ASAHI SUNAC

Operation and Maintenance Manual

AIRLESS PUMP
LIGHT BEAR

SP1654/M/D
SP1654S/MS/DS

Ec'Coater™ エコーター

This manual contains important information on warnings and cautions. Read the manual thoroughly before starting to operate the equipment, and follow the instructions.
Always keep the manual handy until such time as the equipment is no longer being used.
If your manual is lost or worn badly, do not hesitate to contact our agency which is closest to you, or the Asahi Sunac Corporation, directly, and ask us to send you a new one.

23th Edition: August 22, 2025

Thank you for buying our product

Thank you for buying our Pneumatic Airless Painting Equipment, Model <SP1654(S)> LIGHT BEAR.

Please read this manual carefully before starting to operate the equipment. Please pay particular attention to major specifications, warnings and precautions, including prohibited items. Use the equipment appropriately and with care, following the instructions. We hope that by doing so you derive benefit from use of the product over a long period of time.

CAUTION：

This airless spray equipment〈SP1654（S)〉is designed to make full use of airless equipment by a simple operation.

Although it is designed considering safe and handy use, take care in the use of this product as it may cause troubles or injury.

Contents

23th Edition: August 22, 2025

1 For Your Safety

Please read and understand this manual. Always follow the instructions in it.
Failure to do so may **result in injury to the user, or damage to equipment**.

The manual contains only minimum safety precautions and no implication is intended that other measures are unnecessary. Needless to say, regulatory and corporate safety rules and regulations must invariably be observed.

Shown below are minimum basic safety precautions in connection with use of our product:

●**The safety precautions are divided into three (3) categories, based on the degree of severity of the hazard:**

⚠ WARNING	Indicates a potentially hazardous situation which, if not avoided by following the instructions given, could result in injury.
⚠ **CAUTION**	Indicates a potentially hazardous situation which, if not avoided by following the instructions given, could result in damage to equipment.
NOTICE	Indicates general safety rules, including key practices and useful tips

※ A potential hazard classified into the CAUTION category could still bring about serious results, depending on the circumstances. Always follow precautionary instructions issued to protect you and the equipment from potential injury or damage.

⚠ WARNING

Potential Hazards: Misuse

<<General safety precautions>>

- ●Never attempt to change component parts or modify the pump without prior consultation with Asahi Sunac. Any attempt to do so may result in equipment failure.
- ●Conduct periodic, and thorough inspections of the equipment, and repair and replace parts, as required.
- ●When spraying, ALWAYS use Personal Protective Equipment, such as protective goggles, working clothes, and/or means for breathing protection, as recommended by a manufacturers of paints or solvents. Depending on the chemical contents of the paint or solvent, and the ventilation system used, a different type of Personal Protective Equipment may be required. Please consult with the maker of the paint, or solvent concerned.
- ●Never leave the pump unattended while it is running. Keep children, and other unauthorized people well away from the painting equipment.

<<Compatibility of paint and solvent>>

Make sure that any fluid, any mixture of paint and solvent used, is chemically compatible with the material of the part of the pump with which it is likely to come into contact. Before use, carefully consider makers, and confirm whether or not it is compatible.

⚠ WARNING

Potential Hazards: Fires and Explosions

<<Sources of fires>>

As liquid paint flows through pumps and hose, static electricity is generated.
If painting equipment is not properly grounded, sparking may occur due to static electricity.
If sparks come into contact with spray paint particles, floating dust, or other inflammables the sparks could cause a fire or an explosion, possibly causing serious injury to the user and/or damage to the equipment.

- Provide good ventilation in the vicinity of spraying operations.
- Never conduct painting operations in the vicinity of a source fire, a pilot lamp, or other inflammables.
- When cleaning the painting system,
  Always: Remove the nozzle, Point the tip of a spray gun at a grounded metal paint can,
  Keep part of the gun in contact with the can, and
  Pull the trigger for cleaning.
- Ensure that the painting equipment and workpiece are properly grounded. If they are not grounded, a fire or an explosion could result, caused by static electric discharge or sparking.
- Interrupt painting operations at once if you feel static electric shock, no matter how slight it might be. Check the equipment for grounding. Don't resume operations until you clarify the cause, and take appropriate countermeasures.
- Always keep handy a powerful fire extinguisher in the spray painting area.

<<Grounding>>

To remove potential static electricity hazards, ensure that the pump, the workpiece, and all other items within the painting system (including other equipment in use near by) are grounded.
If you find something that is not properly grounded, ground it in accordance with the grounding methodology specified by Electrical Equipment Technical Standard (Class D above standard).
The grounding method for each item within the painting system is as follows:

- Pump
  Connect a ring crimp terminal (that comes with the equipment) to the pump grounding terminal ⏚, and then connect the other clip to a Class D grounding object.
- Air compressor
  Arrange grounding in accordance with the maker's instructions.
- Painting hose
  Use a grounded hose.
  When using an extension hose, ensure that it is grounded.
- Spray gun
  After connecting the spray gun to the grounded hose and pump, ensure the spray gun is also properly grounded.
- Workpieces
  Always remove dirt from hangers and grounding clips in order to keep workpieces grounded.
- Paint container
  Among paint containers, only those made of a conductive metal should be placed on a grounded floor or table. For details, refer to the local regulatory requirements, and comply.
- Cleaning solvent can
  Among the solvent cans, only those made of a conductive metal should be placed on a grounded floor or table. Do not place the conductive metal can on a non-conductive sheet, such as paper or corrugated fiberboard. Before you pull the trigger for pump cleaning, or to reduce pressure, ensure that the metal portion of the gun is in contact with the grounded container, and securely supported.

⚠ WARNING

<<Solvents>>

- ●Never use a halogenated hydrocarbon solvent: When such a solvent comes into contact with an aluminum, or plated, portion of the painting equipment, it will react chemically in a way that is very dangerous.
- ●Further, such a solvent may explode upon coming into contact with an aluminum, or plated, portion of a pressure vessel (pump, heater, filter, valve, gun, etc.), on occasions leading to death or injury.

【Some examples of halogenated hydrocarbon solvents】

Chlorines	Trichloroethylene, Tetrachloroethylene, Ethylene chloride
Bromines	n-Propyl Bromide
Carbon-fluorines	HCFC-225, HFC-43-10mee, HFE-449s1(HFE-7100)

(Please note that the above examples do not cover all halogenated hydrocarbon solvents. Please contact a paint maker for further details.)

⚠ WARNING

In an atmosphere contaminated with paint- or spray-mist, you may suffer from respiration difficulties or you may even be intoxicated from organic solvents contained therein.

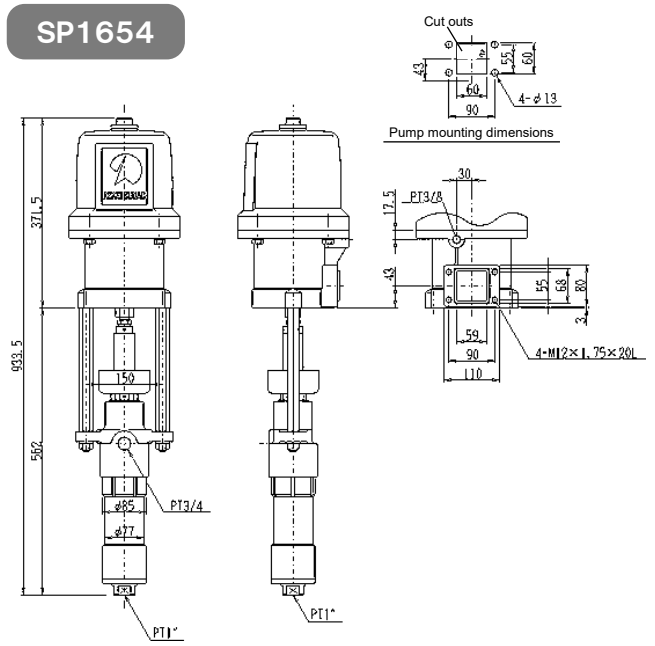
- ●Do not use the painting system in a room, tunnel, tank, etc., where ventilation is poor.

  When you do use it, make sure that no people or livestock are within a vicinity where they may be affected.

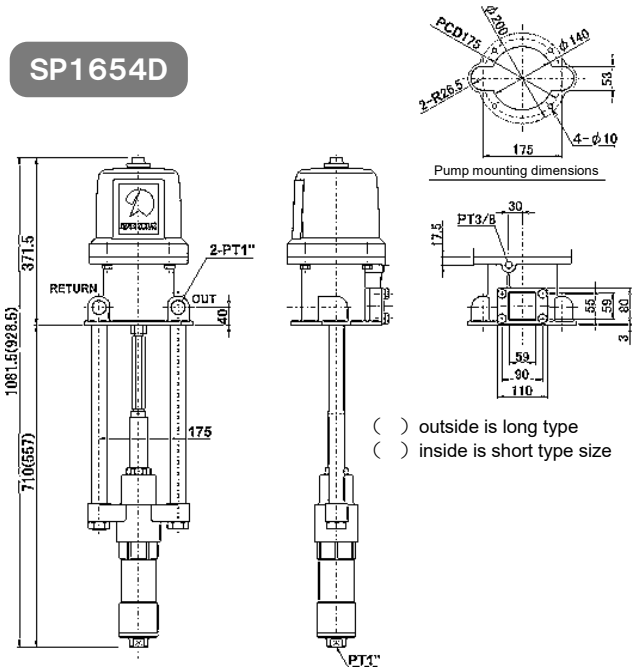
2 Standard dimensions and specifications

●Pump Size

SP1654



SP1654D



●Specifications

	SP1654		SP1654D			
Specifications	Normal	SUS	Long	Short	Long(SUS)	Short(SUS)
Model	SP1654	SP1654S	SP1654S-L	SP1654D-S	SP1654DS-L	SP1654DS-S
Part number	40118-4	40168-4	40118-3	40119	40168-6	40168-5
Pressure ratio	1：9					
Max. fluid pressure	14L/min					
Max. stroke	60st/min					
Fluid pressure	6.5L/min					
Unit fluid pressure	233mL/st.					
Max. air pressure	0.5MPa					
Max. paint pressure	4.5MPa					
Air consumption	770L/min（ANR）					

(Note) The specifications and configurations of this equipment are subject to change without prior notice due to improvements being made continuously.

3 General Set-up Precautions

①This airless spray equipment uses compressed air for the fluid displacement pump.
Use a compressor with a capacity of 2.25kW or larger.

②Supply dry compressed air.
(Drain standing water in air compressor tank from time to time.)

③Pressure drop occurs when a compressor is installed in a place far removed from the pump. The maximum compressed air pressure supplied to the pump is 0.5 Mpa.
Determine the capacity of compressor taking the compressor-to-pump distance into account.

④Be sure to ground the pump well before use.

⑤When you noticed any failure symptom, take corrective actions in accordance with the “Tear Down Inspection and Parts Replacement” (pages 9) and “Troubleshooting” (pages 11).
If your problems still exist after you did all this, don’t try to do anything further but immediately contact our agency near you or Asahi Sunac directly, giving us details about the problems. Please rest assured; we’ll take care of them.

4 Installation

①Grounding Pump

(1) Install a pump vertically with the ground at the place where no paint spray.
(2) For paint in the hose to have a possibility that rub is electrified, ground a pump by a ground wire of an accessory.

⚠ WARNING

Improper grounding may cause electric shock, fire or explosion.

②Piping Air Hose

(1) Even connect an air regulator of a pump by compressed-air hose more than the branch part from a compressed air source.
(Please prepare necessary compressed-air hose by users.)
(2) Prepare the one from which the impurities which are water and oil dirt, etc. for mist separator was removed for a compressed air source.
(3) When Lubricator (Oiler) which can be supplied continuously is combined for lubrications, an extended period can make operation of a pump become stable.

⚠ CAUTION

Do not use compressed air containing moisture. Freezing inside the pump can cause switching problems, and rust can form in various parts, causing major problems with the pump's operation. Check whether water has accumulated in the compressor tank.

③Piping paint hose

(1) Connect between the paint regulator or the transfer pump and the spray gun by a paint hose.
（Please prepare a necessary paint hose by users.）
(2)Suction hose set is put in paint container.
(3) When connecting 2-3 pieces of spray gun from 1 pump, prepare "connection nipple" separately.
(4) When installing a paint regulator in the pump directly, with a wrench after a sticker tape is wound on a paint intake of the paint regulator (G1/4 (PF1/4), screw).

⚠ WARNING

Don’t connect plural airless pumps on the same paint supply route. Applying pressure to multiple pumps simultaneously may cause excessive load, potentially damaging the pumps, hoses etc.

5 Operation: Procedures and Precautions

①Operation

Clean the unit well using solvents and check that everything works properly. If there is any leak in the paint circuit, retighten the joints well.
Remove foreign materials, as well. Foreign materials, such as dust, contaminants, etc., may cause the nozzle to get clogged, resulting in inconsistent spray pattern. Flush thoroughly.
Equipment Flushing Procedure.

⚠ WARNING

Do not use the paint hose with a loose connection.
If paint sprays out, it may cause personal injury or accidents.

(1) Fill an empty can (fluid container) with 5liters of solvent (cleaning thinner). Put the suction pipe into the can.
(2) Gradually open the air regulator (turn clockwise) and supply compressed air and then start operation. Set the compressed air at about 0.1 MPa.

⚠ CAUTION

In order to prevent an air regulator from getting damage , unlock the handle of air regulator before operate.

(3) Open an exit valve of a circulation line. Solvent circulates in the pump.
Air in the equipment is removed at the same time. (It'll be a bubble, and go out.)
(4) Once passage cleaning is done, pull the suction pipe off the fluid can and run the pump idly to completely remove residual solvent within the pump. And then close the air regulator (turn counter-clockwise).
Now it's ready for operation.
(5) Provide a paint fluid can.
(6) Adjust the air regulator to keep compressed air pressure at 0.4 to 0.5MPa.
The fluid pressure of 9 times the compressed air pressure, fluid pressure will be 3.6 to 4.5MPa or more, causing the pump to stop.
(7) When adding paint to a paint can, filter.

②Shutdown and Equipment Care

(1) After completion of painting operation, perform one of the two treatments.
1) Leave the equipment filled with fluid.
In this case, because air will be purged from the fluid passage keeping the fluid in the way as if it were stored in a paint can, the fluid in the equipment will be kept free from solidification.
（When safekeeping is a case when I extend over a long term and the paint which tends to settle, the next way ② is performed.）
2) Completely remove fluid from the equipment and keep it empty.
Any fluid paint left inside the equipment, how little it may be, will solidify.
Flush thoroughly with solvent.
Until a pump is re-applied in this case, solvent is better to be filled.
(2) Clean the material filter when the day's work is done.
(3) When circulating through paint and washing, drive the pressure by less than 0.2 MPa.
(4) When you change paint colors, empty-handed at a pump, then flush it with solvent repeating suction-circulation-discharge circles as many time as it takes to completely flush the fluid passage from the inlet to outlet. After this, change paint colors.
(5) If a drain is used, be sure also clean the drain system.

☆The point is to leave the system completely filled with solvent or washed out with the solvent. That is not to leave it improperly or just the paint pumped out. Clean the system completely after using dissolving material or high viscosity material.

③Maintenance

Equipment Maintenance Guidelines

(1) Compressed air of an air motor is supplied in the state as pure as possible and juiceless. Use through an air filter (option) as much as possible.

(2) When the pump V packing is worn, replace. (Rule of thumb: Replace every six months under normal operation condition.)

(3) When paint is solidified and accumulated in the pump, take it apart and clean.

(4) Apply grease to the air cylinder part of transfer pump 2-3 times a year.

(5) When stopping transferring at the time break time, reduce the pressure.

⚠ WARNING

Before you take parts apart, always drain all paint fluid from the system and relief the pump operating pressure down to zero.

6 Maintenance

Inspection	Content
Check before work every day	Solvent inject packing retainer.
Check after work every day	①Clean the pump.
	②When not washing a pump, a suction filter is put in paint.
	③When paint is leaking from packing retainer, tightening by attached tool.
	④Air regulator is reduced and air pressure is returned to 0.
Check every 3 months	①Grease is applied to sliding part of cylinder.
	②Disassemble the pump to clean it when the material hardened inside the pump.
Check every 6 months	①Keep inside of the pump clean by spraying the solvent. (When the paint hardened inside the pump, disassemble to clean every day)
	②Clean the suction filter.
Check every 6months – 1year	①Disassemble the pump.
	②Consumables and wear part are exchanged.

7 Performance Tips

(1)Always pay attention to pressure

- Don't raise output pressure more than required.
- Always lock the trigger of your gun – each time you stop spraying for a break or interruption.
- When you found leak from joint,
  Bring the pressure down,
  Drain the fluid,
  Locate the point of leakage,
  Retighten.
- Use the lowest pressure possible, when:
  Flushing the fluid circulation passage in the system,
  Circulating fluid.
  (Air pressure at about 0.1MPa)

(2)Check the appearance of the material hose.

- Is there any sharp bending along the line?
- Are hose fittings tight enough?
- No hose damage?
- No trace of any heavy object placed on the hose?
- Replace the concerned parts to new one if these abnormalities are detected.

(3)In switching and addition of the paints,

- When you change paint fluid, thoroughly flush the can with solvent so that no paint residue may be left unremoved. (Paint residue may cause the nozzle to get clogged.)
- Be sure to add the filtered paints.
- In color changing, draw the suction part out from the paint can and discharge all paints by opening the valve of gun or outlet side.
  Next, repeat the procedures of suction (It reduces cleaning solvent consumption.), circulation and discharging and then, change the color after the paint route is completely cleaned.

(4)Method for measuring pump operation counts (Option)

- By using the optional air counter cap (0101-404), the number of pump operations can be measured using the air counter.

  ※For details, please contact distributor or the contact information on the back cover.

(Note) The specifications and configurations of this equipment are subject to change without prior notice due to improvements being made continuously.

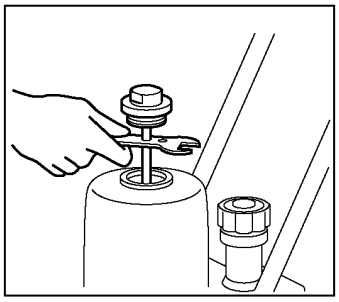
8 Tear Down Inspection and Parts Replacement Procedure

Before you take parts apart, always drain all paint fluid in the system and completely relieve the pump operating pressure and wrap air pressure down to zero.

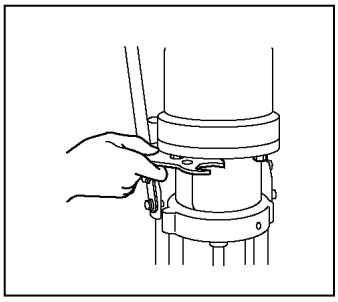
①Air motor

（For the index number in parentheses (　), see page 13, 14, 16.）

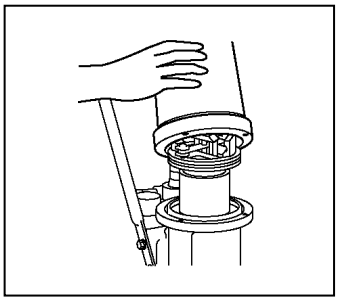
When you apply grease to the cylinder interior or replace perishable parts, follow the procedure shown below.
(See the exploded diagram for the index number referred to in the following instructions.)
Before you take parts apart, always drain all paint fluid in the system and shutdown compressed air supply.



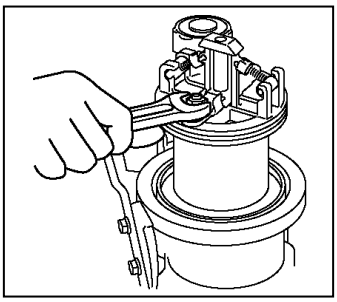
① Remove the cap (4) from the cylinder (1) using a spanner. At that time, the trip rod (15) comes off with the cap. Disconnect the trip rod from the cap with a spanner. (If the trip rod is not lifted up enough to provide a room for a spanner to be manipulated, life the cap. This will shift the valve pushing the shift rod up making access by a spanner possible.)



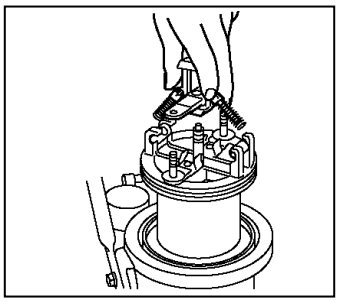
②Remove four bolts(28).



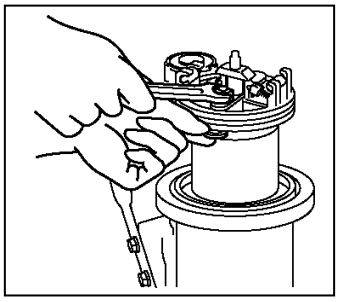
③Carefully lift the cylinder and take it out from the top. The entire piston (3) and air valve (12)(16) will be exposed.



④When you replace the air valves (12) and (16), do so with the toggle shuttle (5) lifted. (In this case, the spring (10) will be pointing up diagonally.)



⑤Remove the wire (11) and nut (16). Carefully lift the toggle shuttle (5) off.



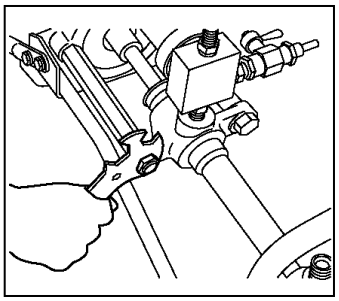
⑥When you put them together again, do so in the reversed order. When reassembling, carefully mount the stay perpendicularly, to the hole. Make a 3mm clearance between air valve(12) and air hole by adjusting stay(13) then tighten top and but tom of nut(18). If you find any damage to the “O”-ring, replace.

②Material cylinder

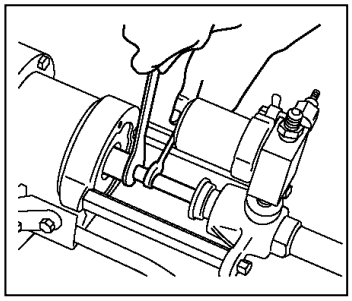
（See page 15, 17, 18, 19 for configurations and part names.）

Shown below are the replacement procedures for the booster “V packing” (20 and 26) at the upper end of the cylinder and the suction “V packings” (20 and 26) at the lower end of piston rod.
Packing can be adjusted by retightening the packing retainer (2). Service the pump setting it flat horizontally.

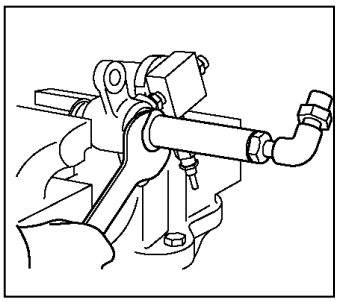
① Booster V Packing Replacement Procedure



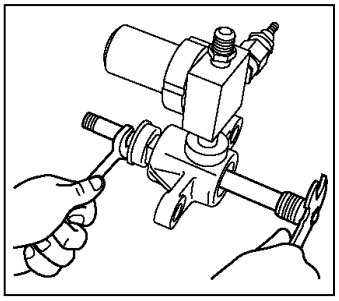
⑦Remove the accumulator hose. Remove the nut for the stay that connects the pump housing (1).



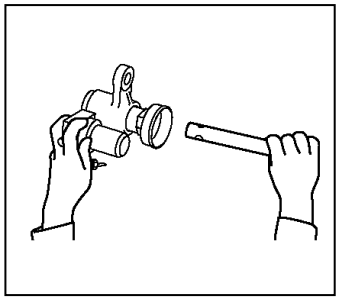
⑧Loosen the nut (17, 22) disengaging the threaded portion of the rod and piston rod (5). Disconnect the air motor from the material cylinder.



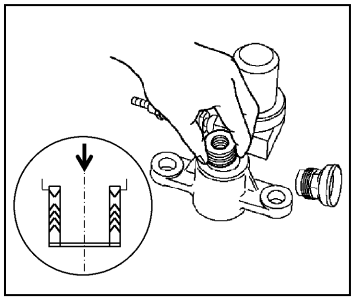
⑨Remove the cylinder (12) from the pump housing (1)



⑩Put a spanner on the piston rod (5) and remove the screw part of the check valve (6). Remove the check valve together with the V-packing.



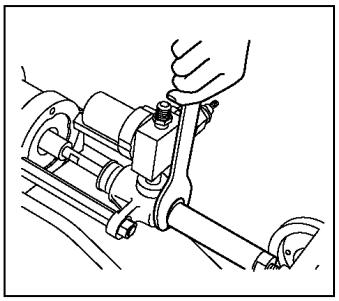
⑪Loosen the packing retainer (2).
Pull off the piston rod (5).
Remove the V packings.



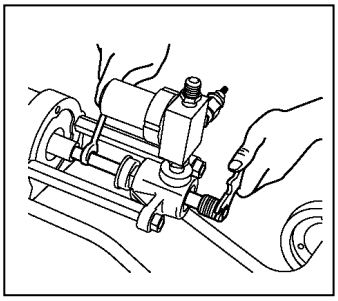
⑫Put in new V packings, one by one.
(Install the packing gland (4) and V packings with the convex side pointing up.).

Reassemble in the reverse order.

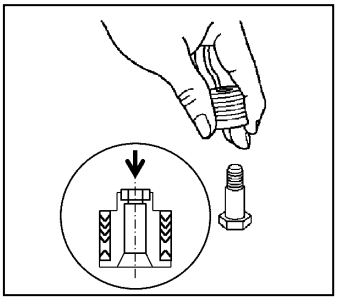
② Suction V Packing Replacement Procedure



⑬Remove the cylinder (12) from the pump housing (1)



⑭Put a spanner on the piston rod (5) and unscrew the check valve (6) to remove it along with V packings



⑮Install new V packings, one by one.
(Install the packing gland (4) and V packings with the convex side pointing down.)

Reassemble in the reverse order.

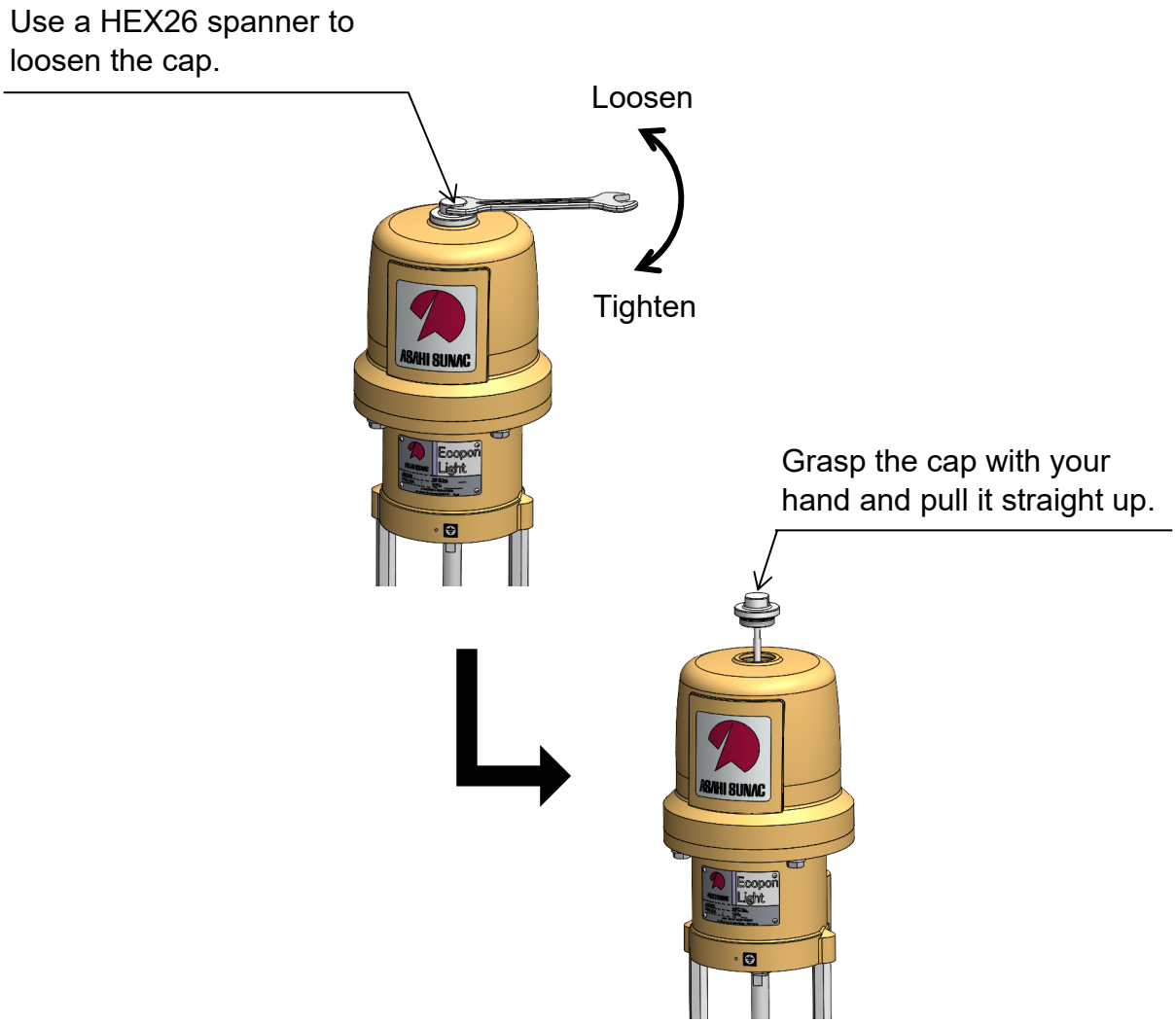
Note: Remove the check valve, the valve ball will come out, so be careful not to lose it.

9 Troubleshooting

（Before you take parts apart, always shut down of operated air in the system and completely relieve the pump operating paint pressure down to zero.

Symptom	Cause	Remedy
1. No fluid pressure	① Air regulator valve not opened.	① Fully open (turn clockwise).
	② Defective pressure gauge	② Replace it with a new one.
	③ Poor cleaning: Pump valve stuck due to hardened paint	③ Flush thoroughly with thinner. If hardened paint still remains after that, disassemble pump and clean.
	④ Air in fluid passage	④ Pull spray gun trigger for air bubble purging through fluid circulation.
	⑤ Insufficient fluid supply	⑤ Replenish fluid
	⑥ Worn V packings	⑥ Replace V packings following V Packing Replacement Procedure.
	⑦ Clogged between the valve seat and the ball	⑦ Remove and Clean
	⑧ Clogged suction filter not sucking enough	⑧ Clean suction filter
	⑨ Exit valve of a circulation line forget, tightened up	⑨ Tighten it up
2. Pump runs, but pressure does not rise to working pressure	① Insufficient compressed air supply capacity	① Replace compressor with one with larger capacity.
	② Compressed air supply hose too small in diameter	② Use larger hose in terms of diameter.
	③ Much compressed air consumed elsewhere	③ Provide a separate compressed air source for exclusive use.
	④ Air regulator not operating properly or setting pressure too low	④ Readjust.
3. Pump fails to operate if compressed air introduced	① Seizure of rod and oiles metal	① Disassemble and clean rod and metal. Replace oil seal with new one. If damage is found to rod or metal replace.
	② Packing retainer too tight	② Loosen packing retainer. The retighten it by hand until you can not turn it any further. Then turn it about another 15° ～ 30°using a spanner. That will be tight enough.
4. Air leak (Sound is heard when air leaks)	① Air valve is stuck in middle of stroke	① Remove cap and lift handle. (refer to page12)
	② Air valve is defective	② Replace
	③ Spring is defective	③ Replace

● How to pull up a trip rod



Assembly is in reverse procedure.

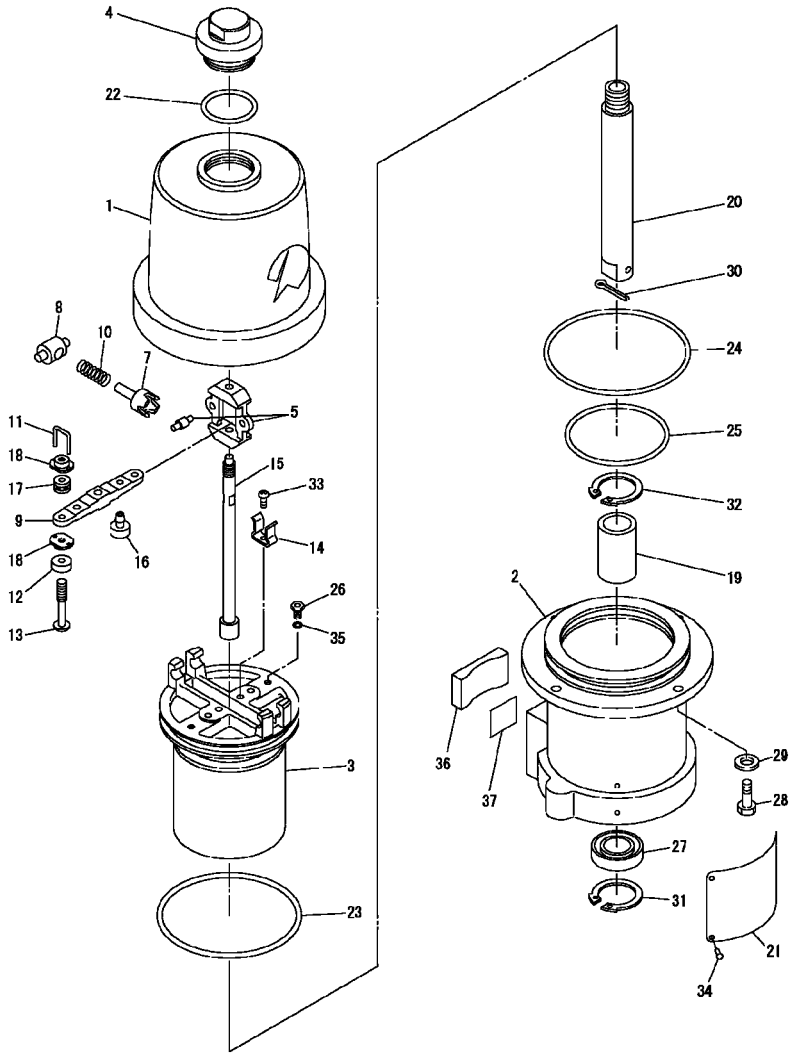
⚠ WARNING

Always relieve paint and air pressure before cleaning, disassembly or performing any maintenance work.

- **Pressurized paint, cleaning fluid and air can cause injury to the human body.**
- **Harmful substances may cause serious injury such as inflammation and poisoning.**

10 Component Names

Air Mortor
0102−4



Air motor AC1610 < For SP1654／SP1654S>

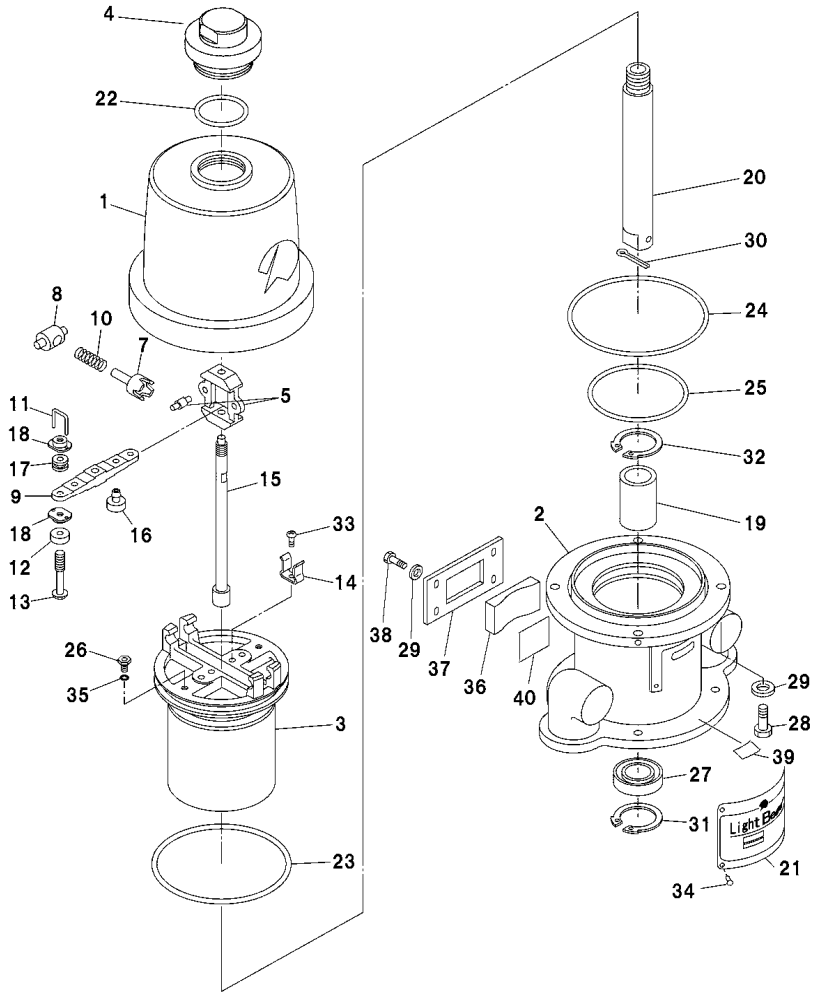
No.	Part No.	Part Name	Qty	Remarks
1	0102-701A	Cylinder	1	
2	0102-702A	Stand	1	
3	0102-703	Piston	1	
4	0101-304	Cap	1	
5	0101-005	Toggle shuttle	1	
6	Nill			
7	0102-007	Toggle arm	2	
8	0101-008	Toggle locker	2	
9	0105-009	Valve bar	1	
10	0102-110	Spring	2	
※11	0101-011	Wire	2	
※12	0101-012	Air valve	2	
13	0101-013	Stay	2	
14	0101-014	Clip	2	
15	0102-715	Trip rod	1	
※16	0101-016	Air valve	2	
※17	0101-017	Washer	2	
18	0101-118	Nut	4	
19	0101-019	Oilless metal	1	

No.	Part No.	Part Name	Qty	Remarks
20	0102-520	Rod	1	
21	0102-421	Name plate	1	
22	103-6025	O-ring	1	
※23	101-6150A	O-ring	1	
24	102-6165	O-ring	1	
※25	101-6115	O-ring	1	
26	0102-726	Bushing	2	
27	151-0001	Oil seal	1	
28	01-11240	Hex. bolt	4	
29	0C-91200	Spring washer	4	
※30	49-10432	Split pin	1	
31	56-13800	Stop ring	1	
32	56-13200	Stop ring	1	
33	68-10406	Cross recessed pan hd screw	2	
34	91-40408	Parker stud	4	
35	146-7024	Gasket	2	
36	0102-039	Noise-canceling unit	1	
37	0102-046	Seat	1	

Items marked with ※ are the parts we recommend you to carry in stock.

Air Motor

0102−6



Air motor〈For SP1654M／SP1654MS〉

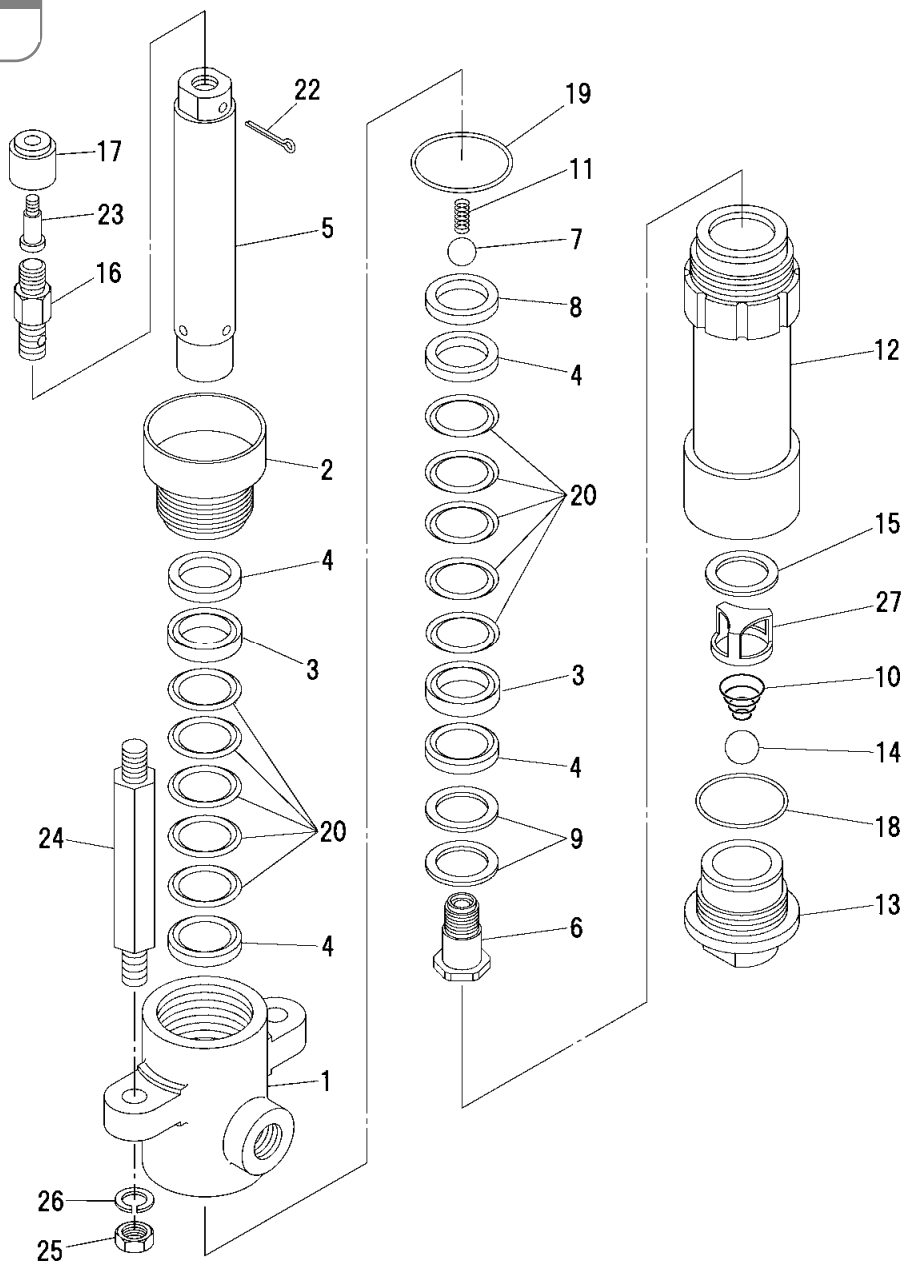
No.	Part No.	Part Name	Q'ty	Remark
1	0102-701A	Cylinder	1	
2	0102-302	Stand	1	
3	0102-703	Piston	1	
4	0101-304	Cap	1	
5	0101-005	Toggle shuttle	1	
7	0102-007	Toggle arm	2	
8	0101-008	Toggle locker	2	
9	0105-009	Valve bar	1	
10	0102-110	Spring	2	
※11	0101-011	Wire	2	
※12	0101-012	Air valve	2	
13	0101-013	Stay	2	
14	0101-014	Clip	2	
15	0102-715	Trip rod	1	
※16	0101-016	Air valve	2	
※17	0101-017	Washer	2	
18	0101-118	Nut	4	
19	0101-019	Oil-less metal	1	
20	0102-520	Rod	1	
21	0102-521	Name plate	1	

No.	Part No.	Part Name	Q'ty	Remark
22	103-6025	O-ring	1	
※23	101-6150A	O-ring	1	
24	102-6165	O-ring	1	
※25	101-6115	O-ring	1	
26	0102-726	Bush	2	
27	151-0001	Oil seal	1	
28	01-11240	Hex. bolt	4	
29	0C-91200	Conical spring washer	8	
※30	49-10432	Cotter pin	1	
31	56-13800	Stop ring	1	
32	56-13200	Stop ring	1	
33	68-10406	Screw	2	
34	91-40408	Rivet	4	
35	146-7024	Gasket	2	
36	0102-039	Silencer	1	
37	0102-040	Push plate	1	
38	01-11220	Hex. bolt	4	
39	5241-001	Terminal name plate	1	
40	0102-046	Seat	1	

Items marked with ※ are the parts we recommend you to carry in stock.

Material cylinder

0270−2

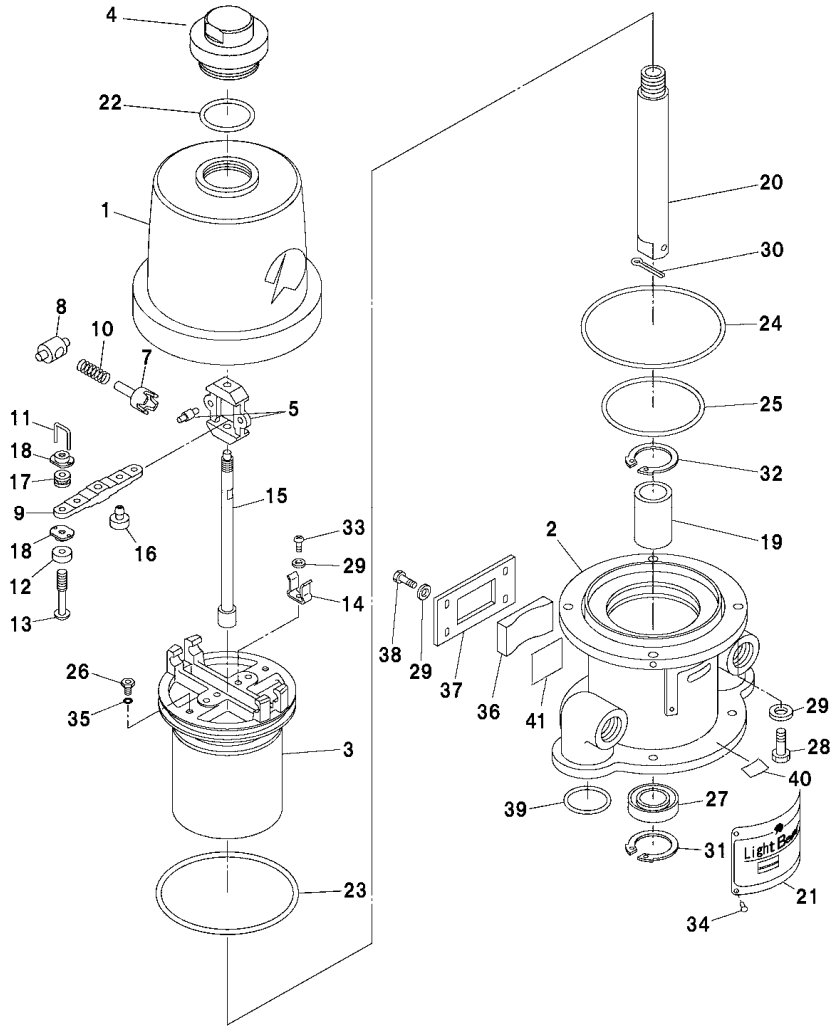


Material cylinder 〈For SP1654, SP1654M〉

No.	Part No.	Part Name	Q'ty	Remark
1	0270-101	Pump housing	1	
2	0270-002	Packing retainer	1	
3	0270-003	Retainer	2	
4	0270-005	Support ring	4	
5	0270-106	Piston rod	1	
6	0270-108	Check valve	1	
7	0280-016	Valve ball	1	
8	0270-010	Ring	1	
9	0270-011	Plain washer	2	
10	0270-012	Spring	1	
11	0270-013	Spring	1	
12	0270-014	Cylinder	1	
13	0270-115	Foot valve	1	

No.	Part No.	Part Name	Q'ty	Remark
14	0206-016	Valve ball	1	
15	0270-017	Stop ring	1	
16	0270-218	Stud bolt	1	
17	0280-019	Nut	1	
18	102-2060	O-ring	1	
19	102-2070	O-ring	1	
20	V853930545	V-packing	10	
22	49-10445	Cotter pin	1	
23	0280-020	Special joint	1	
24	4102-801	Stay	2	
25	15-11600	Hex. nut	2	
26	41-51600	Spring washer	2	
27	0270-115-3	Ball guide	1	

Air Motor
0102



Air motor〈For SP1654D／SP1654DS〉

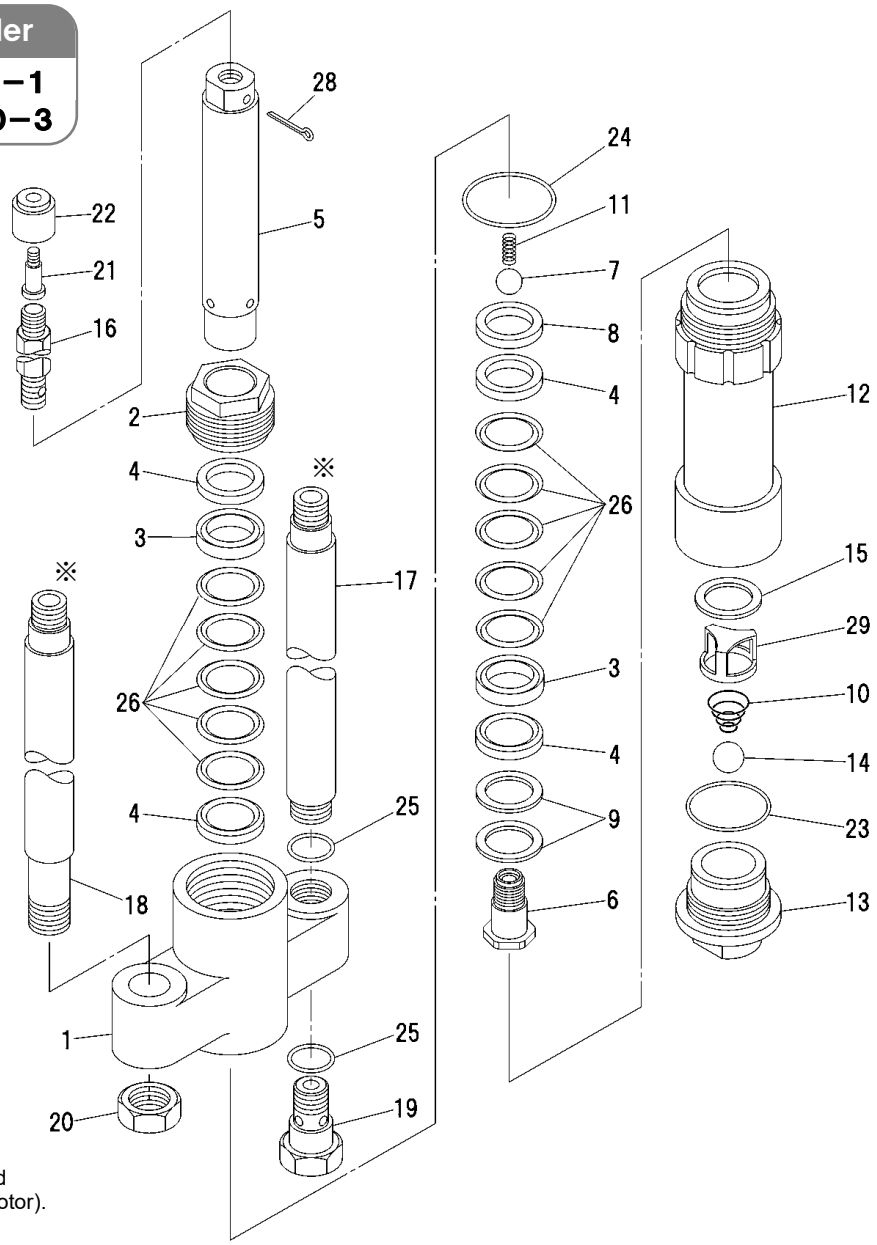
No.	Part No.	Part Name	Q'ty	Remark
1	0102-701A	Cylinder	1	
2	0102-002	Stand	1	
3	0102-703	Piston	1	
4	0101-304	Cap	1	
5	0101-005	Toggle shuttle	1	
7	0102-007	Toggle arm	2	
8	0101-008	Toggle locker	2	
9	0105-009	Valve bar	1	
10	0102-110	Spring	2	
※11	0101-011	Wire	2	
※12	0101-012	Air valve	2	
13	0101-013	Stay	2	
14	0101-014	Clip	2	
15	0102-715	Trip rod	1	
※16	0101-016	Air valve	2	
※17	0101-017	Washer	2	
18	0101-118	Nut	4	
19	0101-019	Oil-less metal	1	
20	0102-520	Rod	1	
21	0102-521	Name plate	1	

No.	Part No.	Part Name	Q'ty	Remark
22	103-6025	O-ring	1	
※23	101-6150A	O-ring	1	
24	102-6165	O-ring	1	
※25	101-6115	O-ring	1	
26	0102-726	Bush	2	
27	151-0001	Oil seal	1	
28	01-11240	Hex. bolt	4	
29	0C-91200	Conical spring washer	8	
※30	49-10432	Cotter pin	1	
31	56-13800	Stop ring	1	
32	56-13200	Stop ring	1	
33	68-10406	Screw	2	
34	91-40408	Rivet	4	
35	146-7024	Gasket	2	
36	0102-039	Silencer	1	
37	0102-040	Push plate	1	
38	01-11220	Hex. bolt	4	
39	102-6030	O-ring	2	
40	5241-001	Terminal name plate	1	
41	0102-046	Seat	1	

Items marked with ※ are the parts we recommend you to carry in stock.

Material cylinder

Short type 0270−1
Long type 0270−3



※ 102-6030 O-rings (2pcs)
that into the 0102-002 Stand
is shown on page 16 (Air motor).

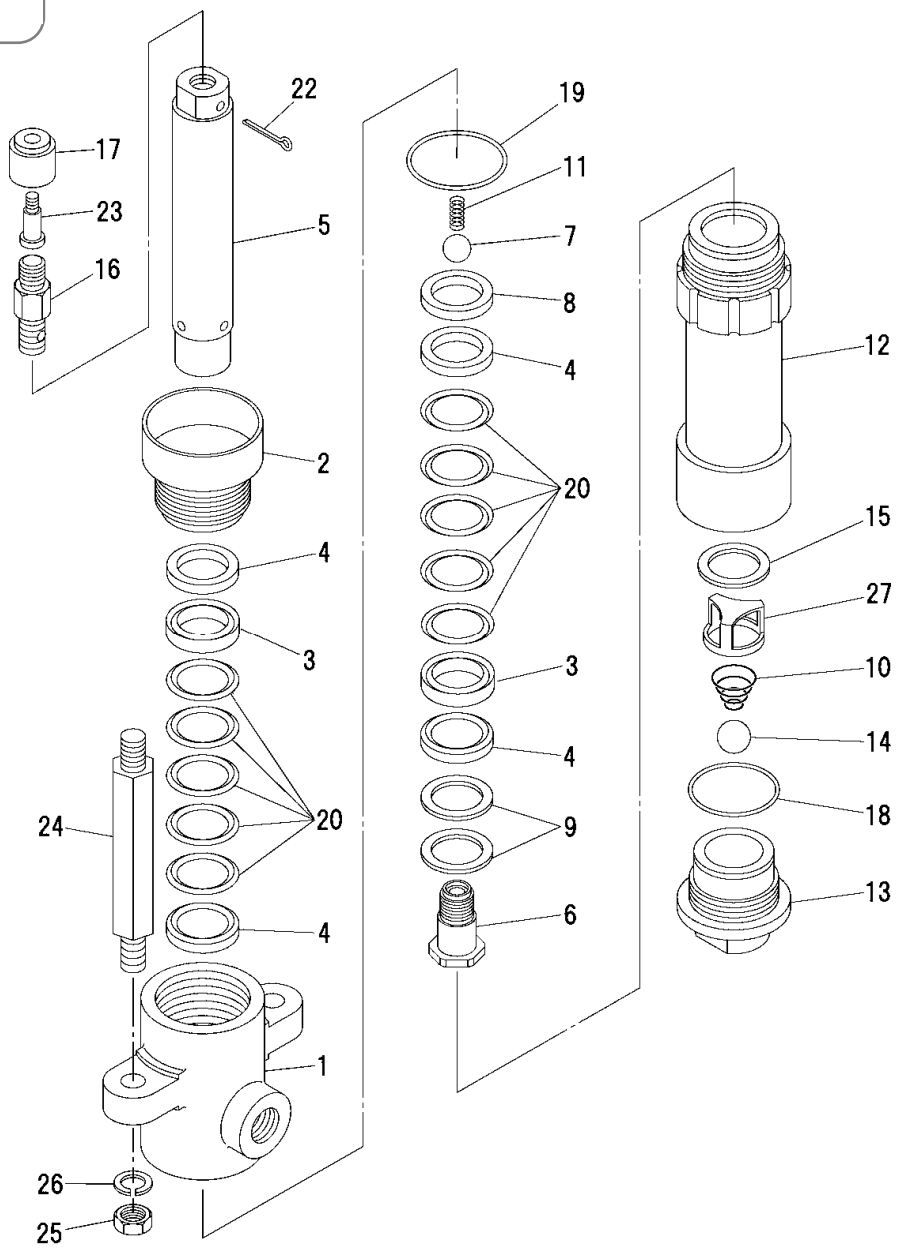
Material cylinder 〈For SP1654D〉

No.	Part No.	Part Name	Q'ty	Remark
1	0270-201	Pump housing	1	
2	0270-102	Packing retainer	1	
3	0270-003	Retainer	2	
4	0270-005	Support ring	4	
5	0270-106	Piston rod	1	
6	0270-108	Check valve	1	
7	0280-016	Valve ball	1	
8	0270-010	Ring	1	
9	0270-011	Plain washer	2	
10	0270-012	Spring	1	
11	0270-013	Spring	1	
12	0270-014	Cylinder	1	
13	0270-115	Foot valve	1	
14	0206-016	Foot valve ball	1	
15	0270-017	Stop ring	1	
16	0270-218	Stud bolt	1	Short
	0270-118		1	Long

No.	Part No.	Part Name	Q'ty	Remark
17	0270-123	Stay (A)	1	Short
	0270-023		1	Long
18	0270-120	Stay (B)	1	Short
	0270-020		1	Long
19	0270-021	Cap	1	
20	0270-022	Hex. nut	1	
21	0280-020	Special joint	1	
22	0280-019	Nut	1	
23	102-2060	O-ring	1	
24	102-2070	O-ring	1	
25	102-6030	O-ring	2	
26	V853930545	V-packing	10	
27	Nil			
28	49-10445	Cotter pin	1	
29	0270-115-3	Ball guide	1	

Material cylinder

0270−5



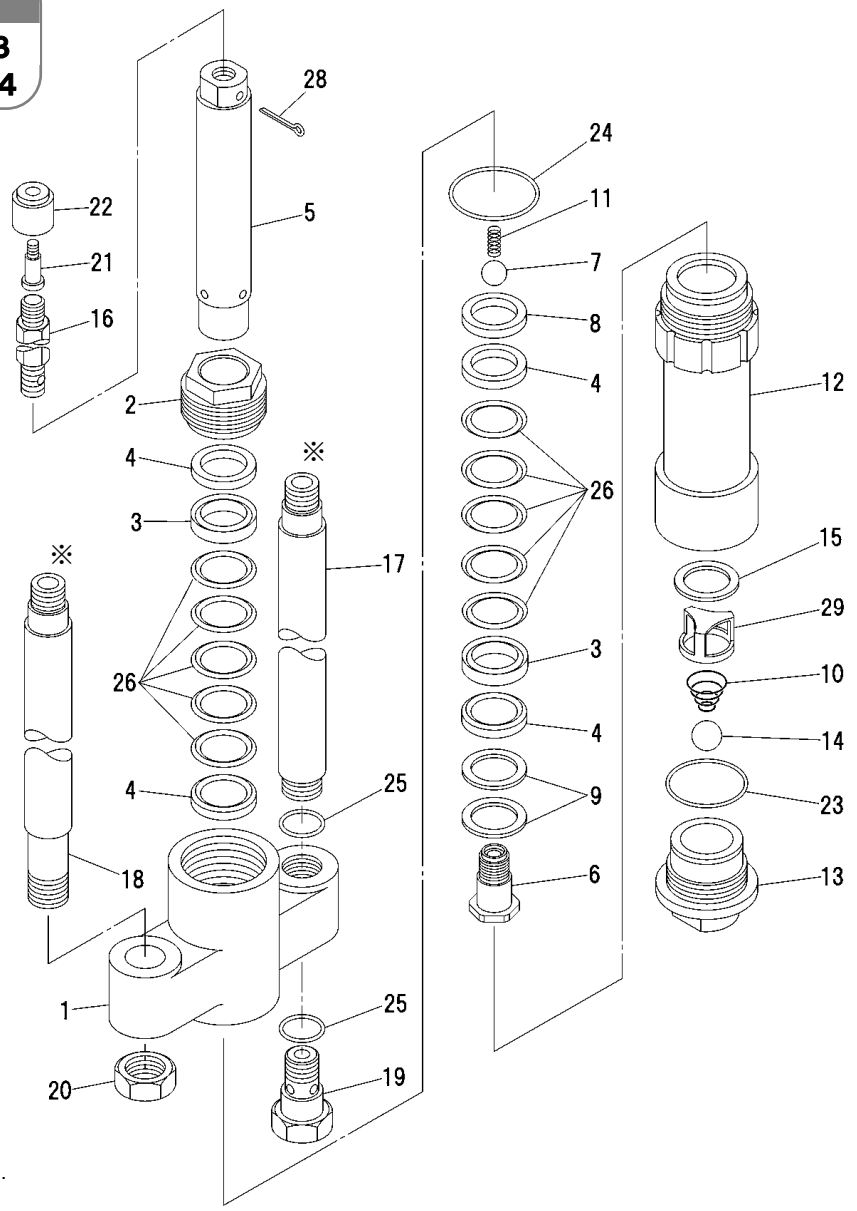
Material cylinder 〈For SP1654S, SP1654MS〉

No	Part No.	Part Name	Q'ty	Remark
1	0270-501	Pump housing	1	
2	0275-002	Packing retainer	1	
3	0270-003	Retainer	2	
4	0275-005	Support ring	4	
5	0275-006	Piston rod	1	
6	0275-108	Check valve	1	
7	0290-116	Valve ball	1	
8	0275-010	Ring	1	
9	0275-011	Plain washer	2	
10	0275-012	Spring	1	
11	0275-013	Spring	1	
12	0275-014	Cylinder	1	
13	0275-115	Foot valve	1	

No.	Part No.	Part Name	Q'ty	Remark
14	0226-016	Valve ball	1	
15	0275-017	Stop ring	1	
16	0270-218	Stud bolt	1	
17	0280-019	Nut	1	
18	102-2060	O-ring	1	
19	102-2070	O-ring	1	
20	V853930545	V-packing	10	
22	49-10445	Cotter pin	1	
23	0280-020	Special joint	1	
24	4102-801	Stay	2	
25	15-11600	Hex nut	2	
26	41-51600	Spring washer	2	
27	0270-115-3	Ball guide	1	

Material cylinder

Short type 0275−3
Long type 0275−4



※ 102-6030 O-rings (2pcs)
that into the 0102-002 Stand
is shown on page 16 (Air motor).

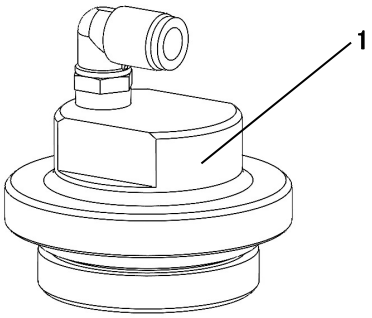
Material cylinder 〈For **SP1654DS**〉

No.	Part No.	Part Name	Q'ty	Remark
1	0275-201	Pump housing	1	
2	0275-302	Packing retainer	1	
3	0270-003	Retainer	2	
4	0275-005	Support ring	4	
5	0275-006	Piston rod	1	
6	0275-108	Check valve	1	
7	0290-116	Valve ball	1	
8	0275-010	Ring	1	
9	0275-011	Plain washer	2	
10	0275-012	Spring	1	
11	0275-013	Spring	1	
12	0275-014	Cylinder	1	
13	0275-115	Foot valve	1	
14	0226-016	Valve ball	1	
15	0275-017	Stop ring	1	
16	0275-218	Stud bolt	1	Short
	0275-118		1	Long

No.	Part No.	Part Name	Q'ty	Remark
17	0275-123	Stay (A)	1	Short
	0275-023		1	Long
18	0275-120	Stay (B)	1	Short
	0275-020		1	Long
19	0275-021	Cap	1	
20	0275-022	Hex nut	1	
21	0280-020	Special joint	1	
22	0280-019	Nut	1	
23	102-2060	O-ring	1	
24	102-2070	O-ring	1	
25	102-2030	O-ring	2	
26	V853930545	V-packing	10	
28	49-10445	Cotter pin	1	
29	0270-115-3	Ball guide	1	

〈Option〉

Cap
0101-404



〈Option〉

Air counter cap 0101-404

No.	Part No.	Part name	Qty	Remarks
1	0101-404	Cap	1	Including O-ring

※When measuring operating cycles with an air counter, replace the standard cap (0101-304) on the air motor (AC1006, AC1610).

11 Maintenance Log

Please use record the details that you conduct a maintenance service, such as replacement of a part, tear-down cleaning, post-failure repair, etc.

Equipment name			Light Bear <SP1654（S）／M／D>		Purchase date:	
Date of service			Portion worked on	Description	Result	Who serviced
						In-house / Dealer / Asahi Sunac
						In-house / Dealer / Asahi Sunac
						In-house / Dealer / Asahi Sunac
						In-house / Dealer / Asahi Sunac
						In-house / Dealer / Asahi Sunac
						In-house / Dealer / Asahi Sunac
						In-house / Dealer / Asahi Sunac
						In-house / Dealer / Asahi Sunac
						In-house / Dealer / Asahi Sunac
						In-house / Dealer / Asahi Sunac

Note: Due to continuous improvements and modifications, the configurations specified herein are subject to change without prior notice.

12 Warranty

ASAHI SUNAC CORPORATION (the “Company”) shall provide the original purchaser (the “Purchaser”) with warranty service for a period of one (1) year from the date of purchase of the product, as follows:

- Should you find defects in design or workmanship with regard to parts, ship them back to the Company, with freight prepaid. The Company shall repair or replace the parts free of charge and reimburse the freight charges, provided that, as a result of an inspection and investigation of the parts conducted by the Company, the defects are deemed to be to attributable to the factors within the Company’s responsibility.

- In the following cases, free after-sales service is not provided.

  1. Failure resulting from an inappropriate method of installing this equipment.
  2. Failure resulting from a use method not conforming to this instruction manual or mishandling.
  3. Failure resulting from insufficient maintenance management of this equipment and incorrect handling such as non-conformance to the procedures specified in this instruction manual.
  4. Failure resulting from unauthorized alteration or structure change of this equipment without the Company’s consent.
  5. Failure due to force majeure such as earthquake, disaster, flood disaster or lightening.
  6. Warranty for consumables worn or deteriorated even in the case where this equipment is used correctly.
  7. Repair after the machine has been used outside Japan, and shipping cost.
  8. In addition to the above, failure due to circumstances beyond our control.

- As for items such as parts purchased by the Company from another manufacturer, the warranty of that manufacturer shall apply.

- As for any parts deemed to be defective, the Company shall not be held liable for any expenses beyond the provision of repair or replacement parts free of charge.

- The Company shall not be held liable for any damage to the Purchaser caused by factors not attributable to the Company, such as misuse of product, etc.

- When a transfer of title of this equipment takes place, please ensure that this Operation and Maintenance Manual is handed over to the new owner.
- This equipment is manufactured in compliance with the Laws and Regulations of Japan.
  In the rare eventuality of this equipment being used outside Japan, compliance with the safety standards of the relevant countries is of course mandatory.

23th Edition : August 22, 2025

ASAHI SUNAC CORPORATION

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