



“DL” SERIES BACKLASH ADJUSTMENT INSTRUCTIONS.

These instructions will cover basic shaft endplay & backlash adjustment procedures for all “DL” series tables from 6.5” through 25”, A, B & C models.

Tools needed: Basic hex key wrenches, pry bar, properly sized spanner wrench & dial test indicator with magnetic stand.

STEP #1

Make sure there is NO power going to the rotary table and that the table clamps are turned OFF. At that point you should be able to rotate the unit by hand or with a wrench, the larger the table the more resistance you should feel at the worm shaft nut.

STEP #2

It is recommended that you first check worm shaft endplay, (FIG-2).

Make sure the bearing cartridge set screw is tight, (FIG-1).

With an indicator, place the stylus on the **face** of the worm shaft hex nut, (FIG-2), using a pry bar in one of the T-slots, (FIG-3), push and pull the rotary table, as if you were trying to rotate it in both directions, the amount of movement should be less than .0002”.

If this reading is higher, it may indicate that the worm shaft bearings are either worn or damaged and need to be replaced before adjusting backlash.

Endplay adjustments can be made if the bearings are still good, loosen the 2 set screws on the OD of the hex nut and tighten the nut clockwise, tighten the set screws and recheck. Be sure not to over tighten the worm shaft nut, this can lead to premature wear or damage to the bearings and cause higher than normal current draw readings.

NOTE:

Make a measurement on the cartridge distance to the base, (FIG-6), on models 6.5" to 15", if this measurement is less than 1/8" then the worm gear has reached the end of its adjustment life and should be replaced. The 16.5" through 25" bases all have a 3/4" counterbore machined so the flange of the cartridge can go into the base, so you would need to measure the amount of the cartridge flange that is protruding out, when it is at or less than 7/16" then the worm gear is at the end of adjustment and would need replaced.

Also, after multiple adjustments you will need to check and possibly realign the pulleys (B Models) so that the belt does not rub on the pulley flanges and cause belt damage. "A" & "C" models should not require any realignments for the life of the gear.

STEP-3

Once you have determined that the worm shaft endplay is good and the unit rotates freely, then move on to check backlash.

Reposition the indicator so that the stylus is on the side of any T-slot, (FIG-4). **Make sure the locking set screw (FIG-1) is always tight before making any indicator readings otherwise you could get a false reading.** Using the pry bar, push and pull the rotary table and make note of the indicator readings, if backlash is higher than .001", adjustments should be made. It is also recommended to check the backlash in several positions throughout 360° to verify that the backlash is consistent all the way around the unit prior to making any backlash adjustments, if the unit was heavily used in one area for extended periods of time "localized wear" can occur and cannot be adjusted, at that point the worm gear would need to be replaced or possibly re-machined.

ADJUSTMENT:

Loosen bearing cartridge locking set screw (FIG-1), using the properly sized spanner wrench, rotate the cartridge clockwise to decrease the amount of backlash, (FIG-5), it is recommended to make these adjustments in small increments, (1/2 – 1 revolution), rechecking as you adjust, **being sure to lock the set screw before checking with the indicator.** The amount of rotation on the cartridge varies depending on the worm gear ratio, generally the more backlash the unit has, the more you will need to rotate the cartridge. If needed, rotate the cartridge counterclockwise to "add" backlash. It is important to maintain .0005" - .001" of backlash to allow oil to lubricate the worm threads.

If you experience any trouble during the checking or adjusting backlash, contact:

Troyke Mfg. Co. for assistance at 513-769-4242

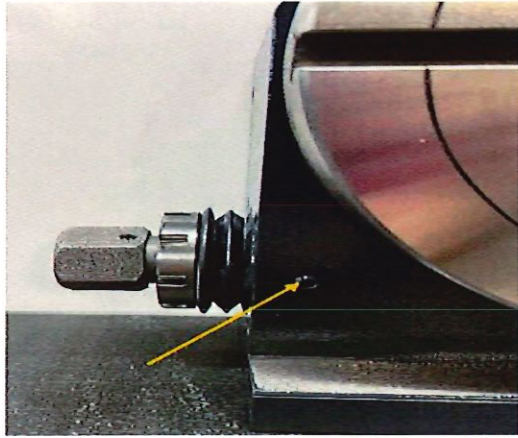


FIG-1

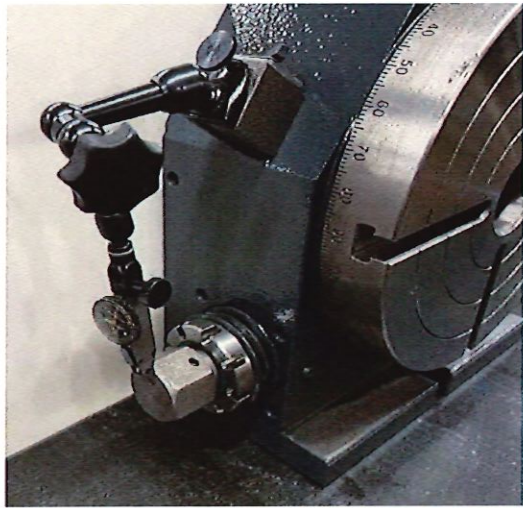


FIG-2

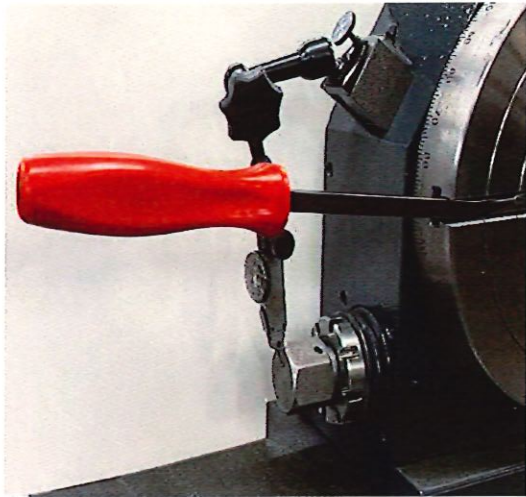


FIG-3

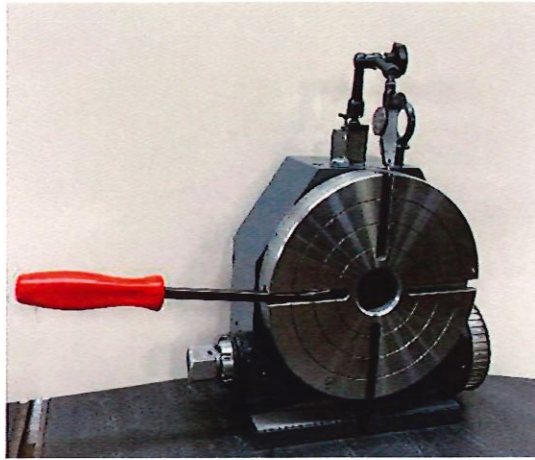


FIG-4



FIG-5

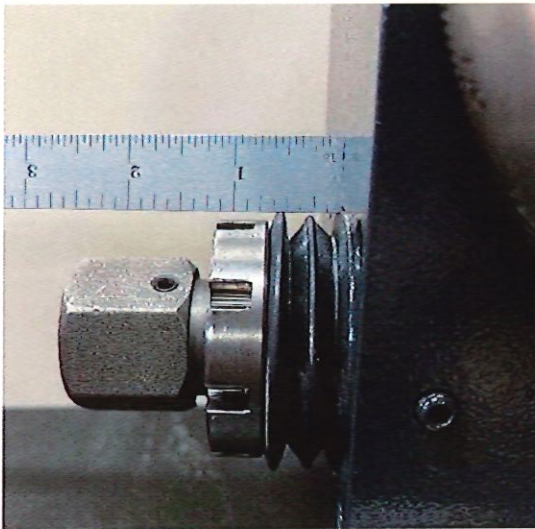


FIG-6