

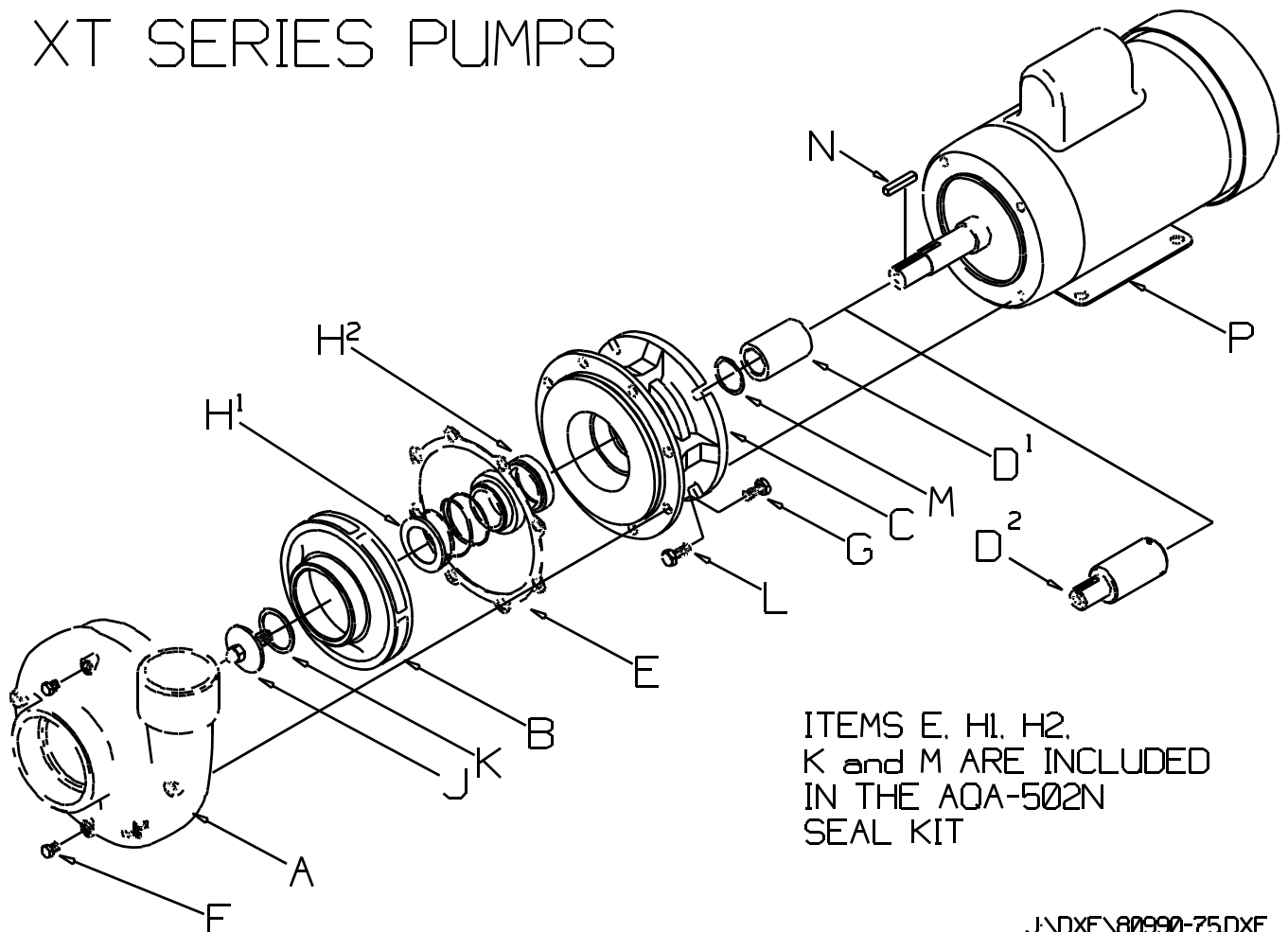
XT Series Seal Replacement

Please refer to the drawing at the bottom of the page for component references (A) through (P).

DISASSEMBLY

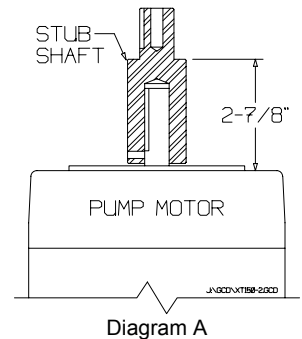
1. Disconnect the power source from pump motor (P).
2. Disconnect the electrical connections, tagging the wires carefully to preserve the correct rotation. Loosen the bolts holding the motor base to the surrounding structure.
3. Remove the pump and motor assembly to repair area. Observe position of all parts prior to disassembly. (Note: the volute may be left in piping.)
4. Remove the 8 volute bolts (G) and remove the volute (A) from pump.
5. Remove the impeller (B). Remove the impeller lockdown bolt (J) by turning CCW. Slide the impeller off of the shaft. Save the shaft key (N).
6. Remove the seal head (H1) by sliding it off of the shaft.
7. Remove the four motor bolts (L) and remove the bracket (C) from the motor.
8. Remove the seal seat (H2) from the bracket (C). Use a wooden or plastic dowel to tap the seat from the bracket.
9. Remove the shaft (D2) or shaft sleeve (D1). Heat the shaft sleeve to approximately 300/F and use a bearing puller to remove the sleeve.

XT SERIES PUMPS



REASSEMBLY

1. Clean the seal cavity of the bracket (C) thoroughly.
2. Thoroughly clean the pump shaft. Assure that the shaft is not grooved and that there is no evidence of pitting or fretting. Polish the shaft with extra fine emery cloth and clean the keyway.
- 3a. On 56C motors, (stub shaft (D2) pumps only), ensure all debris and burrs are removed from the motor shaft. Align the halfdog setscrew with the motor keyway while sliding the stub shaft over the motor shaft. Set the height according to Diagram A. Tighten all set screws.
- 3b. On JM style motors, apply Loctite RC/609 to the inside diameter of the shaft sleeve (D1). Install the shaft sleeve onto the motor shaft making sure that the groove for the Teflon sleeve gasket is facing the pump end. Clean the excess Loctite from the shaft. Be sure the sleeve is seated against the motor shaft shoulder.
4. Place the bracket (C) on a firm surface with the seat cavity (pump end) up. Then place a small amount of vegetable oil on the seat cup or "O" ring seat. Place the seat in the seal cavity with the polished face up toward the pump end. Evenly push the seat into the seat cavity with your fingers, then gently tap the seat into place with a wooden dowel or plastic rod (2" outside diameter). To help ensure that the seat is not damaged, place the cardboard disk supplied with the seal under the end of the dowel to prevent damaging the seat face.
5. Place the bracket (C) on the motor (P) (aligning the base if applicable). Secure the bracket (C) to motor (P) with four motor bolts (L) and washers.
6. Install seal head assembly (H1).
 - a. Lubricate the shaft and elastomer with vegetable oil.
 - b. Install the rotary seal head (H1) onto the pump shaft and slide toward the seat (H2) using a twisting motion until the carbon face touches the seal seat.
 - c. For 145JM through 215JM frame pumps, install a new sleeve gasket (M) onto the shaft sleeve. For 254JM through 256JM, install a new gasket into the hub of the impeller.
 - d. Install the seal spring and retainer (H1) over the shaft sleeve.
 - e. Install the impeller (B) onto the motor shaft being careful to align the keyway of the impeller with the keyway in the motor shaft. Be careful that the seal spring retainer fits inside the lip of the impeller hub. Push the impeller on until the impeller bottoms out on the shaft sleeve.
 - f. Install the impeller lockdown gasket (K) and the impeller lockdown (J).
7. Install the new volute gasket (E). Make sure that all of the mating surfaces of the gasket joint are cleaned to bare metal.
8. Install the volute (A) and secure with the 8 bolts (G) and tighten evenly.
9. Rotate the pump shaft by hand to make sure the impeller does not rub against the volute.
10. Return the pump to the installation and reconnect the electric connections.
11. Start the pump momentarily to observe the shaft rotation. If the rotation corresponds to the rotation arrow on the front of the pump volute, it may be put into service. If the rotation is incorrect, switch any two leads on 3-phase motor to change rotation. Check the wiring diagram of the motor for single phase rotation correction.
12. Remove the top pipe plug (F) (if applicable) or bleeder from the front of the volute and prime the pump thoroughly, making sure all of the air is purged. Turn the shaft one revolution and then refill. Replace the pipe plug or close the bleeder.
13. Start pump allowing adequate time to purge all air from system. Observe any gauges, flow meters, etc., to see if pump performs properly.



DO NOT ALLOW THE PUMP TO RUN DRY AS THIS WILL DESTROY THE SEAL AND VOID THE PUMP WARRANTY. A BROKEN CERAMIC SEAL IS CAUSED BY THE PUMP BEING RUN WITH INSUFFICIENT WATER IN THE HEAD OR TOO MUCH TENSION ON THE SEAL SPRING.