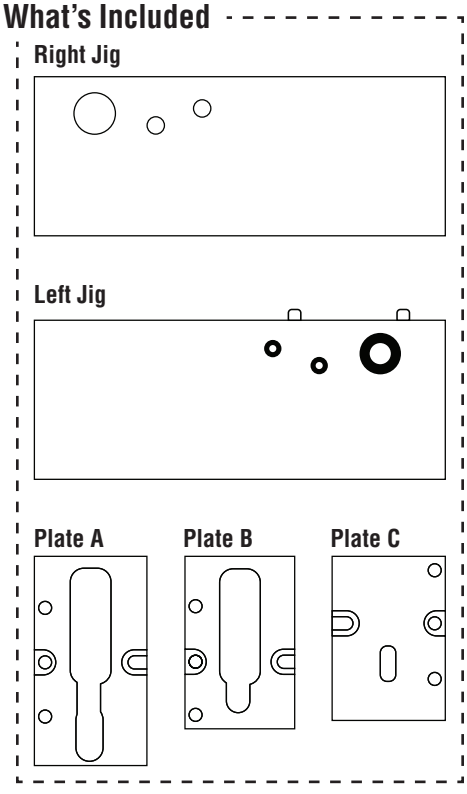
Finishing your Noreen Firearms 80% Lower Receiver

Tools and Materials

Drill Press
X-Y Axis Vice
3/8” Drill Bit Screw Machine Length
Stop Collar
#23 drill bit Screw Machine Length
5/16” drill bit
3/8” end mill
3/8” drill bit
Metal Files
Cutting Fluid
Eye Protection
Ear Protection
Brush
Shop Vac
6” Dial Caliper

What’s Included



NOTICE FROM NOREEN FIREARMS. PLEASE READ BEFORE BEGINNING.

Congratulations on your purchase of a Noreen Firearms 80% receiver. This tutorial is meant to be used as a guide, and does not make Noreen Firearms, LLC. responsible for damaged parts, damaged tools, or any injury or death. Use at your discretion.

Preparation

Always wear proper safety equipment including gloves, safety glasses, hearing protection, etc. Make sure to have a shop vac and brush handy to clean up any excess material that may impair the finishing process. Remember to apply cutting fluid to your bit regularly to avoid damaging your tool or the receiver. The Stop Collar may be used in replace of or in addition to setting your drill press to the required depth during each step.

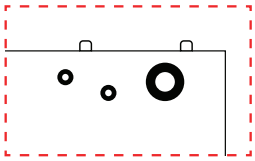
Jig Assembly

Insert the left and right jig into the takedown pin holes of your 80% receiver. Attach Jig Plate A to the top of the side jigs, using the two jig screws provide. Ensure there is no movement between the receiver and the jig.

Drilling Sides

Fire Selector.

You will be drilling from the left side of the receiver, using the plate with the steel inserts as guides. The guides should fit your drill bits properly. Be careful not to damage the guides while drilling.



Look for the steel inserts on the left jig plate.

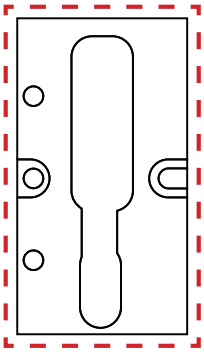
3/8" bit will be required, and will be used to drill through the entire body of the receiver, so no depth gauge is needed. Apply cutting lubricant and drill completely through. Once through, use a brush and small file to remove and burs on the freshly cut hole.

Trigger Pins.

A #23 bit will be required, and will be used to drill through the entire body of the receiver, so no depth gauge is needed. Apply cutting lubricant and drill completely through. Once through, use a brush and small file to remove and burs on the freshly cut hole.

Drilling Plate A (largest top jig plate) - Upper Shelf (Rear Pocket)

From the previous steps above, Jig Plate A should already be mounted to the side jigs.



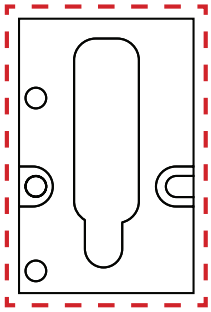
Jig Plate A

The upper shelf (rear pocket) will be at a depth of .610". Use a 3/8" drill bit for this step. Set your drill press to a depth of .610" to accommodate the jig, to reach the desired .610" depth.

Drill until there is no remaining material within the pocket of Jig A. Remember to apply cutting lubricant to the bit regularly. Use a small metal file to remove any burs without removing excess material. Use the 3/8" end mill to remove shavings and scraps and clean before proceeding to the next step.

Drilling Jig Plate B (second largest top jig plate) - Lower Shelf (Front Pocket)

Remove Jig Plate A, and replace with Jig Plate B, make sure the jigs are tight and secure, and that there is no play between the jigs and receiver.



Jig Plate B

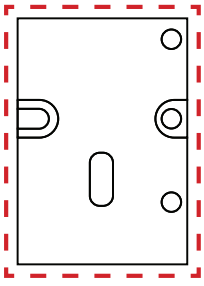
Start by drilling the "corners" of the wider area, and then drill out the remaining middle. Drill until there is no remaining material within the pocket of Jig Plate B. Remember to apply cutting lubricant to the bit regularly. Use a small metal file to remove any burs without removing excess material. Remove shavings and scraps and clean before proceeding to the next step.

Jig Plate B by drilling out the lower shelf (front pocket), which is the wider portion of the jig that faces what will be the front of the rifle. Cut to 1.23 inches to leave extra space for the end milling. This will have a final depth of 1.265 inches once completed.

Set your drill press, equipped with a 3/8" drill bit, to a depth of 1.23".

Drilling Jig Plate C - Trigger Hole

Remove Jig Plate B, and replace with Jig Plate C, make sure the jigs are tight and secure, and that there is no play between the jigs and receiver.



Jig Plate C

Set your drill press, equipped with a 5/16" drill bit, to a depth of 1.3 inch to accommodate for the jig, make sure you have enough depth to completely drill through the bottom of the shelf, but not enough to drill past it and into the trigger guard.

Drill until there is no remaining material within the pocket of Jig Plate C. Remember to apply cutting lubricant to the bit regularly. Use a small metal file to remove any burs without removing excess material. Remove shavings and scraps and clean before proceeding to the next step.

Milling the Remaining Material

For this process, be careful not to run your mill directly on the jig plates, as the mill will wear into the jig plates and they will no longer be accurate.

Remove current top jig plate, and replace with Jig Plate A.

Mount your XY Vise under your drill press for the final steps of finishing your receiver. Do not overtighten the vise, or else it may damage the receiver or jigs. Make sure the receiver (with attached jigs) is firmly in place and will not move.

Equip your drill press with a 3/8" end mill. Set your drill press to a depth of .63" to accomodate for jig plate..Final depth should be .63". Use your XY vise to slowly move from side to side and remove excess material. Start by milling out the remainder of the bottom shelf. Once the bottom is complete, use your end mill to smooth out the sides.

Remove your receiver from vice, and replace Jig Plate A, with Jig Plate B. Place back into vice. Set your drill press to a final depth of 1.5" to accommodate for jig plate. Final depth should be 1.25". Start by milling out the remainder of the bottom shelf. Use your XY vise to slowly move from side to side and remove excess material. Once the bottom is complete, use your end mill to smooth out the sides.

If the trigger hold needs additional smoothing, remove Jig Plate B and replace with Jig Plate C. Place back into vice. Start by milling out the remainder of the bottom shelf. Use your XY vise to slowly move from side to side and remove excess material.

Once you have removed all excess material with a file, and cleaned your receiver, you are ready to assemble your lower receiver.