

Warning and Disclaimer: Make sure that the firearm is unloaded before going further. Also, be aware that if you modify firearms from factory stock, you are likely voiding your warranty. If you can't afford to try this project as a learning experience, DON'T ATTEMPT IT. **Important:** NEVER, EVER HAVE LIVE AMMO of the caliber of the firearm you are working on IN THE SAME ROOM. Only inert "Dummy" rounds, "Action Proving" rounds or "Snap-Caps" should be allowed in your work area. Be SAFE, not sorry.

Purpose and Overview:

You would be hard pressed to find a more cost effective, reliable and accurate out-of-the box hunting rifle than the H&R/NEF Handi-Rifle. It's safe for a young hunter as well, due to the transfer bar safety and single shot capacity. However, while as a rule very crisp, the Handi-Rifle trigger pull is heavy by any standard. Rare examples of 2.75 - 3 pound factory pulls have been reported on the internet, but I have never seen one with less than 4.75 pounds. I own five, and have handled several more, and expect a less than match trigger.



If the rifle you are thinking of modifying is to be used by a young or inexperienced shooter/hunter, DON'T ALTER THE TRIGGER. Even with the heavy pull, a Handi is more than capable of being shot accurately at 100 yards, and that's as great a distance as any novice needs to be shooting.

If you are an experienced rifleman, and willing to assume the responsibility that comes with a lightened trigger, not to mention just want to learn more about your firearm, these instructions can help you achieve a trigger pull in the 3.25 - 2.75 pound range. As always, if you can't bear to have a period of down time for the firearm or can't afford to have a professional or the factory fix it if something goes wrong, DON'T ATTEMPT GUN WORK YOURSELF! If you can't afford to have a pro do it in the first place, you can't afford to fix a mistake.

Before you disassemble the rifle, check your pull weight using your trigger scale and note it down. The instructions in the second part of this project will differ slightly depending on your pull weight.

AND MOST IMPORTANT OF ALL – IF YOU AREN'T WILLING TO BEAR ALL THE LIABILITY AND RESPONSIBILITY OF CHECKING FOR SAFETY AND PROPER FUNCTION AFTER DOING THE WORK, DON'T EVEN THINK OF TRYING IT. YOU ALONE ARE LIABLE FOR ANY INJURY OR DAMAGE.



I did three trigger jobs for this project, a 30.06, .308 and a 25.06.



Photos from all three are used for these instructions.



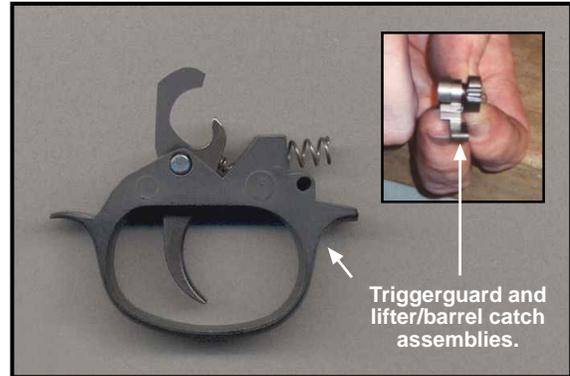
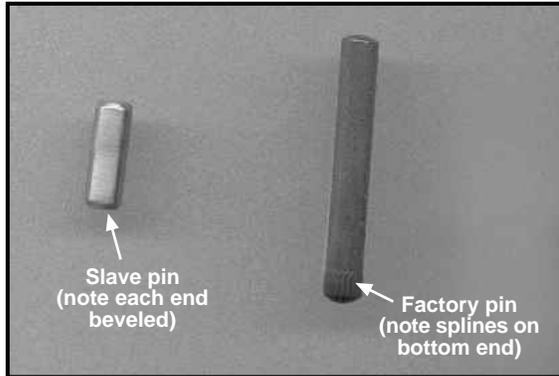


Tools and Supplies for the Handi-Rifle Trigger Job

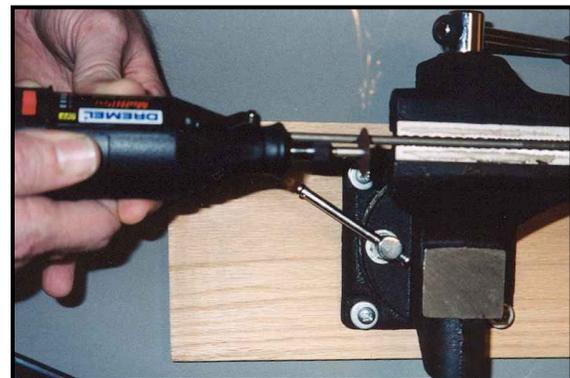
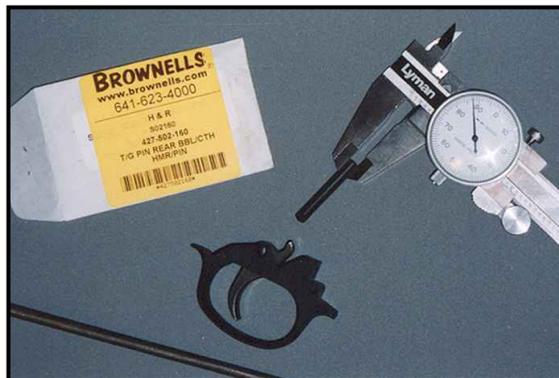
- q Leather, hobby store felt or framing "mat" board etc. for padding parts, frame and vise jaws.
- q Brass 8 oz. hammer.
- q 3/16, 3/32 and 5/32 pin punches.
- q Ratchet with extensions totaling 12" and a 9/16" socket.
- q 2 - 2"x4"x8" wood blocks.
- q 1 - block of 1/2"x4"x10" hardwood.
- q Long needle nose pliers or long hobby tweezers.
- q One of the following: Brownells Action-Lube Plus, Wheeler Engineering Moly Super Lube, Wilson Combat's Optima-Lube or Tetra Gun's "G" Grease.
- q A fine hard Arkansas gunsmith trigger stone. My favorite is a 1/2"x1/2"x6".
- q Honing oil for the stone mentioned above.
- q Hand drill with 7/32 and 7/64 bits.
- q 2 - large "C" clamps that have at least a 6" to 8" opening, depending on how thick the top of the workbench or table you're working on is plus the thickness of the wood blocks, wood fixture and frame described in the instructions.
- q Two Phillips screwdrivers, a #1 and a #3.
- q A gunsmithing/gun cleaning mat or a piece of indoor/outdoor carpet, hobby store foam or felt or framing "mat" board that's at least 11"x17" to protect your work surface. If you're truly doing this as a kitchen table project, you'll score points with the spouse if you don't scratch up the table.
- q A set of (inch) allen wrenches.
- q Blue (removable) Loctite.
- q Dremel with round felt polishing wheels and fine sandpaper drums.
- q Metal Polish (Flitz is good) of a fine grit.
- q Popsicle stick, toothpicks and Q-tips.
- q 400 and 600 grit wet sandpaper, available in the bodywork section of most auto parts stores.
- q A piece of 3/16" mild steel round bar stock. Available for modest cost at good hardware stores like Home Depot or at some hobby/model shops.
- q Hacksaw or Dremel cutoff wheel.
- q Tap wrench or pin vise that can hold 3/16" material.
- q A handheld magnifying glass of 6x or higher.
- q Calipers.
- q Vise.
- q "Cold" bluing for touch-ups.
- q Trigger pull scale. Get the recording type such as the RCBS that has this function. Recording scales have a marker that stays at the trigger break point.

Making a Slave Pin

Reassembling the H&R/NEF frame requires a "slave" pin to hold the trigger and lifter/barrel catch assemblies together. It is a big disassembly help as well.

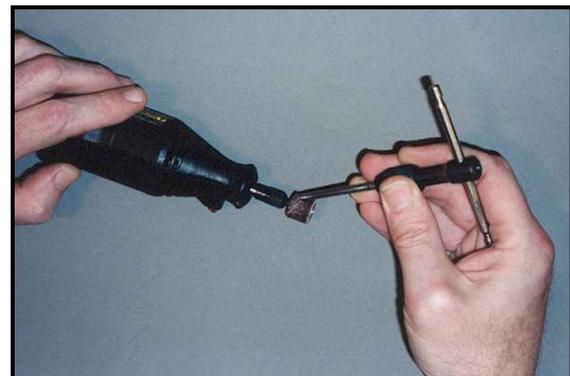


You can make a slave pin from plastic or wood, but it is easy to break or smash when you try to push it out with the factory pin, causing problems and binding. Here's how to make a steel one that will last through several trigger jobs.



My factory pin measured .187", so I made my slave pin from 3/16" steel rod from Home Depot, which cost around \$2.00. It measured from .187" to .190" thick. You want your slave pin to be slightly smaller in diameter than the factory pin to make it easy to push the slave pin out with the factory one when reassembling. A good hardware store and some hobby/model shops may also have steel rod stock.

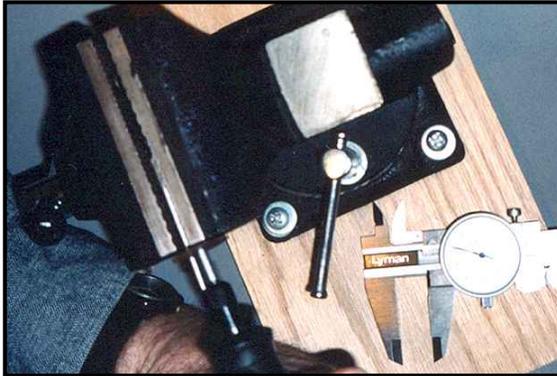
The steel rod stock I found came in 3 ft. lengths, so I cut about 3.5" off with my Dremel cutoff wheel. A hacksaw would work just as well.



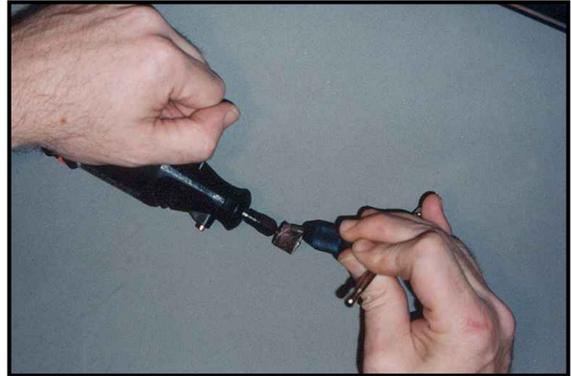
Then I put the piece in my hand drill, doubled up two thicknesses of 400 grit sandpaper, and spun it while working the paper back and forth until it measured .181" thick. Finally, I polished it smooth with 600 grit.

The rod was too thick to fit in any of my pin vises, so I locked it in a tap wrench to keep a grip on it. Using a sanding drum on my Dremel, I beveled (chamfered) the edge of the end that was exposed.

Making a Slave Pin 2



The finished slave pin needs to be no more than .530" long, so I marked the pin with a scribe (any sharp tool will do) and using the cutoff wheel again I cut the pin off of the remaining stock.



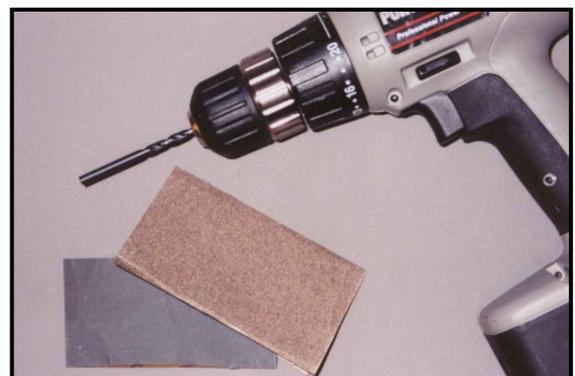
I measured the resulting pin length and found it to be fine, and then sanded the cut-off end smooth and flat with a block of wood and some sandpaper. I finished it off by putting it back in the tap wrench and beveling the edges of the newly cut end as well. The bevels really help when it comes to pushing it out of the frame with the factory pin.



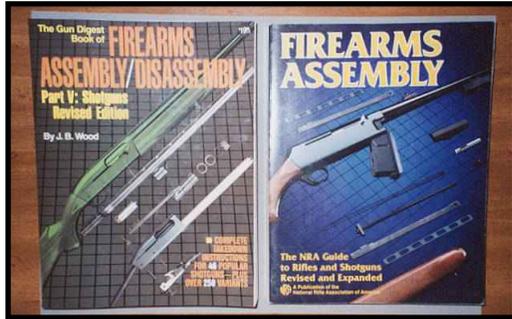
Note that the slave pin is flush with the sides of the guard at the trigger pivot point (not sticking out), but will hold the trigger in place as you reassemble the gun. It is also useful in holding the lifter, barrel catch, and spring assembly together when disassembling and assembling.



Another source of material for the pin was suggested by a friend of mine; if you can't find the 3/16" rod he suggested you could use a standard 3/16" drill bit. Not the extra hard TIN or cobalt bits, just a blue steel jobber bit. The shank above the spiral flutes is a few thousandths smaller than the rated cutting size of most bits, which is good for this application. I'd still lock it in a drill chuck (backwards) and spin polish with the sandpaper to the correct diameter, just be careful not to cut your fingers on the sharp flutes as it spins. Also, bits will be harder than steel rod stock, so sanding/cutoff with the dremel may take more effort.

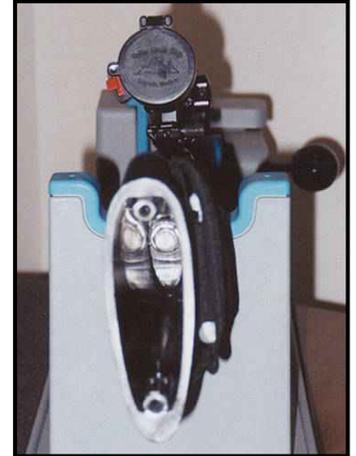


Disassembly



I got some of my disassembly info from these books, but a lot I figured out on my own...

Make sure the gun is unloaded and remove buttstock, fore-end and barrel. Use the Phillips screwdrivers to remove the recoil pad and fore-end. Most Handi's buttstock bolts have a 9/16th socket head bolt.



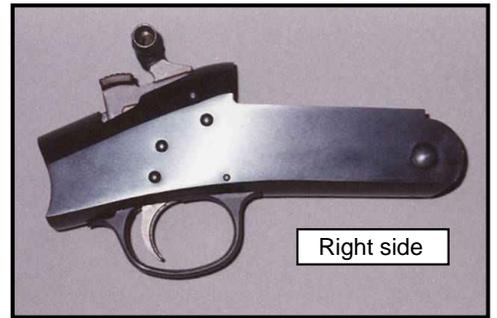
The stuff in the hollow buttstock is plastic-wrapped survival gear - it only adds about 4 ounces and might save my life one day! Waterproof matches, mini-compass, heavy nylon thread and needle, water purifying tablets, firestarter tablet, mini- flashlight and a loud whistle. Once removed, you can see the stockbolt head in there; get to it with an extension on your socket.



When you have removed the fore-end screw, pull fore-end down and away from frame.



Depress the barrel catch release lever, then rotate the barrel down. While barrel is rotated down, lift barrel off to the rear and up. The side of the frame shown in the photo to the right I'll refer to as the **RIGHT** side in these instructions.



This side of the frame has the "splined" pin heads and in these instructions I'll refer to it as the **LEFT** side of the frame. Before you go further, you must remove the hammer extension with a allen wrench.

H&R/NEF Handi-Rifle Trigger Work

These instructions can be found at:
www.perkloafm.com

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Email comments to: perklo@perkloafm.com

One of the biggest challenges to disassembly of the Handi-Rifle is that the internal action parts are held in the frame by round top, press-fit cross pins. These are securely held in place by the ridged splines on the left side and the round tops make it very likely that a punch will skate off as you try to drive them out. A ugly gouge on the frame side is the usual result when this happens, so I came up with a simple method to avoid this.

I padded the left frame side with hobby store felt and mat board and put a piece of 1/2" thick board against the right side pins. My piece of board was 1/2"x10"x4". I then put the padded frame and board in a vise and tightened down on the padding and wood a good bit, enough to leave the impression of the right side round pin tops in the board, but not to crush the frame.

In the picture at right, I have circled the pin impressions to make them easier to see.

Clamp the impressed piece of wood over the two 2 x 4 wood blocks with your C-clamps for drilling.



Drill the board using the impressions of the pins like center punch marks. Use the next size up drill bit from the pin size - for the large pins (3/16) I used a 7/32 bit, for the small one at the front of the triggerguard (3/32) I used a 7/64.

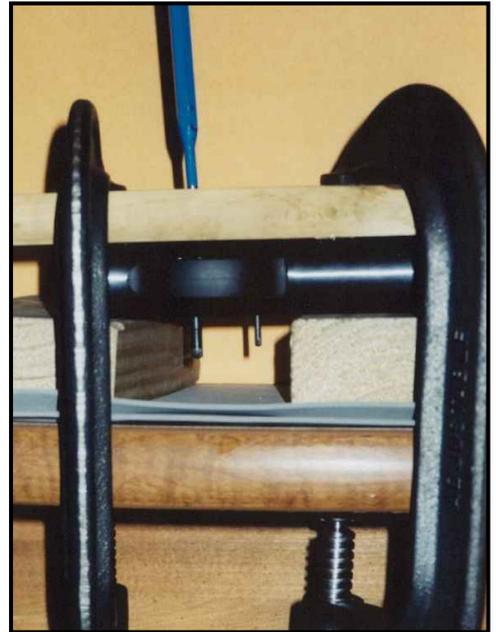
This wood becomes a fixture to avoid the punches slipping off the round pin tops and putting a gouge down the frame side. You really have to WHACK the pins from the right side out the left, and it will happen.

Wrap some sandpaper around your punches and remove splinters and rough spots from the holes.

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Make this sandwich; padded benchtop, two 8" 2 x 4 wood blocks with a three-inch gap between them, your frame (right side up!) with the pins over the space between the 2 x 4's and then the wood fixture on top. Clamp solid to the bench with two large (6" or 8"??, depends on your table thickness) C-clamps. Use your best punches and you will probably have to whack 'em pretty good. Don't drive them all the way out, just start them. Do the one at the front of the triggerguard first, the rear triggerguard next, then up in order. Don't drive out the top 3/16 pin that retains the barrel release lever and firing pin - you don't need it out to do the triggerwork. The flashlight in the first picture was used to look down the drilled pin and make sure the wooden fixture was located correctly over the pins on the right side of the frame.

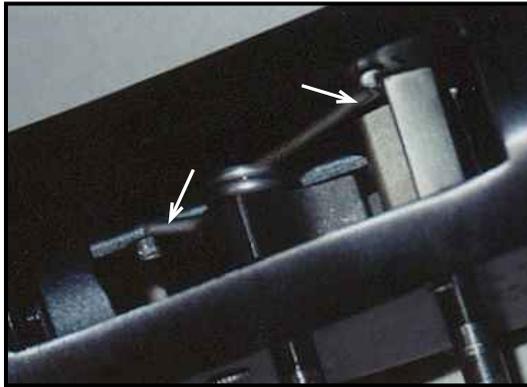


Once all the pins are started, remove the wooden fixture and use your longest drive punches to drive the pins out of the front and rear triggerguard. Note my thumb restraining the guard after the two pins have been driven out, and the punch still in the rear guard hole holding things together. Remove the punch and ease the thumb pressure off - watch those springs! I always pull small parts out with the frame inside a plastic gallon ziploc bag so it catches anything that flies off, especially the first time I work on a new firearm type.

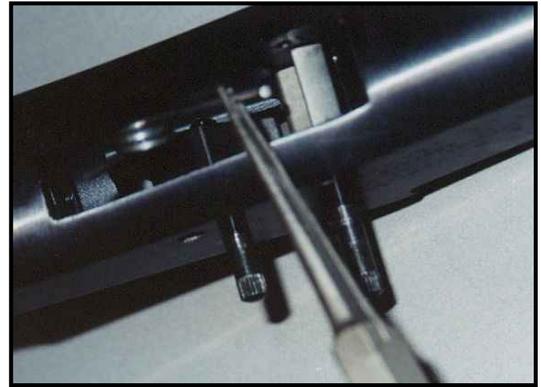
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Use your needle-nose pliers to pop the hammer spring ends from the recess in frame side and from under the stud on the side of the hammer.



Then slip the center coils of the spring over the end of the partially driven out pin and lift the spring out.



Now drive that pin completely out and again use your needle-nose pliers to wiggle the hammer out the bottom of the frame.

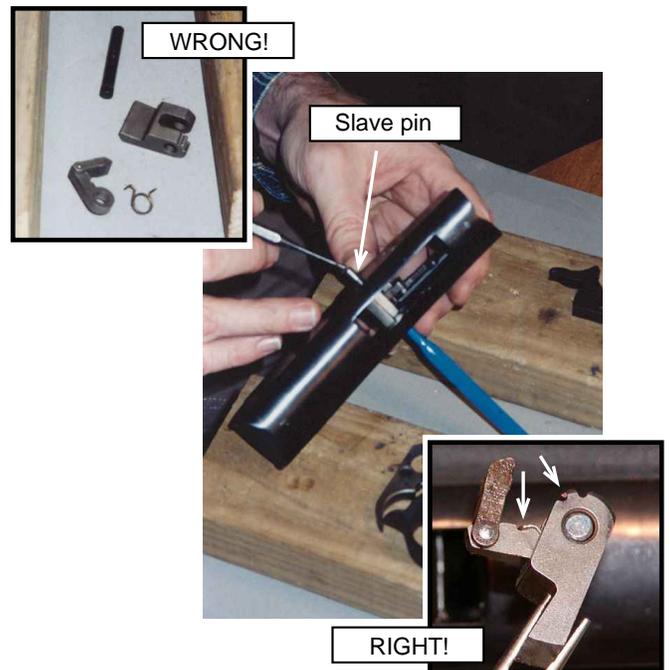


That only leaves the started pin that retains the barrel catch and lifter assembly in place. You want to remove the assembly as a unit, so have your slave pin handy.

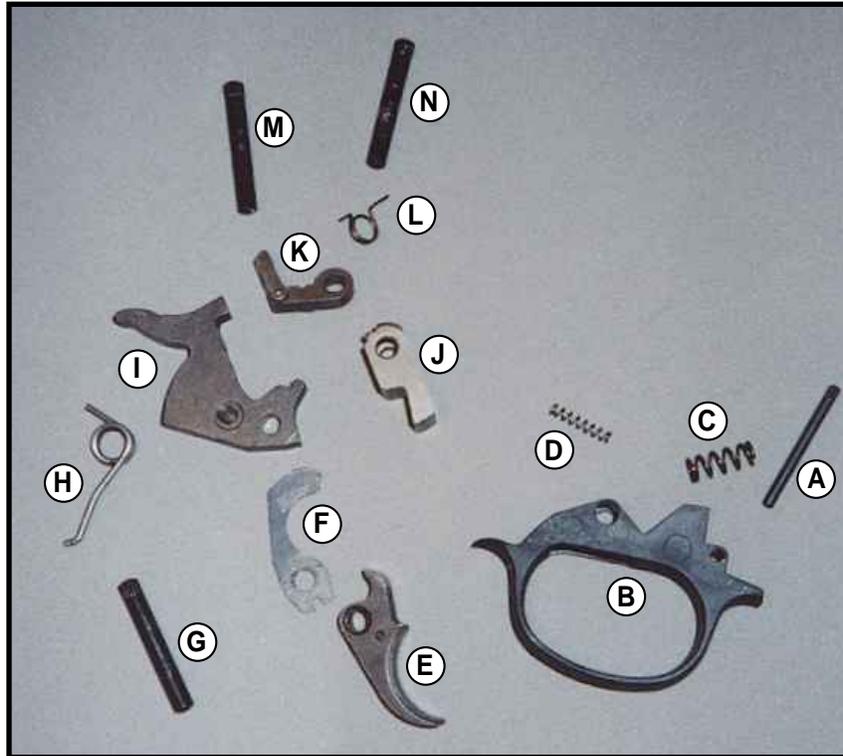
Once you drive the pin out that holds the barrel catch/lifter assembly (the topmost of the three 3/16" pins you are removing), insert the slave pin (coated with a light film of your action grease) in the left side hole BEFORE you remove the drive punch from the right side. If you don't the unit will fall out in pieces and you won't know how it was assembled.

As you withdraw the punch from the right side, push the slave pin in place with another punch. Don't push the slave pin all the way through, just halfway to the assembly center.

This will hold the barrel catch/lifter assembly together after you fully withdraw the drive punch. Pull the assembly (carefully) out of the frame with your needlenose pliers and observe the way the legs of the lifter spring sit in the notches on the assembly. The grease on the slave pin helps hold things together.



These instructions apply to current production H&R/NEF Handi-Rifles only. If your firearm is mechanically different than the parts below upon disassembly, carefully reassemble and seek the help of a professional gunsmith.



Internal Part Names

- A - Front triggerguard pin
- B - Triggerguard
- C - Barrel catch spring
- D - Trigger return spring
- E - Trigger
- F - Trigger extension
- G - Rear triggerguard pin*
- H - Hammer spring
- I - Hammer
- J - Barrel catch
- K - Lifter and striker (transfer bar) assembly
- L - Lifter spring
- M - Hammer pin*
- N - Barrel catch/lifter pin*

*These pins are identical

End of Part I - Part II covers trigger work and reassembly.