



The Scope Alignment Lap provides the gunsmith with one tool that will both lap the rings for maximum holding power, and help to quickly and accurately align scope rings.



WARNING



Never attempt to disassemble or reassemble a firearm unless you are absolutely certain that it is empty and unloaded. Visually inspect the chamber, the magazine and firing mechanism to be absolutely certain that no ammunition remains in the firearm. Disassembly and reassembly should follow the manufacturer's instructions. If such instructions are not immediately available, contact the manufacturer to see if they are available. If they are not available at all, then you should consult other reference sources such as reference books or persons with sufficient knowledge. If such alternative sources are not available and you have a need to disassemble or reassemble the firearm, you should proceed basing your procedures on common sense and experience with similarly constructed firearms.

With regard to the use of these tools, the advice of Brownells Incorporated is general. If there is any question as to a specific application it would be best to seek out specific advice from other sources and not solely rely on the general advice and warnings given.

HOW TO USE

Secure the firearm in a padded bench vise. Position the firearm to give you unrestricted access to the scope mounts and rings. Both hands must be free to work with the scope, rings, bases, and the tools used during the installation. Cover as much of the receiver as possible with a clean cloth. This will prevent any of the lapping compound from falling into the firearm.

The Scope Ring Alignment Lap has two handles. They can be installed in any of six locations on the body of the Lap. This allows you to find a handle combination for many different types of rings and ring positioning. Positioning of the Lap handles is purely a matter of personal preference and convenience. We've had success with the following locations: **Front and rear rings located close together** - position a handle in each end of the Lap. **Rings located far apart** - place both handles in the center of the Lap, either 90° to one another or on opposite sides of the Lap.

Using The Lap To Help Install The Rings

Redfield/Leupold-style Rings - Clamp the front, dovetail-base ring onto one end of the Scope Ring Alignment Lap. Lube the dovetail with Brownells Action Lube Plus™. Use the Lap as a "handle" to turn the ring into its base. Loosen the top ring screws, and remove the lap. Mount the lower half of the rear ring on the scope base, leave the windage screws loose. Slide the Lap into the front ring from the rear and tighten the ring screws to hold the lap secure. Turn the front ring in its dovetail as needed to align the front and rear rings with each other. Sight down the length of the lap and barrel; the lap and rings should be in line with the center of the barrel.

Weaver-style Rings - Place the lower halves of both the front and rear rings onto the base. Lay the Lap in the rings. Wiggle the Lap from side to side and front to back. This will help to center and align the rings. Sight down the length of the lap and barrel; the lap and rings should be in line with the center of the barrel. Install the top halves of the rings and tighten the screws holding them to their lower halves. Recheck the alignment of the Lap and barrel. Tighten the ring base clamping screw(s) evenly to maintain the correct alignment.

Lapping The Rings

Once the rings are tightened onto the bases, you can determine if lapping is necessary. Remove the top halves of both rings and mark them so they will always be reinstalled in the same position, on the same bottom half. This is a Must-Do step if you *do* lap the rings. We like to mark both the top and bottom ring halves on the flat area, near the screw holes. A white, Mark-On-Anything Pencil (Brownell stock#347-125-600) works well on blued rings; use black Magic Marker on silver rings. We've used one mark on the front ring, two on the rear.

BROWNELLS® SCOPE RING ALIGNMENT LAP

READ & FOLLOW THESE
INSTRUCTIONS

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If you are lapping silver rings, coat the inside of the rings with Magic Marker. Coat the body of the Lap with 800 grit lapping compound. Place the Lap in the front and rear ring. Reinstall the top halves of the rings. How tight to tighten the screws is a matter of feel. Too tight and the Lap won't move, too loose and the top halves can tilt and bind the Lap. You will have to experiment to find the right setting.

Make thirty strokes with the Lap. During each stroke, move the Lap back and forth, and rotate it through a 90° arc as you move it. Remove the tops of the rings and remove the Lap. Carefully clean the lapping compound from the inside of the rings.

Check the wear on the bluing (or Magic Marker) inside the bottom ring halves. The areas that show bare metal are the only portions of the rings that are truly parallel. The bottom ring halves are the most critical to scope alignment and secure mounting. The top halves will lap-in as you lap the bottom halves, but they will not be cut as much as the bottom halves. You can make certain the top halves lap in as much as possible by gradually tightening the ring screws as you lap. **DO NOT** attempt to fully tighten the upper halves of the rings as you use the Lap. You could end up with perfectly round rings which would look great but actually have very little clamping power.

Reapply the abrasive compound and lap another thirty strokes. Then clean and inspect as before. Continue this process until you have approximately 80% of the surface of the lower ring halves showing no bluing or Marker. This will provide an excellent clamping area; additional lapping is not required.

Carefully clean the rings and bases of all traces of the lapping compound. Make sure there is no residue from the lapping compound in the screw holes in the rings. Install and adjust the scope, following the manufacturer's instructions. To enhance the increased holding power of the newly lapped rings, we coat the insides with a dusting of Brownells powdered Rosin.