

- f. Begin lapping the scope rings. Rings may need to be gradually tightened as you remove material.
- g. Periodically check your progress. Remove the lapping bar, clean any lapping compound from the rings, and reinstall the alignment bars. Make sure you don't remove so much material that the rings will no longer tighten onto the scope.
- h. Repeat until alignment bars match. (Figure 4)
- i. Clean scope rings to remove all grit. Do not remove bases or rings or you will have to realign and/or re-lap.
- j. Mount scope according to manufacturer's instructions.

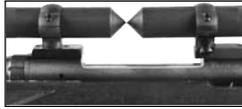


Figure 4

Limited Warranty

Every Wheeler Engineering product is warranted to be free of defects in materials and workmanship for a period of one (1) year from the date of original purchase. Wheeler will, at its option, repair or replace without charge, except for transportation costs, parts that fail under normal use and service when operated and maintained in accordance with our instructions. This warranty does not apply to normal wear or to items whose life is dependent upon their use and care. This warranty is in lieu of all other warranties, expressed or implied and releases Wheeler Engineering, its affiliates, and its vendors from all other obligations and liabilities.

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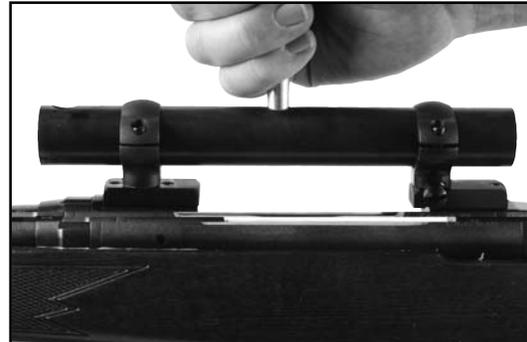
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Scope Ring Alignment and Lapping Kit



Instructions

Thank you for purchasing the Wheeler Engineering[™] Scope Ring Alignment Kit. Dimensional variances in scope bases, rings, and firearm receivers combine to cause scope rings to be misaligned. There are two reasons for aligning your scope rings:

1. Misaligned rings cause stress on the scope tube, which can dent the tube, distort the reticle, and cause adjustment problems.
2. Properly aligned rings create more surface contact with the scope tube to keep scopes in place during heavy recoil.

Parts List

This kit includes the following items:

- 2 Alignment Bars
- 1 Lapping Shaft (threaded for handle)
- 1 Lapping Shaft Handle
- 1 Jar 220 Grit Lapping Compound

Warning: Be sure firearm is unloaded before performing any gunsmithing or maintenance.

Using the Scope Alignment Kit

1. Clamp firearm in a vise with padded jaws. We recommend the use of the Tipton Gun Vise[™] to hold the firearm securely and safely.
2. Follow manufacturer's instructions for mounting bases and rings. **NOTE:** Scope manufacturers specifically say not to use the scope tube for mounting dovetail rings because of the risk of bending the tube and voiding the warranty. The Lapping Shaft may be used to install dovetail rings.
3. Check initial alignment after the base and rings have been mounted.
 - a. Remove top half of both rings. Keep ring pairs together and do not reverse top halves on their bottom halves. Most rings are manufactured as a single piece before they are split. Note: It is a good idea to mark the rings so you don't mix or reverse them.
 - b. Lay an Alignment Bar in each of the ring bottoms, pointed ends facing, just short of making contact. Adjust them so the pointed

ends are approximately midway between the rings. (Figure 1)

- c. Replace ring top halves. Tighten ring screws as if scope were being secured.
- d. If the scope rings are aligned, the points of the Alignment Bars will be aligned both horizontally and vertically.

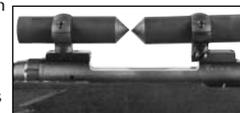


Figure 1

- e. If the points are not in alignment:
 1. Check that the ring top halves are not switched or reversed.
 2. Slightly rotate dovetail mount rings (if equipped) to improve windage alignment.
 3. Adjust rear ring windage screws (if equipped).
 4. Two-piece bases may need to be shimmed to improve elevation alignment.
 5. Align the rings as closely as possible before lapping; lapping will remove minor alignment issues.

4. Lapping the scope rings.
 - a. Loosen the rings enough to remove alignment bars.
 - b. Apply lapping compound to the inside of both halves of the rings (Figure 2).

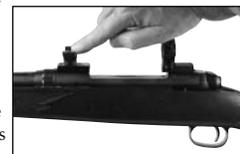


Figure 2

- c. Slide the lapping bar through both sets of rings.
- d. Tighten rings just enough to apply pressure to the rings but still allow the lapping bar to slide.

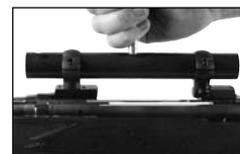


Figure 3

- e. Thread the handle into the hole on the lapping bar. (Figure 3) **NOTE:** Two threaded holes are provided in the lapping bar for the handle. For most applications, mounting the handle in the center of the lapping bar will provide the most control and ease of use while lapping. For mounting systems with closely spaced rings, it may be more convenient to mount the handle at the end of the bar.