

U1700 Cartridge Seal

Dwg. I-6116-A

INSTALLATION INSTRUCTIONS

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U1700 Cartridge Seal

Date: 1/29/08 Rev A

INSTALLATION INSTRUCTIONS for Viking Universal Bracket Pumps

SEAL DESIGN

- The cartridge seal comes pre-assembled, factory tested and ready to be installed.

PREPARE EQUIPMENT

1. Follow all O.E.M instructions for preparing the pump for seal replacement.
2. Clean and inspect parts.
3. Check shaft or shaft sleeve, repair or replace if necessary.
4. Remove all sharp edges and burrs that could cut the secondary seal (wedge) or cause misalignment.
5. Determine that all equipment components meet any applicable O.E.M. specifications (i.e. shaft runout, stuffing box alignment, etc.) and that all sealing areas are in good condition.

INSTALLING SEAL

1. Review all pertinent documentation prior to installation.
2. Determine proper orientation of the seal to equipment.
Note: **Do not lubricate the shaft.**
3. The shaft must already be in place and properly aligned in the pump housing.
4. The bearing must be removed from the bearing housing to allow access to the shaft.
5. Slide the spring loading collar over the shaft. **Position the collar according to the dimension specified on the installation drawing supplied with the seal.** Tighten the set screws to the shaft using the access holes provided on the pump.
6. If the loading ring is a separate component from the cartridge seal it must be placed on the shaft at this time and moved into position next to the spring loading collar.
7. **Before sliding the seal onto the shaft** through the bearing housing, make sure the flexible graphite wedge is centered to the sleeve I.D.
8. The seal should be loose on the shaft (do not install T-bolts at this time). Replace the bearing in the bearing housing per O.E.M. installation instruction. Make all necessary Thrust Bearing and Impeller adjustments as required.
9. Install T-bolts and loosely thread gland nuts against the gland.
10. Tighten gland nuts evenly.
11. Tighten the sleeve collar setscrews to the shaft.
12. Remove the seal setting spacers.
13. Turn the shaft by hand to assure free rotation. There should be some drag created by the loaded seal faces.
14. Make all necessary pump connections.
15. Vent the seal of any air and purge the piping prior to start-up.
16. Run pump according to normal start up and operating procedures.

U1700 Cartridge Seal

Date: 1/29/08 Rev A

INSTALLATION INSTRUCTIONS for Viking HV-3383 Pump

SEAL DESIGN

- The cartridge seal comes pre-assembled, factory tested and ready to be installed.

PREPARE EQUIPMENT

1. Follow all O.E.M instructions for preparing the pump for seal replacement.
2. Clean and inspect parts.
3. Check shaft or shaft sleeve, repair or replace if necessary.
4. Remove all sharp edges and burrs that could cut secondary seal (Grafoil wedge) or cause misalignment.
5. Determine that all equipment components meet any applicable O.E.M. specifications (i.e. shaft runout, stuffing box alignment, etc.) and that all sealing areas are in good condition.

INSTALLING SEAL

1. Review all pertinent documentation prior to installation.
2. Determine proper orientation of seal to equipment.
Note: **Do not** lubricate shaft.
3. Move shaft into position (even with opening of stuffing box) and slide loading ring onto the shaft.
4. Insert seal into position in line with shaft and square to stuffing box.
5. **Before sliding shaft through seal**, make sure flexible graphite wedge is centered to the sleeve I.D.
6. Secure rotor assembly onto the casing.
7. The seal should be loose on the shaft at this time (do not install T-bolts at this time). Make all necessary Thrust bearing and Impeller adjustments as required.
8. Loosely thread gland nuts onto stuffing box studs (T-bolts).
9. Tighten gland nuts evenly.
10. This seal has four set screws and two dog point screws. It is not necessary to make any adjustments to the dog point screws (these are on the collar but not positioned through any of the spacers). Tighten the set screws (those screws positioned in the spacer clips) to the shaft at this time (when tightened the set screws should pass completely out of the spacers and into the collar).
11. Turn shaft by hand to make sure there is no rubbing between rotating and stationary parts.
12. Make all necessary pump connections.
13. Vent the seal of any air and purge the piping prior to start-up.
14. Run pump according to normal start up and operating procedures.

U1700 Cartridge Seal

Date: 1/29/08 Rev A

INSTALLATION INSTRUCTIONS for Viking 1-7/16" KKV Pumps

SEAL DESIGN

- The cartridge seal comes pre-assembled, factory tested and ready to be installed.

PREPARE EQUIPMENT

1. Follow all O.E.M instructions for preparing the pump for seal replacement.
2. Clean and inspect parts.
3. Check shaft or shaft sleeve, repair or replace if necessary.
4. Remove all sharp edges and burrs that could cut the secondary seal (wedge) or cause misalignment.
5. Determine that all equipment components meet any applicable O.E.M. specifications (i.e. shaft runout, stuffing box alignment, etc.) and that all sealing areas are in good condition.

INSTALLING SEAL

1. Review all pertinent documentation prior to installation.
2. Determine proper orientation of the seal to equipment.
Note: **Do not lubricate the shaft.**
3. Verify that the set screw access hole location matches the dimension shown on the installation drawing.
4. Move the shaft into position (even with the opening of stuffing box) and place an Allen wrench or equivalent solid rod through the set screw access hole until it contacts the shaft, this is to prevent the spring loading collar from moving too far down the shaft.
5. Slide the spring loading collar and the loading ring over the shaft.
6. **Before sliding the seal over the shaft**, make sure the flexible graphite wedge is centered to the sleeve I.D. The seal should be loose on the shaft (do not install T-bolts at this time).
7. Secure the rotor assembly onto the casing.
8. Make all necessary Thrust Bearing and Impeller adjustments as required.
9. The Allen wrench can be removed from the set screw access hole at this time. **Position the collar according to the dimension specified on the installation drawing supplied with the seal** (this will require the Allen wrench to be centered in the access hole). The seal can be carefully pushed inward to align the collar - rotate the shaft until a set screw is located. Tighten both set screws to the shaft using the access hole provided on the pump.
10. Install T-bolts and loosely thread gland nuts against the gland.
11. Tighten gland nuts evenly.

12. This seal has four set screws and two dog point screws. It is not necessary to make any adjustments to the dog point screws (these are on the collar but not positioned through any of the spacers). Tighten the set screws (those screws positioned in the brass spacer clips) to the shaft at this time. When tightened, the set screws will pass completely out of the spacers and into the collar. After tightening the set screws, the removal of the brass setting spacers is optional.
13. Turn the shaft by hand to assure free rotation. There should be some drag created by the loaded seal faces.
14. Make all necessary pump connections.
15. Vent the seal of any air and purge the piping prior to start-up.
16. Run pump according to normal start up and operating procedures.