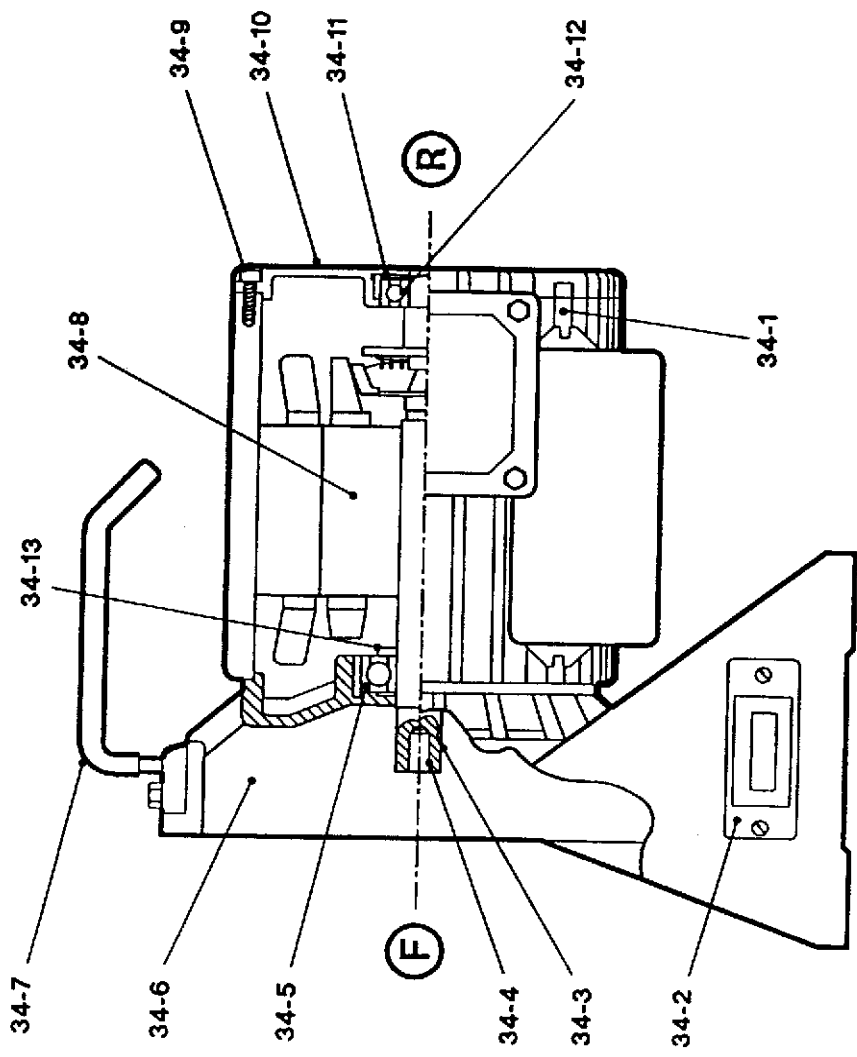
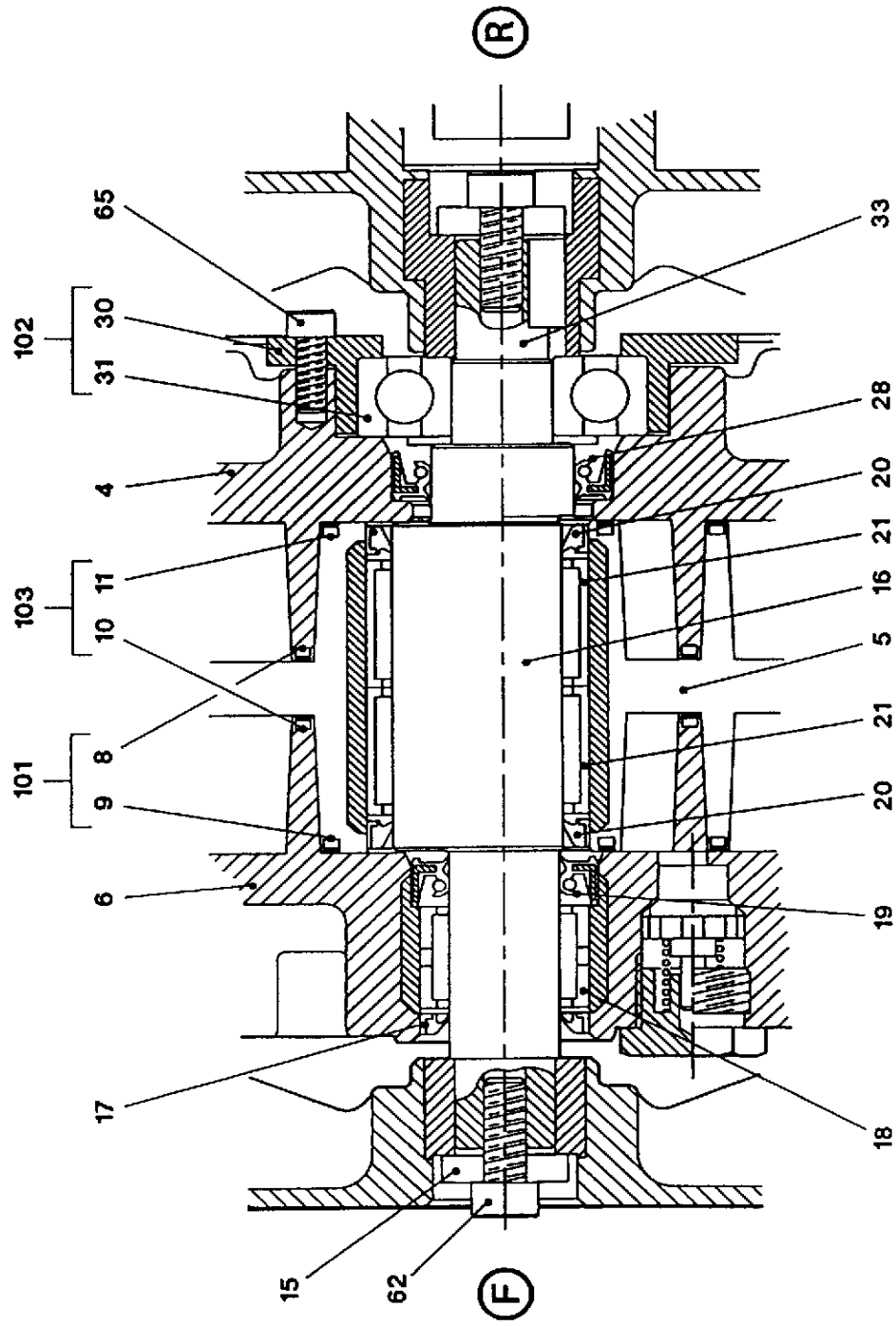


Figure 2 - Exploded view of the ESDP12 pump module



- F Front of the motor assembly
- R Rear of the motor assembly

Figure 3 - Sectional view of the ESDP12 motor assembly



- F Front of the pump module
- R Rear of the pump module

Figure 4 - Sectional view of the ESDP12 scrolls, crank shaft and bearings to show the seal orientations

Part Number	Description	Qty	Spares kit(s) or assembly	Item Number
1	Base	1		
3	Dowel	4		
4	Rear fixed scroll	1		A710-02-013
5	Orbiting scroll	1		A710-02-015
6	Front fixed scroll	1		A710-02-014
7	Cover plate	1		
8	Tip seal	1	2 *, 6	
9	Tip seal	1	2 *, 6	
10	Tip seal	1	2 #, 6	
11	Tip seal	1	2 #, 6	
12	Fan cover	1		A710-02-024
13	Front fan	1		A710-02-017
14	Parallel key	1		
15	Plain washer	1		
16	Crank shaft	1		A710-02-012
17	Grease seal 16 i.d.	1	1	
18	Needle bearing	1	2	
19	Shaft seal 16 i.d.	1	1	
20	Grease seal 24 i.d.	2	1	
21	Needle bearing	1 pair	2	
23	'O' ring	1	1	
24	Inlet flange	1		A710-02-018
25	'O' ring	1		A710-02-027
26	Outlet flange	1		A710-02-019
27	Cover plate	1		
28	Shaft seal 20 i.d.	1	1	

* Included in kit 2 as part 101

Included in kit 2 as part 103

Table 1 - ESDP12 parts list

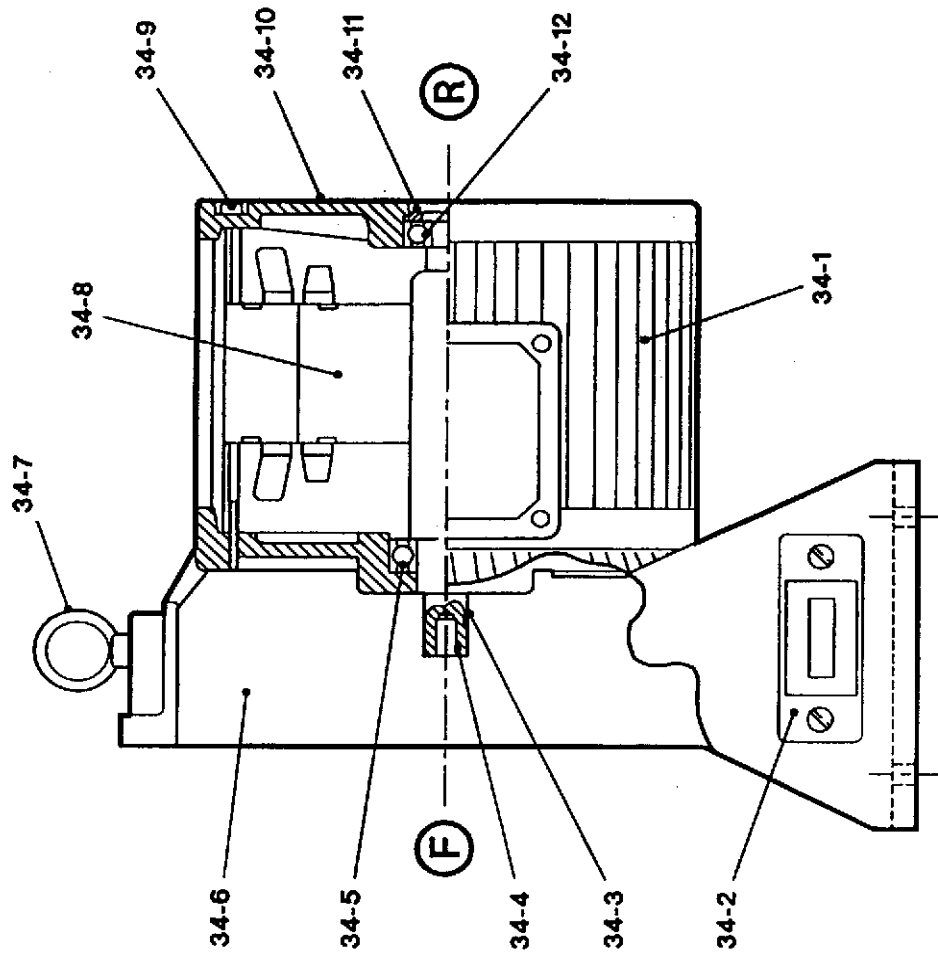
Part Number	Description	Qty	Spares kit(s) or assembly	Item Number
29	Rear fan	1		A710-02-016
30	Bearing case	1	2 *	
31	Ball bearing	1	2 *	
32	Spacer	1		
33	Parallel key	1		
34	Motor assembly	1	4	A710-03-022
34-1	Stator	1	4	
34-2	Hours meter	1	4	
34-3	Shaft	1	4	
34-4	Key	1	4	
34-5	Front bearing	1	2, 4	
34-6	Coupling cover	1	4	
34-7	Lifting handle	1	4	
34-8	Rotor	1	4	
34-9	Hex head bolt	4	4	
34-10	Motor end-plate	1	4	
34-11	Spring washer	2	4	
34-12	Rear bearing	1	2, 4	
34-13	Washer	1		
35	Inner race	3	3	
37	'O' ring	6	3	
38	Needle bearing	3	3	
39	Crank pin	3	3	
40	Spacer sleeve	3	3	
41	Spacer sleeve	3	3	
42	Ball bearing	6	3	
44	Outlet valve guide	1	1	

* Included in kit 2 as part 102

Table 1 - ESDP12 parts list (continued)

Part Number	Description	Qty	Spares kit(s) or assembly	Item Number
45	Outlet valve spring	1	1	
46	Outlet valve stem	1	1	
48	'O' ring	1		
49	Nut	1		
50	Plug	1		
51	Washer	1		
53	Coupling element	1		A710-02-023
54	Coupling hub	1		
58	Inlet screen	1		A710-02-021
61	Dome head screw M6 x 12	8		
62	Cap head screw M6 x 16	2		
63	Cap head screw M6 x 16	12		
64	Cross head screw M5 x 8	4		
65	Cap head screw M5 x 12	3		
66	Cross head bolt M3 x 4	6	3	
67	Cross head bolt M4 x 5	6	3	
68	Cross head bolt M5 x 8	3	3	
71	Plain washer M6	4		
72	Hex head bolt M10 x 25	4		
73	Washer M10	4		
75	Grub screw	1		
101	Tip seal (clockwise)	1	2	
102	Bearing kit	1	2	
103	Tip seal (anticlockwise)	1	2	
104	Crank pin assembly	3	3	

Table 1 - ESDP12 parts list (continued)



- F Front of the motor assembly
- R Rear of the motor assembly

Figure 7 - Sectional view of the ESDP30 motor assembly (3-phase motor shown)

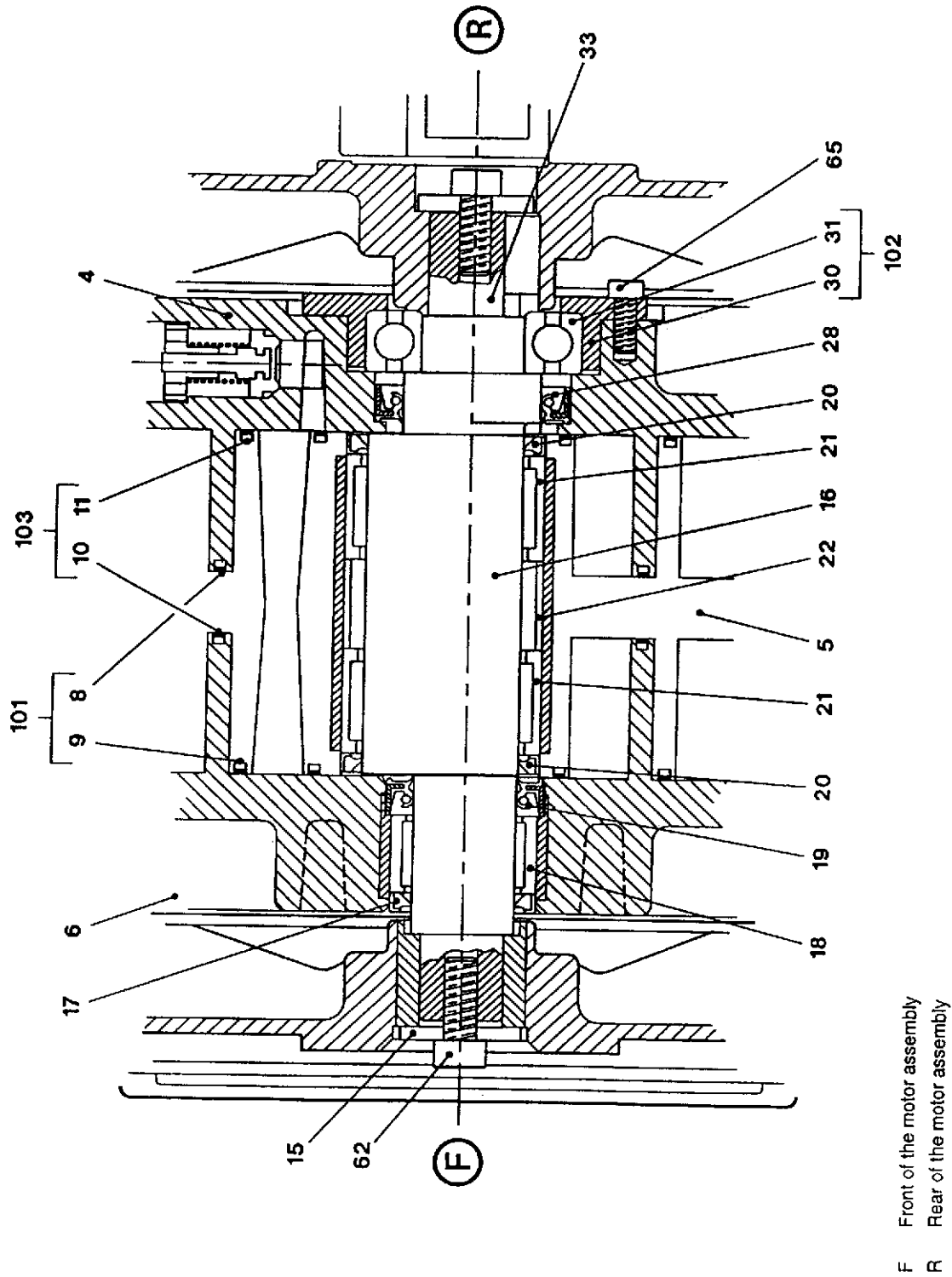
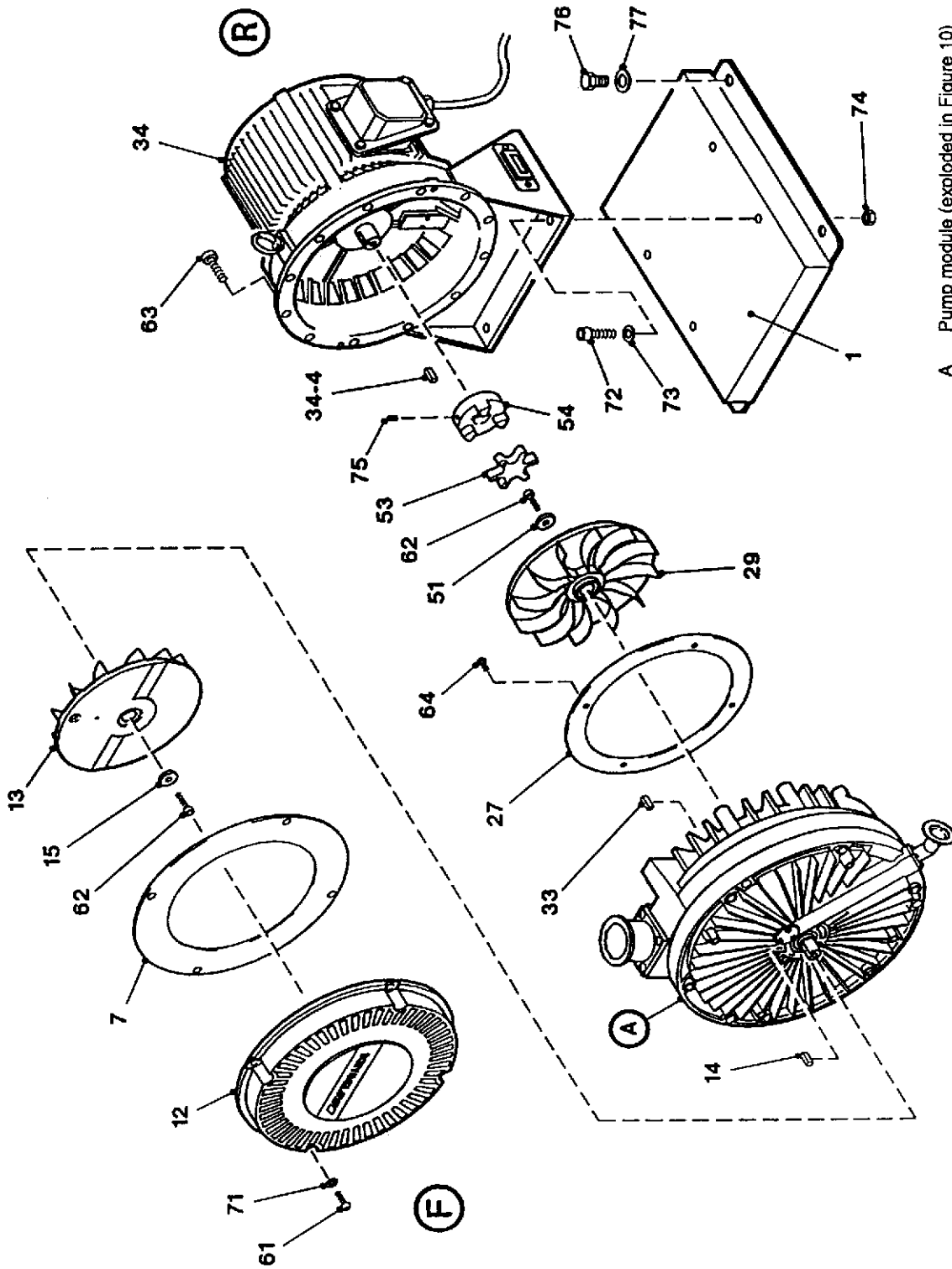


Figure 8 - Sectional view of the ESDP30 scrolls, crank shaft and bearings to show the seal orientations

- F Front of the motor assembly
- R Rear of the motor assembly



- A Pump module (exploded in Figure 10)
- F Front of the pump
- R Rear of the pump

Figure 9 - Exploded view of the ESDP30A pump

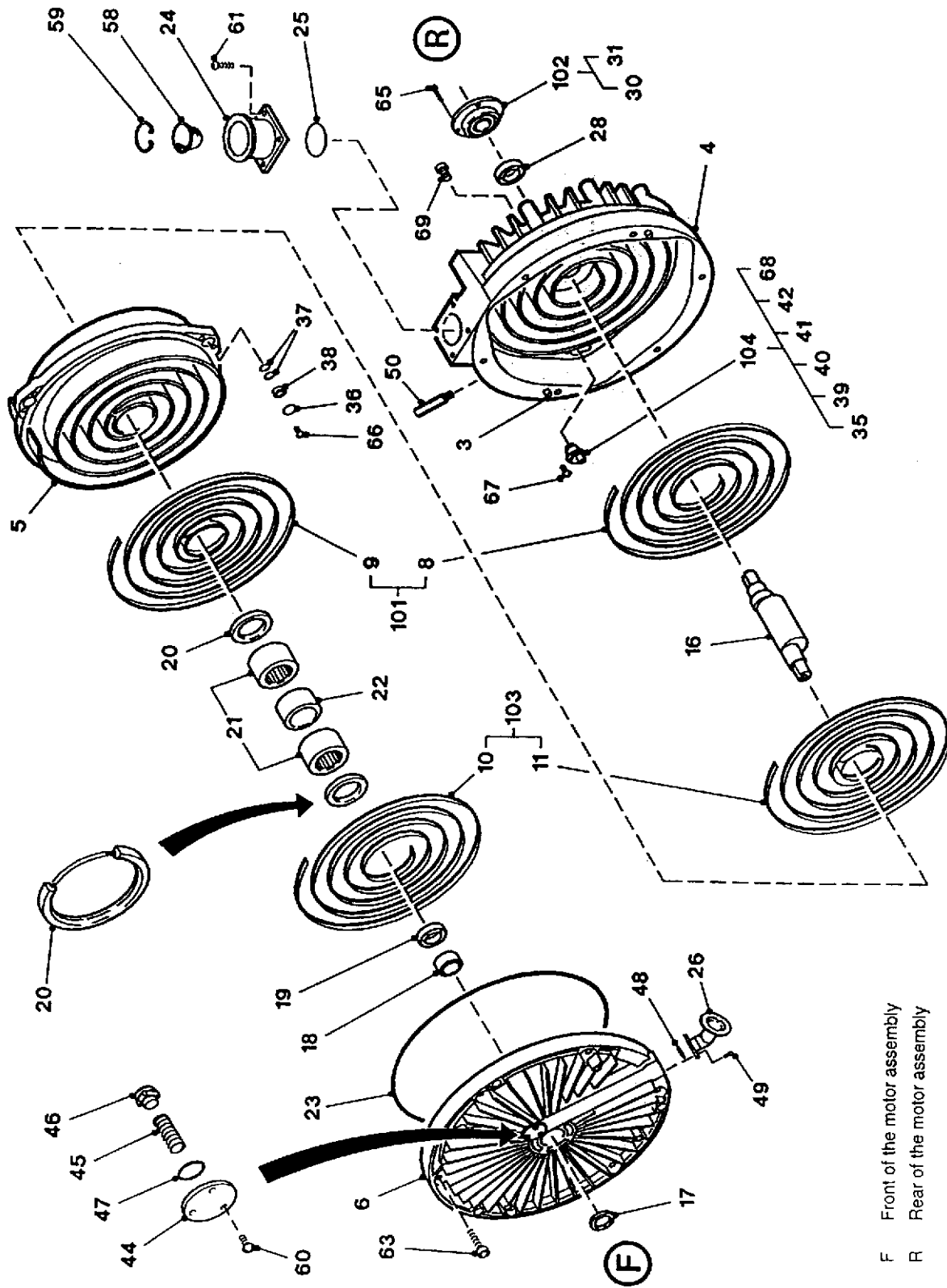


Figure 10 - Exploded view of the ESDP30A pump module

- F Front of the motor assembly
- R Rear of the motor assembly

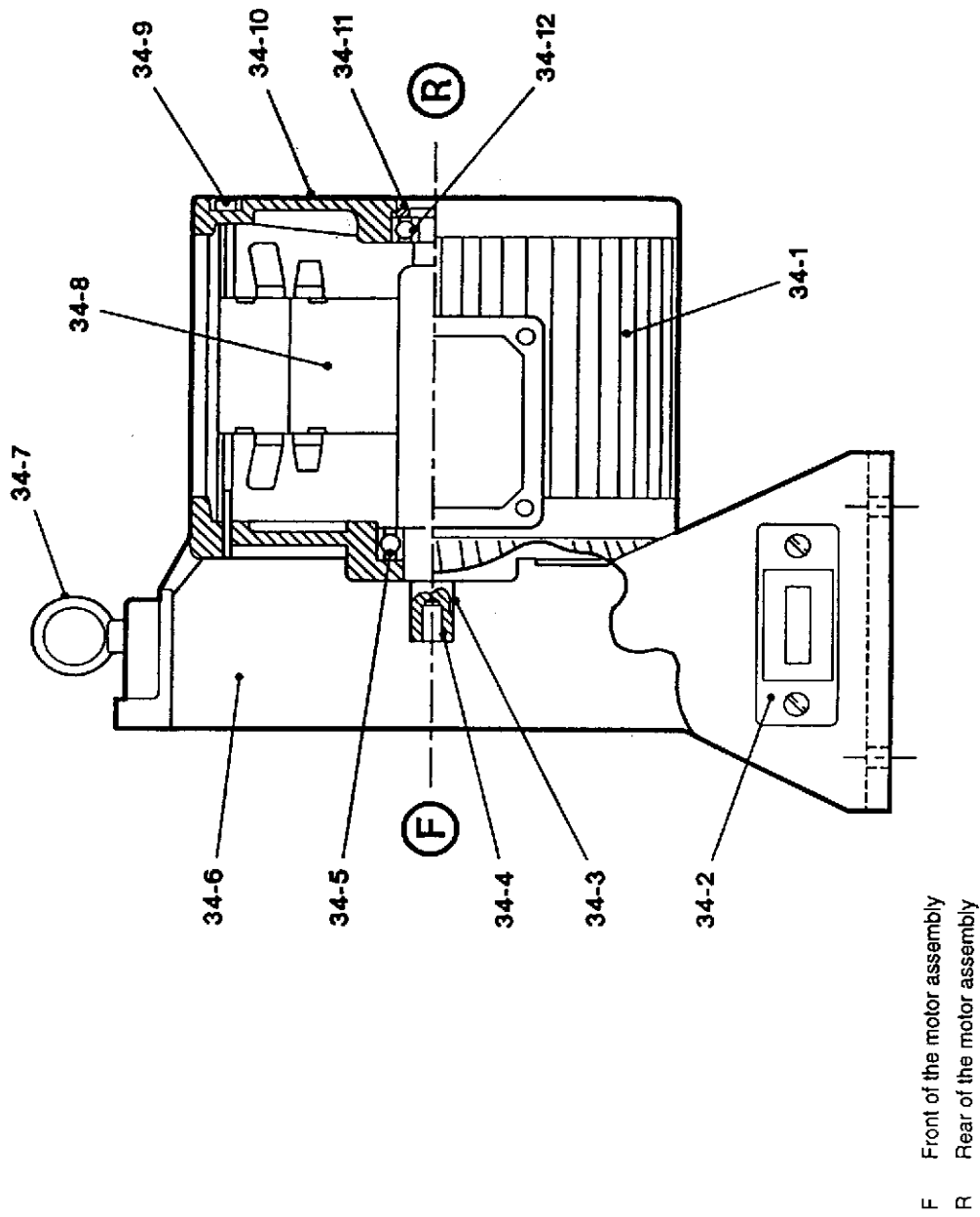
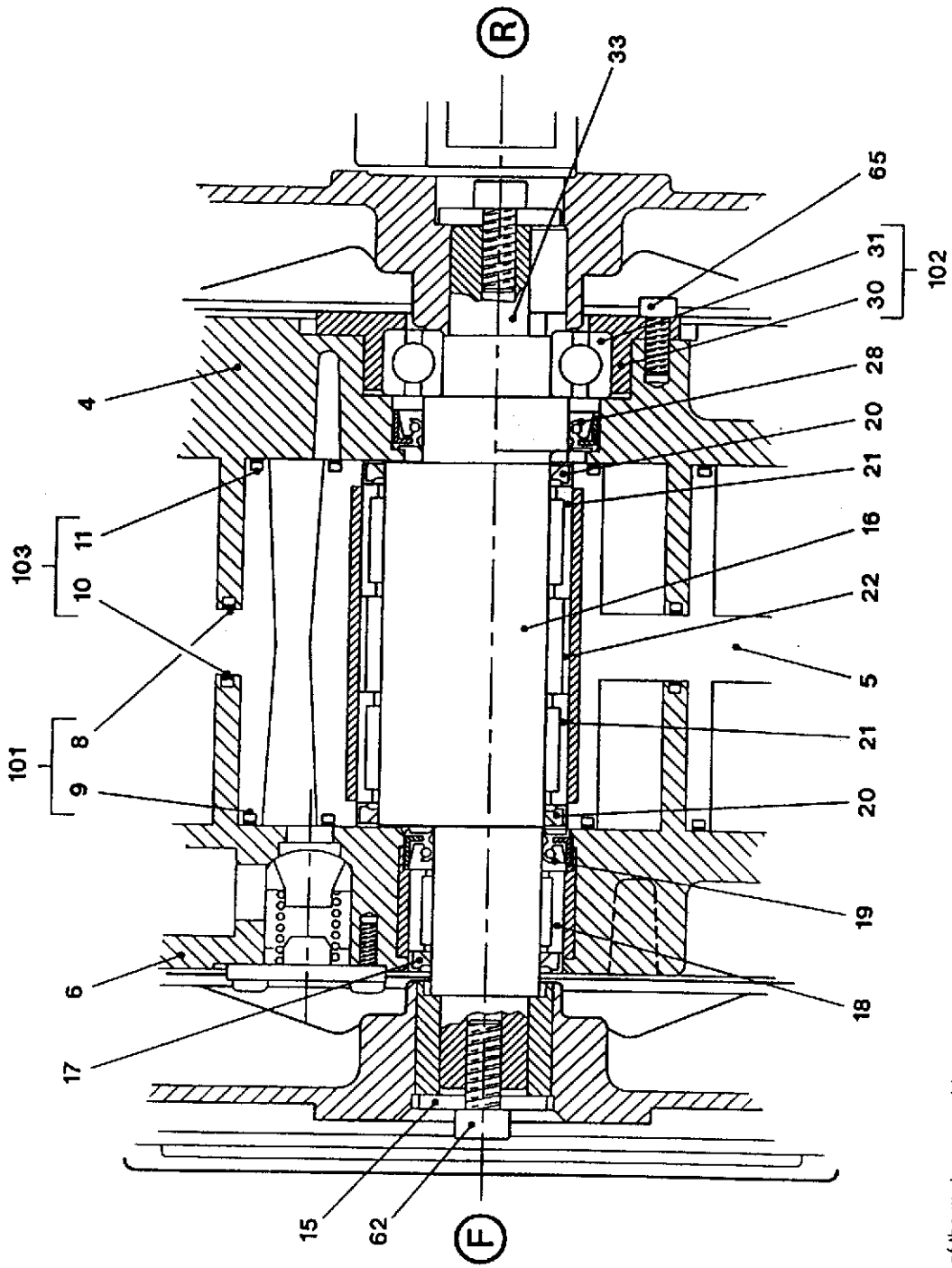


Figure 11 - Sectional view of the ESDP30A motor assembly (3-phase motor shown)



F Front of the motor assembly
 R Rear of the motor assembly

Figure 12 - Sectional view of the ESDP30A scrolls, crank shaft and bearings to show the seal orientations

Part Number	Description	Qty		Spares kit(s) or assembly	Item Number
		ESDP30	ESDP30A		
1	Base	1	1		
3	Dowel	4	4		
4	Rear fixed scroll - ESDP30	1	-		A710-03-013
4	Rear fixed scroll - ESDP30A	-	1		A710-03-113
5	Orbiting scroll	1	1		A710-03-015
6	Front fixed scroll - ESDP30	1	-		A710-03-014
6	Front fixed scroll - ESDP30A	-	1		A710-03-114
7	Cover plate	1	1		
8	Tip seal	1	1	2*,6	
9	Tip seal	1	1	2*,6	
10	Tip seal	1	1	2#,6	
11	Tip seal	1	1	2#,6	
12	Fan cover	1	1		A710-03-024
13	Front fan	1	1		A710-03-017
14	Parallel key	1	1		
15	Plain washer	1	1		
16	Crank shaft	1	1		A710-03-012
17	Grease seal 20 i.d.	1	1	1	
18	Needle bearing	1	1	2	
19	Shaft seal 20 i.d.	1	1	1	
20	Grease seal 30 i.d.	2	2	1	
21	Needle bearing	1 pair	1 pair	2	
22	Spacer sleeve	1	1		
23	'O' ring	1	1	1	
24	Inlet flange	1	1		A710-03-018
25	'O' ring	1	1		A710-03-027
26	Outlet flange - ESDP30	1	-		A710-03-019
26	Outlet flange - ESDP30A	-	1		A710-03-119

* Included in kit 2 as part 101

Included in kit 2 as part 103

Table 2 - ESDP30/ESDP30A parts list

Part Number	Description	Qty		Spares kit(s) or assembly	Item Number
		ESDP30	ESDP30A		
27	Cover plate	1	1		A710-03-016
28	Shaft seal 26 i.d.	1	1	1	
29	Rear fan	1	1		
30	Bearing case	1	1	2*	
31	Ball bearing	1	1	2*	
33	Parallel key	1	1		
34	Motor assembly	1	1	4,5	A710-03-022
34-1	Stator	1	1	4,5	
34-2	Hours meter	1	1	4,5	
34-3	Shaft	1	1	4,5	
34-4	Key	1	1	4,5	
34-5	Front bearing	1	1	2,4,5	
34-6	Coupling cover	1	1	4,5	
34-7	Lifting bolt	1	1	4,5	
34-8	Rotor	1	1	4,5	
34-9	Hex head bolt	4	4	4,5	
34-10	Motor end-plate	1	1	4,5	
34-11	Spring washer	1	1	4,5	
34-12	Rear bearing	1	1	2,4,5	
35	Inner race	3	3	3	
36	Cover plate	3	3		
37	'O' ring	6	6	3	
38	Needle bearing	3	3	3	
39	Crank pin	3	3	3	
40	Spacer sleeve	3	3	3	
41	Spacer sleeve	3	3	3	
42	Ball bearing	6	6	3	
43	Spring	1	-	3	A710-03-029
44	Outlet valve guide	1	-		
44	Outlet valve cover	-	1		

* Included in kit 2 as part 102

Table 2 - ESDP30/ESDP30A parts list (continued)

Part Number	Description	Qty		Spares kit(s) or assembly	Item Number
		ESDP30	ESDP30A		
45	Outlet valve spring	1	1	1	
46	Outlet valve stem	1	1	1	
47	'O' ring	-	1	1	
48	'O' ring	-	1		
49	Cap head screw M4 x 10	-	4		
50	Plug	1	1		
51	Washer	1	1		
53	Coupling element	1	1		A710-03-023
54	Coupling hub	1	1		
58	Inlet screen	1	1		A710-03-021
59	Circlip	1	1		
60	Dome head screw M4 x 10	-	3		
61	Dome head screw M6 x 12	4	4		
62	Cap head screw M6 x 16	2	2		
63	Cap head screw M8 x 22	12	12		
64	Dome head screw M5 x 8	4	4		
65	Cap head screw M5 x 12	3	3		
66	Cross head bolt M3 x 4	6	6	3	
67	Cross head bolt M4 x 5	6	6	3	
68	Cross head bolt M5 x 8	3	3	3	
69	Plug	1	-		
71	Plain washer M6	4	4		
72	Hex head bolt M10 x 25	4	4		
73	Washer M10	4	4		
74	Nut	4	4		
75	Grub screw	1	1		
76	Hex-head bolt M10	4	4		
77	Washer	4	4		
101	Tip seal (clockwise)	1	1	2	
102	Bearing kit	1	1	2	
103	Tip seal (anticlockwise)	1	1	2	
104	Crank pin assembly	3	3	3	

Table 2 - ESDP30/ESDP30A parts list (continued)

3

SPARES KITS AND ASSEMBLIES

Note: Spare parts for the pumps are listed in Tables 1 and 2 (see Section 2).

The spare assemblies and kits are listed in Table 3 and the contents of these assemblies and kits are listed in Tables 4 to 7. Use the service kits to service the pump every year, as follows:

- Use the Minor Service Kit only to service the pump at the end of the first, third, fifth and every subsequent 'odd' year of operation.
- Use the Major Service Kit together with the Minor Service Kit to service the pump at the end of the second, fourth, sixth and every subsequent 'even' year of operation.
- Use the Tip Seals Kit to replace the tip seals at any time, if there are signs of tip seal wear.

The motor bearings kit (Item Number A710-03-805) and the flexible coupling kit (Item Number A710-03-806) are upgrade kits. If required, use the ESDP30A Retrofit Kit (Item Number A710-03-028) to reconfigure an ESDP30A pump so that the pump outlet is next to the pump inlet, as on the ESDP30 pump. Use these kits as described in the instructions supplied with the kits.

Kit/assembly Number *	Kit	Item Number			Refer to Table
		ESDP12	ESDP30	ESDP30A	
1	Minor Service Kit	A710-02-820	A710-03-820	A710-03-821	4
2	Major Service kit	A710-02-800	A710-03-800	A710-03-800	5
3	Crank Pin Kit	A710-02-006	A710-03-006	A710-03-006	6
4	Motor assembly: 1-phase	A710-02-010	A710-03-010	A710-03-010	#
5	Motor assembly: 3-phase	-	A710-03-011	A710-03-011	#
6	Tip Seals Kit	A710-02-026	A710-03-026	A710-03-026	7

* Table 1 or 2 reference. # The component parts of the motor assembly are shown in Figures 2, 6 and 10.

Table 3 - Kits and spare assemblies

Part Number	Description	Qty		
		ESDP12	ESDP30	ESDP30A
17	Grease seal	1	1	1
19	Shaft seal	1	1	1
20	Grease seal	2	2	2
23	Stator 'O' ring	1	1	1
28	Shaft seal	1	1	1
44	Outlet valve guide	-	1	-
45	Outlet valve spring	1	1	1
46	Outlet valve	1	1	1
48	Exhaust flange 'O' ring	1	-	-
-	Grease syringe and grease	1	1	1

Table 4 - Contents of the Minor Service Kit

Part Number	Description	Qty
18	Needle bearing	1
21	Needle bearing	1 pair
34-5	Front bearing	1
34-12	Rear bearing	1
101	Tip seal (clockwise)	1
102	Bearing kit	1
103	Tip seal (anticlockwise)	1

Table 5 - Contents of the Major Service Kit

Part Number	Description	Qty	
		ESDP12	ESDP30/30A
35	Inner race *	2	1
37	'O' ring	4	2
38	Needle bearing	2	1
39	Crank pin *	2	1
40	Spacer sleeve *	2	1
41	Spacer sleeve *	2	1
42	Ball bearing *	4	2
66	Cross head bolt M3 x 4	4	2
67	Cross head bolt M4 x 5	4	2
68	Cross head bolt M5 x 8 *	2	1
104	Crank pin assembly *	2	1

* Parts 35, 39 to 42 and 68 are supplied assembled into part 104.

Table 6 - Contents of the Crank Pin Kit

Part Number	Description	Qty
8	Tip seal	1
9	Tip seal	1
10	Tip seal	1
11	Tip seal	1

Table 7 - Contents of the Tip Seals Kit