



# PROFESSIONAL SPRAYERS USER'S MANUAL

## Safety Precautions

- Do not pressurize tank with external air or gas source; do not pressurize above 50 psi.
- Do not adjust the tip or change spray patterns while depressing the valve trigger.
- Open tank cap slowly to release air before removing; keep tank upright when releasing pressure.
- Do not store or transport the unit while tank is pressurized.

## Before Starting

- Inspect the hose, tank gasket, discharge valves, and nozzle for signs of wear or damage. These parts must be in full working condition to permit tank pressurization.
- It is recommended that compressed-air sprayers be used with a pressure gauge (B&G #AG-3) or a pressure regulator (B&G #460) fitted to the valve.

## Operating Instructions

### Filling and Mixing

- When mixing insecticides in the tank, first add about 1/2 the water then the chemical, followed by the remainder of the water required.
- Note gallon marks on the side of the tank and mix accordingly.
- Replace the pump and tank cap assembly, be sure the tank gasket fits properly; tighten the cap until snug (do not over tighten).
- Mix all insecticides according to label directions.

### Pressurizing the Tank

- Disengage the handle from locked position by pressing down and turning 1/4 turn to the left.
- Pump plunger up and down until desired pressure for application is achieved, then engage handle in the locked position.

## Operation

B&G sprayers are designed for a variety of professional uses, such as outdoor perimeter spraying, and indoor spraying, which includes surface treatments and crack-and-crevice applications.

## Application Rates\*

50° coarse fan = 14.1 oz/min

80° fine fan = 6.4 oz/min

Pin stream = 8.9 oz/min (large)  
4.5 oz/min (small)

\*Calibrated at 20 psi

## Care and Maintenance

- Flush tank, valve, and extension with clean water regularly.
- Do not use bleach or ammonia-based cleaners, these will damage the stainless steel and brass parts.
- After rinsing the tank with clean water, pressurize the tank and flush the valve and hose.
- Inspect hoses and hose connections, gaskets, washers and other fittings for wear; replace when necessary.
- Clean the filter at the hose/valve connection regularly.
- Do not use metal objects to clean the orifices in the nozzle, this will disrupt the liquid spray pattern.
- Use the B&G Cleaning Kit (#22028000) for regular maintenance and cleaning of the sprayer.

## Trouble Shooting

**Problem:** Tank not holding pressure

- Solution:**
- Tighten tank cap
  - Replace tank gasket (P-268)

**Problem:** Tank not getting air pressure

- Solution:**
- Replace plunger cup (NPO-277)
  - Replace or add oil to leather plunger cup

**Problem:** Pump cylinder filling with water when pumping

- Solution:**
- Clean around the check valve at the bottom of pump cylinder
  - Replace the check valve (PV-266)

**Problem:** Holds pressure, but will not spray

- Solution:**
- Nozzle clogged, clean with a soft brush
  - Cracked siphon tube, replace
  - Siphon tube clogged, clean end
  - Clean strainer at the base of the valve, at the hose / valve junction

**Problem:** Hose leaks at tank fitting

- Solution:** Replace hose washer (D-51-P)

**Problem:** Valve body leaking

- Solution:**
- *Extenda-Ban:* Tighten packing nut, replace packing washers (in D-124 Repair Kit)
  - *XR-Valve:* Replace O-ring at base of handle; replace copper gasket at base of valve stem (in GT-100 Repair Kit)
  - *Ban-Drip:* Tighten packing nut; replace rod packing (RP-48)

**Problem:** Tip Leaking

- Solution:**
- *Extenda-Ban:* Clean or replace soft seat gasket, replace valve spring (in GD-124 Repair Kit)
  - *XR-Valve:* Clean or replace check valve at end of valve extension
  - *Ban-Drip:* Clean or replace seat gasket; replace rod spring (RS-49)



## CARE AND MAINTENANCE OF YOUR B&G SPRAYER

The 1-gallon B&G sprayer is the workhorse of professional pest control. Most service technicians use their sprayer every day for routine pest control service, or for special jobs that require precise application. The tip shut-off (no drip) feature ensures customer safety, and the rugged stainless steel and brass construction ensures long service. However, like other pieces of equipment, the sprayer has moving parts, valves, and washers that require regular maintenance to keep them in top condition. Monthly care and maintenance of the sprayer will keep it trouble-free.

A Six-Point Maintenance program can keep your B&G sprayer ready for any pest control job. This program covers key components of the sprayer—from the spray tip to the tank. It takes about 10 minutes, and requires only a 3/8 open-end wrench, a long-handled plastic brush, and an old toothbrush. Start with an empty tank and the hose drained of liquid. It helps to work at a sink with good lighting. Start at the tip or nozzle and work back to the pump tube, and finish by cleaning the tank.

### Six-Point Maintenance

- **Nozzle** – The brass nozzle determines the pattern (pin-stream or fan) of the liquid spray. The nozzle is made of thick brass and will survive being knocked around in the back of service trucks. However, with extended use the openings for the fan sprays and the pin-stream will gradually enlarge. This increase will change the angle (80 degrees for the fine fan, 50 degrees for the coarse fan) of the spray, and the distribution of the liquid in the fan may become uneven.

The general appearance of the nozzle may not indicate that the openings have enlarged or are damaged. Replacing the nozzle every 2 years is a reasonable schedule, and will maintain an accurate spray pattern and flow rate.

- **Hose** – The hose will give long and trouble-free service, and needs replacement only when damaged. Check connection points: hose to valve, and hose to tank. These are common sites to show wear and to develop leaks. Leaks at fittings may require replacing the Teflon washer (D-51-P), don't over-tighten this fitting and damage this washer. If there are cracks or swelling in the hose, replace it immediately.

- **Filter/Strainer** –The small filter./strainer should be removed, cleaned, and replaced regularly. Regardless of the water source or insecticides used, small pieces of dirt and debris often get into the tank. The strainer keeps dirt from clogging the valve, preventing tip shut-off, and blocking the spray. A toothbrush can be used to clean the strainer.
- **Valve** – The Extenda-Ban valve is designed for long service without leaking. A leak in the gaskets may result in a small amount of liquid on the handle, or at the end of the valve. Small leaks can be corrected by slight tightening of the packing nut (use a 3/8 wrench).
- **Check Valve** —The check valve at the base of the pump cylinder admits air into the tank as the pump handle is depressed. It can become worn and deposits around its edge (on the pump cylinder) can cause it to leak. Replacing the check valve (PV-266) will keep the pump working and to maintain proper tank pressure. Clean the bottom of the pump cylinder, a small brush will remove deposits that build up around the edge of the check valve.

## **Cleaning the Tank**

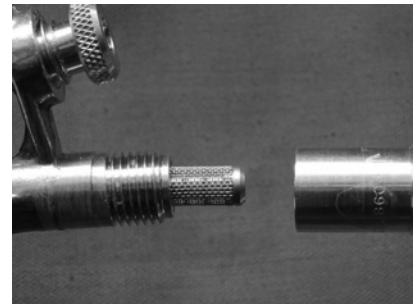
Pesticide residues can form on the inside of the tank, especially when the tank is not emptied every day. Cleaning inside the stainless steel tank is an important part of a care and maintenance program, but should be performed carefully and with the correct cleaning fluids and brushes.

Do not use bleach as a cleaning agent. It is not effective in removing pesticide residue, and it can create small holes in the tank. Cleaning should be done with a warm, ammonia-based detergent solution and with a plastic brush (toilet-bowl brush works well) to remove residue from the tank bottom and sides. The siphon tube extends along the side and close to the bottom of the tank; be careful not to hit (and possibly bend) the siphon tube when using a brush to clean inside the tank. The hose can be cleaned with detergent solution by pressurizing the tank and spraying into the sink for several minutes. Rinse the tank with clear water several times, and flush the hose with clear water. If the sprayer is not going to be used for an extended period, remove the pump unit and store the tank upside down.

The brass nozzle should be cleaned with a toothbrush and a detergent; don't use a metal brush or sharp objects on the nozzle.



The filter is located between the hose and the valve; loosen the fitting, remove the filter and clean with a toothbrush. This filter keeps dirt out of the valve and nozzle, replace if it is lost.



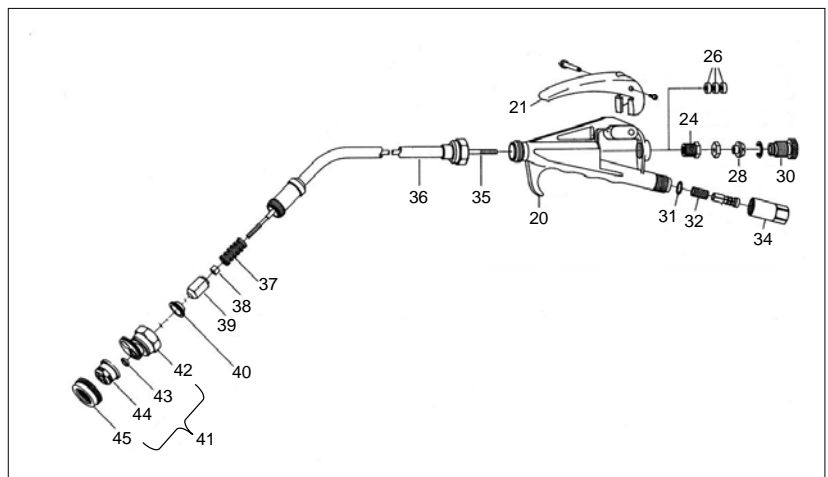
A 3/8 open-end wrench can be used to tighten the packing nut if the valve develops a leak.



The check valve, at the base of the pump cylinder, can be removed and cleaned, and the base of the cylinder (around the holes) should be cleaned of residue. Tightly replace the check valve, and be certain it is secure.

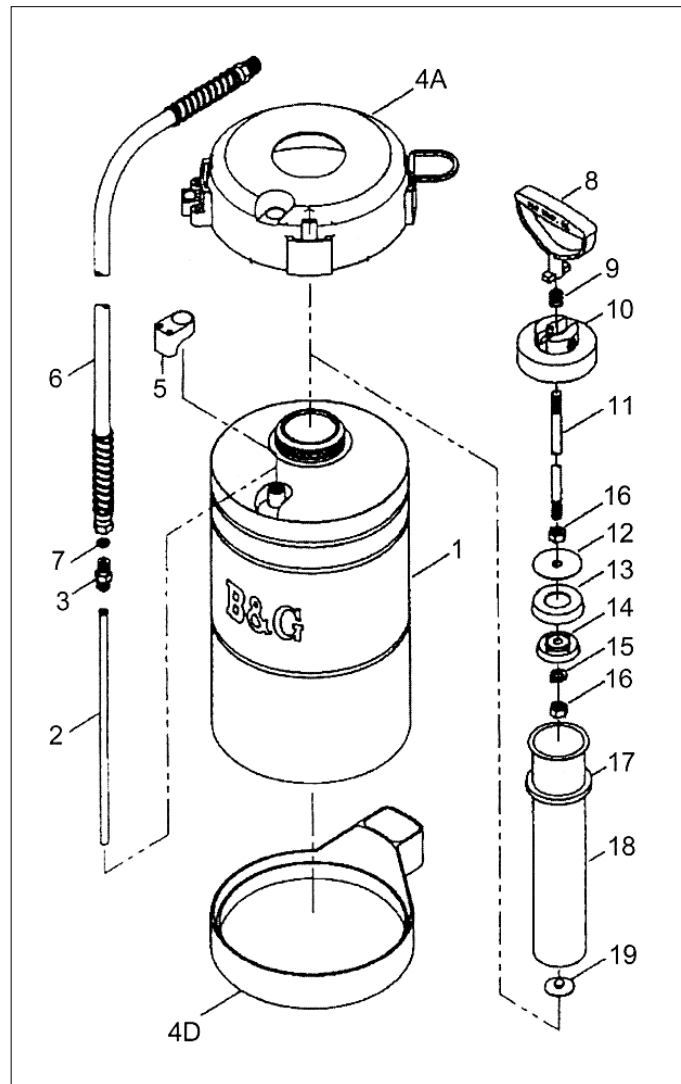


# Extenda-Ban Valve



## Extenda-Ban Valve

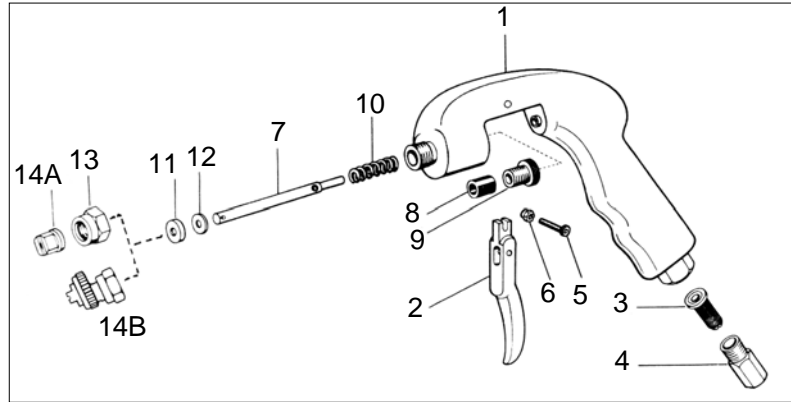
#	Part	Order #	Description
20	VB-147	22044450	Valve body
21	VT-140	22042800	Valve Trigger Kit (includes SH-142 Screw housing, TS-141 Trigger screw)
24	PN-150-2	22042455	Packing nut (stainless steel)
26	VP-151	22045099	Valve packing washer
28	AS-148	22044500	Adjustment Screw Kit (includes LN-149 Lock nut, SR-161 Snap ring)
30	SL-162	22046700	Safety lock nut
31	NG-146	22044200	Nylon gasket
32	MS-145-50	22043800	Mesh Strainer Kit (includes SS-144 Strainer support)
34	SA-143	22043400	Strainer housing
35	VC-152	22045300	Valve cable, 9 in
	VC-153	22045400	Valve cable, 18 in.
	VC-163	22045450	Valve cable, 24 in.
36	VE-154	22045500	Valve extension, 8 in. (brass)
	VE-155	22045600	Valve extension, 18 in. (brass)
	VE-164	22045650	Valve extension, 24 in. (brass)
	VE-154-SS	22045510	Valve extension, 8 in. (stainless steel)
	VE-155-SS	22045610	Valve extension, 18 in. (stainless steel)
	VE-164-SS	22045710	Valve extension, 24 in. (stainless steel)
37	VS-156	22045700	Valve spring
38	SSL-157	22045900	Seat stem nut
39	SS-158	22046100	Seat stem
40	SP-159	22046300	Soft seat gasket
41	5850-CC	22049466	Multiejet tip assembly
42	9751-M	22034700	Multiejet tip holder
43	4190	22034700	Viton gasket
44	5800-CC	22049467	Multiejet CC tip
45	4596	22034500	Tip retainer



### Stainless Steel Sprayer

<u>#</u>	<u>Part</u>	<u>Description</u>	<u>#</u>	<u>Part</u>	<u>Description</u>	
<b>1</b>	T-50	Tank, ½ gallon	<b>8</b>	P-275	Pump handle	
	T-100	Tank, 1 gallon		<b>9</b>	P-276	Pump lock spring
	T-200	Tank, 2 gallon		<b>10</b>	P-274	Pump cap
	T-300	Tank, 3 gallon		<b>11</b>	PH-273	Plunger rod, ½ gal.
	T-500	Tank, 5 liter		PO-273	Plunger rod, 1 gal.	
<b>2</b>	HS-297	Siphon tube, ½ gal.	PF-265	Plunger rod, 2 gal., 5 L		
	OS-297	Siphon tube, 1 gal.	PT-265	Plunger rod, 3 gal.		
	TS-297	Siphon tube, 2 gal.	<b>12</b>	P-272	Back plate	
	THS-297-01	Siphon tube, 3 gal.	<b>13</b>	NP-277	Polypropylene cup	
	FS-297	Siphon tube, 5 liter	<b>14</b>	NP-270	Cup spreader plate	
<b>3</b>	HA-298	Adapter, hose	<b>15</b>	P-269A	Lock washer	
<b>4A</b>	TT-1	Tank top (1 gal.)	<b>16</b>	P-269-SS	Plunger nut	
<b>4D</b>	TB-1	Tank bottom	<b>17</b>	P-268	Pump gasket	
<b>5</b>	5700-H	Tip holder	<b>18</b>	PH-267	Pump tube, ½ gal.	
<b>6</b>	D-50	Hose, 4 ft. red		PO-267	Pump tube, 1 gal.	
<b>7</b>	D-51-P	Hose washer		PF-267	Pump tube, 2 gal.	
				PT-267	Pump tube, 3 gal.	
				<b>19</b>	PV-266	Check valve

# Ban-Drip Valve

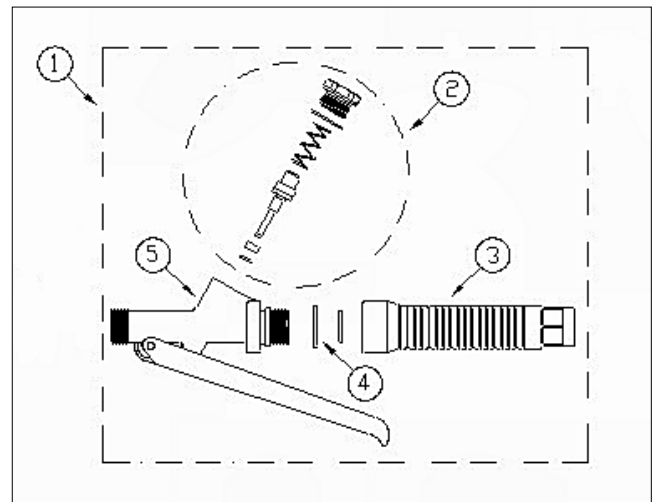


## Ban-Drip Valve

#	Part	Description
1	VB-40	Valve body
2	VT-41	Valve trigger
3	SA-42	Mesh strainer
4	SB-43	Pipe thread strainer
5	TS-44	Trigger screw
6	TN-45	Trigger nut
7	VR-46	Valve rod and pin
8	PN-47	Brass packing nut
9	RP-48	Rod packing
10	RS-49	Rod spring
11	SGH-50	Seat gasket holder
12	TSG-51	Seat gasket
13	TC-52	Tip cap
14A	800067	Fine fan tip
14B	5850	Multiejet tip assembly

## XR VALVE

#	Order #	Description
1	22037500	Valve assembly
2	22037510	XR Valve Kit
		Valve stem sub-assembly
		Brass guide
		O-ring #1
		Gasket, copper
		Valve spring
3	22037503	Handle
4	22037508	O-ring (Viton)
5	22037501	XR Valve body



## REPAIR KITS

### EXTENDA-BAN VALVE REPAIR KIT GD-124 (Order # 22050100)

1	PV-266	22027200	Check valve
1	P-268	22028000	Tank gasket
1	NP-270	22028600	Spreader plate
1	NP-277	22029000	Plastic plunger cup
1	P-276	22029900	Lock spring
1	D-51-P	22030400	Washer (hose coupling)
1	4190	22034700	Gasket (Viton)
1	NG-146	22044200	Gasket (Nylon)
3	VP-151	22045099	Valve packing
1	VS-156	22045700	Valve spring
1	SP-159	22046300	Soft seat gasket

### BAN-DRIP VALVE REPAIR KIT GB – 114 (Order # 22049900)

1	PV-266	22027200	Check valve
1	P-268	22028000	Tank gasket
1	NP-270	22028600	Spreader plate
1	NP-277	22029000	Plastic plunger cup
1	P-276	22029900	Lock spring
1	D-51-P	22030400	Washer (hose coupling)
1	4190	22034700	Gasket (Viton)
1	RP-48	22041100	Packing rod
1	RS-49	22041300	Rod spring
1	TSG-51	22041700	Seat gasket (Teflon)

### XR GUN REPAIR KIT GT-100 (#22049600)

1	PV-266	22027200	Check valve
1	P-268	22028000	Tank gasket
1	NP-270	22028600	Spreader plate
1	NP-277	22029000	Plastic plunger cup
1	P-276	22029900	Lock spring
1	D-51-P	22030400	Washer (hose coupling)
1	4817	22037800	Valve stem sub-assembly
1	4932	22038200	Brass guide
1	-----	22038900	O-ring #1
1	4143	22039100	Gasket, copper
1	VS-156	22045700	Valve spring



**XR GUN FIRST AID KIT FA-600-T (#22050200)**

1	PV-266	22027200	Check valve
1	P-268	22028000	Tank gasket
1	NP-270	22028600	Spreader plate
1	NP-277	22029000	Plastic plunger cup
1	P-276	22029900	Lock spring
1	D-51-P	22030400	Washer (hose coupling)
1	4190	22034700	Gasket (Viton)
1	4817	22037800	Valve stem sub-assembly
1	4932	22038200	Brass guide
1	4578	22038700	Brass cap
1	-----	22038900	O-ring #1
1	4143	22039100	Gasket, copper
1	VS-156	22045700	Valve spring

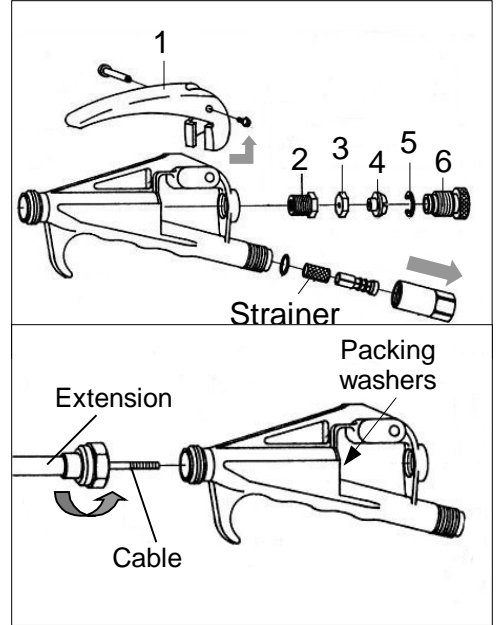
**EXTENDA-BAN VALVE FIRST AID KIT FA-600-D (Order #22050400)**

6	PV-266	22027200	Check valve
4	P-268	22028000	Tank gasket
1	NP-270	22028600	Spreader plate
2	NP-277	22029000	Plastic plunger cup
1	P-276	22029900	Lock spring
1	D-51-P	22030400	Washer (hose coupling)
3	4190	22034700	Gasket (Viton)
1	TS-141		Trigger screw
1	SH-142	22043200	Trigger screw housing
1	MS-145-50	22043800	Mesh screen (filter)
2	NG-146	22044200	Gasket (Nylon)
1	AS-148	22044500	Adjustment screw
1	LN-149		Locknut
1	VP-151	22045099	Valve packing
2	VS-156	22045700	Valve spring
1	SS-158	22046100	Seat stem
2	SP-159	22046300	Soft seat gasket

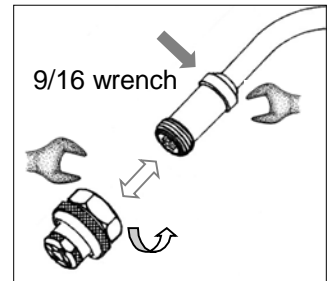
## EXTENDA-BAN VALVE REPAIR AND MAINTENANCE

1. Detach the Valve and Extension from the hose. Carefully remove the mesh strainer. Squeeze the Trigger to drain all liquid from the Valve.
2. Remove the Trigger (1), then the Snap ring (5), Safety lock nut (6), the Adjustment screw (4), the Lock nut (3), and then the Packing nut (2).

The Trigger can be removed by moving it to the back of the Valve.



3. Unscrew the extension at the front of the valve. The extension can be pulled away from the valve along with the interior steel cable.
4. Packing washers (white) that were at the end of the cable will remain inside the valve. Carefully dislodge and remove these washers.

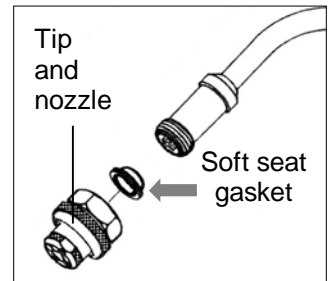


5. Remove the tip and nozzle assembly from the end of the extension, be careful to keep the Soft seat gasket.

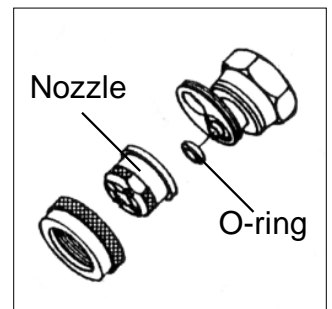
Use 2 wrenches to loosen the tip: one (5/8 ") to hold the extension, and a second to loosen the tip

**Note:** The extension may become twisted and unusable unless 2 wrenches are used to remove the tip.

Inspect the soft seat gasket and the small O-ring on Multeejet tips, replace if damaged or worn. Replace the nozzle if it is more than old.

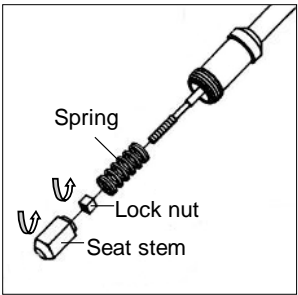


6. Push the cable out the front of the Extension to expose the Spring, the small Lock nut, and the Seat stem.



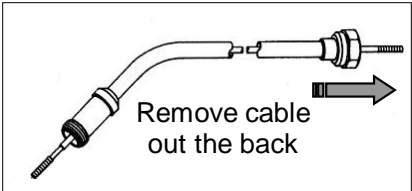
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Unscrew the Seat stem and Lock nut, and slide off the Spring. Place these small pieces in a closed container (they are easily misplaced).



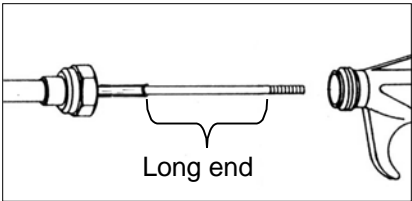
- 7. Remove the stainless steel cable by pulling it slowly through the back end of the Extension – you cannot pull the cable through the front of the Extension.

The threaded end of the cable at the nozzle end is short and easily passes through the curve in the Extension. The end of the cable at the valve end is long and will not pass through the curve.



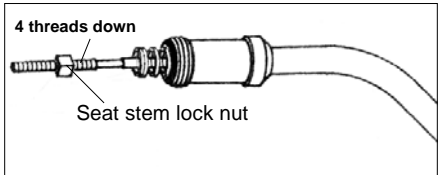
Replace the cable if it is worn or damaged.

- 8. Re-assemble the Extension by inserting the short end of the cable into the back so that threads are exposed at the nozzle end.

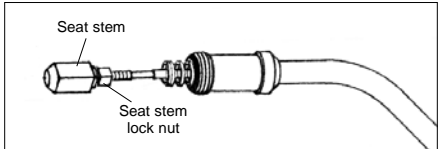


- 9. Slide the Spring onto the end of the cable, then the Seat stem lock nut.

Screw lock nut only about 4 threads down, towards the end of the cable.

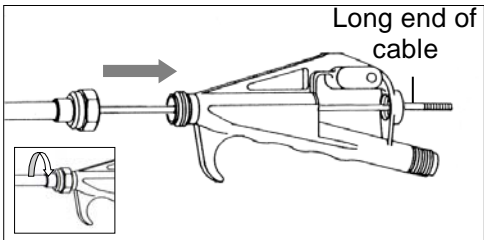


- 10. Attach the Seat stem onto the cable, in front of the Lock nut. Hand tighten Seat stem against the lock nut.



- 11. Insert the long end of the cable into the front end of the valve. Push the cable through the valve until the end is through the back of the valve.

Tighten the Extension to the valve body.



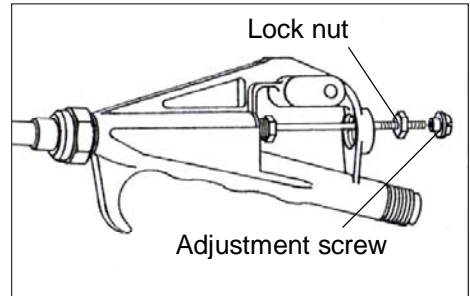
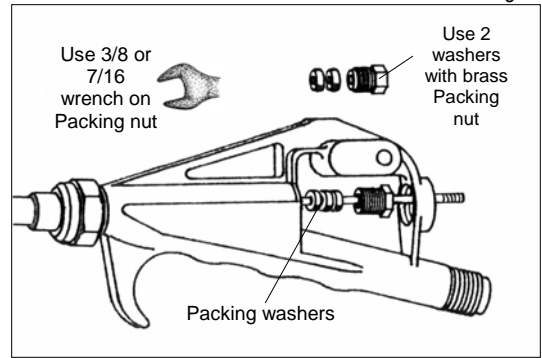
- 12. Insert 2 or 3 Packing washers onto the cable, then slide on the Packing nut

behind the washers and tighten.

Valves built before 1999 have a stainless steel Packing nut that takes 3/8 wrench, there is no internal O-ring, these valves need 3 washers.

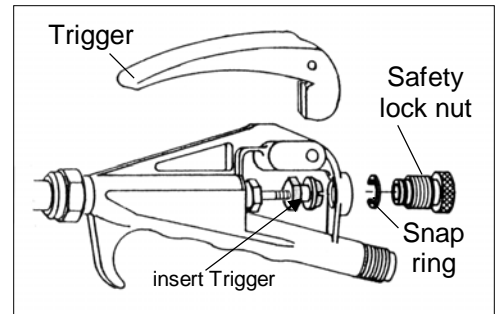
Valves built between 1999 and 2000 have a brass Packing nut + O-ring, this nut takes a 7/16 wrench, these valves need 2 washers.

Valves built after 2000 have a stainless steel Packing nut + O-ring, this nut takes a 3/8 wrench, and these valves require 2 washers.



13. Screw onto the cable the Lock nut and the Adjustment screw. Turn the Adjustment screw so the end of the cable is level to the top of the slot in the top of the screw. Tighten the Lock nut against the screw.

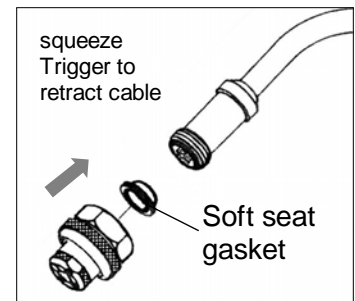
14. Attach the valve trigger by inserting it into the space between the Lock nut and Adjustment screw, then insert the Trigger screw.



15. Screw the Safety lock nut into the valve body, and then attach the Snap ring.

16. Attach the tip and nozzle to the end of the Extension, make certain the Soft seat gasket is facing correctly. The small end faces the Extension.

Press the Trigger to retract the Seat stem into the Extension, then attach the tip and nozzle.



## TANK SPRAYER PROBLEMS AND SOLUTIONS

**P.** Tank is not holding pressure; pump is working but no pressure remains in the tank.

**S.** Check pump gasket, replace if cracked.

**P.** Tank is not getting pressure; the pump seems to be working but no pressure builds in the tank.

**S.** Grease plastic cup in pump tube, or replace cup and spreader plate.

**P.** Pump cylinder fills with liquid, pumping is difficult.

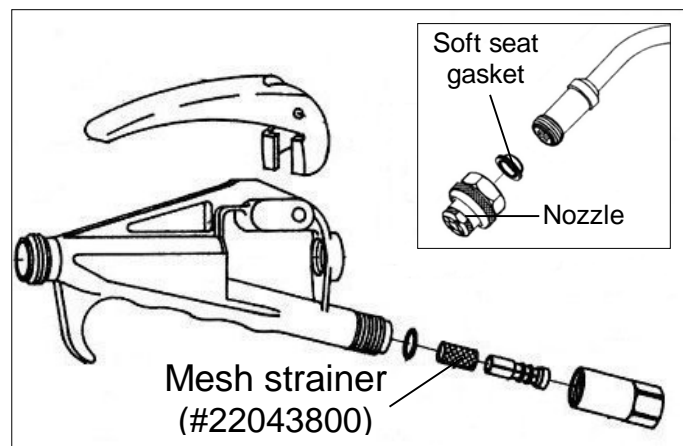
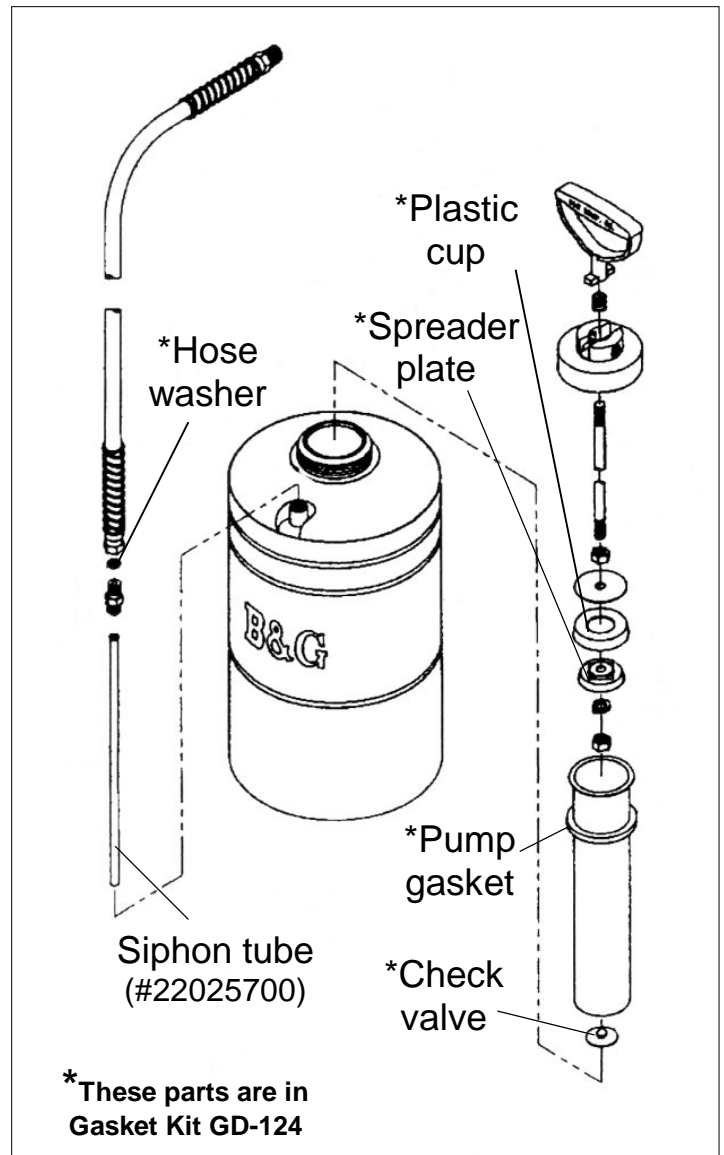
**S.** Clean dirt from bottom of pump tube, replace check valve at bottom.

**P.** Won't spray; tank holds pressure but there is no spray from the nozzle, this is a new sprayer.

**S.** Replace Hose washer, it may have been damaged when hose was attached to tank; the junction may have been over-tightened!

**P.** Tank holds pressure, but there is no spray from nozzle (old sprayer).

- S.** (1) Siphon tube is clogged or cracked, it must be cleaned or replaced.
- (2) Clean the mesh strainer at the end of the hose near the valve.
- (3) Clean the nozzle with a soft brush.
- (4) Clean or replace Soft seat gasket at end of the extension.



# TANK SPRAYER PROBLEMS AND SOLUTIONS

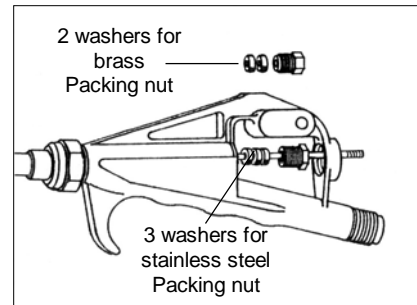
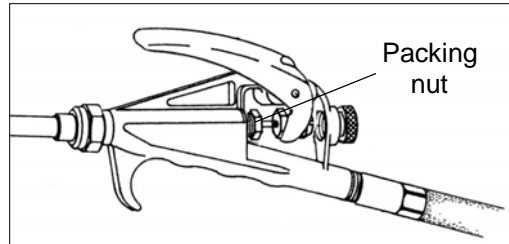
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**P.** Valve is leaking around the packing nut, and the handle is wet.

- S.** (1) Tighten the packing nut.  
(2) Replace the valve packing washers.

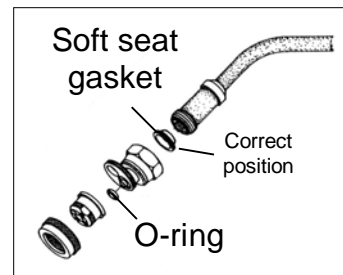
2 washers with brass packing nut

3 washers with stainless steel packing nut



**P.** Extension is leaking at the tip, a constant drip from the tip.

- S.** (1) Clean or replace nozzle O-ring.  
(2) Clean end of seat stem.  
(3) Clean or replace soft seat gasket.  
(4) Replace the valve spring.



**P.** Hose is leaking at the connection with the tank; leaks when tank is pressurized.

- S.** Replace the hose washer at the end of the hose; do not over-tighten the connection when reconnecting the hose to the tank.

