



Mister AUTO

Garden Sprayer

For Gardening

HS-W Series

Instruction Manual

- Read this instruction manual before using product.
- Keep this book at hand for future reference.

Safety Precautions

- Below information should not be neglected in order for proper use of this product. Harm or damage to user or others can also be prevented. Following information is very important for the safety in handling this product. Be sure to observe them.

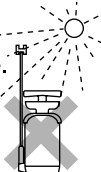
- ⚠ **Danger** :Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.
- ⚠ **Warning** :Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
- ⚠ **Caution** :Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury, or property to damage.

⚠ Danger

Stop using this product immediately if you find crack on tank or defect on product. Otherwise tank would explode which may cause injury.

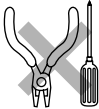


Store this product in a place free from direct sunlight. Storage in box is recommended after usage.
Replace with a new tank after 4-year use since tank deteriorates because of UV light in sunshine.



⚠ Warning

Never remodel this product. This would cause failure or erroneous function, triggering possible injury.



Do not use this product with chemical which strong acidity or alkalinity and combustible solution such as gas or coal oil. Otherwise equipment would damage or cause injury.



Precautions in Using Gardening Chemical

⚠ Caution

Wash chemical off in nozzle and hose by spraying clean water after dispersing content and washing inside tank. Residual chemical would cause stuff on discharge orifice or strainer or breakage of product for deterioration.



Observe attached instruction of applied chemical.



Use chemical in appropriate concentration. High concentration would cause harm to plant as well as to this product.



Wear protective items such face guard, protective goggle, and gloves to minimize contact or inhalation of chemical during spraying.



Do not use with chemicals such trefanocide, pendimetalin, and DCPA. Such chemical would cause deform to this product and leading to breakage or damage to tank.



Machine oil designed for gardening may be used. Do not apply petroleum or coal oil to equipment. Otherwise equipment would damage or break.

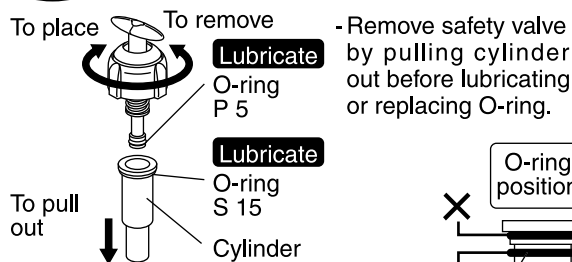
Troubleshooting

- ◎ Be sure to let pressure out of tank before disassembling.
- ◎ Most accumulator system sprayers can be repaired by customer's since they are simply structured. Check chart below for [Symptom] → [Cause] → [Solution] → [Procedure] . Repairing service is available. If listed procedures below do not work, labor/freight/parts are chargeable.

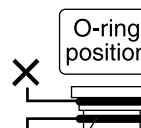
Symptom		Cause	Solution	Procedure
- Does not spray. or - Poor spraying.	High pressure level obtainable. ("Swoosh" when raising safety valve lever.)	Spray head blocked.	Clean.	A
		Strainer blocked.	Clean.	B
		Poor compression.	Apply pressure again until safety valve operates.	
		Discharge hose bent.	Straighten discharge hose.	
	High pressure level not obtainable.	Pump not closed tightly enough.	Tighten pump.	
		O-ring on pump not oily enough or deteriorated.	Lubricate or replace.	C
		O-ring on safety valve not oily enough or deteriorated.	Lubricate or replace.	D
		Discharge valve deteriorated or lost.	Replace.	E
		Poor compression.	Apply pressure again until safety valve operates.	
- Water leak from each connection part.		Loose and not closed tightly enough.	Tighten pump.	
- Water leak from nozzle body.		O-ring deteriorated.	Replace with new one.	F
- Nozzle lever is heavy.		Not enough oil.	Lubricate.	F

Fill small amount of grease to O-ring on regular basis. Shortage of oil triggers malfunction of product and water leak. * Use pure grease or silicon grease for this purpose.

Procedure D Oil filling and replacement of O-ring of safety valve.



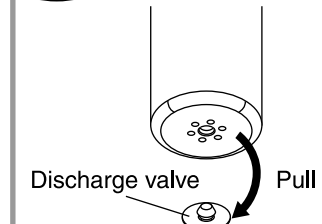
- Remove safety valve by pulling cylinder out before lubricating or replacing O-ring.



⚠ Caution

Do not remove safety valve before rotating change cap to neutral position. If T-shape lever is revolved, product could be broken.

Procedure E Replacement of discharge valve



- Remove discharge valve at tip of pump by hand.
- Press discharge valve forcibly by hand allowing no gap.

Part Name

*Different models have different accessories. See table below.

Model	Body	Nozzle
	Tank, Hose and Grip	2 stages extendable, 2 heads (Switchable to 1 head)
HS-503W	○	○
HS-703W	○	○
Content		

Specification and Performance

Model	Specified quantity	Nozzle type / Total extendable length	Hose length	Operating pressure around safety valve	Spraying time		Spray area
					1 head	2 heads	
HS-503W	5 Liters	2 stages extendable, 2 heads (113.5/63cm)	5m	0.5Mpa (5kgf/cm ²)	approx. 21 min.	approx. 10 min.	56~ 72.7m ²
HS-703W	7 Liters	2 stages extendable, 2 heads (113.5/63cm)			approx. 31 min.	approx. 15 min.	79~ 99m ²

*Spraying time depends on employed chemical type.



KOSHIN

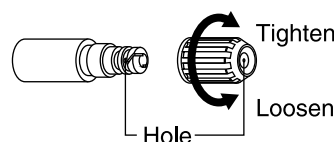
12, KAMI-HACHINOTSUBO KOTARI, NAGAOKAKYO-CITY, KYOTO, JAPAN 617-8511
TEL.+81-75-954-6111 FAX.+81-75-954-6119
www.koshinpump.com

OVERSEAS OFFICE

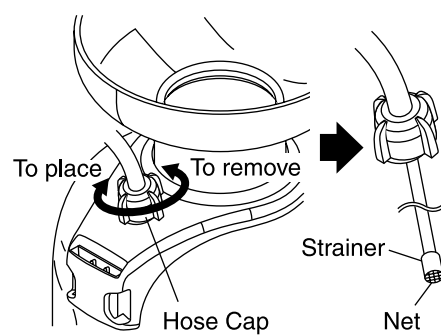
KOSHIN AMERICA CORP.
KOSHIN CHINA LIMITED

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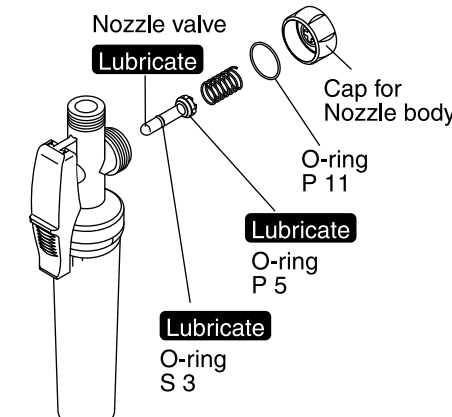
Procedure A Cleaning spray head



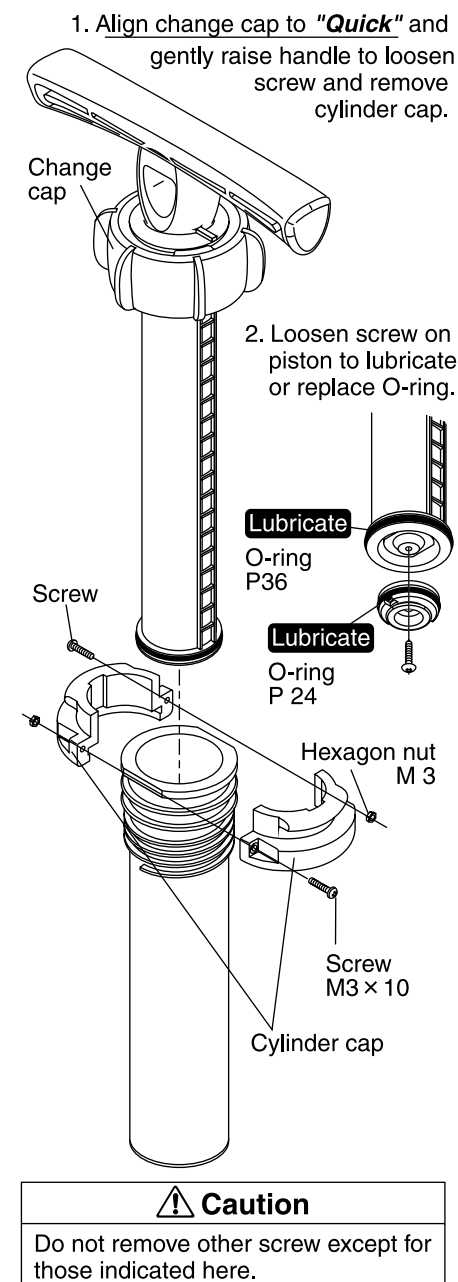
Procedure B Cleaning strainer



Procedure F Oil filling and replacement of O-ring of nozzle



Procedure C Oil filling and replacement of pump O-ring



⚠ Caution

Do not remove other screw except for those indicated here.

How to Use

1 Attach belt to body.

How to lace belt in

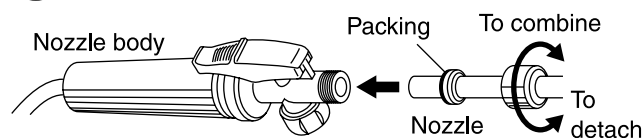
Attention to buckle direction

Pay attention to buckle direction when attaching belt. Belt would not be fixed with wrong buckle direction.

- Insert buckle in belt attaching part. Place buckle so that edge of folded belt faces outside.

Belt attaching part

2 Assemble nozzle.



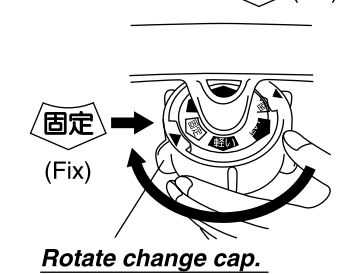
Caution

Make sure that packing is preset on connection part. Tighten up well so no leakage.

3 Pull pump out.

1. Rotate change cap until ▲ mark comes to 固定 (Fix).

2. Rotate handle to pull pump out.



Rotate change cap.

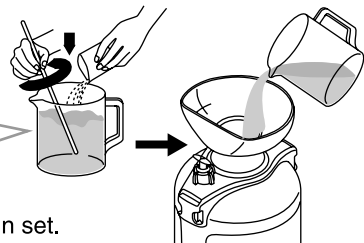
Pull pump out while rotating handle. (Counter clockwise)

4 Pour chemical into tank.

- Dissolve chemical sufficiently in a separate container before pouring into tank.

Completely dissolve.
Any chemical added must be completely dissolved.

*Container is not included in set.



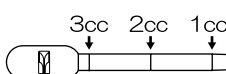
Caution

Be sure that no previously used chemical has been left in tank. If so, chemical reaction may occur generating harmful gas.

Caution

Do not exceed specified quantity. This would shorten spraying duration. (Specified quantity : 5L tank: 5th scale, 7L tank: 7th scale)

Water (L)	Chemical (cc)		
	× 500	× 1000	× 2000
1	2	1	0.5
4	8	4	2
5	10	5	2.5
7	14	7	3.5



Scale unit of syringe: cc (cc = g = ml)

5 Restore pump to original position before pressurizing.

Warning

Do not pressurize when nozzle is in nozzle stand. This may cause injury.

Caution

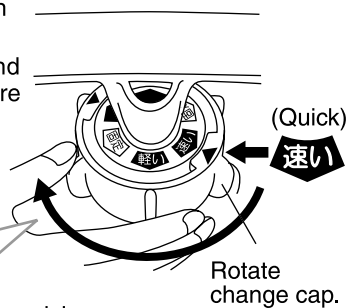
Make sure that nozzle lever is not set for spraying before applying pressure to prevent erroneous function.

1. Place pump in tank.

2. Rotate change cap to align ▲ mark to 速 (Quick). Move handle upward and downward to apply pressure into tank.

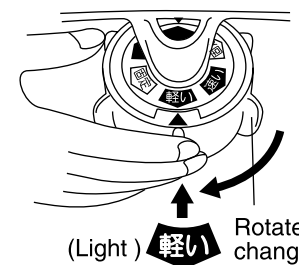
Precaution in changing.

Push handle down to the lowest position to operate change cap.

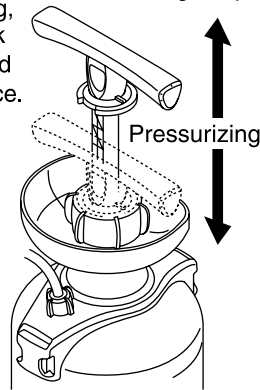


Rotate change cap.

3. If you feel heavy while pressurizing, rotate change cap until ▲ mark places at 軽 (Light). This would enable to pressurize with light force.



(Light) 軽 Rotate change cap.



Pressurizing

Indicator for pressurizing

Scale around safety valve indicates pressure level inside tank. Apply pressure until scale positions 5 or 0.5Mpa or according to specified quantity of tank. Such level pressure is unnecessary if smaller amount chemical is used. (Appropriate spraying is assured if scale indicates 1(0.1Mpa) or larger.)



This scale just serves as indicator and could slightly deviate from actual pressure level.

4. Stop pressurizing when safety valve pops air. This means appropriate pressure has been obtained for spraying.

Safety Valve

Set for preventing breakage due to overpressure, this automatically lets excess pressure out when appropriate pressure is reached.

5. Lock handle after applying pressure.

How to Use

6 Disperse chemical.

1. Adjust nozzle length.
- Close cap tightly after adjustment.

2. Now, disperse chemical.

How to operate lever

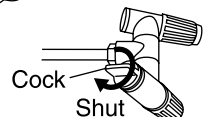
Intermittent spray

- Press and slide lever.

Continuous spray

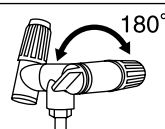
How to change to one-head type

- Shut cock to use with one head.



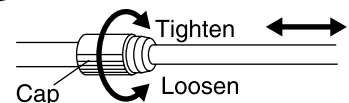
3. Apply pressure again if spraying force becomes weaker.

Caution

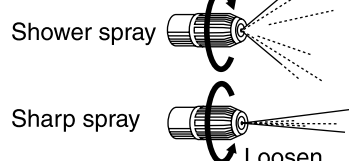


- Do not overturn cock exceeding 180°. Disperse orifice may break.
- Do not touch nozzle lever by mistake when resting nozzle on nozzle stand to avoid erroneous spraying.
- Do not leave leftover chemical inside tank for a long period of time. This would damage parts and shorten life of product.

How to adjust nozzle length



How to adjust spray



Caution

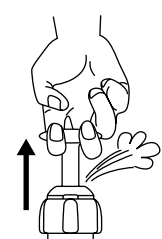
Do not twist and loosen tighten up cock over one rotation to avoid leak.

7 Let pressure out in tank after use.

- Let pressure out until no "Swoosh" is heard when pulling safety valve lever after dispersing.

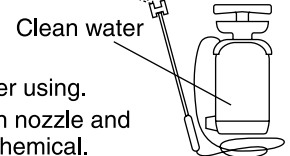
Caution

- Do not leave tank pressurized. This would damage product.
- Release pressure before removing pump or cap. Failing this would cause injury.



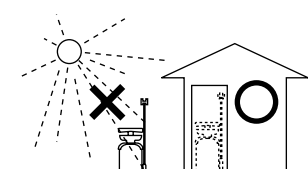
8 Clean unit properly before storing in box.

- Wash leftover chemical in tank with clean water immediately after using.
- Repeat several times after pouring clean water in tank and clean nozzle and hose by spraying for 60 seconds. This is efficient to remove all chemical.

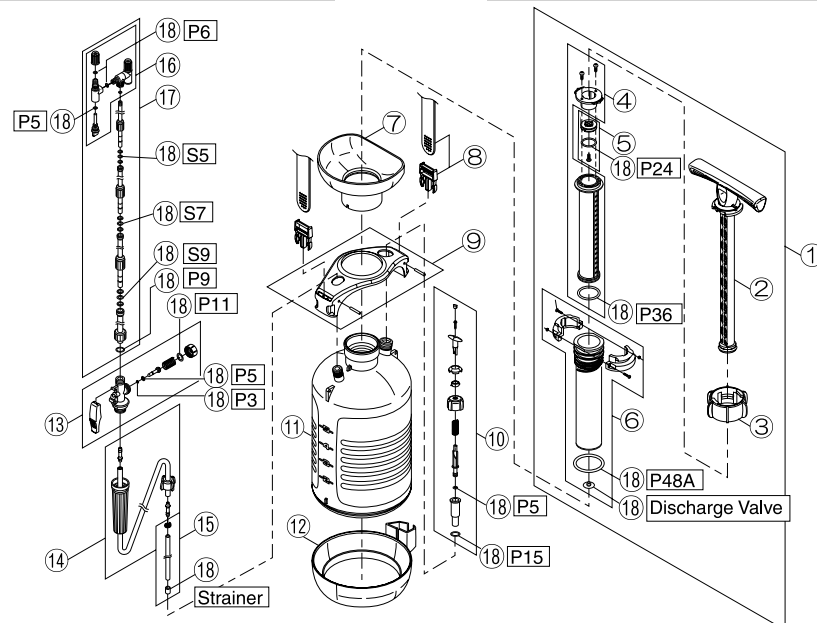


Caution

- Leftover chemical would solidify in nozzle.
- Put this product in box after use. Avoid direct sunlight. Direct sunlight accelerates deterioration of tank, may cause explosion while pressurizing in the future.



Part List



HS-503W-BAA-0 (040872204), HS-703W-BAA-0 (040872404)

No.	Part No.	Part Name	Compatibility with HS-C series
1	0408699	Pump assy	×
2	0408700	Handle	×
3	0408701	Change cap	×
4	0408702	Inner cylinder assy	×
5	0408703	Piston assy	×
6	0408704	Outer cylinder assy	×
7	0408705	Funnel	×
8	0408706	Shoulder belt assy	×
9	0408707	Head cover assy	×
10	0408708	Safety valve assy	×
11	0408709	5L tank	×
12	0408710	7L tank	×
13	0408711	Bottom cover	×
14	0408712	Nozzle body assy	○
15	0408713	Discharge hose assy (5m)	○
16	0408714	Suction hose assy (For 5L tank)	×
17	0408715	Suction hose assy (For 7L tank)	×
18	0408716	2 heads spray head assy (Changeable to 1 head)	○
19	0408717	2 stages extendable nozzle with 2 heads (Changeable to 1 head) [1135-630mm]	○
20	0408164	4 stages extendable nozzle with 2 heads (Changeable to 1 head) [2010-630mm]	○
21	0408719	Packing set	×
22	0108693	Grease (5g)	○

*Le specifiche sono soggette a modifiche e miglieorie senza preavviso. Aprile 2004.