

## 1900 Series Pumps

SUPERSEDES: February 1, 2007

EFFECTIVE: June 1, 2014

Plant ID# 001-941

### APPLICATION:

All 1900 pumps are covered by this instruction sheet. They are designed for pumping water or a glycol/water mixture with no more than 50% glycol.

Working Pressure: 175 PSIG with cold water and  
125 PSIG at rated temperature  
Temperature: 250°F Standard  
300°F with Hi-Temp Seal



### INSTALLATION:



The pump must be mounted with the motor in a horizontal position. Optionally, it may be mounted with the motor above the volute.



**CAUTION: DO NOT SUPPORT, SUSPEND OR BRACE MOTOR AND/OR BRACKET. SUPPORT PROVIDED BY CASING IS SUFFICIENT FOR STRUCTURAL INTEGRITY OF THE PUMP. UNDER NO CIRCUMSTANCES SHOULD ANY PART OF BRACKET OR MOTOR BE COVERED WITH INSULATION. OBSERVE ALL APPLICABLE ELECTRICAL AND MECHANICAL CODES.**

**WARNING: USE O-RING SEALS WITH GROOVED FLANGES. DO NOT USE FLAT GASKETS**

### START UP:

1. Wire the motor according to the nameplate specifications. Warranty is void if the motor is damaged due to improper electrical installation.
2. If a magnetic starter is used, see that the heater element is sized for the service factor load of the motor otherwise nuisance circuit breaker trips may occur.

### SEAL REPLACEMENT:

1. Disconnect the electrical connections. Relieve the system pressure, reduce the system temperature to ambient and drain the water from body.
2. Remove the motor and bracket assembly from the pump body. (Figure 1)
3. Place the bracket in a vertical position with the impeller up and loosen the bolt at center of impeller, two turns ( $\frac{7}{16}$  Hex Head). This bolt has a **REVERSE** (Left-Handed) thread. Tap the impeller at its outside diameter with handle of hammer to free the tapered fit between the shaft and the impeller and completely remove the bolt, washer, and impeller. (Figure 2)
4. Remove the complete rotating element, which includes the spring retainer washer, spring, rotating seal assembly, and the rubber bellows. Next remove the stationary seat from the recessed end of the bracket. It may be necessary to pry it loose. (Figure 3) **Important Note:** *The original seat may be difficult to see, but must be removed before installing the new seat.* (Figure 4)

3. Before starting the motor, ensure that pump is filled with water to lubricate the seal. Do not operate the pump dry, this will result in seal failure.

### LUBRICATION:

The pump end requires no lubrication. The motor uses permanently sealed bearings, which do not require lubrication.



Figure 1



Figure 2



Figure 3

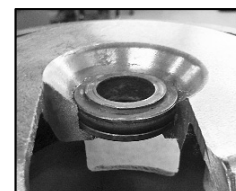


Figure 4



Seat & Seal Assembly

5. Thoroughly clean the shaft sleeve and the seat cavity
6. Insert the new seat. For easy assembly, coat the seat rubber with the special grease provided in the small container. **Do NOT use any other oil or grease.** Push the seat all the way down into the cavity. (Figure 5) The seat must not be cocked relative to shaft. Be sure the face of the seat stays absolutely clean – wipe the surface with a soft, clean cloth if necessary.
7. Install the new rotating seal assembly. Coat the inside of the rubber bellows with the special grease provided. **Do NOT use any other oil or grease.** Be sure the carbon face remains absolutely clean. Slide the assembly, carbon first, over shaft until the carbon meets the seat. Install spring and spring retainer washer (Figure 6)
8. Ensure the mating surfaces of the shaft sleeve and impeller are clean. Replace the impeller using the new impeller bolt and washer provided. **Torque to 9 ft-lbs.**
9. Clean the gasket surfaces of both the casing and the bracket. Using the new gasket provided, reassemble the motor/bracket assembly to the casing.
10. Follow procedure outlined under **START UP** section.

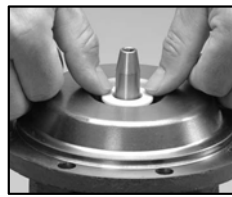


Figure 5



Figure 6

#### IMPELLER REPLACEMENT:

Follow steps 1 → 3 and 8 → 10 outlined under **SEAL REPLACEMENT** section.

#### MOTOR REPLACEMENT:

1. Follow steps 1 → 4 under **SEAL REPLACEMENT** section.
2. Remove the bracket from the motor.
3. Loosen the set screws and remove the shaft adaptor and sleeve, being sure to reclaim the original shaft key from the motor.  
**Note:** *The key provided with the new motor must be modified to the length of the original before it is installed if the original is not being reused.*
4. Thoroughly clean the shaft sleeve and reuse it or install new **shaft sleeve (Part # 1600-205RP)**
5. Insert the **shaft adaptor** onto the motor shaft, press until it bottoms out against the end of the motor shaft. (Part # 1900-008RP)
6. Tighten set screws beginning with the two keyway set screws.
7. Slide the bracket over shaft adaptor assembly and secure to the motor.
8. Follow steps: 5 → 10 under **SEAL REPLACEMENT** section.

#### Water Seal Kit

E Type Seal (Standard)	1600-868CRP
S Type Seal (High Temp)	1600-868SRP



**CAUTION: USE ONLY GENUINE TACO REPLACEMENT PARTS. THE USE OF ANY OTHER PARTS CAN RESULT IN PREMATURE OR CATASTROPHIC DAMAGE TO THE PUMP OR PROPERTY.**

## LIMITED WARRANTY STATEMENT

Taco, Inc. will repair or replace without charge (at the company's option) any commercial pump product or part which is proven defective under normal use within one (1) year from the date of start-up or one (1) year and six (6) months from date of shipment (whichever occurs first).

Motors provided on commercial pumps are not covered by this warranty, and are warranted by the motor manufacturer. For complete details on motor warranty returns, the purchaser should contact the motor manufacturer's local service repair center or contact the motor manufacturer directly.

Seals provided on commercial pumps are not covered by this warranty.

In order to obtain service under this warranty, it is the responsibility of the purchaser to promptly notify the local Taco stocking distributor or Taco in writing and promptly deliver the subject product or part, delivery prepaid, to the stocking distributor. For assistance on warranty returns, the purchaser may either contact the local Taco stocking distributor or Taco. If the subject product or part contains no defect as covered in this

warranty, the purchaser will be billed for parts and labor charges in effect at time of factory examination and repair.

Any Taco product or part not installed or operated in conformity with Taco instructions or which has been subject to misuse, misapplication, the addition of petroleum-based fluids or certain chemical additives to the systems, or other abuse, will not be covered by this warranty.

If in doubt as to whether a particular substance is suitable for use with a Taco product or part, or for any application restrictions, consult the applicable Taco instruction sheets or contact Taco at [401-942-8000].

Taco reserves the right to provide replacement products and parts which are substantially similar in design and functionally equivalent to the defective product or part. Taco reserves the right to make changes in details of design, construction, or arrangement of materials of its products without notification.

**TACO OFFERS THIS WARRANTY IN LIEU OF ALL OTHER EXPRESS WARRANTIES. ANY**

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