

Thank you for choosing an ECHO Sprayer. This sprayer is powered by retained air pressure and is made of materials highly resistant to corrosion and commonly used chemicals. The ECHO Sprayer is easy to maintain, easy to repair. No special tools are required. These and other features make this sprayer very functional, lightweight and economical. Failure to observe cautions and to follow instructions could result in serious injury.

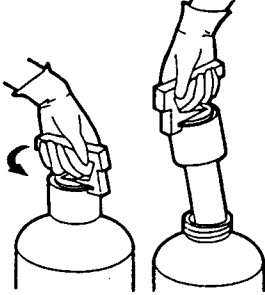
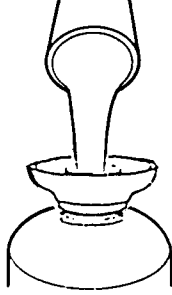
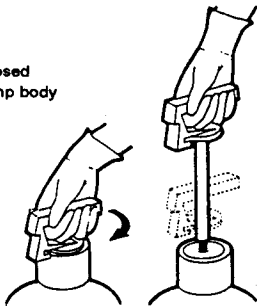
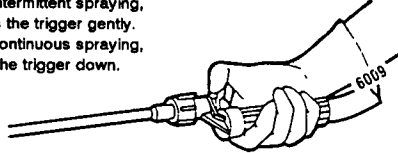
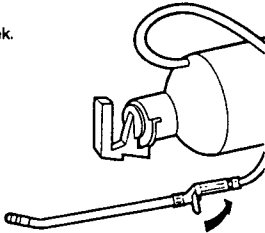
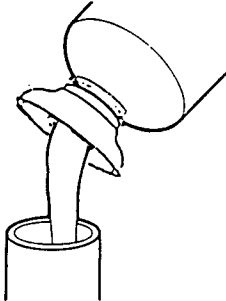
### RULES FOR SAFE OPERATION

Read and understand this entire manual before using the sprayer to avoid potentially serious situation.

- Always inspect your sprayer thoroughly before and after each use. Check to be sure hose is securely attached and in good condition before pressurizing tank.
- Use special care when spraying near electrical installations.
- Keep the work area clear of people and animals.
- Never use the sprayer during windy conditions.
- Always wear goggles when filling, using or cleaning the sprayer.
- Always wear a mask or respirator when filling, using and cleaning sprayer if recommended by the spray material manufacturer.
- Wear protective gear and clothing when filling, using and cleaning the sprayer.
- Always release pressure in the pump prior to filling, cleaning or servicing the sprayer.
- Before opening a container of pesticide or other spray material carefully read, understand and follow all instructions on the label.
- Do not use flammables in the sprayer. They can ignite or explode, causing serious injury.
- Never use caustic or corrosive materials in sprayer. They could cause damage to unit.
- In case of personal contamination, remove contaminated clothing, remain upright, do not consume liquids or cause vomiting, get professional help immediately.
- Never attempt to pressurize unit by any other method than with the pump module provided. Never over pressurize unit.
- Do not eat, drink or smoke while spraying.
- Wash face and hands with soap and water after spraying.
- Clean and rinse tank and spraying assembly after each use to prevent crystallizing, which would later cause clogging and chemical damage to the unit.
- Do not use hot water (100 degrees F+ or 38 degrees C+).
- Never stand with face or body over sprayer when pressurizing tank or releasing pressure.
- Do not store sprayer under pressure or with spray solution in tank.
- Do not transfer spray materials to other containers, especially food and/or drink containers.
- Keep spray materials locked up and out of reach of children and animals.
- Use only original manufacturer's replacement parts.

## OPERATION

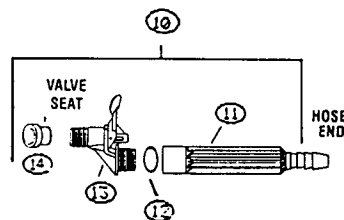
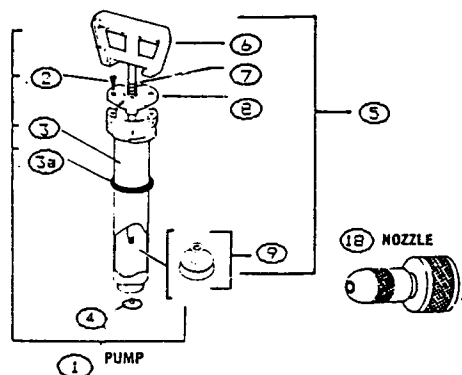
**IMPORTANT! RELEASE PRESSURE FROM TANK BEFORE FILLING OR SERVICING.** To release pressure from tank, lay sprayer on its side in a flat position with hose outlet on top. Depress trigger completely until **ALL** air has escaped. Then and only then is it safe to remove pump. (See Fig. 5)

<p><b>1</b></p> <p>Lock Handle into Pump. Unscrew the pump body counter-clockwise and remove from sprayer.</p> 	<p><b>2</b></p> <p>Fill the sprayer up to full line. Make certain that liquid has been strained to remove foreign particles before using your sprayer.</p> 
<p><b>3</b></p> <p>Be sure shut-off valve is closed (trigger up). Screw on pump body and pressure sprayer by unlocking the handle from its notches and moving in a smooth up &amp; down motion until pump works hard (15 to 30 strokes). Lock pump handle into position.</p> 	<p><b>4</b></p> <p>Adjust nozzle to desired pattern (clockwise for mist; counter-clockwise for stream). For intermittent spraying, press the trigger gently. For continuous spraying, lock the trigger down.</p> 
<p><b>5</b></p> <p>Releasing pressure from tank. Lay sprayer on its side in a flat position with hose outlet on top. Depress trigger completely until <b>ALL</b> air has escaped. Then and only then is it safe to remove pump.</p> 	<p><b>6</b></p> <p>Empty any leftover spray material into proper container. Flush out tank with cold clean water. Dry off sprayer with clean cloth and dry inside of tank by hanging upside down with pump assembly removed.</p> 

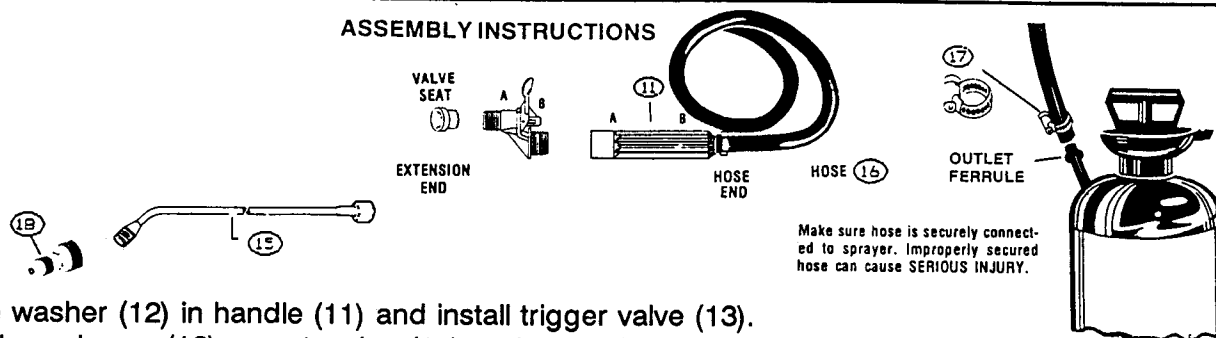
## ACCESSORY ITEMS

<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>
999441-00290	Repair Kit	999441-00130	16" Brass Ext.
999441-00180	Filter	999441-00140	Padded Carry Strap
999441-00160	Handle and Hose Clamp	999441-00120	Pressure Regulator
999441-00170	Trigger Asy	999441-00050	6" Twin Noz Bearer
999441-00150	Standard Nozzle	999441-00060	11" Twin Noz Bearer
999441-00250	Brass Nozzle	999441-00070	Noz, Dual Swivel
999441-00260	Fan Spray Nozzle	999441-00080	Weed Shield
999441-00270	Viton Repair Kit	999441-00090	Spray Boom, 26"

# SPRAYER PARTS



## ASSEMBLY INSTRUCTIONS



1. Place washer (12) in handle (11) and install trigger valve (13).
2. Install nozzle asy (18) on extension (15) and extension on trigger valve (13).
3. Slide clamp (17) on end of hose (16), push hose on tank nipple, tighten clamp.

KEY	PART NUMBER	QTY	DESCRIPTION
1	23109 61400	1	Pump Assy. (includes Items 2-5)
2	23100 10000	2	Screw
3	23100 30000	1	Cylinder Pump
4	23101 50000	1	Diaphragm, Valve
5	23109 64101	1	Handle & Piston Assy. (includes items 6-9)
6	23102 80000	1	Handle, Pump
7	23100 50000	1	Spring (included in STD. & OPT. Repair Kit)
8	23100 20000	1	Cover, Cylinder
9	23101 81401	1	Piston Asy
10	23105 50100	1	Valve Asy, Shut Off (includes items 11-14)
11	999441 00160	1	Handle (includes Hose, item 16)
12	23103 51600	1	Washer
13	999441 00170	1	Valve, Trigger
14	23105 00000	1	Seat, Valve
15	999441 00130	1	Extension, 16" STD (Brass)
16	23614 60000	1	Hose, 39"
17	23600 90000	1	Clamp, Hose
18	999441 00150	1	Nozzle Assy
	999441 00280	1	Repair Kit, STD (includes all STD Seals)
	999441 00270	1	Repair Kit, Viton® (includes Viton® equivalent of all rubber parts contained in STD Repair Kit)

## SPARE PARTS INFORMATION

A complete parts catalog is available for your unit. It contains exploded views of the product with accompanying spare parts list and selected accessories. See ordering instructions on the last page.

\* Viton® is a registered trademark of E.I. duPont de Nemours & Co.

## TROUBLE SHOOTING

**CAUTION:** Always Release Pressure From Tank Before Servicing Sprayer

Problem	Possible Cause	Solution
Sprayer will not spray	Nozzle, extension, hose, or syphon tube clogged	Clean or replace clogged parts.
	Diaphragm Valve 4 missing/worn	Replace
	Piston Asy 9 dry/worn	Lubricate or replace
	Pump cylinder 3 cracked	Replace
	Pump gasket 3a missing/worn	Replace
Sprayer leaks or drips	Valve Seat 14 missing/worn	Replace
	Hose Clamp 17 loose	Tighten/replace
	Trigger Valve 13 worn	Replace
	Washer 12 missing/worn	Replace

## CLEANING AND STORING

### COLD WEATHER STORAGE

All liquids must be removed from the tank, handle, trigger, and extension. Failure to do this may cause these parts to rupture.

**NEVER STORE SPRAYER WITH PRESSURE IN TANK.**

Empty any leftover spray material into proper container.

Flush out tank with cool clean water. **NEVER USE HOT WATER FOR CLEANING.**

Dry off sprayer with clean cloth and allow inside of

tank to dry by hanging upside down with pump assemble removed.

Lubricate plunger assembly with light oil through hole in cap.

Lubricate all threaded fittings with light oil or grease.

**IMPORTANT: ALWAYS EMPTY, CLEAN AND DRAIN TANK AND HOSE ASSEMBLY AFTER EACH USE. FAILURE TO DO SO MAY WEAKEN TANK AND/OR HOSE CAUSING SUCH PARTS TO BURST WHEN UNDER PRESSURE.**

### PARTS CATALOG

To obtain a parts catalog for this unit, order part no. 99922201997, enclose a check/mail order made out to: ECHO, INCORPORATED (\$2.00 per parts catalog ordered), your name and address and mail to the address shown below, ATTN: TECHNICAL PUBLICATIONS.



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