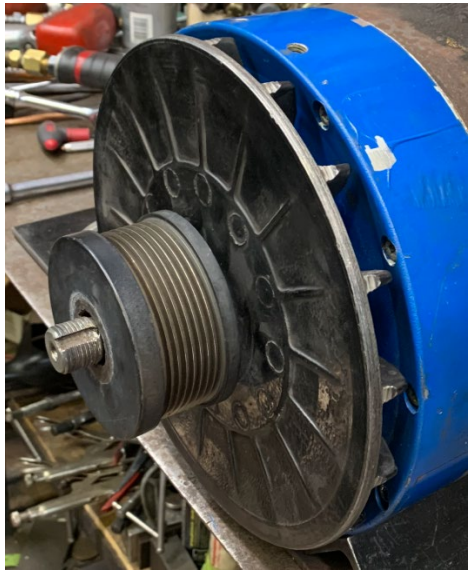
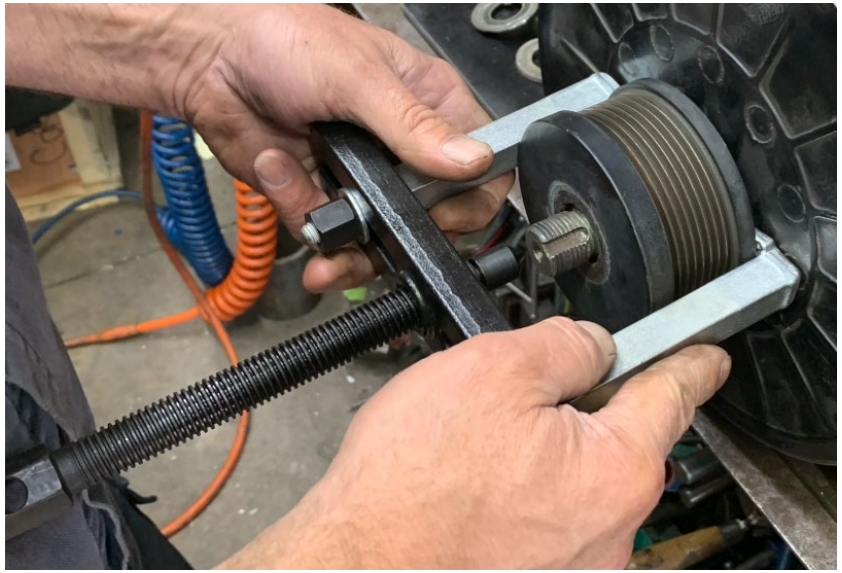
TWR ALTERNATOR REPAIR TOOLING KIT

Set unit inside the TWR cradle, remove back cover



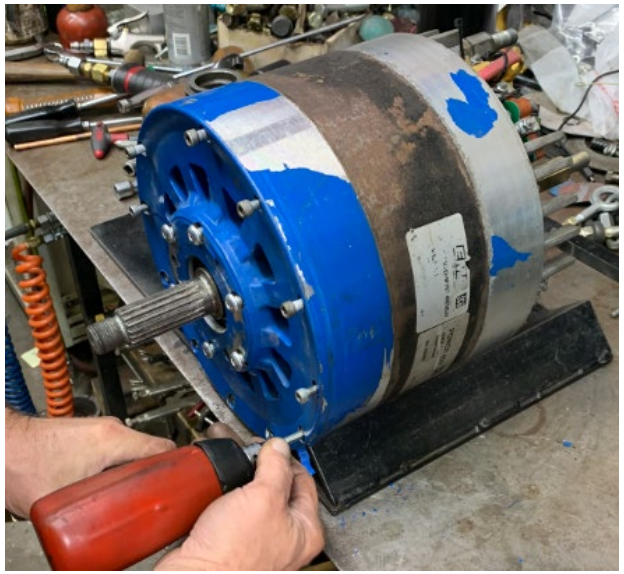
Remove nut from pulley



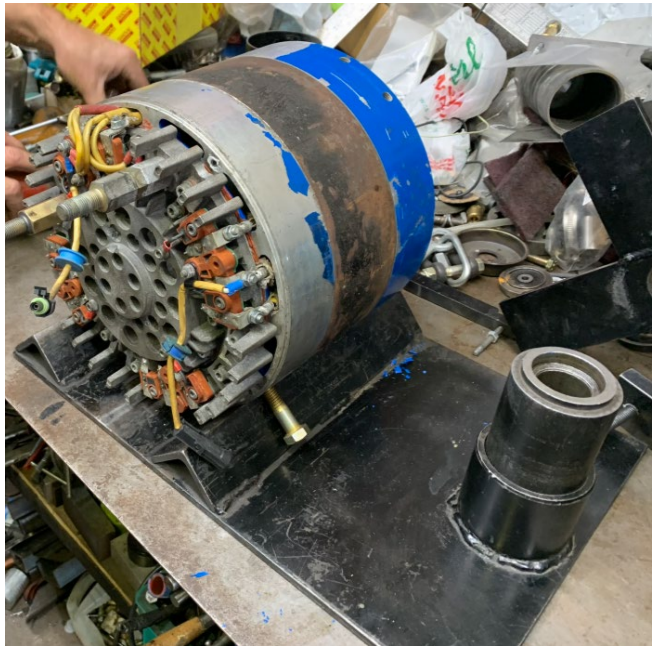
Using the TWR puller, install over pulley and align threaded adjustor with center of rotor shaft

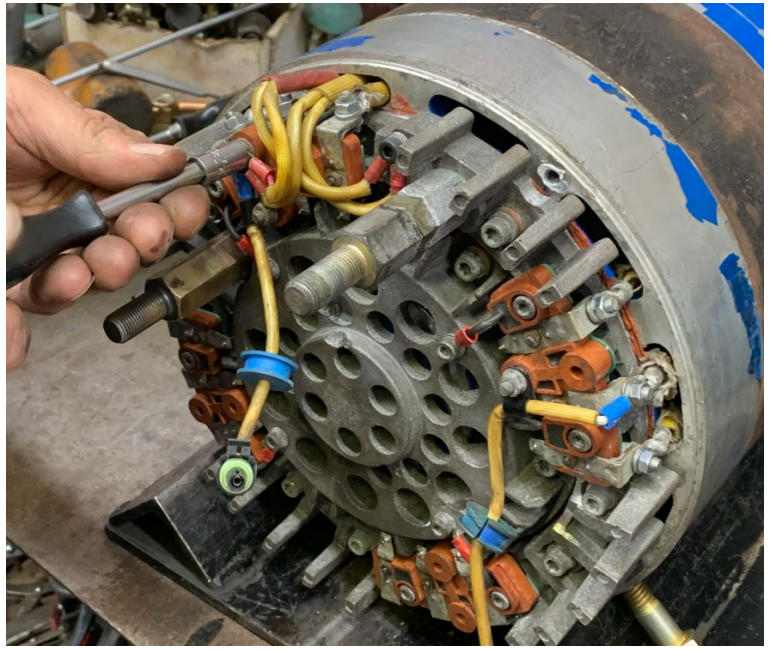
Once pulley is removed, remove fan

Remove 6 bolts

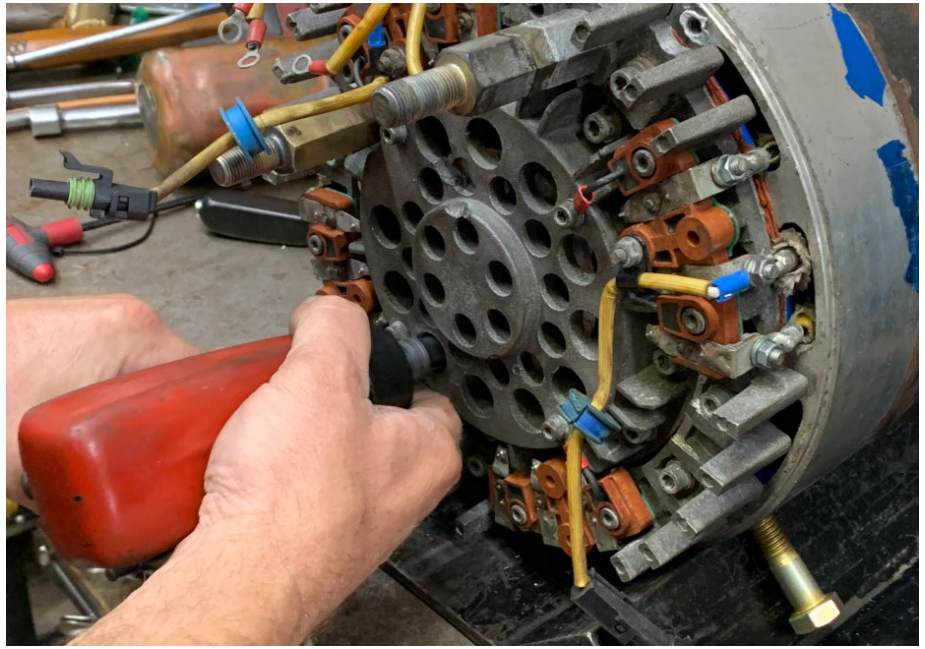


Remove 12 bolts and washers

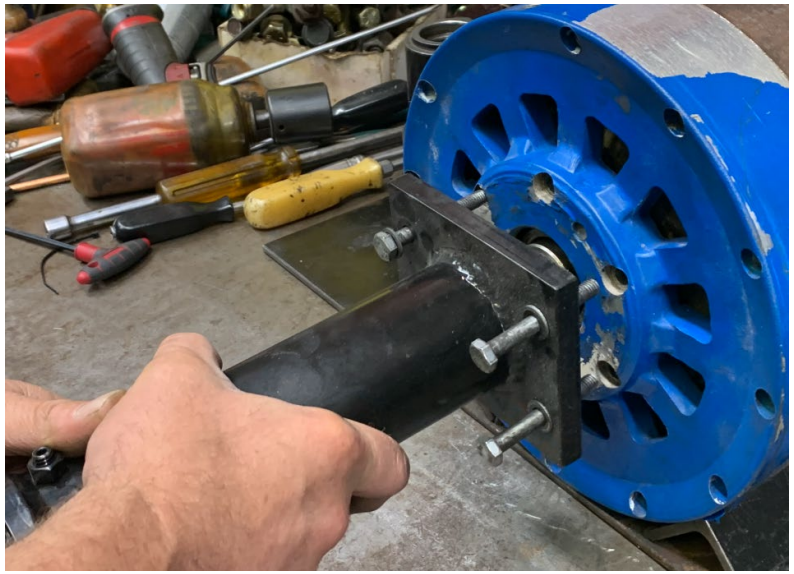


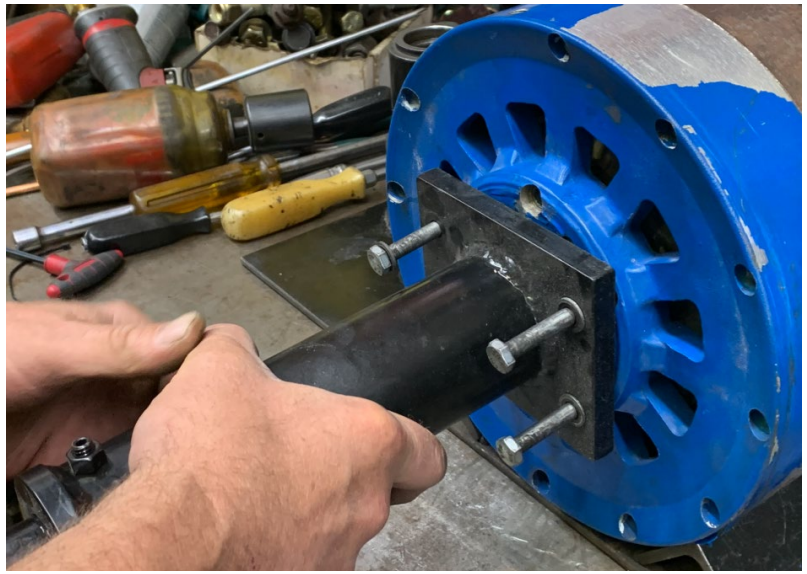


Spin TWR cradle stand so rectifier is facing you, undo exciter wire harness front/rear exciters



Remove rear exciter bolts (6). Once removed, spin cradle stand so front cover is facing you.



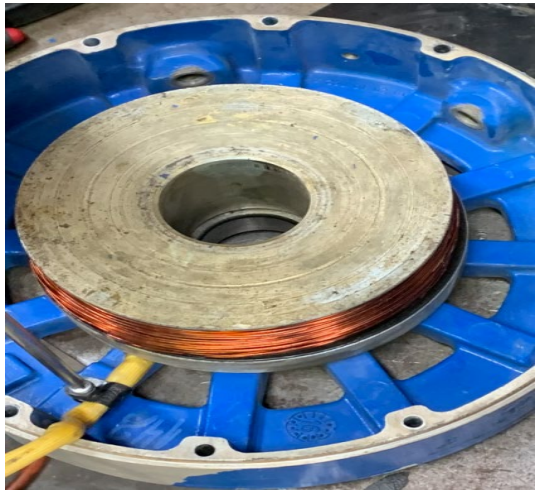


Attach TWR hydraulic ram puller to rotor

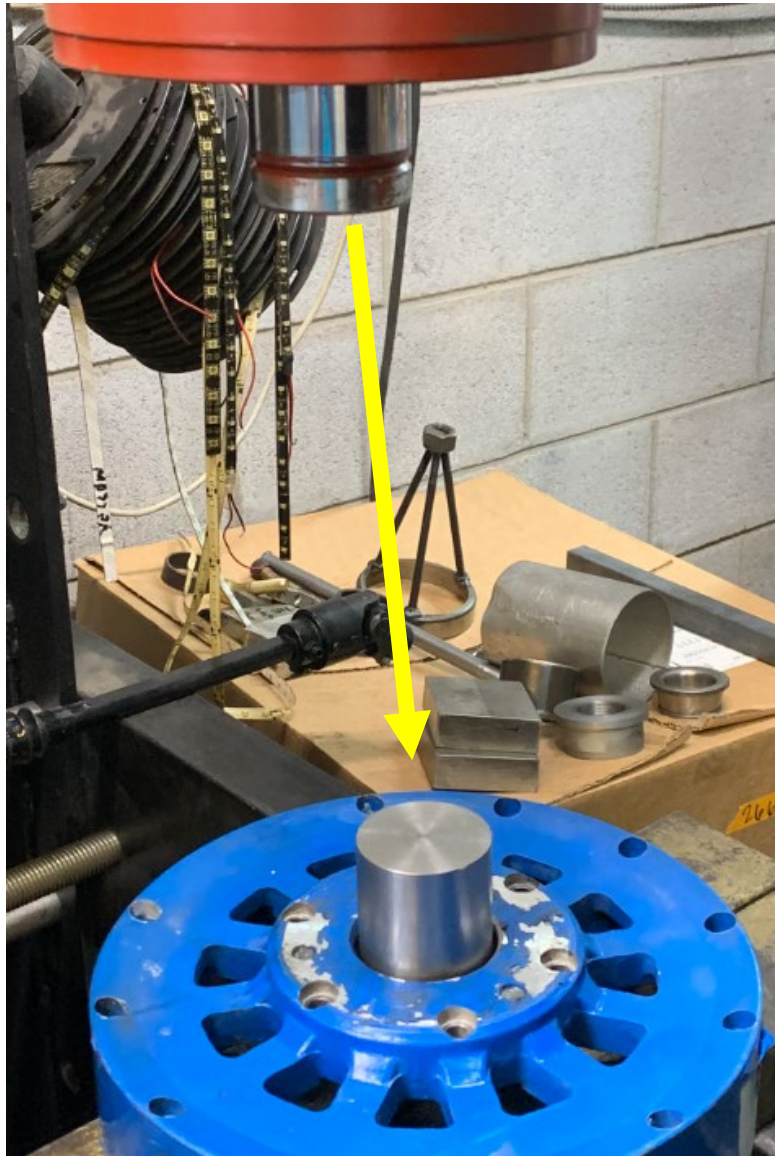
Tighten bolts (HELPFUL HINT: using an extension on the socket does make it easier)

Connect airline to foot pump
and slowly engage hydraulic

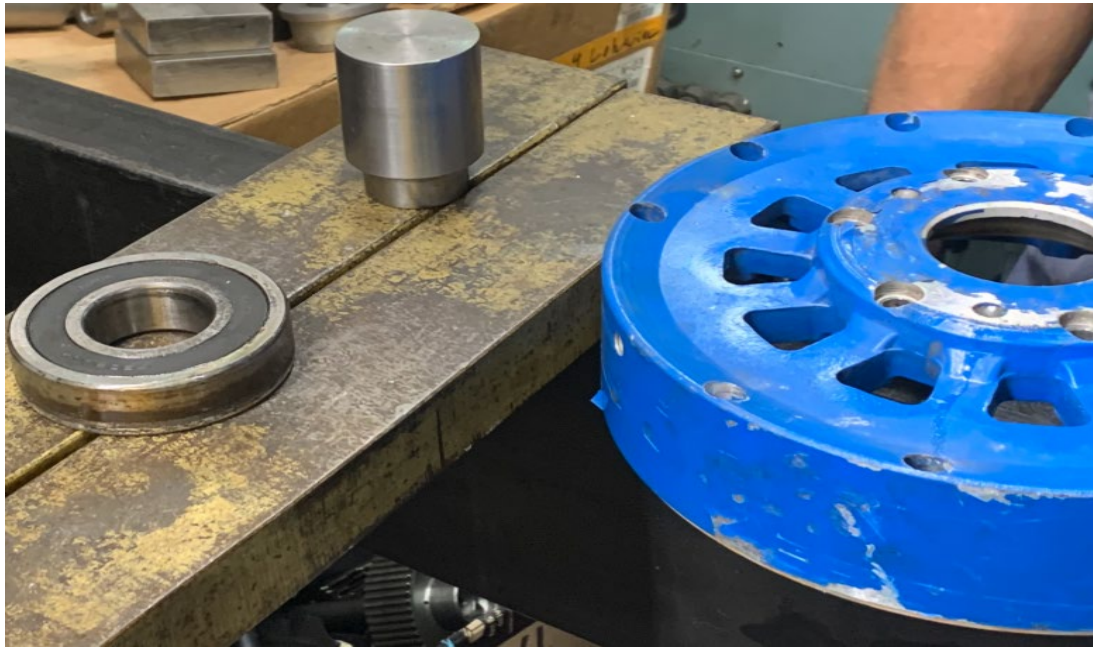
Front cover and bearing will
pull away from rotor and stator.
Remove Ram Puller from Cover



Flip cover and remove screw from pea clip



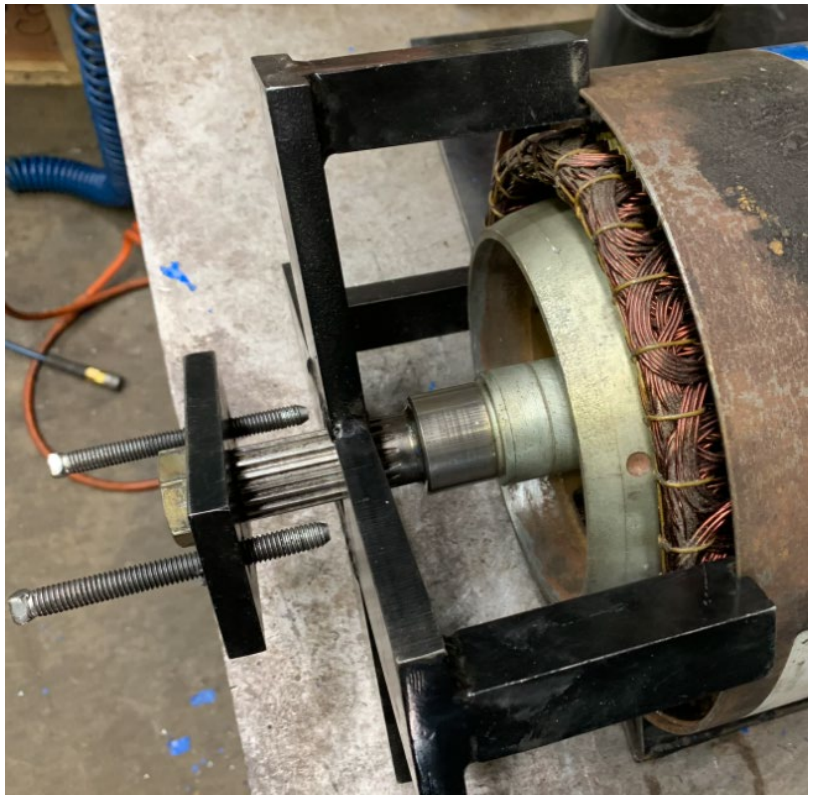
Using the TWR Bearing press tool, set in place as shown. Align tooling with cylinder press carefully press out bearing and coil (ensure you have something to catch the coil)

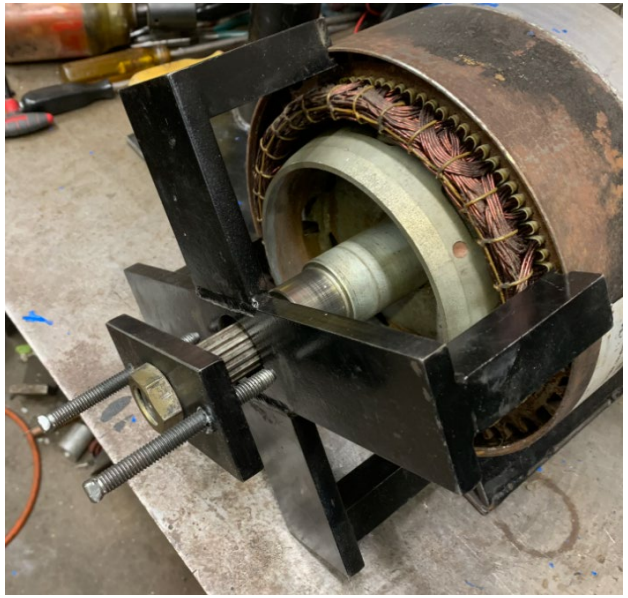


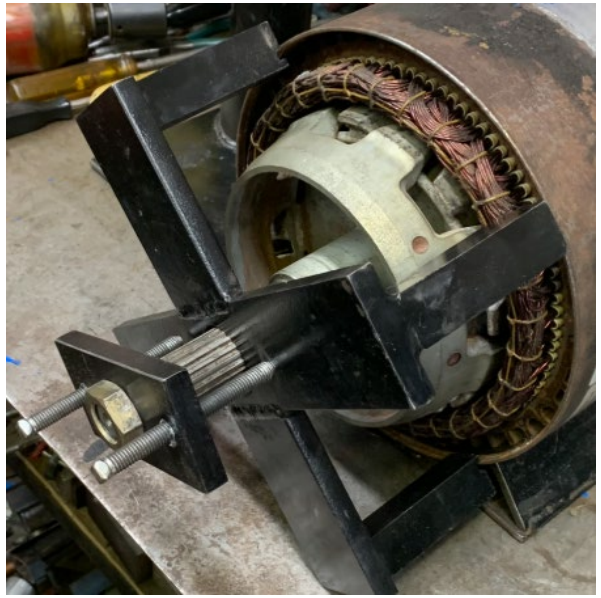
Shown here is the TWR Bearing press tool and the bearing after press is complete

Using TWR Rotor puller, align edge of stator housing with groves in puller, reinstall nut on rotor.

Keeping 2 bolts on either side of the rotor shaft equal, turn equal amounts ensuring rotor pulls straight.







Once rotor is removed, use stand on TWR cradle for rotor (as shown in picture above)

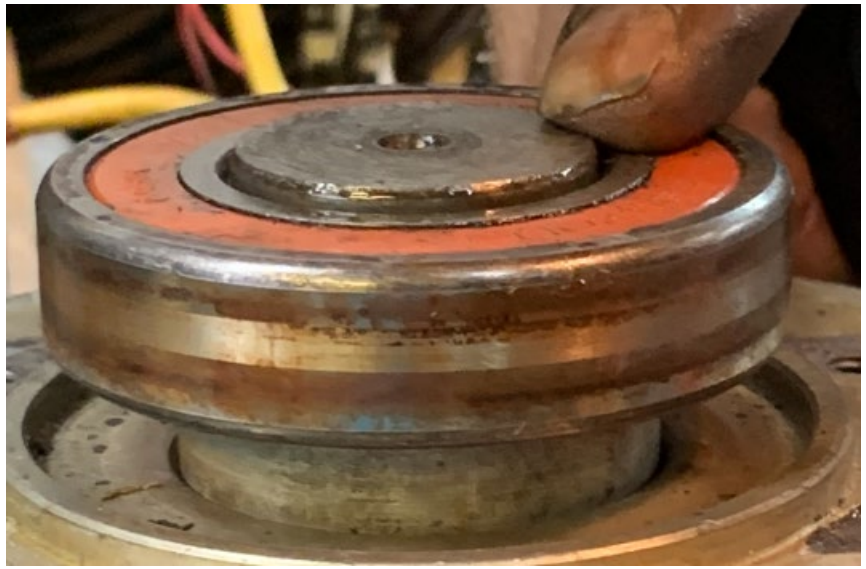
Install TWR Hydraulic Ram over bearing and tighten bolts onto coil

With TWR Hydraulic Ram securely fastened, apply air using foot pump. This will pull the coil along with the bearing.

AT THIS POINT YOU HAVE DISASSEMBLED the P450 ALTERNATOR. Perform required service





SERVICE is NOW Complete and reassembly process is required.

Press bearing back onto rotor using the TWR Bearing press tooling, this will ensure the bearing is pressed to the proper depth as shown.

Re-install pea clip to hold wires. Set the front cover over the rotor shaft

Using the TWR cover press tooling, set on front cover and press using manual and hydraulic press

Install bolts to secure cover to rotor

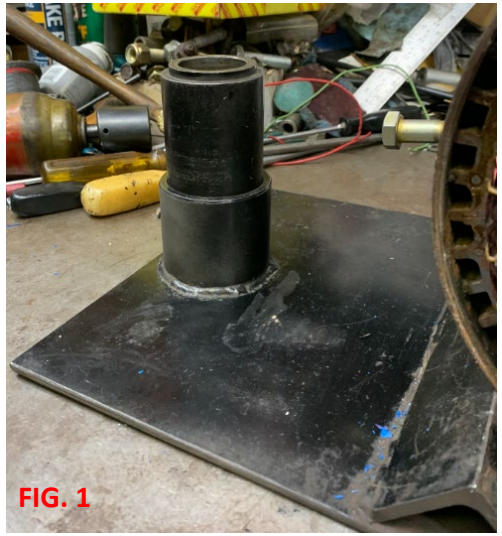


Fig 1, 2 – using shaft of rotor, set rotor/cover into TWR plate stand

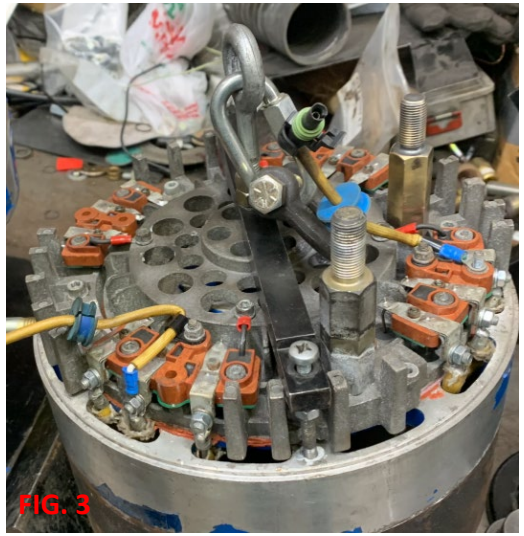


Fig 3,4 – attach TWR harness using large screw bolts to rectifier and lift using a block and tackle

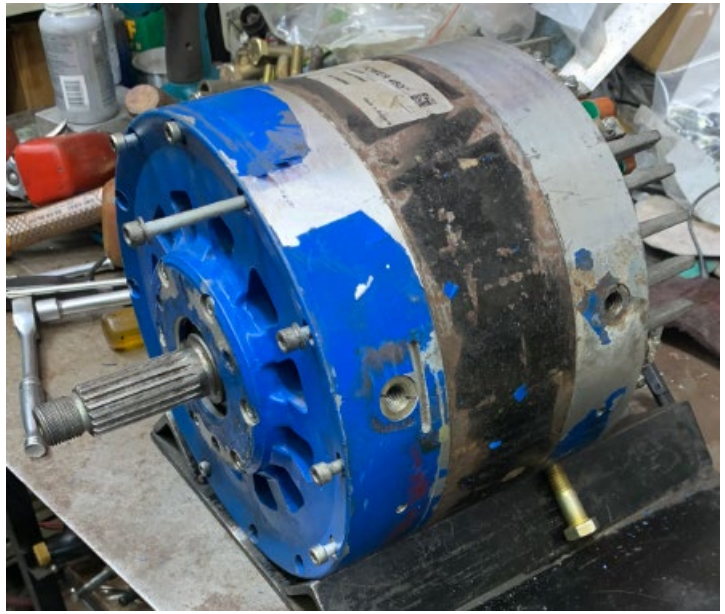
Fig 5 – attach guide wires to help ensure coil wires align

Watching alignment, slowly lower over rotor




HINT – using a longer rod as shown, align bolt holes as you lower rectifier end

Note the stand is made so it allows you to start some of the through bolts



Once you have started 3 bolts/washers to ensure alignment remains true, move/flip the unit into the TWR Cradle mount and finish installing the other bolts/washer. Tighten and then torque in a crisscross pattern

1) Re-Assembly complete

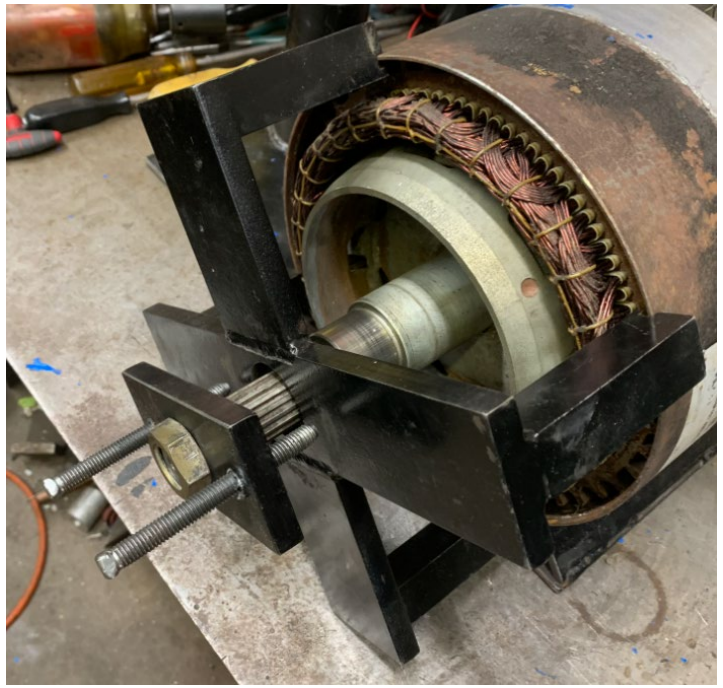
3) READY FOR USE

2) Pulley On

Additional or adjustments to tooling from TWR

BLOWN BEARING PULLER

Additional or adjustments to tooling from TWR
Rotor Puller Adjustment



If you recall in the initial tooling kit the rotor puller had 2 bolts that had to be turned similarly to ensure an even pull

The re-designed prototype has one nut only to turn, helping pull the rotor evenly.