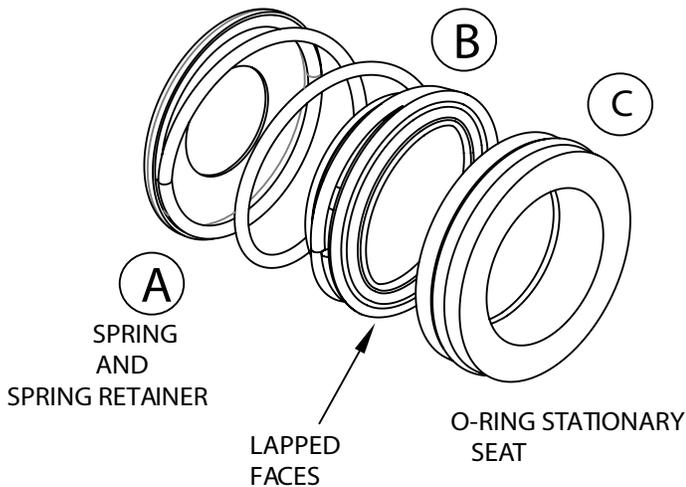


# Successful Seal Instructions

- 1. Read entire installation procedure** before beginning installation.
- 2. Handle components carefully.** Careless handling of the critical seal components may result in chipping, cracking or breakage.
- 3. Do not touch sealing areas.** The sealing faces, O-rings, wedges, and bellows must be kept perfectly clean. Even fingerprint can cause a seal to leak. Primary and secondary sealing areas must be kept clean and undamaged to ensure a proper seal. Rubber gaskets tear easily when handled carelessly.
- 4. Make sure that the shaft or sleeve is free of burrs, nicks, grooves, and sharp edges.**
- 5. Bleed all trapped gases from the seal cavity before start-up,** otherwise the seal cavity may vapor lock and burn the seal.
- 6. All valves must be open on the suction side of the pump** so that the seal is assured of a positive flow of liquid at all times. Failure to do so will also cause the seal to burn.

# INSTALLATION INSTRUCTIONS

## TYPE 21 SHAFT SEAL



**THE SEAL IS SUPPLIED WITH A PACKET OF LUBRICANT.**

### LAPPED RUNNING FACES

The lapped running surfaces of the rotary seal head and stationary seat must be treated with care. **KEEP CLEAN. DO NOT SCRATCH.** Use a clean, soft cloth during installation. Protect the faces. Install both the seat and rotary square to the shaft. Check the stationary seat installation from behind the seal cavity for squareness.

### STATIONARY SEAT INSTALLATION (C)

The stationary seat is supplied with either an O-ring or cup mount. Clean the seal seat cavity of the adapter.

Position the stationary seat with the silver dot down (away from you) and the lapped face (shiny side) facing you. Lubricate the seat O-ring or cup and press the stationary seat in seal cavity of the adapter squarely and evenly. Be careful not to scratch or touch the lapped surface of stationary seat.

Inspect the face of the stationary seat to be certain there is no dirt on the face. If there is any dirt or fingerprints on the face, wipe it off carefully with a soft cloth.

### ROTARY SEAL HEAD INSTALLATION (B)

Clean, polish and lubricate the shaft (or shaft sleeve).

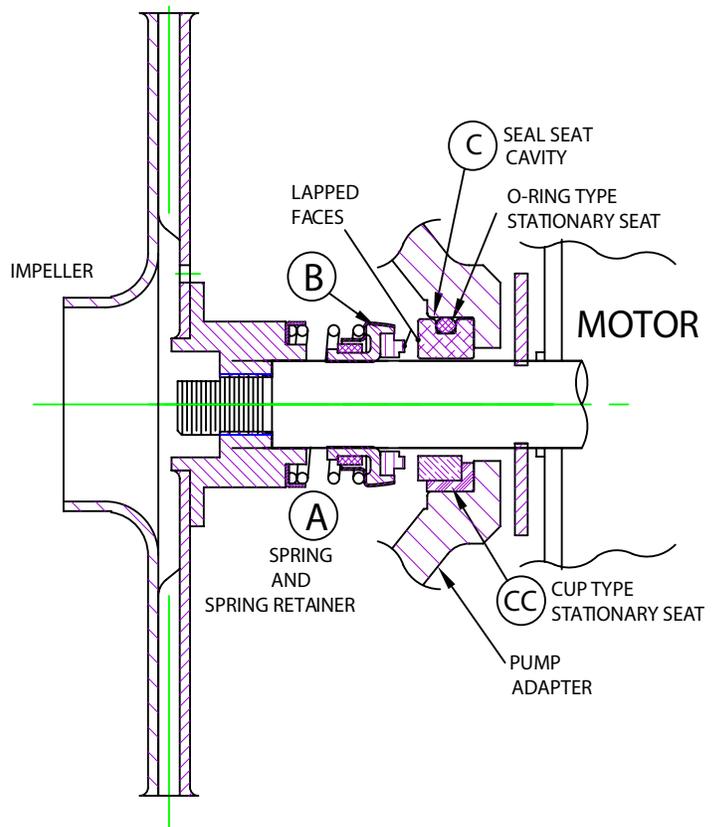
Check lapped faces on the stationary seat to be certain there is no dirt is on either face.

Slide the rotary seal head on the shaft with the rotating ring facing the stationary seat. Press the drive band until the head seats firmly against the seat. Install spring and spring retainer. Install impeller which will compress the spring to proper length assuring correct pressure on the lapped faces.

### THE SEAL ASSEMBLY CONSISTS OF:

- A. SPRING AND SPRING RETAINER**
- B. ROTARY SEAL HEAD**
- C. STATIONARY SEAT - May have an O-ring groove in seat (C) or a rubber cup seat (CC)**

**CAUTION:** This seal is a precision product and should be handled accordingly. Be especially careful of the lapped sealing surface of the rotary washer and stationary seat.



**CAUTION:** Never operate the lapped running faces dry. The liquid being handled ensures proper lubrication.

In some cases a short period of operation is required to clear up slight leakage.

**NOTE:** The seal contains a packet of the approved lubricating fluid for seal installation. **DO NOT USE OTHER LUBRICATING LIQUIDS! DO NOT OVER LUBRICATE!** It is not required to use the complete contents of the lubrication packet for seal installation.