B-2000 FIELD SERVICE MANUAL

BROWNING

BROWNING FIELD SERVICE MANUAL
B-2000
12 and 20 GAUGE

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 carrying out 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, cautions and notes on any step involving assembly or reassembly 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.

SAFETY WARNING

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 at all times during service procedures.
3. As noted in the attached parts list on Pages 2 & 3, some of the Browning supplied spare parts must be fitted by Browning Service Dept. in Arnold, Missouri, or trained 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 firearm and extra copies may be obtained by contacting Browning, Route # 1, Morgan, Utah, 84050.
5. Section VI provides lists of special tools which may be required and the recommended points of lubrication.

SECTION I

B-2000
12 and 20 GAUGE
DESCRIPTION AND FUNCTIONAL OPERATION

The B-2000 is a semi-automatic gas operated shotgun. Some contain chrome lined Barrels and others do not. Chrome lined Barrels are so marked on the right side of the Barrel. Magnum 3" shells or 2 3/4" shells may be used by changing to Barrels appropriately chambered.

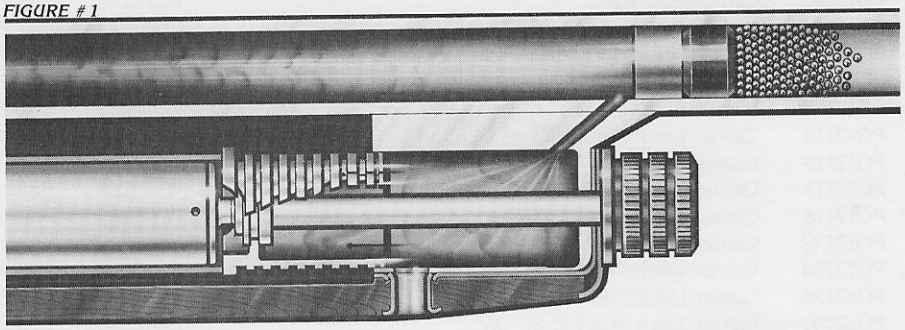
For the purpose of functional operation explanation, assume the gun is loaded with shells in the chamber and the magazine. Shells are retained in the magazine by the Cartridge Stop located in the bottom of the Bolt Slide.

The Safety is a crossbolt type blocking Trigger movement when in the "ON SAFE" position. When the Trigger is pulled with the Safety in the "OFF SAFE" position, it rotates about its pin causing the Disconnector to move forward against the Sear. This causes the Sear to disengage the Hammer which is driven forward by two compressed Mainsprings. The Hammer strikes the Firing Pin which moves forward to further compress the Firing Pin Spring and ignite the primer of the chambered shell.

As the shot and wad column travel down the Barrel and pass the Barrel Gas Orifice, gas pressure is bled into the Magazine Tube (gas cylinder) to force the Gas Piston Assembly approximately 3/4" to the rear. The Gas Piston Assembly stops against a buffer, the Magazine Base, while its momentum is imparted to the Inertia Piece by contact with the Gas Piston Bar.

Un-needed gas pressure is bled forward through an orifice in the Magazine Cap. Pressure is vented through the cap when the Gas Piston Assembly has traveled sufficiently to the rear to withdraw the Gas Piston Valve from the orifice in the Gas Cylinder Plug as shown in Figure # 1. The Forearm Cap Buffer cushions the forward movement of the Gas Cylinder Plug.

FIGURE # 1



Through connection with the Action Bars, the retracting Inertia Piece starts the Bolt Slide moving rearward as it also compresses the Action Spring located around the Magazine Tube. The retracting Bolt Slide cams the Locking Block downward and out of its locking notch located in the Barrel extension. This action unlocks the Bolt Assembly. After the Bolt Assembly is unlocked, the Bolt Slide makes positive contact with the Bolt and carries it to the rear.

As the Bolt Assembly retracts, the shell in the Magazine Tube to be chambered travels along with the Bolt Assembly by pressure from the Magazine Spring. The shell from the Magazine, in moving to the rear, strikes the Carrier Latch Trip and comes to rest against it and above the Carrier. When the Carrier Latch Trip is struck, the Carrier is released from the Carrier Latch but is immediately caught by the Carrier Release which is located on the inside of the right Receiver wall.

The retracting Bolt Assembly extracts the empty shell which is finally ejected from against a radiused cutout on the left side of the Barrel extension which serves as an Ejector.

After the empty shell is ejected, approximately 1/4" further movement of the Inertia Piece to the rear brings a camming surface of the Right Action Bar into contact with the Carrier Release. The camming surface of the Right Action Bar causes the Carrier Release to rotate and disengage from the Carrier. When the Carrier is released, it raises under pressure from the Carrier Spring lifting the shell above it for chambering. When the Carrier raises, the Carrier Cartridge Stop is allowed to raise to prevent additional shells from being fed from the Magazine.

After it has over-ridden and cocked the Hammer, the Bolt Assembly stops its rearward movement against the Receiver Buffer. The compressed Action Spring then starts the Bolt Assembly moving forward. In moving forward, the Bolt Assembly chambers the shell lifted by the Carrier and cams the Carrier downward. In moving downward, the Carrier makes contact with and moves the Carrier Cartridge Stop downward releasing the next shell in the Magazine. The shell released from the Magazine is caught by the Cartridge Stop which, as previously stated, is located in the bottom of the Bolt Slide. The Carrier is cammed fully downward and is caught by the Carrier Latch.

This completes the cycle of firing, extraction, ejection and loading. If the Trigger is held to the rear throughout this cycle, the gun cannot fire fully automatic. This is due to the Disconnector being unable to engage the Sear unless the Trigger has been released.

When the last shot is fired, the Bolt Assembly remains open. This is due to the Bolt catching on the Carrier Dog. The Bolt can't release from the Carrier Dog until the Carrier is allowed to rotate. The Carrier is prevented from rotating by the Carrier Latch. When the Carrier Latch Trip is manually depressed, the Carrier is released and allowed to rotate. The Bolt Assembly is then moved to the closed position by the compressed Action Spring.

SECTION II

PARTS LIST B-2000
12 and 20 GAUGE

	PART NO.	PART NAME
	PO12001	Action Bar Left
	PO12005	Action Bar Right
*	PO12010	Action Bar Rivet (4)
	PO12012	Action Spring 12 Ga.
	PO12014	Action Spring 20 Ga.
*	PO12024	Barrel Ring 12 Ga.
*	PO12025	Barrel Ring 20 Ga.
*	PO12028	Barrel Guide
*	PO12034	Bolt 12 Ga.
*	PO12036	Bolt 20 Ga.
	PO12040	Bolt Slide 12 Ga.
	PO12042	Bolt Slide 20 Ga.
*	PO12046	Butt Plate 20 Ga.
*	PO12047	Butt Plate 12 Ga.
	PO12049	Butt Plate Screw
	PO12052	Butt Stock 12 Ga.
	PO12054	Butt Stock 12 Ga. Trap
	PO12056	Butt Stock 12 Ga. Skeet
	PO12058	Butt Stock 20 Ga.
*	PO12068	Carrier 12 Ga.
*	PO12070	Carrier 20 Ga.
	PO12075	Carrier Cartridge Limit Pin
	PO12079	Carrier Cartridge Pin 12 Ga.
	PO12080	Carrier Cartridge Pin 20 Ga.
	PO12081	Carrier Cartridge Spring
	PO12085	Carrier Cartridge Stop 12 Ga.
	PO12087	Carrier Cartridge Stop 20 Ga.
	PO12090	Carrier Dog 12 Ga.
	PO12092	Carrier Dog 20 Ga.
	PO12095	Carrier Dog Pin
	PO12098	Carrier Dog Spring
	PO12101	Carrier Dog Spring Guide
	PO12105	Carrier Latch 12 Ga.
	PO12107	Carrier Latch 20 Ga.
	PO12112	Carrier Latch Pin 12 Ga.
	PO12113	Carrier Latch Pin 20 Ga.
	PO12115	Carrier Latch Spring
	PO12118	Carrier Latch Spring Plunger
	PO12122	Carrier Latch Trip 12 Ga.
	PO12124	Carrier Latch Trip 20 Ga.
	PO12128	Carrier Latch Trip Pin 12 Ga.
	PO12130	Carrier Latch Trip Pin 20 Ga.
	PO12132	Carrier Pin
	PO12136	Carrier Release 12 Ga.
	PO12138	Carrier Release 20 Ga.
	PO12142	Carrier Release Pin
	PO12146	Carrier Spring
	PO12150	Cartridge Stop
	PO12156	Cartridge Stop Pin
	PO12159	Cartridge Stop Spring
*	PO12162	Disconnector
	PO12168	Disconnector Pin
	PO12171	Disconnector Spring
	PO12173	Disconnector Spring Plunger
	PO12176	Extractor
	PO12182	Extractor Spring
	PO12186	Extractor Spring Plunger
	PO12190	Firing Pin
	PO12195	Firing Pin Bushing
	PO12198	Firing Pin Bushing Pin
	PO12202	Firing Pin Spring
	PO12206	Forearm 12 Ga.
	PO12208	Forearm Semi-Beavertail 12 Ga.
	PO12212	Forearm Field 20 Ga.
	PO12216	Forearm Bushing 12 Ga.
	PO12218	Forearm Bushing 20 Ga.
	PO12220	Forearm Bushing Washer 20 Ga. only
	PO12222	Forearm Cap 12 Ga.
	PO12224	Forearm Cap 20 Ga.
	PO12227	Forearm Cap Buffer 12 Ga.
	PO12229	Forearm Cap Buffer 20 Ga.
	PO12231	Forearm Cap Buffer Washer 20 Ga. only
	PO12232	Forearm Cap Plunger
	PO12237	Forearm Cap Plunger Spring
*	PO12240	Forearm Liner 12 Ga.
*	PO12242	Forearm Liner 20 Ga.
*	PO12246	Forearm Tab 12 Ga.
*	PO12248	Forearm Tab 20 Ga.
	PO12252	Gas Cylinder Plug 12 Ga.
	PO12254	Gas Cylinder Plug 20 Ga.
	PO12262	Gas Piston 12 Ga.
	PO12264	Gas Piston 20 Ga.
	PO12268	Gas Piston Bar 12 Ga.
	PO12270	Gas Piston Bar 20 Ga.
	PO12272	Gas Piston Bar Guide 12 Ga.
	PO12274	Gas Piston Bar Guide 20 Ga.
	PO12276	Gas Piston Buffer 12 Ga.
	PO12278	Gas Piston Buffer 20 Ga.
	PO12282	Gas Piston Spring 12 Ga.
	PO12284	Gas Piston Spring 20 Ga.
	PO12287	Gas Piston Valve 12 Ga.
	PO12289	Gas Piston Valve 20 Ga.
*	PO12292	Hammer 12 Ga.
*	PO12294	Hammer 20 Ga.
	PO12298	Hammer Pin 12 Ga.
	PO12299	Hammer Pin 20 Ga.
	PO12302	Inertia Piece 12 Ga. w/Action Bars Complete
	PO12304	Inertia Piece 20 Ga. w/Action Bars Complete
	PO12308	Locking Block 12 Ga.
	PO12310	Locking Block 20 Ga.
	PO12312	Magazine Adaptor Three Shot
	PO12315	Magazine Base 12 Ga.
	PO12318	Magazine Base 20 Ga.
	PO12320	Magazine Base Pin 12 Ga.
	PO12322	Magazine Base Pin 20 Ga.
	PO12324	Magazine Follower 12 Ga.
	PO12326	Magazine Follower 20 Ga.
	PO12330	Magazine Spring 12 Ga.
	PO12332	Magazine Spring 20 Ga.
*	PO12336	Magazine Tube 12 Ga.
*	PO12338	Magazine Tube 20 Ga.
	PO12342	Mainspring - Right or Left
	PO12348	Mainspring Guide - Right or Left
	PO12352	Mainspring Pin - Hammer 12 Ga.
	PO12354	Mainspring Pin - Hammer 20 Ga.
	PO12356	Mainspring Pin - Trigger Guard 12 Ga.

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

† Part may be purchased only by holders of current valid Federal Firearms License.*

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

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

	PART NO.	PART NAME
	PO12358	Mainspring Pin - Trigger Guard 20 Ga.
	PO12360	Operating Handle 12 Ga.
	PO12362	Operating Handle 20 Ga.
	PO12366	Operating Handle Retainer
	PO12370	Operating Handle Retainer Pin
	PO12374	Operating Handle Retainer Spring
†*	PO12378	Receiver Assembly 12 Ga.
†*	PO12380	Receiver Assembly 12 Ga. Trap & Skeet
†*	PO12384	Receiver Assembly 20 Ga.
†*	PO12386	Receiver Assembly 20 Ga. Skeet
	PO12394	Receiver Buffer 12 Ga.
	PO12396	Receiver Buffer 20 Ga.
*	PO12398	Safety Crossbolt
	PO12402	Safety Spring
	PO12406	Safety Spring Plunger
	PO12408	Safety Spring Retaining Pin
*	PO12415	Sear 12 Ga.
*	PO12417	Sear 20 Ga.
	PO12420	Sear Pin
	PO12421	Sight Base Front
	PO12422	Sight Bead Front
	PO12424	Stock Bolt
	PO12428	Stock Bolt Washer
*	PO12432	Trigger 12 Ga.
*	PO12434	Trigger 20 Ga.
	PO12438	Trigger Pin
	PO12442	Trigger Guard 12 Ga.
	PO12445	Trigger Guard 20 Ga.
	PO12452	Trigger Guard Retaining Pin 12 Ga.
	PO12453	Trigger Guard Retaining Pin 20 Ga.
	PO12454	Trigger Guard Retaining Pin Bushing
	PO12458	Trigger Guard Retaining Pin Spring
	PO12462	Trigger Guard Shield 12 Ga.
	PO12464	Trigger Guard Shield 20 Ga.

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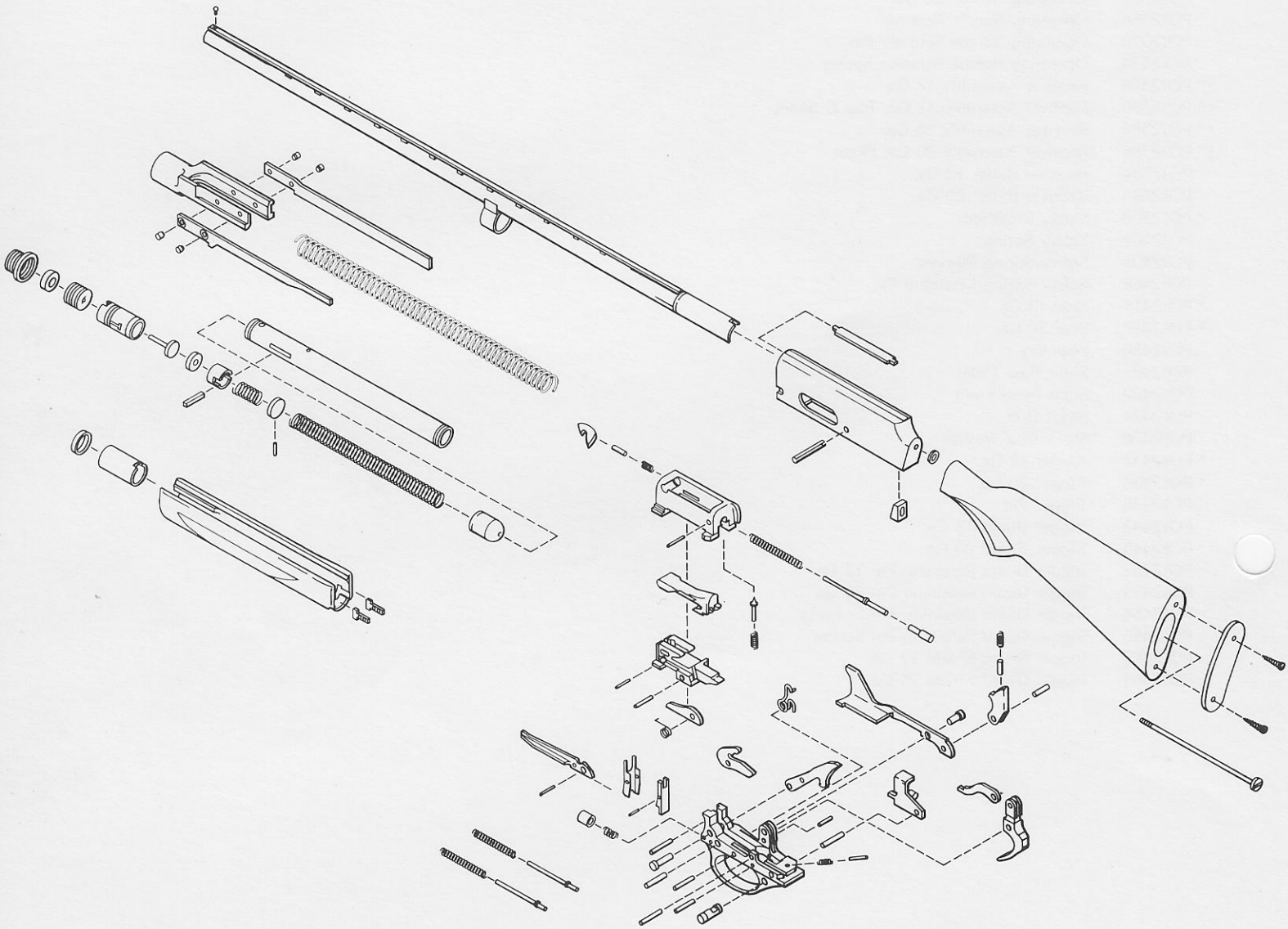
NOTE: Unless otherwise indicated, part is interchangeable between gauges/calibers.



SECTION III

DISASSEMBLY INTO SUB-ASSEMBLIES

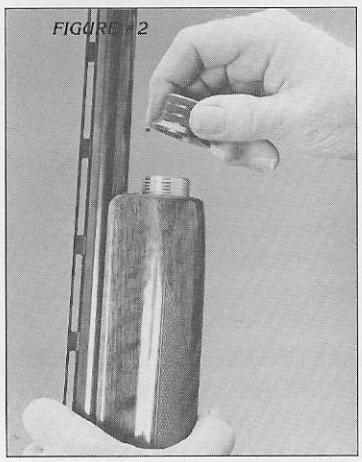
SAFETY WARNING **CAUTION:** Make sure the gun is unloaded before any inspection or disassembly operations are performed.

1. HAND DISASSEMBLY

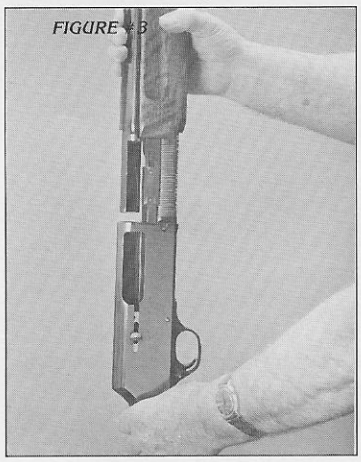
A. BARREL AND FOREARM

Place the Safety to the "ON SAFE" position and draw the Bolt Assembly rearward by the Operating Handle until it remains locked in the open position.

Remove the Forearm Cap as shown in Figure #2.



Grip the Forearm and Barrel together and move them forward and off the Receiver Assembly as shown in Figure #3.

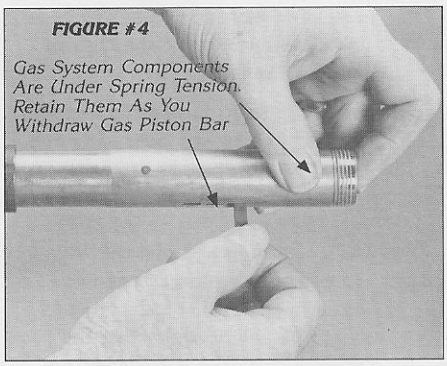


B. GAS PISTON ASSEMBLY

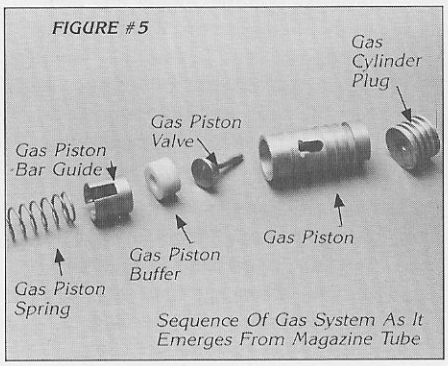
With the Bolt Assembly locked to the rear, remove the Gas Piston Bar by pushing it from one side and withdrawing it from the other as shown in Figure #4.

SAFETY WARNING **CAUTION:** Retain the Gas Piston Assembly components with the other hand when removing the Gas Piston Bar as they are spring-loaded.

NOTE: Be extremely careful not to trip the Carrier Latch, (Figure #6) and let the Bolt Assembly slam forward with the Gas Piston Bar removed or the Receiver will be damaged.



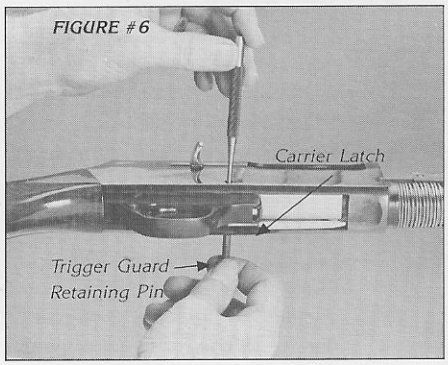
Ease the Gas Piston Assembly components out of the Magazine Tube as shown in Figure #5.



C. TRIGGER GUARD ASSEMBLY

Hold onto the Operating Handle, trip the Carrier Latch (Figure #6) and slowly ease the Bolt Assembly forward.

NOTE: If the Breech Bolt is allowed to fly forward the Operating Handle will put a dimple in the forward end of the Ejection Port.



Remove the Trigger Guard Retaining Pin with a 1/8" punch as shown in Figure #6.

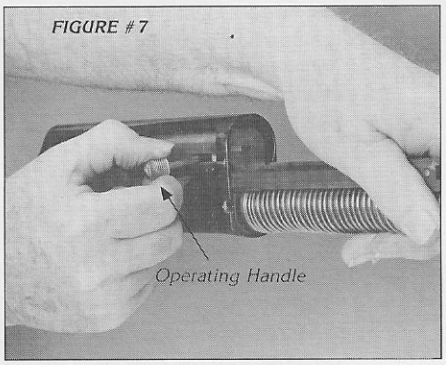
Pull the forward end of the Trigger Guard Assembly slightly downward, push the assembly forward and remove by lifting the rear end of the assembly out of the Receiver.

NOTE: Use care not to damage the Receiver with the forward end of the Carrier Cartridge Stop.

D. OPERATING HANDLE

Rest the Butt Stock on a solid work surface, grasp the Inertia Piece and compress the Action Spring several inches.

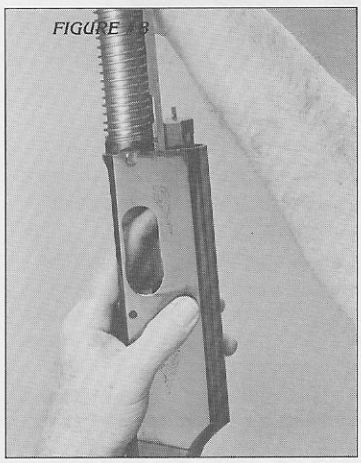
Remove the Operating Handle by pulling it straight out of the Bolt Assembly as shown in Figure #7.



NOTE: The use of a pair of pliers may be necessary.

E. INERTIA PIECE ASSEMBLY AND BOLT ASSEMBLY

With the Butt Stock resting on a solid work surface, ease the Inertia Piece Assembly forward and off the Magazine Tube after depressing the Cartridge Stop with a finger of the other hand as shown in Figure #8.



SAFETY WARNING **CAUTION:** Use care not to let the spring-loaded components fly off the Magazine Tube.

Remove the Inertia Piece Assembly, Bolt Assembly and Recoil Spring.

SECTION IV

DISASSEMBLY OF SUBASSEMBLIES INTO COMPONENT PARTS, INSPECTION & REASSEMBLY OF SUBASSEMBLIES

1. PRE-DISASSEMBLY INSPECTION OF THE TRIGGER GUARD ASSEMBLY

NOTE: B-2000 production in the mid-1970's incorporated a modification to the Trigger Guard Assembly. This modification encompasses the Carrier Assembly, the Trigger Guard housing, the Trigger and the Safety Spring.

The Trigger Guard Assembly of the gun being repaired must be updated if it is not to the latest configuration. One method which may be used to determine whether or not the Trigger Guard Assembly is the updated version is to look for a relief hole in the Trigger Guard housing. The updated version has the relief hole. This hole is approximately .275" in diameter located just forward of the Trigger slot and is centered with the Sear as shown in Figure #9.

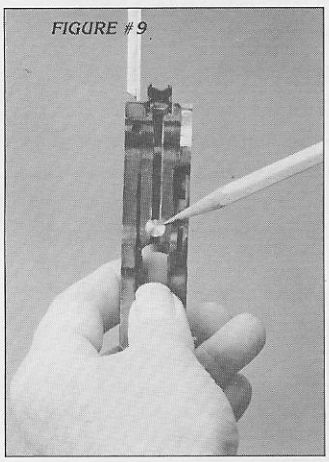


FIGURE #9

The purpose of the hole is to provide a relief for debris that may accumulate under the Sear.

Complete modification procedures for the Trigger Guard Assembly is given in Section VI. If modification is necessary, proceed with disassembly of the Trigger Guard Assembly as in Para. 2 of this section. If modification is not necessary, proceed with the following inspections:

A. Check the Trigger pull for a let-off force of 4 to 5 lbs. for target guns and 5 to 6 lbs. for field guns.

B. With the Hammer in the cocked position, observe positive engagement with the Sear.

C. With the Hammer cocked, place the Safety to the "ON SAFE" position; see that it does not bind in moving and that it detents positively into the "ON SAFE" and "OFF SAFE" positions.

D. With the Hammer cocked and the safety in the "OFF SAFE" position, pull slightly on the Trigger and make sure that the Trigger has a slight pre-travel before the Disconnector contacts the Sear.

E. Make sure that the Disconnector does not contact the Sear when the Trigger is pulled while the Safety is in the "ON SAFE" position. To do this, place the Safety in the "ON SAFE" position and pull the Trigger while depressing the Disconnector with a finger. In this fashion, you should be able to verify that the Disconnector does not contact the Sear.

F. With the Safety in the "OFF SAFE" position, pull the Trigger and hold in the fired position. With the other hand, cock and depress the Hammer slowly and observe it does not contact the Sear until the Hammer is depressed sufficiently to disengage the Disconnector from the Sear.

G. With the Hammer cocked and the Safety in the "OFF SAFE" position, pull the Trigger slightly and only partially disengage the Hammer and Sear. Release the Trigger and observe the Hammer and Sear regain to full engagement.

SAFETY WARNING

CAUTION: The searing surfaces of the Sear and Hammer must never be altered or show signs of being altered. If they have been altered or exhibit any damage, they must be replaced.

SAFETY WARNING

CAUTION: If the Trigger Guard Assembly fails to meet the foregoing inspection criteria, necessary repairs must be accomplished in order to correct those discrepancies. Repair procedures are given in this manual.

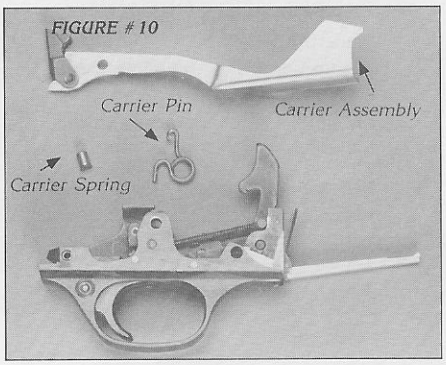
2. DISASSEMBLY OF THE TRIGGER GUARD ASSEMBLY

NOTE: Normally it is not necessary to disassemble the Trigger Guard Assembly except for updating to the latest configuration, or to check the adjustment of the Carrier as described in Section IV, Para. 6.J. Normally, cleaning with a good solvent and blowing dry with compressed air is all that is necessary.

A. CARRIER ASSEMBLY, CARRIER SPRING AND PIN (Figure #10)

Place the Hammer to the fired position and trip the Carrier Latch so the forward end of the Carrier moves upward.

Remove the Carrier Pin from left to right and remove the Carrier Assembly (Carrier Dog attached).

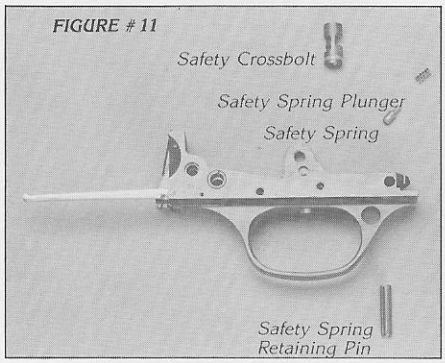


NOTE: It should not be necessary to disassemble the Carrier Assembly and it is not recommended.

Lift the Carrier Spring out of the Trigger Guard.

B. SAFETY CROSSBOLT, SAFETY SPRING AND SAFETY SPRING PLUNGER (Figure #11)

Grip the Trigger Guard Assembly in a vise and remove the Safety Spring Retaining Pin with a 1/8" punch as shown in Figure #11



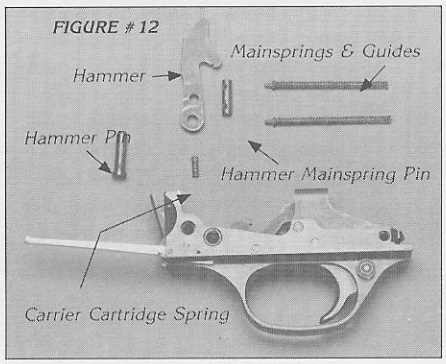
Remove the Trigger Guard Assembly from the vise; invert it and tap out the Safety Spring and plunger.

Remove the Safety Crossbolt.

C. MAINSPRINGS, MAINSPRING GUIDES, HAMMER MAIN SPRING PIN, HAMMER, HAMMER PIN AND CARRIER CARTRIDGE SPRING (Figure #12)

Grasp the Mainsprings with pliers and compress the springs rearward along with the Mainspring Guides. Disengage the forward ends of the

guides from the Hammer Mainspring Pin and remove the springs and guides.

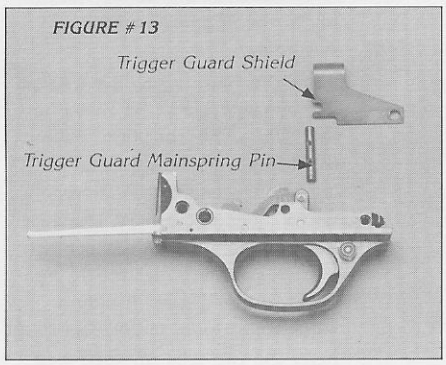


SAFETY WARNING **CAUTION:** Use care not to let the Mainsprings and guides fly out of the Trigger Guard.

Remove the Hammer Mainspring Pin, Hammer Pin and Hammer.

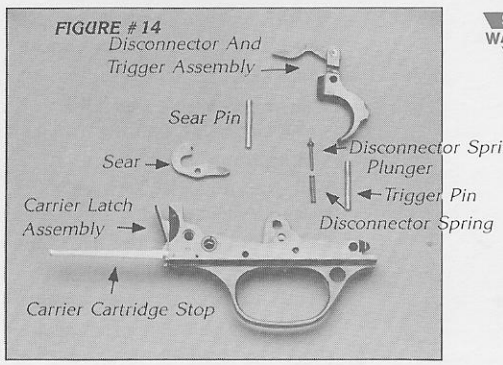
Invert the Trigger Guard and tap out the Carrier Cartridge Spring.

D. TRIGGER GUARD MAINSPRING PIN & TRIGGER GUARD SHIELD (Fig.# 13)



Remove the Trigger Guard Mainspring Pin and Trigger Guard Shield.

E. TRIGGER PIN, TRIGGER ASSEMBLY, DISCONNECTOR SPRING AND DISCONNECTOR SPRING PLUNGER (Fig. # 14)



Remove the Trigger Pin, Trigger Assembly (Disconnector attached), Disconnector Spring and plunger.

SAFETY WARNING **CAUTION:** Use care not to let the Disconnector Spring and plunger fly out of the Trigger Guard.

NOTE: Normally it is not necessary to disassemble the Disconnector from the Trigger.

F. SEAR (Figure # 14)

Remove the Sear by removing the Sear Pin from the Trigger Guard housing.

G. CARRIER LATCH ASSEMBLY AND CARRIER CARTRIDGE STOP (Figure # 14)

The removal of these components should not be necessary and is not recommended. However, if required, their removal and reinstallation are straightforward.

3. INSPECTION OF COMPONENTS AND REASSEMBLY OF THE TRIGGER GUARD ASSEMBLY

NOTE: If modification to the Trigger Guard Assembly is necessary, as determined in Section IV, Para. 1, refer to Section VI, Para. 1.0 for modification procedures.

A. TRIGGER GUARD

Inspect the Trigger Guard housing for breakage and replace it if necessary. Clean with solvent and compressed air.

NOTE: It is recommended the Trigger Guard Assembly components be reassembled clean and dry without any lubrication. If a lubricant is used, it should be a dry type.

B. CARRIER LATCH ASSEMBLY AND CARRIER CARTRIDGE STOP (Figure # 14)

Replace these components if previously removed.

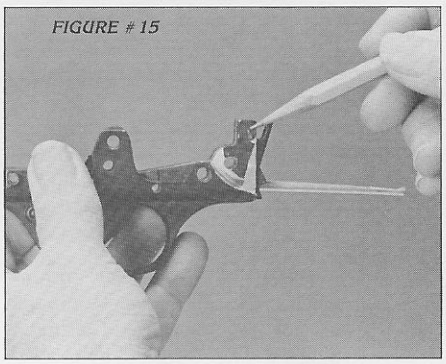
SAFETY WARNING **CAUTION:** Check the Carrier Latch Pin (Figure # 15). Make sure it is staked securely on both ends to prevent it from working out of the Trigger Guard housing and causing malfunctions.

C. SEAR (Figure # 14)

Inspect the Sear for signs of alteration or breakage and replace if found altered or chipped.

Install the Sear and Sear Pin.

NOTE: The hooked end of the Sear is installed positioned forward.



D. TRIGGER ASSEMBLY (DISCONNECTOR ATTACHED) (Figure # 14)

SAFETY WARNING **CAUTION:** Inspect the Disconnector Pin and see that it does not protrude excessively from the sides of the Disconnector. If it does, it can interfere in the Trigger Guard housing and cause malfunctions.

Lightly peen the ends of the Disconnector Pin if necessary and lightly smooth with a fine cut file.

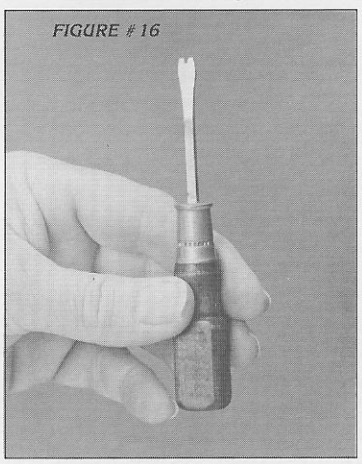
SAFETY WARNING **CAUTION:** In peening the Disconnector Pin, do not cause the Disconnector to bind in the Trigger.

Check the radius at the back of the Trigger that contacts the Safety for burrs. If burred, smooth **lightly** with a 4" fine cut half round file.

SAFETY WARNING **CAUTION:** Do not remove an excessive amount of material from the Trigger and render the Safety ineffective.

Position the Disconnector under the hooked end of the Sear, align the Trigger Pin holes and install the Trigger Pin.

E. DISCONNECTOR SPRING AND PLUNGER (Figure # 14)



Place the Disconnector Spring on its

plunger and position the parallel end of the plunger over the small hole in the top of the Sear. Using a special tool such as pictured in Figure # 16, compress the spring with the top of the plunger extending the bottom end of the plunger into the small hole in the Sear.

NOTE: The special tool in Figure # 16 may be made from a small blade screwdriver by filing a small notch in the end of the blade.

With the special tool still engaged on the plunger, position the upper end of the plunger in the small hole in the underneath side of the Disconnector.

SAFETY WARNING **CAUTION:** Use care not to let the Disconnector Plunger fly out of the Trigger Guard housing.

F. HAMMER, HAMMER PIN AND CARRIER CARTRIDGE SPRING (Figure # 12)

Inspect the Hammer Sear notch for signs of alteration and breakage. If found altered, broken or chipped, replace.

Position the Carrier Cartridge Spring (slightly longer than the Safety Spring) in its hole through the Hammer Pin Hole.

Compress the Carrier Cartridge Spring with a 1/16" punch from the top of its hole and partially insert the Hammer Pin from left to right over the spring.

Position the Hammer for installation and install the Hammer Pin completely.

G. SAFETY CROSSBOLT AND TRIGGER GUARD SHIELD (Figure # 11)

SAFETY WARNING **CAUTION:** The Safety for the B-2000 may be installed for either left or right hand shooters.

The red band is placed on the left side of the Trigger Guard for right hand shooters and is in the "ON SAFE" position when pushed fully to the right.

The red band is placed on the right side of the Trigger Guard for left hand shooters and is in the "ON SAFE" position when pushed fully to the left.

Inspect the Safety Crossbolt for burrs and chamfer all sharp edges on the Safety which will be internal and in contact with the Trigger Guard housing when installed.

Position the Trigger Guard Shield for installation aligning both holes with the holes in the Trigger Guard housing.

Grip the forward end of the Trigger Guard housing in a vise. Position the Safety for installation by orienting the "detent" side towards the Safety Spring and plunger hole and by orienting the red band correctly for left or right hand shooter.

Position the Safety Spring Plunger and Safety Spring (in that order) in their hole through the Safety Spring Retaining Pin hole. Compress the Safety Spring from its top end with a 3/32" punch and install the Safety Spring Retaining Pin (roll pin) with the gap of the pin toward the top side of the Trigger Guard.

H. MAINSPRINGS, GUIDES AND PINS (Figure # 12)

Install the Trigger Guard Mainspring Pin in the Trigger Guard aligning the two holes to receive the parallel ends of the Mainspring Guides.

Place the Hammer in the fired position and install the Hammer Mainspring Pin aligning the holes to receive the forward end of the Mainspring Guides.

Install the Mainsprings and guides using the special tool pictured in Figure # 16. The hat section of the guides are positioned forward.

SAFETY WARNING **CAUTION:** Use care not to let the spring-loaded components fly out of the Trigger Guard.

I. SAFETY AND TRIGGER MECHANISMS INSPECTION PROCEDURE

SAFETY WARNING **CAUTION:** Observe the following procedures carefully.

1. Place the Hammer to the cocked position and the Safety to the "ON SAFE" position. Pull the Trigger and observe a slight movement in the Trigger before the Trigger makes contact with the Safety. If the Trigger and Safety are fitted too tightly, a burr may develop on the Trigger making selection of the Safety difficult.

   If too tight, remove the Trigger and slightly relieve the surface contacting the Safety making sure to maintain a line-to-line contact with the radius of the Safety.

SAFETY WARNING **CAUTION:** If an excessive amount of material is removed from the Trigger, it will fail later checks and will have to be replaced.

2. Move the Safety back and forth from the "ON SAFE" to the "OFF SAFE" positions and see that it does not bind. Actuation force should be approximately 5 1/2 lbs.

   If the Safety is sticky in selection, make sure that the milled ring at the red band is not catching on the edge of the Trigger Guard housing. If the ring is not catching, the Safety Spring may be removed **and 1/2 coil only** may be cut from the spring. During reinstallation, the cut end of the spring should be oriented upward.

   If it has been determined the Safety is binding at the milled ring at the red band, remove the Safety Crossbolt and proceed as follows:

   A. Obtain a commercial brand two-part epoxy that is clear and completely fill in the milled ring over the red band.

   B. Allow the epoxy to harden and carefully file flush with the outside diameter of the Safety. Touch up with cold blue if necessary.

   C. Reinstall the Safety Assembly in the Trigger Guard Assembly.

3. Place the Hammer to the cocked position and place the Safety to the "ON SAFE" position. Pull the Trigger firmly and observe the forward end of the Disconnector does not contact the Sear. If the Disconnector does contact the Sear, there is too much pretravel in the Trigger. If only a slight adjustment is necessary, bend the two tabs on each side of the Trigger backward with a punch as shown in Figure # 17.

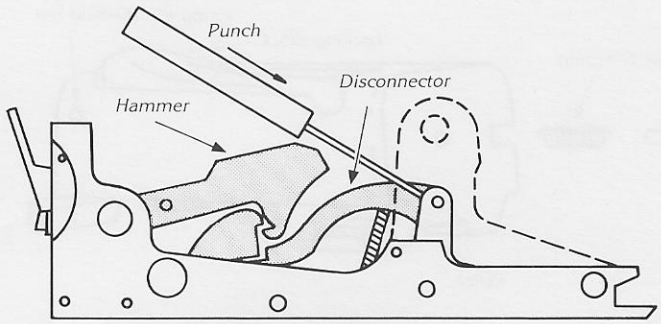
SAFETY WARNING **CAUTION:** Only a slight tap with a light hammer is necessary to bend the tabs.

If a large adjustment is necessary, over .010", a new Trigger should be fitted to allow less pretravel. See Section VI for correct procedure.

4. With the Safety in the "OFF SAFE" position, pull the Trigger and hold in the fired position. With the other hand, depress the Hammer slowly and observe that it does not contact the Sear until the Hammer is depressed sufficiently to disengage the Disconnector from the Sear.
5. Place the Hammer to the cocked position and the Safety to the "OFF SAFE" position. Slightly pull the Trigger to only partially

disengage the Sear from the Hammer. Release the Trigger and observe the Hammer and Sear regain fully in their notches.

FIGURE # 17



6. Check the Trigger pull for a let-off force of 4 to 5 lbs. for target guns and 5 to 6 lbs. for field guns. Trigger pull may be increased by replacing the Disconnector Spring and decreased by trimming off a single coil from the Disconnector Spring

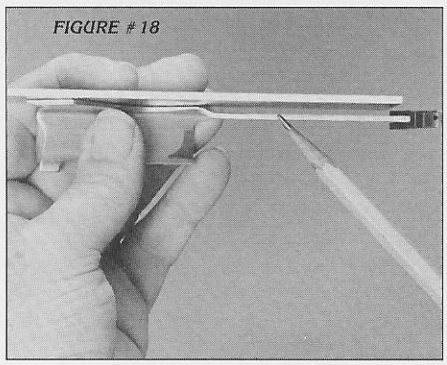
SAFETY WARNING

CAUTION: If the Trigger Guard Assembly fails to meet any of the inspection criteria given above, repair it or return the gun to the Arnold Service Center.

J. CARRIER INSPECTION AND ADJUSTMENT PROCEDURE

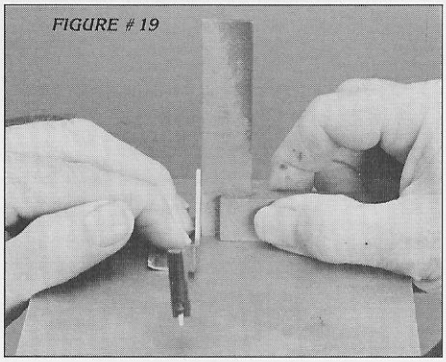
Inspection and adjustment to the Carrier is critical and is carried out on a special fixture. However, it may be accomplished by **carefully** following the procedures outlined below.

1. Lay a straight edge against the Carrier as shown in Figure # 18 and see that the slender portion of the Carrier is parallel to the straight edge.



Additionally, the gap between the slender portion of the Carrier and the straight edge should be .085" ± .004" for both 12 and 20 gauges. Bend as necessary.

2. Lay the Carrier on a flat inspection surface as shown in Figure # 19.



With a small square, check the side of the Carrier at the wide front and narrow rear sections and see they are perpendicular to the bottom. Bend as necessary.

3. Lay a straight edge against the Carrier as shown in Figure #20 and check the distance between the bottom of the Carrier Pin hole and the straight edge.

   This can be accomplished with a pair of dial calipers, also shown in Figure #20, by subtracting the thickness of the straight edge. This distance must be adjusted to .584" ± .004" for 20 Ga. and .614" ± .004" for 12 Ga. Bend as necessary.

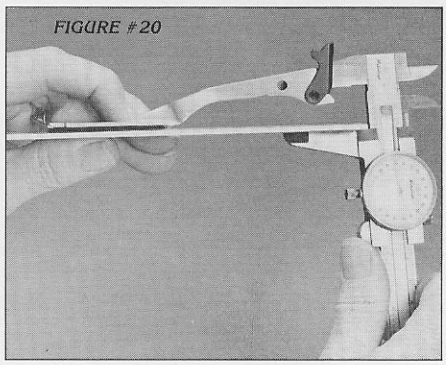
   NOTE: After making any adjustments, the Carrier must meet all three inspection parameters given above.

   NOTE: An adjustment to the Carrier Dog may be necessary. This determination must be made after complete reassembly of the gun and will be covered later in this manual.

K. INSTALLATION OF THE CARRIER ASSEMBLY

Position the Carrier Spring for installation on the Trigger Guard housing.

Compress the Carrier Spring with the Carrier, align the Carrier Pin holes and install the Carrier Pin.



4. INSPECTION OF THE BOLT SLIDE

Disassembly of the Bolt Slide should not be necessary. However, check for excessive roughness or burrs in the areas indicated in

FIGURE #21

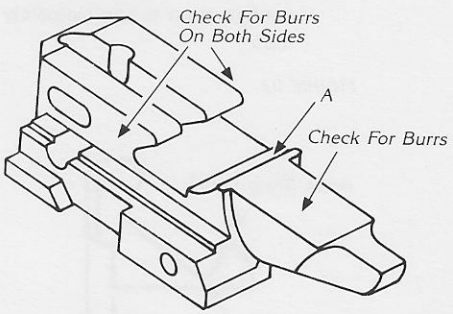


Figure #21, draw file and polish as required.

NOTE: Use care not to change the radius at point A.

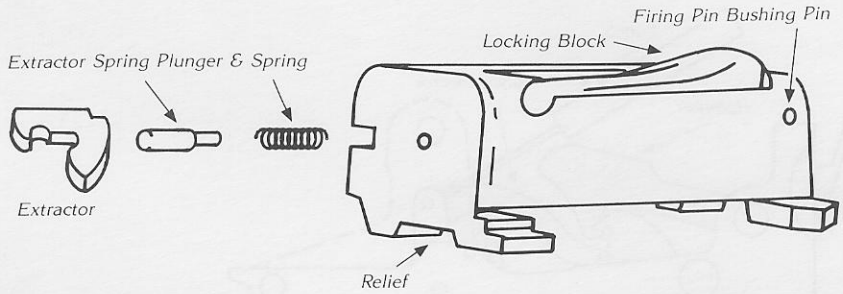
5. DISASSEMBLY OF THE BOLT ASSEMBLY

A. EXTRACTOR

Remove the Extractor by first depressing the Extractor Spring Plunger with a pointed scribe. Position the plunger under the

shoulder of the Extractor and pry the Extractor out from the inside of the Bolt.

FIGURE #22



SAFETY WARNING

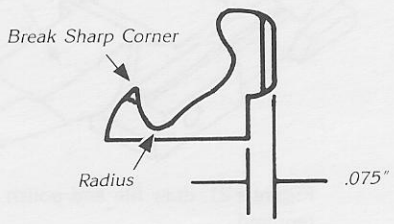
CAUTION: Use care not to let the spring and plunger fly out of the Bolt Assembly.

NOTE: Extractors on older model B-2000's should be modified to make them more effective by making the following changes: (1) changing the dimension of the Extractor and (2) removing the debris and burrs from the Extractor Spring hole. Follow the instructions below. If the B-2000 is a new model, this modification will not be necessary.

Inspect the Extractor as shown in Figure #23 for the modified or increased dimension of .075".

Either replace the old Extractor or grind to the modified dimension. This dimension in the old configuration is approximately .055".

FIGURE 23



Break the sharp edge and corner of the Extractor also shown in Figure #23. This may eliminate some feeding problems.
Grind the end of a #31 drill bit off square, or use a proper reamer, and ream out the Extractor Spring hole to remove any debris or burrs.

B. FIRING PIN AND LOCKING BLOCK

Further disassembly of the Bolt Assembly is not recommended unless necessary. However, if required, the Locking Block may be removed by first removing the Firing Pin Bushing Pin (Figure #22) and then the Firing Pin and bushing.

Inspect the Locking Block for free movement in the Bolt. If it binds, remove, deburr and polish as required. After reinstallation, check for free movement of the Firing Pin.

SAFETY WARNING

CAUTION: Inspect the forward lower edge of the Bolt for a relief as shown in Figure #22. If it does not contain this relief, modify the Bolt per instructions given in Section VI.

6. REASSEMBLY OF THE BOLT ASSEMBLY

A. EXTRACTOR, SPRING AND PLUNGER

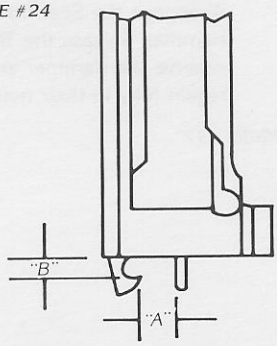
Position the Extractor Spring and plunger in the hole in the Bolt Assembly.

Compress the Extractor Spring with the Extractor and snap into position.

Inspect the Extractor's installation to the following criteria:

1. Press the Firing Pin past the fired position and check the distance "A" between the Firing Pin and point of the Extractor as shown in Figure #24.

FIGURE #24



This distance should measure .255" ± .009" for 20 Ga. and .315" ± .009" for 12 Ga.

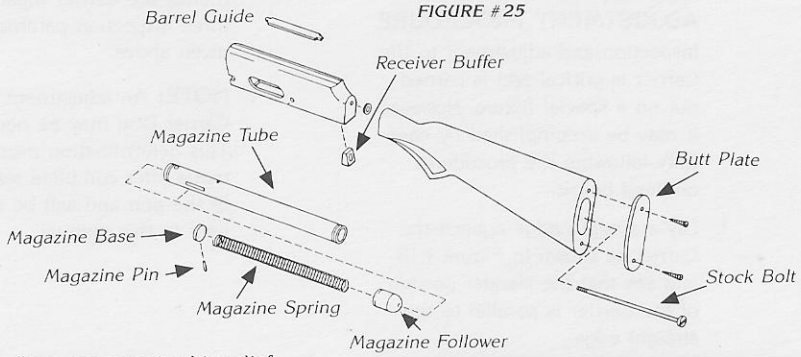
2. Measure the gap "B" between the face of the Bolt and the point of the Extractor as shown in Figure #24.

This gap should measure .098" ± .007" for both 20 and 12 gauges.

NOTE: If the Extractor fails to meet this criteria, it is suggested it be replaced rather than try to adjust it.

7. DISASSEMBLY OF THE RECEIVER ASSEMBLY (Figure #25)

FIGURE #25



If further disassembly of the Receiver Assembly is requred, proceed as follows:

A. STOCK

Remove the Butt Plate or Recoil Pad with a blade screwdriver.

Remove the Stock Bolt using a screwdriver as pictured in Section VI, Para. 5.

NOTE: A regular screwdriver is easily positioned alongside the Stock Bolt and when turned could bust out the side of the Stock.

B. RECEIVER BUFFER

Remove the Receiver Buffer after removal of the Stock by pushing it forward from the hole in the rear of the Receiver. It should be

removed for rebluing. The buffer need not be removed for cleaning.

C. MAGAZINE TUBE

The Magazine Tube is stainless steel and is screwed into the Receiver with Loctite. Its removal should not be required except for replacement due to damage. If removal is necessary, support blocks in a vise will be necessary in order to grip it properly. Additionally, the tube should be supported from the inside to prevent collapsing.

D. MAGAZINE FOLLOWER, SPRING AND MAGAZINE BASE

The Magazine Follower Spring and Magazine Base must be removed if the Receiver is to be reblued or if the Magazine Follower does not move freely in the Magazine Tube.

To remove, drive out the Magazine Base Pin with a 1/8" punch. Push out the components from the Receiver end forward using a flexible fiberglass or plastic rod as shown in Figure #26.

SAFETY WARNING

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

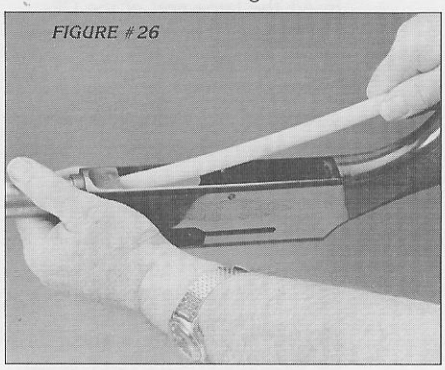


FIGURE #26

E. CARRIER RELEASE

The Carrier Release is normally not removed even for rebluing due to its difficulty in reinstallation. If the Receiver is to be reblued, leave the Carrier Release installed but very thoroughly rinse out all bluing salts.

It should be noted here the Carrier Release may have to be removed. This determination must be made after any adjustments to the Carrier Assembly are made and reassembly of the gun. The appropriate inspection procedure is given later in the Final Inspection portion of this manual.

F. BARREL GUIDE

The Barrel Guide is normally not removed even for rebluing. Inspect it to see that it is tight in the Receiver and restake it in the two places on the right side if it is loose.

G. TOP RIB (Trap Model only)

The Top Rib is fastened to the Receiver by two screws, one of which is located under the Barrel Guide. Its removal is normally not necessary except for replacement due to damage. To remove it, drive out the Barrel Guide from the hole in the rear end of the Receiver and remove the two screws.

8. INSPECTION AND RE-ASSEMBLY OF THE RECEIVER ASSEMBLY

A. RECEIVER

Inspect the Receiver for bulges on the sides. This sometimes occurs with the usage of overloads. If not too severe, re-spring to shape in a large padded vise or replace.

Inspect for burrs at the front end of the slot for the Operating Handle. This area can become deformed if the gun experienced a blown out Extractor. Reshape any damaged area and reblue if necessary.

B. MAGAZINE TUBE

Clean the inside forward end of the Magazine Tube with powder solvent and a brass brush.

If the Magazine Tube was replaced, fit a new one by removing material from the rear end. Adjust until it can be screwed into the Receiver and bottomed out with the gas orifice positioned directly on top and in line with the Barrel gas ports. After properly fitting the Magazine Tube, remove it to Loctite the threads and replace it.

Place the Barrel on the Receiver and check for a slight interference fit between the forward end of the Magazine Tube and the Barrel Ring. If these parts fit loosely, gas leakage between the two may cause malfunctions.

To tighten requires a special tool such as pictured in Figure #27.

NOTE: The special tool in Figure #27 was made from a 2 1/2" rear section of a 3 square file. The cutting surfaces have been ground off and the end ground to a taper.

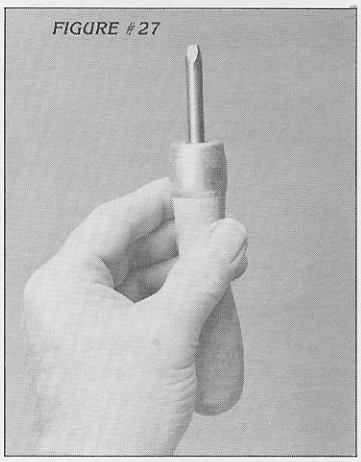


FIGURE #27

The taper should be ground so that when inserted in the gas orifice and turned with considerable downward pressure on the tool, the edge around the orifice will be raised (Figure #28).

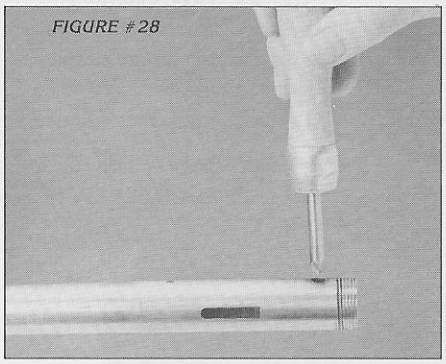


FIGURE #28

NOTE: Use care not to raise a burr on the inside edge of the orifice.

Retry the Barrel on the Receiver and adjust the raised edge around the gas orifice so that a snug fit between the Magazine Tube and Barrel Ring is obtained. This will reduce gas loss and many times will cure failure to eject problems.

Additionally, with the Barrel installed on the Receiver, check for straightness of the Magazine Tube. If the Barrel binds in the Receiver, chances are the tube is bent and must be straightened.

C. MAGAZINE FOLLOWER, BASE AND SPRING

Place the Magazine Follower in the Magazine Tube and see that it moves freely in the tube and does not bind. It should stop with its rear end flush with the forward end of the opening in the bottom of the Receiver.

If the follower binds in the tube, the tube should be reamed with a special reamer to remove any burrs or high spots and the follower polished.

Install the Magazine Follower, spring, base and Magazine Base Pin.

NOTE: The Magazine Base is positioned with the concave end forward.

D. RECEIVER BUFFER

Inspect the Receiver Buffer for cracks and reinstall from the forward end of the Receiver making sure it is seated fully to the rear.

E. STOCK AND BUTT PLATE

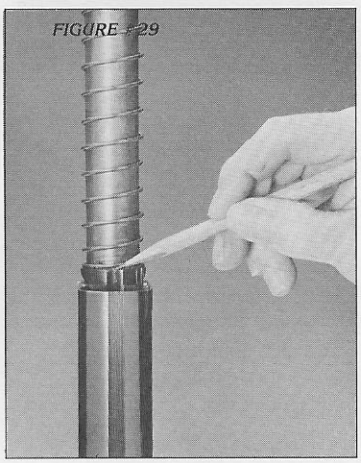
Reinstall the Stock, Stock Bolt and washer using the special screwdriver used during disassembly to prevent damage to the Stock.

SAFETY WARNING

CAUTION: Make sure the end of the Stock Bolt does not protrude into the Receiver past the front surface of the Receiver Buffer.

F. ACTION SPRING

Position the Action Spring on the Magazine Tube with the end of the coil located on top of the Magazine Tube at the Receiver end. (Figure #29)



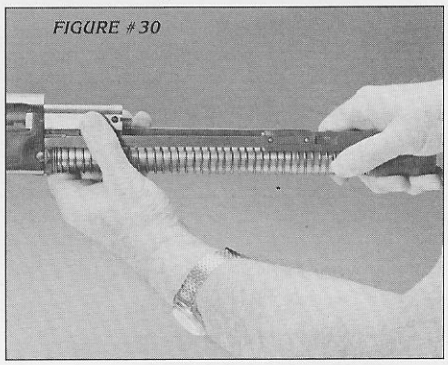
NOTE: Positioning the spring in this manner will facilitate installation of the Barrel.

G. INERTIA PIECE, OPERATING HANDLE, BOLT & BOLT SLIDE ASSEMBLIES

Inspect the Inertia Piece Assembly for any fractures. Remove any burrs from the action bars and polish any areas that may inhibit free movement in the Receiver.

Compress the Action Spring and start the Inertia Piece Assembly on the Magazine Tube keeping the spring slightly compressed.

Place the Bolt and Bolt Slide together and position the action bars on the Bolt Slide as shown in Figure #30.



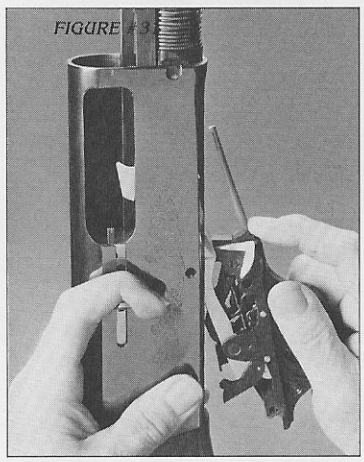
Retract the Inertia Piece Assembly while guiding the Bolt Assembly into the proper guide rails in the Receiver.

While holding the Action Spring compressed and the Bolt Assembly retracted, install the Operating Handle.

After installation, let the Operating Handle slowly come to rest against the forward end of the ejection port.

NOTE: The Operating Handle will damage the forward end of the ejection port if allowed to fly forward.

H. TRIGGER GUARD ASSEMBLY



Trip the Carrier on the Trigger Guard Assembly to the raised position. Place the Butt Stock against one leg and draw the Bolt Assembly to the rear as shown in Figure #31.

Holding the Bolt Assembly to the rear, install the Trigger Guard Assembly and the Trigger Guard Retaining Pin. Place the Bolt Assembly in the locked open position.

NOTE: Use care not to trip the Carrier Latch and let the Bolt Assembly slam forward.

I. GAS PISTON (Figure #5)

Clean the Gas Piston with a good powder solvent and bristle brush.

NOTE: DO NOT wire brush the Gas Piston.

Check the Gas Piston for excessive wear and burrs. If damaged or worn excessively, replace the Gas Piston.

J. GAS CYLINDER PLUG (Figure #5)

Check to see the Gas Cylinder Plug fits closely in the forward end of the Magazine Tube. If it fits loosely, gas leakage around it may cause malfunctions. To tighten, the special tool and procedure described in Section VI may be used.

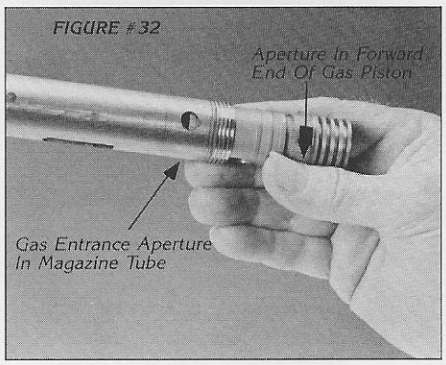
NOTE: The Gas Cylinder Plug should not fit so tight that it can't be installed in the Magazine Tube with the fingers.

K. INSTALLATION OF THE GAS CYLINDER ASSEMBLY COMPONENTS (Fig. #5)

NOTE: To aid in installation, insert the large end of the Gas Piston Spring in the back recess of the Gas Piston Bar Guide to captivate the two, or spread the last coil of the spring to accomplish this, if necessary.

Install the Gas Cylinder Assembly components in the order shown in disassembly making sure the concave end of the Gas Cylinder Plug is toward the rear.

NOTE: Make sure the opening at the forward end of the Gas Cylinder is positioned upward to align with the gas orifice in the Magazine Tube as shown in Figure #32.



Additionally, make sure the slots in the Gas Piston Bar Guide

(Figure #5) are aligned with the slots in the Gas Piston.

If the slots in the Magazine Tube, Gas Piston and Gas Piston Bar Guide do not align properly to receive the Gas Cylinder Bar, rotate the Gas Piston Bar Guide 180 degrees.

NOTE: If the Magazine Tube was replaced, it may be necessary to lightly file one side of the slot in the Magazine Tube in order to install the Gas Cylinder Bar.

To aid in the alignment and installation of the Gas Piston Bar, tap it through the Magazine Tube by tapping on the upper edge as shown in Figure #33.

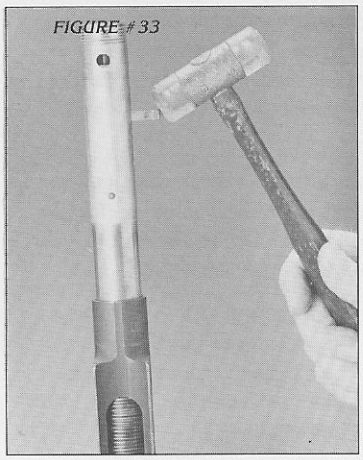


FIGURE #33

L. BARREL

Inspect the locking notch in the Barrel Extension for burrs on the rear edge. If burred, break the edge lightly with a small fine cut file.

Inspect the rear edge of the locking notch for signs of rounding due to over pressure from hand loads. Replace the Barrel if rounding of the edge is present.

Inspect 20 and 12 gauge Barrel gas ports with a #43 drill for 3" Magnum and a #42 drill for 2 3/4" chambered Barrels to make sure they are free of debris.

NOTE: Make sure the bits are run into the ports in the proper angle.

Inspect for erosion around the Barrel gas orifices in the Barrel Ring. If excessively eroded, gas leakage will result and the Barrel Ring should be replaced. It is suggested the gun be returned to the Arnold Service Center for this repair.

Inspect the 12 Ga. Barrel for a small flat ground on the exact bottom as shown in Figure #34. This small flat, approximately 1/4" wide, will aid in the re-assembly of the gun.

If the flat is not present, it may be filed on the Barrel and touched up with cold blue.

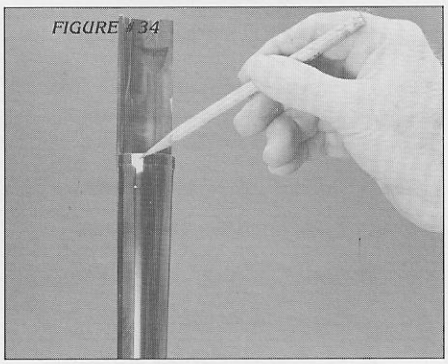


FIGURE #34

M. FOREARM (20 Ga. only)

Early in B-2000 production a Forearm Bushing Washer, P/N PO12220, was added to the 20 Ga. only. This 1.5 mm split washer is inserted in the Forearm at the forward end as shown in Figure #35.

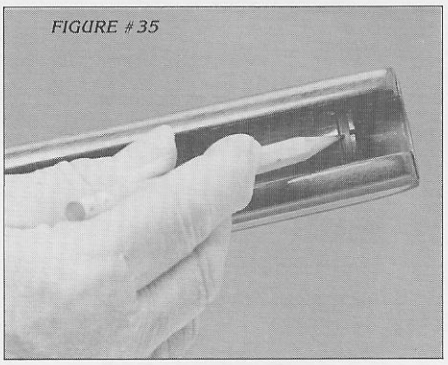


FIGURE #35

In conjunction with this part, an additional part, Forearm Cap Buffer Washer, P/N PO12231, **must** be inserted under the Forearm Cap Buffer in the Forearm Cap.

The purpose of these parts is to improve point of impact and to make the gun operate reliably with target or light field loads.

Inspect the 20 Ga. gun being repaired for these parts and add them if not present.

NOTE: With these parts installed, the Barrel will not seat as far into the Receiver as before. Additionally, a gap will be noticeable between the Barrel Guide in the top inside of the Receiver and the mating slot in the Barrel. This condition is normal with the installation of the two special parts described above.

9. FINAL ASSEMBLY

Pull the Action back to the locked open position.

Place the Forearm on the Barrel to the rear of the Barrel Ring and install them together on the Magazine Tube and Receiver Assembly.

Install and tighten the Magazine Cap.

10. FINAL INSPECTION

A. With the Bolt Assembly completely forward, retract the Bolt Assembly approximately 1 inch and trip the Carrier Latch. Slowly continue retraction of the Bolt Assembly and observe the Carrier does not move upward until the Bolt Assembly is approximately 1/2" from being fully to the rear.

If the Carrier is allowed to raise and follow the Bolt as it is being retracted, the Carrier Release (Figure #25) will have to be replaced.

NOTE: If replacement of the Carrier Release is required, cock the Action, place the Bolt Assembly in the closed position and remove the Trigger Guard Retaining Pin and Trigger Guard.

Drive out the Carrier Release Pin with a 1/16" punch from the bottom of the Receiver to the top.

In replacing the Carrier Release, first chamfer the end of the Carrier Release Pin to aid in installation.

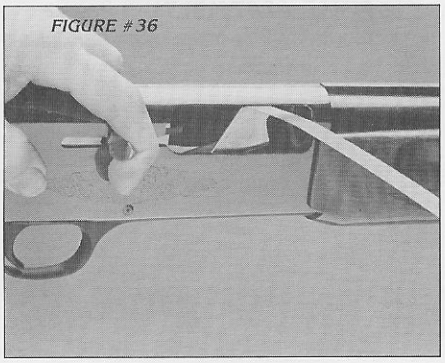
Start the Carrier Release Pin in the Receiver and the first hole of the Carrier Release. Align the second hole of the Receiver and the Carrier Release with a bent paper clip and tap out the paper clip while seating the Carrier Release Pin.

Completely reassemble the gun.

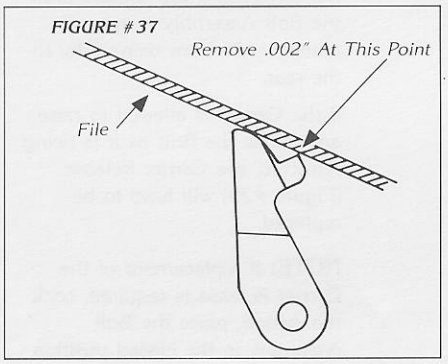
B. Hold the Bolt Assembly fully to the rear by the Operating Handle, release the Carrier Latch, slowly let the Bolt Assembly travel forward and observe the feel of the Bolt Assembly going forward for the first inch.

Repeat this procedure with a .010" shim between the Barrel Extension in the Receiver and the Carrier as shown in Figure #36.

If the shim causes the Bolt Assembly to drag or catch on the Carrier Dog, remove the Trigger Assembly.



With the Trigger Guard Assembly removed from the Receiver, file away approximately .002" material from the Carrier Dog as shown in Figure #37.



NOTE: The Trigger Guard Assembly need not be disassembled in order to adjust the Carrier Dog.

Repeat the above procedure until the Carrier Dog no longer catches or drags on the Bolt with the .010" shim installed.

Completely reassemble the gun.

C. Check the Trigger pull for a let-off force of 4 to 5 lbs. for target guns and 5 to 6 lbs. for field guns.

D. With the Hammer cocked, place the Safety to the "ON SAFE" position. See that it does not bind in moving and detents positively into the "ON SAFE" and "OFF SAFE" positions.

E. With the Hammer cocked and the Safety in the "OFF SAFE" position, slightly pull the Trigger to only partially disengage the Hammer and Sear. Slowly release the Trigger and feel the Hammer and Sear regain to full engagement.

SAFETY WARNING **CAUTION:** If the gun fails any of the inspection criteria given above, return it for service to the Arnold Service Center, Arnold, Missouri, or make necessary repairs.

SECTION V

TROUBLESHOOTING/POSSIBLE CAUSES/SOLUTIONS

SAFETY WARNING **CAUTION:** Make sure the firearm is unloaded before performing any troubleshooting.

1. FAILS TO EJECT/EXTRACT

A. Excessive erosion and gas leakage around the gas orifices in the Barrel Ring.

B. Clogged Barrel gas orifices.

C. Dirty gas system components.

D. Loosely fit Gas Cylinder Plug.

E. Worn Gas Piston.

F. Improperly installed gas system components.

G. Nonconforming Extractor.

H. Binding Extractor Spring Plunger.

I. (20 Ga.) Missing Forearm Bushing Washer and Forearm Cap Buffer Washer.

2. JAMS

A. Carrier out of adjustment.

B. Bolt dragging on Carrier Dog.

C. Loose Carrier Latch Pin.

D. Carrier Release out of adjustment.

3. FAILS TO FEED

A. Binding Magazine Spring Follower.

B. Carrier out of adjustment.

4. BLOWS OUT EXTRACTORS

A. Modify the Extractor per Section IV, Para 5.A.

B. Burred or dirty Extractor Spring hole.

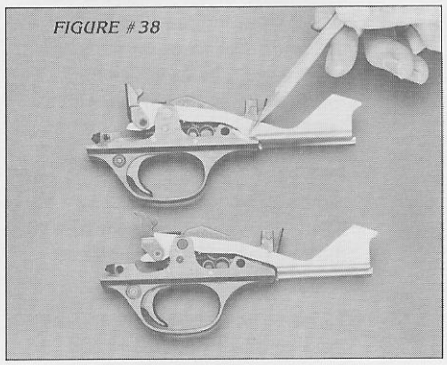
SECTION VI

SPECIAL INSTRUCTIONS

1. MODIFICATION OF TRIGGER GUARD ASSEMBLY TO THE UPDATED VERSION

A. Completely disassemble the Trigger Guard Assembly per instructions given in Section IV, Para. 2.

B. Replace the Carrier with a modified version which is wider and stronger in the area illustrated by Figure #38.



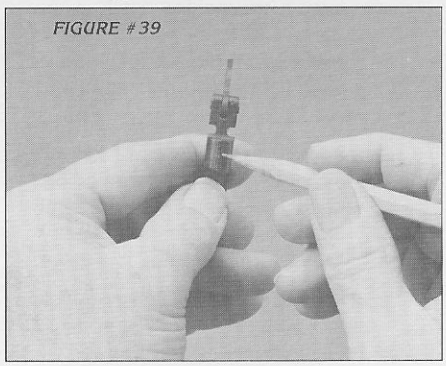
The new configuration is shown on top, the old on the bottom.

C. Mill out the Trigger Guard (a hand held Dremel tool may be used) to provide for the extra dimension of the Carrier, also shown in Figure #38.

D. Drill a 9/32" hole located approximately 1/4" forward of the Trigger slot and centered with the Sear slot as shown in Figure #39.

NOTE: Drill only slightly past the bottom of the Sear slot being careful not to drill completely through the Trigger Guard housing.

E. File the ridge off the front of the Trigger as shown in Figure #39.



File past this ridge and leave a flat approximately 1/8" wide. The purpose for this is to provide extra relief for unburned powder to drop out of the Trigger Guard Assembly.

F. Reassemble and inspect the Trigger Guard Assembly to Section IV, Para. 3.

2. PROCEDURE FOR FITTING NEW TRIGGER

A. Disassemble the Trigger Guard Assembly less the Hammer per instructions given in Section IV, Para. 2.

B. Install the new Trigger and Trigger Pin. Holding the Trigger rotated to the forward position, insert the Safety Crossbolt in one side of the Trigger Guard and tap lightly to mark the rear tab on the Trigger.

C. Remove the Trigger and carefully file to the marked line on the rear tab of the Trigger with a 4", fine cut, half round file.

NOTE: Be sure to file perpendicular to the Trigger.

Adjust this cut until a very slight pre-travel exists between the Trigger and the Safety Crossbolt when in the "ON SAFE" position.

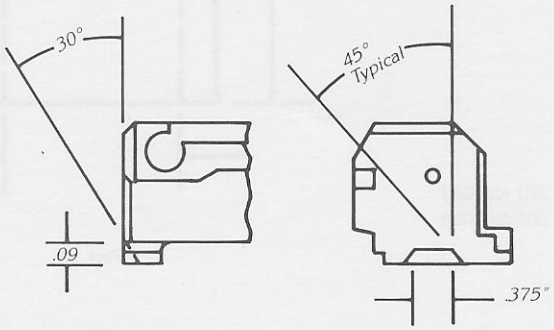
D. Using a new Disconnector Pin, assemble the Disconnector on the new Trigger.

E. Reassemble the Trigger Guard Assembly and inspect to Section IV, Para. 3.

3. BOLT MODIFICATION TO NEW CONFIGURATION

If the Bolt does not contain a relief in the forward lower edge, use a coarse cut, 8" square bastard and file to the approximate dimensions given in Figure #40.

FIGURE #40



The coarse cut file is needed to break through the chrome plate. Touch up the relief with a fine cut pillar file.

4. SPECIAL TOOL FOR TIGHTENING GAS CYLINDER PLUG

Excessive leakage around the Gas Cylinder Plug can cause malfunctions. To tighten, the plug requires a special tool such as described in Figure #41. It should be fabricated from a good impact resistant tool steel heat treated to approximately Rc 45 to 50.

To use, part "B" is seated on an anvil and the Gas Cylinder Plug inserted with its concave end upward. Part "A" is then inserted in part "B" with its concave end downward.

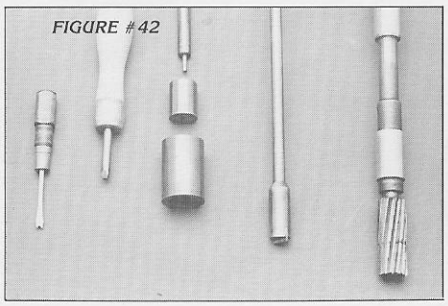
Part "C" is next inserted in part "A" and struck with a hammer on the large end. This action expands the rear flange on the Gas Cylinder Plug.

NOTE: The Gas Cylinder Plug should not fit so tightly in the Gas Cylinder so that it can't be installed with the fingers.

5. SUMMARY OF SPECIAL TOOLS

A summary of special tools required to properly service the B-2000 is given below and pictured in Figure #42.

FIGURE #42



From left to right:

A. Modified screwdriver to install the Sear Spring and plunger, ref. Section IV, Para. 3.E.

B. Modified 3 square file to raise the edge of the Gas Cylinder gas orifice, ref. Section IV, Para. 8.B.

C. Special tool described in this section, Para. 4 to expand the rear flange of the Gas Cylinder Plug.

D. Modified screwdriver to remove the Stock Bolt, ref. Section IV, Para. 7.A.

E. Special 2 step reamer to clean out the Magazine Tube, ref. Section IV, Para. 8.C.

6. RECOMMENDED POINTS OF LUBRICATION DURING REASSEMBLY

The use of Browning Ultra-Fine Gun Oil is recommended. Always use oil sparingly.

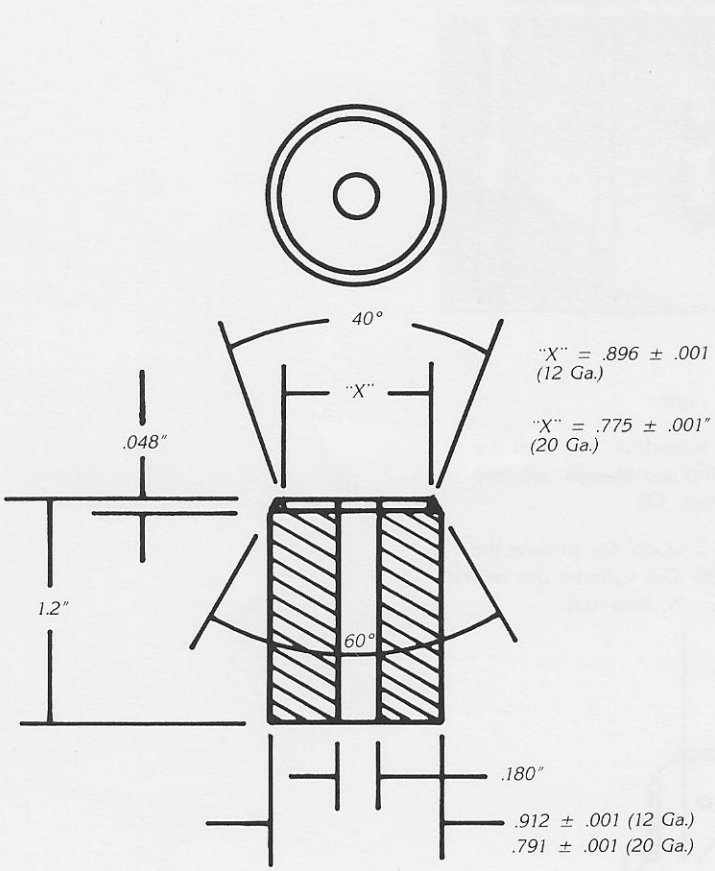
A. Lightly on the rubbing surfaces of the Bolt and Bolt Slide.

B. Lightly on the Action Bars.

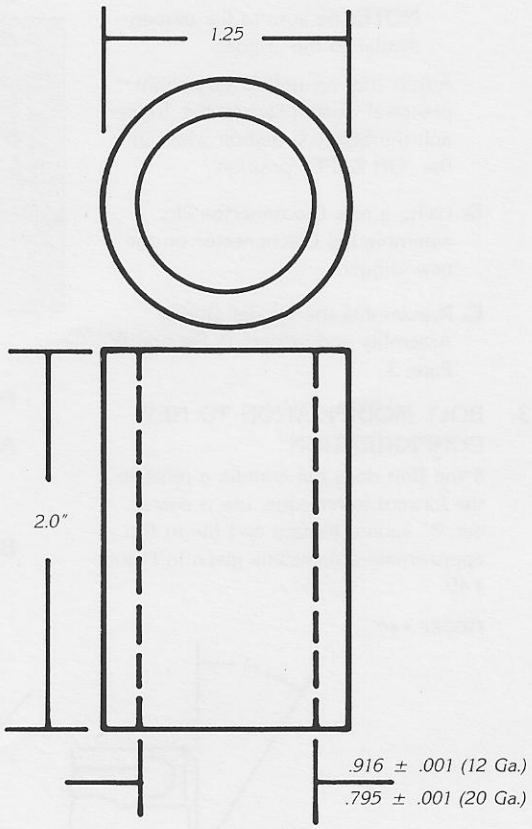
C. Exterior surfaces.

NOTE: It is recommended the Gas System components and Trigger Guard Assembly components be reassembled clean and dry.

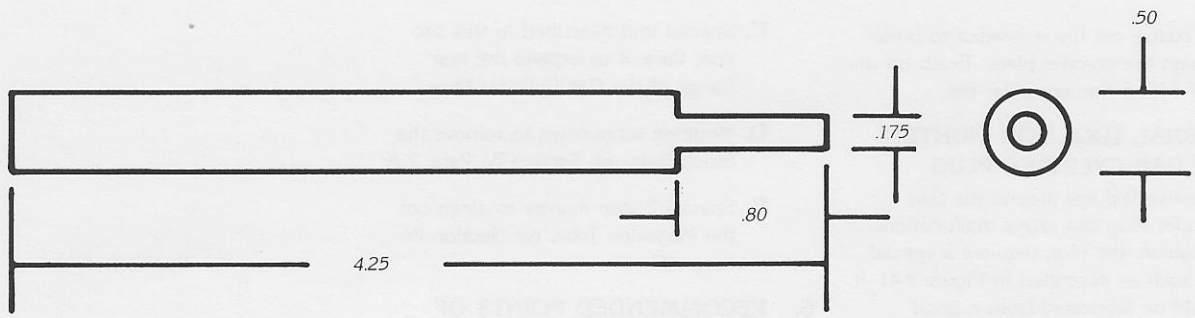
FIGURE 41



Part "A"



Part "B"



Part "C"