

Table Saw Alignment And Maintenance

Two Saw Setup



Two Table Saws

- Primary saw is a Delta Contractor Saw with 32" Unifence
- Secondary saw is a Delta Unisaw with a 52" Unifence
- Leveling and aligning the saws to each other was an EXTREMELY frustrating task! I probably won't do again!



Alignment Tools (Deluxe Set)

- A-Line-It Deluxe kit
- 12" Plastic drafting triangles (45/90 degree)
- Toothless alignment blade
- Wixey digital angle gauge



Alignment with the A-Line-It Deluxe Kit

- Dial indicator and tips
- Mounting bars
- Instructions for drill press, table saw and router alignment
- From In-Line Industries - \$144.95



Alternative Alignment Tool

- Dial indicator clamped to the miter gauge

Overview

- Step 1 - Get the saw ready - clean & safe
- Step 2 - Set the blade stops at 45 & 90 degrees
- Step 3 - Align the blade to the miter slot at 90 degrees
- Step 4 - Align the blade to the miter slot at 45 degrees
- Step 5 - Align the rip fence to the miter slot
- Step 6 - Align the miter gauge at 45 & 90 degrees to the blade
- Step 7 - Table saw maintenance

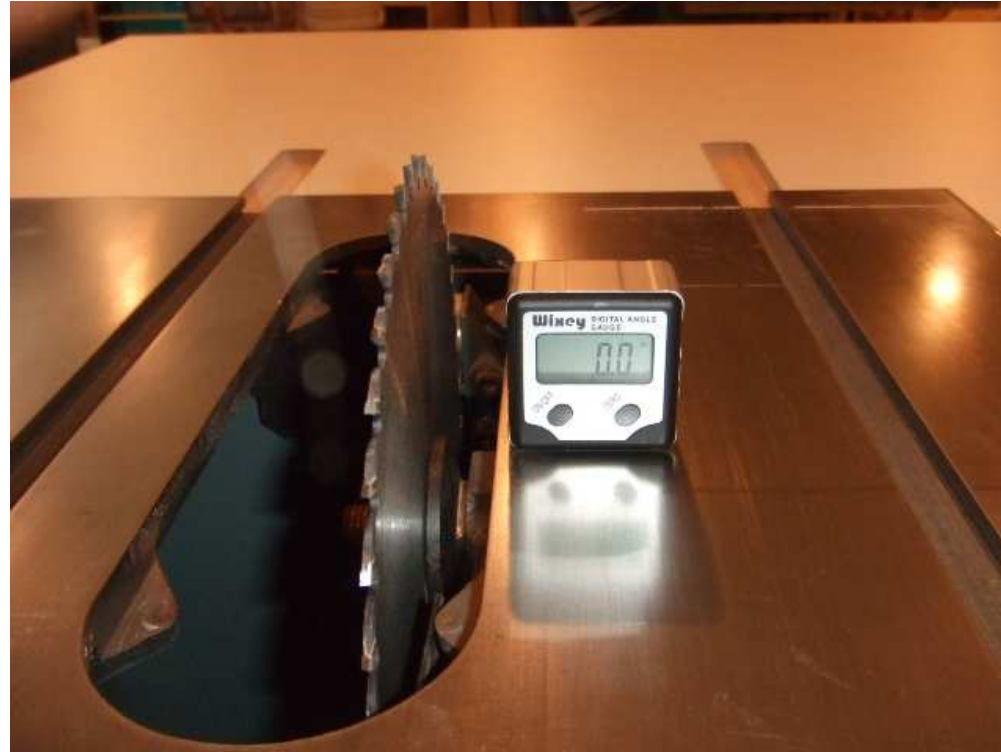
Step One



SAFETY FIRST - Before you start the alignment!

- Unplug the power cord and test the start button
- Remove the belts (if possible) – it makes rotating the blade easier
- Make sure the arbor washer is clean and mount the blade

Step Two



Setting the 90 and 45 degree stops

- I use the Wixey digital gauge to adjust the blade angle
- You can also use a drafting triangle
- I don't rely on the built-in stops (sawdust can cause an error)
- I adjust my stops slightly past the 90 and 45 degree settings
- First set the Wixey gauge to 'zero' on the saw table

Step Two



Setting the 90 and 45 degree stops

- Attach the gauge to the left side of the blade (if you have a 'right tilt' saw)
- Adjust the blade to 90 degrees and adjust the stop

Step Two



Setting the 90 and 45 degree stops

- Attach the gauge to the left side of the blade (if you have a 'right tilt' saw)
- Adjust the blade to 45 degrees and adjust the stop

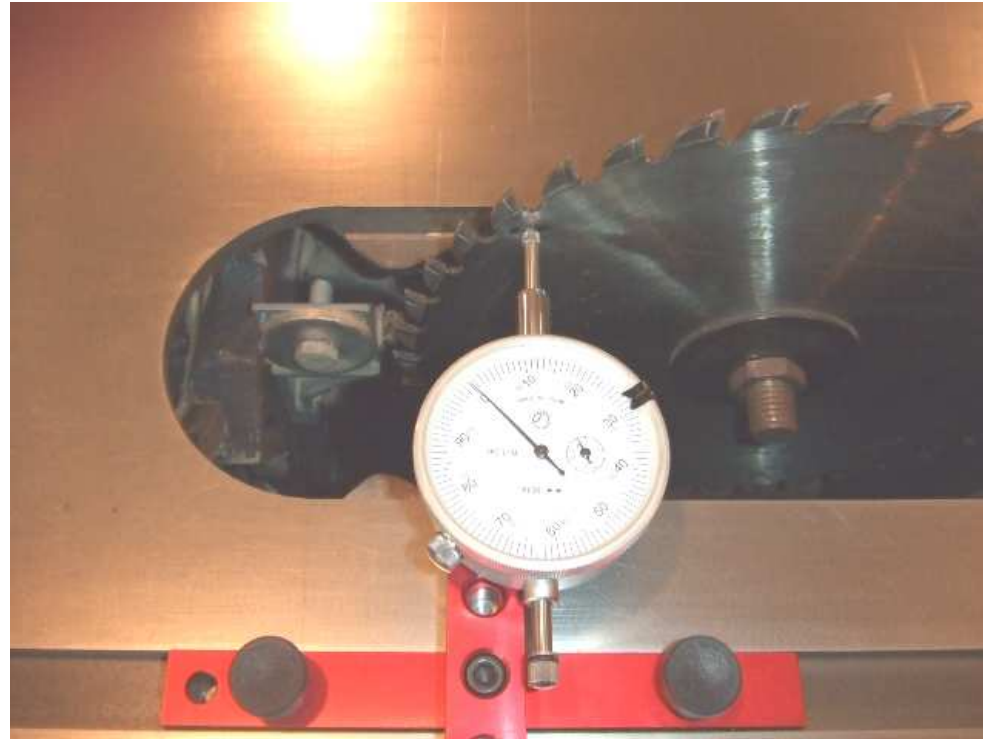
Step Three



Alignment of the blade to the miter slots

- Set up and measure from the left side if it's a 'right tilt' saw
- Make a small mark on the blade at the front of the saw
- Set dial indicator to 'zero'

Step Three



Alignment of the blade to the miter slots

- Rotate the blade to make measurement at the back of the saw
- Move the dial indicator to the marked spot
- If it doesn't read 'zero', recheck the measurement
- Adjust the trunnion as necessary

Step Three



Trunnion adjustment on a 'contractor' saw

- The trunnion is mounted to the table with 4 bolts (this saw has adjustment 'pals' installed)
- Loosen three bolts and leave the fourth bolt 'snug'
- Adjust by rotating the trunnion (use the 'pals' if you have them)
- Tighten the bolts and recheck the alignment until the difference is 'zero'

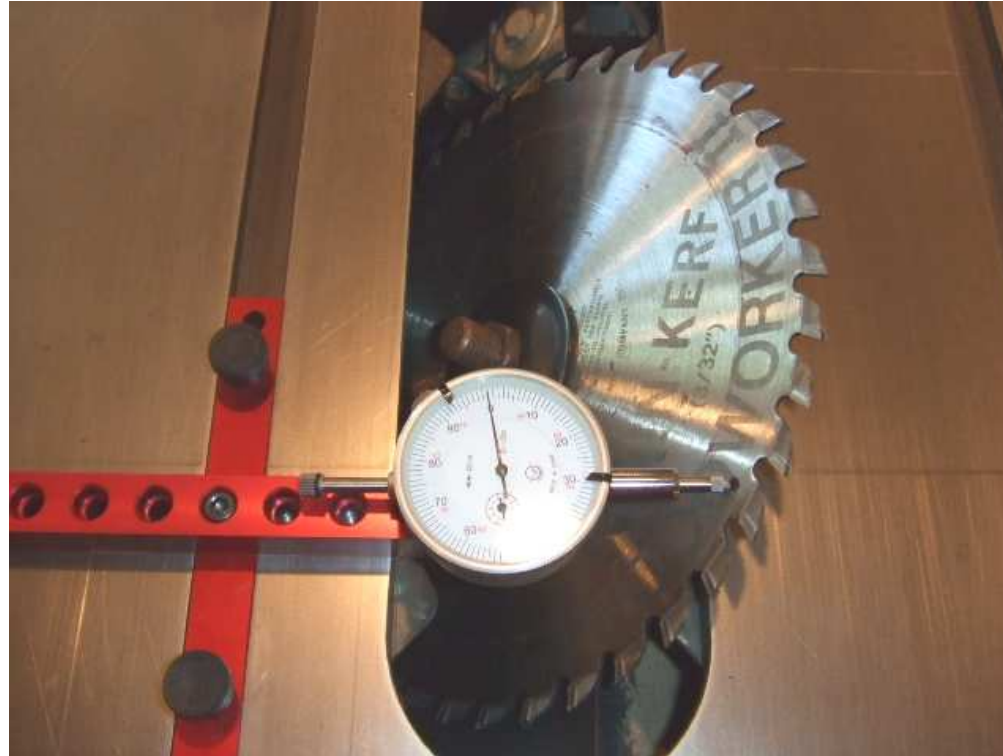
Step Three



Trunnion adjustment on a 'cabinet' saw

- The trunnion is mounted to the cabinet frame and the top is attached to the cabinet with four bolts
- Loosen three bolts and leave the fourth bolt 'snug'
- Adjust by rotating the top
- Tighten the bolts and recheck the alignment until the difference is 'zero'

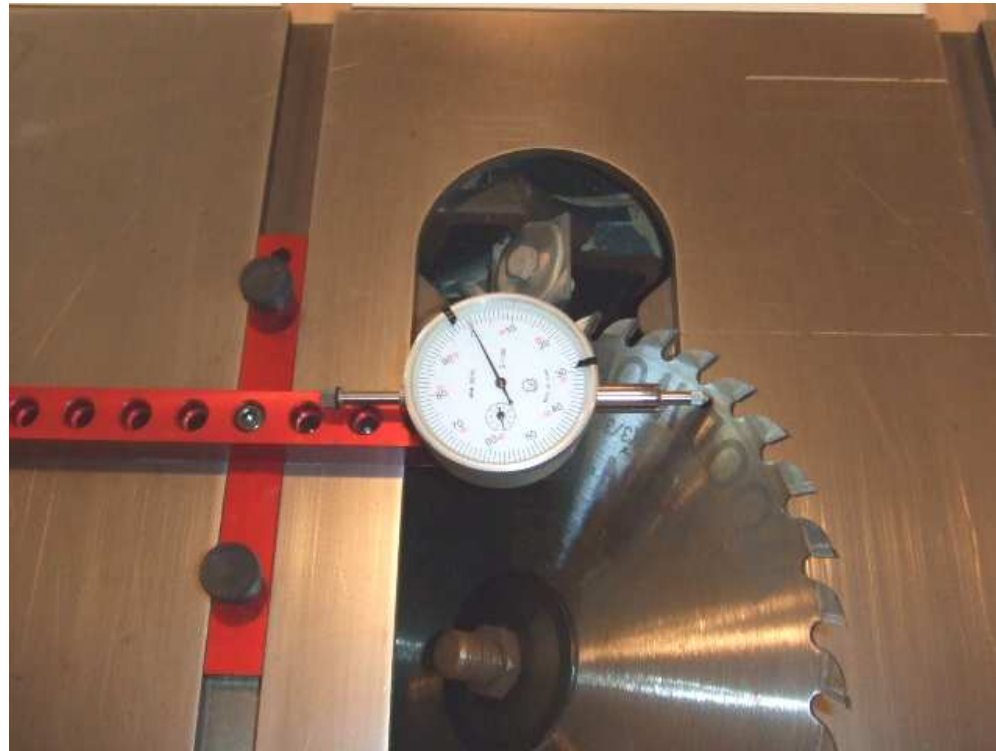
Step Four



Alignment of the blade (at 45 degrees) to the miter slots

- Set up and measure from the left side if it's a 'right tilt' saw
- Make a small mark on the blade at the front of the saw
- Set dial indicator to 'zero'

Step Four



Alignment of the blade (at 45 degrees) to the miter slots

- Rotate the blade to make measurement at the back of the saw
- Move the dial indicator to the marked spot
- If it doesn't read 'zero', recheck the measurement
- Adjust the trunnion as necessary

Step Four



Trunnion adjustment on a 'contractor' saw

- The trunnion is mounted to the table with 4 bolts
- The adjustment is made by adding shims between the trunnion and table on the high side
- Tighten the bolts and recheck the alignment until the difference is 'zero'

Step Four



Trunnion adjustment on a 'cabinet' saw

- The trunnion is mounted to the cabinet frame and the top is attached to the cabinet with four bolts
- The adjustment is made by adding shims between the top and cabinet on the high side
- Tighten the bolts and recheck the alignment until the difference is 'zero'

Step Five



Setting the rip fence to the miter slot

- Put the gauge in the right miter slot
- Set the gauge to 'zero' at the front of the table

Step Five



Setting the rip fence to the miter slot

- Move the gauge to the back of the table and measure the difference
- I like to set my fence to $+0.005$ " (away from the miter slot) to allow extra clearance at the back of the blade. This reduces burning and chances of a 'kickback'

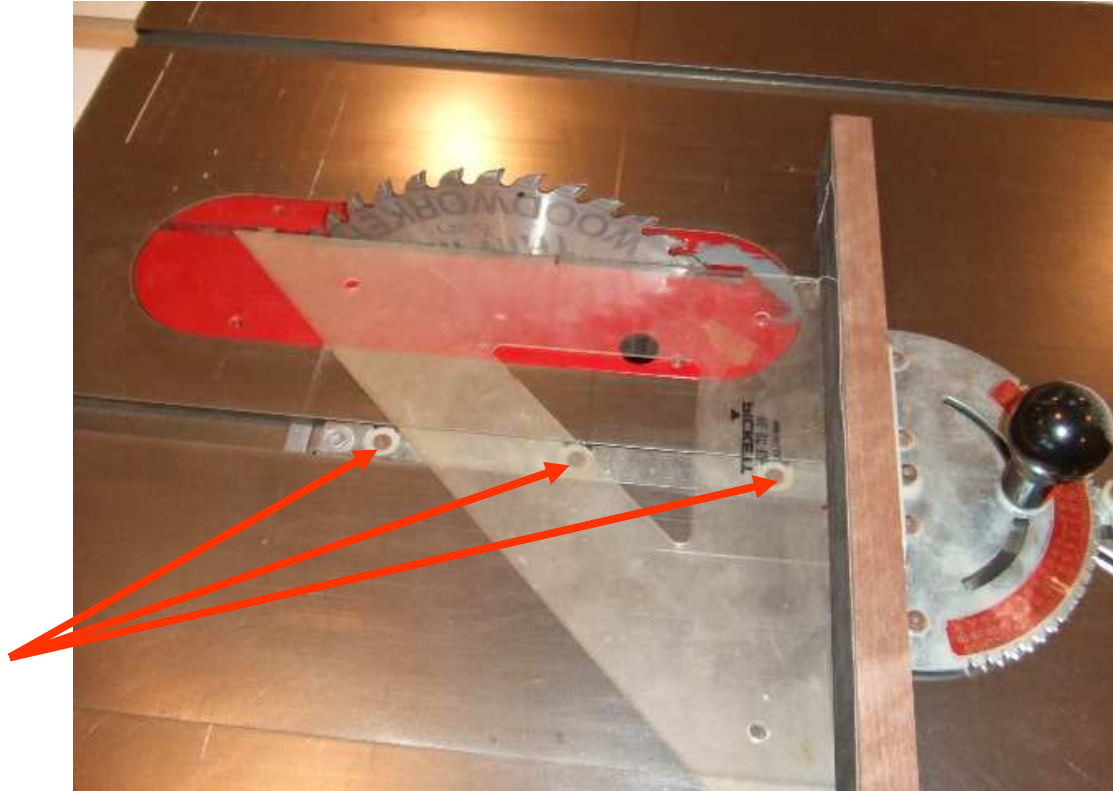
Step Five



Setting the rip fence to the miter slot

- If you have a 'unifence', use the adjusting knobs to align the fence
- Other 'T-square' type fences have similar adjustments
- Older fences usually clamp at both ends and are difficult to adjust

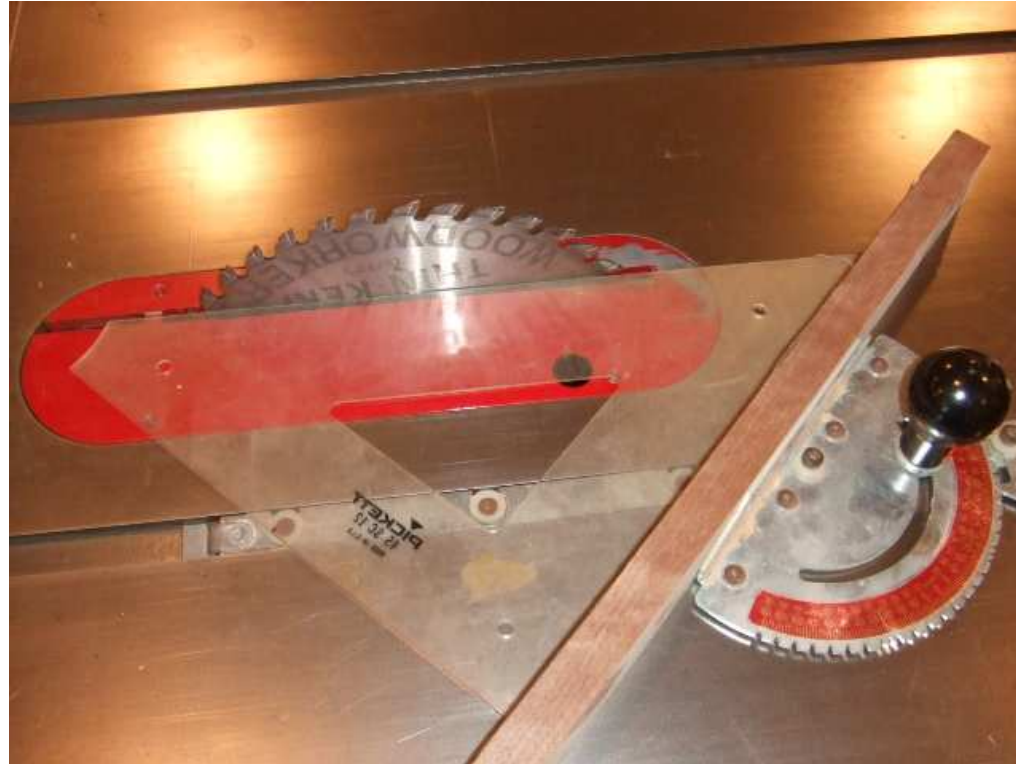
Step Six



Adjusting the miter gauge at 90 degrees

- Adjust the miter gauge bar for a snug fit in the miter slot
- The Incra miter gauge has adjustable inserts in the bar
- The standard gauge can be adjusted by using a center punch and hammer to widen the bar

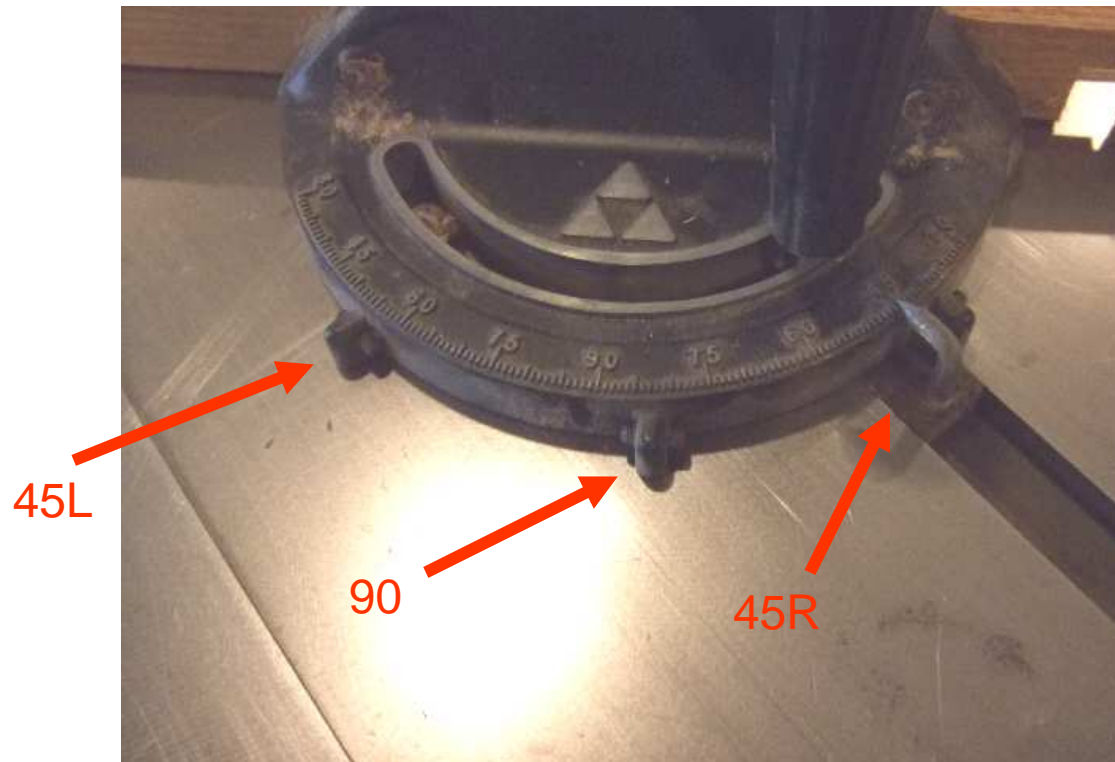
Step Six



Adjusting the miter gauge at 45 degrees

- The Incra miter gauge has adjustment screws in the head

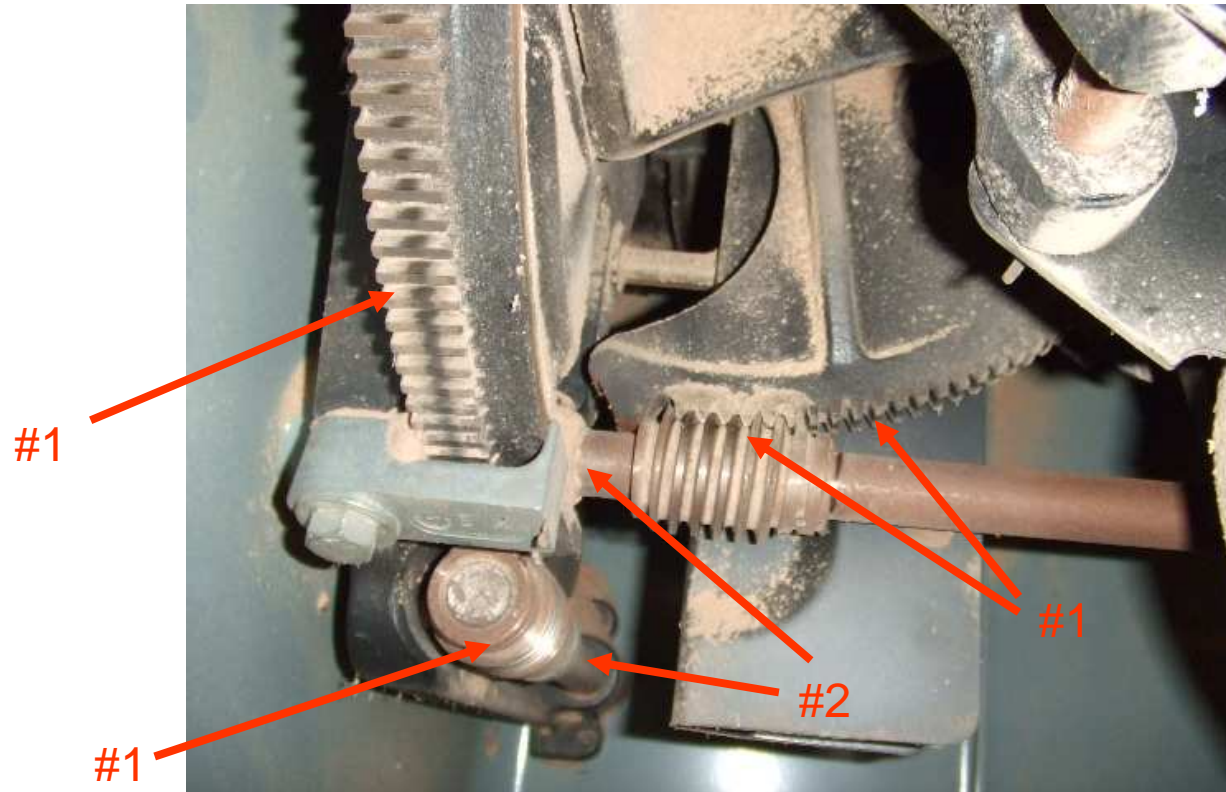
Step Six



Setting the stops on the standard miter gauge

- The standard Delta miter gauge has adjustable stops at 90 degrees and left and right 45 degrees
- Use an Allen wrench to make the adjustments

Step Seven



Routine Maintenance

- Clean the worm gears with a fiber or brass brush and lube with a dry lube product (#1)
- Use light machine oil sparingly on the adjustment shaft bearings (#2)
- Too much oil attracts dirt and sawdust