

Getting inside the hydraulic pump (without breaking the brush holder)

1. remove the entire motor from the hyd pump (if the motor armature remains fastened to the pump coupling; fine)
2. if the motor armature is still inside the motor, remove it from the end opposite of the end cap (where the brushes are); sometimes a gentle push with a pry bar is necessary to get the armature out
3. once the motor armature is out, remove the ground nut on the motor end cap and the end cap should come off (if you put screwdrivers between the end cap and the motor casing, you risk breaking the brush holder inside the end cap)
4. attach the brushes electrically one at a time, being sure to replace each brush with the proper type (there are two types); only install the one brush under the ground bar into the brush holder at this time; leave the other 3 brushes electrically attached but uninstalled in the brush holder
5. place the motor armature on a table surface (commutator side up) and slide the motor casing all the way down on it being careful not to damage the single installed brush; slide the motor casing down onto the armature if it's still stuck on the hydraulic pump coupling
6. install the other 3 brushes into the brush holder one at a time against the commutator
7. replace the end cap and replace the ground nut, if possible; the ground bolt may not come out of the end cap enough to fasten the nut on it until the motor is reinstalled on the hyd pump
8. carefully pick up the motor assembly by not allowing the armature to slide out the bottom of the motor casing again; if it does come out, remove the motor end cap, remove 3 motor brushes from the brush holder (leaving the one under the ground bar installed in the brush holder), slide the motor casing back down onto the armature again, then install the 3 remaining brushes against the motor commutator again
9. reinstall the hydraulic motor onto the hyd pump being careful to fully engage the coupling between the motor and the pump