IMPELLER ADJUSTMENT INSTRUCTIONS – BURKS CT & CS PUMPS

The Burks Pump is equipped with an external impeller adjustment, which can be made without disturbing piping or disassembling the pump. After years of service, if the pump capacity or pressure has been reduced, it is desirable to adjust the impeller to compensate for wear. Also after replacing a seal or any of the main pump parts, the impeller may require adjustment.

To adjust the impeller for correct relationship with the raceway, the following procedure must be closely followed:

1. Disconnect current to prevent pump from operating while adjustment is being made.
2. Loosen Impeller Adjusting Screw Lock. The locking device is a brass slide lock held by a hex head cap screw. (Fig. 1)

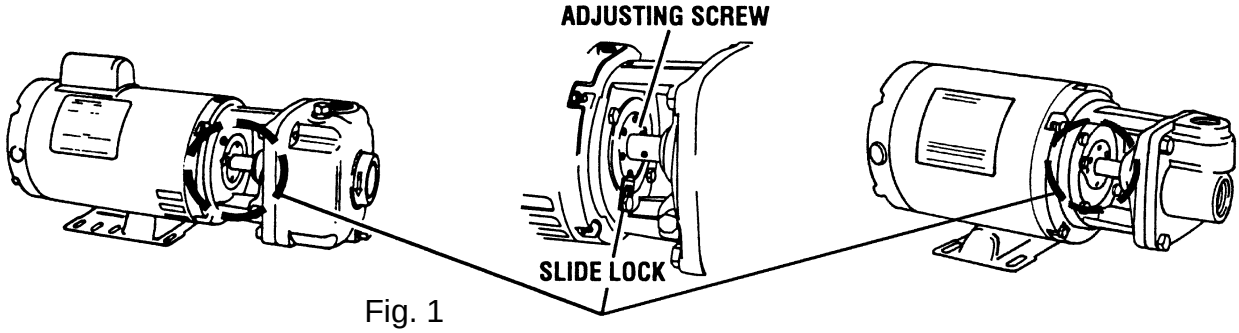


Fig. 1

3. Turn the Adjusting Screw with a Spanner Wrench **(Do not use a screw driver or punch)** to advance the impeller toward the raceway and at the same time rotate the motor shaft with a nail through the hole provided for this purpose. The CT and CS pumps have left hand threaded adjusting screws. Turn adjusting screw clockwise from front of pump (Fig. 2) to move impeller closer to raceway.

   A drag will be readily detected indicating the impeller is in contact with the raceway. At this point mark the pump frame and adjusting screw across one of the punched holes in the adjusting screw as illustrated in (Fig. 3).

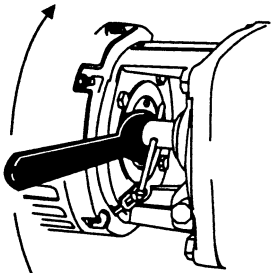


Fig. 2

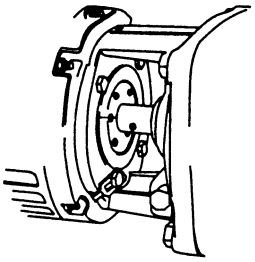


Fig. 3

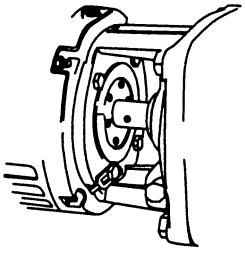


Fig. 4

   NOTE: A spring located back of the bearing in the motor forces the shaft, bearing and impeller forward toward the raceway when the adjusting screw is advanced. In old pumps, corrosion may prevent movement of the bearing when the adjusting screw is released. Should this happen, remove the cap at the end of the motor and with a piece of wood or blunt metal, tap the shaft lightly to loosen the bearing so it can move forward. This movement is so small that it cannot be observed, but the drag mentioned above will be detected.

4. Reverse that rotation of the adjusting screw to provide clearance between the impeller and raceway. For proper clearance under working pressure this reverse rotation of the adjusting screw should be approximately one-half the distance between two spanner wrench holes in the adjusting screw. This distance can easily be determined if a mark is made on the frame and adjusting screw at the point where the drag is felt (Fig. 3) and then measurement taken from the mark to make the proper adjustment (Fig. 4).

IMPELLER ADJUSTMENT INSTRUCTIONS – BURKS CT & CS PUMPS (cont.)

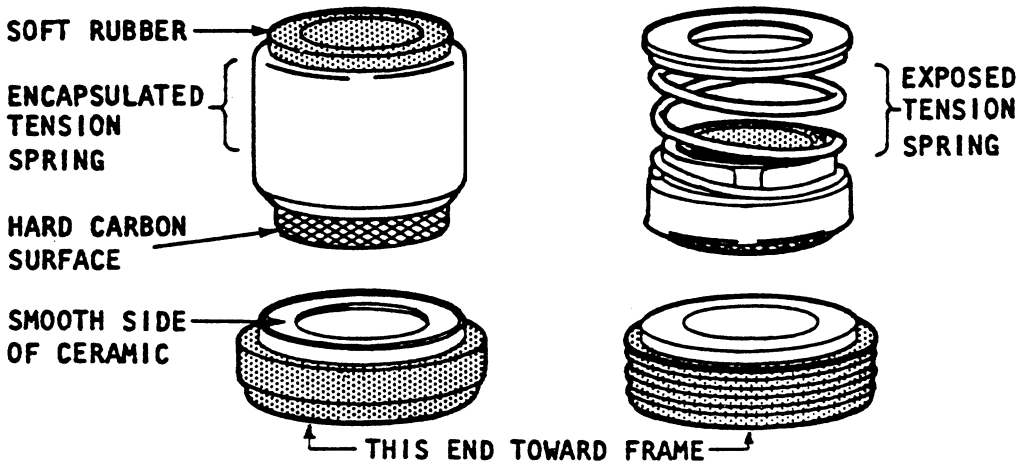
5. Lock the adjusting screw in the new location.
6. Turn on the current and the pump is again ready for service.
7. In event pump labors unduly when water pressure increased, the adjusting screw should be given a slight additional movement to increase the clearance between the impeller and raceway and release the contact. It is better to have more clearance than not enough. If the impeller and raceway are allowed to contact while in service the sealing grooves will "fire" and cause damage to these parts.

SHAFT SEAL REPLACEMENT:
The mechanical shaft seal should be replaced immediately if leakage is noticed around the motor shaft.

Remove pump raceway and impeller. Remove the seal stationary by using two screwdrivers to pry on each side.

Clean seat area of frame, install new stationary seat with smooth side of ceramic surface out and facing the seal. Slide new rotating seal element over shaft with hard carbon surface against ceramic seat.

Replace impeller and raceway.



Although different in appearance, these seals are completely interchangeable on all BURKS pumps of the same corresponding shaft diameter.

For more complete details on Seal Replacement, see Bulletin 106 and Parts Sheet.