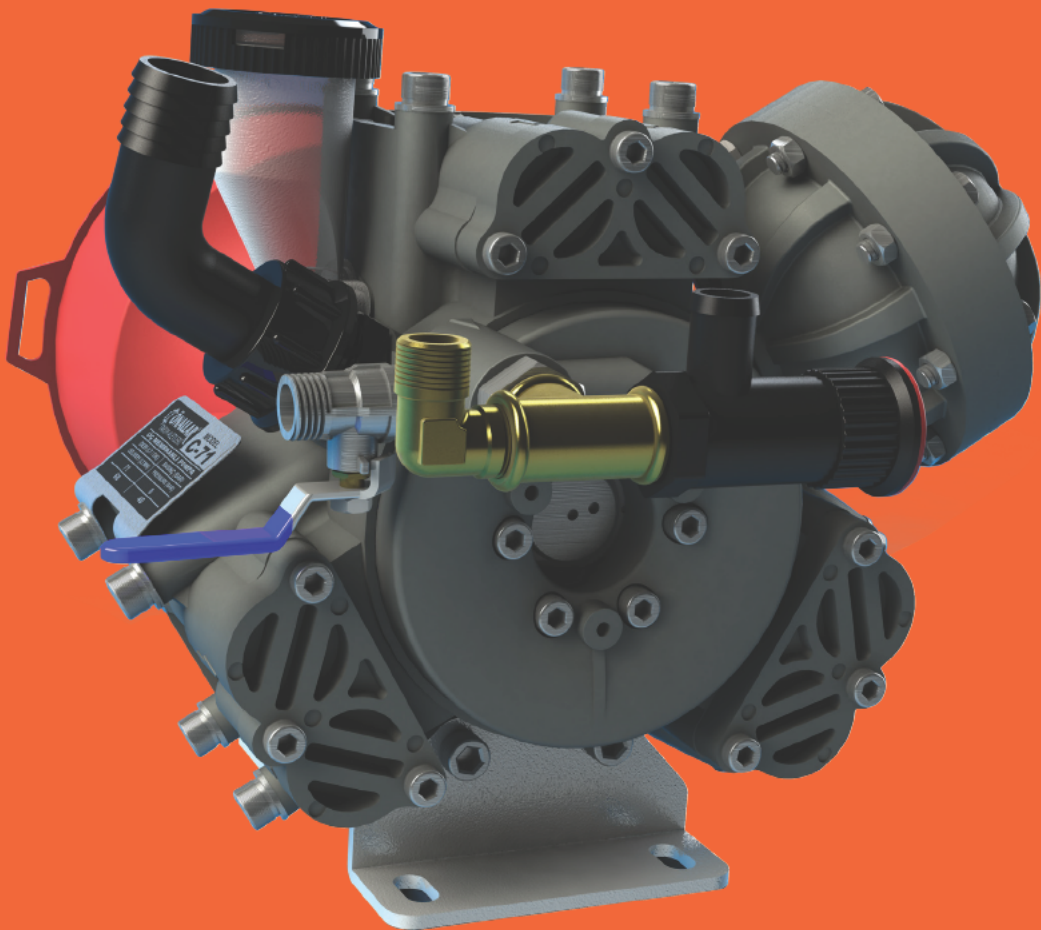


ÖNALLAR AGRICULTURAL PUMPS

MAINTENANCE & SAFETY & OPERATING MANUEL
AND
SPARE PARTS CATALOGUE



ÖNALLAR

MID: C8681C4
MID: 83DA9970

WORKING PRICIPLE

a- Before Using

1. The level in the oil tank should be between two marks. If the level is below bottom mark add 20w-30w engine oil.
2. Make sure there is no air leakage in the sucking circuit. Elbow nut hose clamps gasket and O-rings should be controlled and crewed. Otherwise pump efficiency decreases due to air leakage.
3. With praping up adjusting clip of the regulator and with working the pump for 1-2 minutes in zero pressure, supply the discharge all of the air.



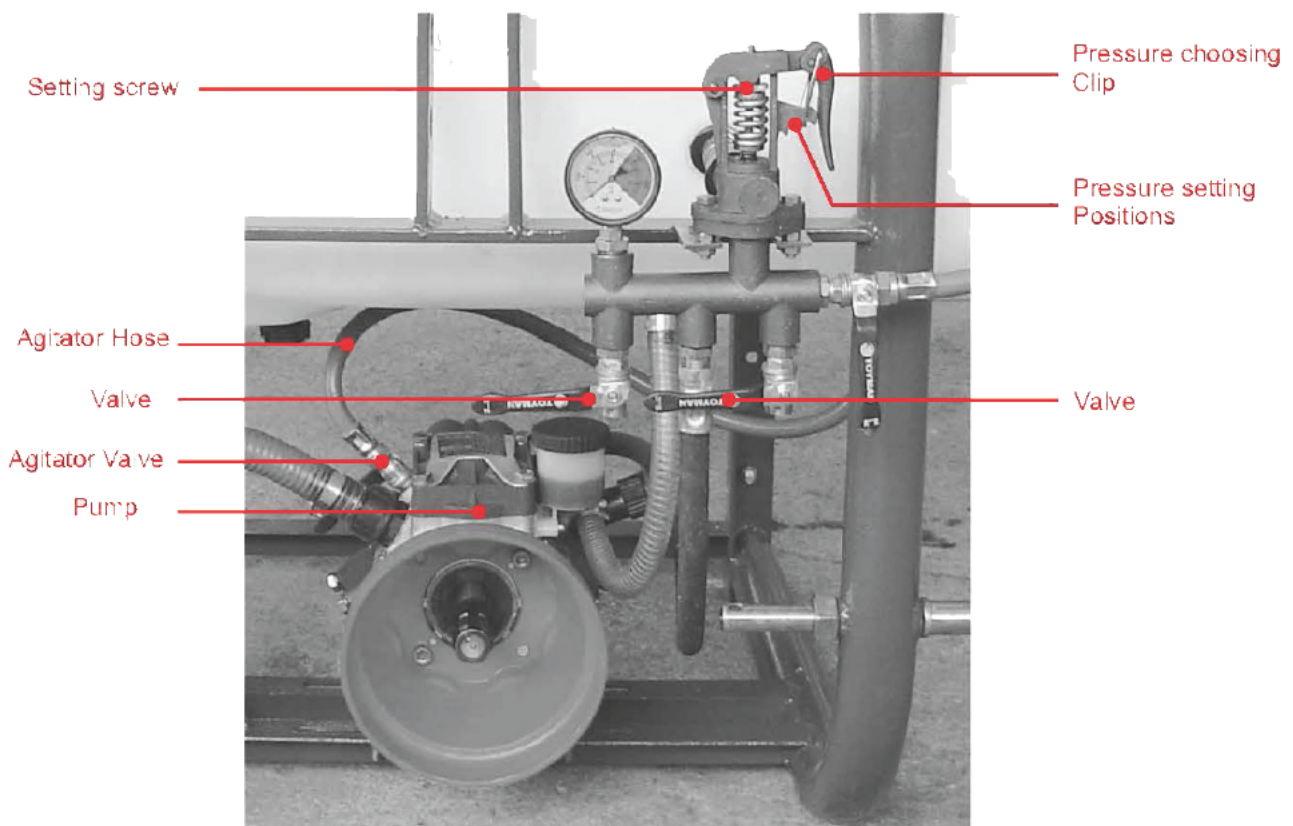
Oil Tank



Elbow Nut



Hose Clamp



a- After Using

1. The liquid which passes through the filter in the tank comes to pump via sucking hose. The liquid which leaves the pump with high pressure (0-30 bar) reaches regulator via pump pressure hose.
2. In hydraulic diaphragm pumps, all mechanical pumps are in an oil bath and mixture (water and pesticide) is separated by a diaphragm. This way, since the losses and wears caused by friction are minimized maximum pump efficiency is obtained.

SAFETY

1. Read also user manual of machine pump carefully.
2. Never exceed maximum pump pressure.
3. Do not start the pump without lubrication oil.
4. Do not remove security valve on pump pressure circuit. Do not change the setting. This valve is opened when the pump maximum pressure goes over 20% and empties the liquid into the tank.
5. When starting and stopping the pump use the regulator.
6. Do not give any damage to the pump when carrying the machine.

MAINTENANCE

Maintenance, repair and adjustments should definitely be made when the machine is not working. Safety mechanisms should never be removed.

a- Maintenance for end of the work

1. Clean your pump following the instructions given in pump manual.
2. Since parts of the pump in contact with the pesticides are made of resistant materials against the chemicals it doesn't need to remove and replace them other than regular maintenance.

b- Maintenance for end of the season

1. In the Winter, to save the pump, there should not be water in it. To remove the water in the pump, it will be enough to rotate the crankshaft. Besides, put some antifreeze in the pump to prevent freezing.
2. Lubrication of the pump is very important. Pump oil should be replaced at every 150 work hours or at the end of season. Remove the oil cap under the pump to empty the pump. Open the cap of oil tank and rotate the crankshaft till the oil tank gets empty. Fill the oil tank with 1 Lt of 20w/ 30w engine oil. When doing this rotate the crankshaft in right clockwise and counter clockwise directions to discharge air in the tank till it fills with the new oil. This process should be continued till oil without air bubbles is seen at the outlet.
3. To prevent the rust, do not leave the pump on the wet ground.
4. After washing the pump put some antifreeze in pump inlet and run the pump to suck antifreeze into it.

TROUBLESHOOTING

1. Pump discharging oily water or water and oil are mixing.

Cause: One or some of diaphragms are worn.

Remedy: Empty oil in pump, unmount the heads and replace the diaphragms. Fill 20 w / 30 engine oil to required level.

2. Pump is not sucking water

Cause: One or some of valve seating is not seating well.

Remedy: Check valve seatings, clean or replace if necessary.

3. Pump discharge flowrate is low or noise in pump.

a- Cause: Oil level is too low.

Remedy: Add oil.

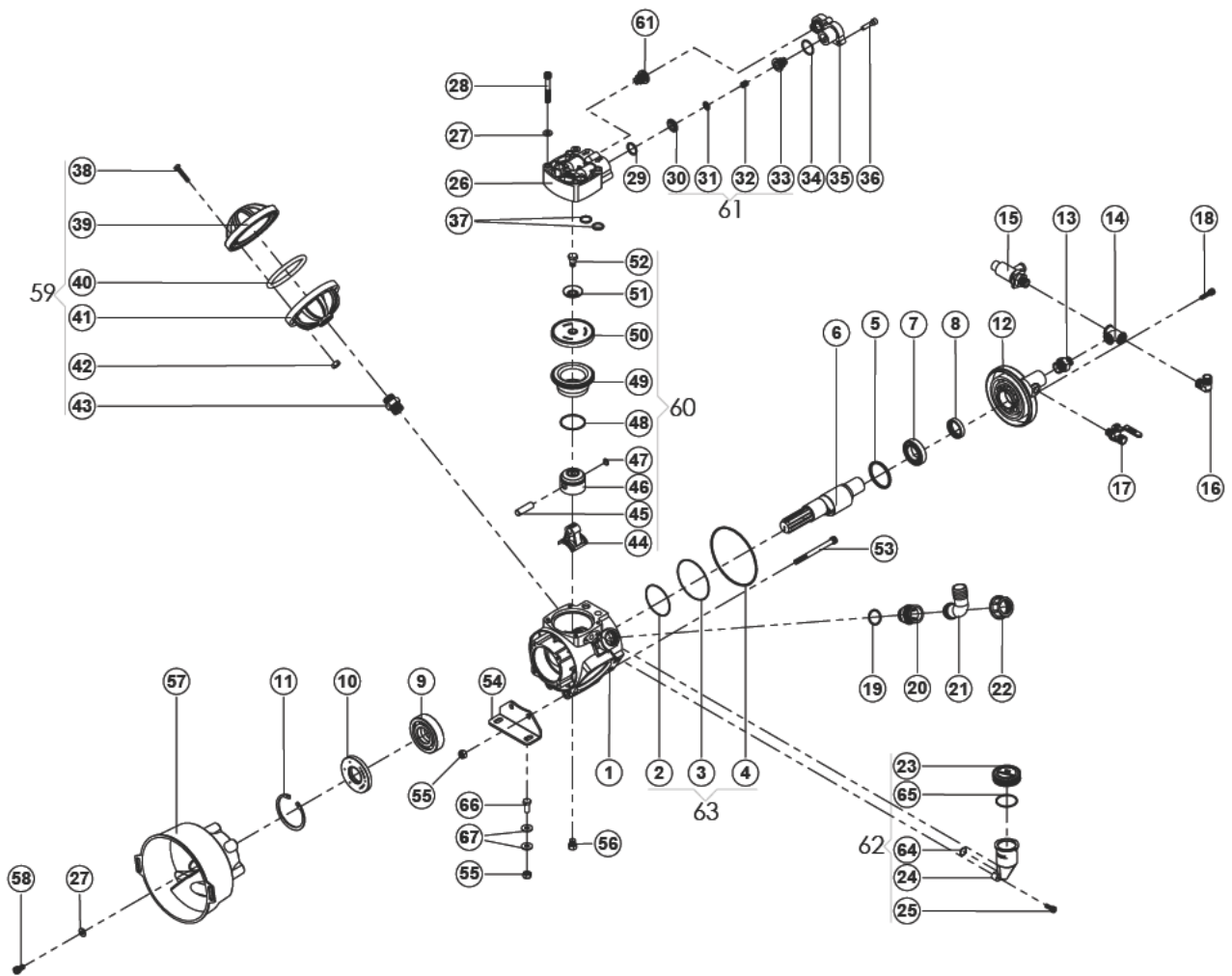
b- Cause: Valve o-rings are worn.

Remedy: Replace o-rings.

c-Cause: Manifold or another part is damaged.

Remedy: Replace this part.

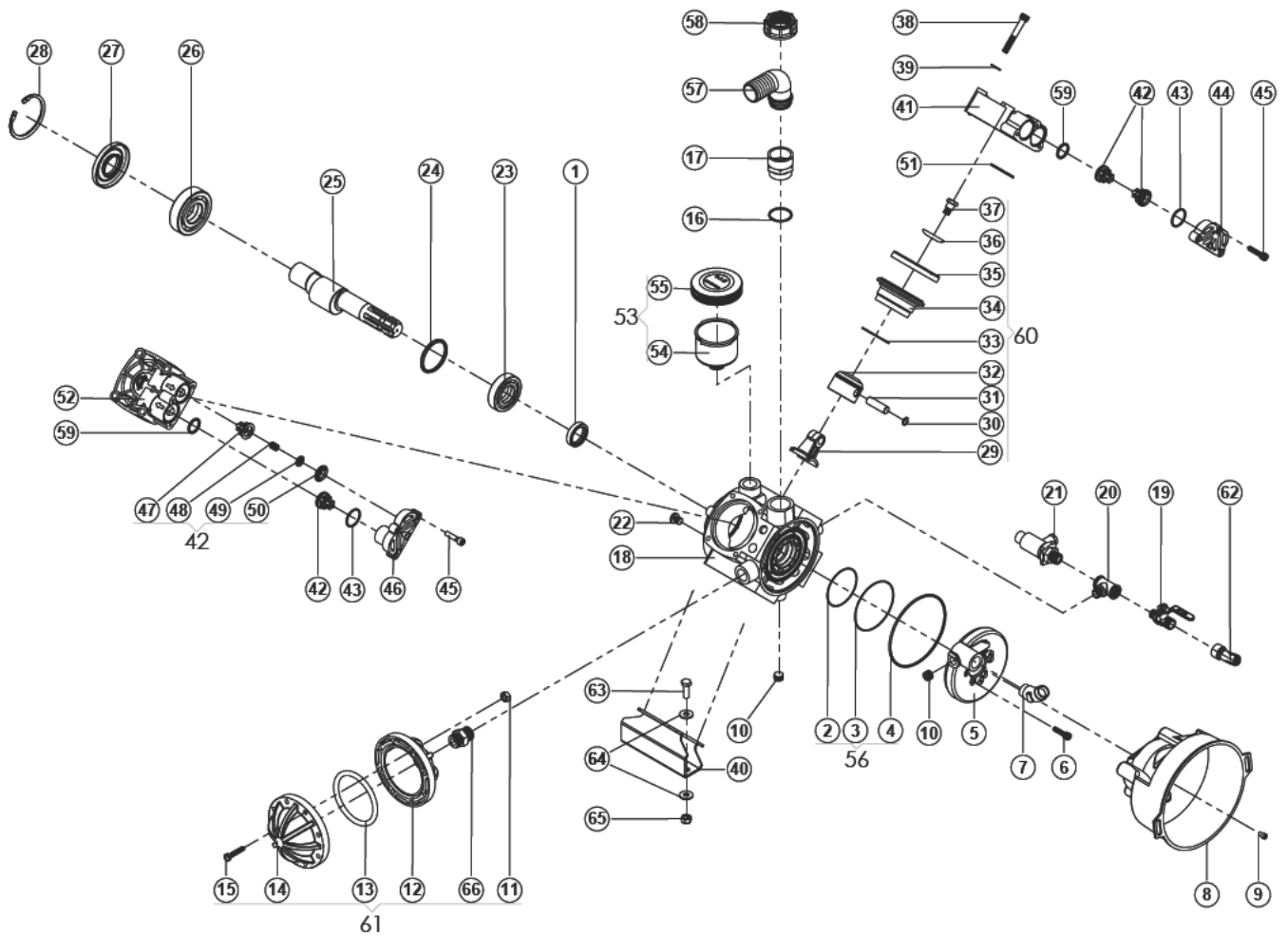
C-71 PUMP



NO	PART NO.	DESCRIPTION	PCS.
1	713040001	Body	1
2	7111040019	O-ring	1
3	7111040018	O-ring	1
4	7111040017	O-ring	1
5	7111040010	Ring	2
6	7113040002	Crankshaft	1
7	6207040002	Bearing	1
8	7111040016	Oil Seal	1
9	6308040003	Bearing	1
10	7111040021	Oil Seal	1
11	7111040022	Circlip	1
12	9613040008	Manifold	1
13	711040025	Nippel	1
14	7111040005	"T" Elbow	1
15	9613040014	Security Valve	1
16	7111040004	"L" Elbow	1
17	7111040023	Ball Valve	1
18	7111040020	Bolt Inbus	6
19	9613040013	O-ring	1
20	9613040011	Nippel	1
21	9613040021	Elbow	1
22	9613040022	Elbow Nut	1

NO	PART NO.	DESCRIPTION	PCS.
23	7111040602	Oil Tank Cap	1
24	7111040601	Oil Tank Body	1
25	7111040603	Bolt Inbus	2
26	7111040201	Pump Cover	3
27	7111040204	Washer	14
28	1070040015	Bolt Inbus	12
29	7111040105	O-ring	6
30	7111040102	Washer Cr-Ni	6
31	7111040104	Valve Sheet	6
32	7111040103	Spring	6
33	7111040101	Valve Cage	6
34	7111040207	O-ring	6
35	7111040202	Valve Cover	3
36	1035040205	Bolt Inbus	9
37	7111040203	O-ring	6
38	7111040305	Bolt	8
39	7111040301	Air Tube Top	1
40	7111040304	O-ring	1
41	7111040302	Air Tube Bottom	1
42	7111040306	Nut	8
43	7111040303	Nippel	1
44	9613040005	Connection Rod	3
45	7111040008	Piston Pin	3
46	7111040006	Piston	3
47	47214040007	Circlip	6
48	7111040009	Piston Circlip	3
49	7111040013	Sleeve	3
50	7111040014	Diaphragm	3
51	7111040012	Thrust Washer	3
52	7111040011	Thrust Bolt	3
53	7111040027	Bolt Inbus	2
54	7111040026	Holder Sheet	2
55	7111040028	Fibered Nut	6
56	9613040020	Oil Discharge Charge	1
57	7111040024	P.T.O. Casing	1
58	9613040018	Bolt Inbus	2
59	7111040300	Air Tube Kit	1
60	7111040400	Sleeve - Piston Kit	3
61	7111040100	Valve Kit	6
62	7111040600	Oil Tank Kit	1
63	9613040023	Manifold O-ring Kit	1
64	7111040604	O-ring	1
65	7111040605	O-ring	1
66	7111040606	Bolt	4
67	7111040607	Washer	8

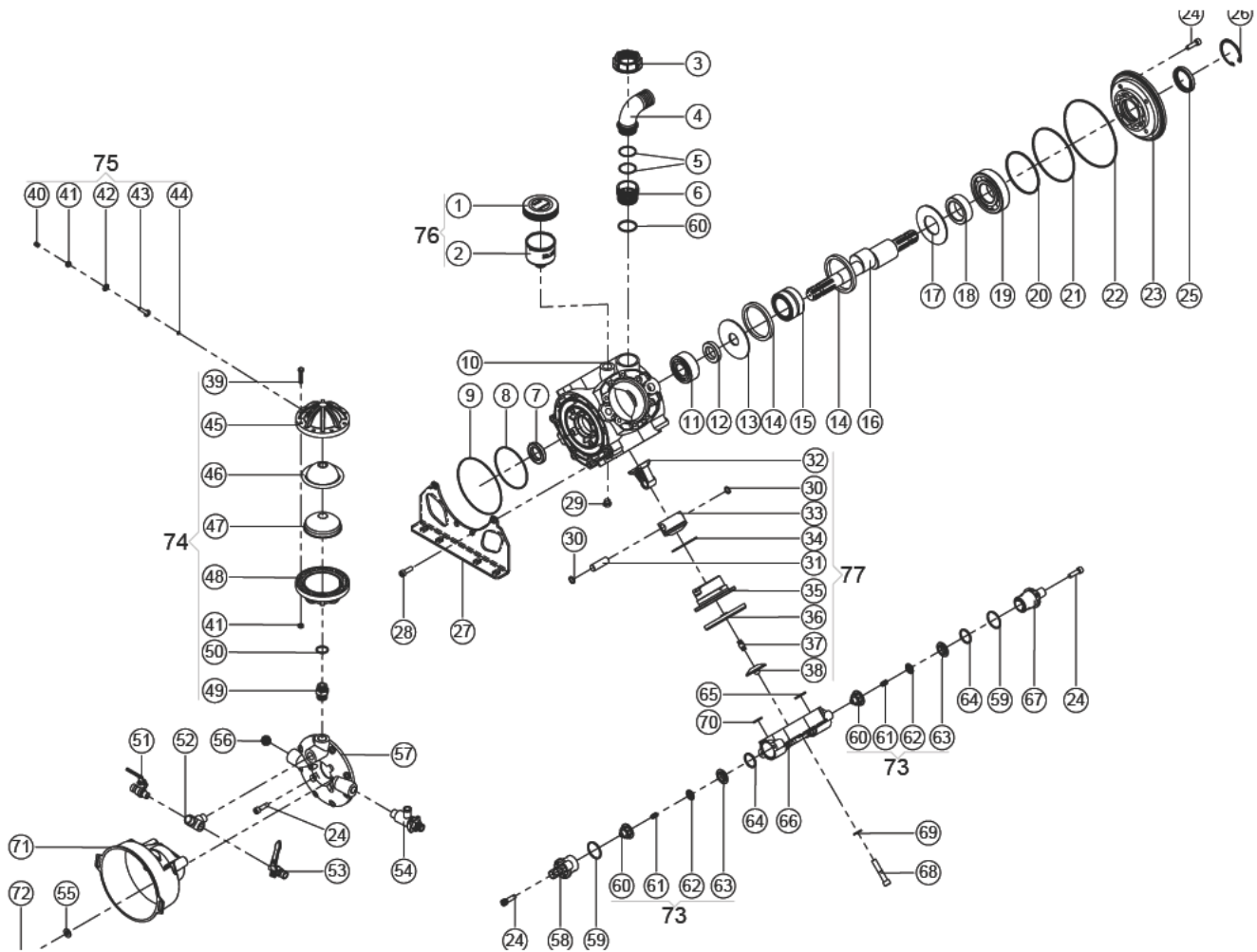
C-96 PUMP



NO	PART NO	DESCRIPTION	PCS.
1	7111040016	Oil Seal	1
2	7111040019	O-ring	1
3	7111040018	O-ring	1
4	7111040017	O-ring	1
5	9613040008	Manifold	1
6	7111040020	Nbolt Inbus	6
7	9613040017	Brass Elbow	1
8	7111040024	PTO. Casing	1
9	9613040018	Bolt Inbus	3
10	9613040015	Tap	2
11	7111040306	Nut	8
12	7111040302	Air Tube Bottom	1
13	7111040304	O-ring	1
14	7111040301	Air Tube Top	1
15	7111040305	Bolt	8
16	9613040013	O-ring	1
17	9613040011	Nippel	1
18	9613040001	Body	1
19	7111040023	Ball Valve	1
20	9613040012	"T" Elbow	1
21	9613040014	Security Valve	1
22	9613040020	Oil Discharge Valve	1

NO	PART NO	DESCRIPTION	PCS.
23	6207040002	Bearing	1
24	7111040010	Ring	2
25	9613040004	Crankshaft	1
26	6308040003	Bearing	1
27	7111040021	Oil Seal	1
28	7111040022	Circlip	1
29	9613040005	Connection Rod	4
30	47214040007	Circlip	8
31	7111040008	Piston Pin	4
32	7111040006	Piston	4
33	7111040009	Piston Circlip	4
34	7111040013	Sleeve	4
35	7111040014	Diaphragm	4
36	7111040012	Thrust Washer	4
37	7111040011	Thrust Bolt	4
38	1070040015	Bolt Inbus	16
39	7111040204	Washer	16
40	9613040019	Holder Sheet	2
41	9613040006	Pump Cover- Right	2
42	7111040100	Valve Kit	8
43	7111040207	O-ring	8
44	9613040007	Valve Cap - Right	2
45	1035040205	Bolt Inbus	12
46	7111040202	Valve Cap - Left	2
47	7111040101	Valve Cage	8
48	7111040103	Spring	8
49	7111040104	Valve Sheet	8
50	7111040102	Washer Cr-Ni	8
51	7111040203	O-ring	8
52	7111040201	Pump Cover- Left	2
53	9613040100	Oil Tank Kit	1
54	9613040101	Oil Tank Body	1
55	9613040102	Oil Tank Cap	1
56	9613040023	Manifold O-ring Kit	1
57	9613040021	Elbow	1
58	9613040022	Elbow Nut	1
59	7111040105	O-ring	8
60	7111040400	Sleeve-Piston Kit	4
61	7111040300	Air Tube Kit	1
62	9613040023	Elbow	1
63	9613040024	Bolt	4
64	9613040025	Washer	8
65	9613040026	Fibered Nut	4
66	9613040027	Nippel	1

C-145 PUMP



NO	PART NO	DESCRIPTION	PCS.
1	9613040010	Oil Tank Lid	1
2	9613040009	Oil Tank Bosity	1
3	1451304003	Elbow Nut	1
4	1451304004	Elbow Nut	1
5	1451304005	O-ring	2
6	1451304006	Nipple (Water Inlet)	1
7	1451304007	Oil Seal	1
8	1451304008	O-ring	1
9	1451304009	O-ring	1
10	1451304010	Pump Body	1
11	1451304011	Bearing	1
12	1451304012	Teflon Bushing	1
13	1451304013	Washer	1
14	1451304014	Connection Rod Ring	2
15	1451304015	Bearing	1
16	1451304016	Crankshaft	1
17	1451304017	Washer	1
18	1451304018	Teflon Bushing	1
19	1451304019	Bearing	1
20	1451304020	O-ring	1
21	1451304021	O-ring	1
22	1451304022	O-ring	1

NO	PART NO	DESCRIPTION	PCS.
23	1451304023	Water Inlet Manifold	1
24	1451304024	Screw (Inbus)	32
25	1451304025	Oil Seal	1
26	1451304026	Piston Ring	1
27	1451304027	Pump Connection Sheet	2
28	7111040020	Screw (Inbus)	8
29	1451304029	Tap	1
30	1451304030	Piston Ring	8
31	1451304031	Piston Pin	4
32	1451304032	Connection Rod	4
33	1451304033	Piston	4
34	1451304034	Piston Ring	4
35	1451304035	Sleeve	4
36	1451304036	Diaphragm	4
37	1451304037	Pressure Bolt	4
38	1451304038	Thrust Washer	4
39	7111040305	Screw (Inbus)	8
40	1451304040	Air Valve Lid	1
41	7111040306	Nut	9
42	1451304042	Air Valve Washer	1
43	1451304043	Air Valve Body	1
44	1451304044	O-ring	2
45	7111040301	Air Tube Top Lid	1
46	1451304046	Air Tube Rubber	1
47	1451304047	Air Tube Plastic	1
48	7111040302	Air Tube Lower Cover	1
49	7111040303	Air Tube Nipple	1
50	7111040304	O-ring	1
51	1451304051	Ball Valve DX	1
52	1451304052	Brass Angular Elbow	1
53	1451304053	Ball Valve SX	1
54	9613040014	Safety Valve	1
55	1451304055	Washer	2
56	1451304056	Tap	1
57	1451304057	Water Outlet Manifold	1
58	1451304059	Valve Lid "OUT"	4
59	1451304060	O-ring	9
60	1451304061	Valve Cage	8
61	1451304062	Spring Valve	8
62	1451304063	Rear Sheet Valve	8
63	1451304064	Cr-Ni Washer	8
64	1451304065	O-ring	8
65	1451304066	O-ring	4
66	1451304067	Pump Cover	4
67	1451304069	Valve Cap "IN"	4
68	1451304070	Screw (Inbus)	32
69	1451304071	Washer	32
70	1451304072	O-ring	4
71	7111040024	Shaft Conservation	1
72	1016040074	Screw (Inbus)	2
73	1016040075	Valve Kit	8
74	1016040076	Air Tube Kit	1
75	1016040077	Air Valve Kit	1
76	1016040078	Oil Tank Kit	1
77	1016040079	Sleeve - Piston Kit	4



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02.10.2014