

## NORTHFIELD #7, #8 & #737 PLANER

### TECH TIPS # 2

September 30, 2004

#### CONDITIONS THAT RESULT IN UPPER RIGHT ANGLE GEAR BOX FAILURE ON #7, #8 & #737 NORTHFIELD PLANERS.

1. Upper outfeed roll set deeper than .020" below cutting circle of knives.
2. Running long unsupported material - when the end of the workpiece passes by the pressure bar, the workpiece fulcrums off of the table edge and attempts to push the upper outfeed roller out the top of the machine.
3. Broken 25-12 upper roll spring holders.
4. Collapsed NF500 upper outfeed roll springs.
5. Square bearing blocks on upper outfeed roll immobilized with rust or pitch, allowing only one side to move.
6. Bent outfeed rollers or roller extensions.
7. On Pre 1980 machines without a spacer under the drive clutch, the clutch can come loose and slide down the output shaft of the gear box making the clutch direct drive with no lateral movement.
8. The six screws that hold the Tol-o-matic gear case halves together, have been known to come loose and fall out if not retightened after several hot-cold cycles.
9. Worn oilite bushings in the older 1 1/2" shaft diameter units.

#### SUPER DUTY BALL BEARING 1 1/2 RIGHT ANGLE GEAR BOXES

In January 2004 we switched to a 1 1/2" diameter, ball bearing right angle drive. These gearboxes eliminate the fragile 1/4" step keys and thin wall sleeves used in all of the 1 1/4 Bore gearboxes. These new units use a heavy 3/8" step key and the stub shafts run on the inner races of the ball bearings.

We do not recommend running the ball bearing right angle gearboxes on 1 1/2" stub shafts and 1 1/2" vertical drive shafts that have been run with the old bushing type 1 1/2" Tol-o-matic gearboxes. This is because the thrust bearing races have probably cut deep grooves in the stub and vertical shafts. We recommend that you change all components when retrofitting.