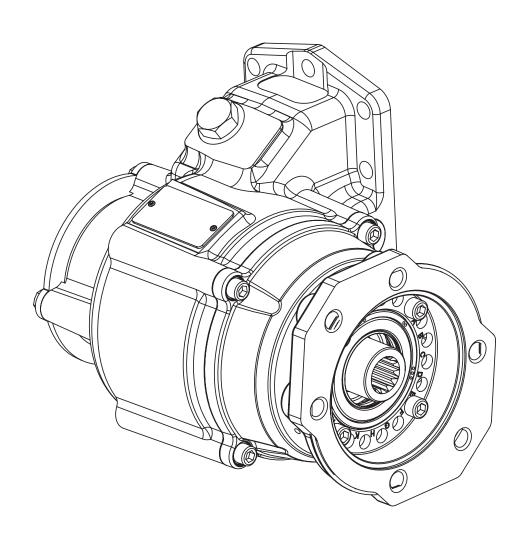
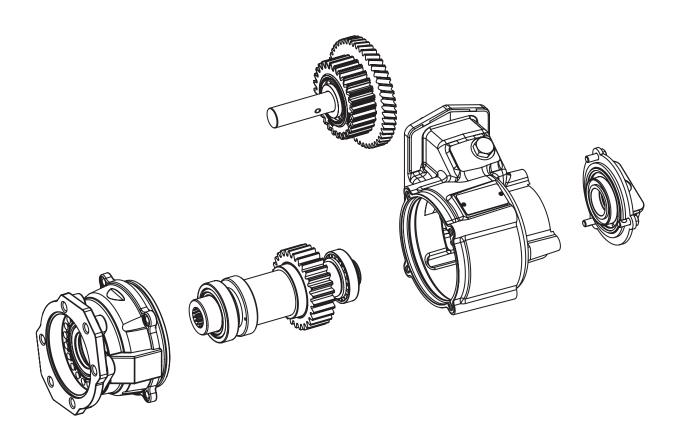


# **A30 PTO**

# **REBUILD INSTRUCTIONS**





## **TOOLS REQUIRED FOR REBUILD**

1/8" hex key
1/4" hex key
1/2" Combination wrench and socket
Mallet or soft faced hammer
Ball Peen Hammer
Dial indicator
Punch
Bearing Puller
Bearing Press
A Pair of 9" C-Clamps
Inch-Pounds Torque Wrench
Foot-Pounds Torque Wrench

# **Preparation**

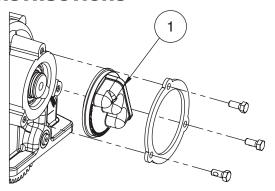
Before beginning the rebuilding process of the PTO, verify that all necessary tools have been obtained. Clean unit thoroughly, and inspect the gears for signs of excess wear or damage prior to beginning the rebuild process.

These instructions are for the rebuilding of Muncie A30 Power Take-offs. The rebuild kit includes all new bearings, seals and shims.

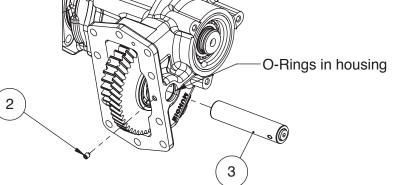
## **SECTION 1**

#### PTO DISASSEMBLY INSTRUCTIONS

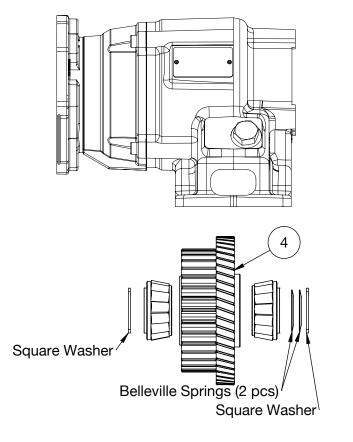
1. Remove bearing cover from PTO housing.



- 2. Remove idler shaft set screw using \( \frac{1}{8} \)" hex key.
- Tap out idler shaft assembly. Remove O-Rings from grooves in housing if they are to be replaced.



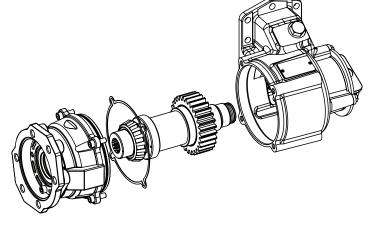
4. Remove Input Gear assembly from PTO housing. There will be one square washer on the output side of the gear. On the opposite end of the gear, there will be two Belleville springs between the gear and the square washer.



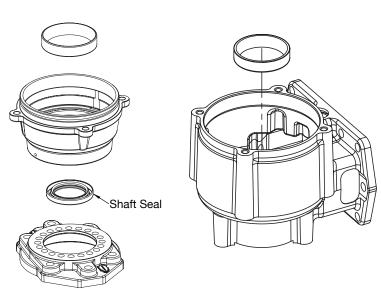
## **SECTION 2**

#### **OUTPUT ASSEMBLY REMOVAL**

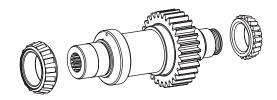
- 5. Remove cap screws holding output cover to housing, using ½" hex key.
- 6. Tap cover off of housing using non marring hammer. Take note of color of shim between cover and housing.
- 7. Remove Output assembly from PTO housing. Take care to not damage bearing cups or cones during this step!



8. Remove output shaft seal. If replacing output bearings, use punch to remove bearing cups from cover and housing. If bearings are not being replaced, do not remove bearing cups.



9. Use bearing puller to remove bearing cone from output end of shaft.

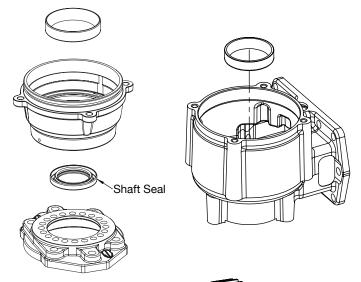


# **REASSEMBLY INSTRUCTIONS**

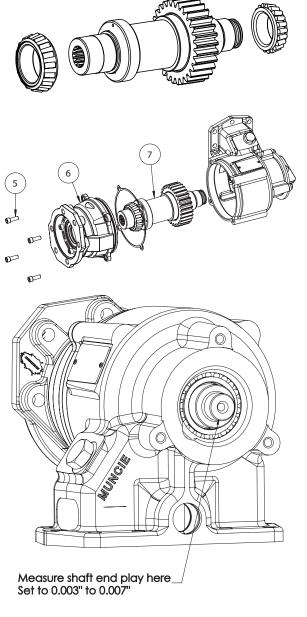
If not replacing output shaft, front cover or housing, proceed to **Section 5 – PTO Reassembly**.

# **SECTION 3 – SHIM SELECTION**

1. Press bearing cups into housing and front covers, using proper tool.



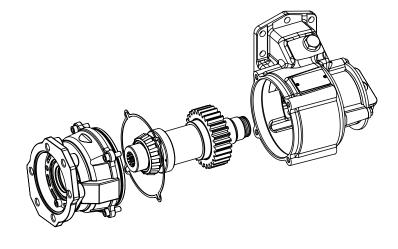
- 2. Press bearing cones onto shaft. Be careful to not damage bearings during installation. Use only the proper tools to install bearings! Bearings must be fully seated to ensure proper function and life!
- 3. Select shim from kit that has same color as one removed from PTO and place on PTO output cover. Tap output cover into place on PTO housing. Once cover is in place, install the 4 cap screws, and torque to **5 ft.lbs.**
- Measure end play of shaft. Use shims in kit to set end play to 0.001" - 0.005". Note which shims result in proper end play measurement.



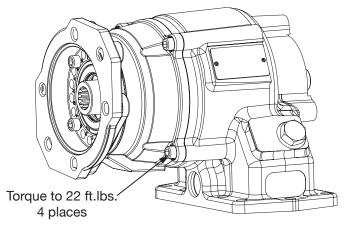
## **SECTION - 4**

#### **PTO OUTPUT REASSEMBLY**

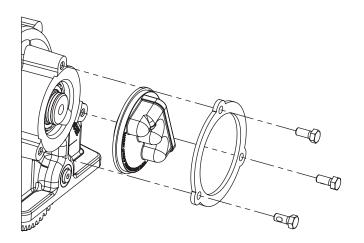
- 5. Install output shaft seal in cover. If PTO is wet spline model, do not install shaft seal.
- 6. Install O-Ring on O.D. of output cover.
- 7. Place shim on O.D. of output cover. Be sure to use shim of same color as was on unit prior to disassembly, or the shims determined from Step 4 in the reassembly process.



8. Install output shaft subassembly and cover onto housing. Torque cap screws holding output cover to 22 ft.lbs.



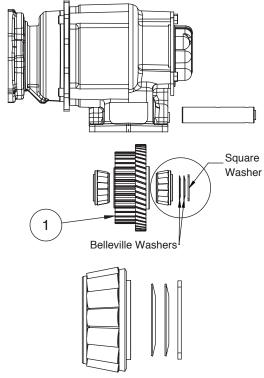
9. Reinstall rear cover. Replace O-Rings as necessary. Torque cover cap screws to 18 ft.lbs.



#### **SECTION - 5**

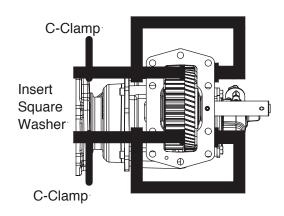
#### INPUT GEAR BEARING INSTALLATION

- Place bearings in input gear, then insert into housing along with Belleville springs and rear side square washer.
- 11. Align input assembly with hole for idler shaft. Once aligned, insert idler shaft until it is in both bearings. DO NOT INSERT ALL THE WAY! There must be room for the output side square washer to be installed.

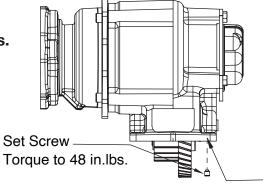


Belleville Spring Installation

12. Place two C-Clamps on the input gear and housing. Then tighten to compress the Belleville washers. Only compress far enough to get the output side square washer started, then tap the washer gently into place. Once the washer is in position insert idler shaft the rest of the way, and remove C-Clamps. TAKE CARE TO NOT DAMAGE INPUT GEAR DURING WASHER INSTALLATION.



13. Install set screw. Torque to 48 in.lbs.



Make sure thru hole on end of shaft aligns with set screw

## **NOTES**



IN21-11 (Rev. 08-21)