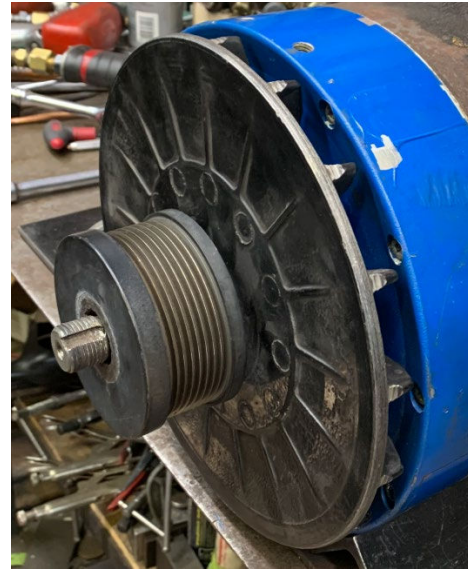




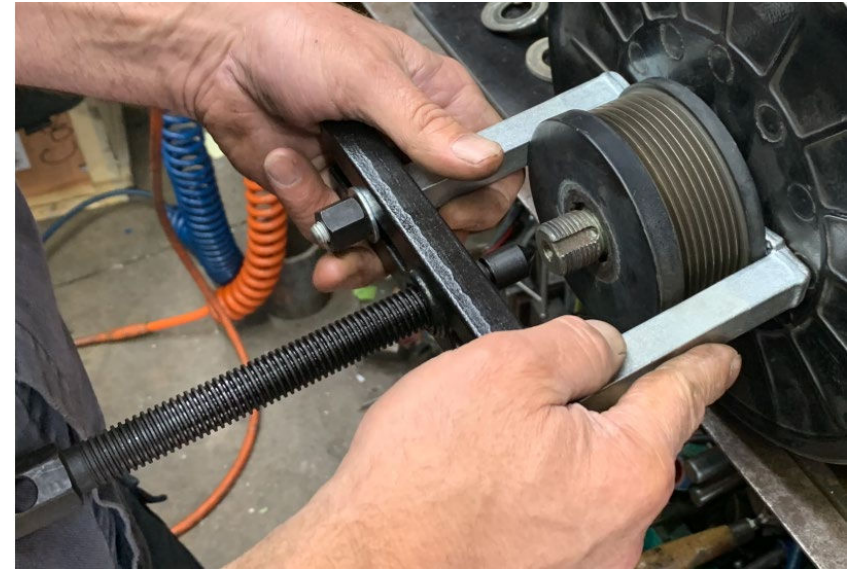
TWR ALTERNATOR REPAIR TOOLING KIT



Set unit inside the TWR cradle, remove back cover



Remove nut from pulley



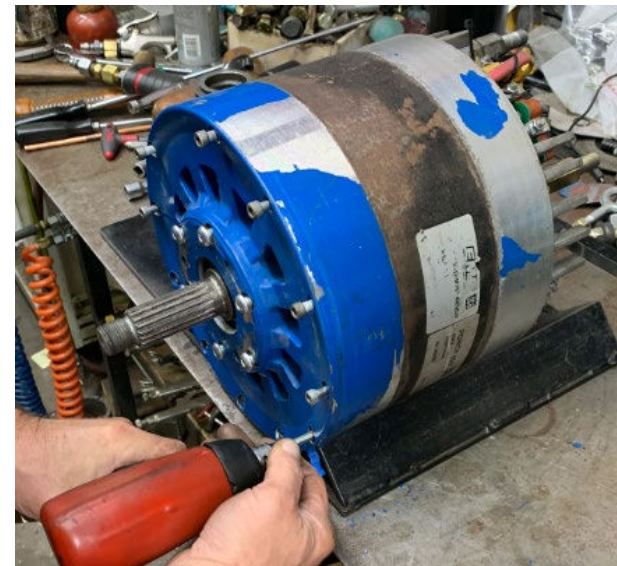
Using the TWR puller, install over pulley and align threaded adjuster with center of rotor shaft



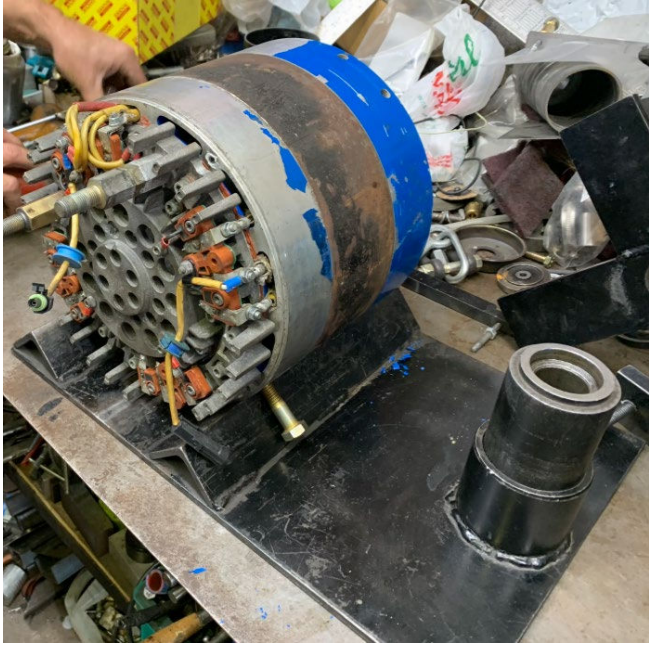
Once pulley is removed, remove fan



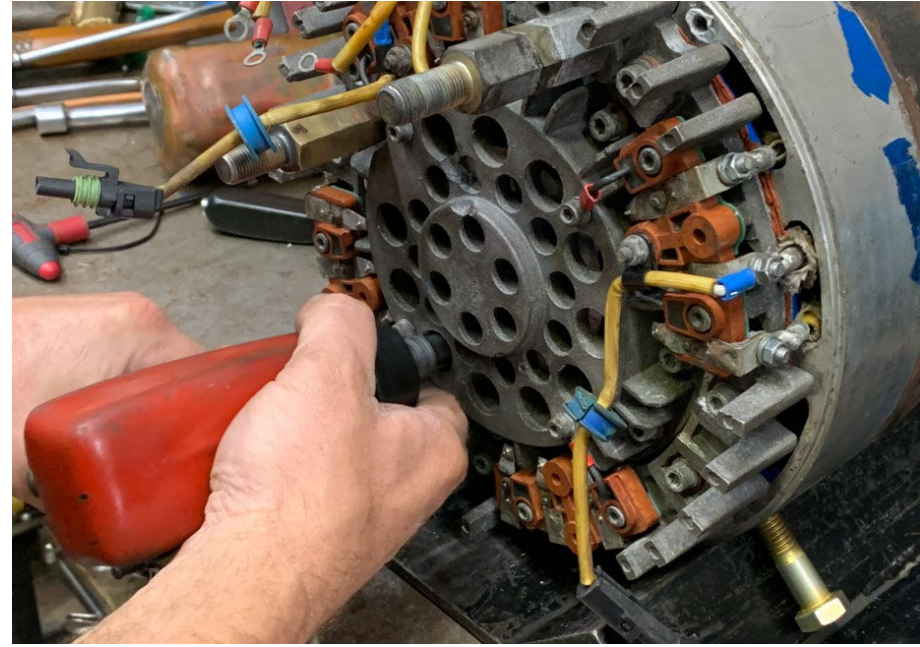
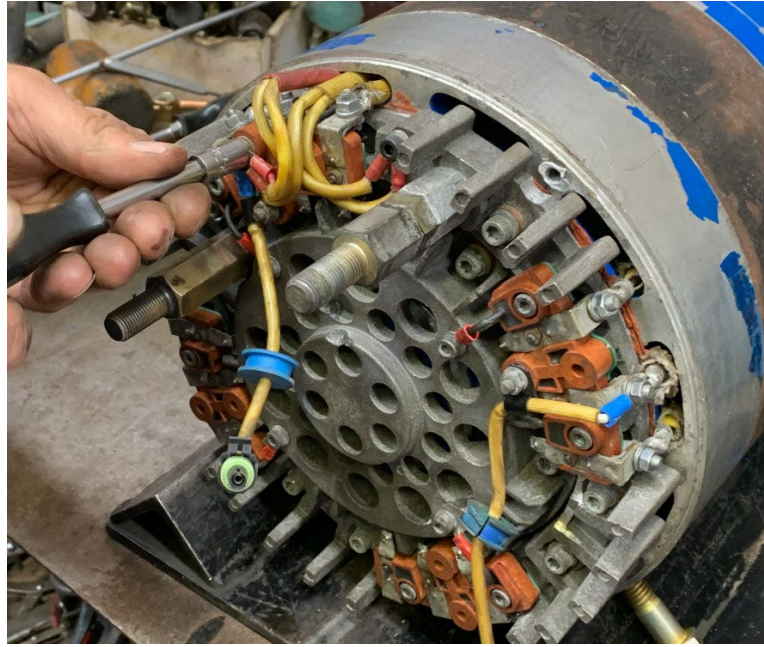
Remove 6 bolts



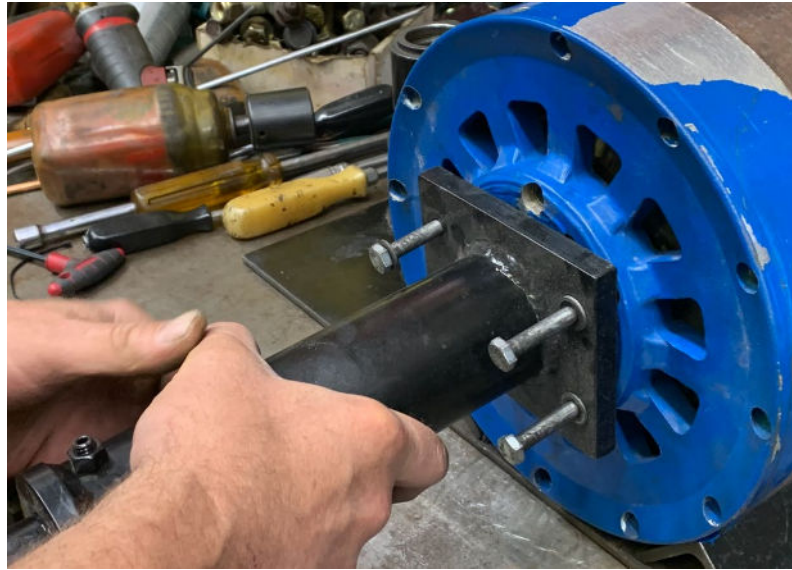
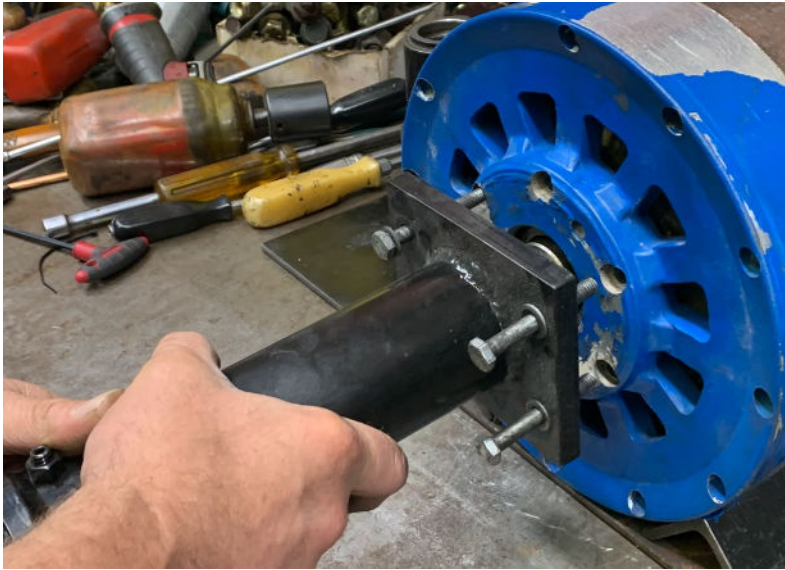
Remove 12 bolts and washers



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.



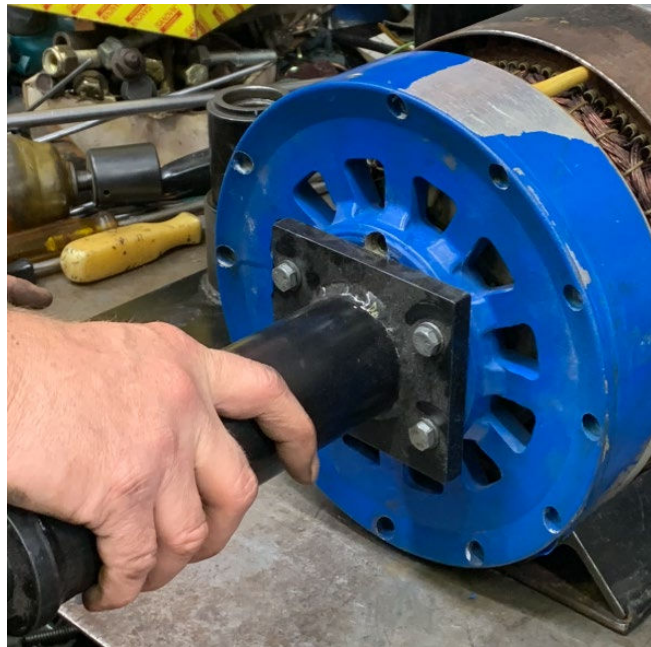
Attach TWR hydraulic ram puller to rotor



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



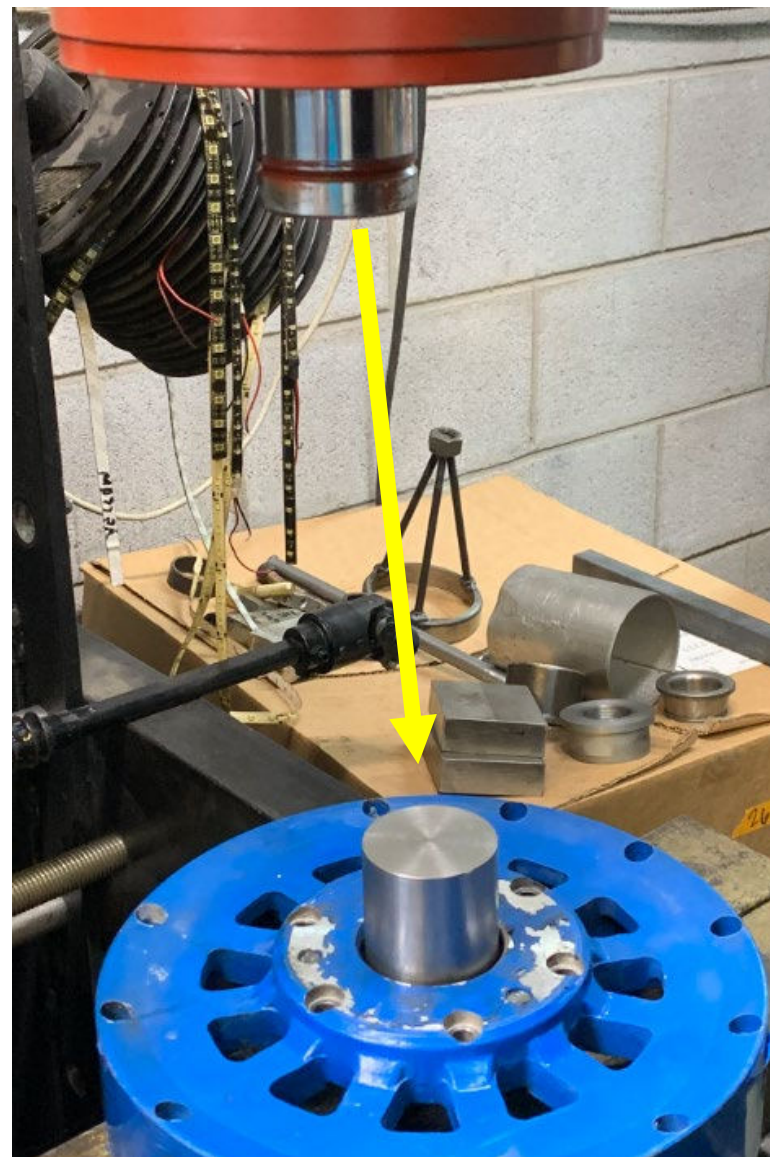
Connect airline to foot pump and slowly engage hydraulic



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)

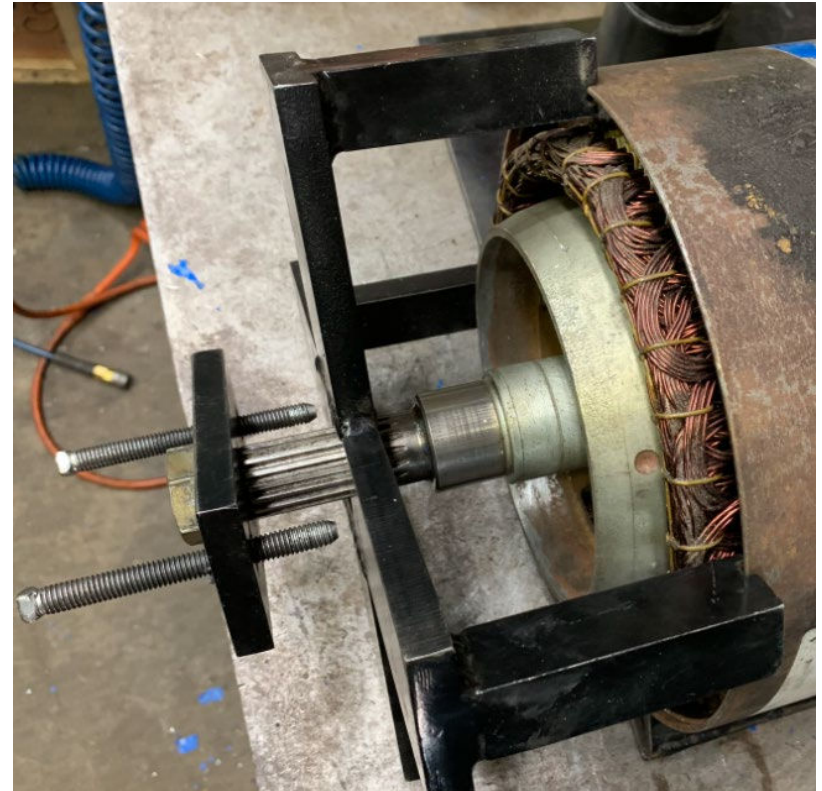


Shown here is the TWR Bearing press tool and the bearing after press is complete



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



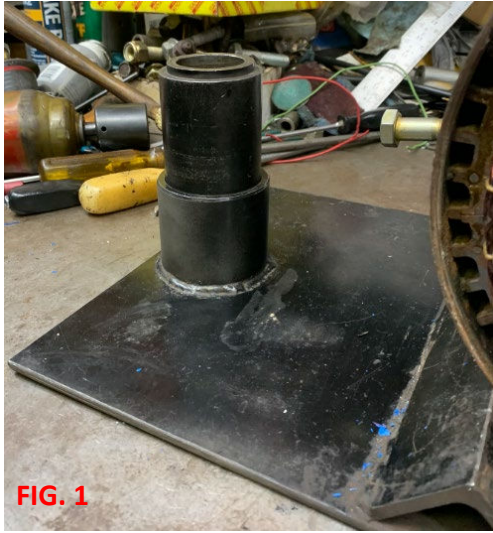


FIG. 1



FIG. 2

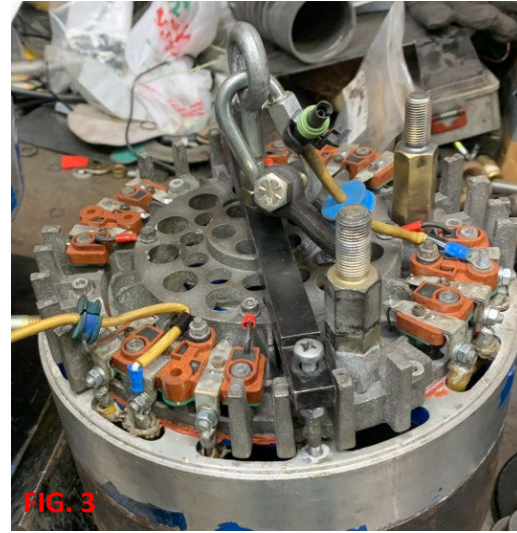


FIG. 3



FIG. 4

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



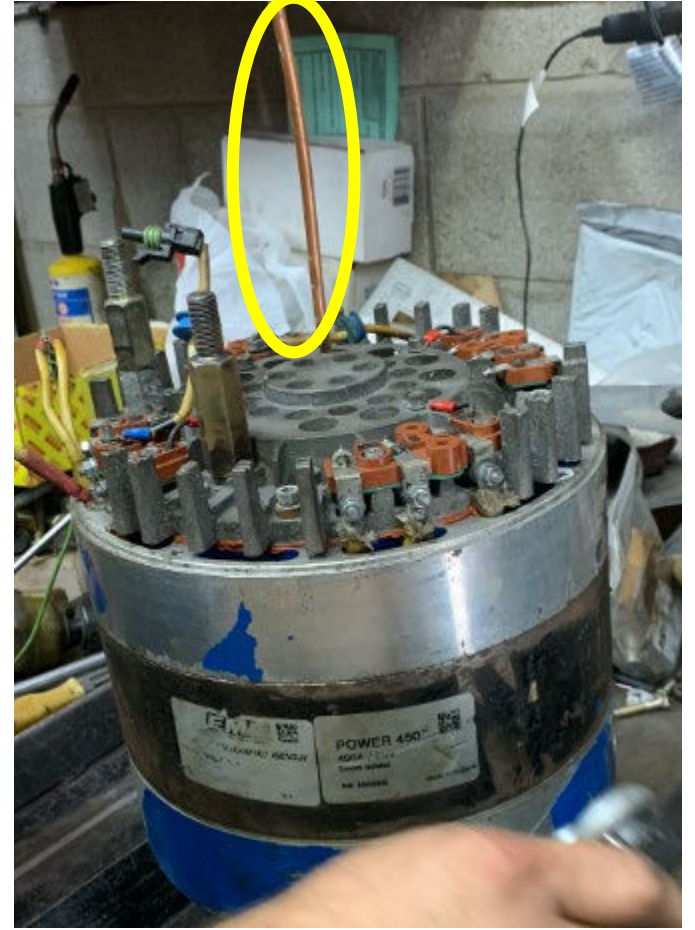
FIG. 5

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



Watching alignment, slowly lower over rotor

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



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

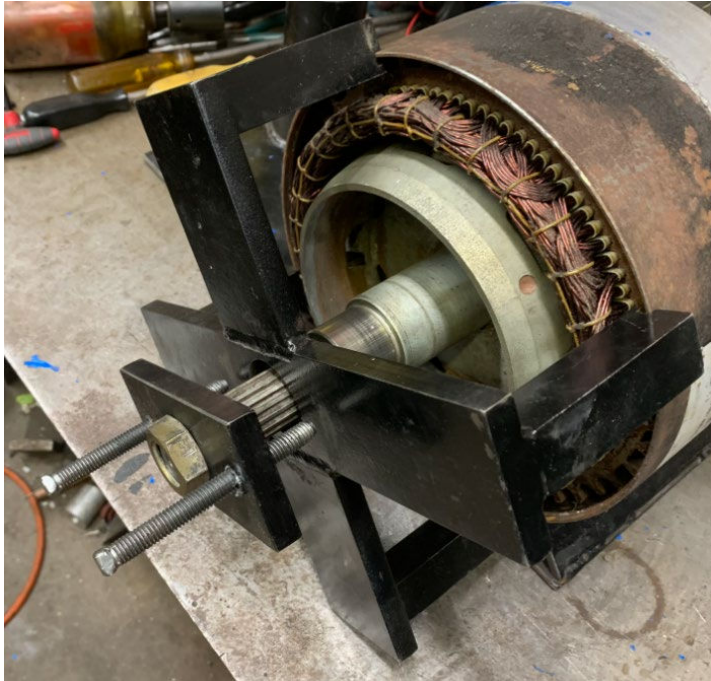




Additional or adjustments to tooling from TWR
BLOWN BEARING PULLER

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.