Bowl Disassembly Inspection Repair and Reassembly

OPERATIONAL CAUSES FOR REDUCED PERFORMANCE

Before pulling the pump bowls from the well, the following possible sources of lowered efficiency and head should be checked:

1. Lateral adjustment. Performance can be greatly improved if impellers are located correctly.

2. Well conditions, such as gas or air in the water, or changes in head due to excessive drawdown.

3. Slow motor speed, caused by overload, low voltage or low frequency in lines.

After pump bowls have been pulled but before the assembly is sent to the shop for service, check the impellers for foreign substances such as rocks which may have become lodged in them. Also check the strainer for obstructions.

If none of the above factors is the cause of the reduced performance, the bowls should be sent to the shop for disassembly and inspection.

SHOP EQUIPMENT AND TOOLS REQUIRED

Bowls may be disassembled in any shop providing a level space of 20 to 30 feet in length, bench and vise, paralled steel or wooden rails for bowls to rest on and clean working area. In addition to the special tools illustrated on page 4, only ordinary hand tools are necessary in the disassembly and reassembly of Peerless bowls.

Stock bronze bushings with 2-7/16" or smaller inside diameter are pre-reamed to finished, installed dimensions Bushings with 2-11/16" or larger inside diameter may require reaming after installation. See pages 5 and 7 for dimension "D".

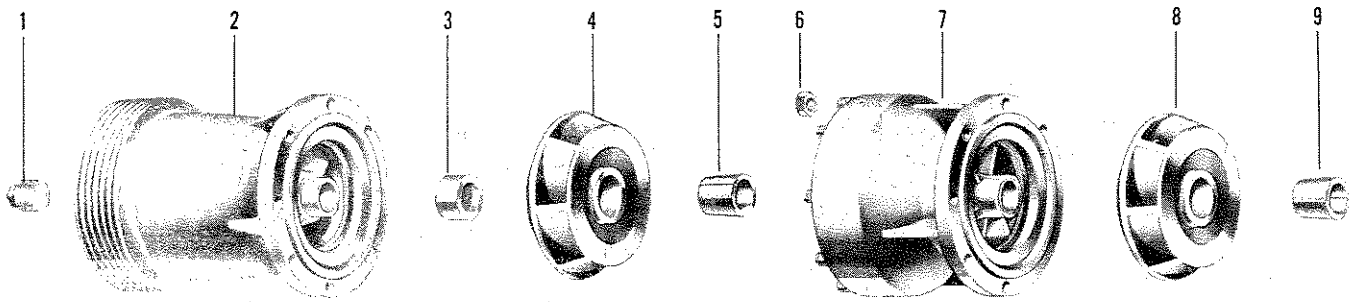
INSPECTION OF PARTS

Excessive abrasive and corrosive action may damage any or all parts of the bowl assembly. It is advisable to replace any that are doubtful, while the unit is disassembled.

Each bowl assembly is stamped with a pump serial number just below the threads on the shaft. Should there be any doubt as to the specifications, the factory can furnish the correct parts through the use of this serial number.

Bowls with Taper Lock Bushings

Figure 1 SUCTION MANIFOLD AND STANDARD BOWL ASSEMBLY



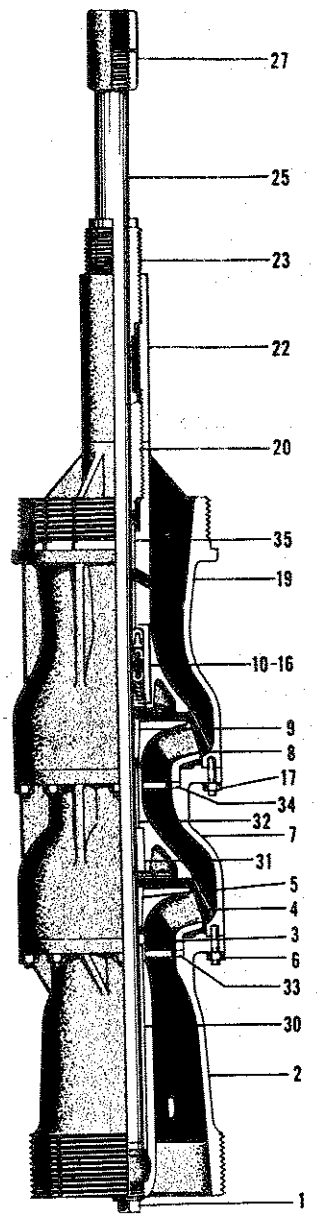


Figure 4
OIL LUBRICATED TYPE

DISASSEMBLY

1. Remove plug (1, Figure 1) in bottom of suction mainfold (2, Figure 1).

2. Match mark all flange butts. A punch mark on each flange will suffice. This will facilitate proper reassembly.

3. Remove hex nuts (6, Figure 1) in flange of suction manifold and remove manifold.

Note: Screw type bowls may be removed by the use of chain tongs. Screw type bowls have right hand threads.

4. Loosen socket head screw in sand collar, (3, Figure 1) and slip off collar (metal only -- no lock used with rubber type).

Caution: Check the impeller shaft for scribe mark. If original scribe mark does not appear on impeller shaft in the same plane as the lower face of the impeller skirt, scribe the shaft at this point. It is important that impellers be mounted in the same position on the shaft as in the original factory assembly. Also, measure the "stick up" (dimension A, page 4). "Stick up" is 10" for water lubricated type, and 20" for oil lubricated type.

5. Tap out taper lock bushing (5, Figure 1) with beater (Figure 9). Remove impeller (4, Figure 1) from bottom of shaft.

Caution: Mark the impellers in the sequence of their disassembly. Each impeller must be reassembled on the shaft in the same location as in the original factory assembly. Also, match each impeller and its taper lock.

6. Spread the taper lock bushing with a screw driver and slide it off bottom of shaft.

Note: The above procedure is repeated for each standard bowl in the assembly.

7. Disassemble the Top Bowl:

Oil Lubricated Type (Figure 3):

(a) Remove the taper lock bushing and impeller from the top bowl (19, Figure 3) as described in operations 5 and 6 above.
(b) Unscrew the spring follower (10, Figure 3) with the spanner (Figure 11).
(c) Slip off the seal spring (11, Figure 3), brass washer (12), "U" leather rings, "T" packing separator ring (15), and "U" leather ring (16).
(d) Remove the shaft from the bowl.
(e) Unscrew the top bearing adapter (22, Figure 3) from the top of the bowl.

Water Lubricated Type (Figure 2)

(a) Remove the taper lock bushing and impeller from the top bowl (18, Figure 2), as described in 5 and 6 above.
(b) Remove the top bowl (18, Figure 2).
(c) Loosen the socket head set screw in the top sand collar (24, Figure 2) (metal type only).

The bowl assembly is now ready for inspection of parts. See Trouble Chart on page 7.

DISASSEMBLY FROM TOP

It is possible to disassemble from the top, but this should only be done when a small number of stages need to be removed for inspection or to be trimmed.

1. Remove the top bowl (18 or 19, Figure 2 or 3) and suction manifold (2, Figure 1).

2. Block the bottom end of the shaft so the impellers are in uppermost position.

3. Tap the top impeller (8, Figure 4) with the large end of the beater (which has a relief to clear the taper lock bushing) until the impeller is loose.

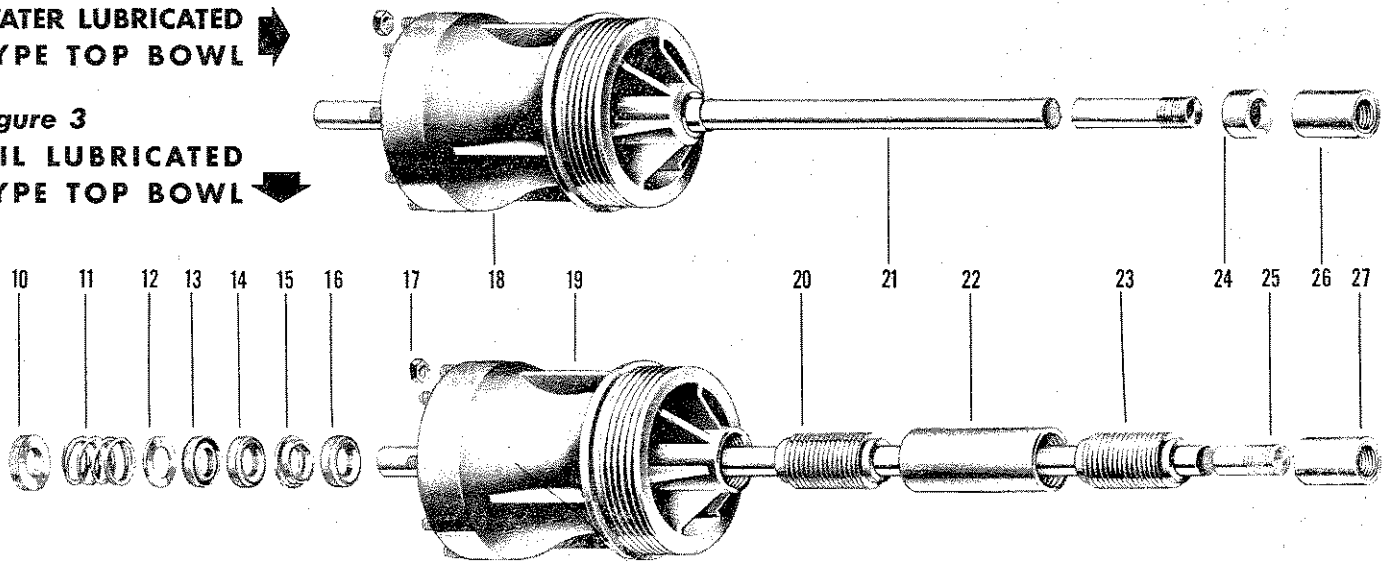
4. Spread the taper lock (9, Figure 4) with a screw driver and slide it off the top of the shaft. The impeller can then be slid off the top.

5. If another impeller is to be removed the standard bowl (7, Figure 4) is removed now.

The above procedure is repeated for each additional impeller needed.

Figure 2
WATER LUBRICATED TYPE TOP BOWL

Figure 3
OIL LUBRICATED TYPE TOP BOWL



REASSEMBLY

1. Place impeller shaft in vise, using copper shaft holder (Figure 6) to protect the shaft. Recheck the shaft for straightness and freedom from nicks and scratches. Do not use a crooked shaft. Remove with a file all burrs and scratches. If shaft is satisfactory, check for scribe mark that locates the bottom impeller. If scribe mark was not made in disassembling, refer to dimension "B" or "C", pages 5 or 7 for its location in the pump size being assembled.

2. Place frog (Figure 8) on shaft and position the shaft in the vise so that scribe mark lines up with the surface of the frog, facing the top of the shaft.

3. Place the first impeller (4, Figure 1), removed in disassembly, on the shaft from the top and slide it into contact with the face of the frog.

Caution: In some bowl assemblies impeller hubs are stamped with an "H". When so stamped mount each impeller so the "H" mark is 180° from the previously installed "H".

4. Spread the taper lock bushing with a screw driver or wedge inserted in the split at the wide end. Slip it along the shaft and into the bore of the impeller. Remove the screw driver and clean off any burrs left by the screw driver. Pound the bushing tightly into place with the beater (Figure 9).

5. Remove the shaft with the impeller from the vise and lay them on rails for assembly of remaining parts. Next, slip the sand collar (3, Figure 1) over the bottom of the shaft, but do not push it up to the impeller hub. Bring the suction manifold (2, Figure 1) into place against the impeller skirt allowing it to position the loose sand collar. Then move the sand collar about 1/16" toward the impeller hub and tighten the socket head set screw.

6. Bring suction manifold up on the shaft until impeller skirt is seated on the rubber seal. Coat the upper face of the manifold flange, or threads on screw type, with red or white lead lubricant.

7. Place the first bowl on the shaft from the top using care not to damage threads at the top of the shaft. Move the bowl into position to fit the bowl flange studs into holes in the suction manifold flange and line up match marks. Bolt into place. At this time, tighten only three or four bolts as each bowl is assembled, to facilitate disassembly, should that become necessary for any reason.

8. Check the shaft for lateral by the following method: Push the shaft toward the bottom of the pump as far as it will go. Scribe a mark on the shaft at the point where it enters the bowl hub. Then pull the shaft in the opposite direction as far as it will go. The distance from the top of the bowl hub to the scribed mark on the shaft should remain constant during assembly. Be sure that the shaft is free to rotate in the bowl Check for free shaft and lateral after each bowl is assembled.

9. Before placing the next impeller on the shaft, pull the impellers already assembled down to the bottom seal by screwing tie down bolt (Figure 7) into end of shaft.

Note: The above procedure is repeated until all standard bowls are in the assembly.

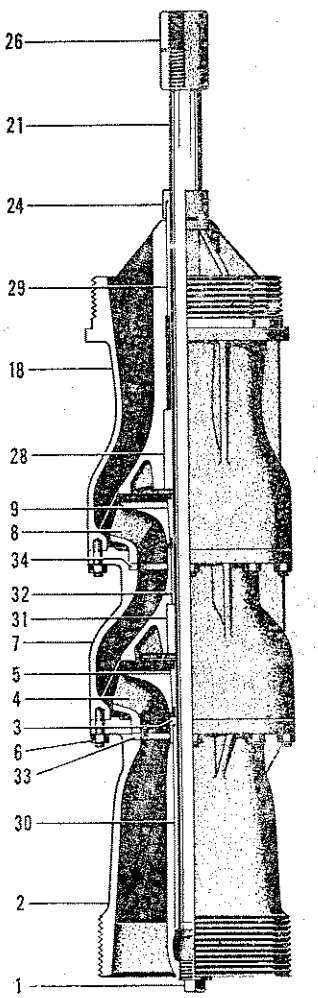


Figure 5
WATER LUBRICATED TYPE

SPECIAL TOOLS

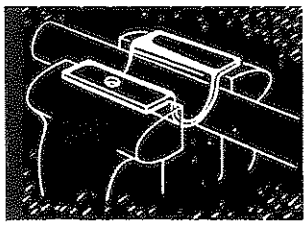


Figure 6
SHAFT HOLDER. To protect shaft from scratches in vise.

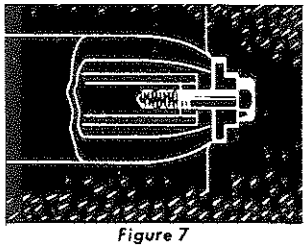


Figure 7
TIE DOWN BOLT. To draw impellers down onto bowl seat.

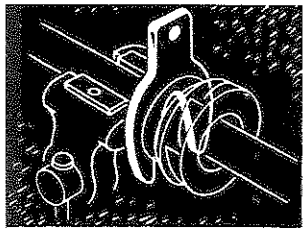


Figure 8
FROG. For locating impeller on shaft.

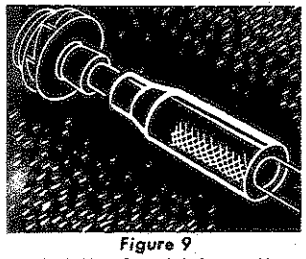


Figure 9
BEATER*. For driving split-tapered impeller lock into impeller.

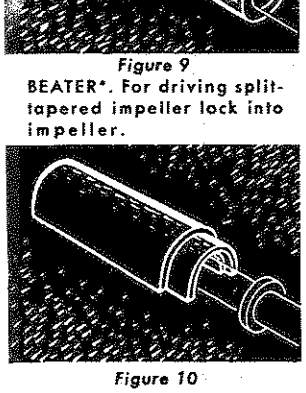


Figure 10
SEAL PUSHER. For sliding seal assembly into top bowl.

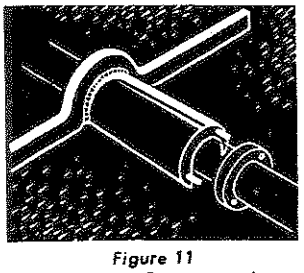


Figure 11
SPANNER. For screwing spring follower into bowl.

10. Reassemble Top Bowl Oil Lubricated Type (Figure 3) as follows: (a) Place on shaft the top bowl impeller and lock (8 and 9, Figure 1) as described above. (b) Place on shaft in the following order: Spring follower (10, Figure 3); spring (11, Figure 3); brass washer (12, Figure 3); "U" leather ring (13, Figure 3) with open part toward top of shaft. On shafts of 1-1/2" diameter and larger, place approximately 3/4 oz. of approved water-resistant grease. On smaller shafts place 3/4 oz. of 1/2 approved water-resistant grease and 1/2 graphite base. "U" leather ring (14, Figure 3) with open part toward bottom of shaft; "T" ring (15, Figure 3) with leg toward top of shaft; "U" leather ring (16, Figure 3) with open part toward bottom of shaft. (c) Place top bowl (19, Figure 3) on shaft and push top bowl seal assembly into hub of shaft with seal pusher (Figure 10). Screw spring follower into place with spanner (Figure 11) and lock by staking material of spring follower into nick in lower surface of bowl hub. (d) Bring top bowl into position to fasten top bowl flange studs into holes in standard bowl flange. Bolt into place. (e) Screw lower bronze tubing bearing (20, Figure 3) into top bowl exactly 1/2 its length. (f) Insert top bronze tubing bearing into tubing bearing adapter (22, Figure 3) exactly 1/2 its length. Then screw the adapter onto lower tubing bearing until tight butt fit is made with hub of top bowl. (g) Check stick up (A, Figure 12). Pack bottom of suction manifold hub with water proof grease (chart on page 8), and screw in plug (1, Figure 1). Tighten all flange bolts.

10A. Reassemble Top Bowl Water Lubricated Type (Figure 2) as follows:
(a) Place on shaft the top bowl impeller and impeller lock (8 and 9, Figure 1) as described above. (b) Slip top bowl (18, Figure 2) over the shaft and position to fasten flange studs into holes in standard bowl flange. Bolt into place. (c) Place sand collar (24, Figure 2) on shaft and seat it approximately 1/16" above bronze bowl bushing. Tighten in place with socket head set screw. (d) Check stick up (A, Figure 12). Pack bottom of suction manifold hub with water proof grease (chart on page 8), and screw in plug (1, Figure 1). Tighten all flange bolts.

ASSEMBLY DIMENSIONS

A -- "Stick up" -- the distance between the upper face of the top bowl to the top of the shaft.

In oil lubricated type bowls, (the construction shown in the drawing), it is 20".

In water lubricated type it is 10".

B and C -- the distance from the lower face of the impeller to the end of the shaft.

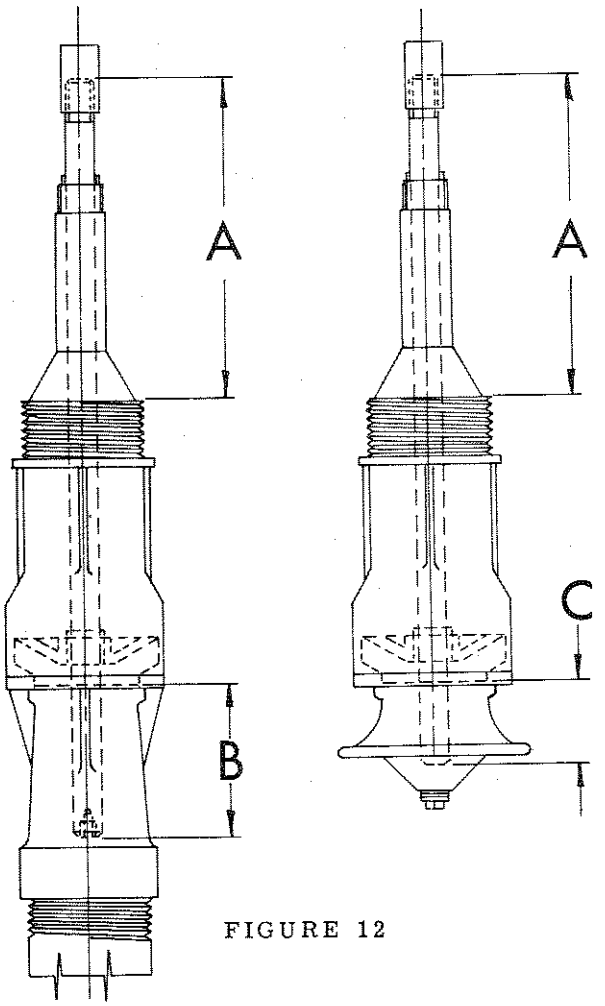


FIGURE 12

* End of beater should be hardened steel.

PEERLESS PUMP VERTICAL TURBINE BEARING AND IMPELLER CLEARANCES

ALL CURRENT VERTICAL MODELS ARE REPRESENTED; SOME OBSOLETE MODELS ARE INCL.
B = DISTANCE FROM BOTTOM OF IMPELLER TO END OF SHAFT (SUCTION CASE)
C = DISTANCE FROM BOTTOM OF IMPELLER TO END OF SHAFT (SUCTION BELL)
D = DIAMETRAL CLEARANCE BETWEEN SHAFT AND BEARINGS
E = DIAMETRAL CLEARANCE BETWEEN IMPELLER SKIRT AND BOWL SIDE SEAL

Size	Model	Shaft Dia.	B	C	D (max.)	D (min.)	E (max.)	E (min.)	Best Lateral
4	LE	0.75	5.19	-	0.006	0.005	0.010	0.006	0.125
6	HXB	0.88	4.56	-	0.007	0.006	0.012	0.008	0.125
6	LB	0.88	3.38	3.38	0.007	0.006	0.011	0.007	0.063
6	MA	0.88	6.56	3.69	0.007	0.006	0.015	0.010	0.125
7	HXB	1.00	5.63	-	0.007	0.006	0.012	0.008	0.125
7	LA	1.00	6.50	4.06	0.007	0.006	0.012	0.008	0.125
7	LB	1.00	7.00	7.00	0.007	0.006	0.018	0.012	0.125
8	HDX	1.19	6.38	-	0.007	0.006	0.018	0.012	0.063
8	HDX (w/o ring)	1.19	6.13	-	0.007	0.006	0.018	0.012	0.063
8	HXB	1.19	5.44	-	0.007	0.006	0.012	0.008	0.063
8	LB	1.19	4.38	4.38	0.007	0.006	0.012	0.008	0.125
8	MA	1.19	7.63	3.94	0.007	0.006	0.012	0.008	0.125
8	MFH	1.19	Keyed	-	0.007	0.006	-	-	0.012
9	LA	1.19	8.00	4.75	0.007	0.006	0.012	0.008	0.125
10	HH	1.50	8.88	8.88	0.007	0.006	0.012	0.008	0.125
10	HXB	1.50	8.25	4.81	0.007	0.006	0.012	0.008	0.188
10	LB	1.19	8.19	8.19	0.007	0.006	0.012	0.008	0.125
10	MA	1.19	8.00	4.31	0.007	0.006	0.012	0.008	0.125
10	MF	1.00	Keyed	Keyed	0.007	0.006	-	-	0.012
10	MFH	1.50	Keyed	Keyed	0.007	0.006	-	-	0.125
10	PL	1.19	Keyed	Keyed	0.007	0.006	-	-	0.125
11	MB	1.94	9.25	-	0.007	0.006	0.015	0.011	0.125
12	HD	1.94	8.88	-	0.009	0.006	0.012	0.008	0.125
12	HD (w/o ring)	1.94	8.63	-	0.009	0.006	0.012	0.008	0.125
12	HXB	1.50	9.75	2.25	0.009	0.006	0.012	0.008	0.125
12	HXH	1.94	8.44	8.44	0.009	0.006	0.012	0.008	0.063
12	LB	1.50	7.81	7.81	0.007	0.006	0.013	0.008	0.125
12	LD	1.50	7.06	7.06	0.011	0.009	0.015	0.010	0.188
12	LD (w/o ring)	1.50	6.75	6.75	0.011	0.009	0.015	0.010	0.188
12	LDT	1.50	7.13	7.13	0.011	0.009	0.015	0.010	0.125
12	LDT (w/o ring)	1.50	6.88	6.88	0.011	0.009	0.015	0.010	0.125
12	MB	1.50	9.38	3.13	0.007	0.006	0.015	0.011	0.188
12	MF	1.19	Keyed	Keyed	0.007	0.006	-	-	0.012
12	PL	1.19	Keyed	Keyed	0.007	0.006	-	-	MIDDLE
14	HH	1.69	9.00	9.00	0.007	0.006	0.015	0.011	0.063
14	HXB	1.94	9.72	3.44	0.008	0.007	0.016	0.010	0.125
14	LA	1.94	10.38	7.06	0.008	0.007	0.012	0.008	0.125
14	LC	1.94	9.56	9.56	0.008	0.007	0.012	0.008	0.125
14	LD	1.94	8.38	8.38	0.006	0.012	0.017	0.013	0.063
14	LD (w/o ring)	1.94	8.06	8.06	0.006	0.012	0.017	0.013	0.063
14	MC	1.94	9.75	9.75	0.008	0.007	0.018	0.012	0.125
14	MD	1.94	9.88	9.88	0.008	0.007	0.018	0.012	0.125
14	MF	1.50	Keyed	Keyed	0.007	0.006	-	-	0.015
14	MFAH	1.50	Keyed	Keyed	0.007	0.006	-	-	0.015
14	PL	1.50	Keyed	Keyed	0.007	0.006	-	-	MIDDLE
15	LC	2.19	9.25	9.81	0.012	0.010	0.012	0.008	0.125
15	MA	2.19	9.81	-	0.012	0.010	0.015	0.011	0.125
16	HH	1.94	9.75	9.75	0.008	0.007	0.015	0.011	0.063
16	HXB	1.94	9.50	9.50	0.008	0.007	0.015	0.011	0.125
16	MC	1.94	9.75	9.75	0.008	0.007	0.018	0.012	0.063
16	MF	1.69	Keyed	Keyed	0.007	0.006	-	-	0.018
16	PL	1.50	Keyed	Keyed	0.007	0.006	-	-	MIDDLE
18	HH	2.19	Keyed	Keyed	0.012	0.010	0.019	0.012	0.063
18	HXB	1.94	8.38	8.38	0.008	0.007	0.015	0.011	0.063
18	MA	1.94	11.13	6.31	0.012	0.010	0.021	0.015	0.063
18	MF	1.94	Keyed	Keyed	0.010	0.007	-	-	0.018
18	MFAL	-	Keyed	Keyed	0.010	0.007	-	-	0.018

Bowls with Split Ring Keys

DISASSEMBLY

1. Refer to assembly drawing #2826723 showing split ring and key construction to position impellers. The disassembly of the bowl unit, because of this feature, must be made from the top down. ELS is shown; OLS is the same except tube bearings and adapter are not used.

2. Remove the shaft coupling (27) and, if ELS, remove the tubing bearings (23) and (20) and tube adapter (22). Remove the hex nuts and top bowl (19).

3. Remove the screws and retainer ring (30). Pry out the split ring halves (28).

4. Inspect the shaft (25), and remove all burrs with fine emery paper. Pull up or pry the impeller (8) off the shaft. Remove the lower split rings (34) and the impeller key (29).

5. Remove the standard bowl (7) same as above, and repeat the process for the remaining stages.

REASSEMBLY

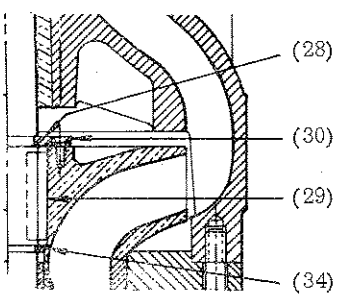
1. Recheck the shaft for straightness. Remove nicks and scratches with a fine emery cloth. Do not use a bent shaft.

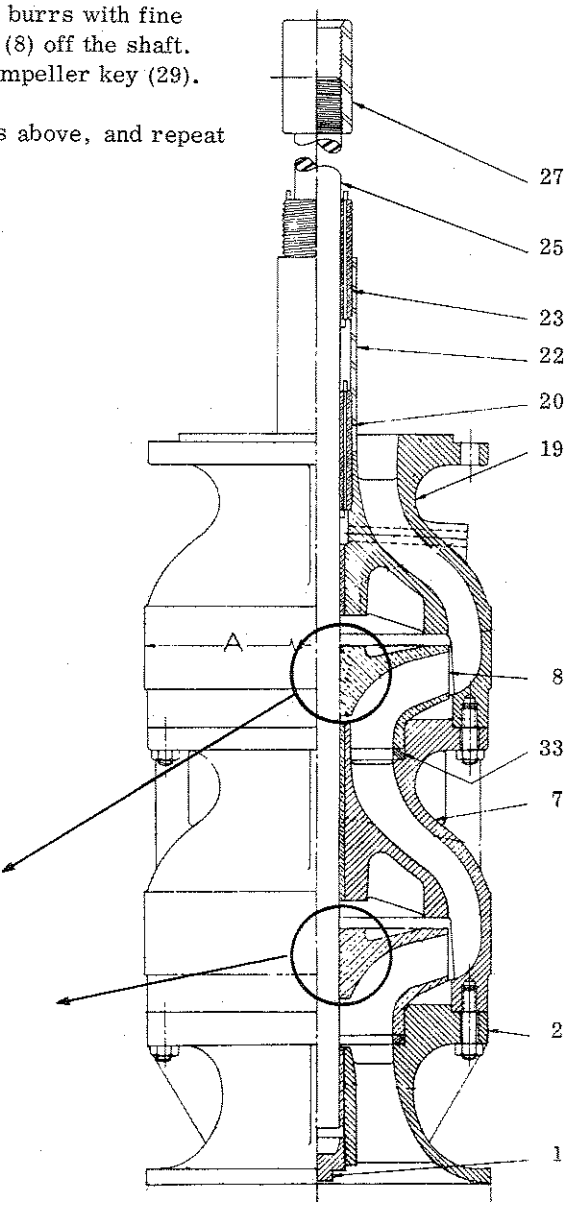
2. Place the key (29) in the lowest keyway. Then slide the impeller onto the shaft from the bottom until the lower split ring groove is exposed below the impeller hub. Place the split ring (34) in the groove. Lower the impeller until it seats on the split ring.

3. Insert the top split ring (28) and assemble the retainer (30) and screws.

4. Place the standard (7) or top standard bowl (19) over the top of the shaft, and the suction manifold (2) over the bottom of the shaft, and assemble together with hex nuts. Pack the suction bearing with a grease recommended on page 8.

5. Proceed by placing the key and lower split ring in the shaft for the next impeller. The split ring can be held in the groove with grease or plastic tape. Lower the impeller over the shaft until it is seated on the split ring. Follow the same procedure with the remaining stages.





Dwg. No, 2826723

WEAR RING APPLICATIONS

Before applying wear rings to bowls or impellers other surfaces and leading edges of the parts should be checked for excessive wear. If the vanes or walls are not in satisfactory condition, the parts should be replaced.

Wear rings must be a pressed fit into the bowl side seal (A, Figure 13), and onto the impeller skirt (b). After the rings are installed, they should be machined to provide the clearance shown in dimension "E" on pages 5 and 7.

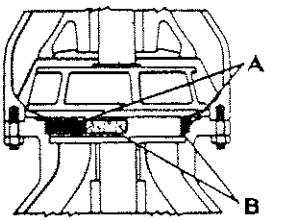


FIGURE 13

TROUBLE CHART

TROUBLE SOURCES	PROBABLE CAUSE	REMEDY
Crooked shaft	Bent in handling.	Replace shaft or have it straightened.
Misalignment of tubing bearings and adapters	Improperly Assembled.	Reassemble and check. If still out of alignment, replace the parts.
Wear on shaft at seals.	Natural wear. Corrosive action.	Replace shaft.
Uneven wear on bearings.	Misalignment on shaft.	Replace bearings and straighten or replace shaft.
Wear on bearings.	Abrasive action.	Replace bearings.
Lateral seal ring wear.	Abrasive action.	Replace seal rings.
Wear on side seal and impeller skirt.	Abrasive action.	Apply wear rings to impeller skirt and side seal if damage to bowl and impeller not too great.
Wear on bowl vanes and outside wall.	Abrasive action.	Replace bowls if wear is excessive.
Wear on impeller vanes and shroud.	Abrasive action.	Replace impellers if wear is excessive.

PEERLESS PUMP VERTICAL TURBINE BEARING AND IMPELLER CLEARANCES

ALL CURRENT VERTICAL MODELS ARE REPRESENTED; SOME OBSOLETE MODELS ARE INCL.
B = DISTANCE FROM BOTTOM OF IMPELLER TO END OF SHAFT (SUCTION CASE)
C = DISTANCE FROM BOTTOM OF IMPELLER TO END OF SHAFT (SUCTION BELL)
D = DIAMETRAL CLEARANCE BETWEEN SHAFT AND BEARINGS
E = DIAMETRAL CLEARANCE BETWEEN IMPELLER SKIRT AND BOWL SIDE SEAL

Size	Model	Shaft Dia.	B	C	D (max.)	D (min.)	E (max.)	E (min.)	Best Lateral
18	PL	1.50	Keyed	Keyed	0.007	0.006	-	-	MIDDLE
20	HH	2.19	Keyed	Keyed	0.013	0.010	0.019	0.015	0.063
20	HXB	2.19	10.56	10.56	0.013	0.010	0.018	0.014	0.063
20	MA	2.19	11.75	11.75	0.012	0.010	0.015	0.010	0.063
20	MF	1.69	Keyed	Keyed	0.007	0.006	-	-	0.020
20	MFAL	2.19	Keyed	Keyed	0.013	0.010	-	-	0.020
20	PL	1.50	Keyed	Keyed	0.007	0.006	-	-	MIDDLE
24	HH	2.44	Keyed	Keyed	0.013	0.010	0.019	0.015	0.031
24	HHOH	2.44	Keyed	Keyed	0.013	0.010	-	-	0.125
24	HXB	2.19	Keyed	Keyed	0.013	0.010	0.019	0.015	0.125
24	HXC	2.19	Keyed	Keyed	0.013	0.010	0.019	0.015	0.125
24	MA	2.44	Keyed	Keyed	0.013	0.010	0.018	0.014	0.063
24	MF	2.44	Keyed	Keyed	0.013	0.010	-	-	0.020
24	MFH	2.44	Keyed	Keyed	0.013	0.010	-	-	0.020
24	PL	1.69	Keyed	Keyed	0.007	0.006	-	-	MIDDLE
26	HH	2.94	Keyed	Keyed	0.013	0.010	0.019	0.015	0.125
26	HHOH	2.94	Keyed	Keyed	0.013	0.010	-	-	0.031
26	HXB	2.94	Keyed	Keyed	0.013	0.010	0.019	0.015	0.063
27	MA	2.94	Keyed	Keyed	0.013	0.010	0.020	0.016	0.063
28	HXB	2.94	Keyed	Keyed	0.013	0.010	0.021	0.017	0.031
30	HH	2.94	Keyed	Keyed	0.013	0.010	0.022	0.018	0.125
30	HHOH	2.94	Keyed	Keyed	0.013	0.010	-	-	0.031
30	LA	2.69	Keyed	Keyed	0.013	0.010	0.021	0.015	0.063
30	MF	1.69	Keyed	Keyed	0.007	0.006	-	-	0.026
30	MFAH	2.44	Keyed	Keyed	0.013	0.010	-	-	0.026
30	MFH	-	Keyed	Keyed	0.013	0.010	-	-	0.026
30	PL	2.19	Keyed	Keyed	0.013	0.010	-	-	MIDDLE
32	HXB	3.69	Keyed	Keyed	0.014	0.012	0.021	0.017	0.031
36	HH	3.69	Keyed	Keyed	0.014	0.012	0.025	0.015	0.125
36	HHOH	3.69	Keyed	Keyed	0.014	0.012	-	-	0.031
36	HXB	3.94	Keyed	Keyed	0.014	0.012	0.022	0.018	0.125
36	MA	3.69	Keyed	Keyed	0.014	0.012	0.018	0.014	0.125
36	MF	3.44	Keyed	Keyed	0.013	0.010	-	-	0.029
36	MFH	3.44	Keyed	Keyed	0.013	0.010	-	-	0.029
36	PL	2.44	Keyed	Keyed	0.013	0.010	-	-	MIDDLE
42	HH	-	Keyed	Keyed	0.014	0.012	0.025	0.015	0.125
42	HXB	3.94	Keyed	Keyed	0.014	0.012	0.022	0.018	0.125
42	MF	3.44	Keyed	Keyed	0.013	0.010	-	-	0.036
42	MFH	3.44	Keyed	Keyed	0.013	0.010	-	-	0.036
42	PL	2.44	Keyed	Keyed	0.013	0.010	-	-	MIDDLE
48	HH	3.94	Keyed	Keyed	0.016	0.012	0.028	0.019	0.125
48	HHOH	3.94	Keyed	Keyed	0.016	0.012	-	-	0.047
48	HXB	3.94	Keyed	Keyed	0.014	0.012	0.025	0.019	0.125
48	MF	3.44	Keyed	Keyed	0.013	0.010	-	-	0.042
48	PL	2.69	Keyed	Keyed	0.013	0.010	-	-	MIDDLE
54	MF	3.94	Keyed	Keyed	0.014	0.012	-	-	0.048
54	PL	3.19	Keyed	Keyed	0.013	0.010	-	-	MIDDLE
56	HH	4.25	Keyed	Keyed	-	-	-	-	0.063
56	HHOH	4.25	Keyed	Keyed	0.016	0.012	-	-	0.047
60	PL	3.94	Keyed	Keyed	0.014	0.012	-	-	MIDDLE
66	HH	-	Keyed	Keyed	-	-	-	-	0.063
66	MF	4.94	Keyed	Keyed	0.016	0.012	-	-	0.054

ALL DIMENSIONS ARE IN INCHES

Peerless Pump Company
2005 Dr. Martin Luther King Jr. Street
Indianapolis, IN 46202
Phone: (317) 925-9661 · Fax: (317) 924-7388

Greases intended for water resisting service shall provide maximum resistance against emulsification or contamination. Barium greases with dropping point 375°F (approx.).

MANUFACTURER	For General Service (May Be Water Resisting) Minus 20°F to Plus 250°F	For Maximum Water Resisting Service Minus 20°F to Plus 250°F
American Oil Co. & Standard Oil Div. of American Oil Co.	Amolith Grease No. 2	Amolith Grease No. 2
The Atlantic Refining Co.	Atlantic Lubricant 54	Atlantic Lubricant 54
Cato Oil And Grease Co.	5335 Lith-Flex C No. 2	5484 Mystik JT-6
Cities Service Oil Co.	Trojan Grease H-2	Trojan Grease H-2
Continental Oil Co.	Conoco Super Lube	Conoco Super Lube
*Gulf Oil Corp.	Gulfcrown No. 2 or EP-2	Gulfcrown No. 2 or EP-2
Exxon	Nebula EP-1	Nebula EP-2
*E. F. Houghton & Co.	Cosmolube No. 2 Grease	Cosmolube No. 2 Grease
*Imperial Oil & Grease	BRB-572	BRB-572
*Jesco Lubricants Co.	Jesco 822 Grease	Jesco 822 Grease
Keystone Lubricating Co.	Grease Nos. 81X LT or 51X LT	Grease Nos. 81X LT or 51X LT
*Mobil Oil Co.	Mobilux EP #2	Mobilux EP #2
*The Pennzoil Co.	Pennzoil 705 HDW	Pennzoil 705 HDW
Phillips Petroleum Company	Philube Multi-Purpose L-2	Philube Multi-Purpose L-2
*Quaker State Refining Corp.	Quaker State Multi-Purpose Lubricant	Quaker State Multi-Purpose Lubricant
*Shell Oil Co., Inc.	Shell Alvania Grease 2	Shell Alvania Grease 2
Signal Oil Co.	Signal Industrial Grease Med.	Signal Industrial Grease Med.
Atlantic Richfield	Litholine HEP 2	Litholine HEP 2
*Standard Oil Co. of California	Chevron Industrial Grease Med.	Chevron Industrial Grease Med.
Sunray DX Oil Co.	No. 646 DX All Purpose Grease	No. 646 DX All Purpose Grease
Sun Oil Co.	Sun 72 XMP Grease or Prestige 42	Sun 72 XMP Grease or Prestige 42
*Texaco, Inc.	995 Multifax EP2	995 Multifax EP2
*Tidewater Oil Co.	Veedol All-Purpose Grease	Veedol All-Purpose Grease
*Union Oil Co. of California	Unoba A-1 Grease	Unoba F-1 Grease

*Internationally & Nationally Distributed