

CHANGING THE CARTRIDGE 90060, 90065, 90067 VACUUM PUMPS

Before beginning the process to change the cartridge you must make sure to drain all oil from the pump by opening the oil drain valve and allowing time for all the oil to drain. Once completed you can begin the repair process.

Please Note: When unscrewing and also when screwing all of the screws, in all steps of this instruction, you must unscrew in a cross pattern in order to allow for a balanced install and disassembly. (Example: take off screw 1, then 3, then 2, then 4.)

- 1. Place pump on the housing with opening exposed.
- (see figure 1)
- 2. Unscrew the small hex screw for the coupling connection on the housing side.
- 3. Unscrew the 4 hex screws on the top of the motor. **DO NOT take the screws completely out**, simply loosen until they disengage from the housing portion.
- 4. Now, with both coupling and motor screws loosened, proceed to pull the motor and housing apart.
- 5. Once motor and housing are separated, take the housing portion and place on a table with the cover facing up.

(see figure 2)

- 6. Unscrew the 4 allen screws holding the housing and cover together.
- 7. Once cover is unscrewed, you can proceed to take the cover off and the cartridge will be exposed. (see figure 3)



Figure 1



Figure 2



Figure 3

- Proceed to unscrew all 4 screws holding the cartridge in place.
- Replace with the new cartridge (see figure 4) and screw back on to the housing.
- 10. Continue to reconnect the motor to the housing and tighten all screws.
- 11. **NOTE:** When making the connection on the rubber coupling, there is a 2 to 3 mm gap left between the rubber and aluminum teeth on the coupling connection.

(see figure 5)



Figure 4



Figure 5