

Weasler Over Running Clutch Used on Discbines

The Weasler drive line on 10 ft machines was used from around 1998 until 2006 and then again from 2014 to present. For the most part, the over running clutch is a dependable component. The most common problem being the over running clutch does not over run and is locked. When this happens the centrifugal force of the machine is transferred to the tractors pto clutch brake when the pto is shut off. This can damage the brake components of the tractor and cause excessive wear of the brake. I also believe some vibration issues can be caused by worn balls used in retaining the clutch center hub to the secondary drive shaft.



Bolt location on early machines

Clamp

The bevel gearbox input shaft on early machines had a tapered end to match the taper of the hub. These machines used a $\frac{1}{2}$ " bolt screwed in from the front to pull the hub tight on the gearbox shaft. Since the tapers pull tightly together, it will take a jar from a hammer and heavy shaft to free the taper so the clutch assembly can be removed. 2014 and newer machines use a straight splined gearbox input shaft and thus no bolt in the front. All use some type of clamp to clamp the rear of the hub to the gearbox shaft. You could see a clamp like this or on early models there will be blocks welded to the hub that the bolts go through.



To remove the slip clutch to gain access to the over running clutch, remove the four bolts holding the slip clutch to the yoke. If the machine uses a clamp like in the above photo, the clutch will slide off the center hub when the clamps are removed. If the machine has welded blocks on the end of the center hub, then the slip clutch will need to be dis-assembled and each piece of the slip clutch slid over the blocks. To dis-assemble the slip clutch remove the circle of bolts.



Snap Ring

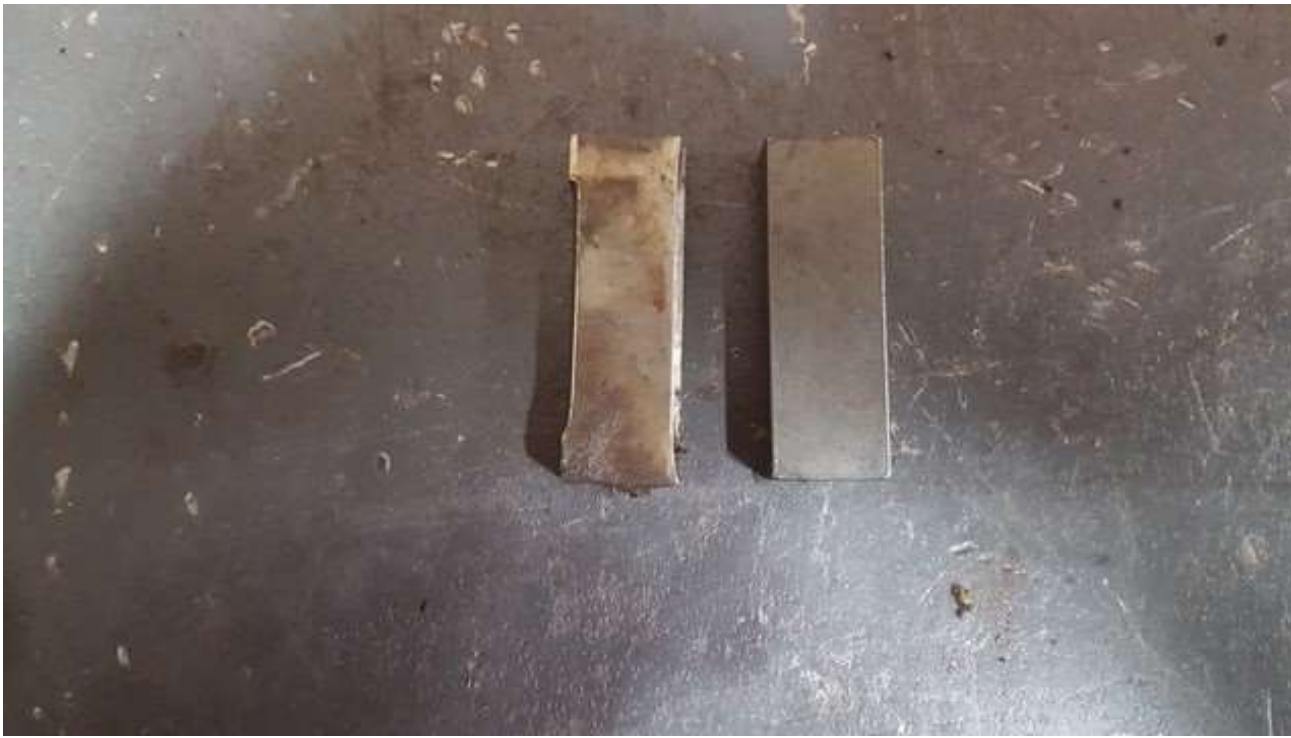
Hub

Washer Under Snap ring

The hub of the over running clutch is retained by a snap ring. Remove the slip clutch first.



The parts to the over running clutch are shown. The hub is a separate part, but the rest of the parts shown are provided in a kit.



The drive lug on the left was removed from the over running clutch and shows wear. A new drive lug is on the right.



When this style Weasler clutch fails to overrun the cause is likely a worn hub. The internal bore of the hub has smooth ramps the drive lugs rotate against. There should be no grooves or notches in the ramps.

If a notch or groove is present, the drive lug will lock in the groove and cannot rotate up the ramp and freewheel and thus the clutch is inoperative.

A groove has formed and will prevent the over running clutch from working.



The other part of the over running clutch is the center shaft. It is not necessary to disassemble this portion of the clutch for most repairs.

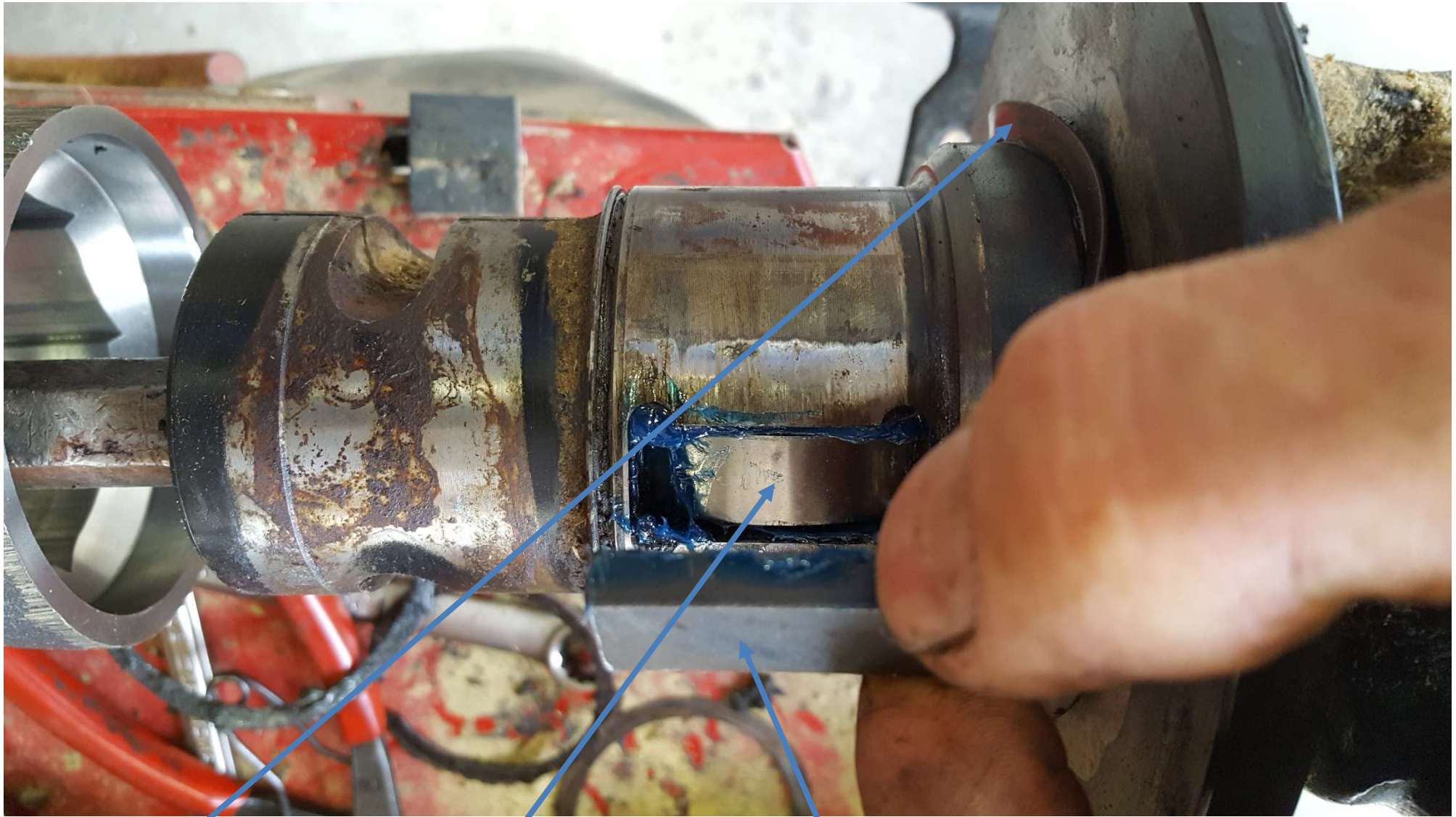
The shaft rotates independently from the pto shaft. There are 31 ball bearings fitted into grooves in the yoke and the center shaft. To remove the ball bearings and separate the parts, remove the set screw from the center shaft.



After removing the ball bearings the parts can be separated.



The ball bearings may not fall out on their own. Using a magnet, and in this case the Allen wrench, you can pluck the ball bearings out of the groove.



Wavy Washer

Curved Spring

Drive Lug

On reassembly of the clutch, place the wavy washer on the shaft first. Insert the two curved springs with the hump up in the center of the groove and install the two drive lugs. While compressing the drive lugs into the grooves, slide the drive hub over the drive lugs. Install the washer and snap ring to retain the parts.