

SP0 & SP1 Knapsack Sprayer

We would like to congratulate you on the purchase of your new SP0. The sprayer that allows you the easiest, most comfortable way of carrying out your farm, garden, etc. projects with the revolutionary piston diaphragm pump (patented), that all but eliminates the problems inherent in most sprayers. As a new owner of the skillfully engineered SP0, we strongly recommend you carefully read and follow all the information.

HOW TO ASSEMBLE:

1. Attach spray wand to spray gun and tighten firmly.
2. Take pump handle Kit 7 (solid) and insert into the tube on the pump lever Kit 5 ("T" shape lever on sprayer) you will notice holes drilled through both sides of both the pump handle and the pump lever. Align these holes; take the "R" pin provided and place through the holes. This affixes the handle in place and is ready for use. For storage reverse process and then place "R" pin through the pump lever Kit 5 to keep from losing "R" pin.
3. Instructions for installing shoulder strap plastic buckle: First put the sprayer on a hard flat surface, take the white plastic buckle and while holding the sprayer up slightly, place buckle under the tubular metal frame. Slowly push down forcing the frame into the buckle. Repeat the same procedure for the other side.

HOW TO PREPARE FOR USE:

1. Remove cap.
2. Mix solution in a separate receptacle, following manufacturer's directions on the container.
3. Pour pre-mixed solutions into sprayer and cap.
4. Place sprayer on back and pressurize tank by pumping approximately 10 to 15 times. For best results, the sprayer should be pumped every 5 seconds on a continuous basis. This will maintain your spraying pressure. If you do not pump, you will not have pressure to spray.
5. Always oil the seal on cap of unit as well as the check valve, this will extend life of seal and is important for obtaining proper seal with no leaks.
6. A unit that has been used with herbicides should never be used to spray insecticides, unless the sprayer has been properly cleaned and all other chemicals neutralized. Failure to do this could cause you to kill plants that

have been sprayed. Consult with the manufacturer of the chemicals in use to obtain proper instructions.

HOW TO CLEAN & MAINTAIN:

1. Remove cap and pour out remaining solution, then rinse all parts thoroughly with clean water.
2. Leaving approximately ½ gallon of fresh water in tank, pressurize and flush pumping system by depressing trigger at least 2 minutes then drain all remaining water.
3. Always store tank clean and empty in a dry, shaded location.

Please read and follow all instructions before using sprayer.

- ✂✂ Before using, filling or cleaning any sprayer, read all parts of the operating instructions.
- ✂✂ Make sure to set up the sprayer exactly as explained above.
- ✂✂ Wear protective clothing, respirator, gloves, eye protection, etc. whenever using, filling or cleaning sprayer.
- ✂✂ Periodically re-grease lid gasket as well as lid vent and pump cylinder, where applicable.
- ✂✂ To ensure good performance, keep lid vent free of obstruction. Before and after each use, make sure all connections are well tightened. Service and replace worn parts as required.
- ✂✂ Read and follow all instructions of the chemical suppliers.
- ✂✂ As a rule, mix your chemicals in a separate container from which to fill the sprayer. Do not mix formulas inside the sprayer. When an exception is made (e.g. with liquid fertilizers), fill sprayer with water BEFORE adding the active ingredient.
- ✂✂ Always sift formula through the screen. IF there is no built-in strainer, use a screened funnel. ✂✂ Never fill the sprayer with hot liquids. Maximum 30°C or 85°F.
- ✂✂ This sprayer is made to handle agrochemicals in their usual water or oil solutions. Do not use flammable, corrosive or caustic solutions.
- ✂✂ Never use gasoline or other flammable materials.
- ✂✂ Before cleaning or servicing the sprayer, allow all pressure to escape. Do not store or transport sprayer under pressure.
- ✂✂ After each use, wash the sprayer – including hose, lance and shut off valve – with plenty of fresh water. Unless spraying is to be continued within hours, drain chemical formula and thoroughly rinse the tank and all liquid ducts.
- ✂✂ Never store chemicals in your sprayer for any length of time.

- ✂️ Use the sprayer only for the kind of jobs for which it was designed.
When in doubt, ask your dealer.
- ✂️ Do not leave the sprayer in reach of children or persons not qualified to handle it in proper fashion.
- ✂️ When not in use – and especially during prolonged storage keep your sprayer in a protected place away from direct solar heat.
- ✂️ Make sure the spray hose loops freely without kinking or squeezing.

TROUBLESHOOTING GUIDE

The letters designate the units that could have this type of problem.

“A” – SP1, SP1-E, SPO & Estate Keeper

“B” – SP80, SP100 & SP5

“C” – SVV 1,2 & 3 GALLON

“D” STAINLESS 1,2 & 3 GALLON

PROBLEM 1 “A”

The unit is new or has not been used for a long time. You pump it but you are unable to build pressure and/or fluid comes out of the wand.

CAUSES (S)

The check valves in the pump module have become stuck and/or there is an air lock in the unit because of differences of pressure. Note this is not uncommon.

SOLUTION (S)

Squeeze trigger on spray gun to release air and pump profusely several times. This will break the seals and allow fluid to pass.

PROBLEM 2 “A, B, C, D”

When you squeeze the trigger on the spray gun, it sticks and is slow in returning to the shut off position when you release trigger.

CAUSES (S)

These O-rings have been under chemical attack and have deteriorated. Put in Repair Kit 20.

SOLUTION (S)

Replace O’ rings in spray pistol and on brass spindle inside the spray gun. If these O’ rings have deteriorated you should also replace all other O’ rings and seals in your sprayer before leaks or other problems occur.

PROBLEM 3 “A, B, C, D”

The pin in the spray pistol sticks when pushed; when you release the trigger the pin does not come back up to shut off the flow.

CAUSES (S)

The O’ rings and washer on the spindle inside the spray pistol have deteriorated from age or chemical attack. Put in Repair Kit 20

SOLUTION (S)

Unscrew cap on bottom of spray pistol, push out brass spindle and replace the o-rings and washer.

PROBLEM 4 “B”

The sprayer will not pressurize – you pump but no pressure is built up – the unit only sprays when you pump.

CAUSE (S)

The pump module (tube) has lost the air pressure head. All the air has escaped from the top of the pump module due to improperly tightened siphon, nut, and hose assembly. The washer that comes with the siphon, nut, and hose assembly has deteriorated and is no longer sealing properly 2. Split or cracked pump module.

SOLUTION (S)

Empty sprayer of spraying solution. Unscrew cap (nut) from the top of pump module and remove. Turn sprayer up side down in order to empty pump module, be careful not to lose the stainless steel ball inside pump module. Once pump module is empty, put stainless steel ball back inside pump module and place siphon tube back in pump module, tighten cap (nut) with wrench provided. Make sure it is very tight. Unit should be ready to operate. 2. Tighten the nut at the top of the pump module with the small wrench provided. 3. If cap is tightened, replace washer in siphon nut hose assembly. 4. If pump module is cracked replace with spare parts available on our website.

Click here for SPO breakdown:

<http://mkrittenhouse.com/ca/backpack-sprayer-sp0-parts>

<http://mkrittenhouse.com/us/backpack-sprayer-sp0-parts>

Click here for SP1 breakdown:

<http://mkrittenhouse.com/ca/swissmex-backpack-sprayer-sp1-parts>

<http://mkrittenhouse.com/us/swissmex-backpack-sprayer-sp1-parts>

PROBLEM 5 “A”

Your unit has been in use for some time. You pump the unit, however you can't build pressure, in fact, if you stop pumping, very little liquid will come out.

CAUSE (S)

1. The O-rings and the check valve on the pump module have been attacked by chemicals and are no longer sealing. There are two o-rings, one large, one small and one check valve.

2. The pressure chamber has expanded due to pressure and/or chemical attack.

SOLUTION (S)

1. Change the O-rings and seals from the pump module Kit 12. If these seals have deteriorated you should change all rubber seals in the unit. If the above

does not solve your problem then: 2. You should change the pressure chamber Kit 9 and install a new one.

PROBLEM 6 “A”

The unit leaks where the pump module is connected (screwed in) to the sprayer.

CAUSE (S)

The O-rings have deteriorated. **SOLUTION**

(S)

Change the O-ring and seals from pump module Kit 12. At this point one should change all rubber seals in the unit.

PROBLEM 7 “A, B”

Fluid is leaking from cap where it is screwed into the tank and should seal with the tank.

CAUSE (S)

Because of capillary action fluid is being pulled through by pressure. **SOLUTION**

(S)

Cap may be loose. Oil the gasket with 30-weight oil. This will stop the passage of fluid.

PROBLEM 8 “A, B”

Unit falls onto its side and leaks through the center of the cap where the check valve is.

CAUSE (S)

Deteriorated check valve, or could be dusty or have some dirt or foreign matter.

SOLUTION (S)

Pull check out. If deteriorated, replace. If not, clean out. Place a small drop of oil and reinstall.

PROBLEM 9 “A”

Unit is leaking from the area just below where the large metal or plastic clamps are where the pump module and pressure chamber enter the unit. **CAUSE (S)**

1. The hose clamp is loose. 2. The o-ring has deteriorated. **SOLUTION (S)**

1. Tighten hose clamp. 2. Install new o-rings. If the o-ring has deteriorated you should install all new ones.

PROBLEM 10 “A”

Unit is brand new and is leaking from where hose connects with the sprayer and possibly where the large hose clamp holds pump module & chamber in place.

CAUSE (S)

The factory does not fully tighten these clamps to ensure longer life. There is an orange tag on the side of unit that says hose clamps should be tightened.

SOLUTION (S)

Tighten clamps with screwdriver.

PROBLEM 11 “A, B”

Unit works properly but the tank starts to collapse, you can't unscrew to pull the cap off the unit. It seems to have created a vacuum.

CAUSE (S)

The vent hole in the cap has become clogged with dirt and is not allowing air into the tank.

SOLUTION (S)

Take a small wire and push in through the vent hole. This will allow air into the tank and release the vacuum. Take cap off, clean vent hole, clean check valve, oil valve & reinstall.

PROBLEM 12 “C, B”

Pump module on SVV & stainless; when you are pumping your unit, some fluid is coming back up through the pump.

CAUSE (S)

The small plug at the top of the pump module has deteriorated due to chemical attack.

SOLUTION (S)

Pull out the small check (antenna with o-ring) and replace with new unit.

PROBLEM 13 “C, D”

Pump module; when pumping the unit slips and does not seal properly to push air into unit.

CAUSE (S)

The rubber or leather check inside pump has dried out or has cracked.

SOLUTION (S)

Take top off pump module and check seal. If cracked, replace. If dry, place some lubricating grease on seal.