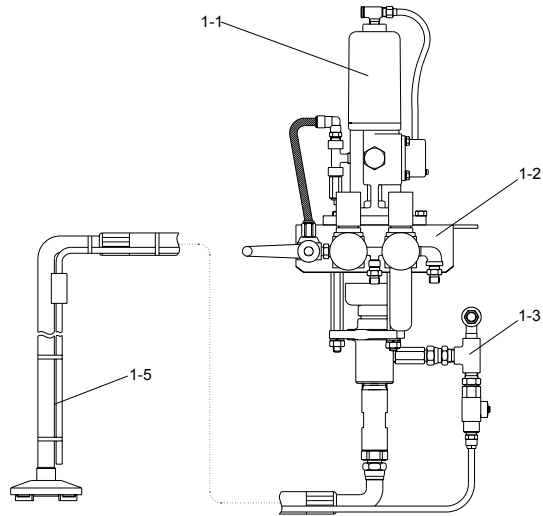


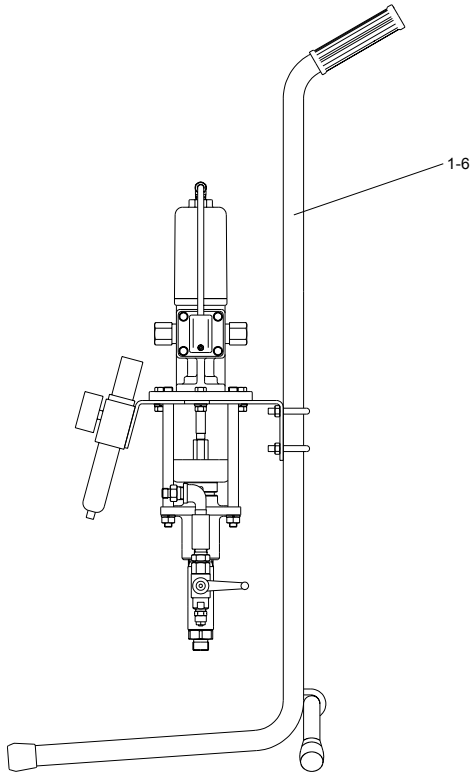
No.	Problems	Causes	Solutions
1	Pump does not operate.	Air pressure is not supplied to the unit.	Check air compressor and hoses. Check emergency valve.
		Pump operating air pressure is too low.	Increase supplied air pressure. Increase air pressure at Air Regulator (C) .
		V-packing (upper, 2-45/3-46 or lower, 2-49/3-54) is over tightened.	Loosen Wet Cup (2-42/3-40) *1 or Valve Holder Nut (2-47/3-50) . *2
		Parts of air motor are worn or damage.	Replace parts. *2
		Parts of air motor are not assembled correctly.	Reassemble air motor. *2
		Pump frozen (supplied air contains too much moisture).	Eliminate air moisture by using a dryer or water trap.
		Exhaust hole of pump is blocked.	Clean.
		Switch Block (2-17) is installed in the incorrect direction.	Reassemble. *2
2	Pump operation unstable. Fluid output is low. Fluid does not come out during pump operation.	Pump operating air pressure is too low.	Increase supplied air pressure. Increase pump operating air pressure at Air Regulator (C) .
		Fluid Filter (6-5/7-3) , Suction Filter (8-5) or spray gun filter is clogged.	Clean or replace.
		Suction Hose Set (E) is clogged.	Clean or replace.
		V-packing (upper, 2-45/3-46 or lower, 2-49/3-54) is worn or damaged,	Replace. *2
		V-packing (upper, 2-45/3-46 or lower, 2-49 / 3-54) is installed in the incorrect direction.	Reassemble. *2
		V-packing (upper, 2-45/3-46) is over tightened or loose.	Loosen or tighten Wet Cup (2-42/3-40) . *1
		V-packing (lower, 2-49/3-54) is over tightened or loose.	Loose or tighten Valve Holder Nut (2-47/3-50) . *2
		Pump frozen (supplied air contains too much moisture).	Eliminate air moisture by using a dryer or water trap.
		Ball (upper, 2-51/3-55 or lower, 2-57/3-60) sticks on valve.	Clean. *2
		Valve Holder Set (2-53/3-56) or Valve Adaptor Set (2-58/3-61) is worn or damaged or paint is built up.	Replace or clean. *2
		Fluid or air passage inside pump is clogged.	Clean.
		Nozzle tip or filter on spray gun is clogged.	Clean or replace. See instruction manual of spray gun.
		Fluid contains air.	See No.3 on next page.
Air leaks from air motor of pump. (Not exhausting air)	See No.6 on next page.		

No.	Problems	Causes	Remedies
3	Paint contains air.	Air has not been released.	Refer to 5-2. Preparing spraying procedure on page 13.
		Suction Hose Set (E) or Valve Adaptor Set (2-58/3-61) is loose.	Tighten.
		Packing (lower, 2-56/3-59) is worn.	Replace. *2
		Fluid contains air by over agitating.	Adjust agitator.
4	Pulsation or variance within spray pattern.	Fluid pressure is too low.	Increase fluid pressure at Air Regulator (C) .
		Fluid Filter (6-5/7-3), Suction Filter (8-5) or spray gun filter is clogged.	Clean or replace.
		Valve Holder Set (2-53/3-56) or Valve Adaptor Set (2-58/3-61) is worn or damaged or paint is built up.	Replace or clean. *2
		V-packing (lower, 2-49/3-54) is loose.	Tighten. *2
		Exhaust hole of pump is blocked.	Clean.
		Nozzle tip is worn or orifice size is too large.	Replace or choose smaller orifice size. *3
		Fluid or air is leaking.	Find leak and fix.
5	Paint leaks from fluid hose or joint.	Fluid hose or joint is loose or damaged.	Tighten or replace.
		Paint builds up on seat of fluid joint.	Clean or replace.
	Paint leaks from the Wet Cup (2-42/3-40) .	Wet Cup (2-42/3-40) is loose.	Tighten. *1
		V-packing (upper, 2-45/3-46) is worn or damaged.	Replace. *2
	Paint leaks from between Suction Body (2-40/3-47) and the Suction Tube (2-54/3-58) .	Suction Tube (2-54/3-58) is loose.	Tighten. *2
		Packing (upper, 2-52/3-57) is worn or damaged.	Replace. *2
	Paint leaks from Fluid Filter Set (I) .	Cylinder (6-2/7-1) is loose.	Tighten.
		Packing (6-6) or O-ring (7-5) is worn or damaged.	Replace.
6	Air leaks from air hose or joint.	Air hose or fitting is loose or damaged.	Tighten or replace.
	Air leaks from air motor.	O-ring (2-16/2-20/3-5/3-26) is worn or damaged.	Replace. *2
		Packing (2-34/3-2) is worn or damaged.	Replace. *2
		Pipe Nut (2-9) is loose or Sleeve (2-10) is worn or damaged.	Tighten or replace.

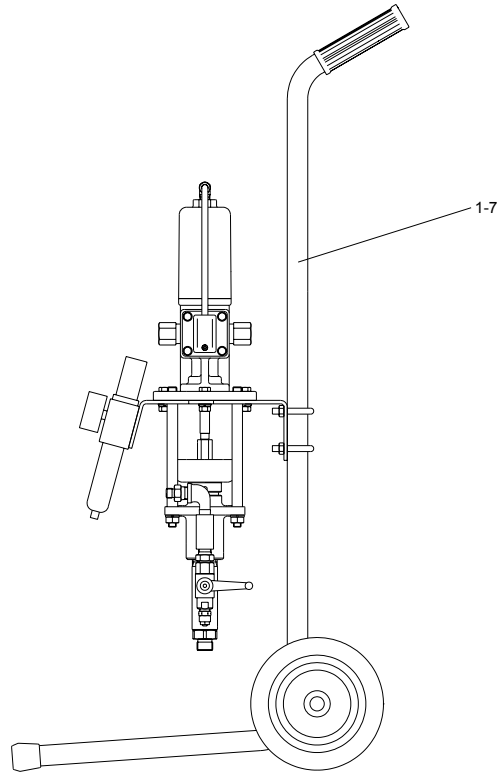
13:1. Pump Unit



MSU-114N (Wall Mount)



MSU-111N (Stand Mount)

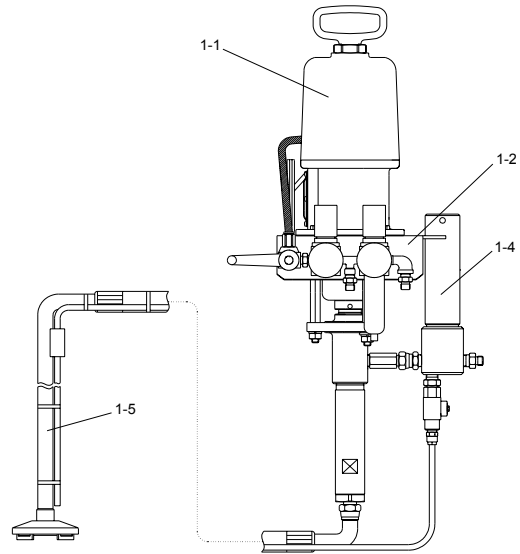


MSU-113N (Cart Mount)

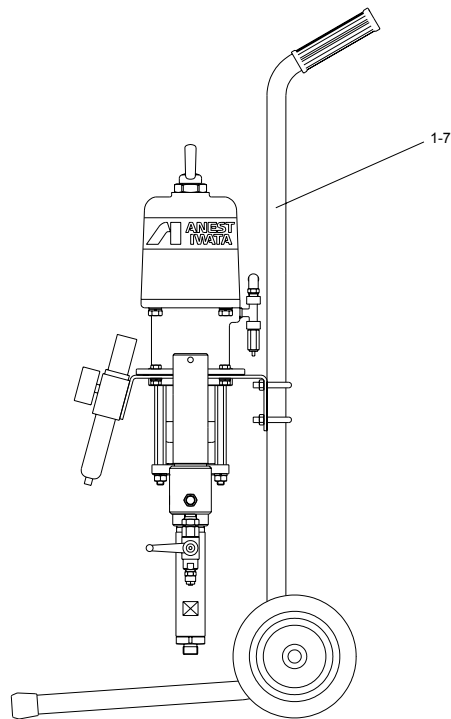
No.	Description	Qty
1-1	Plunger pump, PP-7131N	1
1-2	Air regulator set	1
1-3	Circulation valve set	1
1-4	Fluid filter set (option, not shown)	1

No.	Description	Qty
1-5	Suction hose set	4
1-6	Stand set	4
1-7	Cart set	1

17:1 Pump Unit



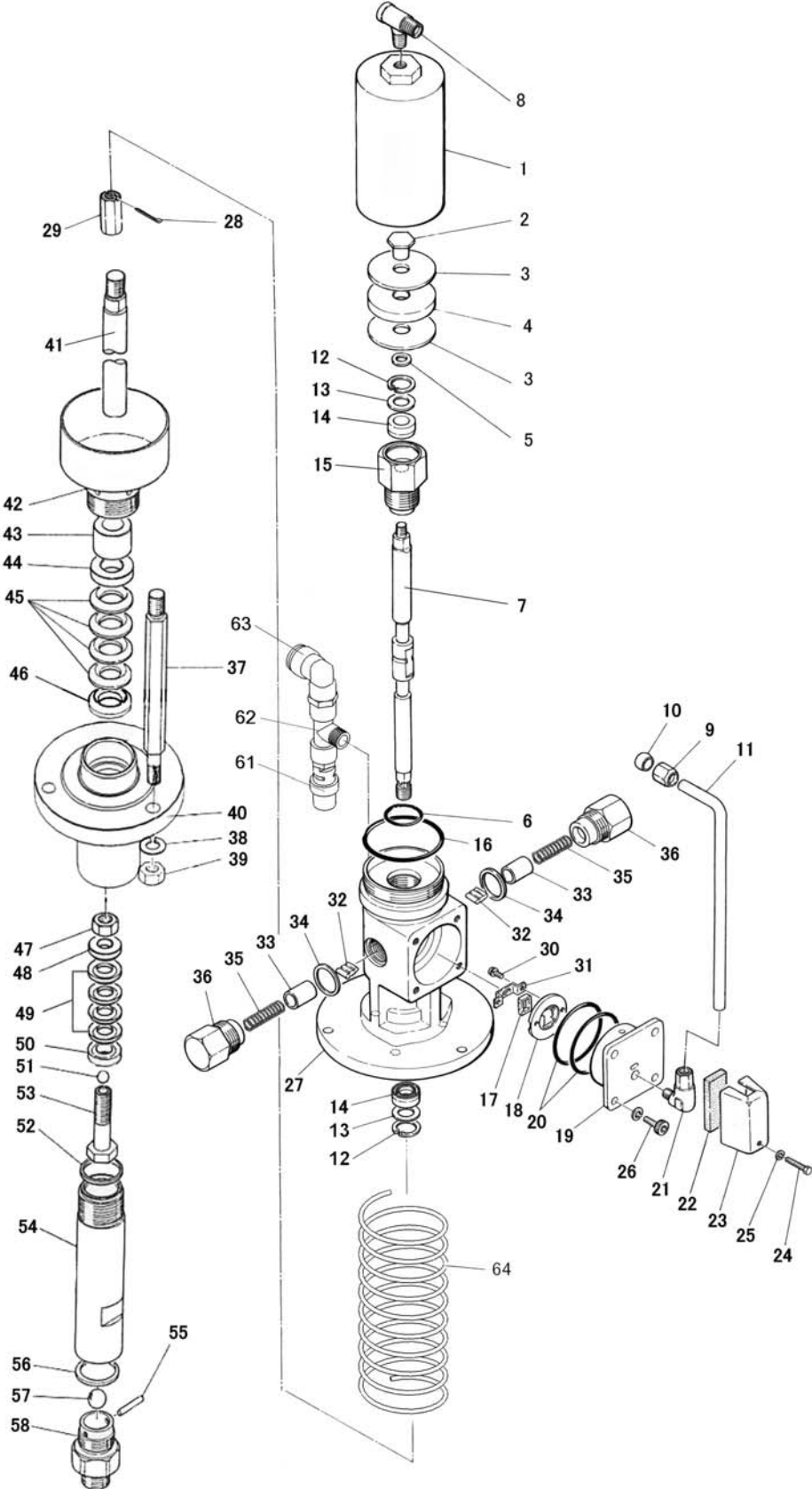
MSU-324N (Wall Mount)



MSU-323N (Cart Mount)

No.	Description	Qty
1-1	Plunger pump, PP-1171CNE	1
1-2	Air regulator set	1
1-4	Fluid filter set	1
1-5	Suction hose set	1
1-7	Cart set	1

Plunger pump (13:1), PP-7131N



Plunger pump (13:1), PP-7131N

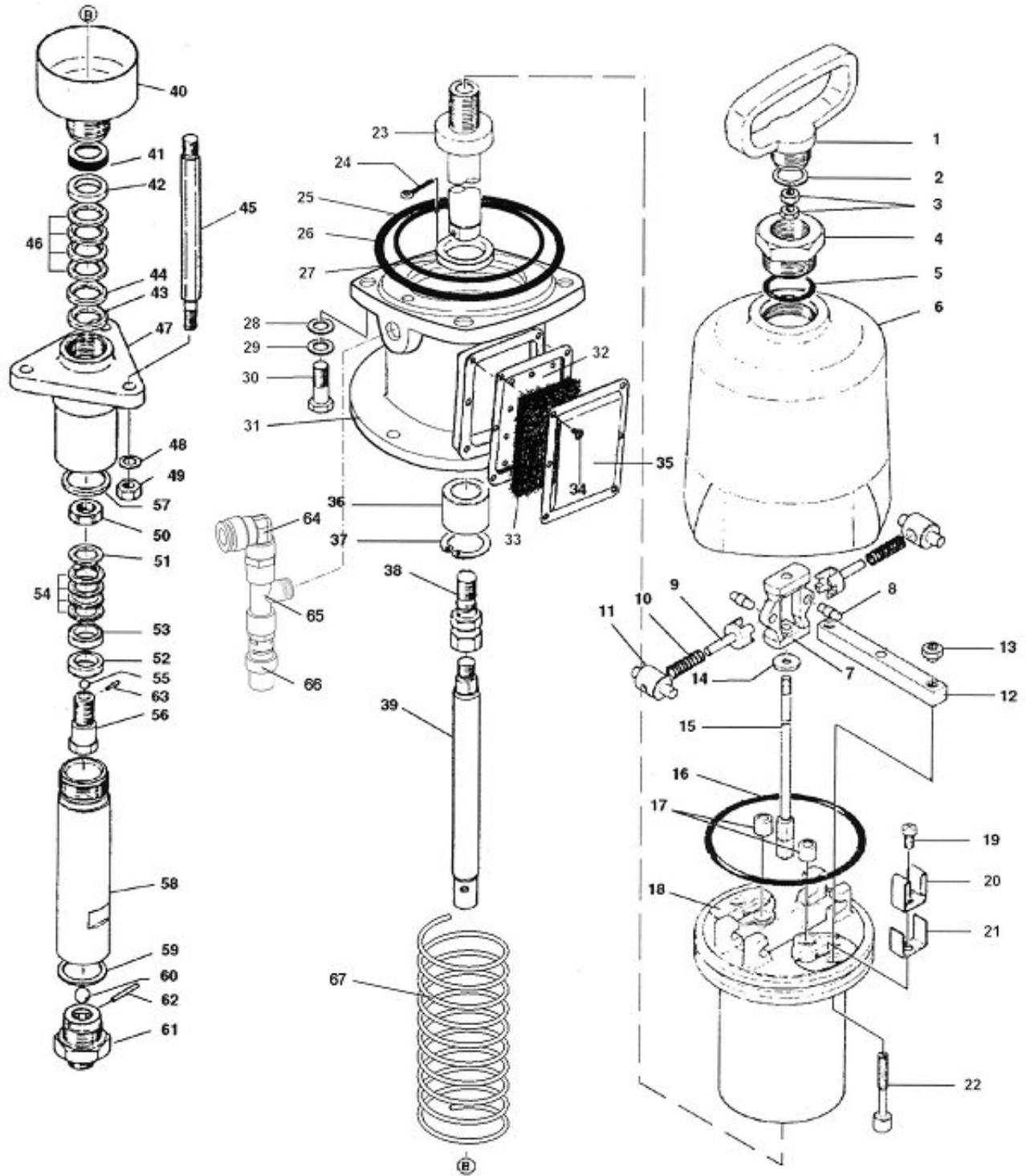
No.	Description	Qty
2-1	Air cylinder	1
2-2	Cap nut	1
2-3	Piston washer	2
■ 2-4	Piston packing	1
2-5	Washer	1
■ 2-6	O-ring	1
2-7	Air motor rod	1
2-8	Air pipe joint	1
2-9	Pipe nut	1
2-10	Joint nut sleeve	1
2-11	Air pipe	1
2-12	Snap ring	2
2-13	Washer	2
2-14	Rod packing	2
2-15	Rod guide	1
■ 2-16	O-ring	1
■ 2-17	Switch block	1
2-18	Block guide plate	1
2-19	Seat block	1
■ 2-20	O-ring	2
2-21	Elbow joint	1
2-22	Exhaust muffler	1
2-23	Muffler cover	1
2-24	Screw	1
2-25	Spring washer	1
2-26	Bolt	4
2-27	Air motor body	1
2-28	Split pin	1
2-29	Adaptor	1
2-30	Screw	2
■ 2-31	Block holder	1
2-32	Interlock piece	2

No.	Description	Qty
2-33	Interlock end piece	2
■ 2-34	Packing	2
2-35	Spring	2
2-36	Cap nut	2
2-37	Connecting rod	3
2-38	Spring washer	3
2-39	Nut	3
2-40	Suction body	1
2-41	Rod	1
2-42	Wet cup	1
2-43	Sleeve	1
▲ 2-44	V-packing female adaptor (upper)	1
▲ 2-45	V-packing (upper)	4
▲ 2-46	V-packing male adaptor (upper)	1
2-47	Valve holder nut	1
▲ 2-48	V-packing male adaptor (lower)	1
▲ 2-49	V-packing (lower)	4
▲ 2-50	V-packing female adaptor (lower)	1
▲ 2-51	Ball (upper)	1
▲ 2-52	Packing (upper)	1
2-53	Valve holder set	1
2-54	Suction tube	1
▲ 2-55	Pin	1
▲ 2-56	Packing (lower)	1
▲ 2-57	Ball (lower)	1
2-58	Valve adaptor set	1
2-59	Fluid outlet joint (not shown)	1
2-60	Grounding wire (not shown)	1
2-61	Pop-off valve	1
2-62	Tee joint	1
2-63	Push-in elbow	1
2-64	Guard spring	1
2-65	Wet cup tool (not shown)	1

*Repair service kit of air motor section includes “■” marked parts.

*Repair service kit of suction section includes “▲” marked parts.

10-3. Plunger pump (17:1), PP-1171CNE



10-3. Plunger pump (17:1), PP-1171CNE

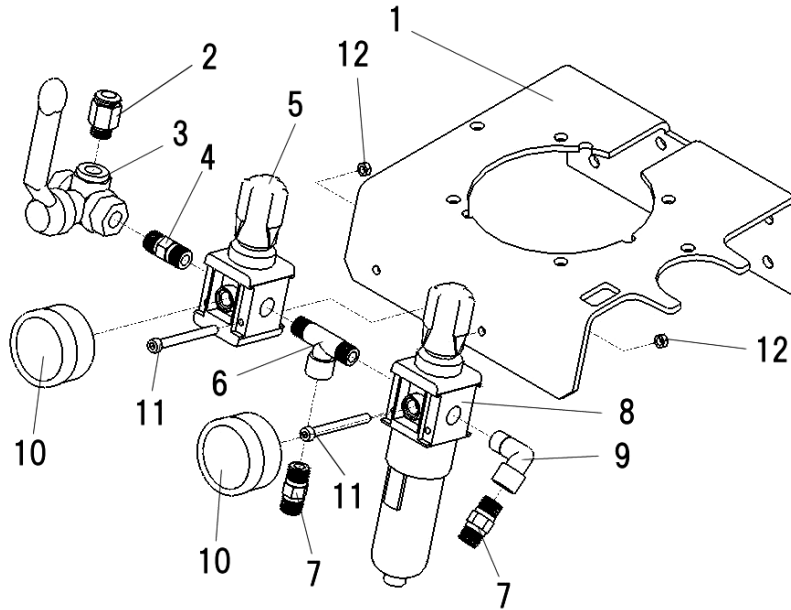
No.	Description	Qty
3-1	Handle	1
■ 3-2	Packing	1
3-3	Nut	2
3-4	Head bolt	1
■ 3-5	O-ring	1
3-6	Air cylinder	1
3-7	Changeover body	1
3-8	Pin	2
3-9	Changeover pin	2
3-10	Spring	2
3-11	Spring holder	2
3-12	Changeover bar	1
3-13	Nut	2
3-14	Washer	1
3-15	Changeover rod	1
■ 3-16	Piston o-ring	1
■ 3-17	Exhaust packing	2
3-18	Air piston	1
3-19	Screw	2
3-20	Changeover bar stay	2
3-21	Reinforce plate	2
■ 3-22	Valve shaft	2
3-23	Piston rod	1
3-24	Split pin	1
■ 3-25	O-ring	1
■ 3-26	O-ring	1
3-27	Stopper	1
3-28	Washer	4
3-29	Spring washer	4
3-30	Bolt	4
3-31	Air motor body	1
3-32	Baffle plate	1
3-33	Muffler	1
3-34	Tapping screw	6
3-35	Exhaust cover	1

No.	Description	Qty
3-36	Metal	1
3-37	Stop ring	1
3-38	Adaptor	1
3-39	Rod	1
3-40	Wet cup	1
3-41	Slide ring	1
▲ 3-42	V-packing female adaptor (upper)	1
3-43	Spacer	1
▲ 3-44	V-packing male adaptor (upper)	1
3-45	Connecting rod	3
▲ 3-46	V-packing (upper)	4
3-47	Suction body	1
3-48	Spring washer	3
3-49	Nut	3
3-50	Valve holder nut	1
▲ 3-51	V-packing male adaptor (lower)	1
3-52	Spacer	1
▲ 3-53	V-packing female adaptor (lower)	1
▲ 3-54	V-packing (lower)	4
▲ 3-55	Ball (upper)	1
3-56	Valve holder set	1
▲ 3-57	Packing (upper)	1
3-58	Suction tube	1
▲ 3-59	Packing (lower)	1
▲ 3-60	Ball (lower)	1
3-61	Valve adaptor set	1
▲ 3-62	Pin	1
▲ 3-63	Pin	1
3-64	Pop-off valve	1
3-65	Tee joint	1
3-66	Push-in elbow	1
3-67	Guard spring	1
3-68	Grounding wire (not shown)	1
3-69	Fluid outlet joint (not shown)	1
3-70	Wet cup tool (not shown)	1

*Repair service kit of air motor section includes “■” marked parts.

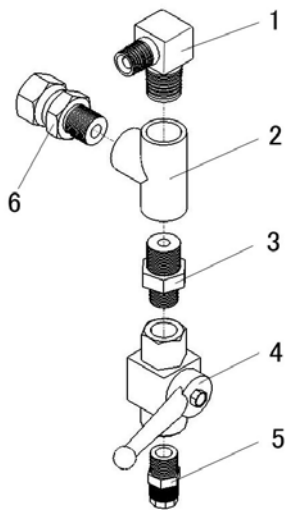
*Repair service kit of suction section includes “▲” marked parts.

Air regulator set



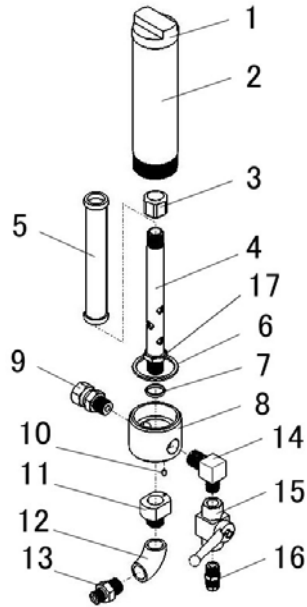
No.	Description	Qty
4-1	Pump base	1
4-2	Push-in elbow	1
4-3	3-way ball valve	1
4-4	Nipple	1
4-5	Air regulator	1
4-6	Tee joint	2
4-7	Nipple	1
4-8	Air filter regulator	1
4-9	Elbow joint	2
4-10	Pressure gauge	2
4-11	Bolt	2
4-12	Nut	2

Circulation valve set for 13:1 pump unit



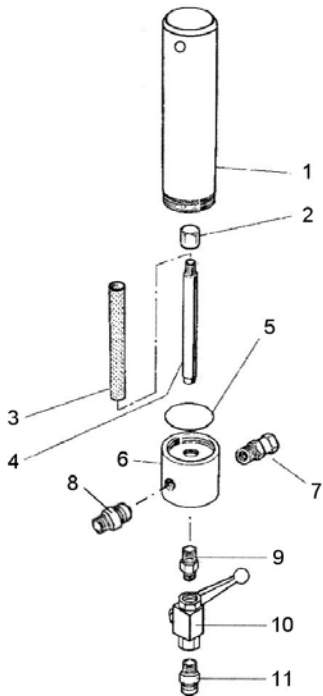
No.	Description	Qty
5-1	Elbow joint	1
5-2	Tee joint	1
5-3	Nipple	1
5-4	2-way ball valve	1
5-5	Hose joint	1
5-6	Swivel joint	1

Fluid filter set for 13:1 pump unit (option)



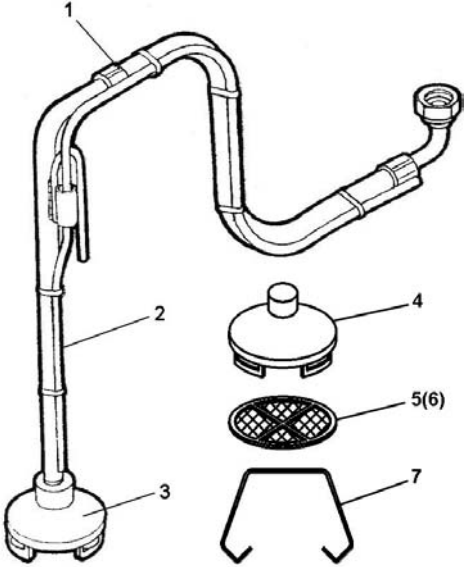
No.	Description	Qty
6-1	Filter plug	1
6-2	Cylinder	1
6-3	Cap nut	1
6-4	Filter bolt	1
6-5	Filter 100mesh	1
6-6	Packing	1
6-7	Packing	1
6-8	Filter body	1
6-9	Swivel joint	1
6-10	Spring pin	1
6-11	Filter adaptor	1
6-12	Elbow joint	1
6-13	Nipple	1
6-14	Elbow joint	1
6-15	2-way ball valve	1
6-16	Hose joint	1
6-17	Locking nut	1

Fluid filter set, TF-8N for 17:1 pump unit



No.	Description	Qty
7-1	Cylinder	1
7-2	Cap nut	1
7-3	Filter 100mesh	1
7-4	Filter bolt	1
7-5	O-ring	1
7-6	Filter body	1
7-7	Swivel joint	1
7-8	Nipple	1
7-9	Nipple	1
7-10	2-way ball valve	1
7-11	Hose joint	1

Suction hose set



No.	Description	Qty
8-1	Suction Hose	1
8-2	Circulation Tube	1
8-3	Filter Set	1
8-4	Filter Cover	1
8-5	Filter 50mesh	1
8-6	Filter 100mesh (Option)	1
8-7	Filter Spring	1