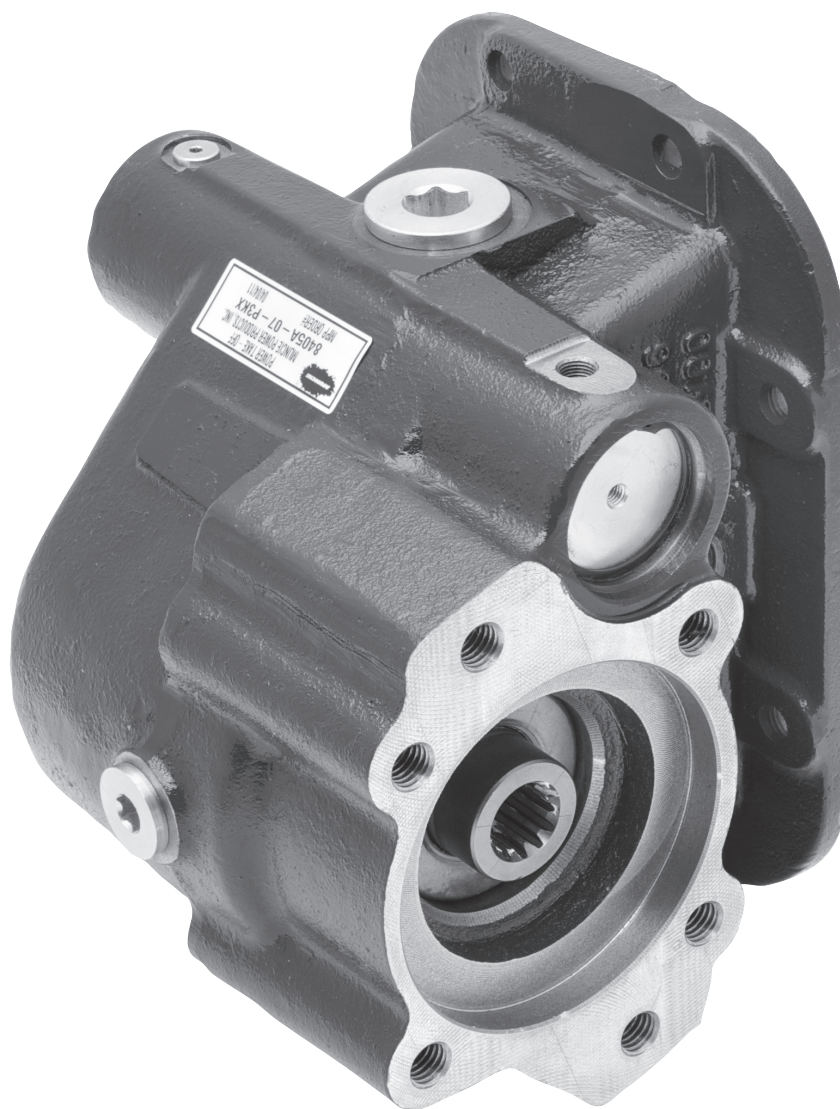




8405/6A SERIES PTO

INSTALLATION INSTRUCTIONS

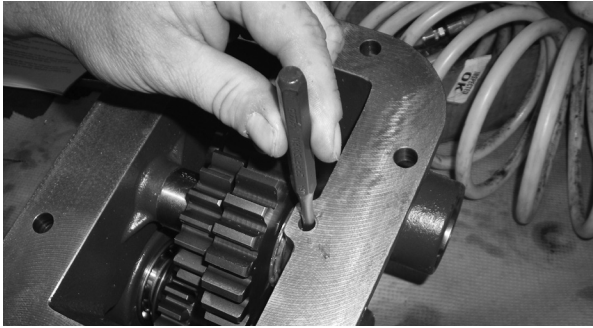


ASSEMBLY & DISASSEMBLY

8405/6A DISASSEMBLY-REASSEMBLY INSTRUCTIONS

This document contains the information to properly disassemble/reassemble your 8405/6A Series PTO.

DISASSEMBLY PROCESS



1. First begin by re-positioning the roll pin from the idler shaft/PTO housing. The roll pin is positioned only half way into the idler shaft and the other half is still positioned in the housing. Begin by carefully knocking the roll pin into the idler shaft so the idler shaft can be moved back and forth.



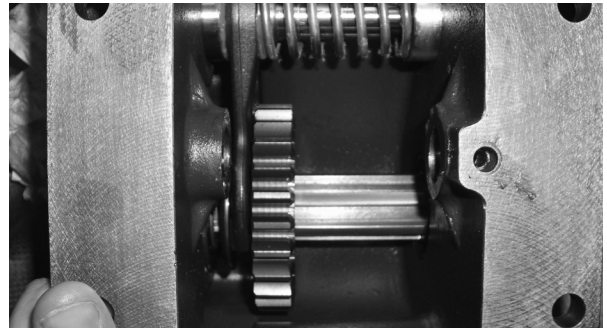
2. Knock out the idler shaft as shown above. The idler shaft will only be knocked far enough to remove the o-ring as described in the next step.

Note: The roll pin will fall out of the idler shaft once it has been removed. Make sure you are able to locate this roll pin once the idler shaft has been removed.



3. Remove the o-ring from the idler shaft and begin to drive the idler shaft opposite of the initial stage.

Note: This step is performed to keep your o-ring from tearing when the idler shaft is being removed.



4. Proceed to remove the input gear, bearings, spacers and the shims. Your PTO housing should look like the picture shown above.



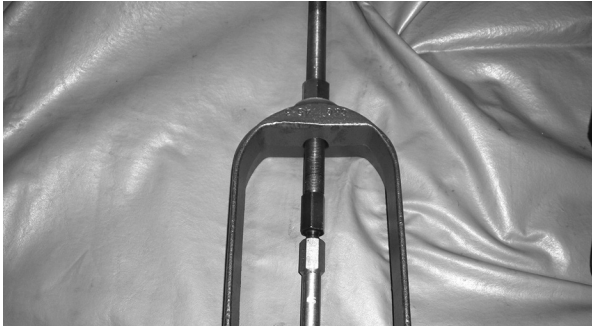
5. Use a cotter pin extractor (or screwdriver) to remove the seal.

Note: This will damage the seal and a new one will need to be purchased if a reassembly process will be taking place.

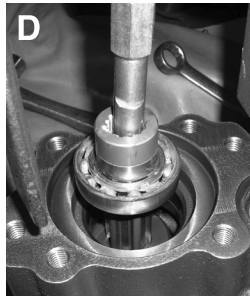
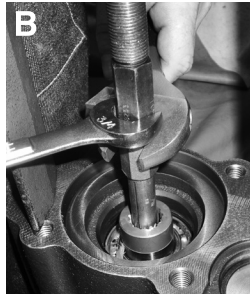
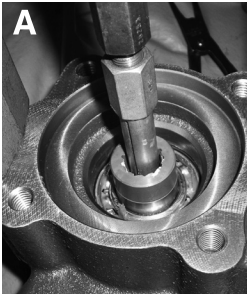


6. Once the seal has been removed, the snap ring that is located directly under the seal should be removed with your snap ring tool.
7. Next, we will use a bearing puller to remove the shaft. Remove the yellow cap, if present, from the end of the shaft and proceed to place the puller into the shaft end. Use two wrenches, as shown below, to open the bottom of the puller. Once the bottom of the puller is snug in shaft, the shaft can

8405/6A DISASSEMBLY-REASSEMBLY INSTRUCTIONS



be pulled out. Continue to pull the shaft out until the rear bearing has been popped off of the shaft. These are shown in steps A-D below.



8. Remove the bearing puller from the shaft end to gain access to the shaft and bearings.

Note: The rear bearing can be removed from inside the PTO housing. It should no longer be attached to the shaft.

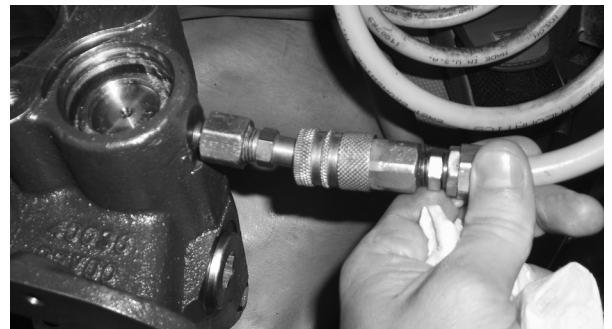


9. Next, remove the snap ring with your snap ring tool located on the shaft as shown.



10. Remove the snap ring with your snap ring tool from the cover as shown. This cover will be on the shaft opening side.

11. **Make sure the snap ring is still in place on the opposite side of the spring/piston assembly before beginning this step.** Once the snap ring has been checked to see if it is still in place, put air to the activation port to quickly remove the cover and the piston.



CAUTION: Once air has been put to the activation port, the cover and piston will leave the PTO housing with excessive velocity and force. Place a box in front of the cover with the removed snap ring to catch the cover and the piston to avoid injury to yourself and others around you.

8405/6A DISASSEMBLY-REASSEMBLY INSTRUCTIONS



12. The cover on each side can also be removed by threading a screw or bolt into the threaded hole and pulling up until the cover is removed. Removing the rest of the spring/piston assembly can follow once the covers have been removed.

Note: The cover opposite of the shaft opening side will contain a 5/16" detent ball. Make sure this ball is located once the cover has been removed.



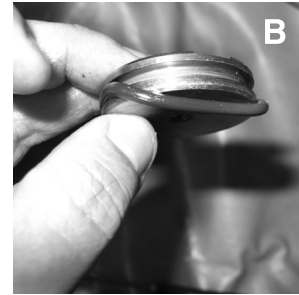
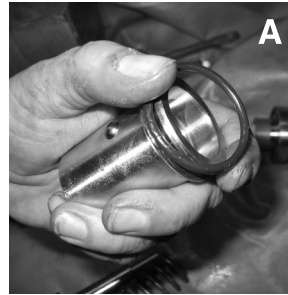
13. Once the rest of the parts have been removed from the spring/piston assembly, the o-ring located in the PTO housing can be removed.



14. This concludes the disassembly of your 8405 Series PTO. All the parts should be present as seen in this photo.

REASSEMBLY PROCESS

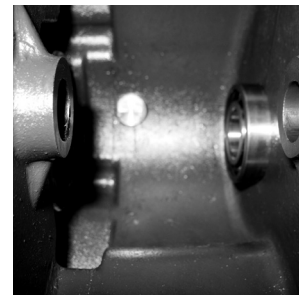
Note: The rebuild kit will need to be purchased in order to reassemble your 8405 Series PTO. The rebuild kit number is 8405-RBK. Fully examine any gear that was removed in the disassembly process. Replace any gear that may contain fractures, pitting or wear. Please see pages 2-3 of the Service Parts manual (SP10-02) to view all of the parts associated with this PTO.



Note: It is standard practice to lubricate all o-rings before they are placed into their appropriate groove.

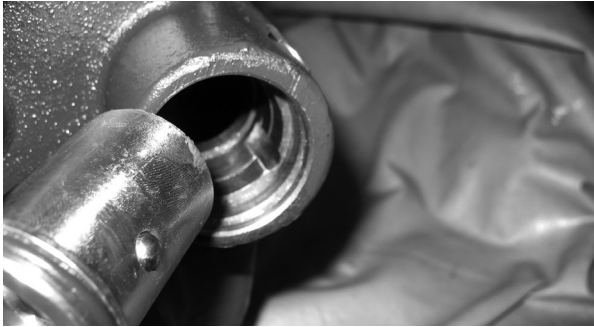


1. Begin by placing the o-rings back on the parts and the o-ring back into the housing where the piston assembly is located as shown in steps A-C above. One (1) o-ring will go on each of the spring/piston end covers (the o-rings for the idler shaft will be put on later in the assembly).



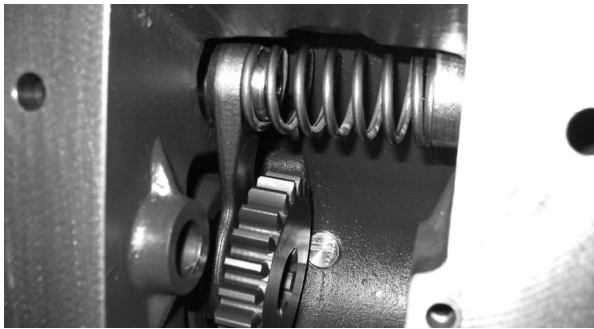
2. Place bearing into the covered end (side opposite of the shaft opening) of the PTO by going through the open shaft end. Use an 82-series bearing driver (or something equivalent) to properly seat the bearing into the PTO housing.

8405/6A DISASSEMBLY-REASSEMBLY INSTRUCTIONS



3. Insert the cover (with the detent ball) into the grooved side opposite of the shaft. Push the cover down into the housing until you are past the snap ring groove and place the snap ring over the cover to keep it into place.

Note: You may have to push down the cover with your snap ring tool at the same time you are putting on the snap ring to get it into its proper ring groove.



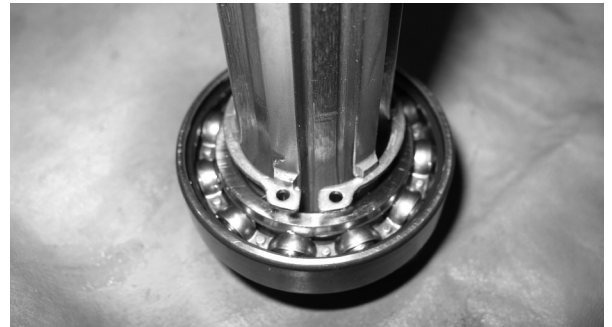
4. Place the fork (attached to the 25T gear) and the spring down into the PTO housing so the fork's yoke end is towards the shaft as shown.

Note: Place the fork's flared end towards the spring.



5. Place the remaining cover for the spring/piston assembly back on where the air activation is located. Just like in step 3, you will have to push the cover down into the PTO housing until you

reach the snap ring groove. Once the groove is reached, release the snap ring from the snap ring tool to hold the cover/assembly into place.



6. Place the snap ring back onto the shaft with your snap ring tool.



7. Place the bearing onto the shaft and insert the shaft/bearing assembly into the gear, noting the grooves in the shaft going directly into the gear. Apply grease to the internal splines of the output shaft. Use an anti-seize grease or a high temperature, high pressure lithium based grease.



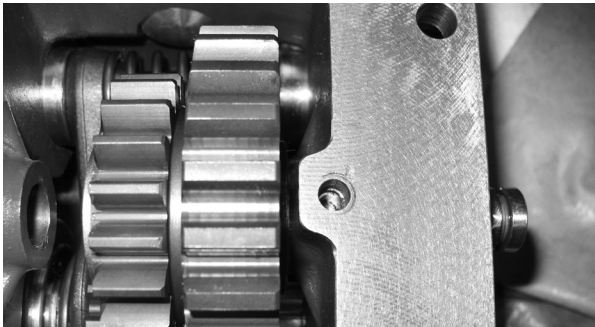
8. Once the shaft/bearing is properly seating into the other bearing/PTO housing, place the snap ring into the proper groove to secure the assembly.

8405/6A DISASSEMBLY-REASSEMBLY INSTRUCTIONS



9. Next, insert the shaft seal over the shaft. Using an 82-series bearing driver (or something equivalent), seat the shaft seal down into the groove of the PTO housing.

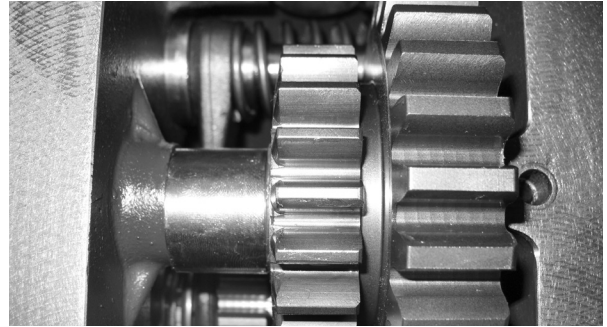
Note: The seal should be flush with the bearing and snap ring.



10. Place the idler shaft through the opening opposite of the open shaft. Slide the input gear along with the bearings onto the idler shaft. The smaller (19T) gear of the input gear should be facing the shaft opening as shown. Once the input gear has been placed on the idler shaft, place the o-ring onto the groove next to the input gear.

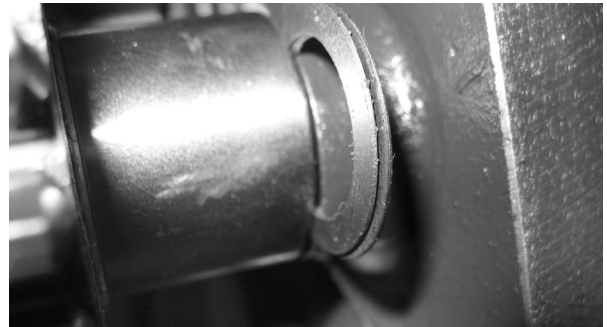


11. Place the remaining o-ring onto the groove located next to the roll pin opening on the idler shaft.

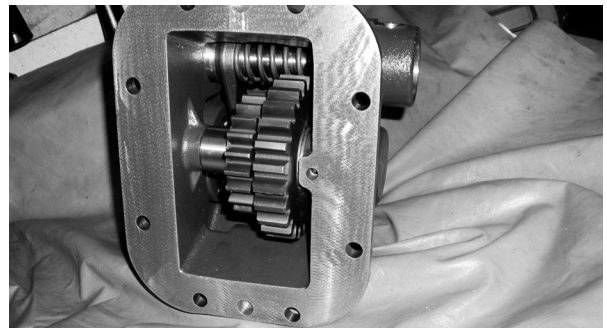


12. Place the spacer next to the gear and continue to slide the idler shaft through the opening (a hammer may be required to continue the idler shaft through the opening). Once the spacer is in place, line up the idler shaft with the end of the spacer to insert the remaining shims.

Note: All spacer and shims are set to keep the play in the gear between 0.002-0.005.



13. Once the idler shaft is lined up from the previous step, begin to properly set in your shims to the required play in the gear as noted above.



14. Put the roll pin back into the opening on the PTO mounting pad. The pin should only be placed down half way into the idler shaft and slightly below the surface of the PTO mounting pad.

Note: There will be no interference or allowable movement from the idler shaft if the roll pin is inserted properly.

