

Gray Hackle Rods

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Using the Ferrule Hone

Figures



Figure 1
Stone/Guide alignment



Figure 2
Mitutoyo micrometer head



Figure 3
Chinese micrometer head



Figure 4
Adjusting the hone

Assembly

1. To align the stone and guide, loosen the two shoulder bolts with the supplied hex wrench until the top and bottom arms move freely.

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2. Place a $\frac{3}{16}$ " or 4mm drill bit (for the 8-14 stone/guide set) or a $\frac{1}{4}$ " or 6mm drill bit (for the other two stone/guide sets) between the stone and guide and hold together firmly. See figure 1 above.
3. Tighten the two shoulder bolts with the hex wrench, the stone and guide are now aligned.
4. Next place the micrometer head in the $\frac{3}{8}$ " diameter hole as indicated in figures 2 and 3.
5. (Optional) Install the dead-stop bolt. if used, this bolt stops the hone from traveling too far. I have quit using this and just rely on the micrometer head.
6. The ferrule hone is now ready for use,

How to Use It

Note: The ferrule hone is not designed to finish ferrules but only to make them round. Please take care when honing to ensure you do not remove too much material from the male.

Note: Due to the placement of the micrometer head, stone/guide and the hone pivot point, the micrometer head cannot be used for an accurate measurement of ferrule diameter but only to indicate an amount of material removal. The vertical scale is not used, only the scale on the barrel is used.

1. Mic the male and female side of the ferrule to determine the amount of material required to be removed for a good fit.
2. Chuck the male ferrule in your lathe and with the power OFF place the hone over the ferrule and adjust the micrometer head using the ratchet knob (the small knob at the end of the micrometer head) down until the stone and guide touch the ferrule, take note of the reading on the micrometer head.
3. Place a couple of drops of good cutting oil on the stone.
4. Turn on the lathe and run between 500 and 700 rpm.
5. Using figure 4 as an example, the micrometer head indicates roughly .00013, rotate the ratcheting knob down .0002. slightly open the ferrule hone and place on the ferrule holding each end of the hone.
6. Using a fluid motion, without stopping, slide the hone along the lathe Z axis on the ferrule from the shoulder to the end of the ferrule. Do this no more than two times without checking the ferrule fit.

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Note: If the male ferrule is more than .002 oversized you may want to perform this operation a few times to help remove material more rapidly, however ensure you do not over-hone the male.

7. Turn off the lathe and slowly rotate the male ferrule observing the circumferential striations on the ferrule, It should take no more than twice with the hone to see the striations the full length of the ferrule, this indicates that you have completely rounded the male with no high spots.
8. At this point you can use whatever method you currently employ to lap the ferrule to size.

Thank you for the purchase, should you have any problems/concerns please feel free to contact me.

Lee Gomolchak