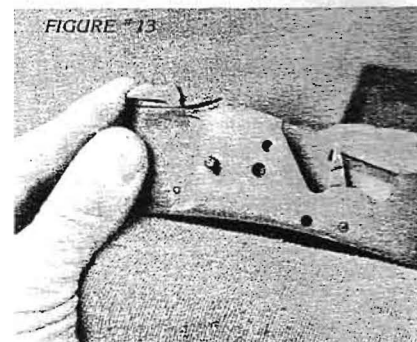


Rotate the Sear and with the aid of the punch, position the rear end of the Trigger/Sear Spring against the rear surface of the Frame.

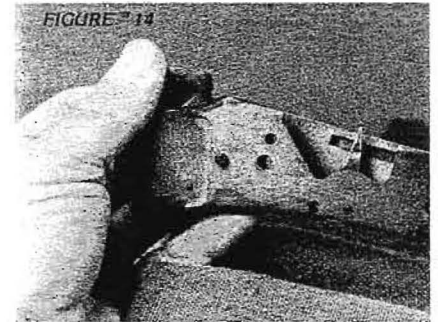
Rotating the Sear with the tip of the middle finger, compress the Trigger/Sear Spring as shown in Figure # 12.



Maintaining compression on the Trigger/Sear Spring, position the Hammer with the Mainspring Guide for installation and install the Hammer Pin from right to left as shown in Figure # 13.



Maintaining compression on the Trigger/Sear Spring, pull the Hammer fully to the rear and release the Sear as shown in Figure # 14.

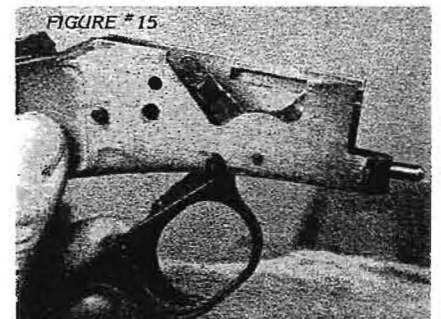


The Hammer is now holding the Trigger/Sear Spring compressed between the Sear and the rear of the frame.

### B. COCKING LEVER ASSEMBLY AND COCKING LEVER LINK

While maintaining the Hammer fully to the rear, install the Cocking Lever and Cocking Lever Pin from right to left.

Rotate the Cocking Lever downward and position the stud of the Cocking Lever Link in the elongated hole of the Cocking Lever as shown in Figure # 15. The Cocking Lever Link fits in the right side of the Cocking Lever.



Maintaining this engagement, align the holes of the Link and Frame and install the Link Pin from right to left.

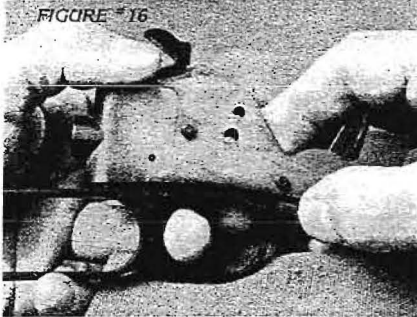
### C. MAINSPRING AND MAINSPRING FOLLOWER

**NOTE:** The installation of the Mainspring by Browning service personnel is accomplished by using a special tool. However, it may be accomplished without this special tool by following these instructions carefully.

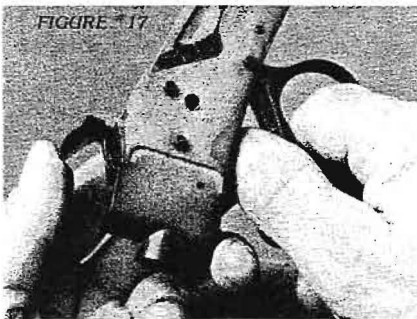
Holding the Frame upright, raise the end of the Mainspring Guide on the Hammer and position the Mainspring and Mainspring Follower on the Mainspring Guide for installation down through the top of the Frame.



Close the Cocking Lever, pull the Trigger, and *slowly* push the Hammer forward. *Push the Hammer forward only far enough to allow the front end of the Mainspring Follower to drop into its recess in the Cocking Lever while pushing on the front end of the Mainspring Follower as shown in Figure # 16.*



When the forward end of the Mainspring Follower drops into its recess, put *slight* rearward pressure on the Hammer and open the Cocking Lever. Maintain slight back pressure on the Hammer and with the small finger, push upward in the center of the Mainspring to align the ends of the Follower and Guide as shown in Figure # 17. When they are aligned, pull the Hammer back to the half cocked position. **MAINTAIN IT THERE** or else the Trigger/Sear Spring will become disengaged.



With the Cocking Lever open, observe the Trigger/Sear Spring is still positioned squarely between the Sear and the back of the Frame. If it has become dislocated, the entire procedure must be repeated with complete disassembly of the Frame Assembly except for the Sear.

**NOTE:** If the Trigger/Sear Spring became dislocated, the Hammer was allowed to go too far forward.

Close the Cocking Lever.

#### D. CARRIER AND HAMMER BLOCK

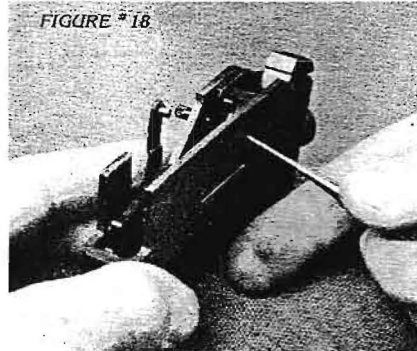
Grp the rear end of the Frame in a padded vise and *partially* install the Carrier Pin into the right side of the Frame.

Place the Carrier Spring on the Carrier Pin with hook end toward the center of the Frame.

Place the Carrier, with the Carrier Guide Pin at the bottom, on the Carrier Pin.

Position the straight leg of the Carrier Spring against the right shoulder of the Frame and the hooked end of the Spring under the Carrier.

Push downward on the Carrier and install the Hammer Block to the left of the Carrier with the orientation as shown in Figure # 18.



Align the holes of the Hammer Block and Frame with a  $\frac{1}{8}$ " punch and complete installation of the Carrier Pin.

#### E. COCKING LEVER LINK ADJUSTMENT PROCEDURE

If the Cocking Lever Link has been replaced, adjustment to it may be necessary.

With the Cocking Lever closed, depress the Carrier and position the Carrier Guide Pin under the forward end of the Cocking Lever Link. If it will not fit under the Link, the Link must be removed and adjusted as follows:

1. With the Hammer still in the half cock position, close the Cocking Lever fully.
2. Remove the Cocking Lever Link Pin from left to right.
3. Open the Cocking Lever only far enough to remove the Link and then close the Cocking Lever.
4. File material away from Cocking Lever Link at the point of interference. Remove material from the pointed end rearward for approximately  $\frac{1}{4}$ ".
5. Properly adjusted there should be approximately .030 inch clearance between the Carrier Guide Pin, when positioned under the Link, and the Link itself with the Cocking Lever completely closed.

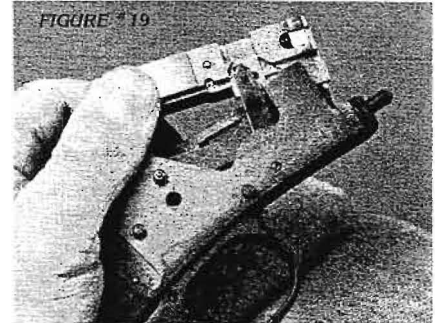
6. After adjustment, reinstall the Cocking Lever Link and drive all pins flush with the Frame.

**NOTE:** Do not open the Cocking Lever any further than necessary to reinstall the Cocking Lever Link.

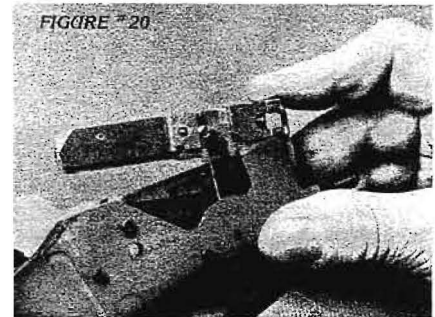
#### F. BOLT

With the Cocking Lever closed, position the Carrier Guide Pin below the forward end of the Cocking Lever Link.

Arrange the relationship of the Locking Block, Bolt and Cocking Lever Link as shown in Figure # 19.



Position the rail on the left side of the forward end of the Bolt in the slot in the Frame as shown in Figure # 20 and drop the Bolt into the Frame with the Carrier Guide Pin still under the Link.



**NOTE:** If a new Locking Block has been added to the assembly, check to see that interference does not exist between the top of the Locking Block and the bottom of the Bolt by placing the Hammer to the full cock position and observing between the two.

Additionally, observe through the Take Down Screw hole in the Frame that the Take Down Screw will not interfere with the Locking Block.

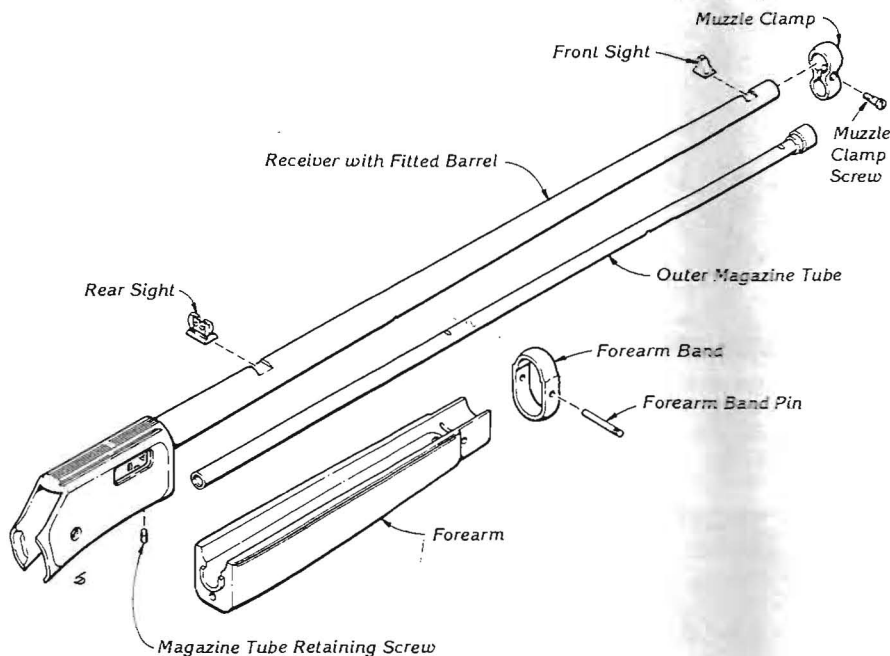
Remove any interferences of the Locking Block with the Bolt and the Take Down Screw at this time.

**NOTE:** If the Cocking Lever Stop Button has been replaced, cock the Hammer and check to see that the Sear Link engages

the Sear when the Trigger is pulled. If not, file away a small amount of the Stop Button to allow for the engagement.

**NOTE:** If the Cocking Lever Stop Button has been filed on to adjust, and if the Cocking Lever Link has been replaced with a new part, check and adjust the Cocking Lever Link if required, as previously discussed in Para. 8E.

## 9. DISASSEMBLY OF THE BARREL/RECEIVER ASSEMBLY (Figure #21)



With the Inner Magazine Tube removed, the Barrel Assembly may be disassembled by first driving out the Front Sight from left to right.

**NOTE:** Use a brass punch in removal of the sight to prevent damage.

Remove the Magazine Tube Retaining Screw, Muzzle Clamp Screw and Muzzle Clamp.

The Outer Magazine Tube may now be withdrawn from the Assembly.

Drive out the Forearm Band Pin from left to right and remove the Band and Forearm.

If desired, the Rear Sight may be removed by driving out from left to right.

**NOTE:** Do not attempt to separate the Barrel from the Receiver.

## 10. BARREL/RECEIVER ASSEMBLY INSPECTION PROCEDURE

Check to see the Ejector Pin in the top of the Receiver is intact and not bent or broken. If broken, it is recommended the Barrel Assembly be

replaced due to the difficulty in replacing the Pin.

**NOTE:** In early production, spare Receivers and Barrels came separately. Due to the difficulty in fitting, they both now come as one assembly.

Ascertain the Lock Insert in the top of the Receiver is intact and not loose. If missing, a new insert may be silver soldered back in and the Barrel Assembly reblued. It is advisable to run a Sporting Long Rifle Chamber Reamer into the Chamber before reassembly. It has been found that this can cure some extraction problems.

## 11. REASSEMBLY OF THE BARREL/RECEIVER ASSEMBLY

Install the Forearm, Band and Pin from right to left. Position the Muzzle Clamp on the Barrel and install the Outer Magazine Tube and Retaining Screw located in the Receiver.

Position the Muzzle Clamp approximately  $3/32$ " from the knob on the end of the Outer Magazine Tube and install the Clamp Screw.

Install both sights from right to left with the aid of a brass punch to prevent marring.

## 12. REASSEMBLY AND LOCKING SYSTEM INSPECTION PROCEDURE

Clamp the Barrel Assembly inverted in a padded vise and position the Ejector and Ejector Spring in the Receiver. Hold the Ejector *level* and slightly against the Ejector Spring as shown in Figure #22.

Holding the Ejector *level*, insert the Frame Assembly in the Receiver as shown in Figure #23.



FIGURE #22



FIGURE #23

**NOTE:** In order to install the Frame Assembly, the Cocking Lever must be opened sufficiently to drop the Locking Block to prevent its interference with the Receiver.

**NOTE:** If the Bolt has been replaced, some fitting will probably be required. Interference is likely to exist at the top of the Bolt which will have to be ground off and polished.

Check also to see that interference does not exist on the sides of the Bolt.

Install the Take Down Screw and cycle the Action to ascertain proper and smooth operation.

With the Action closed as shown in Figure #24, observe the stud of the Cocking Lever Link must be *fully* forward in the slot in the Locking Block. Additionally, the top of the Locking Block must be engaged fully against the Lock Insert in the top of the Receiver.



FIGURE #24

**NOTE:** If the Locking Block has been replaced due to wear, it may be necessary to hone a small amount from its rear top edge so it will engage the Lock Insert.

**CAUTION:** Do not remove too much material as excessive headspace will result.

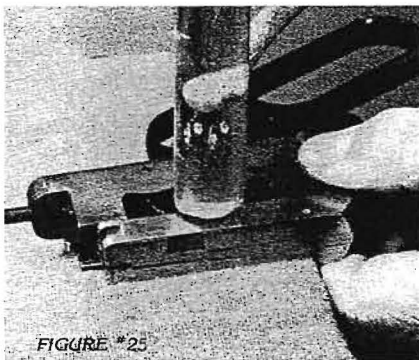
If the stud of the Cocking Lever Link is not fully forward in the elongated slot of the Locking Block, the Cocking Lever and/or Cocking Lever Link are bent and must be replaced.

After it has been determined the assembly is correct, remove the Take Down Screw and Frame Assembly for installation of the Bolt Cover Plate.

### 13. BOLT COVER PLATE INSTALLATION

Remove the Bolt Assembly from the Frame Assembly.

Holding the forward end of the plate in place as shown in Figure #25, tap the rear end into place with a plastic mallet so as not to mar the plate.



If the cover bows in the center, the plate is too long. To correct, file a *very small amount* of material away from the rear edge of the plate.

After installation of the Bolt Cover Plate, the Bolt may be staked in two places at the rear end of the plate to further captivate it.

**NOTE:** Make sure the Bolt Cover Plate's corners do not extend beyond the edge of the Bolt.

### 14. FINAL ASSEMBLY AND INSPECTION

The rifle may now be completely reassembled using the procedures previously given starting at Para. 12 of this Section.

If necessary, tap forward on the back of the Frame Assembly to facilitate the installation of the Take Down Screw.

**NOTE:** Do not over-tighten the screw.

Install the Butt Stock using the special screwdriver to prevent damage to the Stock.

Cycle the Action, Hammer and Trigger Mechanisms to see the assembly is correct and the Action works smoothly.

Check the function of the rifle by cycling dummy rounds through the Action.

Check for proper headspace using a commercial headspace gauge, i.e. .043 to 0.051" specification.

Inspect the rifle to Para. 1, Section III, "PRE-DISASSEMBLY INSPECTION."

## SECTION V

### TROUBLE SHOOTING/POSSIBLE CAUSES

**CAUTION:** Make sure rifle is unloaded before performing any trouble shooting.

#### 1. FAILS TO FEED/JAMS

- A. Bent Cocking Lever.
- B. Burrs in cartridge head slot in face of the Bolt.
- C. Broken Firing Pin resulting in burred Chamber. (Rearm with a Sporting Chamber Reamer.)

#### 2. FAILS TO EXTRACT OR HARD EXTRACTION

- A. Broken or improper Extractor installation.
- B. Weak Extractor Spring.
- C. Chamber too tight.
- D. Failure of Bolt to lock up properly and Extractor not engaged on the rim of the shell.

#### 3. FAILS TO EJECT

- A. Broken Ejector Pin.
- B. Check for worn Extractor and/or Ejector.
- C. Missing Ejector and/or Ejector Spring.

#### 4. FAILS TO COCK

- A. Sear Spring missing or improperly positioned.
- B. Weak Sear Spring, replace with a Trigger Spring, P/N PO64696.

#### 5. RUPTURES CASES

- A. Excessive headspace.
- B. Possibly due to ammunition problems. If condition repeats, change to new style Bolt.

#### 6. FAILS TO FIRE

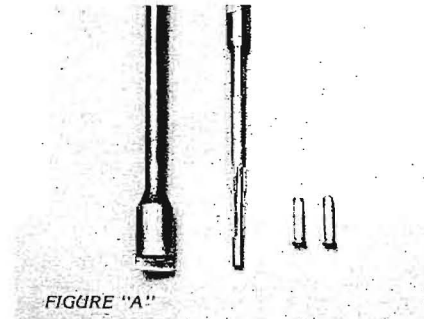
- A. Sear Link not making contact with the Sear. Check for a bent Cocking Lever or file down the Cocking Lever Stop Screw if it has been replaced.
- B. Broken Firing Pin.

## SECTION VI

### SPECIAL INSTRUCTIONS

#### 1. SPECIAL TOOLS

The following special tools shown in Figure "A" are recommended in servicing the BL-22.



From left to right:

- 1. Stock Bolt removal screwdriver.
- 2. .22 Long Rifle Sporting Chamber Reamer.
- 3. .22 Rimfire Headspace Gauges.

#### 2. RECOMMENDED POINTS OF LUBRICATION DURING REASSEMBLY

Use Browning Gun oil lightly in the following areas:

- 1. Bolt Locking Block Slot.
- 2. Rubbing surfaces of the Bolt.
- 3. Mainspring Guide.
- 4. Trigger Assembly.
- 5. Cocking Lever Pin.

