

## **DIALING KNIFE GRINDER RAIL TO STRAIGHT KNIFE CUTTERHEADS**

Even though the pictures are showing the setup on a jointer, the alignment procedure is the same whether you are dealing with a jointer or surfacer.

Grinder rails must be in alignment with their cutterheads in both the horizontal and vertical planes. The horizontal plane must be established first, before the vertical plane is attempted.

If you are dealing with a jointer that originally had the grinder legs pinned to the out feed table at the factory, you must shift the cutterhead/yoke assembly in the incline base to establish the horizontal head knife slot to grinder rail parallelism.

If you are dealing with a field level grinder installation, you can shift the grinder legs on the out feed table to establish the horizontal head knife slot to grinder rail parallelism and then pin the grinder legs to the out feed table.

In all cases on jointers, make sure the out feed table gibs are tight before proceeding.

If you are dealing with a surfacer, you must shift the grinder legs and then re-pin them after establishing the horizontal head knife slot to grinder rail parallelism.

### **EQUIPMENT REQUIRED**

The following equipment is necessary to accurately check the grinder rail to knife slot alignments. These items can be rented from the factory.



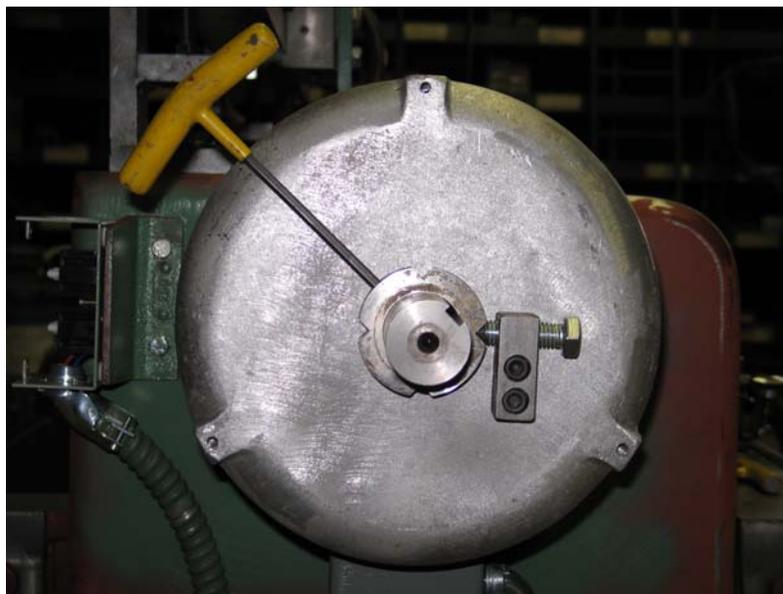
This is the indicator set that is used to establish the horizontal alignment of the grinder rail to knife slot.



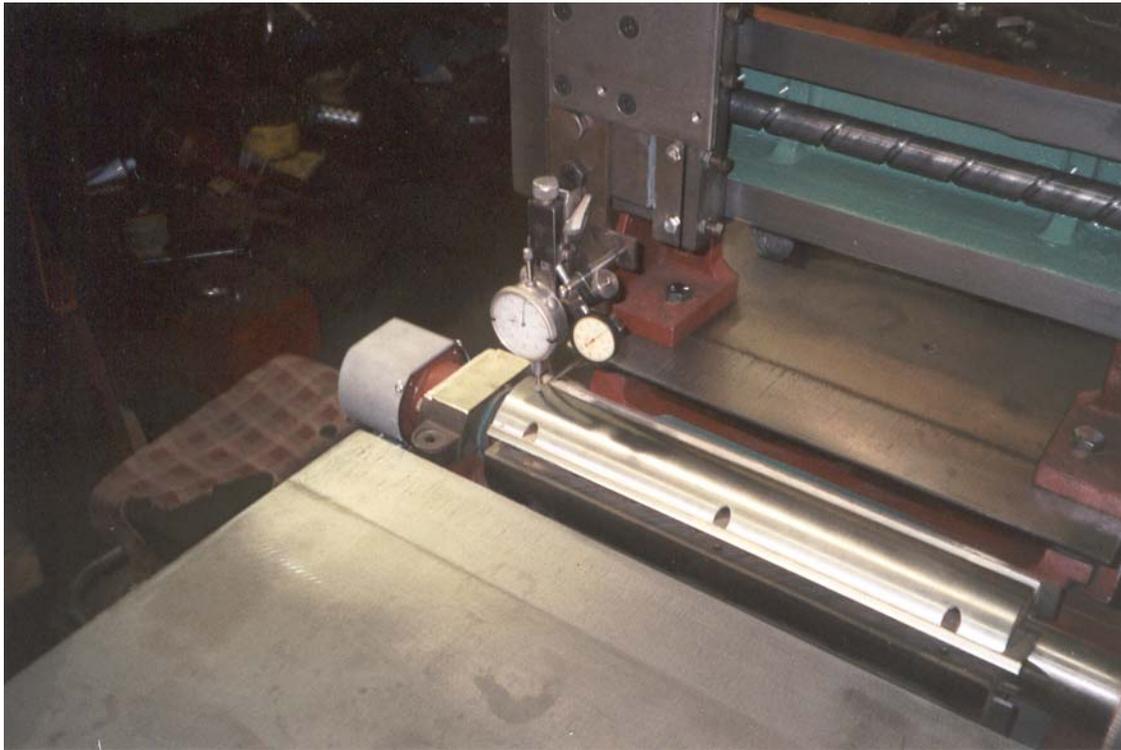
These pictures show both indicators in position on the mount plate. The large indicator checks the vertical alignment. The small indicator checks the horizontal alignment.

### HORIZONTAL ALIGNMENT

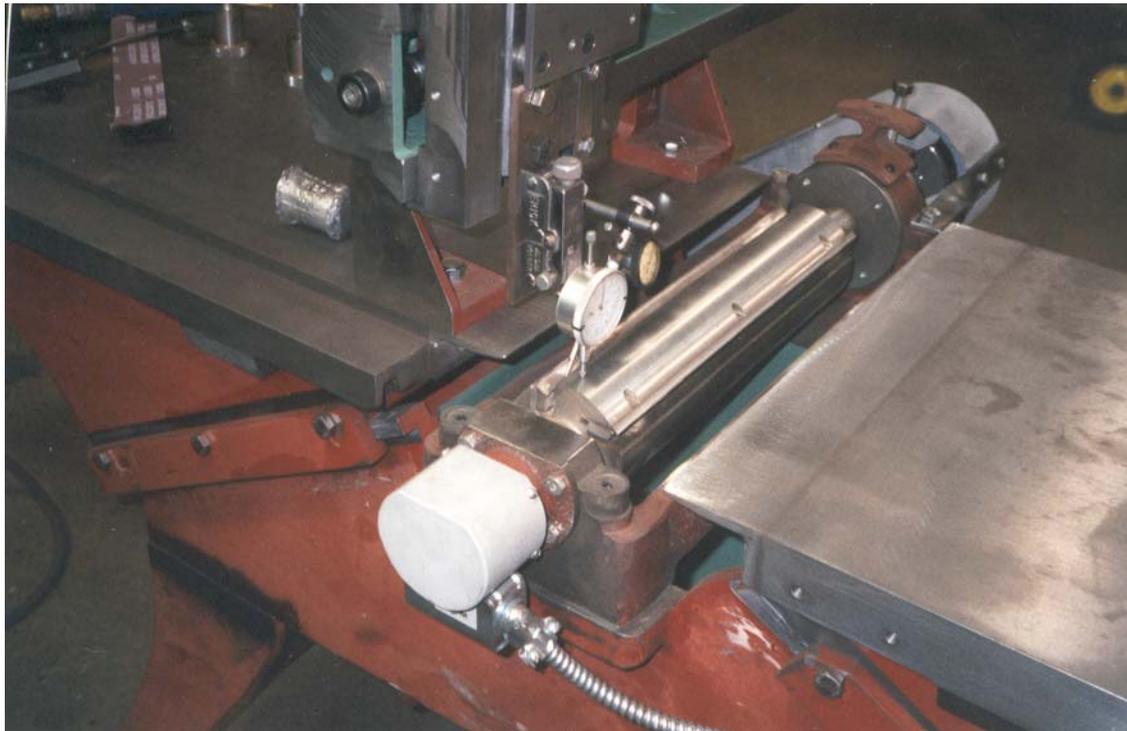
Start by positioning a knife slot so that it is sitting vertically or perpendicular to the table top. Stabilize the head in this position. This can be done by using the INDEX RING and STOP ASSEMBLY that is used for wheel grinding.



This is the Direct Motor Drive Index Plate & Lock assembly. The belt drive version is similar, but with a difficult stop block and bolt.



With the cutter head stabilized, bolt the mount plate to the grinder saddle, and position the dial indicators as depicted by the pictures.



As can be seen in the pictures, the arm of the small indicator rides the side of the knife slot that is opposite to the side where the knife registers.

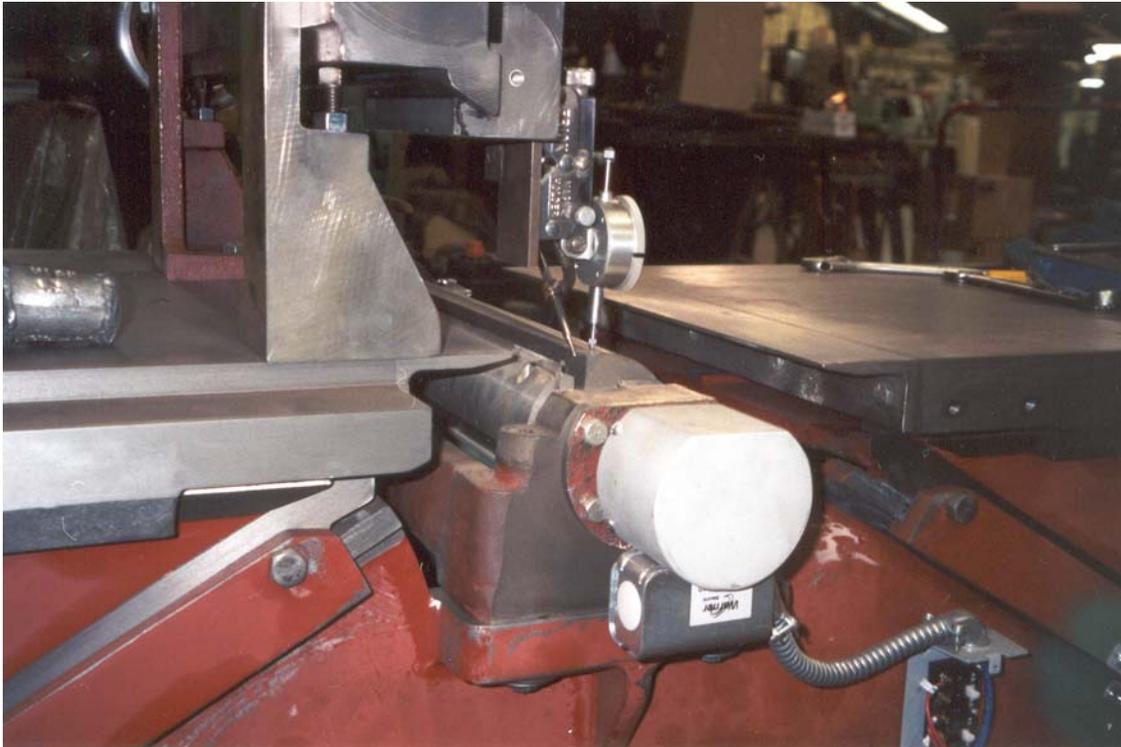
By traversing the grinder saddle along the length of the cutter head, the small indicator will show the amount of misalignment between the grinder rail and the knife slot.

As mentioned previously by shifting either the grinder legs or utter head yoke assembly, the amount of misalignment can be reduced until a zero indicator reading can be achieved which establishes the horizontal rail to knife slot alignment.

Once the horizontal alignment is established and the legs pinned, this alignment normally does not need be checked until the head yoke assembly is disturbed.

### **VERTICAL ALIGNMENT**

The grinder legs have ½” square head set screws, to adjust the parallelism of the grinder rail to the round body of the cutter head. If the rail is not parallel to the head body, the knives when they are ground, will not be parallel with the out feed table.



Position the plunger of the large indicator so that it rides on the body of the cutter head between the knife slots. “Do not indicate on the knives.” Traverse the grinder saddle the length of the cutter head and observe the movement of the indicator needle. The indicator should read the same from one end of the head to the other. If it does not read the same, loosen the ½-13 hex head bolts that hold the rail to the legs and adjust the ½” square head set screw until a zero indicator reading is achieved. Note: always adjust the low side of the rail “up” to eliminate any backlash.