

# Frazer Farm Equipment Company

## AUBURN, INDIANA 46706

### TRANSMISSION SHFT PROCEDURE & SHIFT CONTROL LINK ADJUSTMENT

The transmission shifting mechanism was designed for satisfactory operation when tilling average soil. Difficulty may be experienced in making the shift to the "neutral" position when tilling some types of soil.

When shifting the transmission to the "neutral" position, shift the tiller drive out of operation, then shift the transmission control lever to "neutral" position and immediately close the throttle. If performed properly, this procedure will reduce the load on the gears, permitting the spring tension within the shift control link to complete the shift.

Practice with the machine will be required before the operator can be expected to know exactly when the throttle should be closed so as to relieve the load on the gears. However, if the shift is not made readily, the load can be removed from the gears and the shift completed by pushing forward on the handlebars, or swinging the machine from side to side.

Any lost motion or improper adjustment of the shift control link will affect shifting. Check the shift control link assembly for play; any movement of the link into the link housing should be against the spring tension. If free play exists, remove the cap, then the two coil springs from the link housing. Examine the overall length of each coil spring, which should be not less than 1 1/2". If the springs have collapsed they should be replaced with new ones. Free play may be removed temporarily by placing flat washers of equal thickness behind each spring. However, springs which have lost their length and are less than 1 1/2" long, should be replaced to effect a permanent correction.

To adjust the linkage properly after checking for lost motion, proceed as follows:

1. Pull the transmission shift control rod all the way back.
2. Push the Rototiller forward until the wheels lock. This indicates that the transmission clutch is engaged.
3. Remove cotter pin and disconnect the upper control link from the shift lever.
4. Press shift arm down while rocking the Rototiller back and forth to insure complete clutch engagement.
5. With shift lever resting against the lock spring as shown in drawing, loosen the jam nut on upper link, and turn link until it can slip easily into the shift lever trunion, then replace the cotter pin.

NOTE: The upper link must enter the trunion without pushing or pulling the link. Adjustments must be made by screwing the link threads in or out of the spring housing.

6. Push the transmission shift control lever all the way in, then push the Rototiller forward until the wheels lock. If the link is properly adjusted, the shift lever will appear on the other side of the lock spring, or exactly opposite of the position shown on the drawing.

The trunions should be checked and freed of rust.

