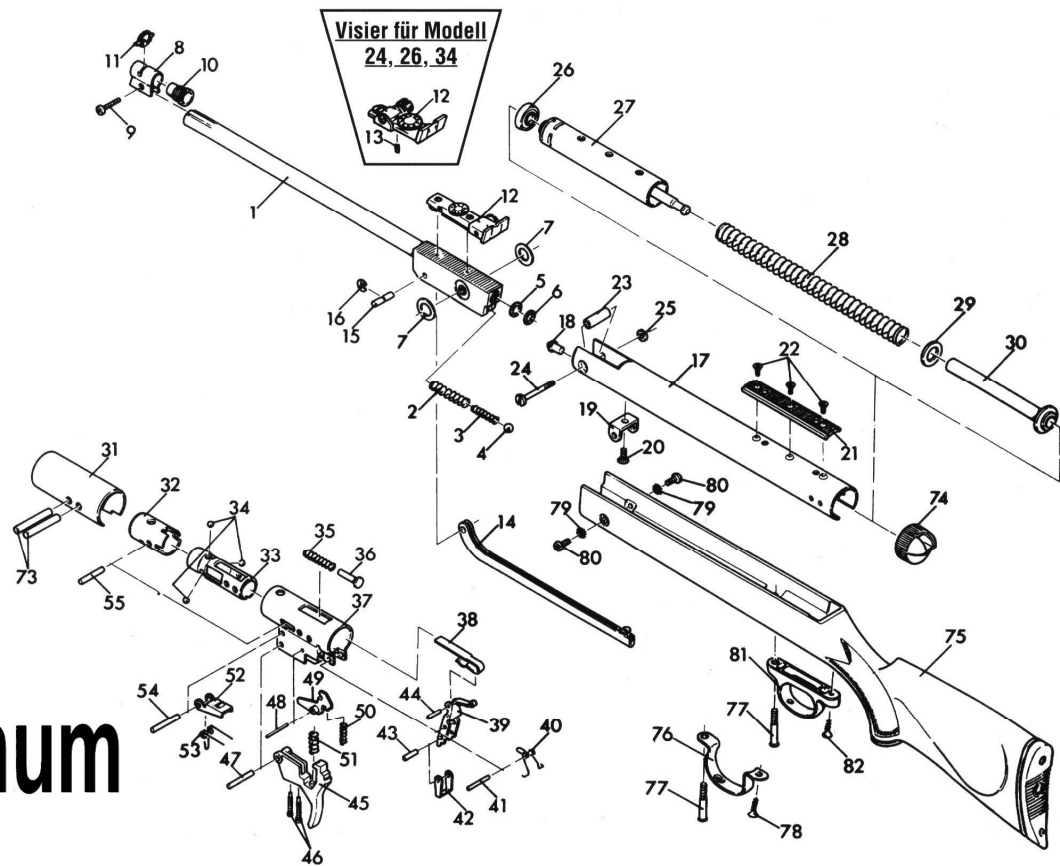


Model 34 DIY 'Tune'



**Mod. 24, 26,
28, 34,
36, 38,
45 T01
350 Magnum**

Ersatzteile · Spare Parts · Pièces De Rechange



Objectives:

1. Install GSI Spring Kit (Jim Maccari)
2. Remove old oils and reapply JM tar and Moly Paste
3. Refine trigger for smoother action and lighter pull weight

Disclaimers: I am not a professional airgunsmith; I am simply sharing what I did to fix my Model 34 for personal use. Although these procedures were done in a manner I felt safe and responsible, this does not imply in any way that they are safe and correct. I do not consider this procedure to rival a tune by a competent airgunsmith, but it made a significant difference on my gun.

Please be smart – make sure the gun begins uncocked, remove the scope mount if you have one, and when compressing the spring, never point the end at yourself. At all points in this process be exceedingly careful to not scratch the bluing or wood components of your gun. I put a couple of small scratches in mine, and I thought I was being careful. Even though I did plenty of ‘homework’ on this procedure, and I stuck to the basics, some things COULD BE WRONG. So don’t blame me if your gun is different or I led you to making a mistake. I based this on procedures outlined in the archives of the yellow forum.

This procedure should be the same for the Diana Model 34 and 36s, and similar for the Model 46 and 48.

Removing the Action

Remove the front stock screws. Inspect threads carefully for damage, and replace if either the male or female threading shows any damage. Don't lose the star washers under the screws.

Remove the rear stock screw.



Carefully slide the metal action out of the stock. Remove the safety cover. Inspect the stock – look for where the stock contacted the action – near the screws and along the action tube. If you find evidence of any uneven pressure or contact, carefully file or sand the stock to make a better fit. I did very little modification to my stock.

Removing the cocking lever

From this point on, I put a cardboard box lid on the workbench and worked over that so any loose pieces didn't migrate away. At \$5 apiece in many cases, you don't want to call Airgun Express to replace a lost screw or e-clip.

Place a screwdriver on one tip of the open side of the E-clip.



Use another narrow screwdriver to press the other tip of the e-clip. The clip will pop loose – don't lose it.

Probably a better approach is to find a thin, 1/2" wide object that fills the width of the gap in the cocking lever and use that to press down both points of the E-clip at once.

Push the pin through and take off the cocking lever.

Removing the barrel

Remove the pivot bolt and nut. There is a thin washer under the head of the pivot bolt – don't lose it or damage it. There is still a sleeve holding the barrel in place.

Pivot bolt,
washer,
and nut



Sleeve

Barrel Pivot Sleeve and Washers

Push the sleeve out using a non-scratching tool. The barrel détente keeps a little tension on the barrel when in the firing position, so it helps to turn the barrel to a half-cocked position. Two washers that fit into grooves on the barrel block will fall loose – they have sharp edges, so don't let them scratch anything.

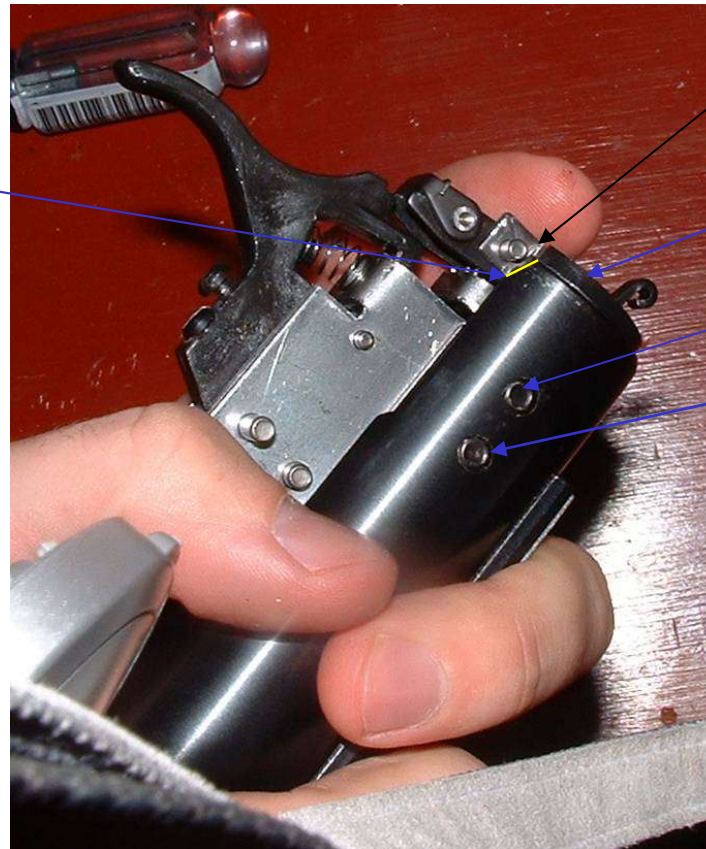


Now is a great time to clean the inside of the barrel with Goo-Gone using a barrel patch and non-scratching pull-through. Set the barrel aside.

Receiver and Safety

The trigger assembly is held in the action by two shear pins. Remove the rear one first using anything appropriate to tap it through. To remove the front pin, you need to have a spring compressor to press on the protruding part of the trigger cage and take the pressure off the pin.

Note: In the past I ground off a corner of the body (yellow line) to allow removal of the safety switch pin. This offers the advantage of removing the safety now so it's not in the way when compressing the spring.



Safety
Switch Pin

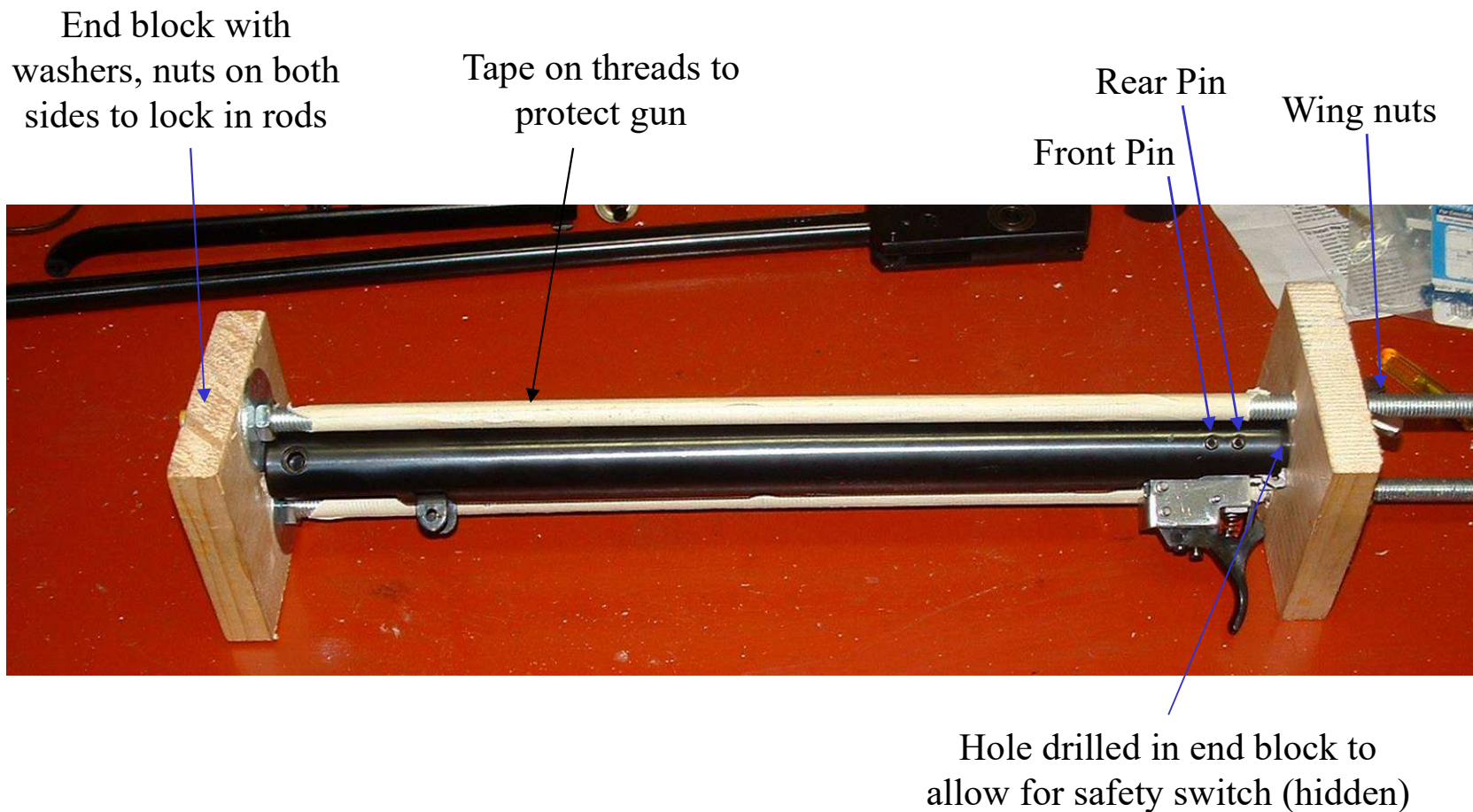
Trigger Cage where it
extends past action tube

Rear pin

Front pin

My quick and dirty spring compressor

On a Model 34, the spring is held under moderate compression. This rig worked for me and only cost \$10 for the threaded rod, fender washers, and nuts. I suggest using bigger/stronger end blocks than mine that have less chance of splitting. The other disadvantage is that it's slow and tedious tightening the wing nuts. Tighten the wingnuts until it begins to snug, but not too tight. Tap out the rear pin, then the front pin.

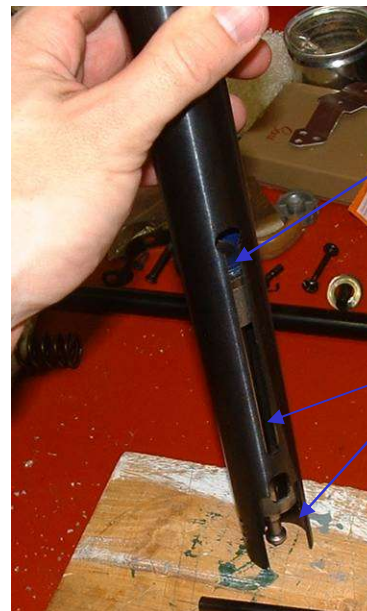


Piston Removal and replacement

Back down the tension on the wingnuts until the tension is gone. Remove the trigger assembly and set it aside. There is no need to take the trigger assembly apart if you are only installing the GSI kit.

Pitch the old spring, rear guide, and rear guide washer. Degrease or clean the inside of the chamber using whatever you can fix up. I used shop paper towels twisted up to clean the inside. I did not degrease the piston because of its awkward shape and the many pockets for it to hold degreaser. I replaced the piston seal with a new one by prying off the old seal and pressing the new one in place. Be sure not to damage the edge of the seal.

I applied moly paste immediately behind the seal. I also used small files and a deburring tool to round the edges of the chamber at the cocking lever and trigger areas. I polished the spring ends, lightly applied moly paste on the inside and outside of the piston (but not on or ahead of the seal), and some moly on the rear guide where it touches the spring. I also rubbed the tar lightly over the outside of the spring, skipping the first and last coils.



New piston
seal (blue)

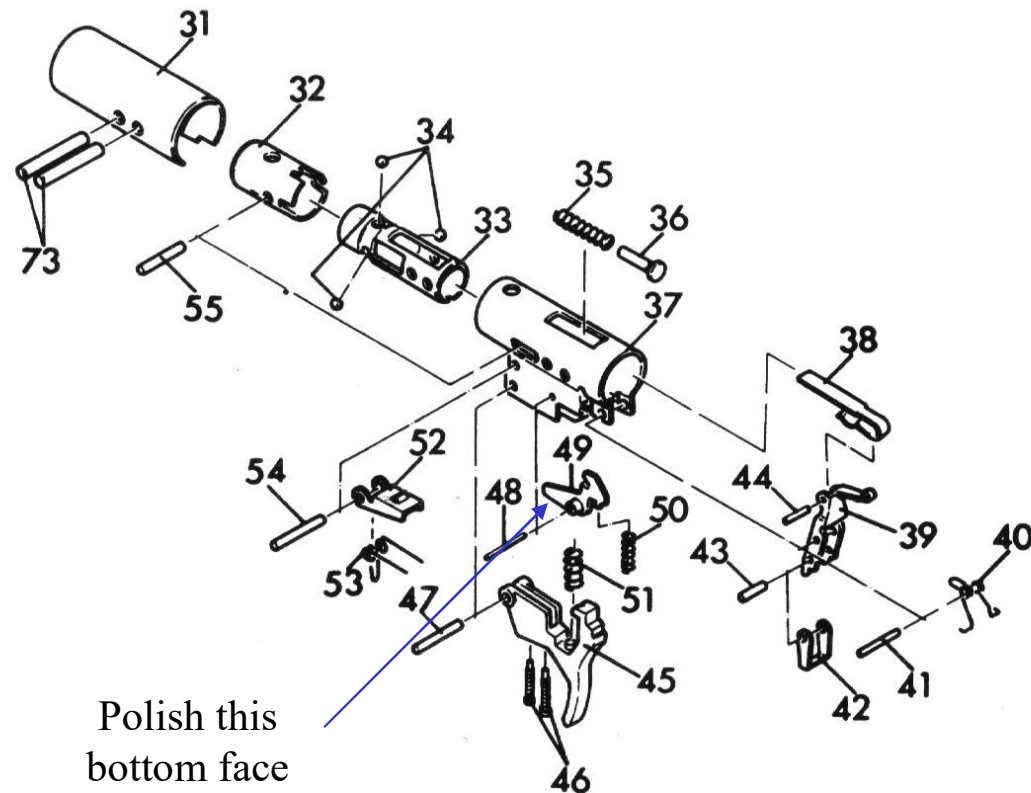
Deburr the edges at these two
openings

Trigger Improvement

I attempted to smooth my trigger since the creep was so rough out of the factory.

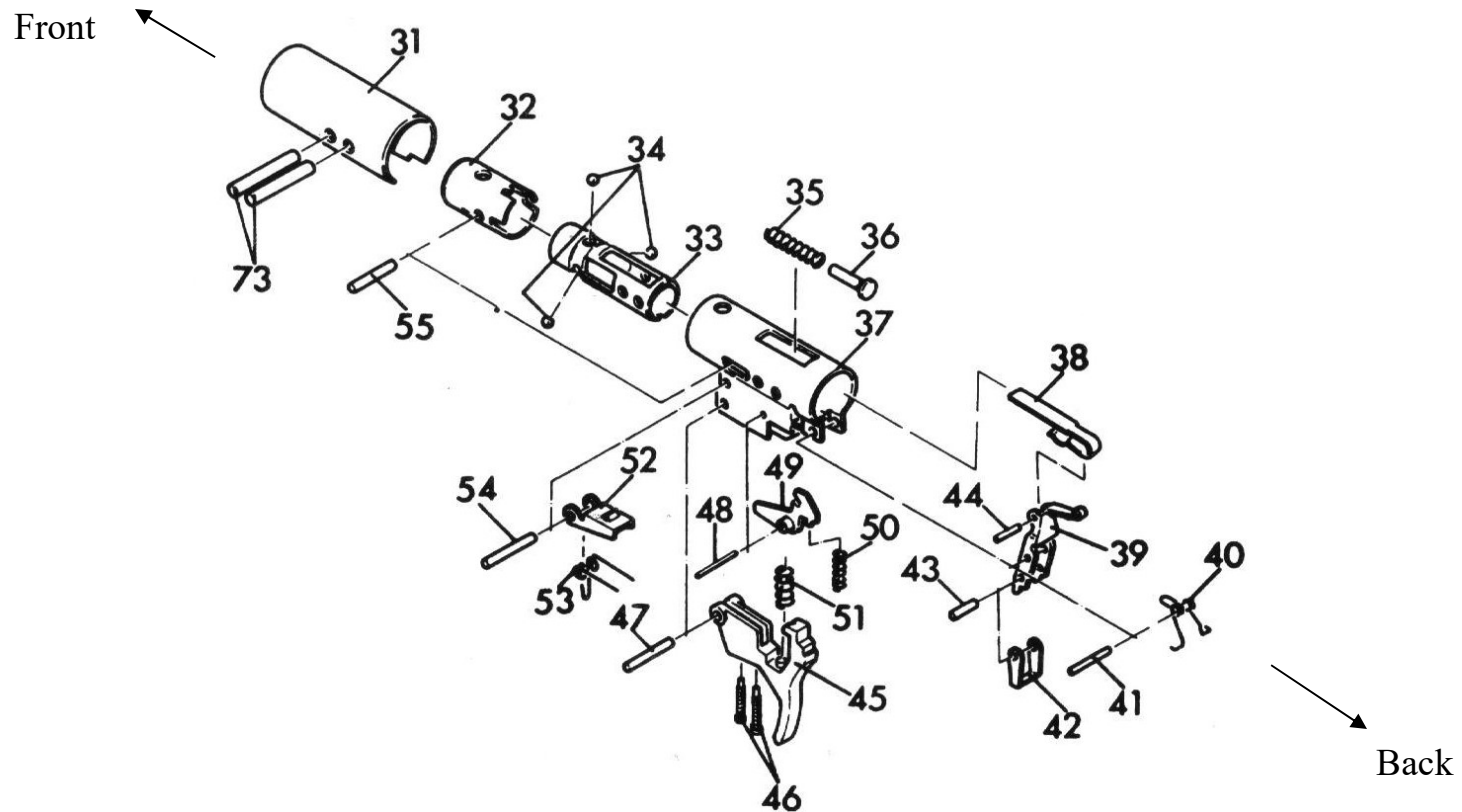
Start by disassembling Pin 47 and removing the trigger and trigger spring. Then remove Pin 48 and sear 49. Be careful to not lose the spring 50 which puts tension on the sear. I then polished the bottom face with a scrap of emery cloth. This greatly reduced the trigger pull and increased its smoothness.

I did not take pictures of my trigger work, sorry. I was probably distracted by the task at hand. It's basically a matter of pulling pins and not losing the springs in the process.



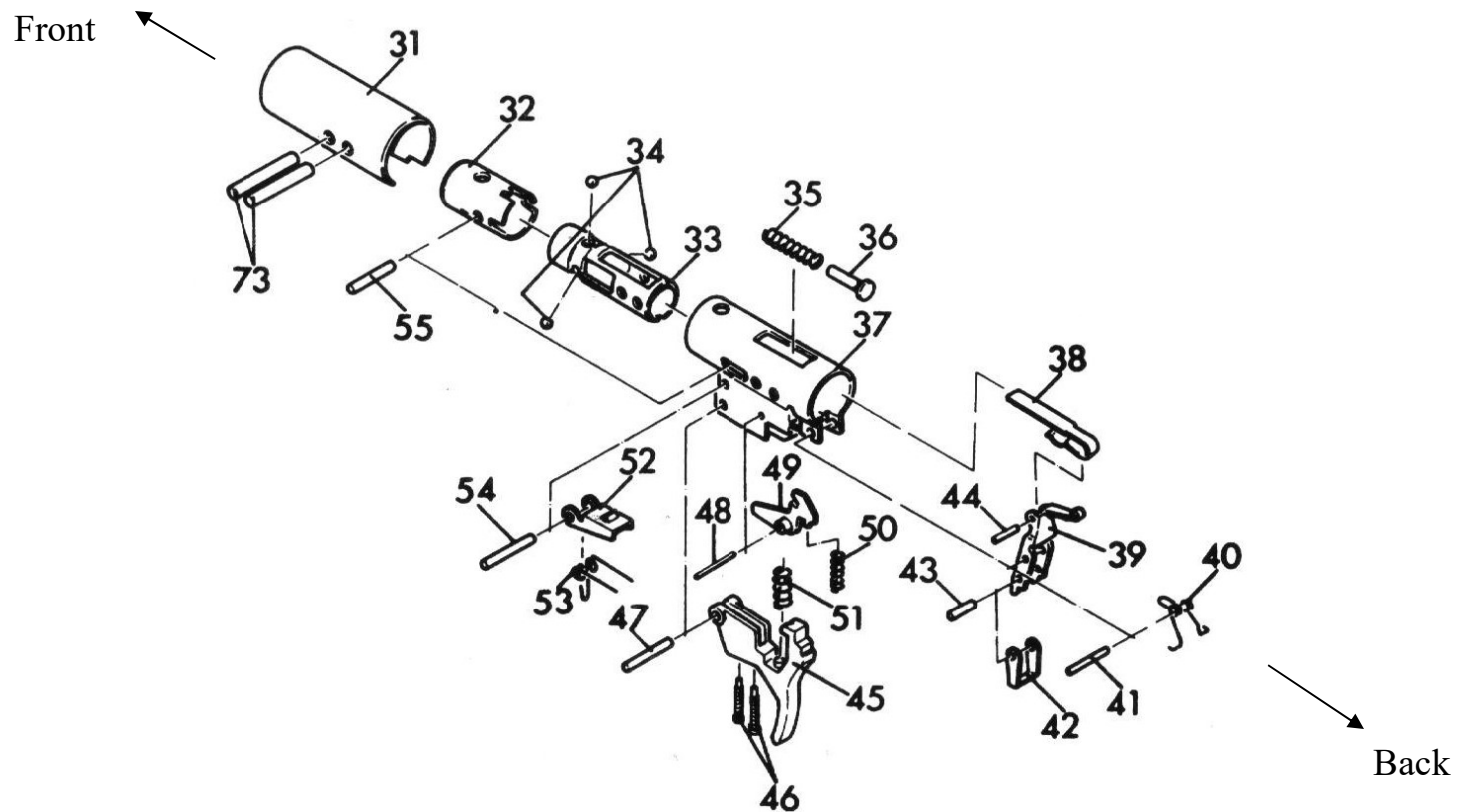
Trigger Reassembly

1. Begin with 33. Insert the catch balls (34) in the openings and then slide the assembly into 32 so that the balls will not fall loose.
2. Insert the assembly into 37, and slide pin 55 into the slot of 37 and the hole of 32.
3. Insert spring 35 and guide 36 together into the assembly. Set the back face of 36 into the slot so that it touches both 37 and 33 equally. Squeeze the spring into the slot and over the tab on the top rear of 32. I used a flathead screwdriver to hold onto the 3rd coil of the spring and my thumbs to keep the spring from popping loose. Do not let it shoot across the room and get lost.
4. Slide the plastic sleeve 31 over the assembly.



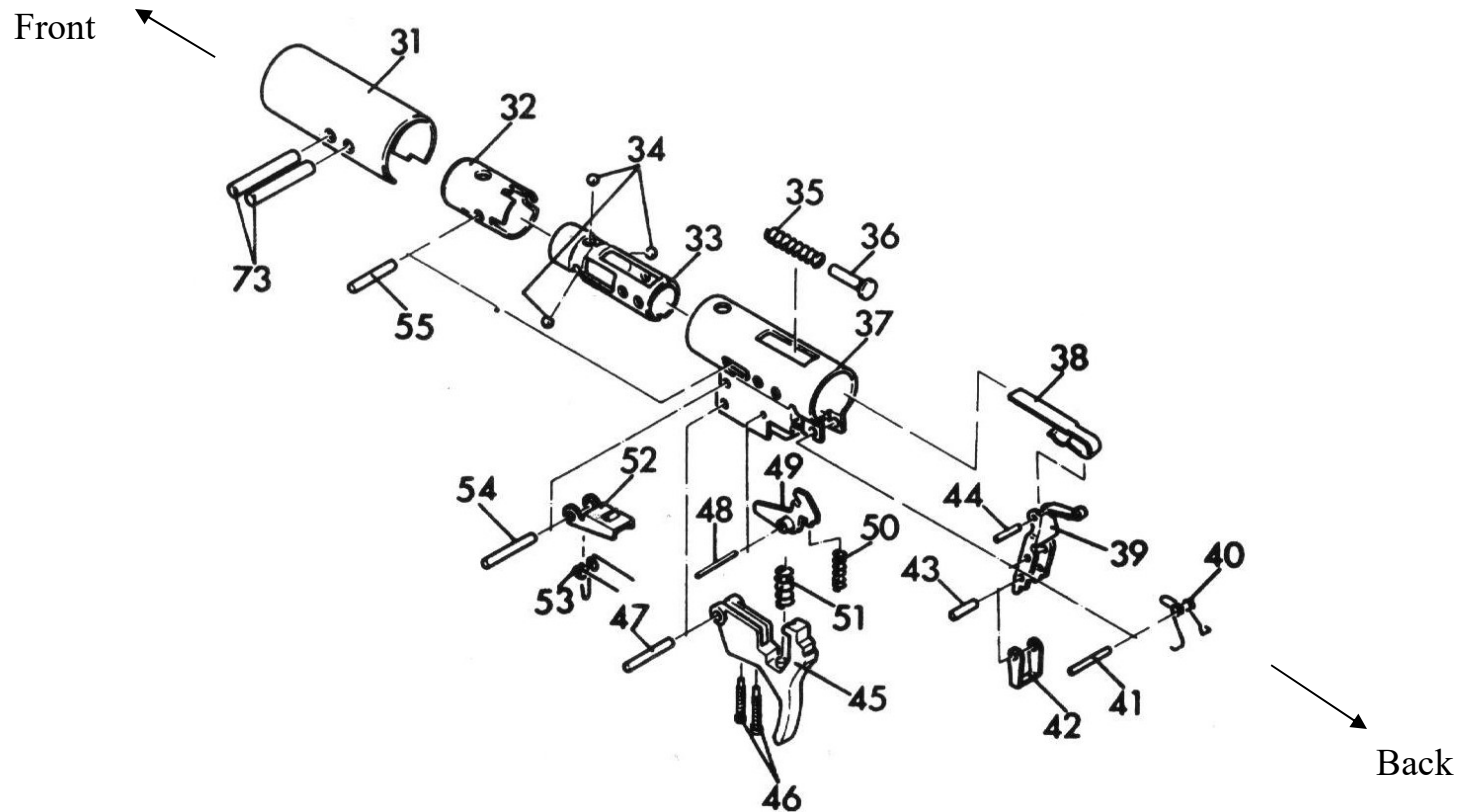
Trigger Reassembly

5. Set part 52 into the trigger and slide the pin in just enough to catch one hole in 52. Using a flathead screwdriver or other narrow tool, push the spring 53 into that corner and use pin 54 to capture it. Now slide pin 54 in completely.
6. Holding part 49 with a needle-nose pliers, set it into the assembly and capture it with pin 48. From the rear of the assembly, hook the top of spring 50 on 49, and push the bottom of 50 into the housing until it clicks into the recess.
7. Capture trigger 45 with pin 47, then push spring 51 in place between the bump on the trigger and the bump in the trigger housing (it will be directly underneath spring 50, but inserted from the opposite side).



Trigger Reassembly

8. The safety should still be an assembly of parts 38, 39, 42, 43, and 44. Once the trigger assembly is mounted on the gun, slide the long tab of 38 over the pins 73 and snap it into the rear pin 73. Then slide pin 41 into one side of the safety assembly. Take spring 40, allow the hooks on the bottom to hang over the bracket of 39&40, then twist the opposite side of the spring to a vertical position pressing on the back side of 39. The middle of the spring will tend to push out toward the back – push it in and catch the coils with pin 41, then push pin 41 all the way in. Don't let spring 40 shoot loose and get lost.
9. Ensure the safety correctly locks the back of the trigger when engaged.



Reassembly and testing

Reassembly is the opposite of disassembly ;o)

I actually reassembled without my spring compressor – I simply held the breech end of the chamber and pressed it down on a 2x4. If your safety switch is in place, don't damage it. I found it wasn't tough to put enough pressure this way to get the front pin in. Just hold it so it won't slip and pop you in the chest or cut your hands.

Degrease all the stock screws and use blue Loc-tite on reassembly.

Be careful cocking the gun the first time. If anything in the trigger is not correct, expect to find out now. Since the trigger should have a lower pull weight, verify it won't misfire.

Take a couple of shots at close range since your POI will change, and it's probably best to fire off a dozen very heavy pellets (Kodiaks) to diesel any lubes that may have gotten into the chamber.

