



Instruction Sheet

302-015

1900 Series Pumps

SUPERSEDES: August 1, 1991

EFFECTIVE: February 1, 2007

Plant ID# 001-941

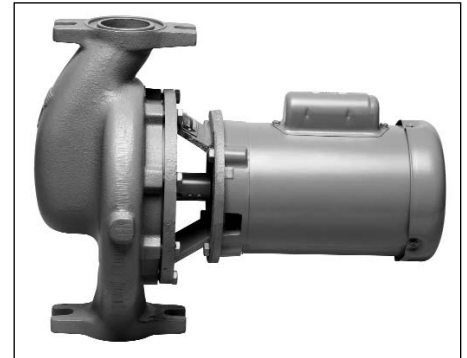
APPLICATION:

All pumps covered by this instruction sheet are designed for pumping water.

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

INSTALLATION:

Install horizontally or vertically. Do not support, suspend or brace motor and/or bracket. Support provided by casing is sufficient for structural integrity of the pump. The casing can be rotated relative to the bracket for installation in other positions.



CAUTION: UNDER NO CIRCUMSTANCES SHOULD ANY PART OF BRACKET OR MOTOR BE COVERED WITH INSULATION. OBSERVE ALL APPLICABLE ELECTRICAL AND MECHANICAL CODES.

START UP:

Before operating the pump for the first time, check the following:

1. Is motor correctly wired for voltage in use? Warranty is void if motor is damaged due to improper electrical hook-up.
2. If a magnetic starter is used, see that the heater element is sized for the Service Factor load of the motor otherwise nuisance tripouts may occur.
3. Before starting motor, ascertain that pump is filled with water to lubricate the seal. Do not operate pump dry for motor checkout.

LUBRICATION:

Pump end requires no lubrication.

Motor permanently sealed bearing design.

SEAL REPLACEMENT:

The John Crane Type 21 Seal (see Photo "A") that had been used for many years on the 1600/1900 pumps was upgraded to the new "Unitized" John Crane Type 2100 (see Photo "B"). The new Type 2100 seal has the carbon rotating element, spring and retainer combined into a single assembly to facilitate easy replacement. (The ceramic stationary seat is still a separate component and is replaced in the same manner as the old Type 21.)

To replace the water seal, the following steps must be observed:

1. Disconnect electrical connections. Relieve system pressure, reduce system temperature to ambient and drain water from body.
2. Remove motor and bracket assembly from pump body.
3. Place bracket in vertical position, impeller up and loosen screw at center of impeller two turns ($\frac{7}{16}$ Hex Head). This screw has a left-hand thread. Tap impeller at its outside diameter with handle of hammer to free tapered fit between shaft and impeller and completely remove screw, washer and impeller (see Figure 2 on reverse side of this Instruction Sheet).
4. Remove the complete rotating element, which includes the retainer, rubber bellows, carbon and spring (it may be necessary to pry these components loose using a screwdriver). Remove the stationary seat from the recess in the end of the bracket (again it may be necessary to pry it loose with a screwdriver, see Figure 3 on reverse side).



A



B

IMPORTANT NOTE: DISCARD ALL OF THESE COMPONENTS. DO NOT REUSE ANY COMPONENTS FROM THE SEAL THAT IS BEING REPLACED.

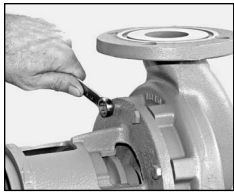


Figure 1



Figure 2



Figure 3



Figure 4



Figure 5

5. Thoroughly clean shaft sleeve and seat cavity.
6. Insert new seal seat. For easy assembly, coat OD of seal rubber (either a cup or an O-ring) with special grease provided in small container. Do not use any other oil or grease. Push seat all the way down into cavity. Seat must not be cocked relative to shaft. Be sure face of seal stays absolutely clean – wipe surface with soft, clean cloth if necessary. (See Figure 4.)
7. Install new carbon assembly. Coat inside of rubber bellows with special grease provided (do not use any other oil or grease) and slide assembly (carbon first) over shaft until carbon meets seat. Push on rubber insert on very end of assembly and not on outside diameter of carbon retainer. Be sure carbon face stays absolutely clean. (See Figure 5.)
8. Replace impeller using new impeller screw and washer provided. Make sure cones of both impeller and shaft are clean.
9. Reassemble bracket into pump casing. Use new gasket provided. Clean gasket surface of both casing and bracket. (See Figure ?.)
10. Reinstall motor and bracket assembly.
11. Follow procedure outlined under “START UP” section.

IMPELLER REPLACEMENT:

Follow steps 1 through 3 and 8 through 11 outlined under “SEAL REPLACEMENT” section.

MOTOR REPLACEMENT:

1. Follow steps 1 through 4 under “SEAL REPLACEMENT” section.
2. Remove bracket from motor.
3. Loosen set screws and remove shaft adaptor.
4. If sleeve is not damaged, thoroughly clean and re-use. If damaged, replace.
5. Install shaft adaptor to new motor until it bottoms against end of motor shaft.
6. Tighten set screws beginning with two keyway set screws.
7. If new sleeve is being used, install it to shaft adaptor.
8. Attach bracket to motor.
9. Follow steps 6 through 9 under “SEAL REPLACEMENT” section.

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.

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