

# Disassembly and Repair Instructions



## CENTRIFUGAL DRY PIT PUMPS

**6000 Series Pumps  
Bearing Frames: 3, 4, 5 & 6  
Vertical and Horizontal**

**IMPORTANT**

READ THIS ENTIRE INSTRUCTION MANUAL THOROUGHLY BEFORE SERVICING PUMP.

 **Yeomans  
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Corporation**  
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## **Tooling**

Use only the proper tools when dismantling or repairing any YEOMANS CHICAGO CORPORATION equipment. Tools required for disassembly and assembly of dry pit pumps are as follows:

Screwdrivers	Wooden Mallet	Bearing Heater
Standard Wrenches	Bearing Puller	Emery Cloth
Retaining Ring Pliers	Wheel Puller/Bars	Allen Wrenches
Lifting Sling	Several Good Blocks of	
Torch	Wood or a Bench	

## **Recommended Cleaning Solvent:**

Safety-Kleen, or any equal grade of non-flammable industrial cleaner.

## **Recommended Lubricants:**

### **Grease**

Citgo Lithium EP-2

### **Oil**

Citgo Citgard 10W

Petro Canada 10W

In cases where abnormal conditions exist, such as very high temperatures, it is advisable to consult a lubrication engineer to determine the proper lubricant to use. If this is not practical, contact your YEOMANS CHICAGO CORPORATION representative stating your conditions and alternative recommendations will be provided.

## **Procedure for Ordering Spare Parts**

Parts and service for YEOMANS CHICAGO CORPORATION Products are available exclusively through the designated sales representative located in your geographical area. When ordering repair parts, please give the full nameplate data from the pump nameplate as described below, including S.O. Number. Complete nameplate data will insure most rapid handling of your order with the minimum chance of mistake. List each part required using the item number and name of part as shown on the following pages. Be sure to state the quantity of parts required.

## **NAMEPLATE IDENTIFICATION**

<b>S.O.</b>	This number corresponds to records, which will enable your YEOMANS CHICAGO CORPORATION representative to determine the component parts of your unit so that exact duplicate parts or specific technical assistance can be provided. The S.O. number must be provided when ordering spare parts or requesting any technical assistance.
<b>DATE</b>	Indicates the month and year of manufacture of the unit.
<b>GPM and HEAD/FT</b>	These ratings indicate the design flow and capacity operating rating of the unit. The unit should be operated within 10% of these ratings.
<b>MODEL</b>	Indicates the pump model and bearing frame configuration (when applicable) for the unit. This information is desirable but not necessary when contacting the factory or our representative.
<b>UNIT</b>	This number indicates the number of units provided on the order and the unit designation (1 of 3. etc.).

Make record of the nameplate information from your pumps) in this manual for easy reference.

## **Spare Parts Recommendations**

The parts list accompanying the cross-section drawing included with this manual denotes items recommended to be carried as spare parts. It is impossible for YEOMANS CHICAGO CORPORATION to accurately determine the predicted life of any parts subject to wear because of the varying severity of duty exerted on each individual unit manufactured.

The list includes parts recommended for one to five years of operation. It is recommended that the following parts not be reused at reassembly, even if showing no apparent wear:

Grease Seals	Radial Bearing	Thrust Bearing
O-rings	Gaskets	Mechanical Seals
Packing	Bearing Holder	Wear Rings & Screws
Impeller Locknut or Cap Screw	Shaft Sleeve (for Packed Pump)	(When Furnished)

## Drawing Legend

**NOTE:** O is used to identify item numbers; Δ to identify applicable bearing frame configurations.

### Figure 1

General pump configuration for VPM Series YEOMANS CHICAGO CORPORATION: Vertical, with pedestal mounted motor, shown with Bearing Frames #3, and packing. Bearing frame #3C and #3D differ only in that the #3C frame has a roller radial bearing, and #3D frame has a ball radial bearing. Optional mechanical seal configuration for the #3 frame pumps is shown on Figure 5.

### Figures 2 & 3

This figure shows the general bearing frame construction for frames #4, 5, & 6. These frames are pictorially the same with the exception of the radial bearing construction on #4frames, which is shown on Figure #3. Bearing frame #4 has a ball radial bearing, and frame #4B has a roller radial bearing with a bearing holder (item #5, Figure 3). Bearing frames #5 & 6 utilize an impeller set screw (item #26, Figure 2) not common to the other bearing frames. While the shaft sleeve set screw (item #98) is common to #4, 5 & 6 frames, note the difference in location.

### Figure 4

This is the configuration for optional mechanical seals on bearing frames #4, 5, & 6. Mechanical seal adapting ring and "O"ring (items 112 & 114) appear only on #5 and 6 bearing frames. Seal box cover (item 121) is held in place by cap screws or bolts, not shown.

### Figure 5

This is the configuration for mechanical seal option on bearing frame #3.

Horizontal pumps differ from vertical pumps only in that these units are provided with a pump base to which the pump and motor are mounted, and they have a mounted pump foot and a bearing frame foot to support the units and provide a means for securing the pump to the base.

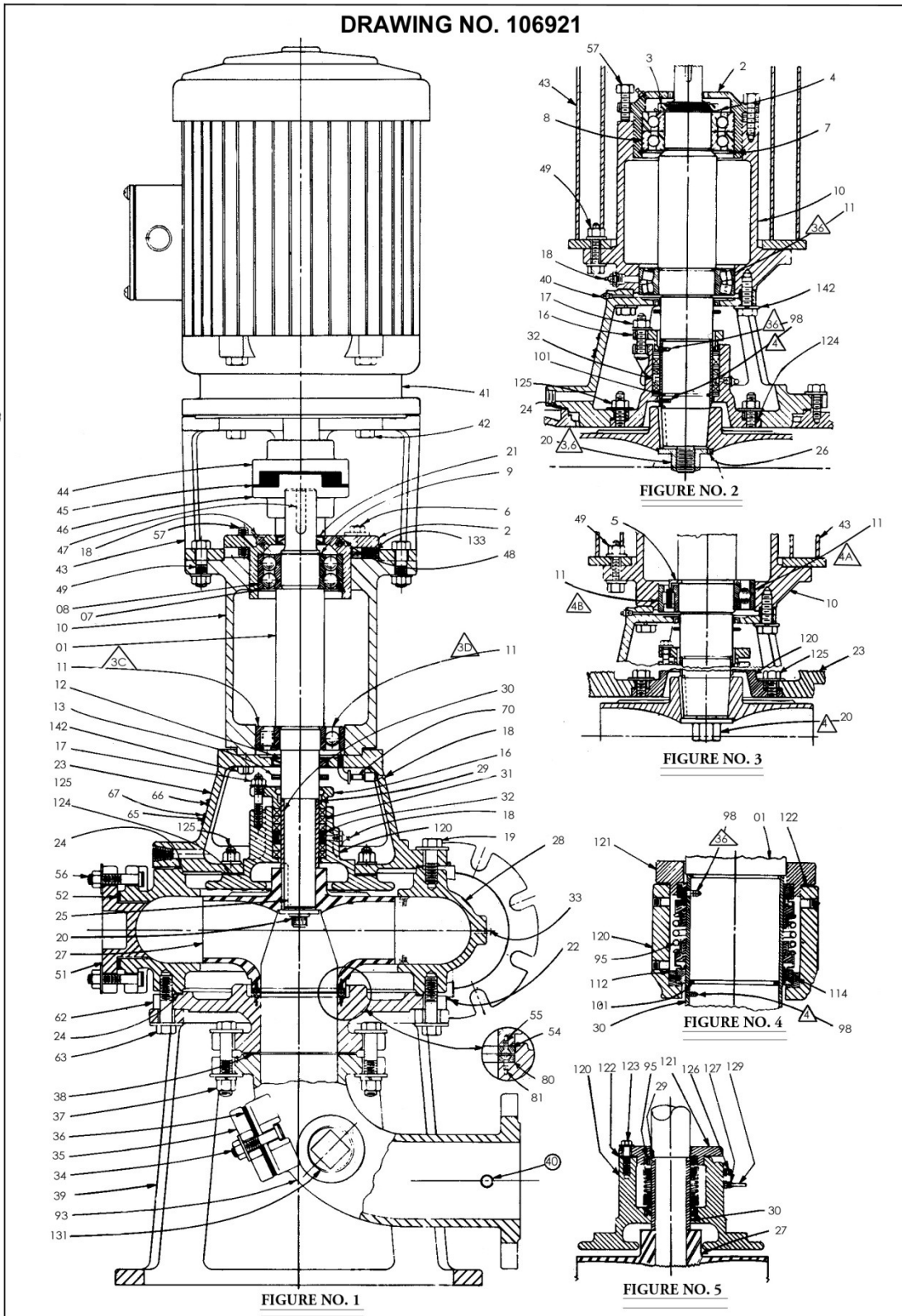
**PARTS LIST FOR DRAWING # 106921**  
**YEOMANS CHICAGO CORPORATION Dry Pit Pumps – All Bearing Frames 3, 4, 5, & 6**

ITEM #	DESCRIPTION	①	②	③	ITEM #	DESCRIPTION	①	②	③
		PUMP FRAME	SPARE PARTS	OPT.			PUMP FRAME	SPARE PARTS	OPT.
1	Shaft				41	Motor			
2	Thrust Bearing Housing				42	Cap Screw & Washer (Motor to Motor Support)			
3	Locknut - Thrust Bearing	4,5,6			43	Motor Support			
4	Lockwasher - Thrust Bearing	4,5,6			44	Coupling – Motor Half			
5	Bearing Holder	4B	XXX		45	Coupling – Insert			
6	Cap Screws (Thrust Bearing Housing to Radial Bearing Housing)				46	Coupling – Pump Half			
7	Retaining Ring				47	Coupling Key			
8	Thrust Bearing – Ball		XXX		48	Pipe Plug.....3			
9	RETAINING RING	3			49	Cap Screw, Nut & Washer (Motor Support to Bearing Housing)			
10	Radial Bearing Housing				51	Volute Handhole Cover			
11	Radial Bearing - Roller .....	4B .....	XXX		52	Gasket (Volute Handhole Cover).....XXX			
		5,6			54	Impeller Wear Ring .....	XXX		XXX
	Ball .....	4A			55	Flat Head Machine Screws -Impeller Wear Ring.....XXX..XXX			
12	Grease Seal .....		XXX		56	Cap Screw & Washer (Volute Handhole Cover)			
13	Water Slinger				57	Adjusting Screw			
16	Stuffing Box Gland Halves				62	Suction Plate			
17	Gland Nuts				63	Cap Screw & Washer (Suction Plate to Volute to Base)			
18	Alemite Grease Fitting				65	Nameplate			
19	Cap Screw & Washer (Casing Cover to Volute)				66	Rotation Arrow			
20	Impeller Self-locking Cap Screw & Washer.....3.....XXX				67	Drive Screws (Nameplate and Rotation Arrow)			
	Impeller Stud, Locknut & Washer .....	4.....XXX			70	Pipe Fitting.....3			
	Impeller Locknut .....	5,6.....XXX			80	Suction Wear Ring.....XXX...XXX			
21	Grease Seal .....		XXX		81	Flat Head Machine Screws Suction Wear Ring .....	XXX		XXX
22	Pipe Plug				93	Suction Elbow			
23	Casing Cover				95	Mechanical Seal .....	XXX		XXX
24	Gasket (Casing Cover to Volute) .....		XXX		98	Shaft Sleeve Set Screw.....	4,5,6		
25	Impeller Key				101	Shaft Sleeve o-ring .....	4,5,6.....XXX		
26	Impeller Set Screw .....	5,6			112	Mechanical Seal Adapting Ring.....5,6.....XXX			
27	Impeller				114	Mechanical Seal Adapting Ring "O" Ring .....	5,6.....XXX		XXX
28	Volute				120	Stuffing/Seal Box			
29	o-ring.....3.....XXX				121	Seal Box Cover.....XXX			
30	Shaft Sleeve .....		XXX		122	Gasket (Seal Box to Seal Box Cover).....XXX ...XXX			
31	Packing Rings				123	Cap Screw & Washer (Seal Box to Seal Box Cover).....XXX			
32	Seal Ring				124	Gasket (Casing Cover to Stuffing Box)..... XXX			
33	Pipe Plug.....3				125	Stud, Nut & Washer (Stuffing/Seal Box to Casing Cover)			
34	Cap Screw, Nut & Washer (Elbow Handhole Cover)				126	Vent Fitting.....XXX			
35	Elbow Handhole Cover				127	Tube Fitting.....XXX			
36	Gasket (Elbow Handhole Cover).....XXX				131	Pipe Plug.....XXX			
37	Cap Screw, Nut & Washer (Elbow to Suction Plate)				133	Shims			
38	Gasket (Suction Elbow to Suction Plate).....XXX				142	Cap Screws (Casing Cover to Bearing Housing)			
39	Pump Support								
40	Pipe Plug								

**NOTES**

- ① Special to frames noted in this column. If no number appears here, part is applicable to all frames.
- ② Parts recommended to be carried as spare parts.
- ③ Optional items furnished at additional cost when specified.

DRAWING NO. 106921



Instruction No. 6102

# DISASSEMBLY PROCEDURES

Refer to Cross Section Drawing #106921, page 5.

## CAUTION

PRIOR TO DISASSEMBLING UNIT, LOCK OUT  
MOTOR AND DISCONNECT MOTOR LEADS.

### TO REMOVE MOTOR:

#### Pedestal Mounted Pumps

- 1A. Remove cap screws, nuts and washers (49). Lift motor (41) with motor support (43) off of bearing housing (1). Coupling halves (44,46) will separate and coupling insert (45) can be removed. Motor half of coupling (44) can be taken off of motor shaft by removing coupling set screw(s), not shown. To separate motor (41) from motor support (43) remove cap screws and washers (42).

#### Horizontal Pumps

- 1 B. Disconnect flexible coupling and motor leads, remove bolts from motor feet, and remove motor from baseplate. NOTE: It may be necessary to use a sling and hoist to aid in disassembling a horizontal unit. Be careful to keep unit balanced when removing bearing housing/impeller from volute.

#### Line Shaft Driven Pumps

- 1C. Removal of motor is not necessary. Disconnect shafting flange at pump and swing shafting out of the way. NOTE: Additional protection must be provided in order to eliminate the possibility of drive shaft coming apart at the spline connection (slip joint). Using a rope to tie both sections of the shafting together can support the slip joint.

## BEARING FRAME DISASSEMBLY

2. Remove cap screws and washers (19). Using a pry bar, break the joint between casing cover (23) and volute (28) at gasket (24). Lift complete upper assembly including impeller (27) from volute (28). Place entire assembly with shaft horizontal on blocks, with impeller and pump half of coupling (46) overhanging. Remove coupling half (46) by removing set screw(s), not shown.
3. Inspect suction wear ring (80) if provided, by viewing through volute (28). If replacement is necessary, remove screws (81) to extract wear ring (80). Impeller wear ring (54) can be visually inspected while bearing frame assembly is on blocks. Impeller wear ring (54) can be removed by taking out screw (55). It may be necessary to apply heat to screws (55, 81) to facilitate removal.
- 4A. (#3 Frame - Figure 1) Remove self-locking cap screw and washer (20). Using a wheel pulling device or wedges placed between impeller (27) and casing cover (23), extract impeller being careful not to cock impeller on shaft. Remove key (25).
- 4B. (#4 Frames) Remove impeller locknut and washer (20) off stud. Because of the tapered shaft fit, impeller (27) can be easily removed by placing a wedge between the impeller (27) and casing cover (23) and "popping" impeller off of shaft (1). Remove key (25).

## WARNING

IMPELLER **MUST** BE INDEPENDENTLY SUPPORTED PRIOR TO ITS REMOVAL.

- 4C. (#5 & 6 Frames - Figure 2) Remove impeller set screw (26) and remove locknut (20) off of threaded shaft end. Proceed as 4B. above.

## **PACKING DISASSEMBLY**

- 5A. Back off gland nuts (17) and remove stuffing box gland halves (16). Remove nuts and washers (125) from studs and pull stuffing box (120) off shaft. Packing rings (31) and seal ring (32) may then be removed from stuffing box. If the shaft area surrounding the water slinger (13) is corroded, polish with a fine emery cloth before sliding water slinger (13) off shaft. Polish and oil remainder of shaft in this area to prevent damage to grease seal (12) when shaft is pulled through.

## **IF UNIT IS EQUIPPED WITH MECHANICAL SEAL:**

- 5B. Remove cap screws and washers (123). Remove seal box (120) from shaft (1). If the shaft area- Surrounding the water slinger (13) is corroded, polish with a fine emery cloth before sliding water slinger (13) off shaft. Polish and oil remainder of shaft in this area to prevent damage to grease seal (12) when shaft is pulled through.
- 5C. Push the mechanical seal seat out of the seal box cover (121), using care not to scratch seal face. Lift the rotating assembly out of the seal box (120). Push the mechanical seal seat out of the seal box (120), again being careful not to scratch the seal face.

## **SHAFT SLEEVE DISASSEMBLY**

- 6A. (#3 Frame - Figure 1) It may be necessary to apply heat to shaft sleeve (30) to facilitate its removal, being careful not to burn o-ring (29). Remove o-ring (29).
- 6B. (#4, 5, & 6 Frames - Figure 2) Shaft sleeve (30) may be pulled off of shaft after shaft sleeve set screw (98) is removed. Remove shaft sleeve o-ring (101).

## **REMOVAL OF RADIAL BEARING**

7. Remove cap screws (6), tighten adjusting screw (57) approximately 1/2 turn, and remove shims (133). Rotor assembly consisting of thrust bearing housing (2), shaft (1), thrust bearing (8) and radial bearing (11) can then be pulled through the top of the radial bearing housing (10) and casing cover (23).
8. Using a suitable pulling device, remove radial bearing (11) and bearing holder (5) (#4B Frame only Figure 3), if furnished.

## **REMOVAL OF THRUST BEARING**

9. Remove retaining ring (7). Clean, polish and oil end of shaft around grease seal (21) and pull thrust bearing housing (2) off of bearing/shaft. Remove retaining ring (9) (#3 Frames only - Figure 1) or bearing locknut (3) and washer (4) (#4,5, &6 Frames - Figure 2). Using a suitable bearing puller, remove bearing (8). Remove grease seal (21) from thrust bearing housing (2).
10. To separate radial bearing housing (10) from casing cover (23), remove cap screws (142). Remove grease seal (12) from casing cover (23).

Generally it is not necessary to disassemble the lower (suction) end of the pump. On vertical units, cap screws (63) secure the volute (28) to the suction plate (62) to the pump support (39) (when furnished). Screws (37) secure the suction elbow (93) to the suction plate (62). The volute handhole cover (51) is secured with screws (56), and the suction elbow handhole cover is secured with screws (34).

# REASSEMBLY PROCEDURES

When disassembling and reassembling pumps, YEOMANS CHICAGO CORPORATION strongly urges replacing all parts subject to wear, as listed on page 2. The procedure for ordering spare parts is outlined on page 1.

Prior to reassembling the pump:

Clean, polish and oil shaft, inspecting for unusual wear or scoring. Scrape and clean all gasketed mating faces to insure proper sealing.

Make sure that stuffing/seal box, shaft sleeve and seal ring are thoroughly cleaned.

Clear all lubricant paths and replace any defective fittings.

Unless indicated otherwise, all fasteners should be tightened to the applicable torque as shown on Table 1, page 10. If any part not listed, as a recommended spare part shows excessive wear, it too should be replaced. Contact your YEOMANS CHICAGO CORPORATION representative for ordering replacement parts.

## CAUTION

WHEN INSTALLING BALL OR ROLLER BEARINGS, PRESS ONLY AGAINST INNER RACES OF BEARINGS. PRESSING ON OUTER RACES WILL DAMAGE BALLS OR ROLLERS AND RUIN THE BEARING. PRESS EVENLY ON BEARING INNER RACE, USING EXTREME CARE NOT TO SCORE SHAFT.

It may be necessary to heat bearings to facilitate installation because of close tolerance fits. Bearings may be heated by either of the following methods:

*OIL BATH:* Accomplished by submerging bearing in a tank of oil having a high flash point. The bearing should be suspended so as not to be in contact with the heat source, for 20 to 30 minutes at a temperature of approximately 200°F. Oil temperature must not exceed 250°F.

*INDUCTION HEATING:* Accomplished by applying heat directly to the bearing (i.e., commercially available induction bearing heater). Extreme caution must be exercised to insure that bearing temperature does not exceed 200°F.

The bearings should be quickly installed and positioned squarely against mating face while it is still hot, and secured with appropriate locknut or retaining ring.

## WARNING

SUITABLE PROTECTIVE CLOTHING (I.E. GLOVES) MUST BE WORN  
WHEN HANDLING HEATED COMPONENTS.

## BEARING HOUSING REASSEMBLY

1. Press bearing holder (5) if furnished, onto shaft (1). Holder can be heated in the same manner as recommended for the bearings to ease assembly. Carefully press radial bearing (11) onto shaft.
2. Place retaining ring (7) loosely over mid section of shaft.
3. Carefully press thrust bearing (8) onto shaft. When double thrust bearings are used (#4, 5, & 6 frames - Figure 2), bearings must be installed so that the narrow inner races of each bearing are face to face. Secure with retaining ring (9) (#3 frames only) or bearing lockwasher (4) and bearing locknut (3). Pack thrust and radial bearings 1/2 to 3/4 full of grease (See Recommended Lubricants, page 1). DO NOT OVERGREASE.
4. Install grease seal (12) into casing cover (23). Primary lip should be oriented to restrict the entrance of dirt, water, and contaminants on grease-lubricated bearings. Assemble radial bearing housing (10) to casing cover (23) and secure with cap screws (142)
5. Install grease seal (21) into thrust bearing cap (2). Primary lip should be oriented to restrict the entrance of dirt, water, and contaminants on grease lubricated bearings.



6. Turn shaft assembly vertical, with impeller end of shaft up, and drop assembly into thrust bearing cap (2). Install retaining ring (7). Be sure that retaining ring is properly seated in groove.
7. Rotate and insert shaft assembly into radial bearing housing assembly. Loosely install cap screws (6) and adjusting stud/screws (57) into thrust bearing cap (2).
8. Slide water slinger (13) onto shaft end.

## **STUFFING BOX REASSEMBLY**

9. Slip shaft sleeve (30) into stuffing box (120). Place packing rings (31) and seal ring (32) into stuffing box, making sure that the center of the seal ring lines up with tapped lubrication hole in stuffing box (120). Rings should be placed so that ends butt together and joints are staggered in stuffing box
10. Install studs (when furnished), and then packing gland halves (16) and gland nuts (17). Gland nuts should be tightened such that threads just engage. Adjustment will not be made until entire upper assembly with impeller has been installed and adjusted. Remove shaft sleeve (30) from stuffing box, leaving packing rings (31) and seal ring (32) intact.
11. Place o-ring (29 if #3 frame, 101 of #4,5, or 6 frame) onto pump shaft (1). Install shaft sleeve (30) over shaft (1). Insert and tighten setscrew (98) (#4, 5, & 6 frames). Place gasket (124) on casing over (23) and install assembled stuffing box onto shaft. Secure to casing cover (23) with nuts 125), making sure that casing cover and stuffing box are properly lined up.
12. Place bearing frame assembly horizontal on blocks or bench. Go directly to instruction 17, on page 9.

## **MECHANICAL SEAL BOX REASSEMBLY**

The mechanical seal assembly is a precision product. Treat it with care. In handling, do not let the carbon sealing washer fall: and take particular care not to scratch the lapped faces on the washer and floating seat. If the seal has been used before, do not put it back in service until the sealing faces of the carbon washer have either been relapped or replaced.

- 9A. Oil the outer surface of the stationary seat rings (use light oil, not grease) and push the assembly into the seal cover and into the seal box, seating them firmly and squarely. If it is not possible to insert seats with clean fingers, place a cardboard protecting ring over face of seats and press into bore with a piece of brass tubing having a square cut smooth end. Tubing should be slightly larger than diameter of shaft. Remove cardboard after seat is firmly seated.  
Before completing the shaft seal installation, wipe the lapped sealing faces of the seat and sealing washer perfectly clean.
- 10A. Place washer and bellows inboard assembly on shaft (not spring) and slide into position against inboard (seal box) seat. When sliding seal assembly on shaft, be sure to press ONLY on tail sections of bellows and driving band. Use a smooth sleeve of about 1/32" over shaft diameter with a wall thickness sufficient to butt against the driving band.
- 11A. Install spring into position making sure it is properly seated over retainer.
- 12A. Place washer and bellows outboard (seal cover) assembly on shaft and slide into a position so that spring is not compressed more than 1/16". Make sure spring is properly seated.
- 13A. Before putting seal cover (12\_1) on shaft, thoroughly clean and oil lapped faces of both seal washer and seat. Then slide seal cover (121) and press it in as far as it will go. Do not allow it to spring out or move backward.

14A **Immediately** install impeller as described in 17. and 18., on page 9.

15A. Set impeller clearance as described in 19B, on page 9.

### CAUTION

SEAL MUST NOT BE ALLOWED TO REST ON SHAFT TOO LONG BEFORE SEAL BOX COVER IS PLACED IN POSITION AS SEAL BELLOWS HAS TENDENCY TO ADHERE TO SHAFT CAUSING TAIL BELLOWS TO BE IMPROPERLY SEATED.

16A. Tighten cap screws (123) uniformly to keep faces of the seat at right angles to shaft. Tightening of seal box cover (121) automatically sets seal in proper position.

### IMPELLER INSTALLATION

17 **#3 FRAMES** - Insert key (25) into keyway of shaft (1) and slide impeller (27) onto shaft until hub of impeller is firmly seated against shaft sleeve (30). Secure with self-locking cap screw and washer (20).

**#4, 5 & 6 FRAMES** - Spray impeller end of shaft with machinists bluing. Slide impeller (27) all the way onto shaft (1) and mark the shaft at the back end of the impeller hub. Remove impeller, and check shaft bluing for impeller engagement. Impeller should have at least three-fourths engagement when checked without impeller key (25). Place key (25) into shaft keyway, and jam impeller (27) onto shaft (1). Impeller hub **must** return flush to mark on shaft. If it does not, check engagement of key (25) and grind key to fit. Once impeller is fully engaged, secure with locknut and washer (20). When impeller set screw (26) are used (#5 & 6 frames), it will be necessary to drill a new locating hole in the impeller hub for the dog point of the setscrew. Using the pilot hole in the locknut (20). Drill a 5/16" diameter by 3/16" deep hole into the impeller hub, and install set screw (26).

18. Entire upper assembly with adjusting screws (57) fully extended can now be assembled to volute (28) after placing gasket (24) on volute (28). Bolt upper assembly (casing cover) to volute with cap screws and washers (19).

### IMPELLER CLEARANCE ADJUSTMENT (PACKED PUMP)

19A. To adjust axial impeller or wear ring clearance, withdraw jack screws (57) and tighten cap screws (6) down evenly until impeller (27) just touches suction plate (62), or impeller wear ring (54) just touches suction wear ring (80). Measure gap for shims (133) and add 1/32. Loosen cap screws (6), and evenly tighten adjusting screws (57) until desired shimming gap be obtained. Install appropriate amount of shims (133), and tighten screws (6).

Check that shaft turns freely. Gland nuts can be tightened down a bit more securely, but final gland adjustment cannot be made until stuffing box weepage is checked during initial period of start-up. Gland must be kept level at all times.

### IMPELLER CLEARANCE ADJUSTMENT (MECHANICAL SEAL)

19B. Impeller clearance must be set with seal box cover (121) loose. To adjust axial impeller or wear ring clearance, withdraw adjusting screws (57) and tighten cap screws (6) down evenly until impeller (27) touches suction plate (62), or impeller wear ring (54) touches suction wear ring (80). Measure gap for shims (133) and add 1/32". Loosen cap screws (6), and evenly tighten adjusting screws (57) until desired shimming gap be obtained. Install appropriate amount of shims (133), and tighten screws (6) Check that shaft turns freely. After initial installation, impeller may be lowered an additional 1/16" before complete seal box disassembly and reassembly is required.

**TABLE 1**  
Recommended Torque Values of Fasteners\*

Bolt/Size	MATERIAL				
	LOW CARBON STEEL	304 ST'N ST'L	SILICON BRONZE	316 ST'N ST'L	
1/4-20	5.4	6.3	5.7	6.6	
5/16 - 18	10.8	11.0	10.3	11.5	
3/8 - 16	17.7	19.7	18.3	20.6	
7/16" - 14	28.2	31.3	29.1	32.8	
1/2 - 13	38.8	43.1	40.0	45.2	
9/16 - 12	51.1	56.8	52.7	59.4	
5/8 - 11	83.3	92.5	85.8	96.7	
3/4-10	104.9	127.5	118.0	131.8	
7/8 - 9	159.9	194	178.3	202.5	
1" - 8	236.0	286.7	265.4	299.6	

\*ALL VALUES LISTED IN FOOT-POUNDS

**NOTE:** Impeller locknut (20) for bearing frames 5 and 6 should be tightened to 300 - 350 ft-lbs.  
Impeller locknut (20) for bearing frame 4 should be tightened to 200-250 ft-lbs.

If any question with regard to pump installation, operation, assembly or repair ever arises, please do not hesitate to contact your YEOMANS CHICAGO CORPORATION representative, or the factory.

Product manual 6101YP covers Installation, Operation and Maintenance of YEOMANS CHICAGO CORPORATION and should be used in conjunction with this manual.



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