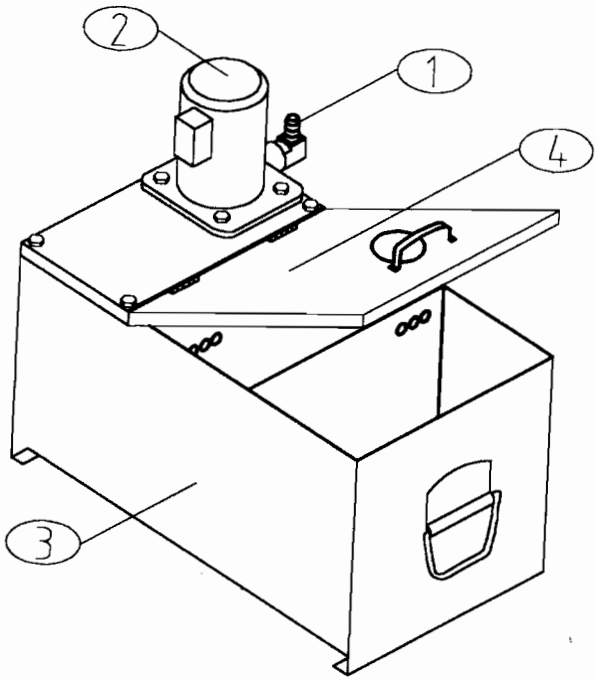
TABLE CONTENT

1. Coolant System

A. Main construction



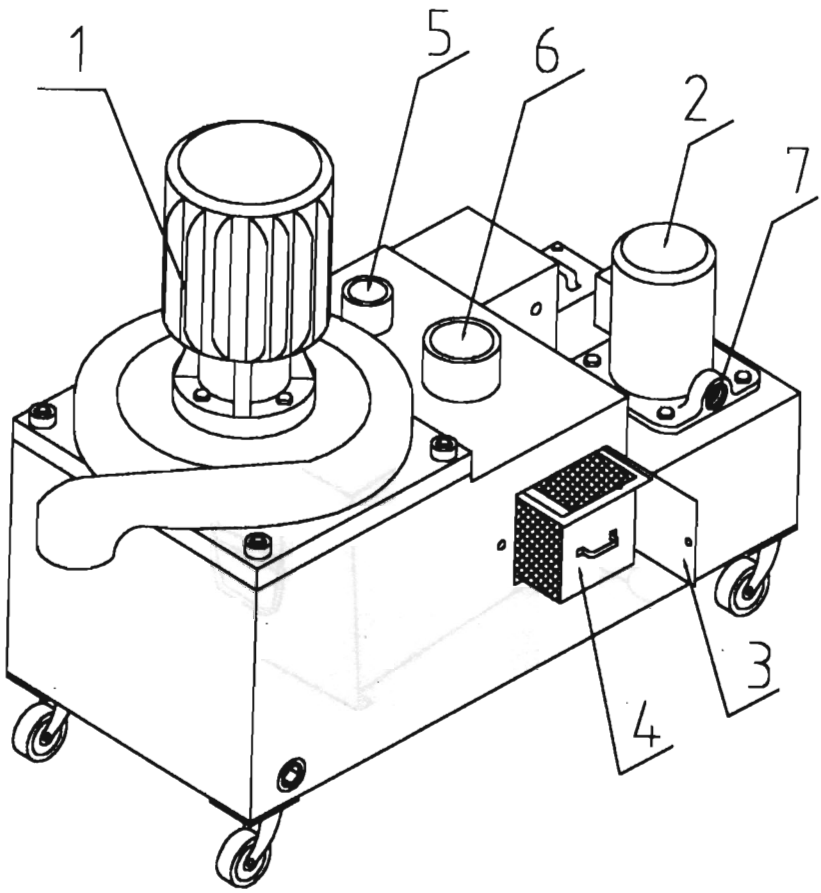
1. Coolant Hose Connector
2. Coolant Pump
3. Tank
4. Motor Fixed Plate

B. Operation and maintenance

1. Please check for correct voltage with the pump motor. If they are not the same, please rewire the motor to the correct voltage.
   To connect to AGS 618, find the terminals U5, V5, W5 inside the electric cabinet.
   To connect to Supra 618, find the terminals U2, V2, W2 inside the electric cabinet.
   After connecting to the cabinet, please check the rotation of the motor to see if it matches with the arrow on the motor. If it does not, please switch two wires on the motor to get the correct rotation.
2. If you use the coolant system often, please clean out the residue every week. This is done to prevent coolant overflow thee tank.
3. If the coolant tank does not have enough coolant, please do not leave the pump motor on, as it might damage the fan blades on the pump.
4. If the machine is not in operation, please shut off the coolant system electronically. Turn off the valve dose not mean the pump is off!

2. Dust Suction and Coolant System

A. Main Construction



1. Dust Suction Motor
2. Coolant Pump
3. Filter Access Door
4. Filter Net
5. Coolant Return Pipe
6. Dust Inlet Pipe
7. Pump Outlet

Coolant tank capacity: 13 gallons
Suction motor: ½ HP
Coolant Pump: 1/8 HP

B. Installation

1. Connect the power source: Please verifies that system has been pre-wired to the correct voltage. For Supra series, AGS 618 and AGS 1020AH, the voltage of the power supply must be the same as the

coolant system. You can either connect the coolant system to the terminals U5, V5, W5, or correct terminals which are located inside the electric cabinet or to the power supply directly.

2. Check the direction of coolant motor, correct direction is indicated by an arrow on coolant motor. If the direction is incorrect, change any two power supply lines to reverse the motor direction. Do not run the coolant pump until coolant has been added, because the heat generated by the pump will damage the coolant pump.

WARNING!

Turn off coolant valve does not mean the coolant pump is off! To stop coolant pump from burning up, please turn off coolant pump electronically.

3. Fill with coolant mixture at the coolant return pipe (refer to fig. 1). The maximum capacity of the tank is 13 gallons. A transparent, anti-high pressure, soluble type coolant is recommended.
4. Connect the coolant drain hose from machine to item 5 (fig 1).
5. Please connect the dust inlet hose from the dust connect of the wheel guard to the inlet pipe (item 6) on the system.

C. Maintenance

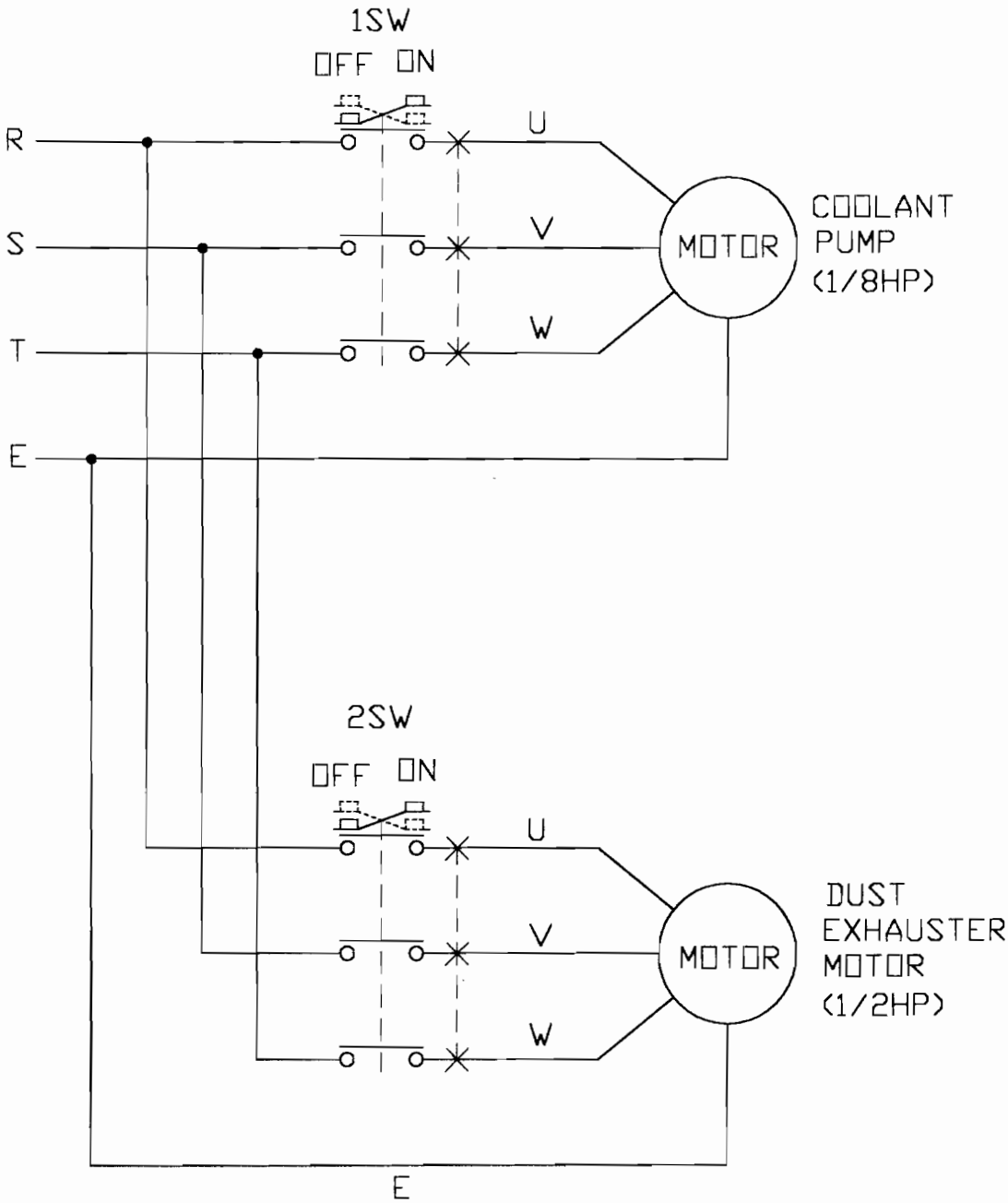
1. Please clean the dust suction filter from time to time to keep the system clean. To clean the filter net, please open the filter access door and remove the filter net. Clean the filter net with warm water and soap, and blow it with air gun to get rip of the water residue.
2. To change the coolant, please remove the plug to drain the dirty coolant out of the tank.

Note: a. Do not ever run the dust collector and coolant pump at the same time.

b. Don't ever run coolant onto grinding wheel with wheel guard off.

c. Connect coolant hose from the steel pipe on the wheel guard to the coolant pump outlet (item 7). On same models, connect coolant hose to the steel pipe, which is located on the lower right hand side of the column.

D. Electric Diagram for Coolant system and Dust Suction & Coolant System



3. Coolant with Paper filter System

A. Main Construction

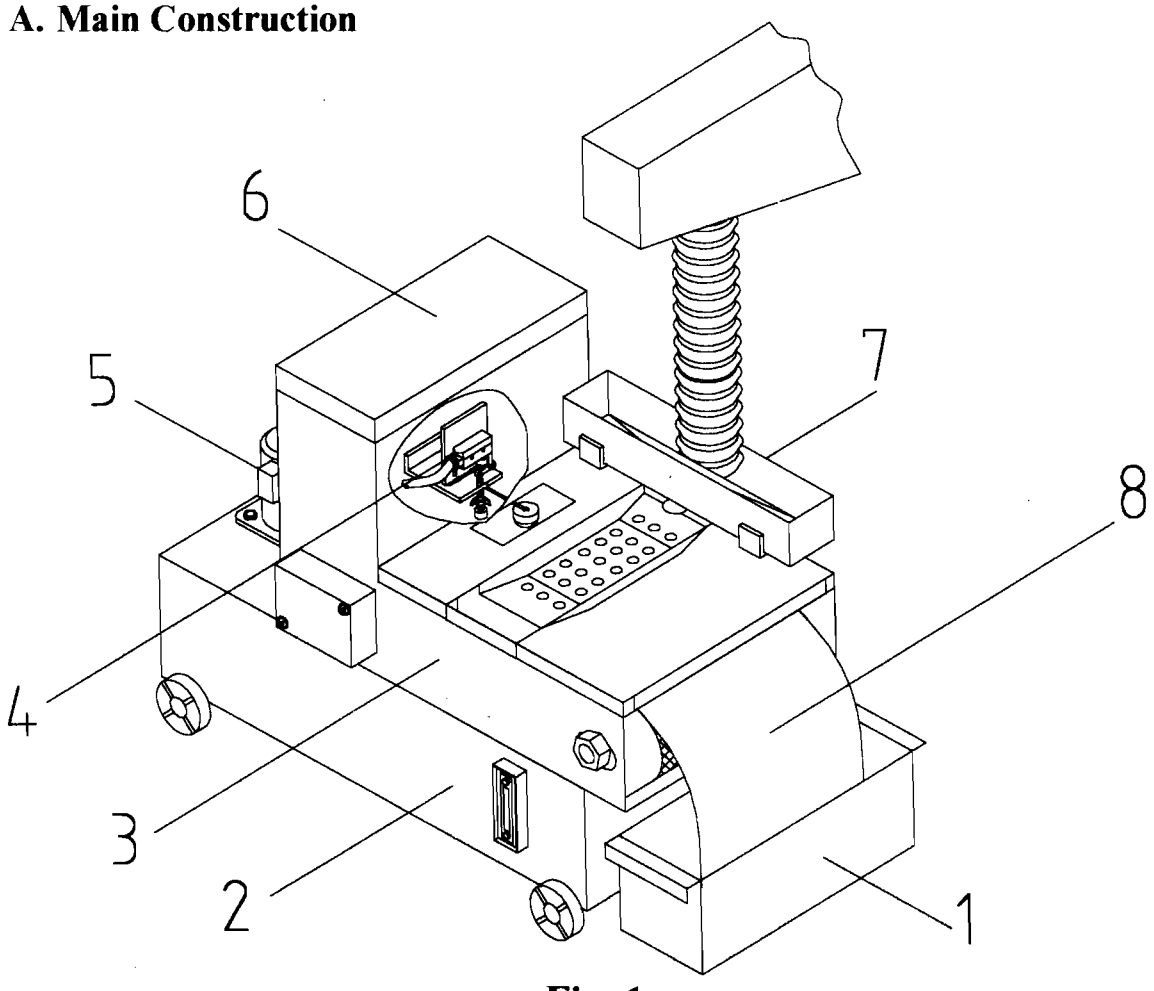


Fig. 1

1. Paper Collecting Box
2. Water Tank
3. Paper Filter Body
4. Limit Switch
5. Coolant Pump
6. Filter Paper Room
7. Inlet water Tank
8. Filter Paper

The coolant system is divided into three divisions. The filter paper room and the inlet water tank are located in upper division. The middle division that include plate filter and paper filter is used to collect the residue from grinding. The lowest division supplies filtrated coolant to the grinding work piece. Each leg of the coolant system is equipped with wheel; hence the coolant system is easy to be removed. There is a draining plug located in the lowest division. This allows us to change coolant easily.

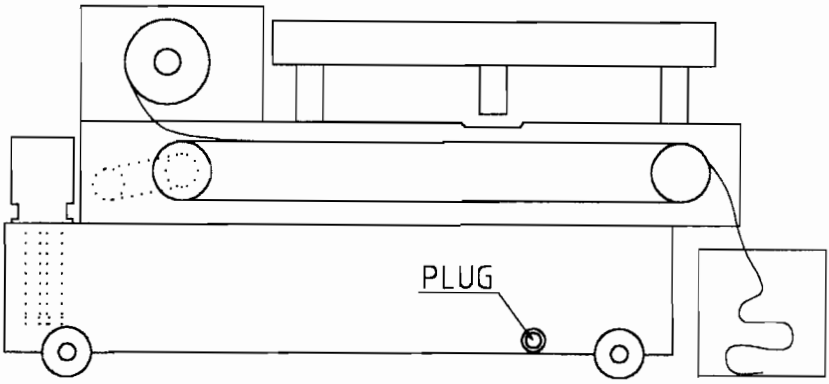


Fig. 2

The coolant will flow to the inlet water tank, when it returns from the machine. Then it goes into the plate filter and paper filter. At there, it is filtrated and bubbly cleaned, then it flows into the lowest division (the main water tank).

Note: If this paper filter system comes with a magnetic separator system, coolant will go from inlet water tank through the magnetic separator, then goes into the plate filter and paper filter.

Many residues are collected on the paper filter; hence the coolant does not flow through the paper filter easily. When coolant water is accumulated on the paper filter to a certain level, the rod of floating bowl will engage the limit switch to activate the gear-chained motor. This will drive the chain wheel in motion. In turn, it pushes the filled paper filter out, and the grinding residues would fall into the collection box. The coolant, then, is again flow easily through the paper filter. Thus a new cycle is begin

B. Operation

1. The coolant system is usually located at the left side of the machine as show in figure 3. First, please connect the hose of coolant pump to the steel pipe on the side of wheel guard or at the lower right hand side of column. Then connect the power cable of the coolant pump to the plug or to the terminals- U5, V5, W5 in the electric cabinet.
2. Please add uniformly mixed coolant to the water tank. First, add 1/3 water into the tank, pour in the soluble coolant, then you fill water to the top level of the tank. Finally stir it thoroughly and make sure they are mixed uniformly. We suggest the mixing ratio of water based coolant is 1/60 to 1/80, and please use a visible soluble, high pressure, durable, and non-bubbly coolant.
3. To use the coolant system, please turn on the select switch or push the button to activate the coolant pump. Coolant is pump out and flow through coolant hose, steel pipe, valve, and coolant nozzle to the work piece or grinding wheel.
4. To turn off the coolant system, please select coolant off position, or push the "off" button on the control panel.

Note: 1. When starting the coolant pump, please check the rotation of pump with the arrow indicated on the pump itself. Correct the pump direction if necessary.

2. Don't start the coolant pump unless the water tank is filled with coolant.
3. Please don't supply coolant to the grinding wheel, when the wheel is stopping or starting, because supplying coolant to it will cause wheel to become unbalanced. Thus cause damage to the spindle.

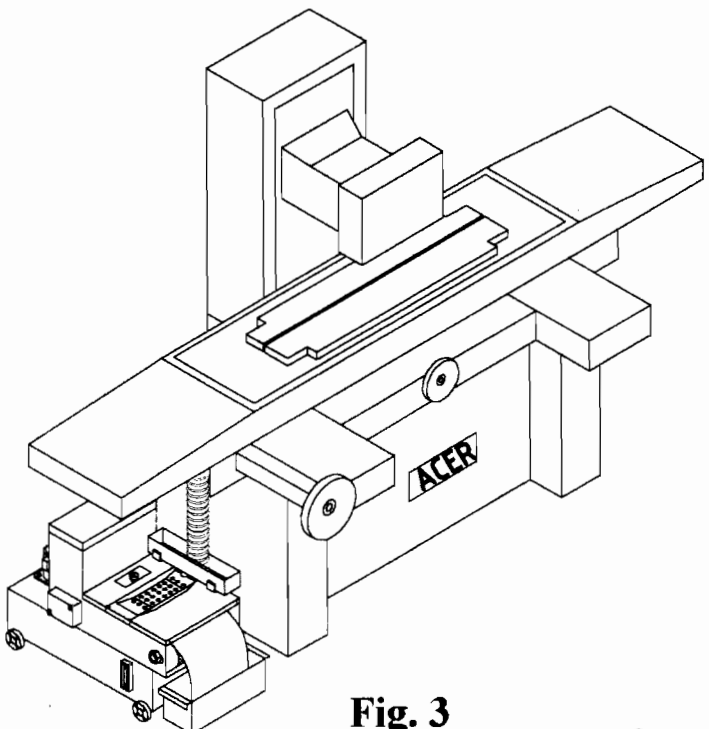


Fig. 3

C. Maintenance:

1. **To replace coolant, please take apart the paper filter system according to number 1 through 8 as shown on figure 4.**
2. **Remove draining plug (item 9) to drain out residues and coolant, then please wash the tank with cleaning agent to prevent germination and odor.**
3. **Add uniformly mixed coolant onto water tank, then re-assemble the paper filter system with the procedure opposite of the number.**

Note: 1. Please frequently clean item 2 and item 4. This is to increase the smoothness of the coolant flow.

2. Please check PH value of the coolant often. This is to make sure the germ level and contamination level are to the minimum, and this will also increase the life of coolant and quality of the work piece.

3. Please replace the coolant every three months as we suggested.

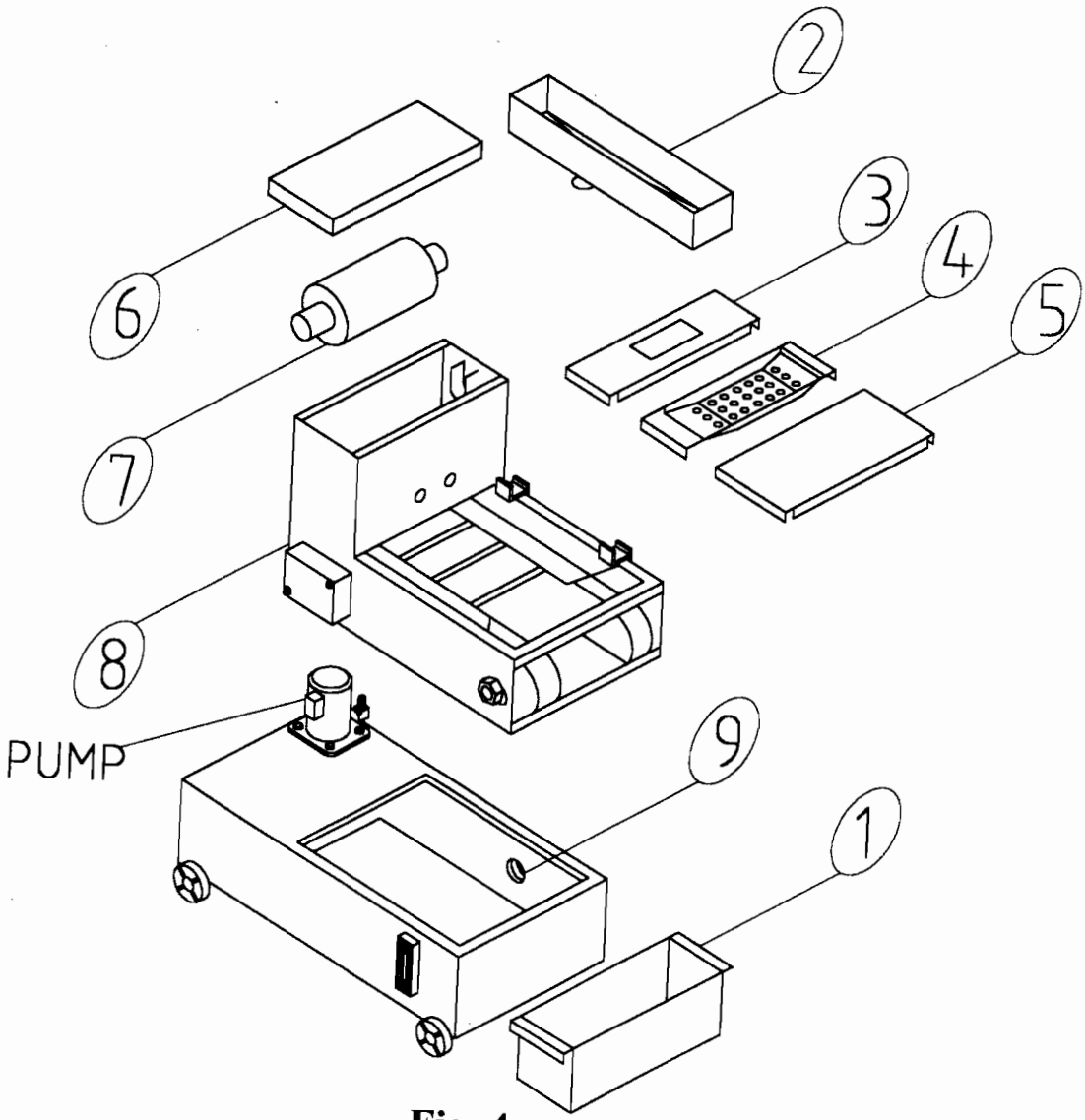


Fig. 4

D. Paper Replacement

Replace paper filter as shown in figure 5.

1. **First remove cover of paper room (item 1), and then inlet water tank (denoted by item 2, 3, 4 and 5).**
2. **Place the roll of paper filter on the "U form" bracket of paper room. Then pull paper through wire net to the residue collection box according to the arrow direction.**
3. **Put the items 5, 4, 3, 2 and 1 back in sequence.**
4. **The paper filter will move out when the gear (paper) transmission motor is started.**

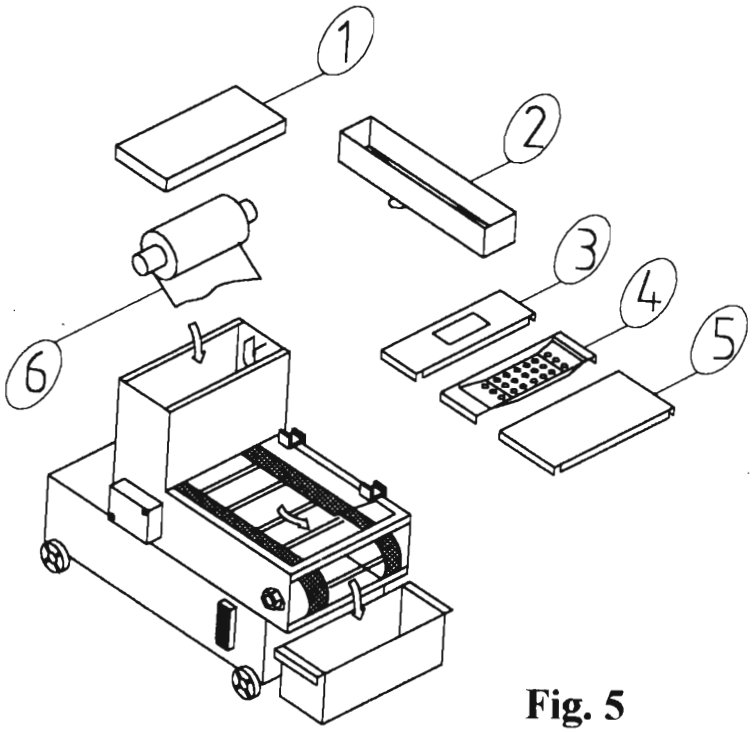
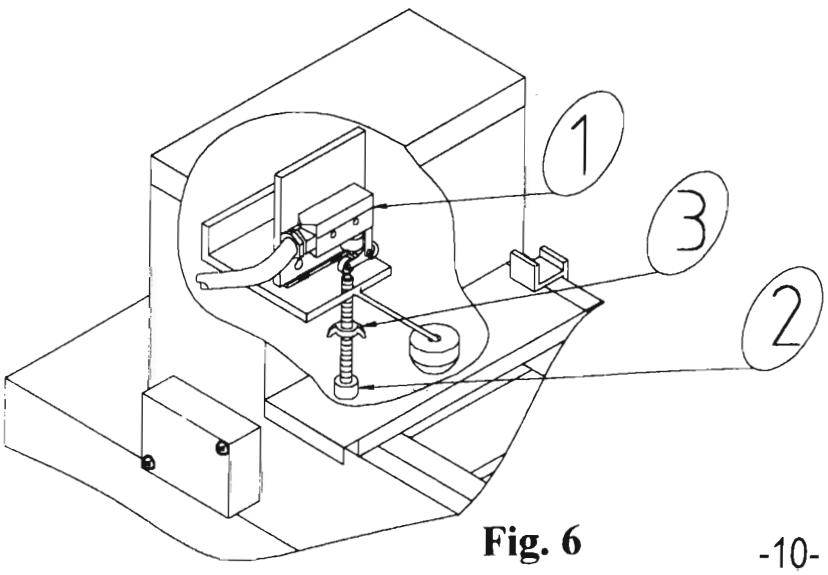


Fig. 5

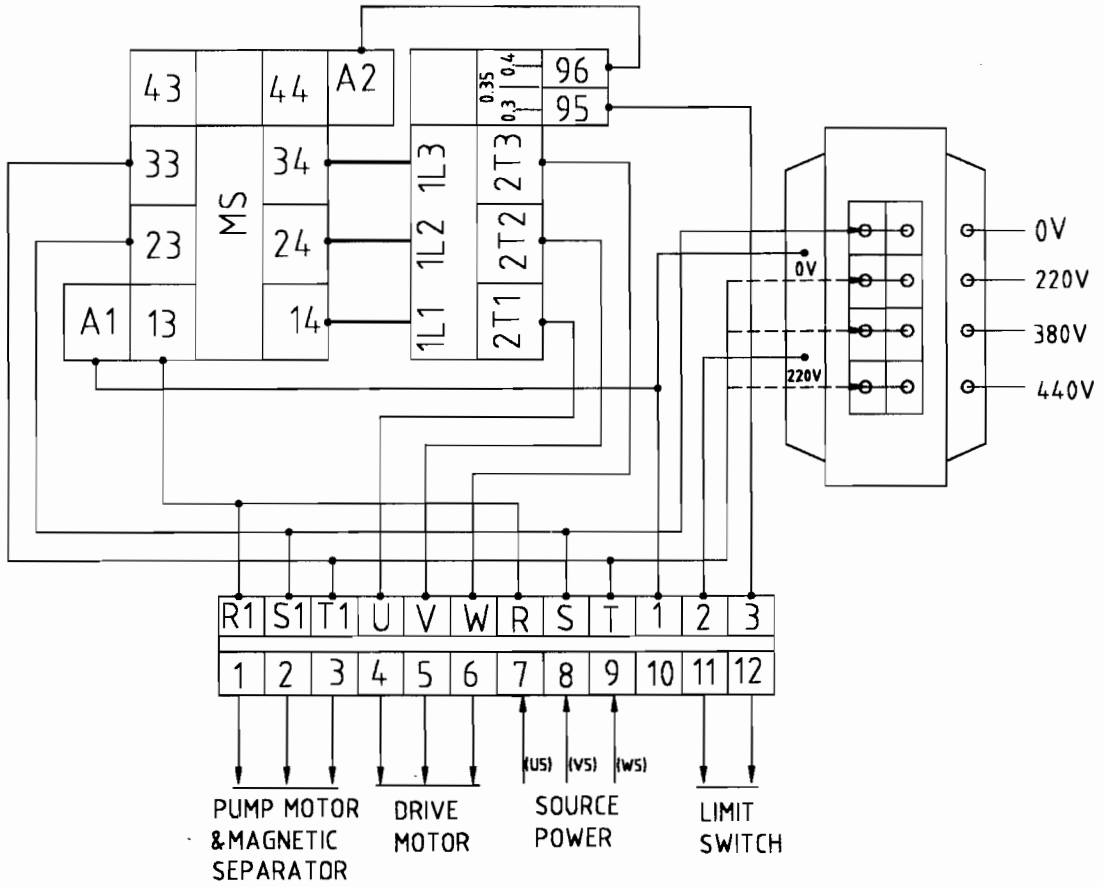
Note: The amount of residue collected on the paper filter can be increased, when the adjusting knob is adjusted up as shown in figure 6.

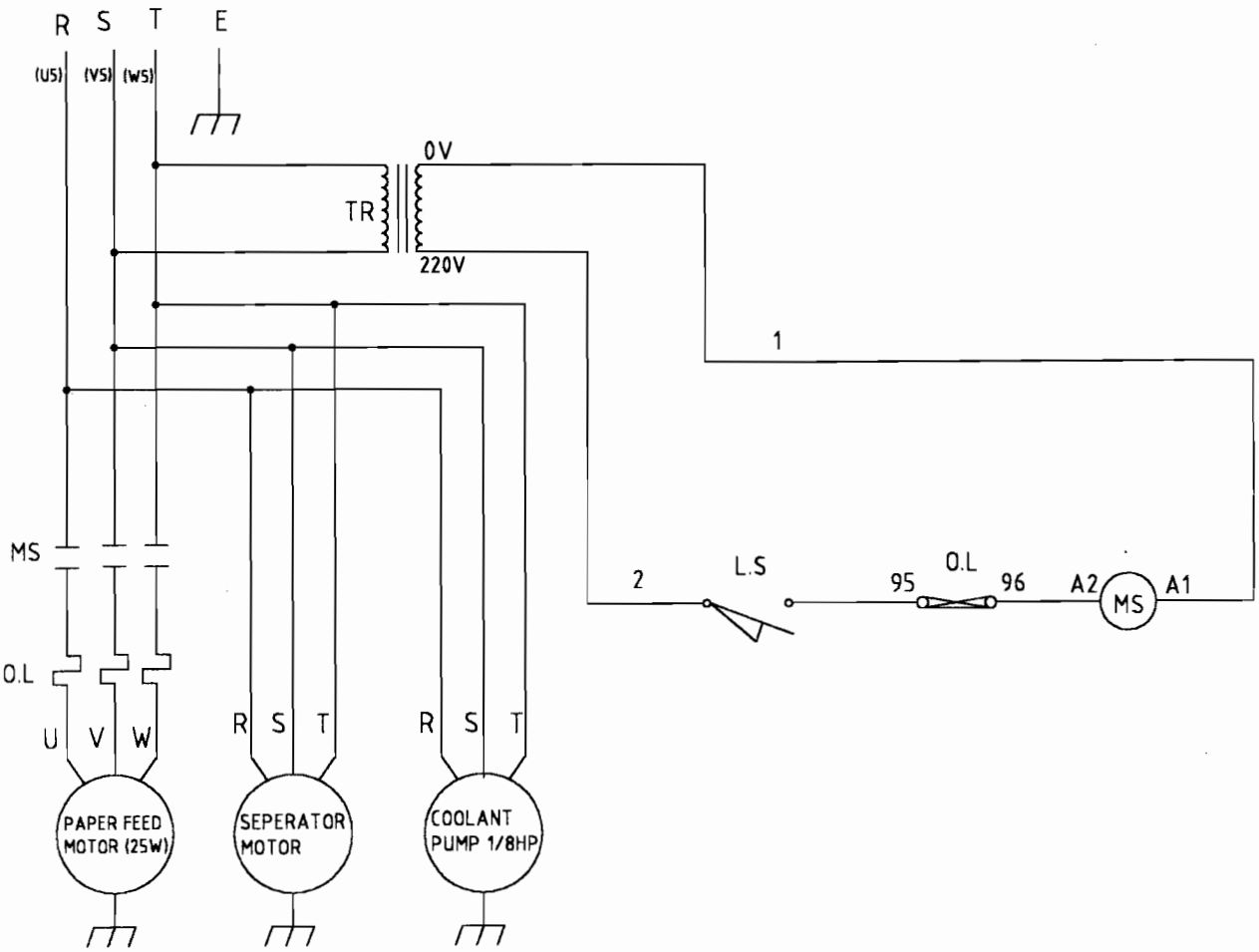


1. **Limit switch**
2. **Adjusting knob**
3. **Locking nut**

Fig. 6

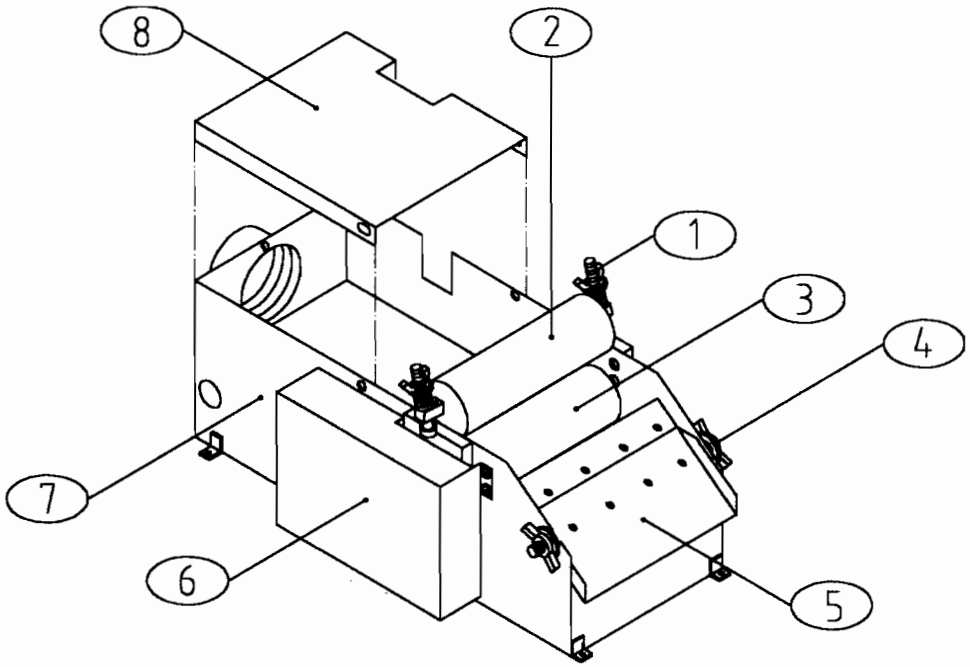
E. WIRING DIAGRAM





4. Magnetic Separator

A. Main construction



1. Wing Nut
2. Rubber Coated Roller
3. Magnetic Roller
4. Wing Nut
5. Residue Flowing Plate
6. Wheel Chain Cover
7. Tank
8. Cover

B. Operation and maintenance

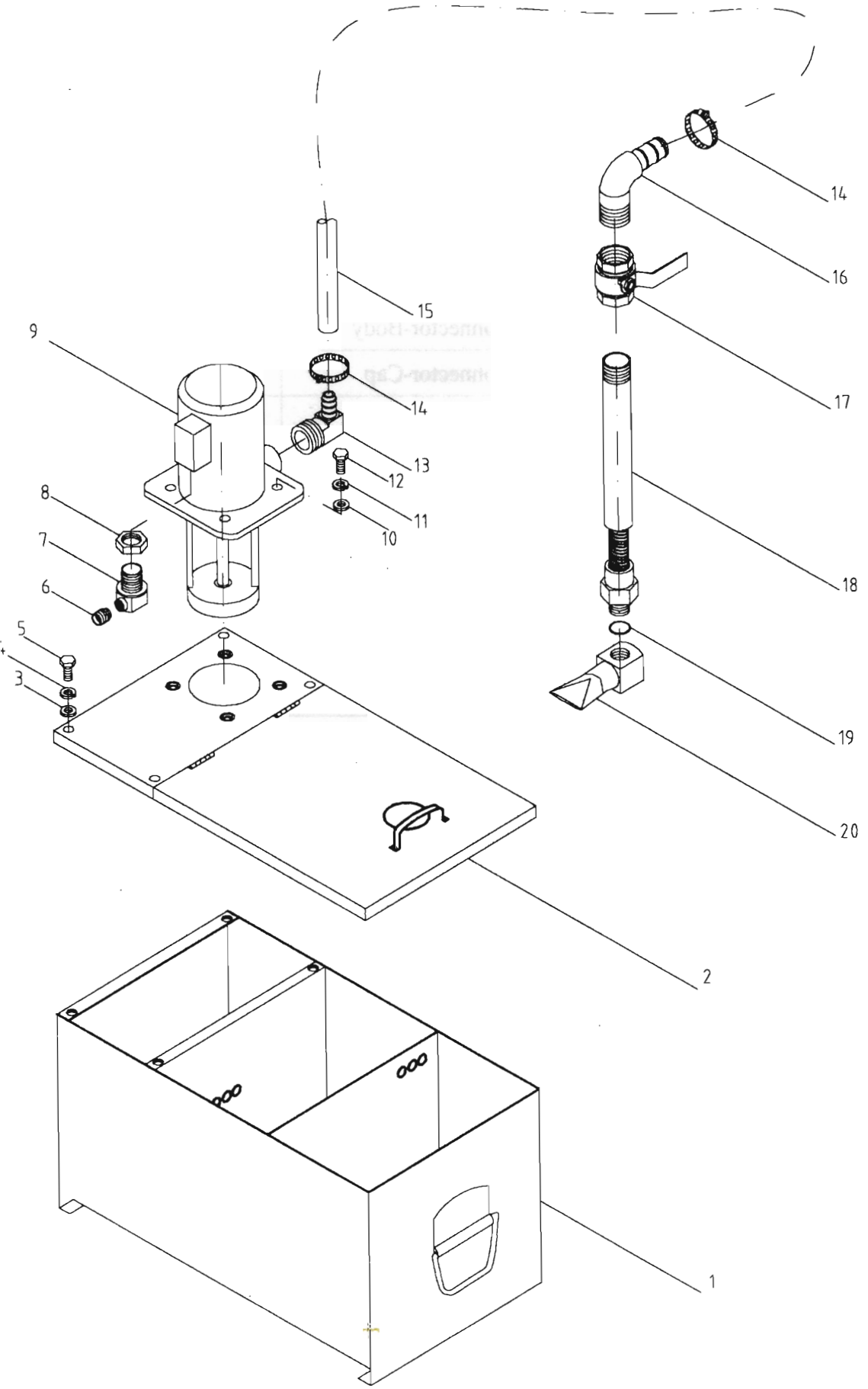
1. Please check the voltage of the power source and the gear motor, make sure they are the same. Otherwise you need to replace the gear motor with the correct voltage one.
2. After connecting to the power source, please check the rotation of the magnetic roller. If the rotation is reversed, please switch any two input power wires to correct rotation.
3. To set the pressure on the rubber coated roller: Unscrew the two wing nuts (item 1) on the figure, then slowly screw in the wing nut until they touch the springs slightly. Finally, rotate the wing nuts clockwise three more times to get the correct pressure setting. The pressure on the rubber coated roller is now set.
4. Tank (item7) will need to be cleaned every month. This will reduce the accumulation of residue on the system.

5. MECHANICAL DRAWINGS & PART LIST

TO ORDER, PLEASE RERIFY

1. MACHINE MODEL,
2. ITEM NUMBER
3. PART NAME
4. QUANTITY
5. SERIAL NUMBER
6. YEAR OF PRODUCTION
7. EDITION OF MANUAL

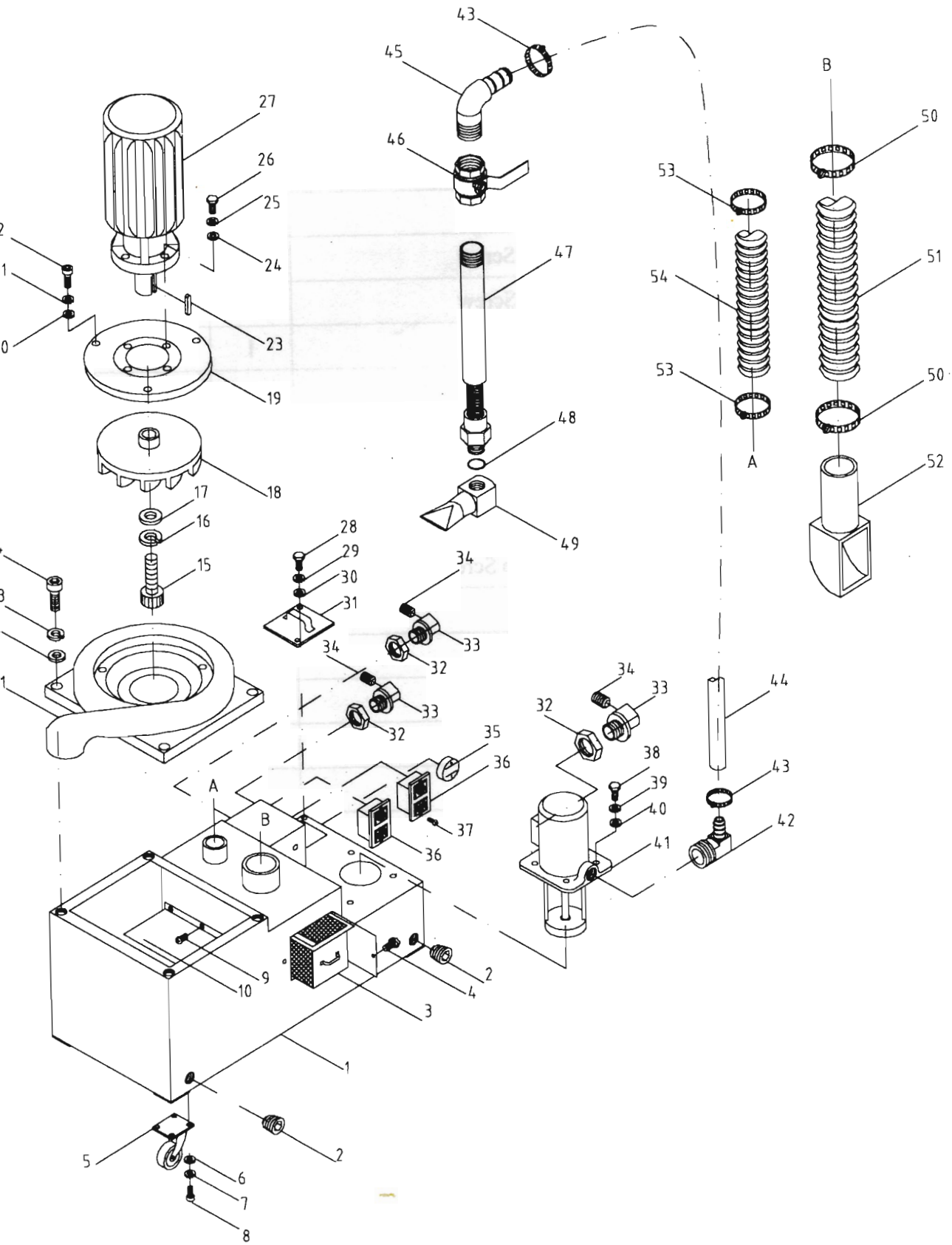
6. COOLANT SYSTEM



COOLANT SYSTEM

ITEM NO.	PART NO.	DESCRIPTION	Q'TY	SIZE
1.	GOP-1020-780	Tank	1	
2.	GOP-1020-781	Motor Fixed Plate	1	
3.	GOP-001	Washer	4	ϕ6
4.	GOP-002	Spring Washer	4	ϕ6
5.	GOP-003	Hex HD Cap Screw	4	M6×16L
6.	GOP-004	Plastic Screw	1	
7.	GOP-005	Nylon Cable Connector-Body	1	
8.	GOP-006	Nylon Cable Connector-Cap	1	
9.	GOP1/8HP*2P	Coolant Pump	1	
10.	GOP-001	Washer	4	ϕ6
11.	GOP-002	Spring Washer	4	ϕ6
12.	GOP-009	Hexagonal Head Screw	4	M6×16L
13.	GOP-010	Coolant Hose Connector	1	½"
14.	GOP-011	Hose Clamp	2	¾"
15.	GOP-012	Coolant Hose	1	½"
16.	GOP-013	Coolant Hose Connector	1	3/8"T×1/2"E
17.	GOP-014	Ball Valve Switch	1	3/8"
18.	GOP-1020-770	Coolant Pipe	1	3/8"
19.	GOP-016	O-Ring	1	
20.	GOP-1020-708	Coolant Nozzle	1	

7. DUST-SUCTION COOLANT SYSTEM ASS'Y



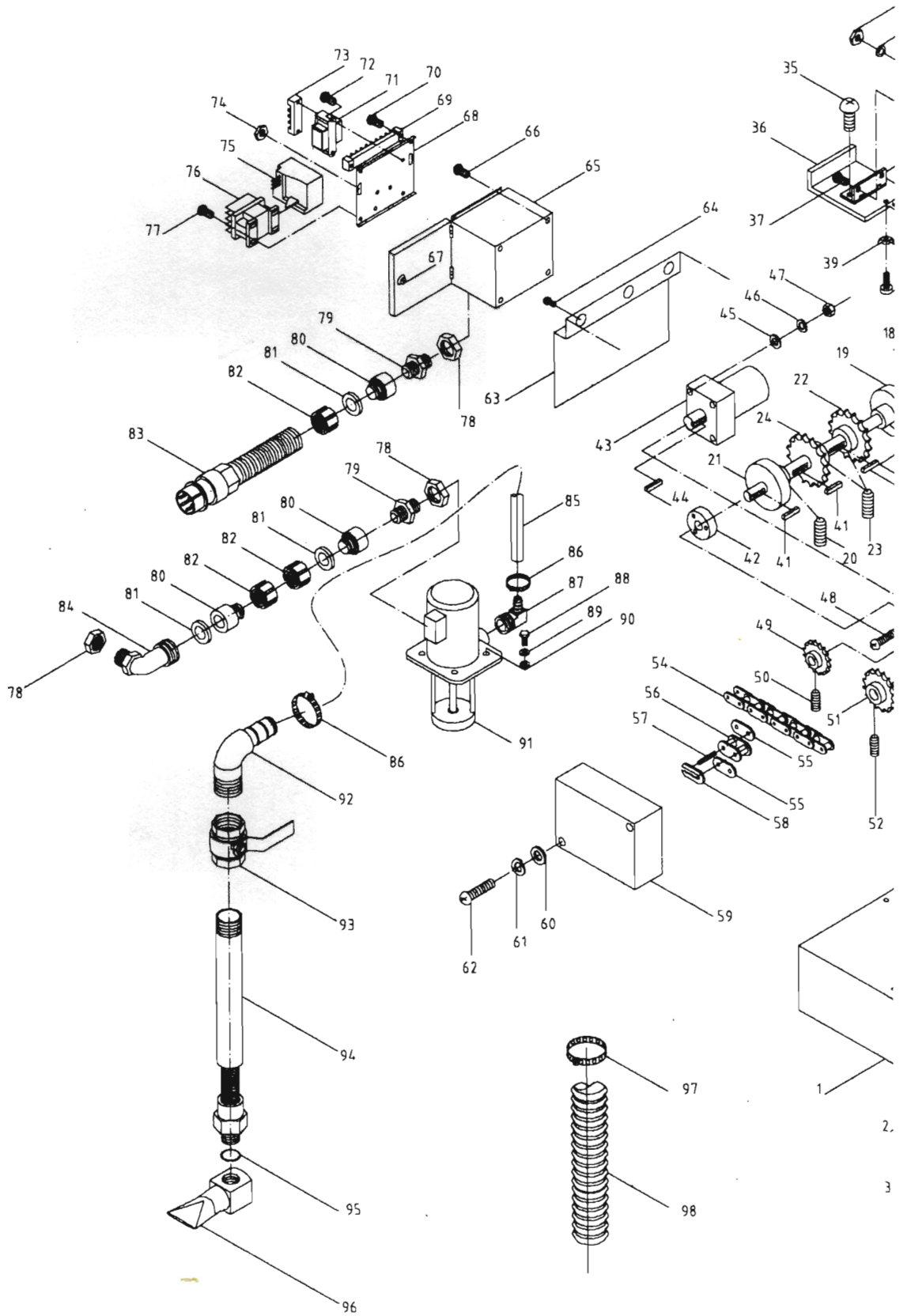
DUST –SUCTION AND COOLANT SYSTEM ASS'Y

ITEM NO.	PART NO.	DESCRIPTION	Q'TY	SIZE
1.	GOP-1020-760	Tank	1	
2.	GOP-087	Plug	2	1/2"T
3.	GOP1020-766	Filter	1	
4.	GOP	Lobe Screw	1	M6×19L
5.	GOP-JA0003	Wheel	4	
6.	GOP-001	Washer	4	φ6
7.	GOP-002	Spring Washer	4	φ6
8.	GOP-003	Hex Hd Cap Screw	4	M6×16L
9.	GOP-020	Hex Hd Cap Screw	2	M6×12L
10.	GOP021	Plate	1	
11.	GOP-1020-761	Upper Cover	1	
12.	GOP-001	Washer	4	φ6
13.	GOP-002	Spring Washer	4	φ6
14.	GOP-021	Socket Hd Cap Screw	4	M6×20L
15.	GOP-022	Socket Hd Cap Screw	1	M6×16L
16.	GOP-002	Spring Washer	1	φ6
17.	GOP-001-	Washer	1	φ6
18.	GOP-1020-762	Suction Fan	1	
19.	GOP-1020-763	Motor Fixed Plate	1	
20.	GOP-023	Washer	3	φ5
21.	GOP-024	Spring Washer	3	φ5
22.	GOP-025	Socket Hd Cap Screw	3	M5×16L
23.	GOP-026	Key	1	5×15L
24.	GOP-027-	Washer	4	φ8
25.	GOP-028	Spring Washer	4	φ8
26.	GOP-029	Socket Hd Cap Screw	4	M8×25L
27.	GOP-1*/2*8P	Motor	1	1/2HP
28.	GOP-020	Hex Hd Cap Screw	2	M6×12L
29.	GOP-002	Spring Washer	2	φ6
30.	GOP-001	Washer	2	φ6

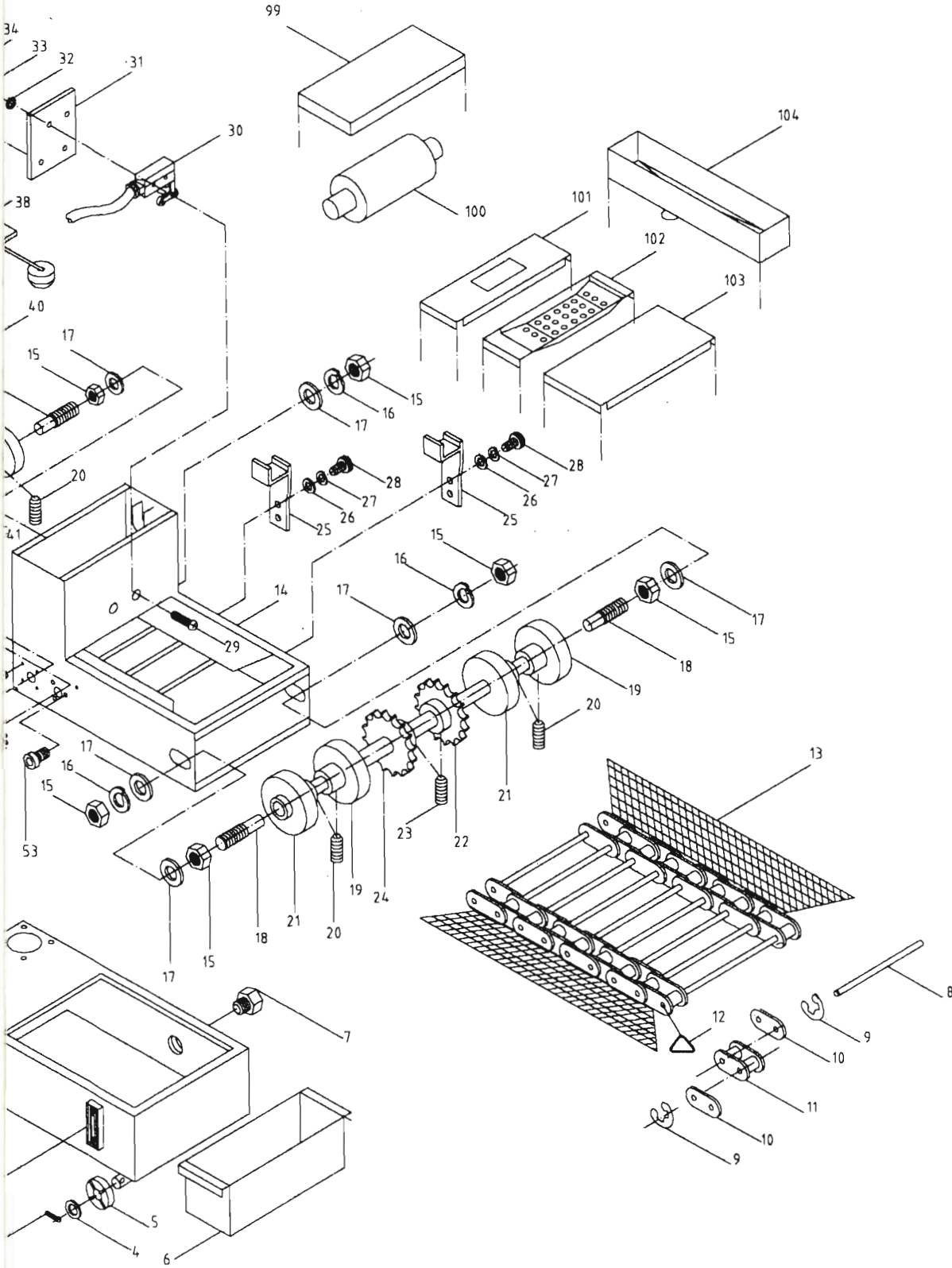
DUST –SUCTION AND COOLANT SYSTEM ASS'Y

ITEM NO.	PART NO.	DESCRIPTION	Q'TY	SIZE
31.	GOP-1020-764	Cover	1	
32.	GOP-030	Nylon Cable Connector –Cap	3	
33.	GOP-031	Nylon Cable Connector –Body	3	
34.	GOP-032	Plastic Screw	3	
35.	GOP-GM0006	Coolant Indicator	1	
36.	GOP-ES9600	On-Off Switch	2	
37.	GOP-033	Round Hd Cap Screw	4	M4×12L
38.	GOP-003	Hex Hd Cap Screw	4	M6×16L
39.	GOP-002	Spring Washer	4	φ6
40.	GOP-001	Washer	4	φ6
41.	GOP1/8HP*2P	Coolant Pump	1	1/8HP×180L
42.	GOP-010	Coolant Hose Connector	1	½"T×1/2"E
43.	GOP-011	Hose Clamp	2	φ3/4"
44.	GOP-012	Hose	1	φ1/2"
45.	GOP-013	Coolant Hose Connector	1	3/8"T×1/2"E
46.	GOP-014	Ball Valve Switch	1	3/8"T×3/8"T
47.	GOP-1020-770	Coolant Pipe	1	3/8"T
48.	GOP-016	O-Ring	1	
49.	GOP-1020-708	Coolant Nozzle	1	
50.	GOP-018	Hose Clamp	2	φ2-3/4"
51.	GOP-019	Suction Hose	1	φ2-1/2"
52.	GOP-1020-771	Dust –Collector	1	
53.	GOP-015	Hose Clamp	2	φ2-1/4"
54.	GOP-017	Waster Hose	1	φ2"

8. COOLANT SYSTE



M WITH PAPER FILTER



COOLANT SYSTEM WITH PAPER FILTER

ITEM NO.	PART NO.	DESCRIPTION	Q'TY	SIZE
1.	GOP-082	Water Tank	1	
2.	GOP-083	Water Level Gauge	1	LS-3"L
3.	GOP-084	Cotter Pin	1	1/8"×1"L
4.	GOP-077	Washer	4	ϕ 12
5.	GOP-085	Foot Wheel	4	
6.	GOP-086	Filter Paper Collect Box	1	
7.	GOP-087	Plug	1	
8.	GOP-088	Chain Axle	1	
9.	GOP-062	E-Snap Ring	1	E-3.5
10.	GOP-059	Chain Connecting Washer	2	
11.	GOP-060	Wheel Chain	1	
12.	GOP-089	Δ-Snap Ring	1	
13.	GOP-090	Wire Netting	1	
14.	GOP-091	Paper Filter Body	1	
15.	GOP-092	Hex. Nut	6	M16
16.	GOP-078	Spring Washer	3	ϕ 16
17.	GOP-079	Washer	6	ϕ 16
18.	GOP-093	Stud	3	
19.	GOP-094	Locating Ring	3	
20.	GOP-095	Socket Set Screw	6	M8×6L
21.	GOP-096	Locating Ring	3	
22.	GOP-097	Drive Gear	2	
23.	GOP-098	Socket Set Screw	4	M6×10L
24.	GOP-099	Driver Gear	2	
25.	GOP-100	Bracket	2	
26.	GOP-001	Washer	2	ϕ 6
27.	GOP-002	Spring Washer	2	ϕ 6
28.	GOP-022	Socket HD Cap Screw	2	M6×16L
29.	GOP-101	Round HD Cap Screw	1	M4×40L
30.	GOP-102	Limit Switch	1	

COOLANT SYSTEM WITH PAPER FILTER

ITEM NO.	PART NO.	DESCRIPTION	Q'TY	SIZE
31.	GOP-103	Setting Plate	1	
32.	GOP-104	O-Ring	2	ϕ4
33.	GOP-007	Washer	2	ϕ4
34.	GOP-056	Hex. Nut	2	M4
35.	GOP-038	Round HD Cap Screw	2	M5×10L
36.	GOP-105	Float Bowl	1	
37.	GOP-038	Round HD Cap Screw	2	M5×10L
38.	GOP-106	Hinge	1	
39.	GOP-107	Wing Nut	1	M8
40.	GOP-108	Socket HD Cap Screw	1	M8×35L
41.	GOP-109	Key	3	7×25L
42.	GOP-110	Chain Shaft Seat	1	
43.	GOP-054 GOP-055	Gear Motor	1	230V 460V
44.	GOP-053	Key	1	4×25L
45.	GOP-023	Washer	4	ϕ5
46.	GOP-024	Spring Washer	4	ϕ5
47.	GOP-067	Hex. Nut	4	M5
48.	GOP-035	Round HD Cap Screw	4	M5×65
49.	GOP-057	Gear Wheel	1	
50.	GOP-034	Socket Set Screw	1	M6×6L
51.	GOP-058	Chain Wheel	1	M6×6L
52.	GOP-034	Socket Set Screw	1	M5×16L
53.	GOP-111	Round HD Cap Screw	3	
54.	GOP-112	Chain	1	
55.	GOP-059	Chain Connecting Washer	2	
56.	GOP-060	Wheel Chain	1	
57.	GOP-061	Roller Pin	1	
58.	GOP-062	Snap Ring	1	
59.	GOP-113	Cover	1	
60.	GOP-023	Washer	2	ϕ5

COOLANT SYSTEM WITH PAPER FILTER

ITEM NO.	PART NO.	DESCRIPTION	Q'TY	SIZE
61.	GOP-024	Spring Washer	2	ϕ5
62.	GOP-114	Round HD Cap Screw	2	M5×40L
63.	GOP-115	Cover	1	
64.	GOP-038	Round HD Cap Screw	3	M5×10L
65.	GOP-116	Electric Box	1	
66.	GOP-035	Round HD Cap Screw	4	M5×65L
67.	GOP-117	Key Set	1	
68.	GOP-118	Terminal Head Plate	1	
69.	GOP-119	Terminal Post	1	
70.	GOP-080	Round HD Cap Screw	2	M4×16L
71.	GOP-081	Transformer	1	
72.	GOP-120	Round HD Cap Screw	2	M4×8L
73.	GOP-121	Terminal Post	1	
74.	GOP-122	Hex. Nut	2	M6
75.	GOP-123	Thermal Relay	1	
76.	GOP-134	Magnetic Contractor	1	
77.	GOP-082	Round HD Cap Screw	2	M6×16L
78.	GOP-070	Nylon Cable Connector-Cap	3	
79.	GOP-071	Nylon Cable Connector-Body	2	
80.	GOP-072	Nylon Cable Connector-Lower Cap	3	
81.	GOP-073	Nylon Cable Connector-Spacer	3	
82.	GOP-074	Connector Joint	3	
83.	GOP-135	Pin	1	
84.	GOP-075	L-Connector Joint	1	
85.	GOP-012	Hose	1	
86.	GOP-011	Hose Clamp	2	
87.	GOP-010	Coolant Hose Connector	1	
88.	GOP-003	Hex. HD Cap Screw	4	M6×16L
89.	GOP-002	Spring Washer	4	ϕ6
90.	GOP-001	Washer	4	ϕ6

COOLANT SYSTEM WITH PAPER FILTER

ITEM NO.	PART NO.	DESCRIPTION	Q'TY	SIZE
91.	GOP1/8HP*2P	Coolant Pump	1	
92.	GOP-010	Coolant Hose Connector	1	
93.	GOP-014	Ball Valve Switch	1	
94.	GOP1020-770	Coolant Pipe	1	
95.	GOP016	O-Ring	1	
96.	GOP1020-708	Coolant Nozzle	1	
97.	GOP-136	Hose Clamp	1	
98.	GOP-137	Suction Hose	1	2-1/2"
99.	GOP-138	Top Cover	1	19" Wide
100.	GOP-139	Filter Paper	1	
101.	GOP-140	Back Dust Protection	1	
102.	GOP-141	Filter Waster Tank	1	
103.	GOP-142	Front Dust Protection Cover	1	
104.	GOP-143	Collect Tank	1	
105.				
106.				
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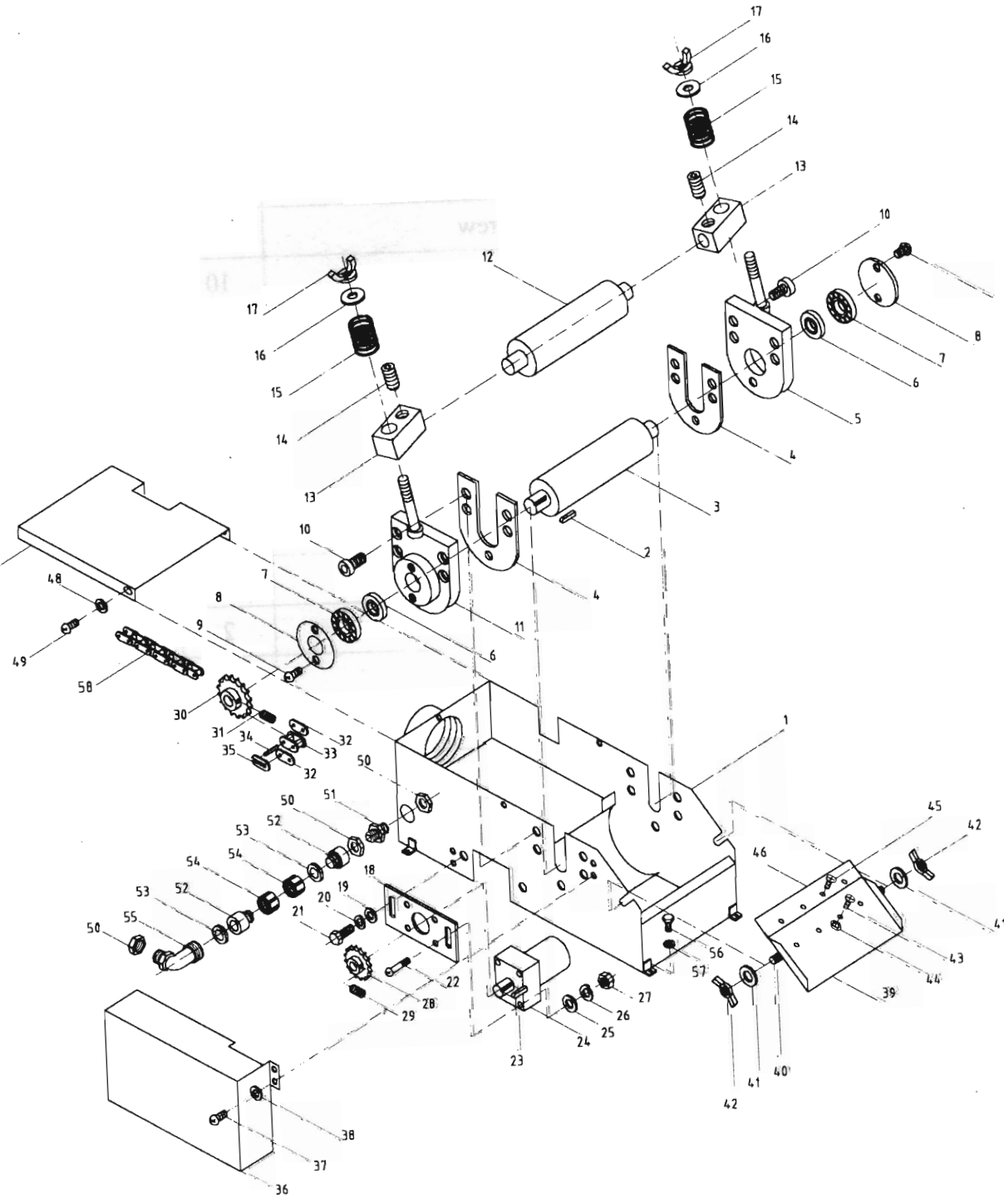
119.				
120.				

9. MAGNETIC SEPARATOR



MAGNETIC SEPARATOR

ITEM NO.	PART NO.	DESCRIPTION	Q'TY	SIZE
1.	GOP-040	Separator Enclosure Case	1	
2.	GOP-026	Key	1	5×15L
3.	GOP-041	Magnetic Roller	1	
4.	GOP-042	Gasket Packing	2	
5.	GOP-043	Roller Supporting Bracket-L	1	
6.	GOP-044	Dust Seal	2	TC-15-35-7
7.	GOP-045	Bball Bearing	2	1202
8.	GOP-046	Cover	2	
9.	GOP-036	Round Hd Cap Screw	2	M5×8L
10.	GOP-035	Cap Screw	10	M6×10L
11.	GOP-047	Roller Supporting Bracket-R	1	
12.	GOP-048	Rubber Coated Roller	1	
13.	GOP-049	Roller Locating Block	2	
14.	GOP-034	Socket Set Screw	2	M6×6L
15.	GOP-050	Spring	2	
16.	GOP-027	Washer	2	ϕ8
17.	GOP-051	Wing Nut	2	M8
18.	GOP-052	Motor Fixing Plate	1	
19.	GOP-027	Washer	2	ϕ8
20.	GOP-028	Spring Washer	2	ϕ8
21.	GOP-036	Hex Hd Cap Screw	2	M8×16L
22.	GOP-035	Round Hd Cap Screw	4	M5×65L
23.	GOP-053	Key	1	4×25
24.	GOP-054 GOP-055	Gear Motor	1	4IK25GN-S(230V) 4IK25GN-S(460V)
25.	GOP-007	Washer	4	ϕ4
26.	GOP-008	Spring Washer	4	ϕ4
27.	GOP-056	Jam Nut	4	M4
28.	GOP-057	Gear Wheel	1	
29.	GOP-034	Socket Set Screw	1	M6×6L
30.	GOP-058	Chain Wheel	1	

MAGNETIC SEPARATOR

ITEM NO.	PART NO.	DESCRIPTION	Q'TY	SIZE
31.	GOP-034	Socket Set Screw	1	M6×6L
32.	GOP-059	Chain Connecting Washer	2	
33.	GOP-060	Wheel Chain	1	
34.	GOP-061	Roll Pin	1	
35.	GOP-062	Snap Ring	1	
36.	GOP-063	Wheel Chain Cover	1	
37.	GOP-036	Round Hd Cap Screw	4	M5×8L
38.	GOP-023	Washer	4	ϕ5
39.	GOP-064	Residue Flowing Plate	1	
40.	GOP-065	Stud	1	M8
41.	GOP-027	Washer	2	ϕ8
42.	GOP-066	Wing Nut	2	M8
43.	GOP-037	Round Flat Head Screw	4	M5×10L
44.	GOP-067	Jam Nut	4	M5
45.	GOP-039	Round Flat Head Screw	4	M5×6L
46.	GOP-068	Roller Scraping Plate	1	
47.	GOP-069	Cover	1	
48.	GOP-023	Washer	3	ϕ5
49.	GOP-038	Round Hd Cap Screw	3	M5×10L
50.	GOP-070	Nylon Cable Connector –Cap	2	
51.	GOP-071	Nylon Cable Connector Body	1	
52.	GOP-072	Nylon Cable Connector –Lower Cap	2	
53.	GOP-073	Nylon Cable Connector –Spacer	2	
54.	GOP-074	Connecting Joint	2	
55.	GOP-075	L-Connecting Joint	1	
56.	GOP-003	Hex Hd Cap Screw	4	M6×16L
57.	GOP-001	Washer	4	ϕ6
58.	GOP-076	Chain	1	