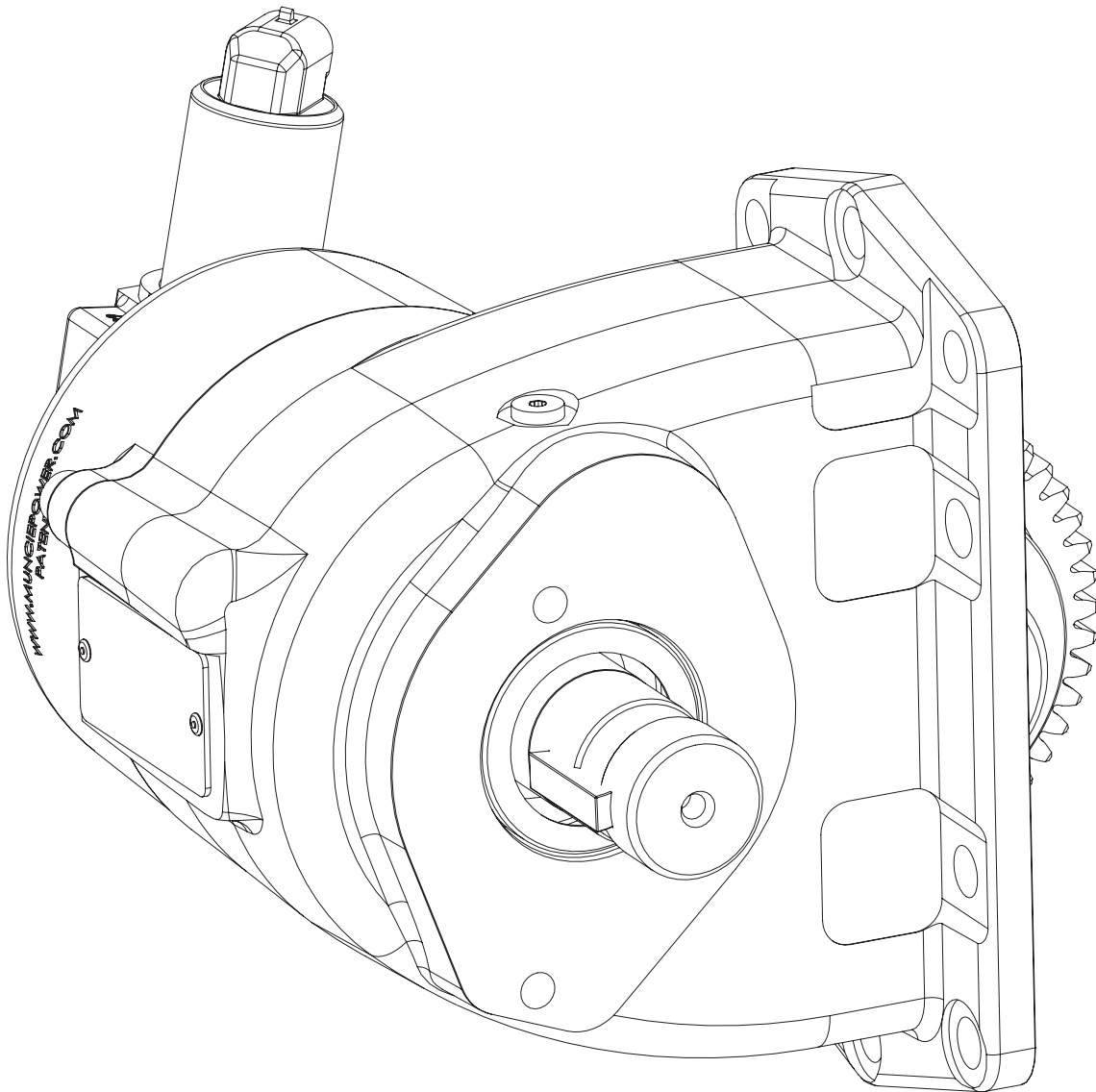


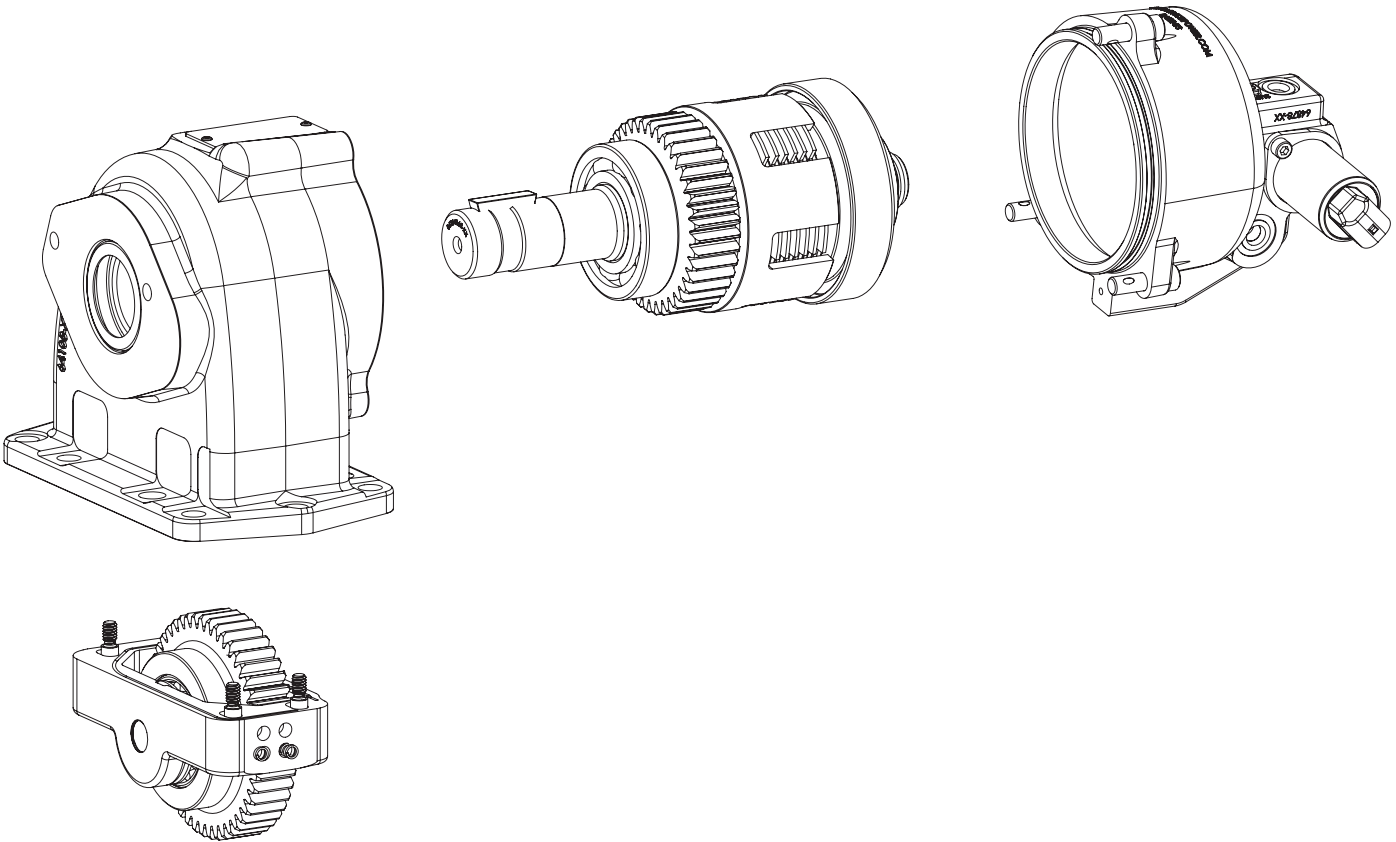


**Muncie[®]
Power
Products**

F20 PTO

REBUILD INSTRUCTIONS





TOOLS REQUIRED FOR REBUILD

Press

Torque Wrench

15/16 Slotted Screw Driver Set

Bearing Puller

Rubber Mallet

Small Ball Ping Hammer

$\frac{3}{16}$ Drift Punch

Retainer Ring Pliers

$\frac{3}{32}$, $\frac{5}{32}$, and $\frac{1}{4}$ " Allen Wrench and or Sockets

90° Pick

Preparation

These instructions are for the rebuilding of the F20 Power Take-off. The rebuild kit includes all new bearings, snap rings, clutch plates, springs, seals, and shims.

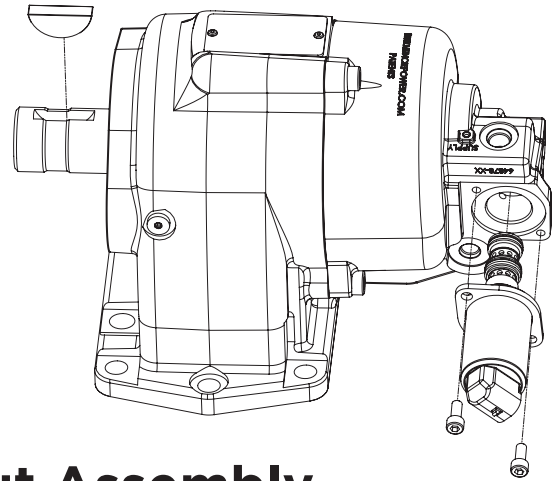
Before beginning the rebuilding process of the PTO, verify that all necessary tools have been obtained. Clean unit thoroughly and inspect the gears for signs of excess wear or damage prior to beginning the rebuild process.

DISASSEMBLY

Section 1 - Woodruff Key & Solenoid

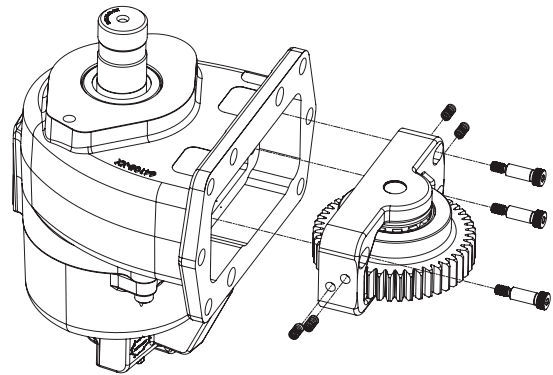
Step 1: Remove Woodruff key from output shaft.

Step 2: Remove solenoid from rear cover by loosening the 2 bolts.

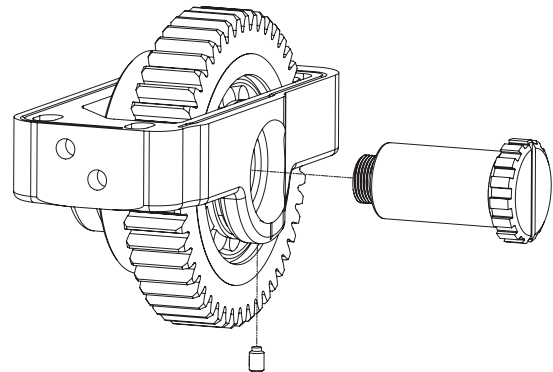


Section 2 - Input Assembly

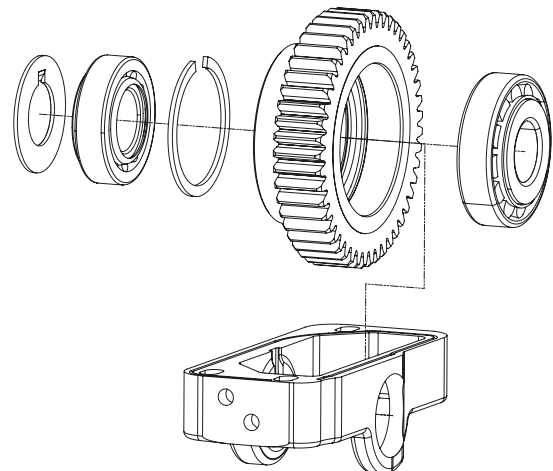
Step 3: Remove input assembly from housing by loosening the 3 carrier bolts. Carrier also houses 4 springs.



Step 4: Remove set screw first. Then remove the input shaft.

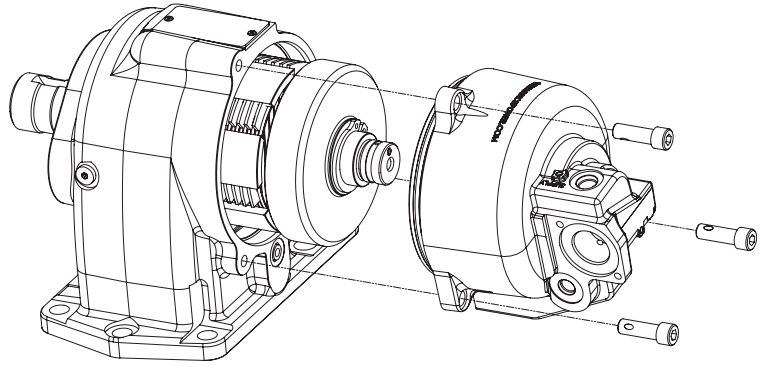


Step 5: Remove Input gear assembly and tabbed washer from the carrier. Remove both bearings and retaining ring from the input gear assembly.

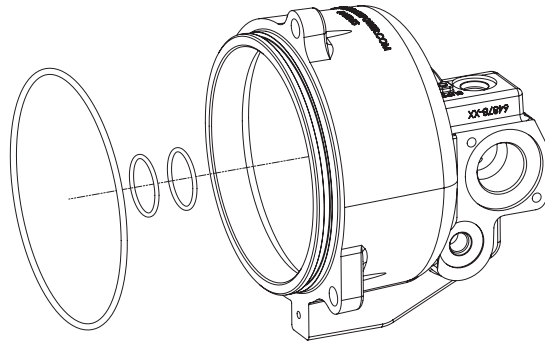


Section 3 – Rear Cover & Housing

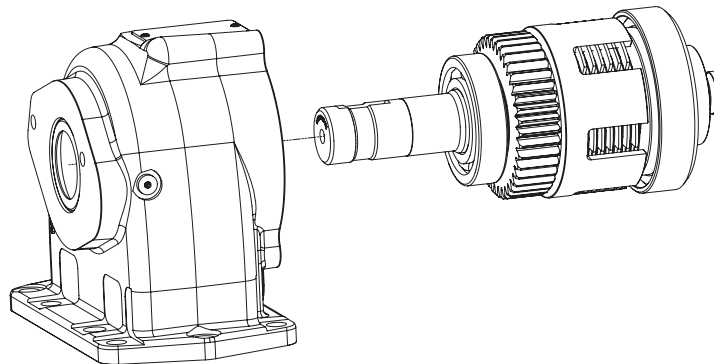
Step 6: Remove rear cover and O-Rings.



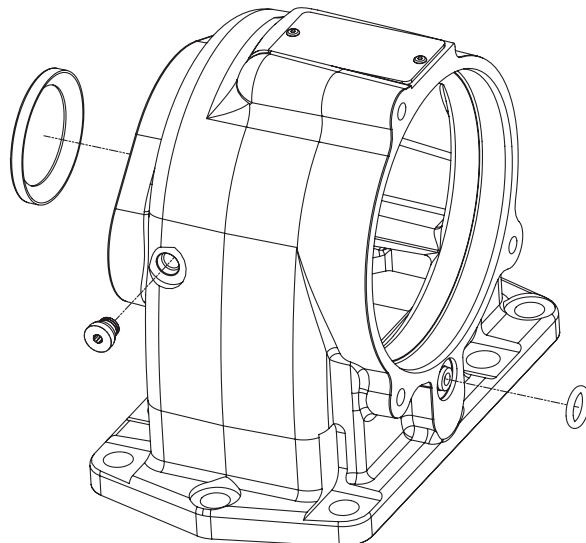
Step 7: Remove O-Rings from rear cover.



Step 8: Remove output shaft assembly from housing.

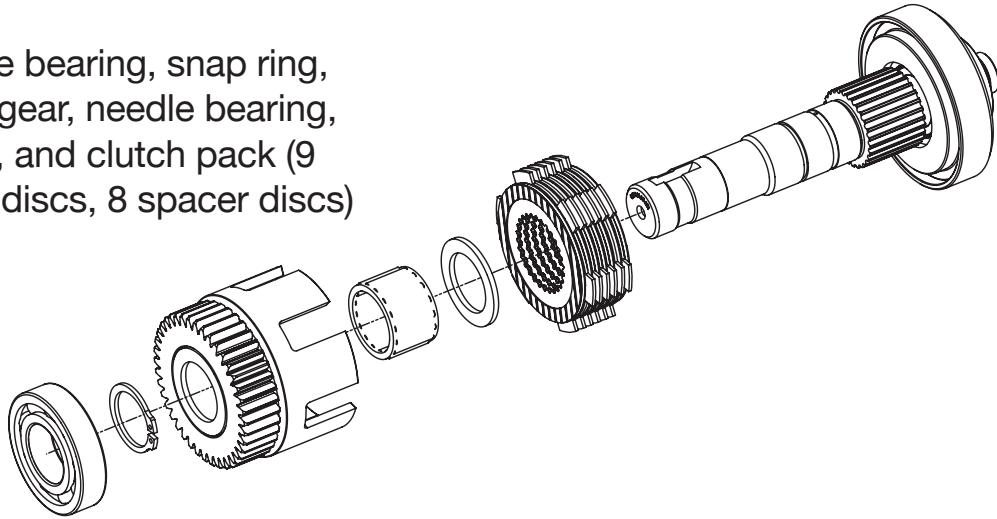


Step 9: Remove housing seals and plug.

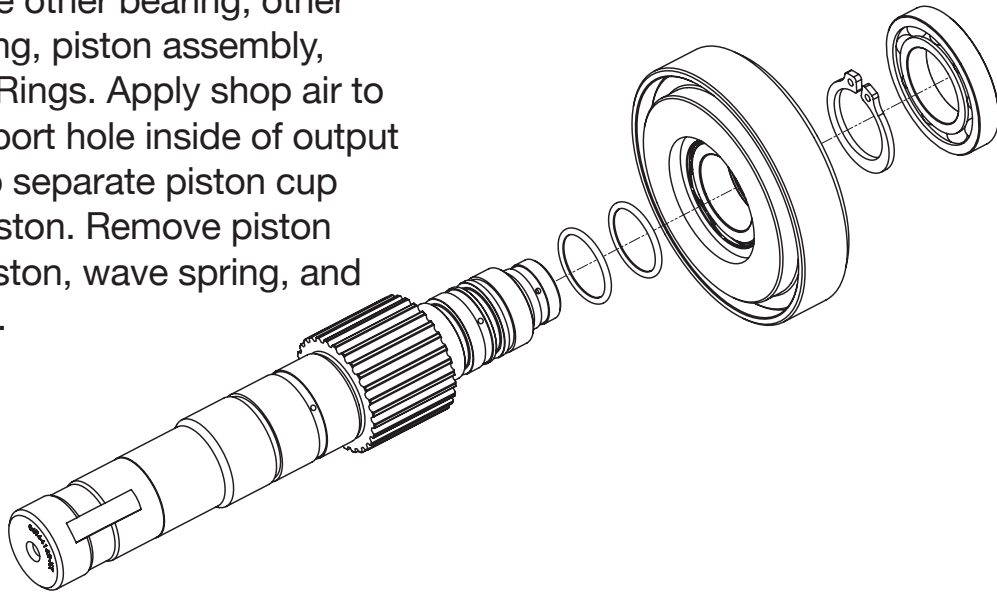


Section 4 - Output Shaft Assembly

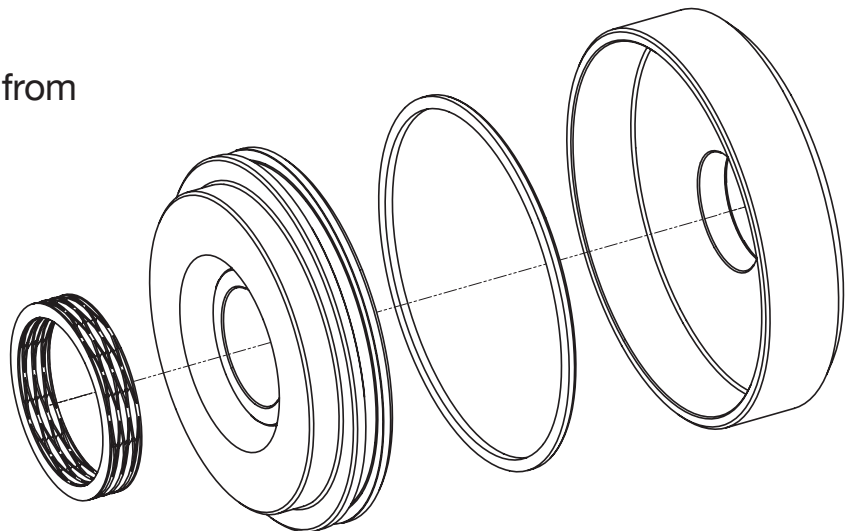
Step 10: Remove bearing, snap ring, output gear, needle bearing, washer, and clutch pack (9 friction discs, 8 spacer discs)



Step 11: Remove other bearing, other snap ring, piston assembly, and O-Rings. Apply shop air to clutch port hole inside of output shaft to separate piston cup from piston. Remove piston cup, piston, wave spring, and O-Ring.



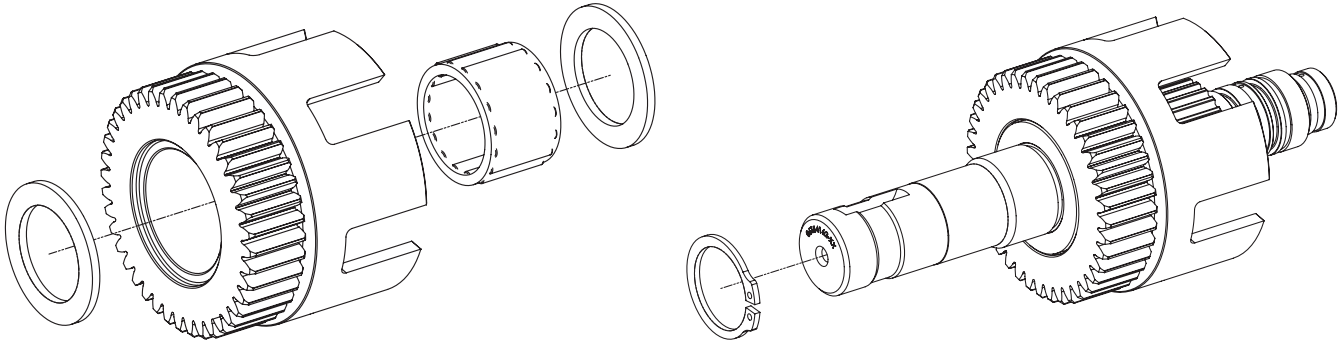
Step 12: Remove O-Ring from piston cup.



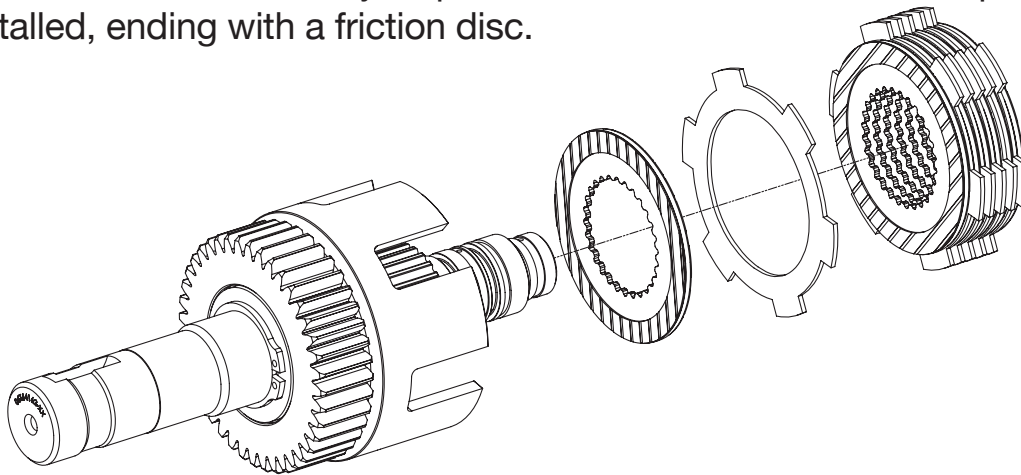
ASSEMBLY

Section 1 - Output Shaft

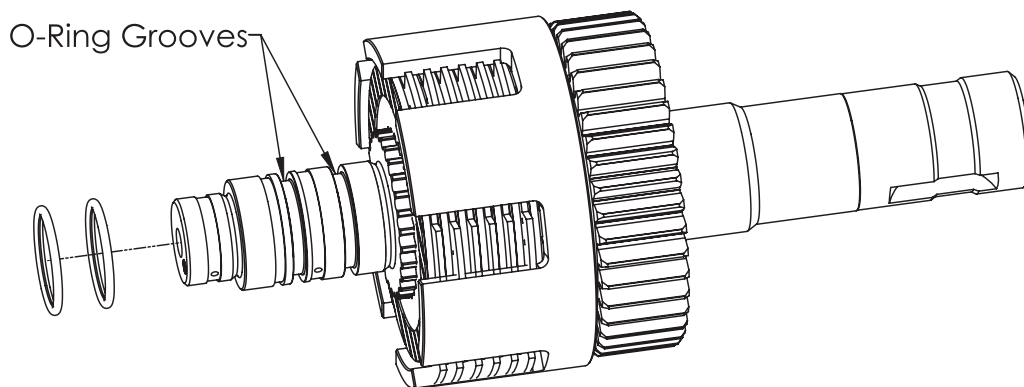
Step 1: Install washers (21T62472) and needle bearing (10T62471) into the output gear (02T65196). Install output gear onto output shaft (06T641**). Install snap ring (24T36470) on “output side” of shaft.



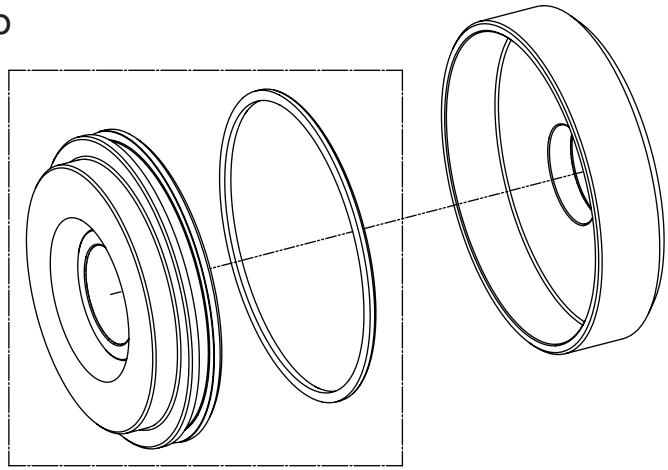
Step 2: Install 9 friction discs (49T65367) and 8 spacer discs (49T36258). Start with a friction disc, followed by a spacer disc. Alternate until all components are installed, ending with a friction disc.



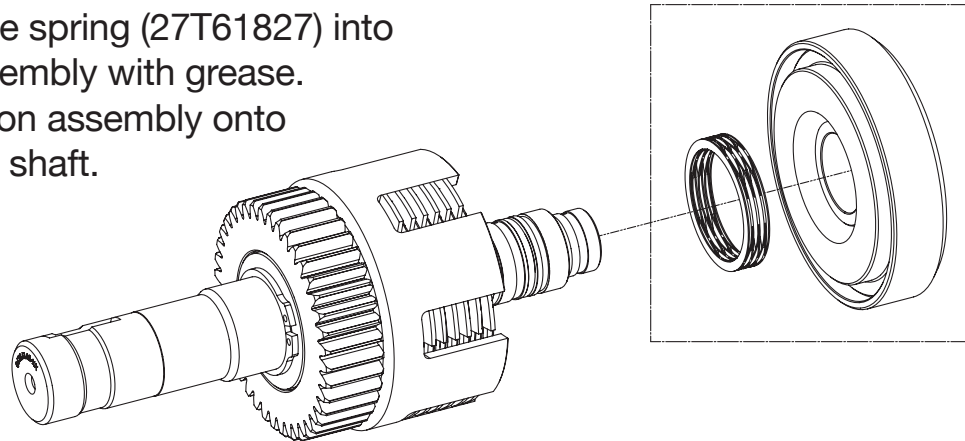
Step 3: Install O-Rings (12T39023) onto output shaft. Add grease to O-Rings.



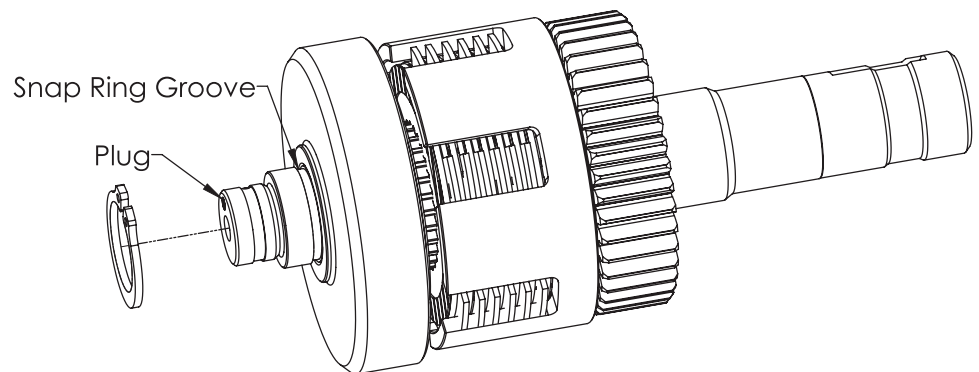
Step 4: Install O-Ring (12T64059) onto the piston (49T64056). Add grease and press into piston cup (49T64057).



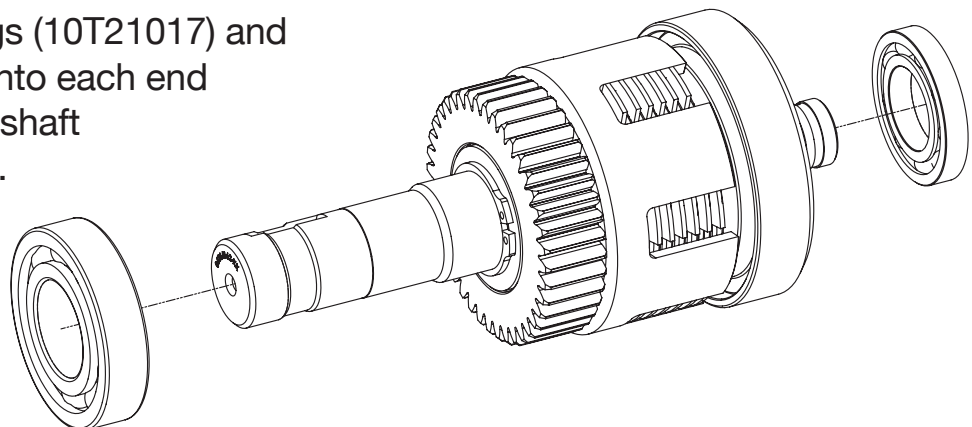
Step 5: Install wave spring (27T61827) into piston assembly with grease. Install piston assembly onto the output shaft.



Step 6: Depress wave spring to install snap ring (24T39182). Ensure that the output shaft has a plug inserted.

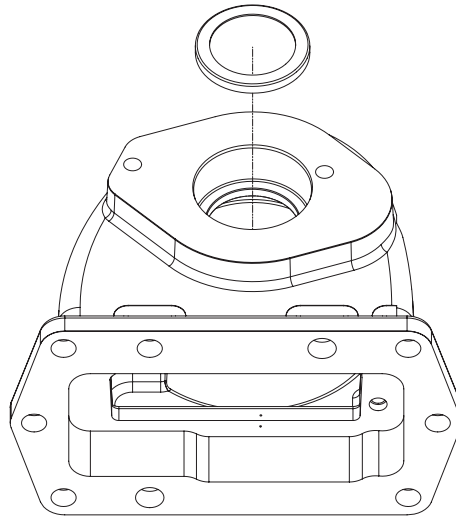


Step 7: Install bearings (10T21017) and (10T39072) onto each end of the output shaft using a press.

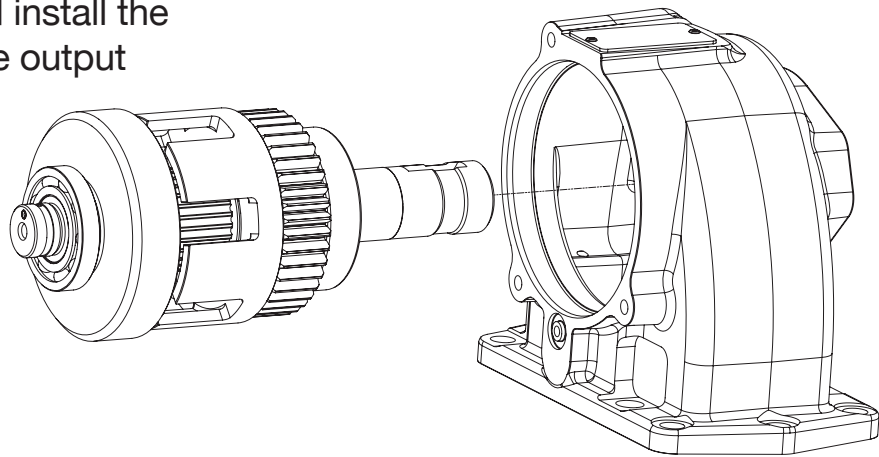


Section 2 - Housing

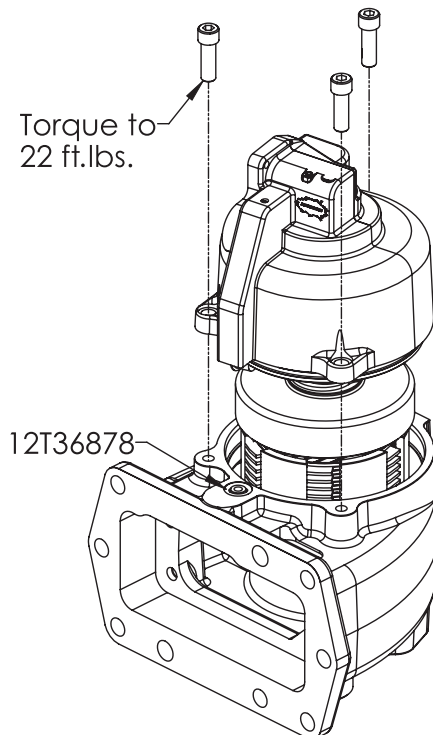
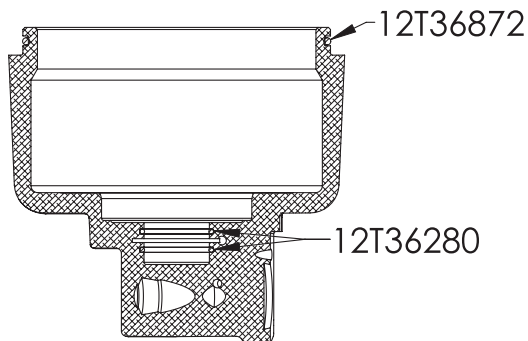
Step 8: Install shaft seal (11T63830) into housing using a press.



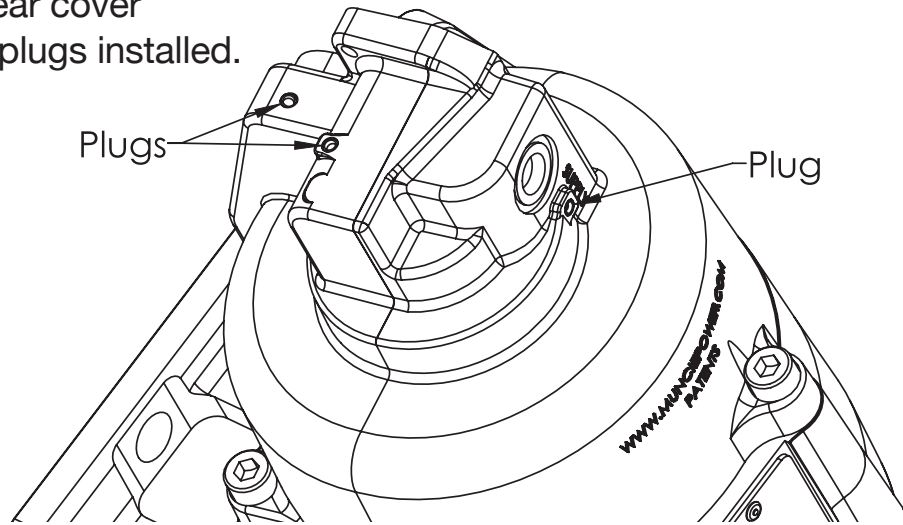
Step 9: Place shaft seal thimble over output shaft and install the housing onto the output shaft assembly.



Step 10: Install rear cover O-Rings (12T36872 and [2] 12T36280), add grease to O-Rings. Install O-Ring (12T36878) into groove on Housing. Place rear cover over output shaft and secure the 3 bolts (19T39257). Torque to 22 ft.lbs.

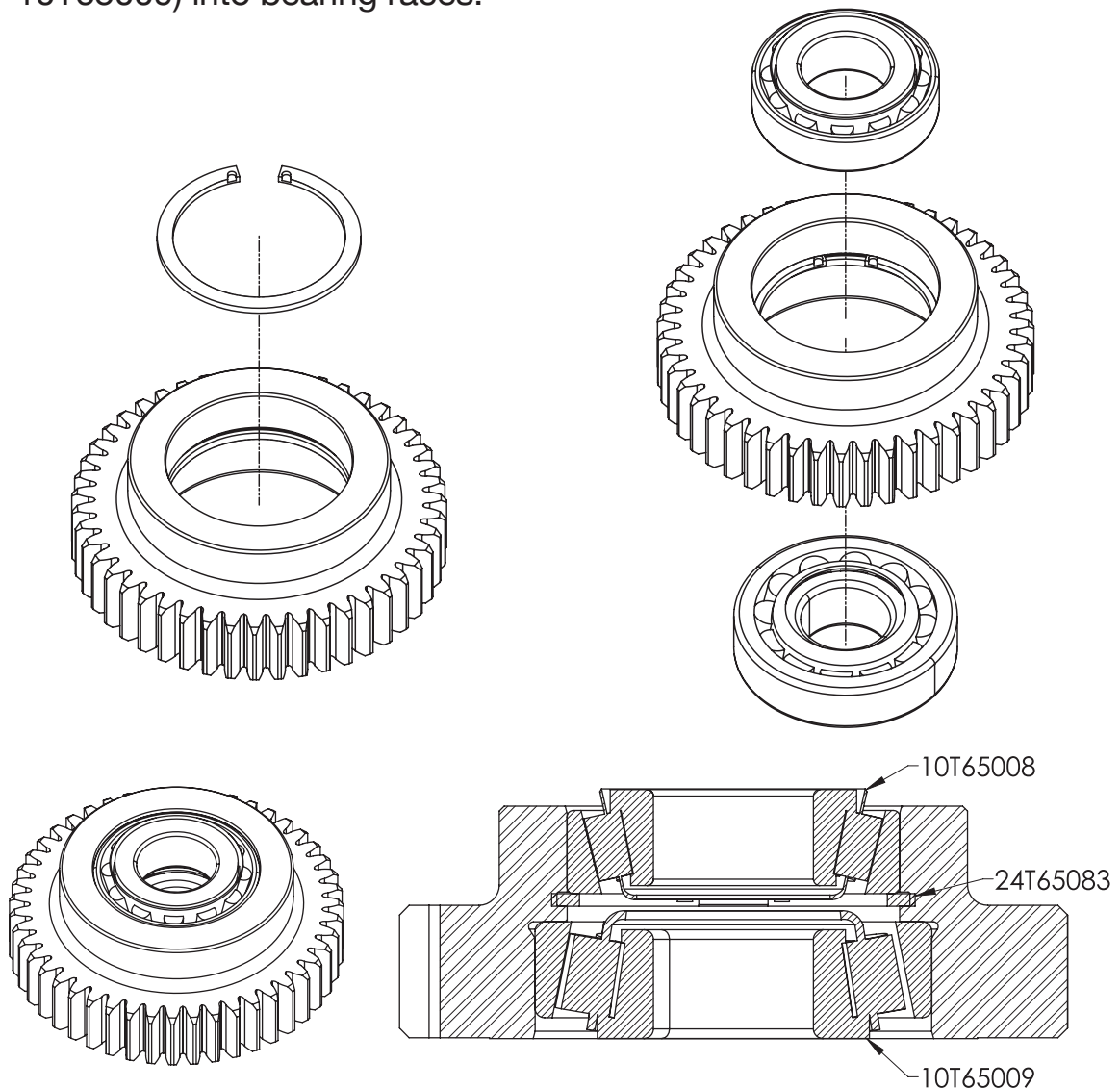


Step 11: Ensure rear cover has all 3 plugs installed.

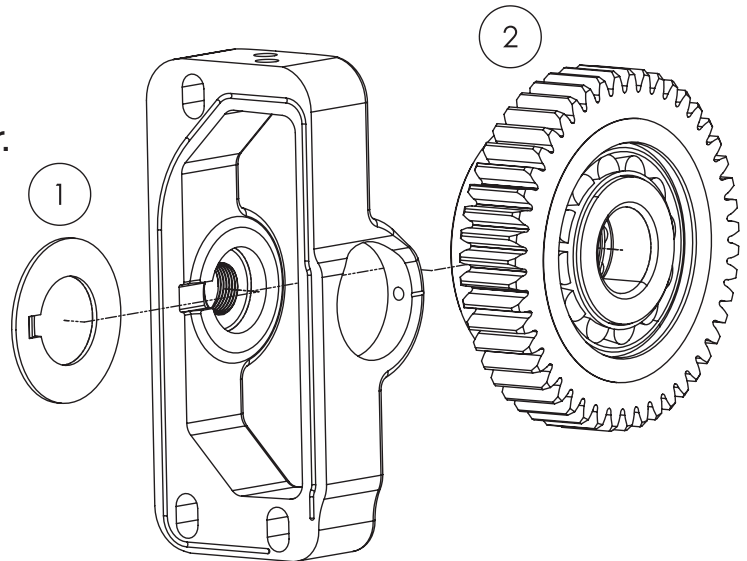


Section 3 - Carrier Assembly

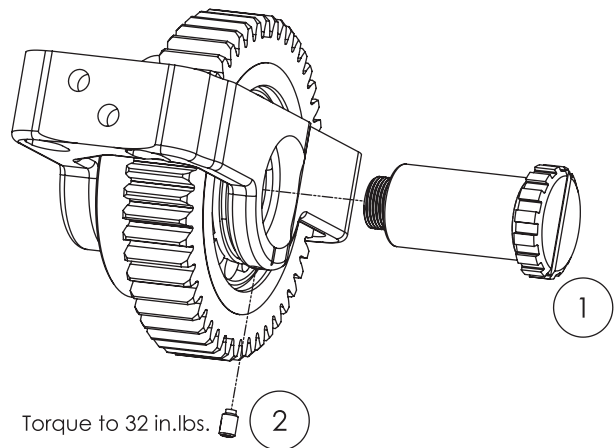
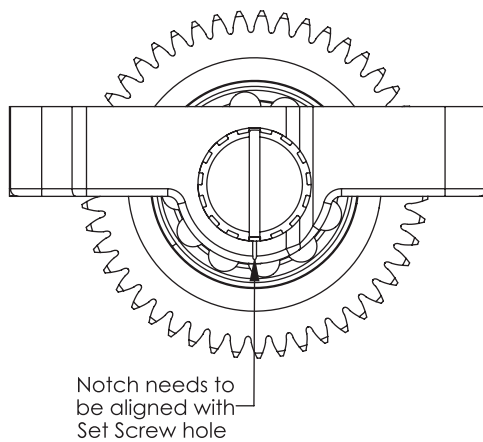
Step 12: Install retaining ring (24T65083) into idler gear (03T64153). Press bearing races into idler gear until fully seated. Install bearings (10T65008 and 10T65009) into bearing races.



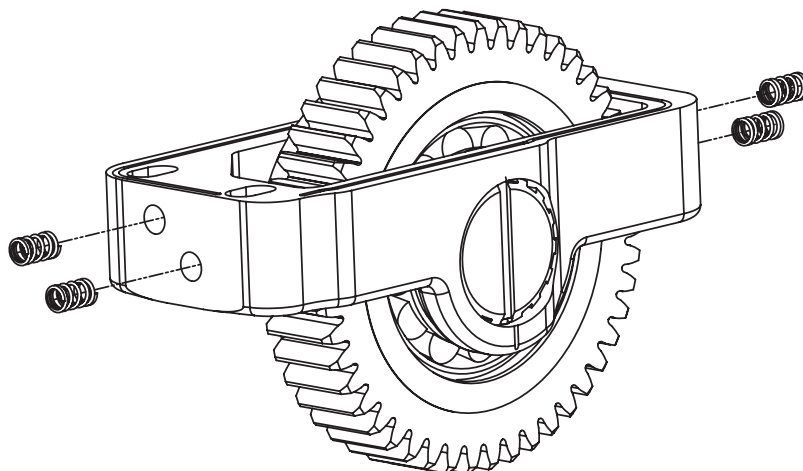
Step 13: First, install tabbed washer (21T62316) into carrier (49T64798). Tab on washers sits in the groove on the carrier. Next, install the bearing and gear assembly into the carrier.



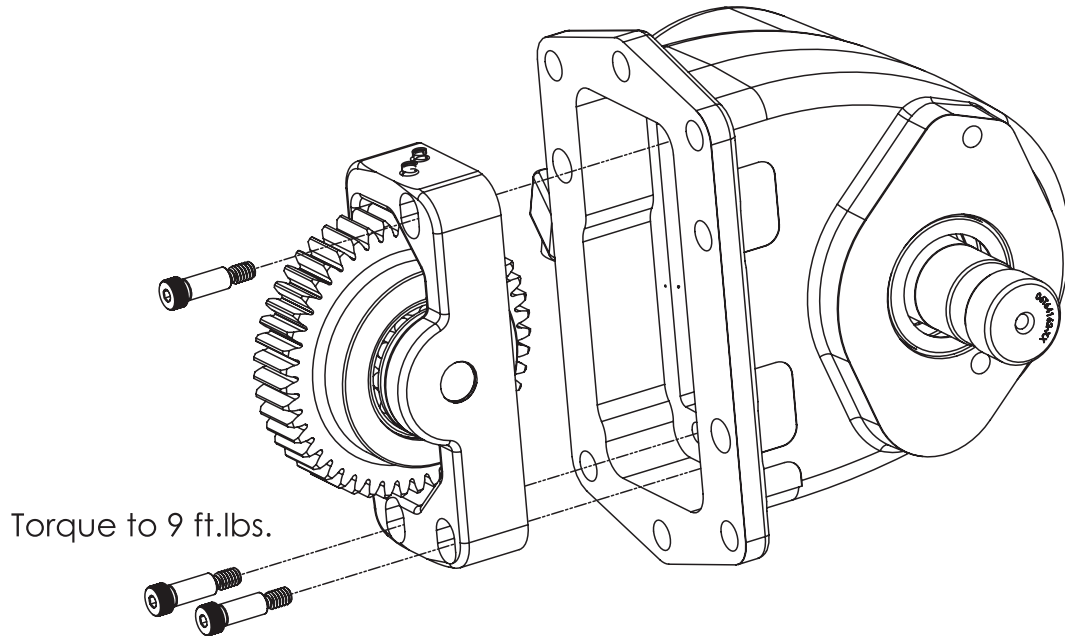
Step 14: First, install idler shaft (07T64145), tighten to 60 in.lbs. Then, back idler shaft off until notch is in alignment with the set screw (19T36846) hole. Next, insert set screw and tightened to 32 in.lbs.



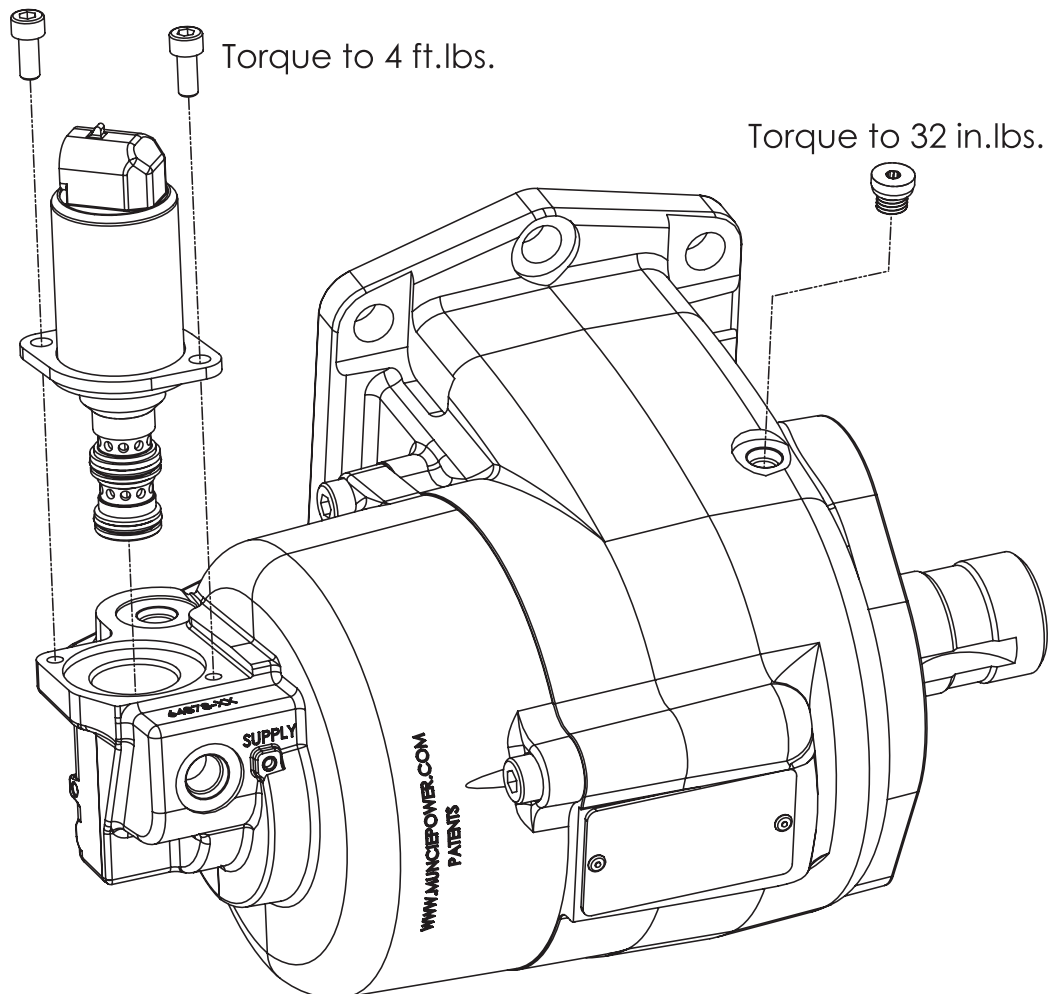
Step 15: Install coil springs (27T63431) into the holes on each side of the carrier. Dab grease on the springs to help hold them in place.



Step 16: Install carrier assembly into housing using shoulder bolts (19T65081) and torque to 9 ft.lbs.



Step 17: Install solenoid (35T43600) into housing. Secure using bolts (19T62950) and torque to 4 ft.lbs. Install housing plug (25T65492) into housing and torque to 32 in.lbs.



Step 18: For “B” shafts, install Woodruff key (26T01627).

