



INSTRUCTION MANUAL

MAN190547 REV B 5/4/2023

PRO GRADE NO LEAK SPRAYER 15L
MODELS: 190547, 190550



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Safety

⚠️ WARNINGS

- This sprayer is designed and manufactured solely for the purpose of applying agricultural chemicals. Under no circumstances may it be used for any other purpose.
- Read owner's manual completely before operating this sprayer.
- Test the sprayer with water before using chemicals
- Before using chemicals refer to the chemical manufacturer's label and safety instructions for safe handling procedures and recommended personal protective clothing and safety equipment.
- Never use flammable liquids, caustics, acids, or hot water in this tank.
- Do not use sprayer near open flame or anything that could cause ignition of the spray.
- Do not leave sprayer in the sun when not in use.
- Spray when the air is calm to prevent drift of chemicals. Do not spray in windy conditions.
- Always inspect hose and all the hose connections before each use. A damaged hose, or loose hose connection can result in unintended exposure to the pressurised chemical, resulting in serious injury or property damage.
- Do not lift or carry sprayer by the hose, shut-off valve, or lance. Carry by the handle only.
- Only use original pump or replacement from the original manufacturer to pressurise the tank. Using any other mechanical device such as an air compressor, can create a dangerous pressure level and bursting of parts resulting in serious injury.
- Do not store chemicals in this tank.
- Dispose of empty chemical containers and chemical residues in accordance with the instructions supplied by the chemical manufacturer.
- Always release pressure when sprayer is not in use and before performing any maintenance.
- Clean and rinse sprayer thoroughly after each use and before and maintenance.
- Never attempt to alter sprayer from original condition.
- Exercise care to ensure proper stability when carrying or operating in hilly or uneven terrain, particularly if the ground is wet or loose. Wear non-slip shoes.
- Keep the sprayer and all chemicals out of the reach of children.

If you experience problems or have questions in Australia, please contact our toll-free Customer Service Centre at 1300 745826, or email: info@silvanaust.com, or access online at: www.silvan.com.au

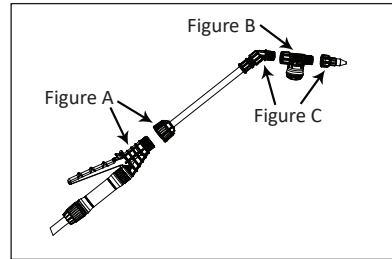
In New Zealand phone 0508 745826 or email: infonz@silvanaust.com

WARRANTY: This product is warranted to be free from defects in materials and workmanship for the warranty period of 5 years from the date of retail sale. In the event of failure return the goods to the place of purchase at your cost and within the warranty period along with evidence of the purchase date. If the fault is assessed to be a failure due to faulty materials or manufacturing, then the product will be repaired or replaced without charge for labour or any defective parts. If the original supplier cannot be contacted, then contact Silvan and we can direct you on how to proceed with your warranty claim. Our goods come with guarantees that cannot be excluded under the Australian & New Zealand Consumer Law.

Assembly

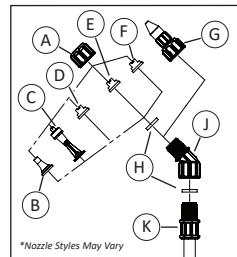
Assemble Lance, Shut-Off, Nozzle and Spray Optimiser


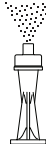



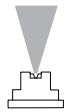
1. Install the lance onto the shut-off assembly and tighten the nut securely.
2. Install Spray Optimiser for low pressure (low drift) applications. This will help prevent weed killer formulas from drifting into undesired areas. **Do not over tighten, actual position will vary.** (See Figure B)
3. Install selected nozzle onto the end of the lance or optimiser (if installed) and tighten securely. (Figure C)



SELECT USING NOZZLE CHART BELOW

- A. Cap Nut
- B. Jet Stream Nozzle
- C. Foaming Nozzle
- D. Brown High-Volume Wide Fan Nozzle
- E. Red Low-Volume Wide Fan Nozzle
- F. Yellow Low-Volume Narrow Fan Nozzle
- G. Adjustable Cone Nozzle
- H. Flat Seal
- J. Adapter
- K. Lance



ADJUSTABLE CONE USES:	FOAMING NOZZLE USES:	JET STREAM NOZZLE USES:
 <ul style="list-style-type: none"> • Spot spraying in or around flowerbeds, trees and shrubs. • Edging along fences, driveways and walkways. • Preparing garden beds for planting of ornamentals and vegetables. 	 <ul style="list-style-type: none"> • Spot spraying in or around flowerbeds, trees and shrubs. • Edging along fences, driveways and walkways. • Reduces drift. 	 <ul style="list-style-type: none"> • For targeted applications from a distance. • Spraying soffits, cracks, crevices, and hard to reach targets.
BROWN HIGH-VOLUME WIDE FAN NOZZLE USES:	RED LOW-VOLUME WIDE FAN NOZZLE USES:	YELLOW LOW-VOLUME NARROW FAN NOZZLE USES:
 <ul style="list-style-type: none"> • For very broad coverage and higher viscosity liquids. 	 <ul style="list-style-type: none"> • Lawn replacement. Kill lawn and weeds before planting a new lawn. • Preparing large areas for planting of ornamental and vegetable gardens. 	 <ul style="list-style-type: none"> • For precision spraying in confined areas such as gardens and flower beds.

Assembly (cont.)

Assemble Pump Handle

Step 1: Insert handle onto the drive shaft.

Step 2: Line up holes so that pump handle is angled upward.



Step 1



Step 2

Step 3: Thread hex bolt through pump handle and drive shaft, tighten with a 13mm or adjustable wrench. Thread lock nut onto hex bolt and tighten using a 13mm or adjustable wrench.



Step 3

Note: Handle has different positions for different uses.



Storage Position



Pumping Position

Operation

Always conduct a test using clean water before mixing chemicals.

Filling

Always refer to chemical manufacturer for proper mixture.

1. Remove the cap from the tank.
2. Make sure the filter basket is in place in the neck of the tank. The filter basket includes the seal and must be in place to prevent leaks.
3. Fill the tank with water and chemical to the desired level.
4. Reinstall the cap.

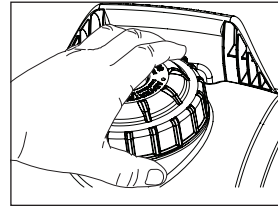


Figure D

Pressurising and Spraying

1. To begin pressurising, be sure shut-off lever is not depressed. Pump handle up and down in a smooth motion (See Figure E). Operating pressure is reached when pumping becomes difficult, which is no more than 5-7 full pumps. (Do not over-pressurise)
2. Direct nozzle away from you and squeeze shut-off lever to begin spraying.
3. To maintain pressure while spraying, operate pump handle every 8 sec. or as needed.
4. For continuous spraying, squeeze lever and rotate lock. (See Figure F)
5. Unlock if needed and release shut-off lever to stop spraying.

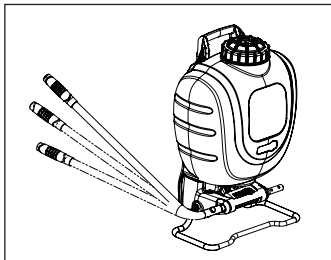


Figure E

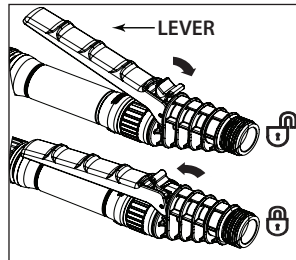


Figure F

Cleaning

1. Fill the tank with cool, clean tap water. Replace the cap and tighten securely.
(Never use hot water for cleaning)
2. Agitate the tank to rinse the chemical from the tank walls.
3. Remove the cap and empty the contents into gravel or bare soil.
4. Refill the tank with clean tap water. Replace the cap and tighten securely.
5. Pressurize the tank as described in the *Pressurising and Spraying* section.
6. Direct the nozzle away from you and activate the shut-off for at least 30 seconds to clean the pressure chamber, hose and shut-off.
7. Remove the cap and empty the contents into gravel or bare soil.
8. Repeat steps 4 - 7 until thoroughly cleaned. Remove nozzle when flushing pump system. Clean nozzle before replacing.

Operation (cont.)

Sprayer Storage

1. Never store sprayer with pressure in chamber or liquid in any part of the sprayer.
2. Sprayer tank should be hung upside down, with the cap removed, to dry completely.
3. Do not store or leave any solution in the tank after use.
4. Store in a dry location out of direct sunlight.
5. Keep the sprayer and all chemicals out of reach of children.

Maintenance

Tank Maintenance

1. After each use, rinse the tank with cool, clean water.
2. Check the check valve (See Figure G) and filter basket gasket.
(See Figure H) Make sure they do not show signs of wear and are operating properly. Replace them as required.
3. Clean any dirt or debris from the filter basket.
4. Periodically check the straps for fraying. Replace them as required.

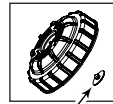


Figure G

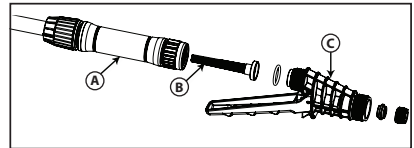


Figure H

Shut-Off Maintenance

Always depressurize sprayer before maintenance by activating shut-off and spraying contents out.

1. Unscrew the handle from the shut-off assembly.
2. Remove the filter from the shut-off assembly.
3. Clean any debris from inside the handle, shut-off assembly, or the filter by rinsing with cool, clean water.
4. Reassemble the components as shown and tighten all connections securely.

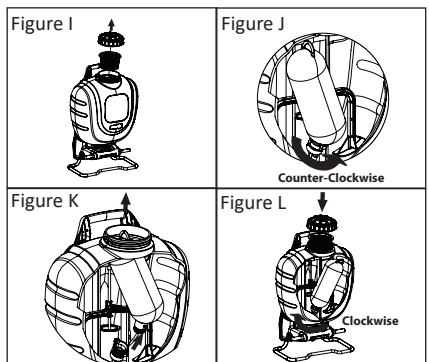


A. Handle
B. Filter
C. Shut-Off Assembly

Pressure Chamber Maintenance

WARNING: Always depressurize sprayer before cleaning or replacing pressure chamber by activating shut-off and spraying out all pressure.

1. Remove the tank cap and strainer (See Figure I).
2. Reach into the tank and turn the chamber 1/4 turn counter-clockwise (See Figure J) to unlock the chamber from the pump then remove chamber from tank (See Figure K).
3. Rinse out any debris that may have accumulated in the chamber.
4. Reinstall the chamber into the pump by aligning the tabs on the chamber with the slots in the pump, push firmly into pump and turn clockwise until pump stops.
5. Reinstall the strainer and tank cap (See Figure L).



Maintenance (cont.)

Nozzle Maintenance

1. If nozzle clogs, remove and disassemble the nozzle assembly.
2. Clean the openings of any obstructions and reassemble.

Servicing

Prior to servicing and/or repairs.

1. Empty contents of tank.
2. While squeezing shut-off, pump sprayer until all liquid is expelled.
3. Continue squeezing shut-off without pumping to release all air pressure.

Sprayer Servicing Steps

1. Unscrew cap from tank. Remove and replace check valve. (See Figure 1)
2. Remove pressure chamber as outlined in *Pressure Chamber Maintenance* section of the manual. Remove and replace o-ring. Lubricate o-ring with petroleum jelly. (See Figure 2)
3. Unsnap agitator from piston rod. Remove from tank. (See Figure 3)



Figure 1



Figure 2

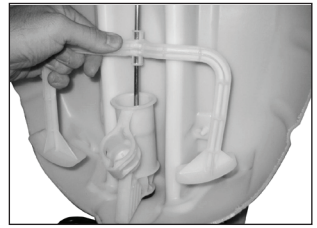


Figure 3

4. Position pump handle to the furthest downward position. Remove pump handle from sprayer. (See Figure 4)
5. Disassemble carry handle by removing the (6) screws. (See Figure 5)
6. Remove hitch pin and lift pivot clip off of the piston rod. (See Figure 6)



Figure 4

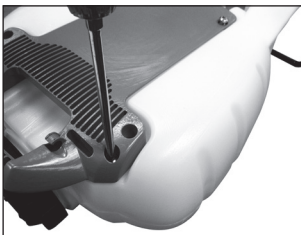


Figure 5



Figure 6

Servicing (cont.)

7. Pull upward to slide piston rod out of pump. (See Figure 7)
8. While holding onto the pump, use an adjustable wrench to unthread pump nut from pump.
Remove nut, hose and barb assembly. (See Figure 8)
9. Inspect (2) o-rings on barb assembly. If damaged, replace hose assembly. (See Figure 9)



Figure 7

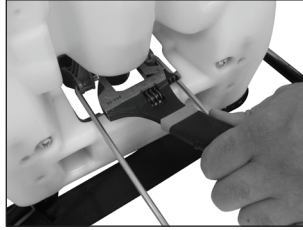


Figure 8

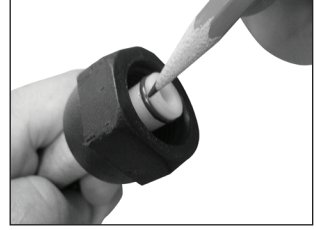


Figure 9

10. Remove pump out of tank. Remove and replace gasket. (See Figure 10)
11. Slide piston rod assembly down and out of grommet and remove from tank. (See Figure 11)
12. Carefully remove and replace o-ring from piston. Lubricate o-ring with petroleum jelly. (See Figure 12)

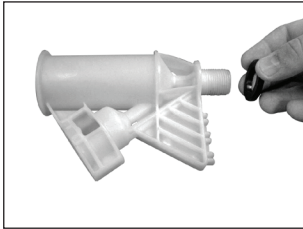


Figure 10



Figure 11

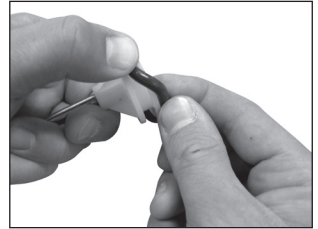


Figure 12

13. Remove grommet from tank using pliers to grasp the head of the grommet while flexing the grommet out of the hole in the tank. Press or tap new grommet into tank. Lubricate hole in grommet with petroleum jelly. (See Figure 13)
14. Insert piston rod assembly into tank and through grommet. (See Figure 14)
15. Reassemble pump with gasket into tank. (See Figure 15) for correct orientation. Tighten pump nut securely with adjustable wrench while holding pump to maintain correct orientation. Push piston assembly into pump.



Figure 13



Figure 14

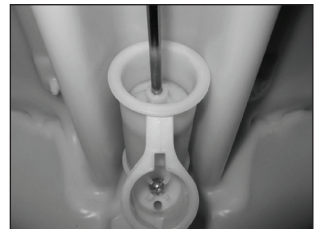


Figure 15

Servicing (cont.)

16. Attach pivot clip to piston rod and insert hitch pin. Note orientation of piston rod must match the pivot clip. (See Figure 16)
17. Reassemble carry handle onto tank. Tighten all (6) screws. (See Figure 5)
18. To reinstall the agitator, line the notch up on the agitator with the swedge on piston rod and snap into place. (See Figure 17)
19. Reinstall pressure chamber as outlined in the *Pressure Chamber Maintenance* section. (See Figure 18)



Figure 16



Figure 17

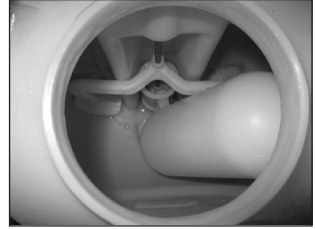


Figure 18

20. Replace tank cap, filter (See Figure 19) and pump handle (See Figure 4).



Figure 19

Harness Installation

1. For each side, remove the small plastic clips from the two shoulder strap loops and thread each loop through the slots at the top of the carry handle. Replace the clips through the loops and pull strap securing the two shoulder straps in place. (See Figure 20)
2. To install lower end of the straps, remove strap from top portion of buckles and place around the foot stand, starting from underneath. (See Figure 21)
3. Loop strap through the first section of buckle. (See Figure 22)
4. Next loop strap through other section of buckle and tighten (See Figure 23). Adjust the shoulder pads and strap length for a comfortable fit.



Figure 20



Figure 21

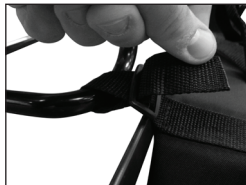


Figure 22



Figure 23

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Troubleshooting

PROBLEM	REASON	SOLUTION
Sprayer starts to spray when pumping or sprayer will not stop spraying when shut-off lever is released.	Shut-off lock is engaged.	Squeeze shut-off lever and disengage the lock. See <i>Pressurising and Spraying</i> section.
Sprayer will not build pressure.	<ol style="list-style-type: none"> 1. Pressure chamber (Fig 18) not installed. 2. Dirty, damaged or worn pump or chamber o-ring (Fig 12). 3. Dirty poppet in pump. 	<ol style="list-style-type: none"> 1. Install pressure chamber as described in <i>Pressure Chamber Maintenance</i> section. 2. Clean or replace o-rings as described in <i>Servicing</i> section. 3. Clean sprayer as described in <i>Cleaning</i> section.
Sprayer will not spray.	<ol style="list-style-type: none"> 1. Sprayer pressurisation. 2. Shut-off clogged. 3. Nozzle clogged. 	<ol style="list-style-type: none"> 1. See <i>Pressurising and Spraying</i> section. 2. Clean shut-off as described in <i>Shut-off Maintenance</i> section. 3. Clean nozzle as described in <i>Nozzle Maintenance</i> section.
Sprayer leaks from the bottom of the tank.	<ol style="list-style-type: none"> 1. Loose pump nut (Fig 8). 2. Damaged or worn o-rings or seals (Service Kit 13868). 	<ol style="list-style-type: none"> 1. Tighten pump nut as described in <i>Servicing</i> section. 2. Replace o-rings and seals as described in <i>Servicing</i> section.
Sprayer leaks where piston rod enters top of the tank.	Dirty, damaged, or worn grommet (Fig 13).	Clean and lubricate hole in grommet or replace grommet as described in <i>Servicing</i> section.
Hose leaks at tank connection.	Cracked, swollen or faulty hose.	Replace shut-off assembly.
Hose leaks at shut-off.	Cracked, swollen or faulty hose.	Replace shut-off assembly.
Pump handle is difficult to operate.	<ol style="list-style-type: none"> 1. Swollen or damaged pump piston o-ring (Fig 12). 2. Dirty, dry or damaged grommet (Fig 13). 	<ol style="list-style-type: none"> 1. Clean and lubricate or replace o-ring as described in <i>Servicing</i> section. 2. Clean and lubricate hole in grommet or replace grommet as described in <i>Servicing</i> section.
Nozzle drips when shut-off lever is released.	<ol style="list-style-type: none"> 1. Dirt or debris in shut-off valve. 2. Damaged o-ring or seal in shut-off (Service Kit 183859). 	<ol style="list-style-type: none"> 1. Clean shut-off as described in <i>Shut-off Maintenance</i> section. 2. Service shut-off seals as described in <i>Shut-off Maintenance</i> section.
Nozzle tip leaks, poor spray pattern, partial spray or complete stoppage.	<ol style="list-style-type: none"> 1. Flat seal is missing or damaged. 2. Spray extension or nozzle clogged. 	<ol style="list-style-type: none"> 1. Replace flat seal at extension tip (Service Kit 183863). 2. Remove nozzle and clean as described in <i>Nozzle Maintenance</i> section.

Spare Parts



	Code	Description
1	184561	SHOULDER HARNESS
2	183862	NOZZLE KIT
3	183859	SHUT-OFF ASSEMBLY (TRIGGER ASSEMBLY)
3A	183863	SHUT-OFF REPAIR KIT
4	183867	PUMP HANDLE
5	183860	STAINLESS STEEL LANCE 21 INCH
6	183861	POLY LANCE 21 INCH
7	183865	CAP
8	183866	FILTER BASKET
9	183868	KNAPSACK PUMP REPAIR KIT

