



## The "REEL" Efficient TMR Mixer

### Timing the final drive on a Farm Aid Equipment 250/340/430

#### Background

The mixing reel is driven in both the front and in the back. Both drives need to be timed to spread the load to both drives evenly. If it is not timed only one drive will be doing the work and premature wear and failure of that drive will occur.

Early models did not have an adjustment for timing the drive; The drives were timed and then the drive shaft that transfers power from the front to the back was welded in position to time the drives.

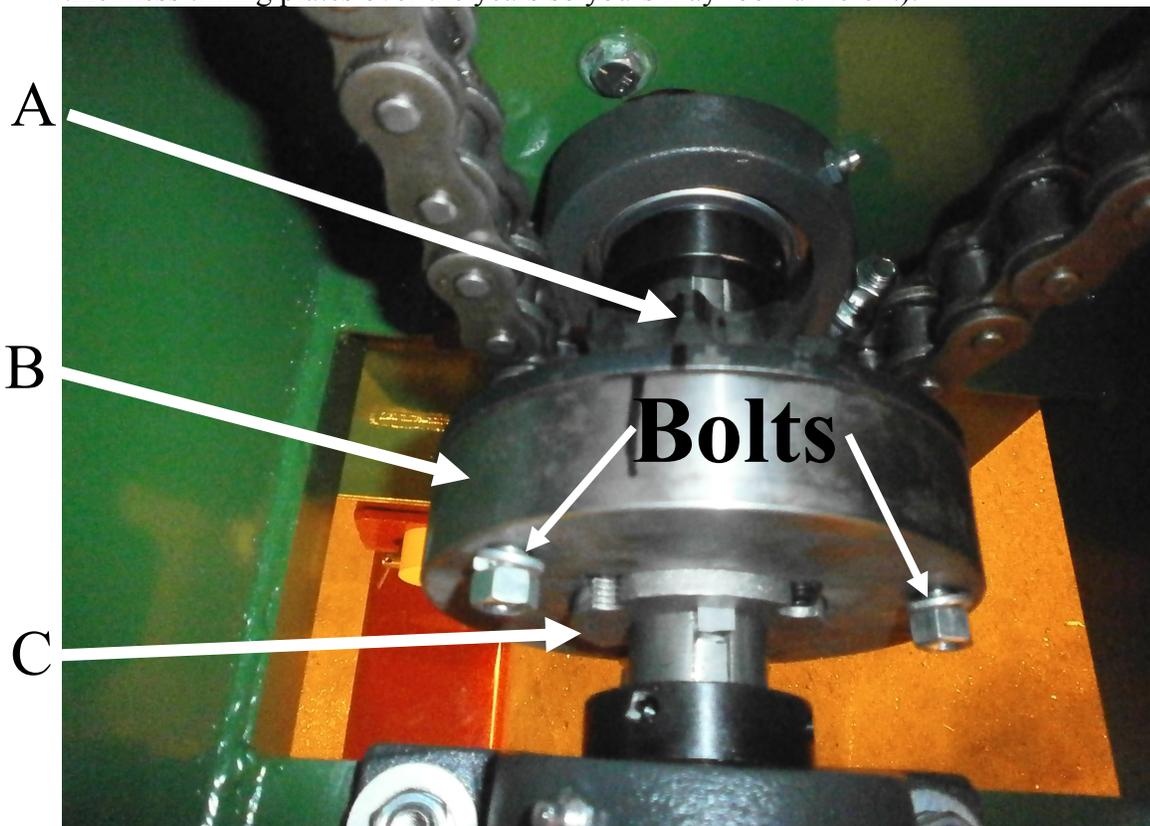
Later models have adjustable timing. The front drive is not adjustable; the adjustment to time is in the rear drive behind the back shield. The adjustment changes the relation between the shaft and the 11-tooth number 80 sprocket (A). The shaft turns in unison with the front shaft and the sprocket can be advanced or retarded so that both drives work together.

The rear 11-tooth number 80 sprocket (A) is not keyed to the shaft. It is attached to the timing plate (B) by three bolts. The timing plate is tightly attached to the shaft by means of a Taper-Lock® bushing and key (C). There are slots in the bolt holes allowing for adjustment.

If you do not have this timing feature on your rear drive you will have to buy a timing sprocket, a timing plate and bushing.

#### Timing

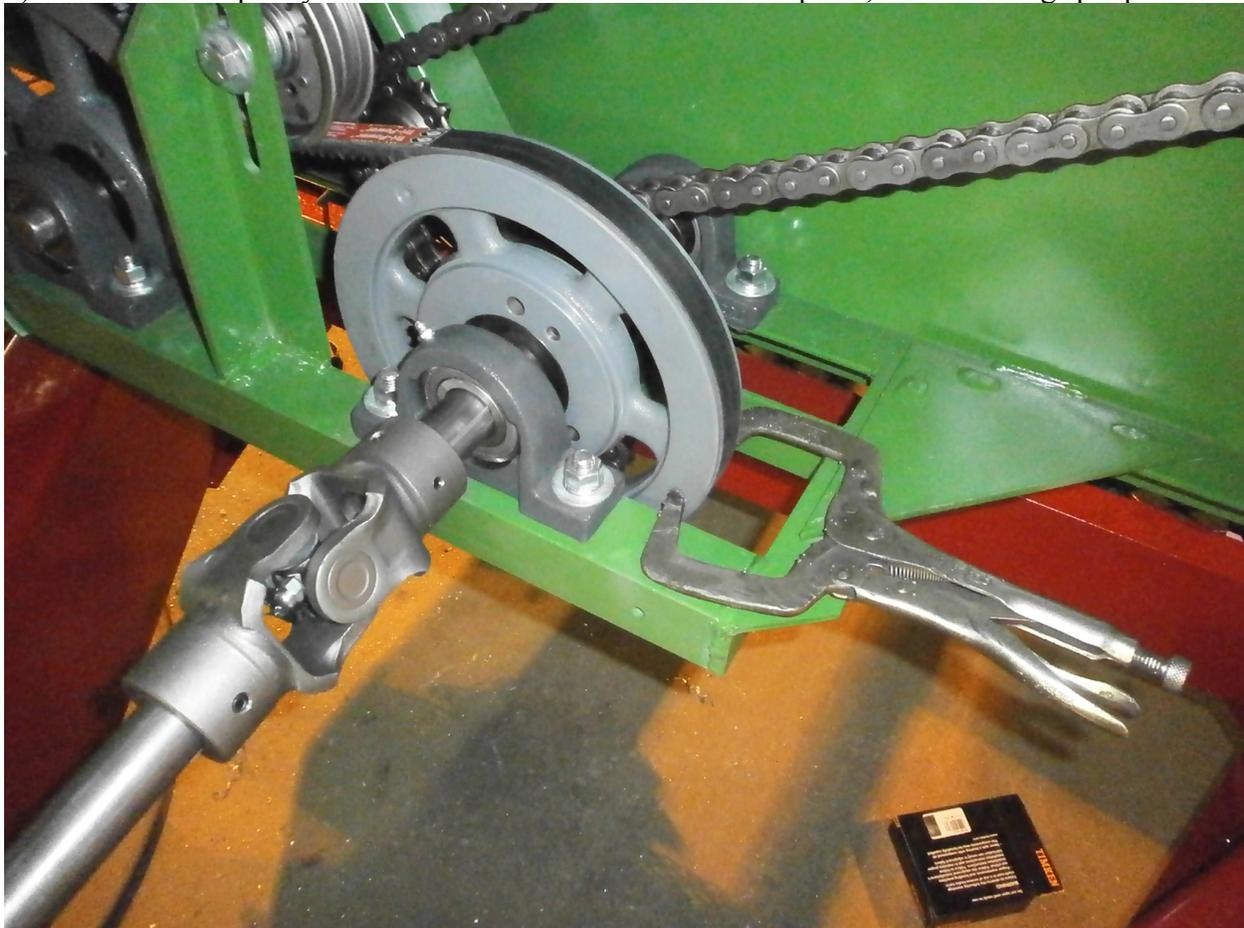
- 1) Loosen the bolts that attach the timing plate (B) to the timing sprocket (A) in the rear tumbler drive, behind the shield on the rear of the mixer. There are three bolts. (There have been different thickness timing plates over the years so yours may look different).



- 2) Block the spiral, we use a vice-grip® pliers and a steel plate. As an alternative you could have a helper stand on the auger side of spiral.



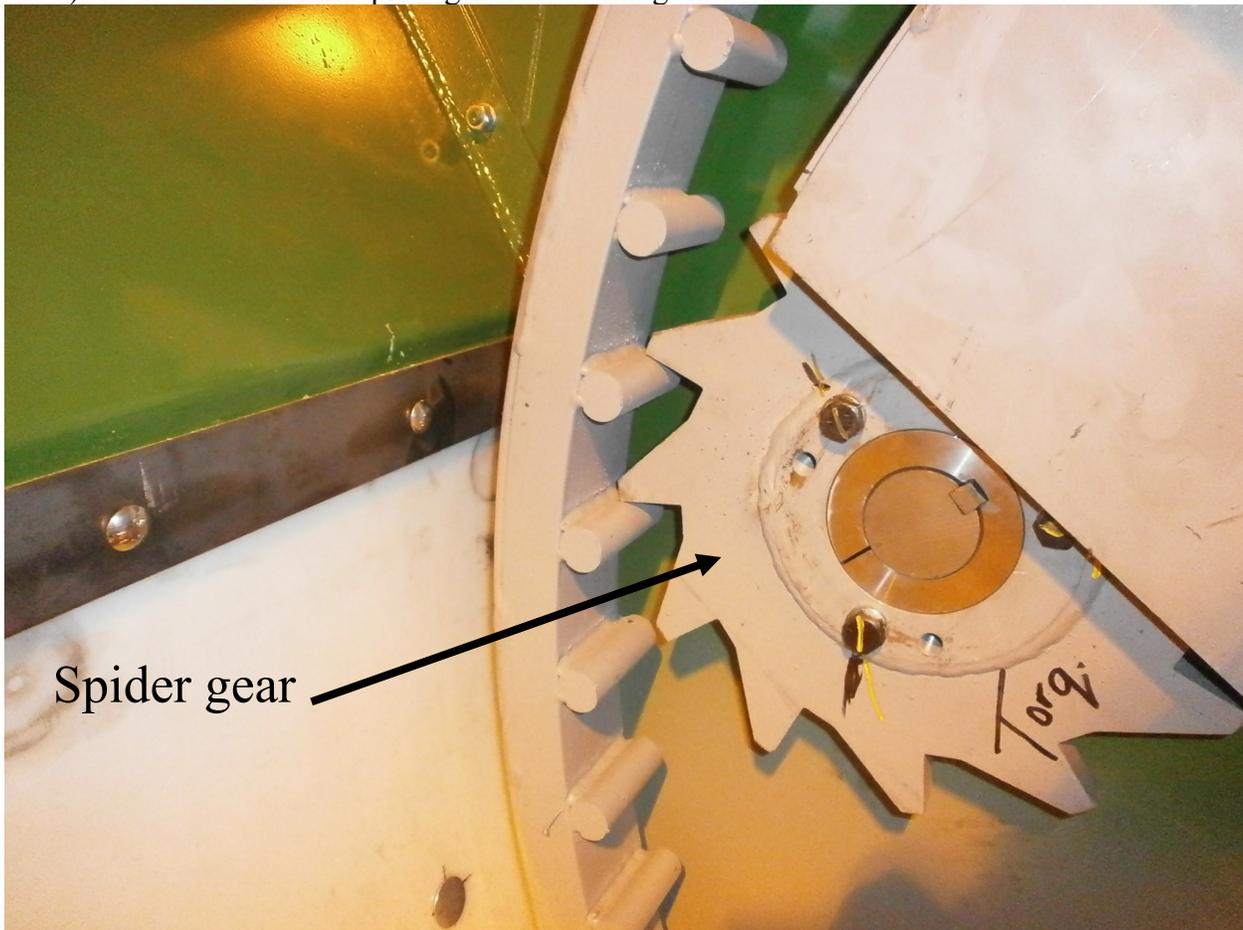
- 3) Turn the PTO pulley in the normal direction and lock it in place, we use vice-grip® pliers.



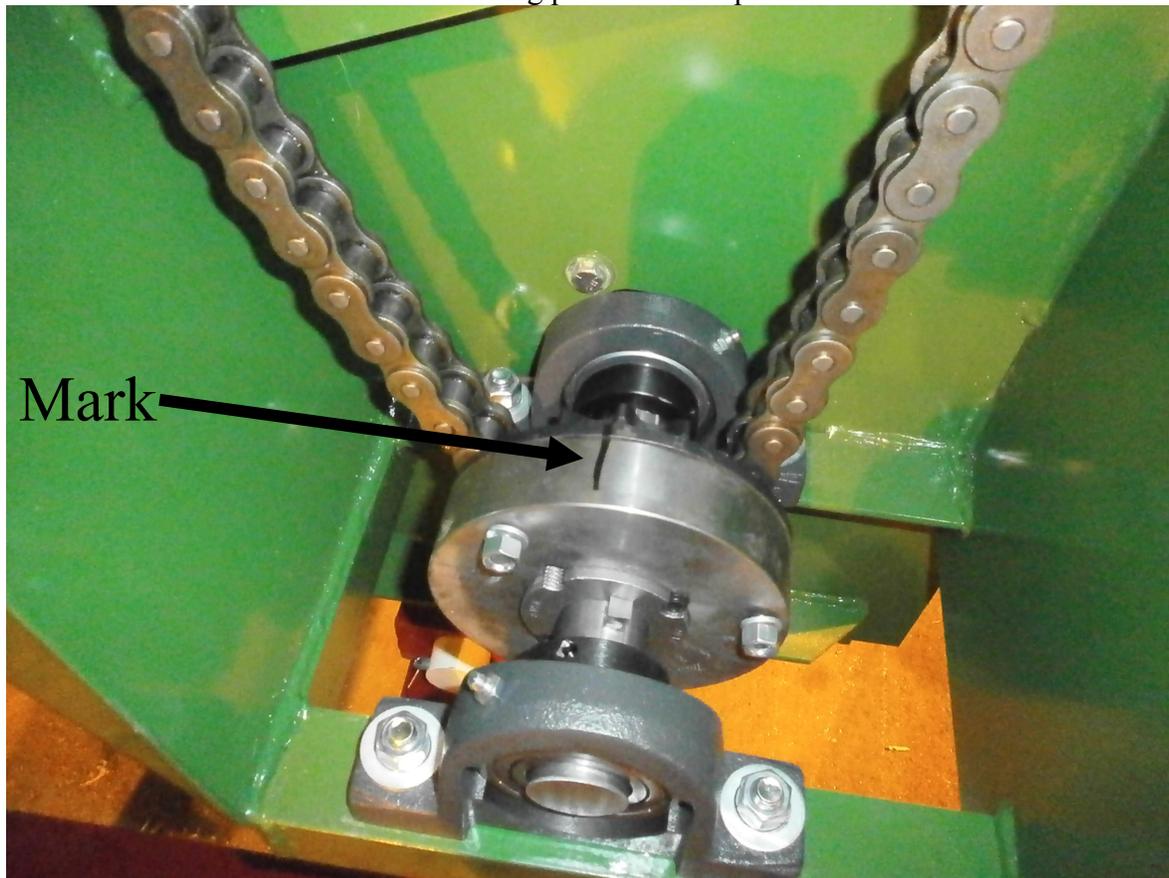
4) Make sure front #80 drive chain is taut.



5) Make sure the front spider gear is contacting the reel drive.



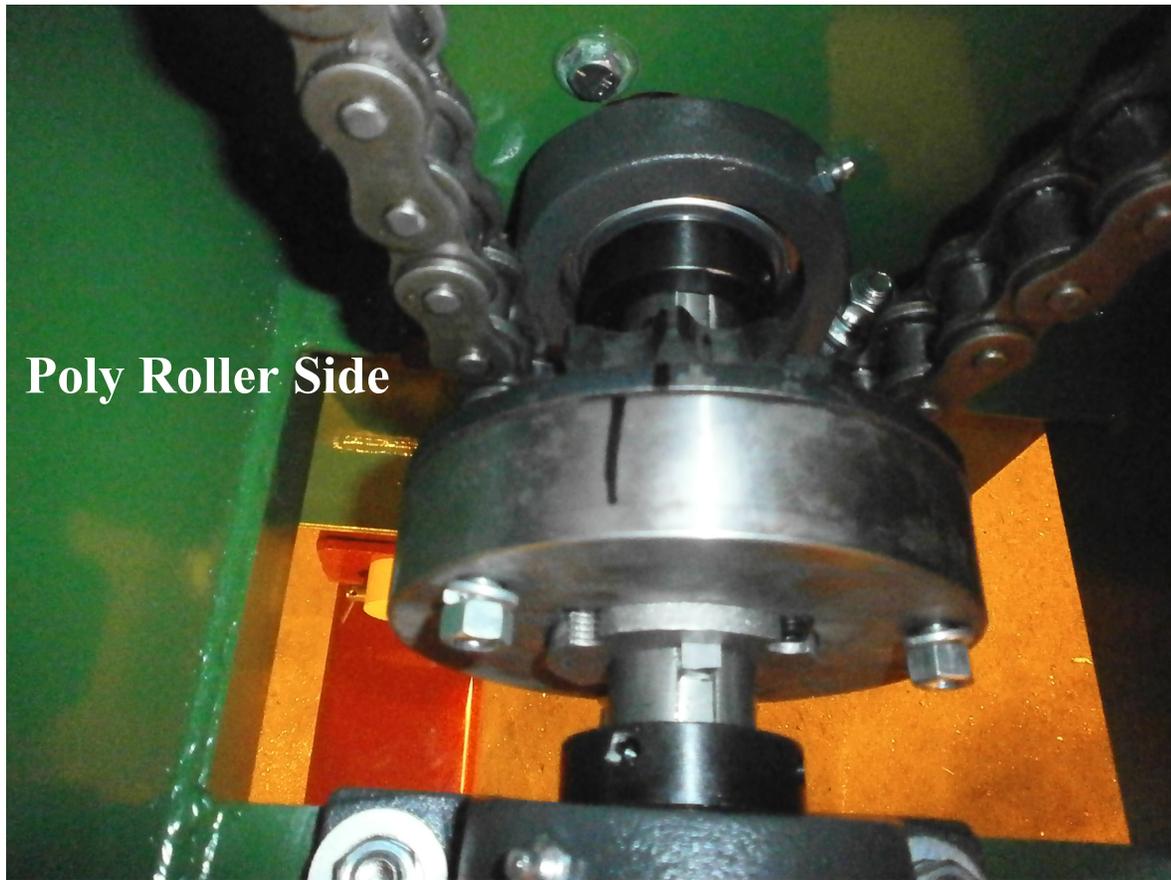
- 6) In the rear drive,
  - a. Turn sprocket in drive direction
  - b. Make sure #80 chain is taut on the drive (Opposite of poly roller) side.
  - c. Snug the three bolts between the timing plate and the timing sprocket
  - d. Make a mark across the timing plate and the sprocket.



- 7) The hard part's over now. Remove what ever you locked the drive pulley in place with in step 3 and make sure that the drive is free. You should be able to move the pulley back and forth with your hand.



- 8) Advance the timing sprocket  $\frac{3}{8}$ " forward. This will make a  $\frac{3}{8}$ " gap on the line you did in step 5. Tighten three bolts. A left hand discharge mixer is shown. A right hand mixer will be reversed.



- 9) Load the Reel on the auger side and adjust the drive chains so that there is about  $\frac{3}{4}$ " to 1" of play in the chain on the non-poly roller side. At the same time confirm that both front and rear spider drive sprockets are equally engaged.