

## Procedure for Aligning Arbor Motors in #4 Saws

The center line of the blade has to be aligned to the center line of the tilting trunnions. If this is not done, the blade will shift laterally and hit the throat plate slot when the saw is tilted. Another problem that can result from a misaligned arbor motor is that when the blade is tilted, it will no longer be parallel to the fence nor the dovetail slides. This can result in inaccurate cutting and kickbacks.

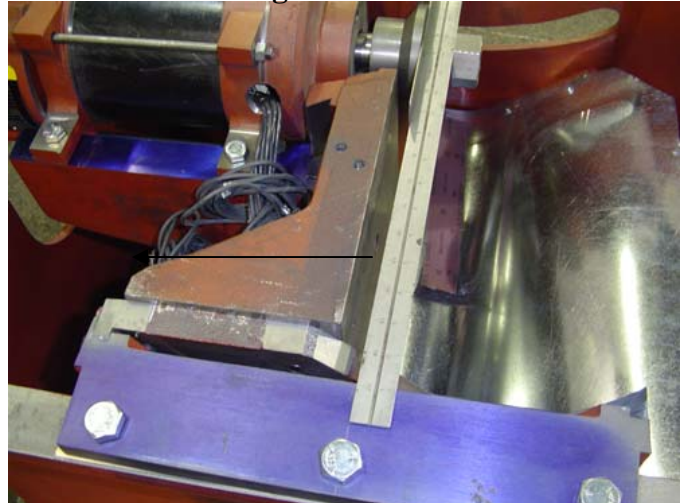
1. This procedure is accomplished most easily with the table top removed. But it can be done with the top in place.
2. The center lines of the Z-4 infeed & outfeed stationary cradles must be established. You may be able to scrape or sand away paint in the area of the center bolt hole to reveal the original factory scribe lines. If the original lines have been obliterated, find the center of the trepanned groove in the cradle with a steel rule. Remove the 5/8 hex bolt and with a combination square on the machined outer edge, scribe the centerline onto the top face of the cradles.
3. An 18" steel rule is required to sweep in the arbor motor. The steel rule is clamped flat wise between the tight collar and the arbor nut. A .0938" (3/32") shim is placed between the tight saw collar and the steel rule. The purpose of the 3/32" shim is to simulate 1/2 the width of a .1875" (3/16") saw blade. By using the shim, we are able to keep the blade kerf width centered on the tilting trunnion center line.
4. With the steel rule and shim clamped up, sweep the steel rule from the infeed to the outfeed trunnions. Shift the arbor motor around until the steel rule is aligned with the scribe marks. When complete, tighten the four 1/2" hex bolts that hold the arbor motor to the motor box.
5. The table can then be reinstalled so that the blade plane is parallel to the dovetail slots.

Northfield Foundry & Machine Company  
1/2007

**Checking Infeed Cradle**



**Checking Outfeed Cradle**



**.0938" shim between tight saw collar and 18" steel rule**



**.0938" shim**