

⚠ WARNING ⚠

WARNING: Improper use or failure to follow instructions can result in explosive failure causing serious eye or other injury. For safe use of this product you must read and follow all instructions. Do not leave a pressurized sprayer in the hot sun. Heat can cause pressure build-up resulting in possible explosion. Do not store or leave solution in tank after use. Always wear goggles, gloves, long sleeve shirt, long pants and full foot protection when spraying. Never use any tool to remove pump if there is pressure in sprayer. Never stand with face or body over top of tank when pumping or loosening pump to prevent ejecting pump assembly and/or solution from striking and injuring you. Never pressurize sprayer by any means other than the original pump. Do not attempt to modify this sprayer. Replace parts only with manufacturer's original parts. **Never spray flammable, caustic, acidic, chlorine, bleach or other corrosive solutions or heat, pressure, or gas producing chemicals.** Always read and follow chemical manufacturer's instructions before use with this sprayer as some chemicals may be hazardous when used with this sprayer.

Sk-1154-1

WARNING: Handling the brass parts of this product will expose you to lead, a chemical known to the State of California to cause birth defects and other reproductive harm. *Wash hands after handling.*



ECHO, INCORPORATED
400 Oakwood Road
Lake Zurich, IL 60047
www.echo-usa.com



Model# MS-21H

Model# MS-31H

Parts, Piezas, Pièces

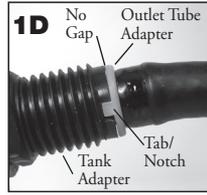
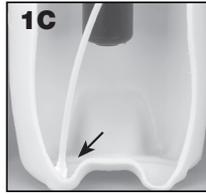
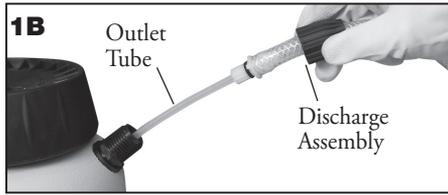
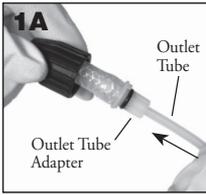
| | | | | | |
|--|---|--|---|--|--|
|  99944100484 Flat Fan Nozzle Tobera Buse |  99944100482 Brass Adjustable Nozzle Tobera Buse |  99944100483 Poly Adjustable Nozzle Tobera Buse |  99944100485 Nozzle Kit Tobera Buse |  99944100478 Shut-off Assembly Unidad de cierre Assemblage d'arrêt | |
|  99944100480 Extension wand, Vara de extensión, Lance de rallonge | | | | | |
|  Elbow O-ring |  Hose Washer |  99944100486 Wand O-ring Kit Kit del anillo "O" Trousse de joint torique | | |  99944100477 Shut-off Valve Repair Kit Kit de reparación para la válvula de cierre. Trousse de réparation de robinet d'arrêt. |
|  Nozzle Gasket |  Wand O-ring |  569033 Pressure Relief Valve Válvula de descarga de presión Soupape de décompression |  569034 Repair Kit Juego de reparación Kit de réparation | | |
|  99944100479 Hose Assembly Ensamblaje de la manguera Assemblage de boyau | | | | | |

Note: Your particular sprayer may not include all parts pictured above.

Nota: Es posible que este pulverizador en particular no incluya todas las partes que se ilustran arriba.

Remarque : Votre pulvérisateur particulier pourrait ne pas inclure toutes les pièces illustrées plus haut.

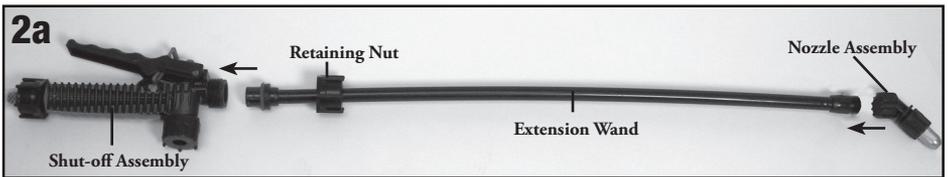
1. Hose to Tank



Discharge/ Assembly

- Make sure white outlet tube is attached to outlet tube adapter (Fig. 1A).
- Insert the outlet tube portion of the discharge assembly into the tank adapter (Fig. 1B).
- Proper placement of white outlet tube (Fig. 1C).
- Firmly insert the outlet tube adapter into the tank adapter (Fig. 1D) Lining up tab with notches on the tank adapter.
- Firmly tighten the retaining nut to the tank adapter (Fig. 1E).

2. Assembly of Shut-off, Extension Wand and Nozzle



- 1) Screw nozzle assembly onto threaded end of the extension wand securely.
- 2) Insert unthreaded end of extension wand into shut-off assembly as shown and tighten retaining nut securely.

1. Poly Nozzle Cap



Figure 1

1. Brass Nozzle Cap

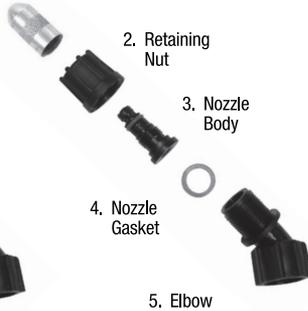


Figure 2



Figure 3

Nozzle Assembly

Figure 1-2

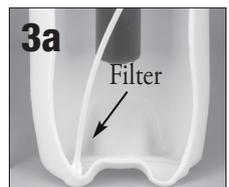
Unscrew the nozzle cap (1) from the nozzle body (3) with retaining nut (2) fastened tightly to the elbow (5). Unscrew the retaining nut (2). Push the nozzle body (3) with the nozzle gasket (4) out of the retaining nut (2). To reinstall the nozzle, reverse the above instructions.

Figure 3

Unscrew the retaining nut from the elbow and push the fan nozzle tip and gasket out of the retaining nut. To reinstall the nozzle, reverse the above instructions.

3. Filter

The filter helps prevent clogging while spraying. It is located on the end of the white tube inside your sprayer tank. To clean filter, remove the hose from the tank and lift out the outlet tube. Make sure the filter is positioned at the bottom of the tank as pictured.



4. Pre-Use Check

- 1) **Do:** Check tightness of hose nut to be sure hose is securely attached to the tank outlet.
- 2) **Do:** Inspect hose for deterioration, cracks, softness, or brittleness. If any of these conditions are found, replace hose before using. Replace with original manufacturer's parts only.
- 3) **Do:** Remove pump (see Filling, Pressurizing and Spraying Instructions), inspect interior and exterior of tank for signs of deterioration of body and bottom. Any sign of deterioration indicates possible tank weakening and could result in explosive bursting under pressure. If any of these signs are found, discard tank immediately and replace. Do not attempt to patch leaks, etc., as this could result in serious injury.
- 4) **Do:** Follow Filling, Pressurizing and Spraying Instructions, except use water only (Pump plunger 10-20 strokes and inspect for leaks).
- 5) **Do:** Direct shut-off away from you and open to make sure discharge is not clogged.
- 6) **Do:** If unit passes this test, release pressure (see Pressure Releasing Instructions), empty tank, and proceed with Filling, Pressurizing and Spraying Instructions.
- 7) **Do:** Inspect all metal parts including the wand, nozzle and fittings for rust, corrosion and pitting. If any of these conditions are found, replace affected part with original manufacturer's part before using.

5. Filling

- 1) **Do:** Turn pump handle counterclockwise and remove pump
- 2) **Do:** Prepare spray solution following all directions and safety warnings on chemical label.
- 3) **Do:** Fill tank to no more than the proper gallon marker. Do NOT: overfill to accommodate pump.
- 4) **Do:** Check pump to make sure that no grass or dirt is stuck to barrel. Replace pump in tank and tighten securely.

6. Pressurizing and Spraying



Do: Turn handle clockwise to tighten. Push handle down, turn 1/4 turn counterclockwise to release.



Do: Pump until you feel resistance.



Do: Push handle, down, turn 1/4 turn clockwise to lock. Begin spraying. Re-pump sprayer as required to maintain spray force.

7. To Release Pressure

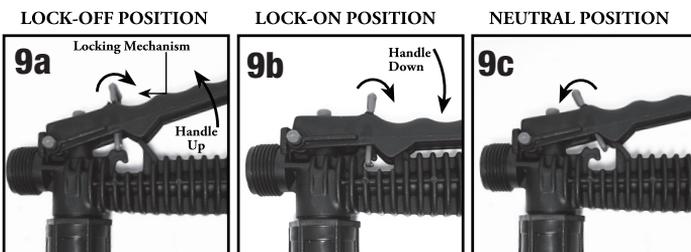
- 1) Your sprayer is equipped with a pressure relief/release valve (Fig. 8A). To release pressure lift and hold the cap until air is completely exhausted, OR, turn the valve slowly counterclockwise until you hear air escaping and wait air is completely exhausted (Fig. 8B).
- 2) **Do:** Stay away from the sprayer until all air has escaped.



8. Care, Storage and Maintenance

- 1) **Do:** Rinse tank thoroughly with water only, empty, refill with water. Follow Filling, Pressurizing and Spraying Instructions, except pump unit only 8-10 strokes. Be sure that the wand and nozzle are thoroughly rinsed with water after each use.
- 2) **Do:** Open shut-off and allow water to run through discharge assembly.
- 3) **Do:** Release pressure (Follow Pressure Release Instructions), remove pump and empty sprayer.
- 4) **Do:** Store sprayer tank upside down, with pump removed, in a warm dry location.
- 5) **Do:** Periodically oil pump by dropping 10-12 drops of light oil down pump rod through opening in cover.

9. Fatigue-free spraying



For safety lock-off feature (no-spraying), pull up on handle and move red locking mechanism into lock-off position as shown in fig. 9a. To disengage, push down on handle and return red locking mechanism to neutral position as in fig. 9c. For lock-on feature (continuous spraying), push down on handle and move red locking mechanism into lock-on position as shown in fig. 9b. To disengage, push down on handle and return red locking mechanism to neutral position as shown in fig. 9c.

In the event that the handle becomes stuck in the lock-on (continuous spraying) position and the tank pressure needs to be relieved, carefully open the tank and place the wand inside the tank until the pressure is relieved.

MS-21H MSP1000001 - MS-21H MSP99999999

MS-31H MSP1000001 - MS-31H MSP99999999