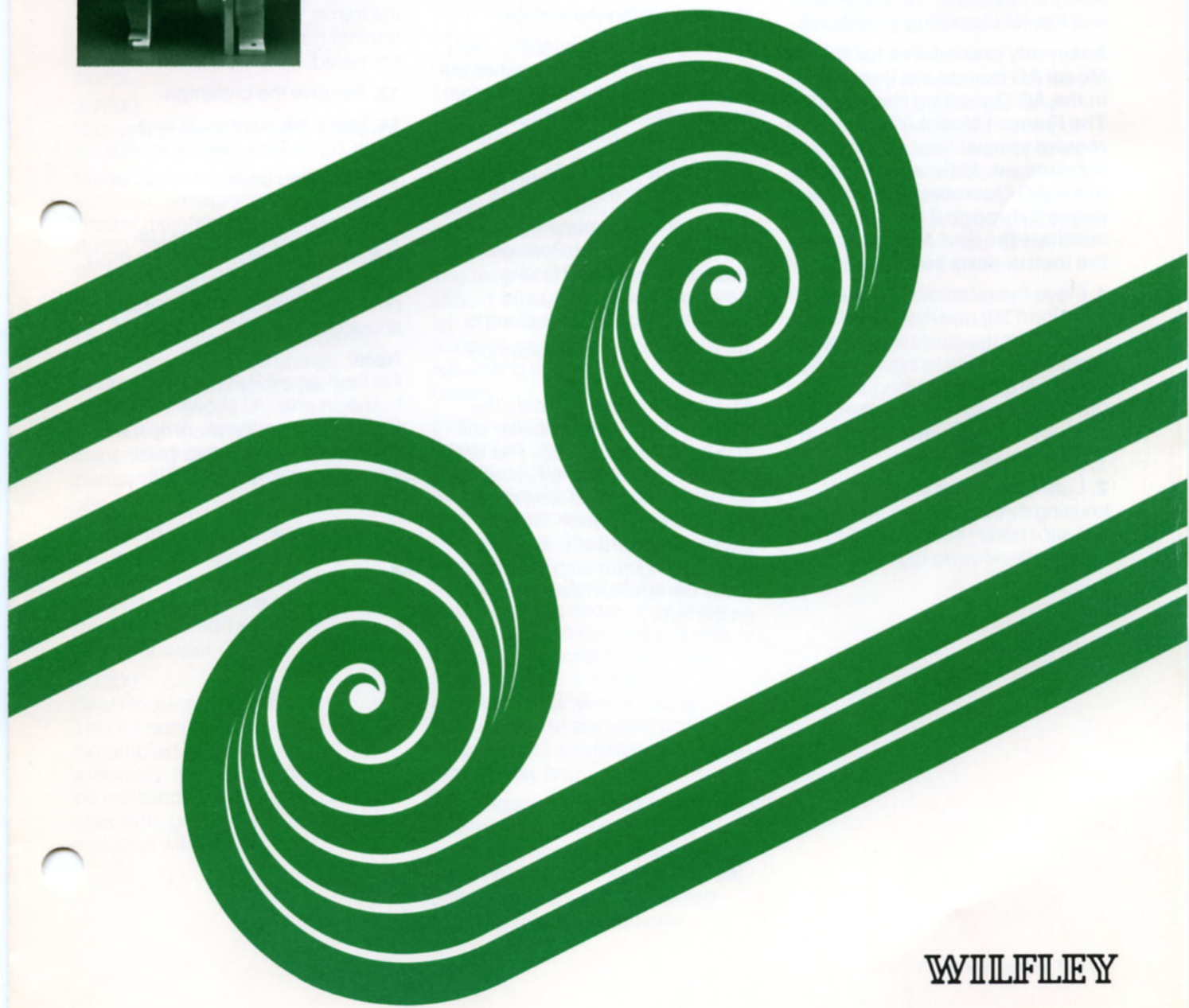


**Centrifugal  
Acid  
Pump**

**Frame 4  
Special Assembly  
& Parts List**

**Model AG**



This brochure supplements the instructions found in the Model AG Operating Handbook. The following assembly instructions and parts list apply only to the Model AG, Frame 4, Metal Pumps.

Before working on your pump, please read all instructions and warnings carefully and observe all safety precautions in this Brochure and the AG Operating Handbook.

**Assembly procedures for the Model AG pumps are described in the AG Operating Handbook. The Frame 4 Model AG pumps require special final assembly instructions. Follow instructions in the AG Operating Handbook pages 6 through 9 (Item 5) and continue the final assembly with the instructions listed below.**

**1.** Place the rotary seal housing seal (Item 36) and rotary seal ring (Item 37) on the rotary seal housing seal (Item 39). Place this assembly into the stationary seal housing (Item 39), be sure that it seats properly in the counterbore of the stationary seal housing.

**2.** Lubricate the rotary seal housing threads. Screw the actuator body (Item 43) and the rotary seal housing together.

**3.** Slide the seal assembly onto the shaft and seat in the frame.

**4.** Slip the governor spring onto the shaft. Be sure it slides into the bore of the rotary seal ring housing.

**5.** Lubricate the impeller and expeller o-rings and place them into their pockets in the expeller.

**6.** Place the expeller on the shaft (Avoid pinching the o-rings).

**7.** Thread the shaft assembly tool onto the shaft. This tool pushes the expeller hub under the rotary seal housing seal and compresses the governor spring.

**8.** Place the case plate gasket into its bore in the case plate.

**9.** Slide the case plate over the shaft assembly tool. Position this case plate assembly on the stationary seal housing and clamp in place with 2 c-clamps.

**10.** Remove the shaft assembly tool.

**11.** Screw the impeller onto the shaft by holding the impeller still and by turning the shaft. The shaft can be easily turned by using either a Wilfley shaft wrench or any standard wrench. Before using a standard wrench, slide the coupling hub onto the shaft. Place the wrench across the flats on the hub.

**12.** Set a .050 clearance between the impeller and case plate by using a feeler gauge. This adjustment is made by tightening screw (Item 13) and by inserting a screw in the top tapped hole in the rear bearing retainer housing (Item 6). After the clearance has been set shims are installed between the bearing retainer housing and the frame, finally all of the bearing retainer housing screws are tightened.

**13.** Remove the c-clamps.

**14.** Press the case wear ring (Item 70) into the case (Item 50).

**15.** Install the case assembly on the pump.

**16.** Turn the shaft by hand as outlined in Step 12. A uniform drag from the rotary seal ring rubbing on the stationary seal housing should be felt.

**Note:**

For the Frame 4 Pumps, the expeller hub diameter "A" shown in the AG Operating Handbook, Article 2, Page 8, can have a minimum allowable diameter of 3.815.

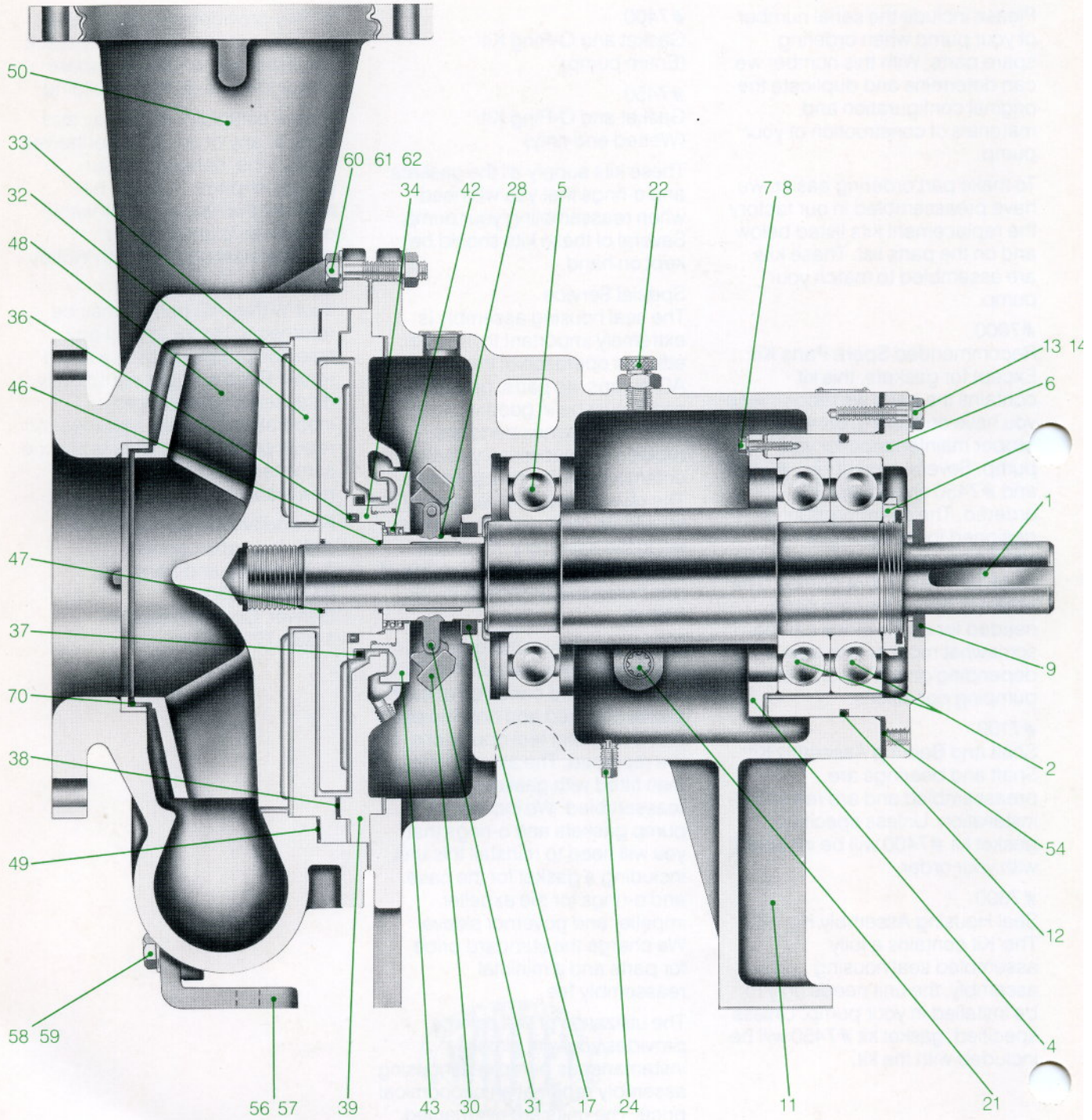
# Parts List and Recommended Spare Parts

#7000    #7100    #7300    #7400    #7450

Part Number	Number Required	Soare Parts Kit	Shaft Assembly Kit	Case Plate Kit	Pump Gasket Kit	Wetted End Gasket Kit	Description
1	1		1				Shaft
2	2	2	2				Rear bearing
3	1		1				Rear bearing locknut
4	1	1	1				Clamp ring
5	1						Front bearing
6	1						Bearing retainer housing
7	4						Clamp ring lockwashers
8	4						Clamp ring cap screws
9	1				1		Bearing retainer housing oil seal
11	1						Frame
12	1				1		Frame O-ring
13	4						Bearing retainer housing cap screw
14	4						Bearing retainer housing cap screw washer
17	1				1		Front oil seal
21	1						Sight gauge
22	1						Oil filler plug
24	1						Oil Drain plug
28	1						Governor sleeve
30	2						Governor weight
31	2						Governor weight pins
32	1	1		1			Case plate
33	1	1		1			Expeller
34	1	1		1			Rotary seal housing
36	1			1	1	1	Rotary seal housing seal
37	1	2		1			Rotary seal ring
38	1			1	1	1	Case plate gasket
39	1	1		1			Stationary seal ring housing
42	1	1		1			Governor spring
43	1			1			Actuator body
46	1				1	1	Expeller O-ring
47	1				1	1	Impeller O-ring
48	1						Impeller
49	1						Case Gasket
50	1						Case
54	1		1				Bearing retainer housing shim (set)
56	1						Left foot
57	1						Right foot
58	2						Foot bolt
59	2						Foot nut
60	12						Case bolt
61	12						Case nut
62	24						Case washer
63	1						Drain hose (Not illustrated)
64	1						Drain hose clamp (Not illustrated)
70	1						Case wear ring

Parts are listed in approximate order of assembly sequence.

# Model AG Frame Size 4



Please include the serial number of your pump when ordering spare parts. With this number we can determine and duplicate the original configuration and materials of construction of your pump.

To make part ordering easier, we have preassembled in our factory the replacement kits listed below and on the parts list. These kits are assembled to match your pump.

## #7000

**Recommended Spare Parts Kit:**  
Except for gaskets, this kit contains the parts we recommend you have on hand to provide proper maintenance for your pump. Several gasket kits, #7400 and #7450 should also be ordered. The spare parts kit is designed for one pump and should be altered when ordering stock for two or more pumps. The actual quantity of spare parts needed for a safe stock can be somewhat more or less than depending on the severity of your pumping conditions.

## #7100

**Shaft and Bearing Assembly Kit:**  
Shaft and bearings are preassembled and are ready for installation. Unless specified, gasket kit #7400 will be included with your order.

## #7300

**Seal Housing Assembly Kit:**  
This Kit contains a fully assembled seal housing assembly, the unit needs only to be installed in your pump. Unless specified, gasket kit #7450 will be included with the kit.

## #7400

**Gasket and O-Ring Kit:**  
(Entire pump)

## #7450

**Gasket and O-Ring Kit:**  
(Wetted end only)

These kits supply all the gaskets and o-rings that you will need when reassembling your pump. Several of these kits should be kept on hand.

## Special Service

The seal housing assembly is extremely important to the total, efficient operation of the Wilfley AG pumps. Its parts, gaskets and seals must be in good working order. Many times parts are replaced unnecessarily due to the unfamiliarity with the assembly. The reverse is also true, parts that should be replaced are at times left in the assembly. For these reasons we provide the service of rebuilding this assembly in our factory.

Each assembly is thoroughly inspected upon arrival. The tolerances and condition of each part is checked and only the parts that don't meet test operations are replaced. The assembly is then fitted with gaskets and reassembled. We include all pump gaskets and o-rings that you will need to reinstall this unit, including a gasket for the case, and o-rings for the expeller, impeller and governor sleeve. We charge the standard price for parts and a minimal reassembly fee.

The utilization of this service provides you with almost instantaneous pump seal housing assembly repair at an economical price. The units are overhauled and returned to you quickly.

Wilfley provides a special carton for easy mailing. You simply stock this assembly as a single spare part and let us do the rebuilding.

Please contact A. R. Wilfley and Sons or any of our representatives at any time, concerning our pumps or parts. You can be assured that we will do all within our power to ensure your complete satisfaction with Wilfley products.

Your Wilfley AG pumps may be returned to the factory, at any time, for complete overhaul and repair. Each pump is completely disassembled and worn or inoperable parts are replaced. All rebuilt pumps are subjected to the same testing procedures as newly constructed units.

For additional information and ordering parts contact:  
A. R. Wilfley and Sons, Inc.  
P.O. Box 2330  
Denver, Colorado 80201  
1-303-779-1777



A. R. Wilfley & Sons, Inc/P.O. Box 2330/Denver, Colorado 80201/303-779-1777